Mandy Rodrigues
Norman Solomon

The 3D Construction Kit Newsletters

June 1991 to May 1994

Created and edited by Mandy Rodrigues
Restored by Norman Solomon
September 2026

In memory of Mandy Rodrigues
(1949–2023)

The creator and editor of the
3D Construction Kit newsletters

The 3D Construction Kit

The 3D Construction Kit is a utility for creating 3D worlds. It was developed by Incentive Software - using their Freescape 3D engine - and published by Domark. The kit was released in 1991 on the ZX Spectrum, Acorn Archimedes, Amstrad CPC, Commodore Amiga, Atari ST, PC and Commodore 64/128. The software came with a 30-minute VHS video tape, featuring an introduction and a tutorial presented by Ian Andrew, the original designer of the Freescape system.

Incentive Software had released several commercial games using the Freescape engine prior to the release of the kit (Driller, Darkside, Total Eclipse and Castle Master), but the release of the kit gave users the opportunity to create their own games and virtual environments.

The kit has a simple, easy to use, graphical user interface, which allows users to create and manipulate objects within the game's 3D environment. Primitives such as cubes, cuboids and pyramids can easily be created, edited, scaled and placed in the 3D world.

To create a more advanced game or environment, the kit allowed the addition of conditions, using the simple-to-program Freescape Command Language (FCL). Sensors, animations and interactivity could be added with very little programming knowledge. Elements such as proximity sensors that triggered events and the ability to activate switches to open doors etc., made the worlds created with the kit come to life with a freedom not seen in computer game utilities before 1991.

The Newsletters

The 3D Construction Kit newsletters were created and edited by Mandy Rodrigues, with a new issue being released every two months, starting in June 1991. Readers of the newsletters could send their contributions to Mandy who would include them in the next issue. Many different articles and regular features were included, such as;

- Mandy’s introduction and editorial.
- Letters to Mandy and her replies.
- Hints and tips sent in by readers.
- FCL program listings with accompanying instructions.
- Articles and ideas sent in by readers with accompanying diagrams and notes.
- Competitions and public domain software listings.

The original newsletters have been scanned and are available for download as PDF files.
At the time of writing they were available from;

https://www.3dconstructionkit.co.uk/fanzines.html

This collection brings together the 18 published newsletters in a modern, restored format. The original paragraph structure, headings, body-text, code-listings, articles and hand-drawn diagrams etc. have been preserved exactly as they were in the original newsletters and every effort has been made to reproduce the original content in the most faithful way possible. The heading styles and fonts used in the newsletters have been standardised across all 18 issues (the headings and fonts in the original newsletters varied from issue to issue) and the layout, formatting and spacing of the content has been modernised to make it easier to read.

The original newsletter front and back page cover images have been enhanced using an AI process and included as part of this collection. Twelve of the 18 back covers were blank, or only had a small user group logo at the bottom. In these cases a Freescape big-box game cover image has been added above the logo to make the back covers more interesting.

Contents

Issue 1 - June / July - 1991 1
Issue 2 - August / September - 1991 23
Issue 3 - October / November - 1991 50
Issue 4 - December / January - 1991 / 1992 79
Issue 5 - February / March - 1992.....103
Issue 6 - April / May - 1992 125
Issue 7 - June / July - 1992 150
Issue 8 - August / September - 1992 173
Issue 9 - October / November - 1992 201
Issue 10 - December / January - 1992 / 1993 227
Issue 11 - February / March - 1993.....254
Issue 12 - April / May - 1993 283
Issue 13 - June / July - 1993.....312
Issue 14 - August / September - 1993 334
Issue 15 - October / November - 1993 357
Issue 16 - December / January - 1993 / 1994 385
Issue 17 - February / March - 1994.....407
Issue 18 - April / May - 1994 429

3D Construction Kit Newsletter

Issue Number 1

June/July 1991

CONTENTS

HELPLINES 2
EDITORIAL 3
MORE ABOUT THE FREESCAPE SYSTEM 4
INTERACTION WITH OBJECTS 5
LIMITATIONS TO FREESCAPE 6
NEWS 6
ANIMATION 6
BORDERS 10
VARIABLES 12
ANIMATING THE PLAYER 14
LETTERS 14
PROBLEM PAGE 16
HINTS AND TIPS 17
LISTINGS 19
THE 3D KIT GAME VARIABLES - 16 BIT 20

THE 3D CONSTRUCTION KIT
USER CLUB NEWSLETTER

ISSUE 1 JUNE 1991

Build your own Virtual Reality

CONTENTS

EDITORIAL ..... PAGE 3
MORE ABOUT THE FREESCAPE SYSTEM ..... PAGE 4
ANIMATION ..... PAGE 6
BORDERS ..... PAGE 10
VARIABLES ..... PAGE 12
LETTERS ..... PAGE 14
PROBLEM PAGE ..... PAGE 16
HINTS AND TIPS ..... PAGE 17
LISTINGS ..... PAGE 19
KITGAME VARIABLES ..... PAGE 20

COPYRIGHT on anything which does not carry the writer's name belongs to the User Group. Copyright on all other items lies with the writer. Members whose work is published in the newsletter continue to hold copyright on it.

CORRESPONDENCE. All correspondence addressed to the User Group will be assumed to be for publication unless otherwise stated. If you wish for a personal reply to a letter then please enclose a S.A.E. otherwise replies will be published in the pages of the newsletter.

CONTRIBUTIONS are always welcome from members. Hints, tips, routines or anything else that you think would be of interest to other members are most welcome. It is your club so we want to hear from you. If there is anything in particular that you would like to see covered in the newsletter then please let me know.

HELPLINES

POSTAL HELP

If you wish to write in for help then please feel free to do so but please don't forget to enclose a stamped, self-addressed envelope and I will do my best to solve the problem.

TELEPHONE HELPLINE

If you need to telephone me for help then I will try to be available during the hours between 2pm and 7pm each weekday and will be delighted to hear from you and will, of course, do my very best to help with any problems you may have. As this telephone helpline is available only to members of the User Group, please do have your Registration Number handy and give your name when you call.

FACSIMILE

If anyone finds it more convenient to send a Fax then please feel free to do so. The telephone number is the same as that for the telephone helpline.

Please address all correspondence to:

Mandy Rodrigues
The 3D Construction Kit User Group

The 3D Construction Kit User Club is an independently run club but is under license to Incentive Software

EDITORIAL

Welcome to issue 1 of the 3D Construction Kit User Group newsletter.

Future issues of the newsletter will contain a rather shorter editorial, about a page (if you can put up with my woffling for that long!), but as this first issue is rather special I thought it only fair to include something about myself and my "qualifications" for being editor/member-in-chief of the User Group, to introduce myself a little bit so you know who you are writing to or speaking to on the telephone. I have been the editor of Adventure Probe magazine for over three years and was a freelance writer prior to that. I have published three games of my own and several for other authors through my own software company and have been involved (devoted, obsessed!) with computers for quite a number of years now. I have an embarrassing number of computers of my own and have been privilaged to playtest all versions of the kit and, of course, wrote the manuals (with considerable help from the programmers, bless them!) so I feel confident that I can answer most of the problems that will come my way. If not, I know a man who can!

I am married with two children and am fortunate in that the whole family are computer crazy (hence the embarrassing number of computers in the family!). My husband deals with the photocopying side of things too and I don't know what I would do without him when it comes to producing all the newsletters. Well, enough about me, let us get on with more interesting matters now.

The aim of the User Group and the bi-monthly newsletters is to provide help, support and information on all aspects of the 3D Construction Kit. To exchange useful information and advice as we explore together the possibilities of one of the most exciting products to be released to date. I say "together" because, although I have been working with the 3D Construction Kit for .quite some time now, there is still so much to be discovered and I will be learning alongside everyone else. As the 3D Construction Kit is so. new. there is so much to be explored and discovered and, I feel that the prospect is extremely exciting.

As this is the very first issue of the newsletter it is, obviously, written mostly by myself. I would like to remedy that if possible and ask that members do write in with their routines, suggestions, articles and the like so that as much information as possible will be available. So if you develop a routine or come up with an idea then do write in and tell me about it. You never know just how important that bit of information could be to another user. What may seem obvious to some may be very obscure to others (I speak from personal experience here as I do have a habit of going the longest route when the obvious shortcut is staring me in the face - the programmers at Incentive will know what I mean. They have been very patient with me and at times it has been rather like talking down an aircraft with all the pilots out of action and a passenger at the controls! - thanks boys!) And, of course, do feel free to write in for help too. I would love to hear from you, even if it is just to chat and tell me about yourself, so do please get in touch. I have already had quite a few letters, some asking for help and these will be dealt with in this issue.

The newsletter will develop and evolve over the coming months and I will try to ensure that each computer is covered in each issue. Once the 8 bit versions of the 3D Construction Kit are released there will be at least one page devoted to each of the six versions with material especially relevant to each particular machine. In this way I hope to ensure that no-one feels left out and that there is something of interest for everyone in each issue.

Shortly I hope to launch our very own Public Domain library which, hopefully, will contain routines, borders, members games and all sorts of "goodies". It would also be nice if we could offer a playtesting service within the User Club so if anyone would like to offer their help in playtesting, evaluation etc on other member's games or environments could you let me know. Above all, please remember that this is YOUR newsletter and I would like you to let me know what you would like to see covered in the newsletter. Ideas, opinions (both good and bad) are welcome as it is only if I get a little feedback from you that I can make sure that you get exactly what you want from the User Club. Contributions will also decide the size of the newsletters. The minimum size will be as this issue but if there is a lot of material for a particular issue then it will mean a fatter issue with lots more information for everyone.

As this is the first issue there is very little in the way of letters for the letters pages so I would like as many of you as possible to write to me and let me know what you think about the Kit, you might even have a grumble or two, or some ideas that you would like to share with the other members. One of my very favourite sections of any newsletter or magazine are the letters pages so, if you feel the same, do take the time to put pen to paper (or pinkies to the keyboard) and get in touch. Your problems and ideas are also needed, remember that often a problem shared is a problem solved!

It could well be that the area that is presenting difficulty for you is also causing someone else a problem so do let me know about it.

As I mentioned earlier, I have been working on the 16 bit versions of the Kit for quite some time now and I am still working hard, this time on the 8 bit versions and am becoming familiar with those versions at this very moment and I am happy to say that the 8 bit versions are just as exciting as the 16 bit versions. I am also busy, well, when I get the time, trying to work on my own environment and, like you, am thoroughly enjoying myself in the process. In fact, I get the sneaky impression that the 3D Construction Kit is taking over my life - I'm not complaining - who could!

I see the bottom of the second page approaching rapidly so I will leave you to get on with reading the rest of this newsletter now. I sincerely hope that you enjoy this first newsletter and that you find it useful and informative. If there is any particular aspect of the Kit that you would like me to cover in the next newsletter then please do let me know and I will do my best to please. One final word (does this woman never shut up!), I sincerely hope that you all get as much pleasure and enjoyment out of using the 3D Construction Kit as I do.

Right, that's all from me for this issue. I'll see you all again in the next newsletter. And meanwhile, please do get in touch with me for either help or to send in material for the newsletter.

Mandy

MORE ABOUT THE FREESCAPE SYSTEM

AREAS

The 3D Construction Kit uses an enhanced version of the FREESCAPE (tm) system. The system allows you to represent a virtual world that you can move around and interact with. This world is represented in three dimensions known as X, Y and Z. X is equivalent to left and right, Y is equivalent to up and down and Z is equivalent to near and far. The world is divided up into regions known as AREAS. Each area is like a box and has a set size. A coordinate of X=0, Y=0, Z=0 (View: 000.000.000) represents the nearest bottom, left hand corner of an area. The world is seen from a single viewpoint which occupies one unit, looking in different directions. The direction is represented by 3 Angles: X rotation represents looking up or down, Y rotation represents looking left or right and Z rotation represents looking sideways (tilting your head). These rotations are measured in degrees and 360 degrees means that you have turned full circle. ROT:000,000,000 means that you are looking straight ahead. Changing the Y rotation by 180 (ROT:000.180.000) by doing a U-turn, means that you are looking directly behind you. Changing the X rotation to 90 (ROT:090,000,000) means that you are looking straight down. An X rotation of 270 (ROT:270,000,000) means that you are looking straight up.

An AREA can be used to represent a room of a house or an "outdoor" region. Areas have no geographical relation to each other, but are tied together by ENTRANCES. An ENTRANCE has a position and View Direction. The user can be placed at an entrance position in a specific area by some form of trigger (ie. walking into a door. This could effectively "move" the viewer from a hall (on an area) into a room (another area)).

OBJECTS

Objects can be placed into an area to make the environment. These are solid and, as such, cannot be passed through when moving. Objects can have different sizes in X, Y and Z directions. Object position and size are measured in a different coordinate system to the 3D world.

There are several basic object types ("PRIMITIVES") which can be resized and combined to make larger, more complicated objects such as buildings, trees etc. The primitive objects consist of:

CUBOIDS: 3 dimensional boxes where the sides can be stretched and shrunk in 3 directions.

PYRAMIDS: These are similar to conventional pyramids but are truncated at the top (they are initially flat on top). A FREESCAPE pyramid, like the cube can be stretched and shrunk in 3 directions.

RECTANGLES: Flat (2 dimensional) boxes whose sides can be stretched and shrunk in 2 directions at any time.

LINES: Two points in 3D space joined together by a line. These two points may be moved in 3 directions.

TRIANGLES: Three points in 3D space forming a triangle. These points may be moved in 3 directions. Only triangular facets may be non orthogonal.

QUADRILATERALS: Four points in 3D space forming a quadrilateral. This can be non rectangular.

PENTAGONS: As triangles but with 5 points.

HEXAGONS: As triangles but with 6 points.

SENSORS: A single point in 3D space which can be moved in 3 directions. Sensors have the ability to detect your presence within a defined distance and even fire at you!

Objects such as pyramids and triangles, which do not occupy a whole unit of space act like solid cubes when moving around the 3D world. For example it is not possible to stand on the slope of a pyramid. This cube is known as the object's BOUNDING CUBE.

Objects can exist in three states; VISIBLE, INVISIBLE or DESTROYED. Visible means that the object is present in the world as a solid form. Invisible means that the object is not present in the world but can be brought into the world by being made visible. Destroyed means that once an object has been destroyed it is invisible and cannot be made visible again until the world is reset.

Each individual side of an object can be coloured differently. The amount of colours available depend, of course, on which computer system you are using. But the first colour has a special property in that it is not drawn. This can be used to improve the speed of drawing the 3D world when used on object sides which are never seen, such as the underside of a house or the back of a door which is placed against a wall.

By painting all the sides of an object with this "Invisible" colour it is possible to have an object which cannot be seen but which is solid and cannot be moved through. Note that in this case the object's attribute will be set as VISIBLE even though it cannot be seen. This can be used to produce invisible barriers or invisible triggers on floors.

INTERACTION WITH OBJECTS

Events or reactions can be caused by interacting with objects within the environment. Objects may be triggered to respond to being shot, activated (touched/pressed/manipulated). Collided with or walked on. However, an object will only be activated if the object is within a predefined distance known as the ACTIVATE RANGE.

SENSORS

A SENSOR is a special type of object that will detect your presence if you are within a set distance from it. This allows reactions to occur when approaching an object. A Sensor can also be set to respond by firing back at you at a given rate.

THE FREESCAPE COMMAND LANGUAGE

In order to interact with objects, check and actions have to be defined in the form of short programs called CONDITIONS. Conditions are written using instructions which make up the FREESCAPE COMMAND LANGUAGE (FCL). FCL is a very simple but powerful set of commands which allow you to manipulate and respond to any occurances. There is also a bank of memory which can be used by the user to store and view information relating to the environment and events. Each memory cell is called a VARIABLE.

There are various categories of instructions in FCL:

VARIABLE MANIPULATION which is a set of instructions which act upon values stored in the variable memory cells. These include commands to add to and subtract values from variables, comparisons of values and setting a value.

OBJECT MANIPULATION which is a set of instructions which can alter the attributes of a specified object. There are instructions to visiblize, invisiblize, destroy and swap the visibility of objects.

CONDITIONAL INSTRUCTIONS are a set of instructions to allow the execution of segments of programs depending on the outcome of specific checks, such as, if a particular object is shot, if a particular object is collided with, if a Sensor has sensed you etc.

OTHER COMMANDS which are instructions to deal with functions such as printing messages, setting colours, playing sounds and setting the TIMER. The Timer is a device that can be set to trigger a set of conditions at a defined regular interval of time.

LIMITATIONS TO FREESCAPE

As FREESCAPE uses extremely complex mathematical algorithms to represent the 3D world on a 2D screen, there are a few basic limitations to what you can do:

Objects should not overlap. The BOUNDING CUBE of one object should not occupy the same 3D space as any other. This is especially true when you have GLOBAL OBJECTS or objects which are made visible which overlap with normal objects.

The number of visible objects in any one AREA is limited due to memory restrictions. Excess objects are not drawn. The maximum number of objects depends on the computer you are using.

As you can see, the limitations are very few considering just how powerful the program is

---

NEWS

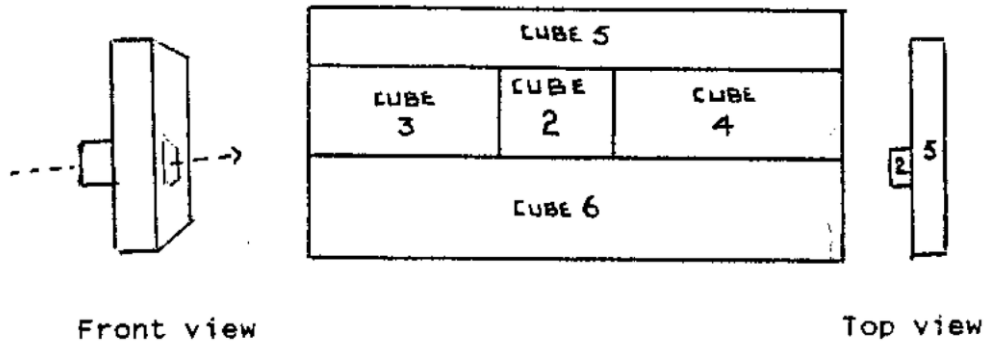
Incentive have just announced that Domark will shortly be producing a compilation of games entitled 3D WORLD. The games that will form the compilation will be Driller, Total Eclipse, Castle Master and The Crypt. The compilation will be available on all six formats: Amiga, Atari ST, PC, Amstrad CPC, Commodore 64 and Spectrum. Details of price etc will be announced here when available. If any of you want to see just what is possible with the FREESCAPE system then these are a must. They are also extremely enjoyable games.

ANIMATION

Some of the most powerful, and versatile, set of commands within the 3D Construction Kit are, of course, the animation commands. With these a wide variety of special effects can be created to really enhance your environments. This article will give some examples of how animation works and some simple examples to get you started.

The most important parts of the animation conditions are LOOP and MOVE. When we enter the LOOP command we are actually telling the system how many times we want the animation to be effected, ie. LOOP (10) tells the system to move the animation 10 times. The MOVE command tells the system the size and direction of the movement steps, ie. MOVE (40,0,0) tells the system to move towards the RIGHT in 40 size units. So putting the two commands together we are telling the system to move 40 units towards the right 10 times.

In the first example we are going to create the effect of a large block in a wall which can be pushed through to the other side. This could be useful if an object on one side of the wall were too high up to reach and we wanted the player to push a block through the wall from the ajoining room and so effectively providing a step on which to stand to reach said object. Firstly we would have to design the wall and block as follows:



The easy way to make the wall and block would be to firstly create a cube (cube 2) and copy this on both sides and above then stretch the top and side cubes (3, 4 and 5) to form a solid wall. Then stretch the "block" (cube 2) outwards to double its size to enable it to be pushed through the wall and appear on the other side. Go to the top Object Menu and select ATTRIBUTES and click on cube 2 and change from STATIC to MOVEABLE. Then enter the following CONDITION for Cube 2:

```
IF COLLIDED?
THEN STARTANIM (1)
ENDIF
```

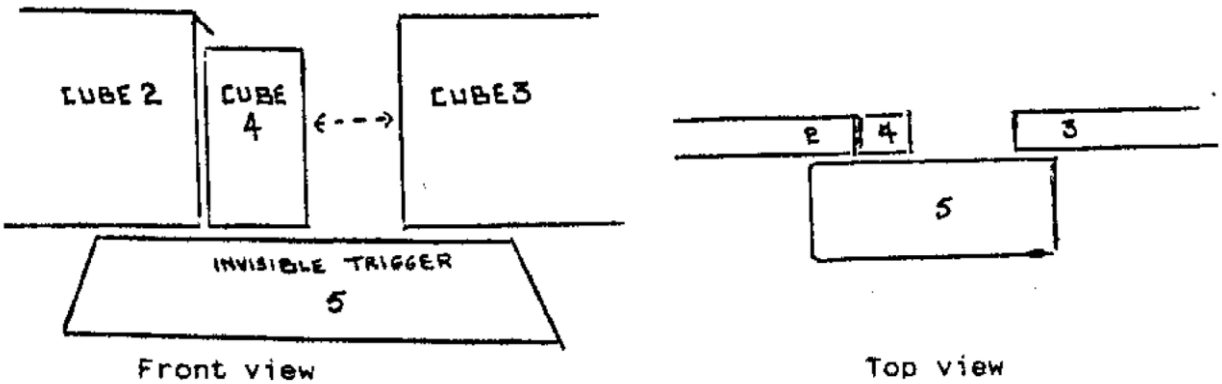
Go to the top Area Menu and select CREATE ANIMATION. Go back to the top Area Menu and select EDIT ANIMATION. You will now see 001 ANIMATOR. Click on this and enter the following:

```
INCLUDE (2)
START
LOOP (15)
MOVE (20,0,0)
AGAIN
```

Now if you walk into the cube, effectively pushing it, you will see it glide into the wall and if you walk around the wall to the other side you will see that it has now been pushed through to the other side. Of course the same effect could be done using the "Activate" command.

(Thanks to Bob Rodrigues for this example)

In the next example we will create a gap in a wall with a moveable block to one side but have an invisible trigger on the floor in front of it so that as the player approaches the gap (doorway?) the block will start to move backwards and forward between the opening. To make life a little more difficult for the player we would have another condition on the moving block which meant that if they collided with it then the game would end and reset. The only way through the gap would be to get the timing of their movements exactly right. Firstly we would have to design our section as follows:



Make two walls with a gap between (cubes 2 and 3) and put the moveable block (cube 4) between them and up against cube 2. Don't forget to make this moveable via the Objects Attributes as in the previous example. Now create a rectangle (5) and using the EDIT option turn it and bring it down so that it is lying flat, rather like a carpet, in front of the gap. Colour this rectangle with the INVISIBLE colour which makes it invisible to the player even though it is really there. Enter the following condition for Rectangle:

```
IF COLLIDED?
THEN STARTANIM (1)
ENDIF
```

Create an animator, select it for editing and enter the following conditions:

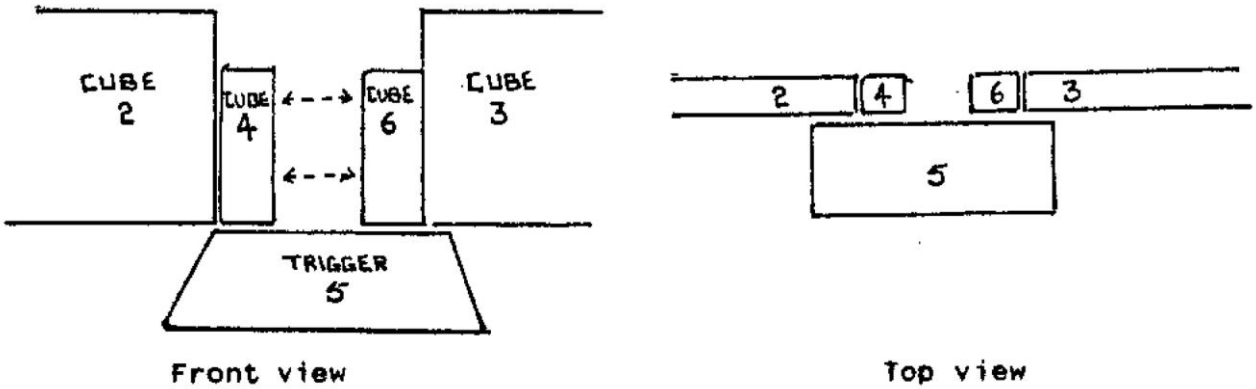
```
INCLUDE (4)
START
LOOP (15)
MOVE (30,0,0)
AGAIN
LOOP (15)
MOVE (-30,0,0)
AGAIN
RESTART
```

Now create a condition for cube 4 as follows:

```
IF COLLIDED?
THEN ENDGAME
ENDIF
```

Now try this out. Walk towards the gap in the wall and when you step on the "trigger" (rectangle 5) the animation should start. Try and walk past the moving block without touching it then try once more but touching it this time and see how the game immediately resets to the original state. Of course, when creating the finished game we would design an END SEQUENCE which would give a more polished effect than a reset.

Of course we could give the player more of a headache if we were to have two cubes moving backwards and forwards between the walls, meeting in the middle! For this we would need to create two cubes instead of one within the gap and make sure they were both moveable. This should look something like this:



We would then edit the condition for our "trigger", rectangle 5, as follows:

```
IF COLLIDED?
THEN STARTANIM (1)
STARTANIM (2)
ENDIF
```

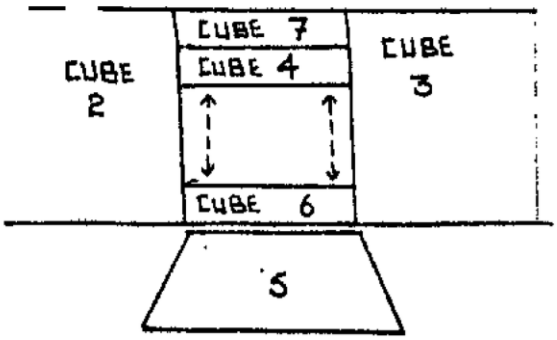
We would now need two animators, one for Cube 4 and the other for Cube 6. Our first animator can be left the same and we would enter the following condition for Animator 2:

```
INCLUDE (6)
START
LOOP (15)
MOVE (-30,0,0)
AGAIN
LOOP (15)
MOVE (30,0,0)
AGAIN
RESTART
```

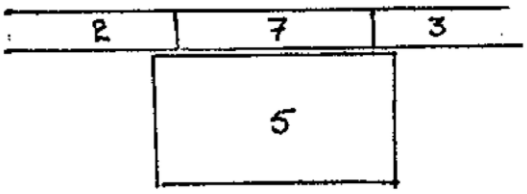
Note the position of the first "minus" symbol. It is opposite to the first Animator so that they move in opposite directions!

Now test this out to see the effect. If necessary the gap can be widened via the EDIT icons to accommodate the two cubes. Experiment a little with the loop command and the first number after the move command to see the effect.

In the next example we will do something slightly different. We will have a hole in the wall with two cubes, one at the top and one at the bottom, which when animated will move up and down within the gap. Design your setting like this:



Front view



Top view

Create two Animators and enter the following condition for Animator 1:

```
INCLUDE (6)
START
LOOP (15)
MOVE (0,-10,0)
AGAIN
LOOP (15)
MOVE (0,10,0)
AGAIN
RESTART
```

Enter the following condition for Animator 2:

```
INCLUDE (4)
START
LOOP (15)
MOVE (0,10,0)
AGAIN
LOOP (15)
MOVE (0,-10,0)
AGAIN
RESTART
```

Note once again the position of the "minus" symbol and also that we are now using the Y coordinate to move upwards and downwards' instead of from side to side.

Walk towards the gap and see how this animation works. Of course, if you wished you could INCLUDE more than one object if, for example you wanted to create a portcullis to move upwards and downwards within a castle entrance. Many different kinds of "traps" and "problems" can be created for the player using this kind of animation.

Animation can be used to enhance the environment as well as for obstacles to the players progress. Lots of pleasing effects can be obtained. For example a swing in a park that really swings. For this example we will not design a full park but will show simply how the effect can be created.

Use the CLEAR ALL option under the File Menu and create a cube. Make this moveable via the Objects Attributes menu. We will use the floor as a trigger this time for simplicity so enter the following condition for Cube 1:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

Create an Animator and enter the following condition:

```
INCLUDE (2)
START
LOOP (15)
MOVE (10,10,10)
AGAIN
LOOP (15)
MOVE (-10,-10,-10)
AGAIN
RESTART
```

Now shoot the floor and see the effect.

Of course in the final "park" scene it wouldn't be a cube that was being animated but the seat of the swing. But is is a good example to show the smooth movement of the animation in three directions. Experiment with the Loop and the Move commands to see the different effects that can be obtained.

These are just a few examples of how animation works and are designed purely and simply to get you started. Many other pleasing effects can be obtained using animation. A flickering torch in a sconce on a dungeon wall in a castle. A bird flying across the sky. A fish swimming in the sea (as in the Kitgame with the shark and the little golden fish beneath). Water dripping from a tap in a bathroom. This would be particularly effective if we were to include sound effects as follows:

```
INCLUDE (2)
START
LOOP (15)
MOVE (0,20,0)
SOUND (4) - (Amiga PING sound effect)
AGAIN
RESTART
```

A portcullis coming down with full clanking sound effects can be quite atmospheric, especially if it is coming down on your head! Have fun and do experiment with animation and please remember to send in your routines for inclusion within the newsletter to help other members - and me too!

BORDERS

One of the readers told me that the information on making borders for your final game is rather sparse in the manual. Of course, it wasn't possible to cover everything in depth within the manual, (which is why the User Club comes in very handy), and I propose to remedy this now with a few hints and advice on creating them.

The very first thing you should do, before you start creating your masterpiece, is to take a good look at your game and to make some notes. I look at all aspects of my game and note down such points as, will there be a scoring system, will there be treasures to be found and all sorts of things like that? Games can include messages to the user which come up at various points during play and, most importantly, which forms of movement the player will be able to use.

Make a note of all these items as space and layout is very important when planning your border. Icons will have to be designed to take care of all movements you think necessary and spaces for messages, score tables etc have to be allowed for. You will notice in the border provided for the Kitgame that some of the movements which are accessible within the main Edit screen are not catered for so do ensure that you have everything well planned before you even load in your Art Package.

One of the very first things I did when I wanted to create my first border was to load in my Art Package (in this case it was the Deluxe Paint III for the Amiga), and actually load in the border from the Construction Kit into Deluxe Paint III to see exactly how it had been created. I then (rather cheekily) swiped some of the icons and saved them as bushes for later use, just to get the feel of how things worked. Later, of course, I was able to create my own borders just the way I wanted them.

For those, like myself, who are not especially artistic, it is very considerate of Incentive to provide a couple of ready made borders so that we can get to work straight away.

It is extremely important, and time saving in the long run, to read the manual very carefully to make sure that you know exactly what format is acceptable to your machine. I know from my own experience how frustrating it is to work for hours on a border and then not be able to load it into the system because I didn't check the number of pixels, number of colours and format and had to start work all over again! The format for the Atari ST and Amiga are 320 x 200 pixels, 16 colours, Lo-Res and NTSC format. On PC CGA it is 320 x 200 pixels with 4 colours and on PC EGA it is 320 x 200 pixels in 16 colours. On the PC the borders must be in IFF format only and have an extension of .LBM. If you are unable to make an NTSC with your art package then cut the screen as 320 X 200 pixels.

Although it may seem more sensible to position your border with the main control section directly beneath the View Window, you can, of course, have this anywhere on the screen you wish as the ability to Set the View Window is very flexible. Consider what type of game you are creating and design a border accordingly. Perhaps you are thinking of designing an adventure in which the player has to explore ancient Egypt and there are plenty of desert scenes. In this case it would be worth while, perhaps, to incorporate Hyroglyphics into your border, or scenes representing the ancient Egyption Book of the Dead. If, perhaps, you were creating a game set in medieval times some shields and crossed lances etc. could be incorporated into the border. All this adds to the overall atmosphere and presentation of the finished product.

I mentioned an Egyptian scenario in particular because I was talking to an artist friend of mine who provided the excellent graphics for Level 9's later releases and for other software companies, and he remarked that the 3D Construction Kit would be the ideal medium for creating such scenarios with deserts and pyramids etc. But of course, with a program such as this there is so much scope for all types of scenarios. If an environment were set in outer space, for example, the border created could be as fantastic as you wish. In fact, anything goes in this case, providing that all movements and messages are catered for and that the player isn't dazzled by green, purple, pink and yellow controls!

If the environment were to represent the view from some form of vehicle then the obvious border would be one to represent the inside of that vehicle with the controls on display and the environment made to fit into the windscreen or porthole, or whatever, of the chosen vehicle.

On the Atari ST versions of the Kit a split screen has been used and it is rather important that we remember this when creating our borders for that machine. If lots of different colours are used in creating our borders on this machine the overall effect can be quite spoiled by the split screen, as the top half of the border can be lost altogether or the colours changed unless care is taken when designing the border. One easy way of overcoming the problem would be to ensure that the border consists of a control panel only or that the sides of the border only reach half way up the screen. But if a full border is required the careful selection of colours can overcome the problem. Make sure that the colours chosen are compatible with the colours used within your environment, in particular, the "sky" colour. In this way the border which took a lot of effort will remain exactly as intended. The split screen is peculiar to the Atari ST only and owners of other versions of the 3D Construction Kit do not have this problem and can use a full screen border.

Another point worth mentioning here is that care should be taken to ensure that the border itself doesn't "overshadow" the environment. It would be a shame if your environment were spoiled by an overlarge and overpowering border with overbright colours. Try to picture your environment and the shades used and to select colours which compliment and enhance your finished product rather than clash horribly and spoil the overall effect.

For those of you who are particularly artistic perhaps it would be a nice idea if you were to donate some of your borders in the form of Public Domain software, which can be distributed through the club. This, I am sure, would be of particular interest to those of us who get all "fingers and thumbs" when it comes to using art packages. So if you do have a border that you are particularly proud of and would like to share with other members, do let me know.

Finally, if anyone has any ideas on creating borders, or any other aspect of the 3D Construction Kit for that matter, do please feel free to write them down and send them in to me for publication within the newsletter.

VARIABLES

To many people who are not too familiar with programming languages, the use of variables can seem very complicated. Indeed, at first they do seem rather daunting but I will try to give a few examples here of how they work to enable you to feel confident about them. Remember that they are very useful tools and with a little understanding of how they work you can really create interesting and involved environments and games.

In this first example, which is a very simple way of handling a variable, we will first create two cubes, cube 2 and cube 3. Via the object attributes menu we will make cube 3 invisible both in the initial and current status. This can easily be done by creating a cube and copying it to the left and using the edit icons separate them slightly.

Now we will enter a condition for cube 2 as follows:

```
IF SHOT?
THEN ADDVAR (25,V40)
IF VAR=? (100,V40)
THEN VIS (3)
ENDIF
ENDIF
```

Note the two ENDIF's at the end of the command. This is because we have used two IF commands. What we are doing is to add the value 25 to variable 40 if the cube is shot and then saying if variable 40 equals 100 then make cube 3 visible.

Now shoot cube 2 four times (25 times 4 = 100) and cube 3 should become visible within the view window.

SYSTEM VARIABLES

We can make use of the variables which are reserved for use by the FREESCAPE system itself which can make life much easier for us. Take the above example for instance. We could do exactly the same thing and create the exact effect by using variable number 21 which actually counts the number of shots fired for us. In this case we would set up the two cubes in exactly the same way as before, making cube 3 invisible but instead of entering the condition for cube 2 (make sure you delete those conditions before going any further) we would create an Area Condition and enter the following:

```
IF VAR=? (10,V21)
THEN VIS (3)
ENDIF
```

Now shoot cube 2 ten times and see how cube 3 becomes visible. Of course, using this method we are just checking how many times we have shot but not WHAT we have shot so if you wish a specific object to be shot to achieve an effect it would be better to use the former object condition.

Making use of the system variables can be useful in a number of ways. We could use variable 12 to check the times the player has been crushed and then kill him off. This could be done very simply and quickly for our example. Clear all via the File Menu and create a cube. We will use an animation for this so create an animator and edit it as follows:

```
INCLUDE (2)
START
LOOP (15)
MOVE (0,20,0)
AGAIN
LOOP (15)
MOVE (0,-20,0)
AGAIN
RESTART
```

Make cube 2 moveable via the attributes and select the "ground" cube (1) as the trigger by entering the following condition for cube 1:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

Now create an Area Condition and enter the following:

```
IF VAR=? (10,V12)
THEN ENDGAME
ENDIF
```

Shoot the ground and when the cube starts to glide up and down, make your way until you are standing directly underneath it. Now wait until you have been "crushed" about 10 times (remember that each time the cube comes up and down it counts as crushing you twice!) and the game should reset.

Of course these examples are very simple but with a little imagination splendid effects can be obtained using the right environment and objects.

VARIABLES AND SENSORS

In the next example we will use a SENSOR and allow it to shoot us until we are killed (well, with a little imagination you know what I mean). Create a Sensor and make it invisible via the attributes. Use the ground as a trigger to make it visible when the ground is shot - see the previous examples for how to do this. Then create an Area Condition and enter the following:

```
IF VAR=? (10,V11)
THEN ENDGAME
ENDIF
```

We use variable 11 because it counts the times that YOU have been shot. See page 61 of the manual for the list of variables and their uses.

Select RESET before we try this as when we created the sensor it shot at us before we could make it invisible. Now shoot the ground and count the number of times that the sensor shoots us. After 10 times the game should reset.

Before ending this article with another couple of examples, it would be helpful if you read the paragraphs which you will find just below

the variable list on page 61 as we will use variable 20. What we will try and do now is to create a situation in which the player cannot shoot until they discover and take the gun! For our purposes we will use a cube yet again to represent the gun (I said you would need a bit of imagination for this didn't I?). As the first General Condition is only called after a reset we will create it and enter the following:

```
SETVAR (V20,9)
```

Create the cube (gun) which will be cube 2 and enter the following Object Condition for cube 2:

```
IF ACTIVATED?
THEN INVIS (2)
ADDVAR (6,V20)
ENDIF
```

Note that before you "get" the gun (by using the right mouse button when close to it), you cannot shoot at all but once you have the gun you can!

ANIMATING THE PLAYER

Routine by Bob Rodrigues.

By using the first set of variables used by the system we can achieve some spectacular effects as can be seen in the Kitgame when the player enters the boat and is transported over the sea to the lighthouse. For our boat we will use yet another cube which we will flatten to make something resembling a skateboard without wheels but it is, for our purposes, a boat. Raise the "boat" just a little way off the ground. Create a river by creating a blue rectangle and stretching it across the ground a little distance away from you. Don't forget to make the "boat" moveable via the attributes! Enter the following condition for the "boat":

```
IF COLLIDED?
THEN STARTANIM (1)
ENDIF
```

Create an Animator and enter the following:

```
INCLUDE (o) (the number of our boat)
START
LOOP (100)
MOVE (0,0,20)
ADDVAR (20,V2)
AGAIN
```

If you move forwards until you are standing on our "boat" you should, if all goes well, find yourself sailing smoothly across the river on the boat! We used Variable 2 because this controls the Z position within the View window. Experiment a little by using the variables 0 and 1 to see the different effects that can be achieved.

I hope that this will help those of you who were unsure about the use of variables to get used to how they work and how you can use them to your advantage. I would be most interested to hear about any special routines or effects that you achieve for future issues of the newsletter.

LETTERS

Dear Mandy,

I have just received my receipt after joining the 3DKC User Club. First I would like to say that your club is a very good idea, I know it will help me a lot on my Amiga version. I do need some help though. How do I make use of the Fly 1 and Fly 2. When tried in editing mode they make no difference. In the manual it says you can set Cameras. How? In early reviews (before 3DCK was released) we were told that you create your own environment and "drive" around in it. How could you enter a vehicle and drive around? The only way I can see is if you could load in borders during the game, is this possible? I have some ideas that may be useful, why don't you ask people to send in finished games on disk and start a mini PD club (Public Domain), one for each format and do a small review on each in the newsletter. You could charge, say, £1.99 per disk including P and P.

ROBERT DAVIS, Caterham, Surrey.
Amiga version

(Try using Fly1 and Fly2 when in Test to see the results, Robert. The Cameras are not available for use in Test or within stand-alone environments but can be selected using the Mode Icon within the editor (left mouse button to select and right mouse button to set). I'm afraid it isn't possible to load in borders during the game in a stand-alone environment but if your border were designed to represent the inside of a vehicle it would give the appearance of moving around the environment. You can actually move the player around the environment if they enter some form of "open" vehicle though. Check out the article on Variables for information on how this can be achieved. I too have been thinking about a PD library and would be more than happy to organise this. Its success would depend upon the response from the members though. Anyone else care to let me know their feelings on the matter?.....Mandy)

Dear Mandy,

I was thoroughly delighted with the 3D Construction Kit when it arrived. Full marks to Incentive for producing such a fantastic program. I have always been fascinated with the idea of computerised 3 dimensional images and this is by far and away the most user friendly program of its kind that I have seen. I am enclosing my registration slip and my application for membership of the User Club which, I hope will provide me with a little extra help and support whenever I need it.

DOUGLAS BROAD, Luton, Beds
Atari ST Version

Dear Mandy

I am enjoying working with the Construction Kit and also playing the Kitgame (purely to get to know how the system works of course, ha ha). I don't seem to be making much progress though, especially in getting the gold bar that sits in front of the monster er... dragon?... dog? that I meet when I open the door just opposite the door to the shop. I managed to shoot it and it stopped shooting back at me but that's as far as I got, I still couldn't get the gold bar. What have I done wrong do you think?

SIMON CROSS, Stafford.
Amiga Version

(The monster will stop firing at you if you manage to hit the spot where the sensor lies, around the nose area. The way in, though, to the gold bar lies in another direction.. Go into the Kiosk and go behind the counter to the left of the screen until you see an opening. Lower yourself until you can enter the passage you see there and shoot the trapdoor. Walk towards it until you fall down and make for the steps you will see. These lead up into the mouth of the monster. Jump down and you can get the gold bar. You can also turn the "force field" off via a panel on the wall that you will find on the right side of the screen. I hope this will help you to make a bit more progress. If you need any more help on this then please do let me know.....Mandy)

Dear Mandy,

I have purchased your 3D Construction Kit from the Home Computer Club and am registering my copy with you. Is it possible, however, that I can upgrade my program from version 1.00 to a higher one even if I have to pay a little extra. Please let me know.

G.SEWELL, Spratton, Northants.
PC Version

(At present there is only version 1.00 available but, version 1.2 is being finalised at the moment, although this contains no new features. More details about this and other versions will follow as I receive them as well as any other news about the program, utilities, upgrades etc..... Mandy)

Dear Mandy,

I am having difficulty in installing the 3D Construction Kit onto my Hard Disk. I have entered A:INSTALL but it just doesn't seem to work. Can you please help me out?

DAVID BUCKNALL, St Helens, Merseyside
Atari Version

(You seem to have the command wrong, David. The correct way of entering the command you want is A: (or B:) (RETURN) then INSTALL (RETURN). I think that should do the trick.....Mandy)

Dear Mandy,

When trying to make a stand-alone game using the MAKE command, how do you load in the border when you want to run the game? I have created (File).RUN but when you RUNEGA (File).RUN the border obviously isn't loaded.

MARTIN REDWAY, Sidcup, Kent
PC Version

(To make a stand-alone game which contains the border of your choice you must first load the border into the Kit together with the Datafile containing your environment. When you then use the MAKE the border data will be saved along with the datafile and the sound samples. If you get any further trouble then please let me know.....Mandy)

More letters next issue – Mandy

PROBLEM PAGE

I have an Amiga 500 computer and am enjoying working with the 3D Kit very much indeed. I do have a problem though. When I am saving or loading my datafiles from disk I sometimes get a DOS error and am unable to access the drive. Can you help me sort out what the trouble is?

ANGELA BISHOP, Stoke-on-Trent, Staffs.

(Well, Angela, as you do not say which DOS error comes up it is difficult to say exactly what is going wrong. I suggest you check out page 65 of the manual where you will find a list of the more common errors listed. It is worth noting, though, that many DOS errors can be corrected by clicking on the top DF0: in the File Selector. It usually works for me.....Mandy)

I noticed that when I had completed one area and filled it with a nice design of a house complete with windows, guttering, garden with plants and trees etc, that the movement became quite slow. Can you tell me why this happens. Is it usual or have I discovered a bug?

BRIAN WILLIAMS, Dyfed, South Wales.

(It looks as if you have rather too many objects in that particular area, Brian. When there are a lot of them it does slow movement down quite a bit. If you ever saw CASTLE MASTER by Incentive you would be surprised to learn that they only had around 40 object in each area to ensure speedy movement throughout the game. There are quite a number of things that can be done to overcome the problem, though. One is to make all surfaces of objects which are not visible in the View window (i.e. bases of cubes), invisible. A clever use of objects is also quite useful. Suppose you had a window on your house that was made up of a blue rectangle for the pane and four edited cubes for the surround it would be much more economical to use two rectangles one larger than the other for the frame and a smaller rectangle on top of this for the pane. In this way you would use only two objects instead of five. If anyone else has any useful tips for saving memory in this way then please do get send them in.....Mandy)

I am thoroughly enjoying the 3D Kit, it is fantastic! Only one irritation with the system - why is it that sometimes when trying to position a rectangle for example, against another object such as a cube, it vanishes into or behind the cube and has to be brought back into view once more?

JOHN SCHOFIELD, St Helens, Manchester.

(The way round that problem is to change to FINE step. Using FINE usually does the trick as the number of pixels used in movement is smaller and you should be able to position rectangles against other objects without any difficulty. While on the subject, it is useful to note that using FINE step will also shrink objects a lot further than the USER step.....Mandy)

Any other problems? Send them in and I'll do my best to help.

HINTS AND TIPS

NAMING OBJECTS

When designing your environments and a lot of objects are being created it is much easier to find the object you want to edit, or include within a group, if you can see exactly what the object is at a glance. It is much easier to discover which is the "doorway" rather than rectangle (32), especially if the object you want is obscured by other objects within the View window. This is simply done by selecting ATTRIBUTES and selecting the object you want to name. Click on the NAME of the object and an inverse cursor will appear. Delete whatever is written there, except the number and enter DOORWAY. Now when creating your environment you should find life a lot easier.

TIME SAVING

If there were a large amount of objects within one area such as the upper and lower floors of a house, movement could become quite slow. In this case it would be a good idea to make all the object on the upper floor of the house invisible whilst exploring the lower floor. Then make the lower floor invisible whilst exploring the upper floor. We could use the staircase as a trigger to toggle the INVIS and VIS flag on all the objects. This should speed things up considerably. To do this we would start all the objects on the upper floor as INVISIBLE and use some sort of trigger, such as when one of the steps on the staircase is collided with, to make the upper floor objects VISIBLE and the lower floor objects INVISIBLE, and of course another trigger could be used to reverse the process when descending the staircase once more.

LIGHT AND SHADE

To add a little more realism to your environments, it is often a good idea to include shaded areas on walls and the "ground" to represent shadows of walls or trees etc. This can easily be done by, for example, putting a slightly darker shade on a triangle, or edited rectangle, up against the lighter wall. Do ensure that you are not adding shadows to animated objects though as the effect can be rather strange once the animation has been effected.

SOUND EFFECTS

The use of multiple sound effects can sometimes give added atmosphere. For example to make the sound of gurgling and splashing when the player falls into a pond we could use the following on a selected trigger object:

```
IF COLLIDED?
THEN SOUND (5)
DELAY (20)
SOUND (5)
DELAY (30)
SOUND (5)
DELAY (30)
SOUND (9)
ENDIF
```

The sound effects used here are based on the Amiga version. To make, for example, the sound of a portcullis closing we could have the following condition on our selected trigger object:

```
IF SHOT?
THEN LOOP (40)
DELAY (10)
SOUND (6)
AGAIN
ENDIF
```

Here again we are using the Amiga sound sample bank. This gives a very realistic metallic, clanking sound of a portcullis being lowered.

If we wanted to create the sound effect of a small metalic object being dropped we could enter the following command:

```
IF ACTIVATED?
THEN SOUND (4)
DELAY (50)
SOUND (4)
DELAY (25)
SOUND (4)
DELAY (10)
SOUND (4)
ENDIF
```

By decreasing the DELAY each time we effectively reproduce the sound of the object hitting the ground, bouncing a couple of times and then coming to rest.

VIEWING THE WHOLE AREA

If you wish to view the whole area that you are working on from the top view, instead of clicking on the icon to view one of your created objects from the top, select the "ground" cube (cuboid 1) and the whole area can be moved over and each object can be viewed within the area. If you are in EDIT mode then each individual object can be selected of editing from above. This is particularly useful if you were creating, for example, a maze such as a hedge maze in a garden. Or if exact positioning of a flat rectangle were required between some other objects.

CHECKING ANIMATIONS

A strategically placed object which has been coloured "invisible" can be very useful for acting as a boundary for an animated object.

LISTINGS

Quite a few of you have asked me how the introductory screen was produced in the Kitgame. Once the messages have been printed and the key pressed it is difficult to access the conditions within the startup area.

Here is the listing of the Conditions which may help you to work out what everything means and make life a little easier when creating your own startup sequences.

```
IF VAR>? (V15,0)
THEN SETVAR (0,V40)
SETVAR (0,V248)
SETVAR (2,V35)
GOTO (6,1)
END
ENDIF
REDRAW
WAIT
WAIT
SETVAR (0,V19)
PRINT (" THE 3D KIT GAME",8)
PRINT (" \N\N        CREATED USING",8)
PRINT (" \N\N\N THE 3D CONSTRUCTION KIT",8)
PRINT (" \N\N\N\N BY INCENTIVE SOFTWARE",8)
PRINT (" \N\N\N\N\N\N PRESS A KEY TO START",8)
LOOP 0
WAIT
IF VAR>? (V15,0)
THEN END
ENDIF
IF VAR>? (V19,250)
THEN ELSE AGAIN
ENDIF
PRINT ("PRESS A KEY TO START",7)
REDRAW
WAIT
WAIT
SETVAR (0,19)
PRINT"
```

There now follows a very long message about the Kitgame, how to play it etc which we can see upon loading. We will not reproduce here as it would take up too much space. Once those print commands have finished the program continues immediately with ...

```
LOOP 0
WAIT
IF VAR>? (V15,0)
THEN END
ENDIF
IF VAR>? (V19,1300)
THEN ELSE AGAIN
ENDIF
```

THE 3D KIT GAME VARIABLES - 16 BIT

Sincere thanks to the programmers at Incentive for providing this list of all the variables used in the 16 Bit versions of the kitgame which should help, not only with being able to examine the variables and understand their uses (and to cheat whilst playing the Kitgame) but also in providing ideas on how to program your own variables within your environments.

Variable 31: Time 0-200.

Variable 33: Treasure collected 0-99.

Variable 34: Score 0-99995.

Varibale 35: Text Timer (General Condition).

Variable 38: Cash and Grab counter (Frames).

Variable 39: Cash and Grab counter.

Variable 40: Game State.

```
0 = Playing,
1 = Lose (Time out),
2 = Lose (Energy out),
3 = Lose (Fell too far),
4 = Lose (Drowned),
5 = Win,
6 = End Game (Endgame sequence and finish).
```

Variable 41: Area Number (V.08?)

Variable 42: Rope Carried?

```
0 = Not carried,
1 = Carried.
```

Variable 43: Time Lapsed in Current Area.

Variable 44: Key Carried?

```
0 = Not carried,
1 = Carried.
```

Variable 45: Exit Pass Carried?

```
0 = Not carried,
1 = Carried.
```

Variable 46: Scuba Gear Carried?

```
0 = Not carried,
1 = Worn.
```

Variable 48: Puzzle Room - Lift X SHIFT.

Variable 49: Puzzle Room - Lift Y SHIFT.

Variable 50: Loop Variable (Multiple Use).

Variable 51: Frames spent in Sea counter.

```
If 50 then Blackout and go to Desert Island.
If >75 then Drown.
```

Variable 53: X Coordinate at Beach Head when going to desert island.

Variable 54: Inventory/List Indicator..

0 = Not showing,

1 = First object,

2 = Second object etc.

Variable 55: Object Carried Counter - for inventory list.

Variable 56: Inventory Request.

0 = Not requested,

1 = Requested,

2 = Current showing.

Variable 57: In Sea? (Desert Island).

0 = No,

1 = Yes.

Variable 58: In Sea (Desert Island) Counter.

Variable 60: Animation Start Flag for End Sequence.

Variable 61: Dragon's Nose Shot?

0 = No,

1 = Yes.

Variable 255: Non Resetable Variable - used for Highscore Store.

Variable 254: Z Viewpoint position - used for locking movement controls when animating the view ie. Area 3.

Variable 253: Y Viewpoint position - used for locking movement controls when animating the view ie. Area 3.

Variable 252: X Viewpoint position - used for locking movement controls when animating the view ie. Area 3.

Variable 251: Temporary Variable - Expected to be used for duration of a frame.

Variable 250: Used to check whether on the boat or not.

0 = Not on the boat,

1 = On the boat.

Variable 249: Used to check whether in the sea or not.

0 = Not in the sea.

1 = In the sea.

Variable 248: Cheat on?

0 = No,

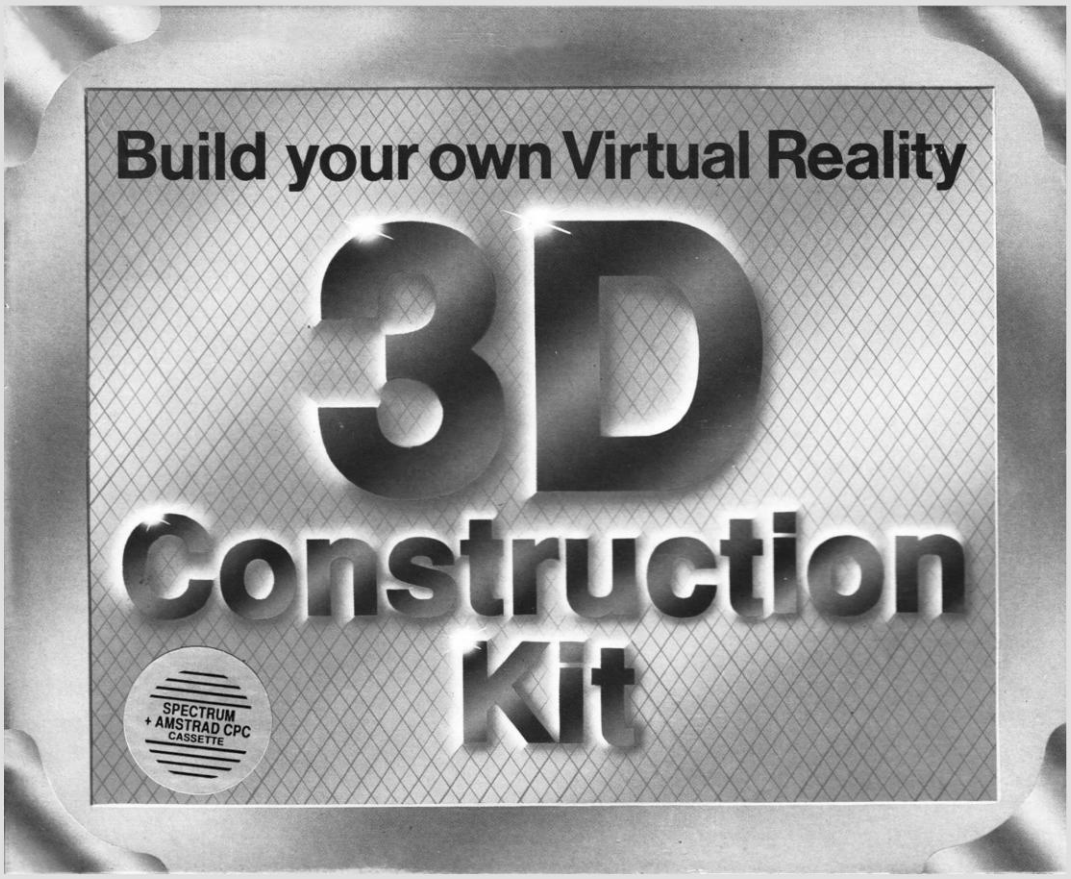
1 = Yes.

Variable 247: Speed Trap On? (PC).

0 = No,

1 = Yes.

A list of the variables used within the 8 Bit version of the 3D Kitgame will be published in the newsletter when those versions of the program become available.



3D

CONSTRUCTION
KIT USERS GROUP

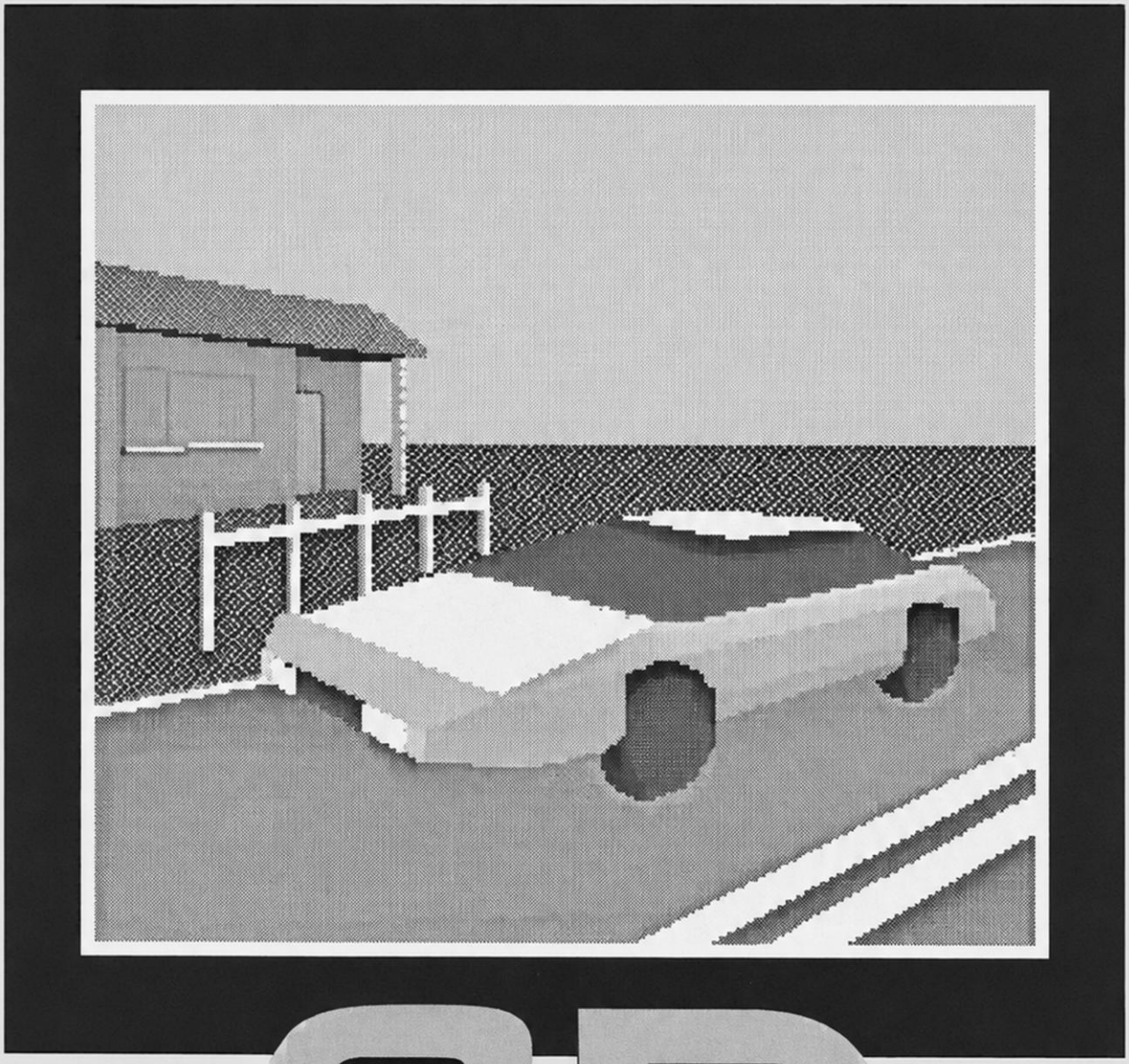
3D Construction Kit Newsletter

Issue Number 2
August/September 1991

CONTENTS

EDITORIAL 25
LETTERS 25
VARIABLES 30
NEWS 33
PROBLEM PAGES 33
SAMPLE SOUND BANKS 37
HINTS AND TIPS 38
ILLUSIONS 39
HALL OF FAME 39
PLANNING AREAS AND ENTRANCES 40
8-BIT ROUTINES 40
16-BIT ROUTINES 45
MAKING DOORWAYS MORE REALISTIC 46
MAKING STAND-ALONE GAMES 47
SHARK-FILLED SEA 48

NEWSLETTER Aug/Sept 1991
Issue No. 2



3D CONSTRUCTION KIT USERS GROUP

EDITORIAL

Welcome to issue 2 of the 3D Construction Kit User Group Newsletter.

Quite a lot has been happening since the last Newsletter. The 8 bit versions of the Kit are now on sale so we will be covering those machines too from now on. The language of the 16 bit and 8 bit versions are quite similar although the input lines are not flexible on the 8 bit versions, and so quite a few routines can be adapted from one to the other. I have had tons of letters so please forgive me if it is taking me a while to reply - I am catching up slowly but the initial "rush" after the launch of the Kit rather bowled me over. Don't worry though, I will respond to all queries as soon as I can. Many of the queries that I have received have been the same and so I have covered most of them in this issue. There is also very good news for 8 bit users who were a bit miserable over the fact that that version doesn't support animation. Thanks to our 8 bit wiz, George Dixon, routines to simulate animation are listed in the relevant routine section of this issue.

One or two of you were wondering if they had missed an issue - it's all my fault for not putting ISSUE 1 JUNE/JULY on the front of the first Newsletter (I just put JUNE) and it gave the impression that it was a monthly not a bi-monthly Newsletter. My apologies for that. This issue is the AUGUST/SEPTEMBER issue and the next issue will be in October (OCTOBER/NOVEMBER). This could change of course, depending on the amount of material sent in. If I am inundated with material from readers then I might have to change to a monthly Newsletter to fit it all in! Anyone joining the User Group from now on will, of course, receive the current newsletter but if anyone wishes to purchase back issues they are welcome to do so. The prices for each issue are the same as for the sample copies as listed on your registration card. But 8 bit members, please note that the first issue was aimed mainly at 16 bit versions as the 8 bit versions were not on sale at the time of printing.

Now that many of you have had a couple of months in which to become familiar with the Kit some first games must be nearing completion. If you have any that you would like me to see then do send them in. I have also had some kind offers of playtesters so if you want them checked then please do let me know. If you have any games that you would like to put into the Club PD library then please send them along for me to take a look at. I have had a few borders sent in for the PD but I need some more in order to compile a disk of them. So far I have only had borders for the Amiga so other machines will need to be covered too. I would like to eventually have PD disks covering borders, routines, objects, games, sound samples, puzzles and any other subject that you might like to suggest - for all machines - so that an extensive library can be built up for the use of all members.

Just one point, before I end, if you are writing for help from abroad please, please do write in English. I know the manual was translated into various languages but that was done by someone else and although I can tackle some "Latin" languages I cannot speak French or German and have no-one available to translate your requests. I have received quite a stack of letters that I cannot understand and it is a pity that I am unable to reply to them. Well, that's all from me for this issue. I'll speak to you all again in October. Bye for now,

Mandy

LETTERS

Dear Mandy,

I have just purchased the 3D Construction Kit from the Computer Club for my Atari 520ST single sided drive. The disc received with the kit shows 0 Bytes on 0 Items? My drive does not accept this and shows no icons. Can you please tell me why? I would appreciate it as i don't feel like laying out this money for a blank disc! Thank you,

N.DOUGLAS, BEESTON, LEEDS
ATARI ST

(The disc supplied with the package is for double sided drives only. If you send your disc to Incentive Software they will be happy to provide you with versions which are suitable for single sided disk drives.....Mandy)

Dear Mandy,

I have been trying to install the Kit on hard disk. You state in the manual: Run the INSTALL program from the CLI and answer the on-screen prompts to install the Construction Kit on to a specified hard disk. This is hardly a friendly way of installing to HD for the first time user. I tried: run df0:utils/install (RETURN). This results in the following: "(CLI2) 1:SYS:>Please ensure original KIT disc is in drive DF0: NOTE - any non-existing subdirectories will be automatically created. Type PATH for INSTALL (e.g.DH0:UTILS/3DKIT)." What I got was "ERROR: You must specify a FULL drive/path specification." What does this mean? It seems to suggest that an error has occured! I decided to ignore the error and instead specify where I want INSTALL to place the KIT: General (RETURN). All I got was "Execute permission not set. Unable to load General: File not an object module". What on earth does this mean?

MR RICHARD HOWE, Isle of Wight
AMIGA

(The answer to your problems regarding the INSTALL program, the correct procedure for installing the 3D Construction kit is to type at the CLI prompt: DF0:UTILS/INSTALL (RETURN). You will be presented with the following prompt: Please ensure original KIT disc is in drive DF0: NOTE - any non-existing subdirectories will be automatically created. Type PATH for INSTALL (e.g. DH0:UTILS/3DKIT). At this point you must type in the full path specification for the installation procedure. The program will then report on the progress of the installation. When completed, a fully installed version of the Construction Kit will be found in the specified directory.....Mandy)

Dear Mandy

When I have done a couple of objects and so on and saved it a few times I then suddenly discovered that I can't activate anything from the top menu bar! It is very strange because I can create and edit from the short-cut icons below, but I can't save it or do anything from the top menu bar at all. How can I solve this problem please? I would also like to ask if it would be possible through the User Group for members to swap their games between themselves as it would be fun to try other members games created with the Kit.

STEFFEN JUUL-SORENSEN, Denmark
AMIGA

(I am sorry you have been having problems, Steffen. This is a problem that has now been corrected. If you return your disc only to Domark Ltd (their address is on the back of the box) and ask them to replace it with version V1.2 they will be happy to do so and I am sure you will experience no further difficulties. Plans are afoot to start a PD Library within the User Group and, depending on the response from members, an extensive collection of Borders, Routines, Games, Objects etc can be made available for interested members. This will, of course, depend entirely on members sending in material for the Library. I'll keep everyone informed on progress.....Mandy)

Dear Mandy,

I cannot begin to tell you how helpful and interesting your first issue of the Newsletter was. I am excited to hear you may set up a PD Library full of Kit stuff, and I think it will be very successful. You mentioned in your editorial that you were looking for Kit Game Testers, and so I am offering my services. Having played all the FREESCAPE (tm) games since my days with a C64 and DRILLER, I think that I would be quite good, I would be glad to help you in any way possible.

SIMON BUTT, Cambs
AMIGA

(I am glad you found the Newsletter helpful, Simon. Thanks for your offer of help with the playtesting service. I will put your name on file and will put anyone who needs this service on an Amiga game in touch with you. Anyone else like to help in this way?.....Mandy)

Dear Mandy,

The 3D Construction Kit is a wonderful piece of software. I have used a number of Virtual Reality systems but find that your software really holds its own. In a future update I would love to see the ability to grab and move objects in real time and also a modem link with other computers so that two people may share a world and have graphic representations of their bodies.

GORDON DURITY, Canada
ATARI ST

(I am glad you are impressed with the Kit and hope that you have a lot of enjoyment from working with it. Thank you for the useful suggestions. I will pass these on to the programmers for possible inclusion in future upgrades.....Mandy)

Dear Mandy,

I am writing to congratulate you and Incentive on a fine and professionally written piece of software, which I hope to use totally in the very near future. I unfortunately have one apparent bug in my copy of the software. The problem occurs on the load and save part of the file menu. When I select save data, load data, save object, load object, load border (or any other option that requires disk accessing) the directory listing takes a good 30 seconds to appear on the screen. I have found that this slowness only occurs when I am using the mouse option from the start up menu. When I select keyboard only the problem disappears and I can then access the load and save features in a matter of seconds. I very much hope there is a simple answer to this problem and it can be resolved promptly.

SIMON CLARKE, East Sussex
PC

Dear Mandy,

I have encountered a slight problem with the Kit and that is I have an Amstrad 2086 with a 32 Meg Hard Card and I also just bought a CONTRIVER MOUSE. When I installed this with the new mouse driver in it

took quite a while for the DIRECTORY to appear and it didn't work properly at all. I returned the mouse for a replacement but found the new one to be exactly the same. So I installed it once more and selected the AMSTRAD MOUSE and it worked really well and now the Kit does everything it should. I am very puzzled as to why the other mouse does not. I tried various mouse drivers but found the best was the Amstrad one. I was wondering if anyone else had the same problem and if so have you managed to solve it? If so, could you please notify me as to what to do.

ALEX WRIGHT, Redditch
PC

(The problems you have both encountered with the Mouse drivers on the PC versions of the Kit have now been fixed. If you return your disks to either Incentive Software or Domark (depending on which version you have - see note at the end of the letters section on where to send them) and ask them to replace them with version V1.2 you should have no further difficulties.....Mandy)

Dear Mandy,

I'm not too artistic but I find a border made up of lines of various shades of grey gives an impressive border suitable for futuristic games. I am sending you three for the PD Library. If anyone happens to have Amiga Format magazine issues 19, 21, 18 and 17, they have Deluxe Paint tutorials that might help you to create more stunning borders.

A.J.BEVAN, Ashford, Middx
AMIGA

(The borders you sent for the PD Library were very impressive indeed and are appreciated very much. They will help to start the ball rolling. Any other readers like to send in contributions?.....Mandy)

Dear Mandy,

I am having trouble loading my own borders into the Kit. The art program I am using is Deluxe Paint I, which is mentioned in the manual. I would be grateful if you could advise me on this matter.

PETER JOHNSON, Dyfed
AMIGA

(I have received a number of queries about this. I admit that I didn't explain this very well in the last Newsletter. If your art package supports NTSC then there should be no problem but many packages do not. In this case you should design your border with 320 x 200 pixels. Lo-Res, 16 colours but make sure you save it out as a BRUSH not a picture as the system quite often reverts to the default format and this causes the problem. Also make sure that you add .IFF to the end of the filename when you save your borders. You should then have no further difficulty.....Mandy)

Dear Mandy,

I have recently purchased the 3D Construction Kit and have been trying to install it correctly. I am finding that it will not run when copied to a floppy, nor will it properly install to hard drive through the install program. One of the three files that the manual says is necessary to run in the same directory as the 3dkit.prg does not exist at all on the floppy, and the install program is install.ttp not install.tos, as stated in the manual. When I run the install.ttp program it still does not work properly. I have run the program from the original floppy, but I cannot copy it with any copier I have. I really haven't gotten the chance to even load something in, hopefully,

these problems are minor. Do you know if there are known bugs with the program, or if faulty copies went out? If Domark has a fix, could you please notify me of it? One thing came to mind was the fact that I am in Canada, and there may be differences machine-wise. But that does not explain the filenames, and given that Domark has a "Rest of World" price set for the Newsletter, they probably expect that the program will be used in "Rest of the World". Hopefully all of this will work out. Thanks in advance.

HOWARD SAUNDERS, Labrador, Canada
ATARI ST

(The problem re installing to hard disk on the Atari ST versions of the Kit has now been fixed with version V1.2. If you return your disk to Domark Ltd for replacement you should have no further difficulty. The initial batch of disks sent out by Domark were given copy protection. This was an error but please don't worry - if anyone does have an "accident" with their original disk then Domark Ltd will be happy to replace it for you.....Mandy)

Dear Mandy,

I think the Construction Kit is brilliant. It is probably the closest I'll ever get to designing or creating my own game. I spent all weekend writing down all the objects and attributes, conditions, area conditions and general conditions and animations for area 001 of the Kitgame in an attempt to work out what variables were attached to what objects and how they worked etc. I was reduced to a jibbering wreck by Sunday evening! On Monday morning I awoke to discover the postman had delivered the Newsletter, which is excellent. Plenty of ideas, hints and tips and help with Variables. I am sure, though, that other users, like myself would like to see this section on Variables carry on. I look forward to the next newsletter!

GLYNNE WATSON, Morley
ATARI ST

Dear Mandy,

Thanks for the Newsletter - I look forward to seeing some more excellent stuff - well done. I have a problem with the Kit. Though I haven't spent enough time on it nor experimented with samples all the manual mentions is that samples have to be saved out in .IFF RAW 8 bit format. As the sample rate info is ignored, what rate should I sample the sounds so they playback the same (ie. what playback rate does the 3DKit use?). I look forward to the setting up of your PD Library and would like to put myself forward as a games tester/evaluator. I work for a software house developing games on the NES so I think I know what makes a good game. Have you thought about Sample Bank disks as well as games, environments and borders in your PD Library?

ROSS HARRIS, Leeds
AMIGA

(Great idea about the Samples for the PD Library, Ross. I will certainly take that on board but as I mentioned previously, it all depends on the response from other members. I'll also put you on file as a playtester. There will be more info on making your own Sound Sample Bank in this issue. The Amiga versions of the Kit have a playback rate of 10 KHz and the Atari ST versions have a playback rate of 8.3 KHz.....Mandy)

Dear Mandy,

Many thanks for the interesting and very informative first issue of the Club Newsletter. I have learned a great deal from it. I have some information which may be of benefit to your users and may be of use also to aid the distribution of the PD borders etc. Firstly, I discovered a bug in the 3D Kit which affects Atari STFM users who have version 1.2 of the operating system (1.2 is quite old, about 1986/87). The bug is in the Atari operating system so it is not Incentive's fault. The problem lies in the SAVE DATA and LOAD DATA options, for example if you create a CUBE and then remove the master disk, insert a blank disk and then use SAVE DATA, once this is done re-insert the master disk, and select LOAD DATA and try and load the KITGAME from the \DATA directory, you may find that the directory is empty. This is caused by a system bug which does not recognise the fact you have changed discs. I reported this to Paul Gregory at Incentive and he has confirmed this is an ATARI operating system bug in V1.2. I returned my master disc and he has sent me back a new bug free copy which seems to be version V1.2 of the 3DCK.

Also I am the System Operator (SYSOP) of a Bulletin Board in Southeast Kent, although the Computer Bulletin Board does not run 24 hours, I am online after 8pm to 6.45am EVERY DAY so I thought I could set up a CLOSED file section for Borders and such on my system for users to download. I run the Bulletin Board on a CPM based machine but have over 10 Mb of Atari STFM software and also have some PC and Amiga files available, and I am also willing to set up a message area on my system for messages etc on the topic - do you think this is a good idea? The telephone is 0233 620228.

CHRIS KING, Ashford, Kent

(I think it is an excellent idea, Chris. If any members are interested and are on-line then I hope they get in touch.....Mandy)

Dear Mandy,

First I must congratulate the programming team of Incentive Software. I think they have designed a very good tool for programming 3D objects. Normally if you want to construct 3D objects you have to buy very expensive software and it is also very difficult to understand and to work with those programs. But with the 3D Construction Kit it makes a lot of fun to build my own virtual reality. I also agree with the suggestion of Robert Davis (Catesham, Surrey - Issue 1) to start a PD Library. It is a very good idea because there are a lot of users who build fantastic worlds or objects or draw fantastic borders and nobody except their family or friends ever get to see them otherwise. I do have a question. Is it possible for Incentive Software to programm a tool for the 3D Kit to use more than 640 KB on IBM computers? I am very sad about this because I've 4Mb on board and I can't use them. I can only create 60 objects in an area but think it must be possible to build more.

CHRISTIAN ROSENHAUER, Germany
PC

(At present users are restricted to 60 objects in any one area but I will pass on your suggestion to the programmers and wait to see what they come up with. They are hard at work on other versions of the Kit at present (news will be published here when it comes in). It would be nice if the extra memory were utilised by the Kit.....Mandy)

Please note that, although version V1.2 of the Kit is available, it does not contain any extra features from V1.1 or V1.0. If, however, any reader has experienced the problems mentioned in a couple of the letters and feels the need to return disks for replacement please ensure that they are sent to the correct address. If your package was from the Computer Club then it is Incentive Software, if the Domark version (in the black box) then please address to Domark - the addresses are on the back of the box. Please feel free to contact me for advice on this first though, as I'll be happy to help.....Mandy

MORE LETTERS IN THE NEXT NEWSLETTER

VARIABLES

Since the previous newsletter I have had lots of requests for more information on variables. These requests range from asking for more examples as in the last article to asking for an explanation for those completely new to programming of exactly what they are and what they do.

A Variable is a symbol that stands for a value. In general programming on a computer they are more complicated than those used within the FCL. Sometimes the value of a variable is unknown before you RUN a program and one of the purposes of a program could be to find one or more values for a variable. The most important thing is understanding how variables work, because variables allow you to do complex tasks with your computer. They also let you write routines that are very re-usable.

Imagine that your computer contains a bunch of little slots, like a bank of mail boxes. When you write a program, you can use some of these slots to hold values. All you would do in general programming is to give a name to the slots you need, and during the program you can put values into each slot by using the slots name. In general programming a variable can be of three types: Integar which contains whole numbers, Text string which are characters and Floating Point which are real (decimal) or whole numbers.

Within the FCL variables are much simpler and easier to use than in general programming. They are used to hold numerical values only. Once a variable has been set to hold a selected number it can then be added to, subtracted from etc and this is what makes them so powerful.

In a very simplistic form we can use a variable by setting it to hold a value of, say, 10 and during the program we can add more to that variable when certain actions are performed and then tell the program that when that variable reaches a certain figure, say 100, to perform a specific task, e.g. We could set variable number 50 to hold a value of 10. We can have 9 gold bars scattered throughout our game. Each time one of the gold bars is discovered by the player we will tell the program to increase the value of variable 50 by 10. In this way, once all the gold bars have been discovered, variable 50 should hold a value of 100. We will have previously told the program that once variable 50 holds a value of 100 we want a message to be printed on the screen such as "Well done! You have now collected all the treasures!".

The real benefit of variables is that we can have many variables working for us on different tasks such as holding the score, holding our strength etc. Throughout the game they can be working away adding and subtracting as various tasks are performed until they reach the figure we have previously selected for them to perform a specific task.

They can also be used to perform more complicated tasks for us where, for example we can use a number of different variables to perform the same task. We could have one variable counting up to a certain value and at that point we could have that variable acting as a trigger to insert another value into a different variable.

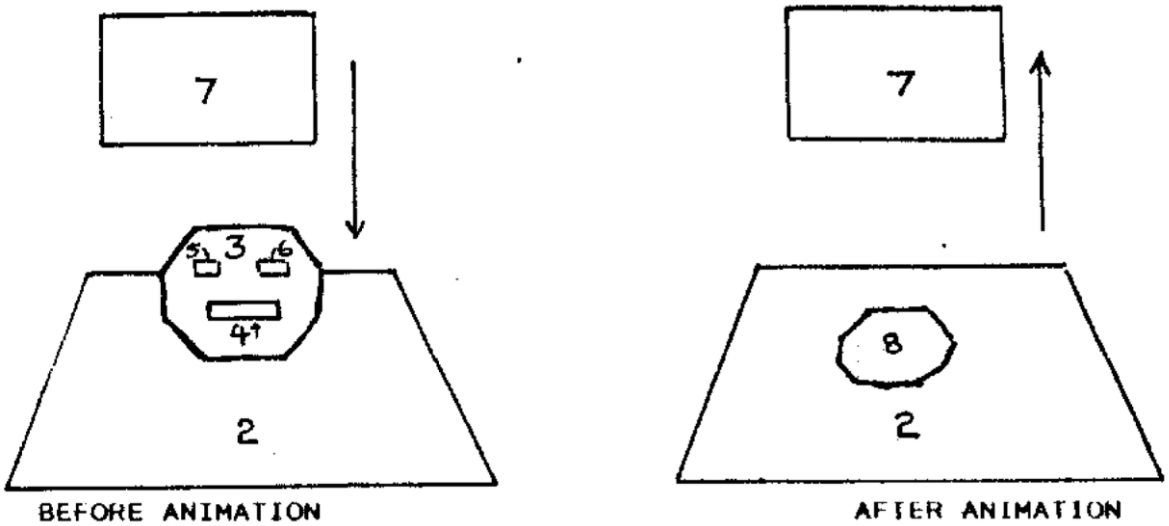
Once you have some understanding of what they can do and you have variables working for you within your environments you will wonder how on earth you managed to program anything at all without them.

When you wish to use a variable in your game you should set the selected variable in GENERAL CONDITION 1 to hold the value you wish. It is now ready for you to call upon whenever you wish from different parts of your environment.

As many of you seem to be having difficulty working out how to create and reduce TIME and ENERGY BARS I will "kill two birds with one stone" by showing exactly how this can be done and, as variables are used for this, give examples on variable uses at the same time.

The following routine was programmed by Bobby Rodrigues (my son) on the Amiga and shows how to have a TIME/ENERGY bar reducing until you are transported to another area which contains the ENGAME routine.

First of all we will create Area 2 which is where we will hold our endgame sequence. What Bobby did was to create an animation where a smiling head was sitting on a mat. A large cube descends and squashes it flat and the message OUCH is printed on the screen. What you should do first is to create this scene as follows:



Create a flattened green cube (2). The head is a hexagon (3) with a mouth (rectangle) (4) and two eyes (rectangles) (5 and 6). The crusher which is suspended in mid-air over the head is cube (7) and the squashed head is pentagon (8). Make the latter invisible via the object attributes. Colour the sky and ground black.

We are going to use variable number 31 so we must set that in GENERAL CONDITION 1 as follows:

```
SETVAR (V31,1)
```

Now create GENERAL CONDITION 2 and edit it to insert the following:

```
IF VAR=? (V31,280)
THEN GOTO (1,2)
ENDIF
```

We are going to use the "ground" cube (1) in Area 1 as our target for shooting so go to area 1 and insert the following condition for cube (1):

```
IF SHOT?
THEN ADDVAR (1,V31)
UPDATET (1)
IF VAR>? (V31,200)
THEN GOTO (1,2)
ENDIF
```

What we are saying here is: If the ground cube is shot then add 1 to the value of variable 31 and update the instrument (which we will create in a moment) accordingly. If the value of variable 31 becomes greater than 200 then transport the player to entrance 1 in area 2.

Now we will go to Area 2, where we have created our endgame scene and animate it. Make sure that cube (7) is set to MOVEABLE via the ATTRIBUTES in the Object Menu and create Animator 1 and edit it as follows:

```
INCLUDE (7)
START
LOOP (20)
MOVE (0,-30,0)
AGAIN
INVIS (3)
INVIS (4)
INVIS (5)
INVIS (6)
VIS (8)
LOOP (20)
MOVE (0,30,0)
AGAIN
PRINT ("  OUCH!  ",2)
```

Now create AREA CONDITION 1 in Area 2 and edit it as follows:

```
STARTANIM (1)
```

This is so that the animation we are creating will take effect as soon as the player is transported to area 2.

Now, via the GENERAL menu we are going to create two INSTRUMENTS and edit them as follows:

```
INSTRUMENT (1)
Type HORIZONTAL
X POS 038   LENGTH 278
Y POS 005   HEIGHT 004
VARIABLE = 031
LEFT/BOTTOM 00000000
RIGHT/TOP   00000200
FG COLOUR 00
BG COLOUR 07
```

```
INSTRUMENT (2)
Type TEXT WINDOW
X POS 110   LENGTH 080
Y POS 164   HEIGHT 008
VARIABLE = 030
LEFT/BOTTOM 00000000
RIGHT/TOP   00001000
FG COLOUR 01
BG COLOUR 03
```

Right, that's all the programming we need for the moment. RESET the environment and enter TEST MODE via the TEST ICON. You should see the ground and sky as normal but with a yellow energy bar across the top of the screen. Now shoot the "ground" and as you do so you will see that the energy bar is reducing towards the right and being replaced by a black bar.

As soon as the energy bar has been completely reduced you will be transported to our ENDGAME sequence where you will see the smiling head being squashed to a pulp and the text message "OUCH!" will be seen on screen.

If you want to then use the ENDGAME command this can be added to the ANIMATOR condition just after the PRINT COMMAND as follows:

```
PRINT (" OUCH!     ",2)
DELAY (500)
ENDGAME
```

This will pause for a short time with the message on screen before the environment is RESET back to Area 1 once more.

This is just an example of how to create and use Time/Energy bars and to transport the player to an Endgame sequence. I am sure that you will be able to create really complex and exciting Endgame routines. When you do, I would love to hear from you on how you did it and the routines that you used, for publication in the Newsletter.

NEWS

3D CONSTRUCTION KIT CIX CONFERENCE

A conference for users of the .3D CONSTRUCTION KIT has been opened on CIX. The conference is closed and as such only REGISTERED users of the KIT will be able to access it. Anybody wishing to be registered as a participant on the conference should simply MAIL the me under the username DIMENSION with your registration number and at the earliest convenience I will contact MANDY RODRIGUES and confirm your registration. If all is well you should receive a reply from me in your MAIL basket within a few days.

What is the conference for?

Primarily the conference will be used by people wishing to contact 3D CONSTRUCTION KIT users to exchange ideas, environments, FCL programs etc. Also as the conference is regularly moderated by us at INCENTIVE any problems or queries could be answered by us.

The conference has a filelist so if you have an interesting environment or object (or anything relating to the 3D CONSTRUCTION KIT) you wish to share, simply upload it to the conference, MAIL me with details of the file and I will include it in the filelist.

We hope this conference will be a successful exchange forum for users of the KIT but that is really up to the users so we hope to hear from you soon.

INCENTIVE SOFTWARE

PROBLEM PAGES

I am very impressed with the program but have a small problem. Maybe I am thick but I don't understand what PROCEDURE CONDITIONS are for, can you please explain? I have tried to study the ones in the Kitgame to see if I can figure out what they do but I am not making any progress there.

MARTIN WESTON, Cambridge
AMSTRAD CPC6128

PROCEDURE CONDITIONS are like SUBROUTINES and the command CALL is much the same as the basic command GOSUB. 16 Bit versions do not have PROC CONDITIONS and, as they do save a lot of time as they can be called up in the same way as basic subroutines, 8-bitters do have an advantage here. The PROCEDURE CONDITIONS in the 8-bit Kitgame are as follows:

1. *Move Hammer along rail in Area 9.*
2. *Move Hammer along rail - part two.*
3. *Debug Gun.*
4. *Lift player on Platform in Area 11.*
5. *Limit energy to 100 if > 100.*
6. *Add 50 to the score.*
7. *Area 4. Check for the Exit Pass - Result if not carried.*
8. *Area 4. Check for Exit Pass - Result if carried.*
9. *Gold Found message.*
10. *Teleport handling - Goto 12 2 / Goto 1 5.*
11. *Clear Text Window.*

I hope that this will help you to a better understanding of how these conditions work. If you need further help on this then please let me know.....Mandy

---

Please could you please tell me exactly what ANMCNT means? This is in the animations within the Kitgame but I can find no reference to this in the manual at all. What does it do?

PATRICK GUIGNET, France
AMIGA

During creation of the program and the Kitgame various names were used for commands and subsequently changed for others until the final version was complete. Unfortunately the command you found - ANMCNT - is one of those obsolete condition names. It was left within the Kitgame but serves no useful purpose at all and I apologise if this has confused anyone.....Mandy

---

I cannot find my 3D Construction Kit Release Number. I received the Kit via the Computer Club. Please could you tell me where it is?

S. ARCHER, Poole, Dorset.

The Release Number can be found under ABOUT within the top FILE MENU or by clicking on the "I" (Incentive) icon found at the bottom left of the Edit Screen.....Mandy

---

Please could you help me solve this problem? I have created a cube (cuboid 2) set attribute to moveable and then made conditions for the cube (cuboid 2) as follows:

```
IF SHOT?
THEN IFVAR>? (V100,0)
THEN STARTANIM (1)
ELSE STARTANIM (2)
ENDIF
ENDIF
```

The animators are as follows:

```
ANIMATOR 1
INCLUDE (2)
START
SETVAR (0,V100
LOOP (20)
MOVE (4,0,0)
AGAIN
STOPANIM (1)
RESTART
```

```
ANIMATOR 2
INCLUDE (2)
START
SETVAR (1,V100)
LOOP (20)
MOVE (-4,0,0)
AGAIN
STOPANIM (2)
RESTART
```

The object is to shoot the cube and it moves to the right and stops and when it's shot again it moves left and stops. This will be used to create the effect of a sliding door. Could you please help with the syntax to create this illusion as it just isn't quite right?

C.J. HELSBY, Warrington
AMIGA

The reason this routine doesn't work is because it is not possible to have two animators on the same object. The use of the variables are also unnecessary here and should really be saved for more complicated routines. A very simple way to achieve the effect you want is as follows:

```
CONDITION FOR CUBE (2)
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

EDIT ANIMATOR 1 AS FOLLOWS:

```
INCLUDE (2)
START
LOOP (20)
MOVE (4,0,0)
AGAIN
STOPANIM (1)
LOOP (20)
MOVE (-4,0,0)
AGAIN
STOPANIM (1)
RESTART
```

This should do exactly what you want. It works because when the cube is shot a second time it starts reading the condition from the first STOPANIM command and continues until it reaches the second STOPANIM command, then it goes back to the start once more. You can keep going for ever in this way.....Mandy

---

Please could you tell me how to write a routine to climb stairs or steps?

ROGER GREEN, Blyth

You shouldn't really need any routine to climb steps, Roger. Providing your steps are not higher than the maximum climb ability you should just be able to "bump" up them. Load in the Kitgame and turn to face the steps leading to the roof of the Kiosk, now walk towards them and keep walking until you find yourself climbing them and you will see what I mean.....Mandy

---

I find the Kit very user-friendly but I have a problem loading the 3D Kitgame. I try to load it accordingto the manual, select the Border Directory, click on the KG Border and the program loads. When I go to TEST the border screen flashes on and then off immediately and the test screen appears again. I am beginning to think that my machine is at fault, can you help me?

BOB PORRITT, Middlesbrough
AMIGA

When a border is loaded into the Kit you will not be able to see it within TEST screen unless you define the size of the window via SET VIEW WINDOW from the GENERAL CONDITION MENU. Once that is selected you will be presented with the TEST window and the border and a dotted line representing a box which you should drag with the mouse until you have defined the window size you want within the border. Once this is done you will be able to see the border and the environment without any difficulty at all. Another common cause of this is failure to load the KITGAME datafile at the same time as the border, if both are loaded there is no difficulty in this way at all.....Mandy

---

I have a question. How is it possible to enlarge an area beyond the size that it is when first created? How it is possible to create an area as large as the Beachy Head area of the Shuttle Area in the Kitgame? My guess is that it is something to do with the scale number but no amount of fooling around with this will do the trick, in fact, the scale figure is barely mentioned in the manual and I have no idea what its function is. Please help!

ALLAN HERN, Bournemouth
AMIGA

The way to create the illusion of a very large area - and it IS an illusion - is to use the globals to enclose the area you want and colour them as you would the sky so they are not visible. Now select HORIZON OFF and as you wander around you will see exactly what the effect is!

Do make sure that you completely enclose the area with walls, floor and ceiling from the Globals or you will get some very disturbing effects - in other words, never use Horizon Off in an open area. If you wonder what I mean then just load in the Kit, create one cube, select Horizon Off and start to turn yourself around - horrible isn't it? The SCALE is another matter altogether. This is what we use to create what we fondly refer to as the Alice In Wonderland Effect. In other words, you can change YOUR size within an area. Very useful if you wish to create a garden shed or other small area. Use the globals, rescale the area and by only taking a couple of steps forward you should find your nose banging against the far wall of the area! Experiment a little until you create the effect you want.....Mandy

---

Please explain precisely how to see the demonstration 3D Kit Game on the screen. The handbook says "Select TEST from the General Menu". I cannot find the word TEST on any menu. Please help me to be able to see this demonstration program.

DAVID TURNER, Guildford
COMMODORE 64

If you have the disc version of the Kit and you scan the disc you should see the program KIT-DATA9 and KITSCR listed. However, to load the Kitgame you should select LOAD and when the item selector comes up you should type in 9 and the Kitgame should load in.....Mandy

---

I have encountered some things that are not in accordance with the manual. For instance, on loading DATA (no DATAFILE visible) I get the file selector of Figure 2, which does not list KITGAME. It is also disturbing to find that on selecting various files a message comes up "the requested file is not of the correct format". My reaction to that is that your firm put them into the format that they have! I would welcome some help on these points.

C.L. BORE, Surrey

When you are presented with the file selector of Figure 2 you should then select DATA and the datafile menu selector should appear which shows the KITGAME. In a similar way when you wish to select a border you should select BORDERS to bring up the relevant directory. Always remember that to return to the PARENT directory you should click on DF0: (or DF1: if data disc is in a second drive) for Amiga or click on Drive A: or B on Atari ST. If you originally selected LOAD DATA and then tried to load in say a border you would get the message about not being of the correct format.....Mandy

---

Please could you tell me how I can format a disc for saving my datafiles on? The manual says that they need to be formatted in a special way although compiled programs can be saved to discs that have been formatted in the normal way. I don't know how to do the special format required, please help.

SHARON WILLIAMS, Rhuddlan
SPECTRUM PLUS 3

If you have the disc version of the Kit you will find a program called FREESCAPE DATA DISK FORMATTER on side one which will format your discs for you. If you have the tape version then, for obvious reasons that program isn't included and you will have to save your datafiles to tape only.....Mandy

---

I have just bought the program and I am having difficulty understanding how the ENTRANCES work. I created an entrance but couldn't see it anywhere on the screen. Can you please tell me where I am going wrong?

DARREN SEGAR, Ipswich
ATARI ST

The entrance you expected to see, I think, are not the kind of entrances that are created with the Kit. When you create an ENTRANCE it is invisible. It is a point where you wish to place the player (or yourself) within a particular area. For instance, if you build a wall with a door in the centre which you wish the player to pass through you should position yourself on the other side of the door, preferably with your back to it - easily done by walking up to the door and performing a u-turn - and select CREATE ENTRANCE. If you then select GOTO ENTRANCE you should see that the new entrance is shown on the list as ENTRANCE 002. Now go to the other side of the door and create a condition for the doorway such as IF COLLIDED? THEN GOTO (2,1). Now when the player collides with the doorway he/she should be instantly transported to the other side with their back to the door just as if they had walked through it.....Mandy

---

I am having problems trying to get the program to understand the conditions. I have entered some of the Animation routines in issue 1 of the User Group Newsletter but cannot get it to accept any of them.

AMANDA CHARNLEY, Exeter
AMSTRAD CPC464

I am sorry, Amanda, but the reason the routines don't work on your machine is that Animation isn't available on 8-bit computers, only on 16-bit versions. However, all is not lost! See the section on 8-bit routines by George Dixon in this issue to see how simulated animation can be achieved on an 8-bit machine!.....Mandy

---

Please could you print more help on Variables as I still don't fully understand what they are and how they work.

PETER SORENSSEN, Sweden
PC

Your wish is my command. Lots of requests have been received for more on the subject of variables. I'll do my best.....Mandy

HAVE YOU A PROBLEM? LET ME KNOW - IT MAY ALSO HELP SOMEONE ELSE!

SAMPLE SOUND BANKS

I have had quite a few letters regarding making members own sample sound banks. The problems seem to be mainly on the Amiga and the Atari ST versions so we will deal with them here. My thanks to PAUL GREGORY (one of the programmers) for his help with this article.

AMIGA

Copy all the samples you wish your bank to contain on a separate formatted disc and then copy the JOIN/MAKESAMPLEBANK program to the same disc.

Boot the Workbench disc and start the CLI as previously explained. Put the new disc into drive DF0: and type at the CLI prompt:

```
DF0:JOIN DF0:'sample1name'+DF0:'sample2name'+DF0:'samplexname'DF0:'Bankname'
```

For example if you have the samples, BANG, CRASH and SIREN on the disc and wish to create a sample bank called NEW.BNK the command line would look like this:

```
DF0:JOIN DF0:BANG+DF0:CRASH+DF0:SIREN DF0:NEW.BNK.
```

This will create a new sample bank on the disc, to use this bank in the KIT simply start the KIT from the CLI with the following command line:

```
"DF0:3DKIT -sNEW.BNK".
```

ATARI ST

Copy all the samples you wish your bank to contain to a new formatted disc, then copy the JOIN.TTP file to the same disc. With the new disc in the drive, double click on the JOIN.TTP icon. You will be presented with a dialogue box asking for parameters, in the text line of this dialogue box type in the command line in the following format:

```
A:'sample1name'+A:'sample2name'+A:'samplexname' A:'BankName'.
```

For example, if you have the samples BANG, CRASH and SIREN on the disc to create a sample bank called NEW.BNK you would type the following command line:

```
A:BANG+A:CRASH+A:SIREN A:NEW.BNK.
```

This will create a new sample bank on the same disc. To use this from within the KIT you should copy it to the BACKUP version of the KIT that you use and rename 3DKIT.PRG to 3DKIT.TTP. Then when you start the KIT from the desktop you will be presented with dialogue box similar to before. Type in the command line "-sNEW.BNK" and your new sample bank will be loaded instead of the default one.

I hope that this will clear up any confusion over using this part of the Kit. If anyone would like me to cover any particular aspect of the Kit in a future newsletter then please let me know - it is YOUR club so please do let me know what you want.....Mandy

---

HINTS AND TIPS

BORDERS – ATARI ST
By JURGEN THUROW, Germany

To overcome the problem with the split screen border and the colours, as mentioned in the last Newsletter. If you create your borders with Neo, you will have to adapt the colour table of the Area Colours, if you use full screen borders (not split). Therefore you should double the values of the colours you need:

E.g. If the colours on Neo are 7 7 7 the 3D Kit would be 15 15 15, or if Neo is 3 5 1 3D KIT would be 6 10 2 to get the same colours.

Thanks to Jurgen for this tip that will help Atari ST users to be able to create full screen borders without them being spoiled when moving around the different areas.

TO ACCESS THE READ-ME FILE

AMIGA

Quite a few people have had difficulty accessing the README file on the Amiga versions of the Kit. This is a problem on single drive machines, as are all processes involving the CLI. To read the file you must boot to the Workbench disc and start the CLI by opening the Workbench disc's icon and clicking on the CLI or SHELL icon.

Then at the prompt you should type:

"TYPE 3D_KIT:README.KIT"

The machine will then prompt for the 3D KIT disc. Insert it in drive DF0: when asked and the file will be printed to the screen.

TIP BY MARCUS JONES

If you create a staircase which you want to lead the player into another area (you obviously cannot build the staircase right up into the roof and you don't want the player to walk right up to the very top before they encounter the entrance), you should enter a condition for one of the steps - say about half way up - as follows:

16-BIT:

```
IF COLLIDED?
THEN GOTO (e,a)
ENDIF
```

8-BIT:

```
IFHIT  o
THEN
GOTO   e a
END
```

If you are creating a "landing" in a building between floors you will also want the player to be able to descend the stairs to the floor below. Drawing these stairs is, for obvious reasons, quite difficult unless you have a raised floor in your area. One way round this could be to make what appears to be a trapdoor in the floor and enter conditions for it (as above) so when the player collides with it they are transported to the required entrance and area.

Another way this could be done - especially if you don't want the player to get too close to the trapdoor in case the illusion is spoilt upon closer inspection - would be to have a cube placed in front of the trapdoor. Close enough so that the intention of descending the stairs is obvious. Paint that invisible and enter the conditions for the invisible cube instead of the trapdoor.

ILLUSIONS

BY PHILIP DENYER

The 3D Kit lends itself to the creation of illusions very well indeed. If you want to create a secret entrance such as those created in the film Labyrinth, it can easily be done by colouring the wall of the room that the entrance leads into exactly the same colour as the outer wall where your entrance lies. In this way the gap in the wall will not be seen until the player is right up against the entrance.

HALL OF FAME

Sincere thanks to the following members who kindly sent in contributions for the User Group Newsletter during the past two months:

GEORGE DIXON. BOBBY RODRIGUES. MARK SLOAN. DAVID SAMBROOK. A.J.BEVAN. PHILIP DENYER. MARCUS JONES. JURGEN THUROW. PAUL GREGORY. PETER KILNER. STUART RIVERS. ALLAN MARTIN. ANDREW NEILSON and KURT SORENSSEN.

All members are invited to send in contributions for the Newsletters. Everything is welcome from a full blown article to just the odd hint or tip. The more material that is received for the Newsletters the bigger they will be!

If any member would like any specific topic to be covered in the Newsletter then do please write in and let me know and I will do my best to include it as soon as possible.

Letters are also welcome on all topics relevant to the 3D Kit - even grumbles if you have any. I would love to hear from you all so do write in.

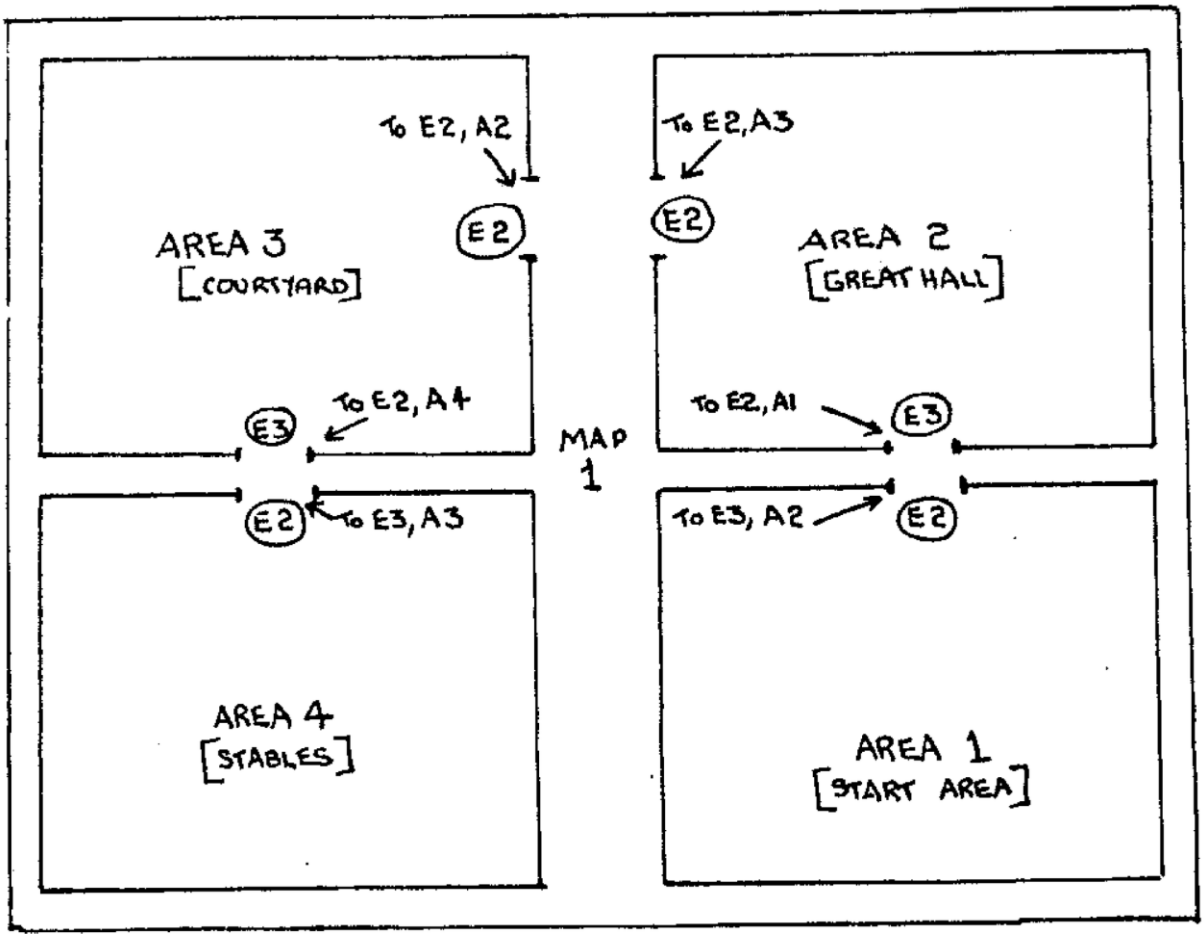
The next Newsletter will be published in October so you have plenty of time to work on some useful routines that you think might be useful for other members. Items for the PD Library are also needed to get things started.

PLANNING AREAS AND ENTRANCES

Before any real work is started on your environments it is much easier, in the long run, to make a plan of the areas you wish to include and the connections and entrances which you will use. One of the most frustrating things to happen whilst working on one area is to start making the conditions for transporting the player to another area and forgetting which area and entrance you wish them to be transported to. It usually means having to go and find the area and check the entrances before returning to the area once more to enter the required conditions.

I usually make sure that I position myself at the correct viewpoint and in the correct position, say with my back against a doorway, creating an entrance and immediately marking it down on my plan. In this way I never forget what the logical connections should be and I ensure that when passing through a doorway I end up with my back to the connecting doorway in another area and likewise for returning once more. It looks rather strange to the player to pass through a doorway and suddenly find themselves right in the middle of a wide open area with the doorway seemingly miles away.

To illustrate what I mean, here is a sample of kind of plan I make before getting to work on a new environment:



8-BIT ROUTINES

BY GEORGE DIXON

I have just received my first Newsletter. What a good read, congratulations! Although you state that it was predominately 16-bit orientated, I found that it certainly gave me food for thought to develop (hopefully) routines that could emulate 16-bit features. I must add that my four teenage children and I are very excited at your ideas for the future of the Club and the Public Domain Library.

Now down to the results of my efforts slaving over a hot keyboard - we ancient 8-bit owners have to suffer the heat from Steam Driven computers.

ROUTINE TO ACTIVATE SENSOR FROM TRIGGER PAD

Within the manual it is stated that SENSORS will shoot at the player when he is in range of the sensor, even if objects are in the way. It is most unfair on poor unsuspecting adventurers to be shot at through walls. The manual hints at the method to overcome this problem, but, is not entirely detailed. Here is my attempt to correct this.

1. CREATE SENSOR.
2. POSITION SENSOR IN ENVIRONMENT.
3. SELECT ATTRIBUTES FOR SENSOR.

At this point may I state that the manual is not entirely clear on how to adjust the range and frequency of a sensor. Within the DIALOGUE box for the sensor. Attributes, the SIZE statement really means RANGE (0-255); SPEED/FREQUENCY; SIZE (cannot be varied). A value of 0 for SPEED means that the sensor will detect but not shoot. Now back to the environment:

4. MOVE THE CURSOR TO 1ST PARAMETER OF SIZE (RANGE) AND CLICK-ON. YOU CAN NOW ENTER YOUR OWN DETECTION RANGE (SAY 10).
5. MOVE THE CURSOR TO 2ND PARAMETER OF SIZE (SPEED) AND CLICK-ON. YOU CAN NOW ENTER YOUR OWN SENSOR FIRING FREQUENCY (SAY 10 WHICH EQUATES TO 1 SECOND).
6. MOVE CURSOR TO "OK" AND CLICK-ON TO EXIT ATTRIBUTES.
7. CREATE A RECTANGLE AND FLIP IT TO ENABLE IT TO BE POSITIONED ON THE GROUND NEAR THE SENSOR.
8. GO BACK TO SELECTION OF THE SENSOR ATTRIBUTES AND POSITION CURSOR OVER INITIAL THEN CURRENT STATES. CLICK-ON EACH IN TURN TO MAKE INVISIBLE CONDITION.
9. CREATE THE FOLLOWING NATIVE CONDITIONS:

```
IFHIT       3    (Rectangle)
THEN
VIS         2    (Sensor)
END
```

To make this "action area" more localised, ie just trigger pad activated, we need to create a further SENSOR then make the speed of SENSOR 1 0 so that it detects but does not shoot. Set SENSOR 2 to your RANGE and SPEED parameters. Now your two SENSOR ATTRIBUTE boxes should appear as follows:

```
        SENSOR 1                          SENSOR 2
POS:   XXX XXX XXX                  POS:   XXX XXX XXX
SIZE: 010,000,001                   SIZE: 010,000,001
CURRENT: VISIBLE                    CURRENT: INVISIBLE
INITIAL: VISIBLE                    INITIAL: INVISIBLE
```

Adjust accordingly. Edit your LOCAL CONDITION as follows:

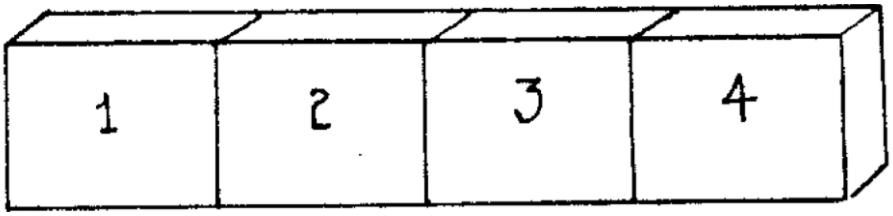
```
IFHIT       3    (Rectangle)
AND
IFSENSED    2  1 (Sensor 1)
THEN
VIS         4    (Sensor 2)
END
```

NOTE: The FCL editor requires that object number and area parameters be included with the IFSENSED condition. This is not mentioned in the manual!

ANIMATION ROUTINE

This is an attempt to emulate the Animation feature available on the 16-bit versions. It is a bit crude in that it is not as smooth as a 16-bit, but, I am sure someone out there can improve on it.

1. CREATE/COPY FOUR IDENTICAL CUBES.
2. POSITION ALL CUBES ON THE GROUND BUTTING UP TO ONE-ANOTHER SO THAT IT APPEARS YOU HAVE ONE LONG BLOCK.



3. SELECT ATTRIBUTES FOR CUBES 2, 3, AND 4 IN TURN AND SET THE CURRENT AND INITIAL STATE OF EACH TO INVISIBLE.
4. CREATE THE FOLLOWING LOCAL CONDITION:

```
TOGVIS      2   (Cube 1)
TOGVIS      3   (Cube 2)
REDRAW
TOGVIS      3
TOGVIS      4   (Cube 3)
REDRAW
TOGVIS      4
TOGVIS      5   (Cube 4)
REDRAW
TOGVIS      5
TOGVIS      4
REDRAW
TOGVIS      4
TOGVIS      3
REDRAW
TOGVIS      3
TOGVIS      2
REDRAW
END
```

You should see what appears to be a cube moving from side to side in front of you. It is possible to break into this action by holding a direction button/joystick direction on to move the cursor to the MENU SELECTOR at the top of the screen.

We can set this animation condition to a particular frequency activated by a Sensor:

1. CREATE A SENSOR AND POSITION IT NEAR TO YOUR CUBES.
2. SELECT ATTRIBUTES FOR SENSOR AND SET THE RANGE TO SAY 10. SET THE FREQUENCY/SPEED TO 0.
3. EDIT YOUR LOCAL CONDITION TO ADD THE FOLLOWING STATEMENTS IN FRONT OF THE EXISTING TEXT:

```
TIMER       150   (= 3 seconds)
IFSENSED    6   1 (sensor=object 6)
AND
IFTIMER
THEN
TOGVIS      2
ETC...
```

Now as you move towards that innocent looking cube, be prepared for a surprise!

USING TIMER TO SET UP A MASTER "CLOCK" RATE

The idea behind this routine is to provide a CLOCK from which various timing functions/time intervals can be set/obtained throughout the environment.

1. CREATE GENERAL CONDITION AND EDIT AS FOLLOWS:

```
TIMER       50                  (= 1 Second)
IFTIMER
THEN
ADDV       001    10            (Add 1 to Variable 10)
CMPV        60    10            (60 Seconds)
IFGT
THEN
SETV       000    10
ADDV       001    11
END
```

2. CREATE LOCAL CONDITIONS THROUGHOUT YOUR ENVIRONMENT WHICH WILL ENABLE THE READING OF TIME INTERVALS FROM GAME START ie:

LOCAL CONDITION 1 AREA 1:

```
CMPV        50    10
IFEQ
THEN
TEXTCOL      3
PRINT        2     7    12
ENDIF
CMPV         5    11
IFEQ
THEN
TEXTCOL      3
PRINT        3     7    14
END
```

MESSAGE 2 to read "FIFTY SECONDS"

MESSAGE 3 to read "FIVE MINUTES".

I have discovered that the 3D Kit Border in use when you go to TEST uses VARIABLE 1 for the SCORE WINDOW/INSTRUMENT. You can use this to demonstrate a second counter. Ie:

```
TIMER        50
IFTIMER
THEN
ADDV          1       1
CMPV         60       1
IFGT
THEN
SETV          0       1
END
```

Go to TEST mode and you will see the SCORE counting up to 60 and then resetting to zero.

CUSTOMISED INFORMATION SCREEN

My aim is to develop a game with the ability to call up an information screen - similar to that found in CASTLE MASTER and THE CRYPT and, in addition, to abort from the game with a single key press. Of course these two functions would have to be carried out from within the compiled stand alone game.

References to pages 42 and 43 of the 8-bit manual in the section "More About Variables" shows that system's variable 121 is for current key presses (ASCII). Could this variable possibly provide a means of "reading" the keyboard? The answer is YES! Using a routine such as the one I am developing (listed below) it could be possible to program various user functions not provided for within the normal key controls.

ROUTINE FOR GAME ABORT

CREATE MESSAGE 2 to say "GIVING UP? HARD LUCK"

CREATE GENERAL CONDITION:

```
CMPV        71   121    (71=ASCII G)
IFEQ
THEN
TEXTCOL      3
PRINT        2     5     7
DELAY      150
ENDGAME
END
```

I aim to use an area to try to use as an Information Screen, ie. read the keyboard for the "I" key (ASCII 73) then GOTO an area with colour set to just one colour (black). Upon this "screen" print messages relating to strength, keys, objects etc. I will inform you of my success or failure!

Incidentally, here is a successful routine partially cribbed from the manual which allows for opening/unlocking a door with a key!

NOTE: Key is object 12, Door is object 8 and Variable 1 is used for storing information on keys held.

```
ROUTINE_ TO COLLECT KEY

IFACTIVE 12
THEN
INVIS      12
SOUND       8
ORV       128      1
ENDIF

ROUTINE TO UNLOCK DOOR

IFACTIVE    8
THEN
ELSE
END
ENDIF
TESTV     128      1
IFEQ
THEN
TEXTCOL     3
PRINT       2   10   14    (see message below)
END
INVIS       8
VIS         9              (Make entrance visible)
SYNCSND    11
ENDIF
```

CREATE MESSAGE 2: "DOOR LOCKED - NEED KEY"

8-BIT KITGAME VARIABLES

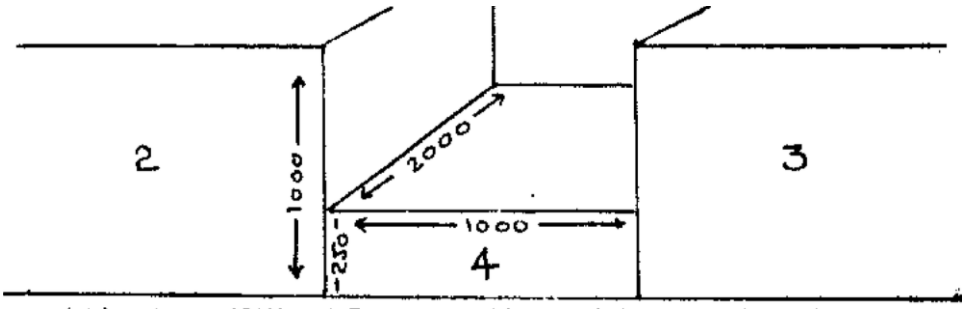
As promised in the last newsletter, here are the variables used in the 8-bit version of the Kitgame. My thanks to the programmers at Incentive for supplying this information to help users to understand the program a little better and to cheat in the game - I know I did!

```
Variable  1 - Time.
Variable  2 - Combination carried?     0 = No   1 = Yes.
Variable  3 - Exit Pass carried?       0 = No   1 = Yes.
Variable  4 - Key carried?             0 = No   1 = Yes.
Variable  5 - Teleport counter    0 = Initial,   1 = Demons Head, 2 =
                                  Desert Island, 3 = Not Operated.
Vvaiable  6 - Score.
Variable  8 - Energy.
Variable  9 - Treasure Found.
Variable 10 - Stamper Position (0-3) Area 9.
Variable 11 - 0 = If on floor, 1 = If on Lift Platform.
Variable 12 - Area 3 mode, 0 = Walking 1 = Crawling.
Variable 13 - End of Game, 0 = No 1 = Yes.
Variable 14 - Energy past minimum, 0 = No >1 = Yes.
Variable 16 - Shoot counter.
Variable 17 - Commodore 64 version Text Clear Flag.
```

16-BIT ROUTINES

First routine was kindly sent in by MARK SLOAN

Mark suggests a variation on the moving obstruction theme discussed in the first newsletter. The idea is to set up an obstruction consisting of three cubes as follows:



Set Cube (4) to MOVEABLE via the Objects Attributes. Create an Animator and edit it as follows:

```
INCLUDE (4)
START
LOOP (75)
MOVE (0,10,0)
AGAIN
LOOP (6)
MOVE (0,-125,0)
AGAIN
SOUND (6)
RESTART
```

Select one of the cubes to be the trigger to start the animation and enter a condition for this as follows:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

This will produce a "pile-driver" type of obstruction which is a little more intimidating don't you think?

Our second routine was kindly sent in by DAVID SAMBROOK

David has a routine that may be of some use to other members. The basic idea was to produce a "radio-controlled" vehicle that can be moved around inside an environment.

David says that it took nearly a day to figure out after much head banging and staring at blank screens and whilst it may not be perfect it does have the benefit of working and should provide a starting place for other members to work from.

The example will consist of some vehicle set up as GROUP 2 and a radio control unit with 4 arrows which when pressed will move the vehicle in the four horizontal directions ie. along the X and Z planes.

There are also two variables used: V40 = Distance moved in X direction each move and V41 = Distance moved in Z direction each move.

To show how it works, these are the listings for pressing the right arrow:

```
IF ACTIVATED?
OR SHOT?
THEN SETVAR (0,V40)
SETVAR (100,V41)
STARTANIM (1)
ENDIF
```

The conditions for the other three arrows are the same with just the values changed for movement in that direction. Ie:

```
V40 set to 0
V41 set to -100
```

The animation triggered is ANIMATION (1) which is created and edited as follows:

```
INCLUDE (2)
START
LOOP (2)
MOVE (V40,0,V41)
AGAIN
STOPANIM (1)
RESTART
```

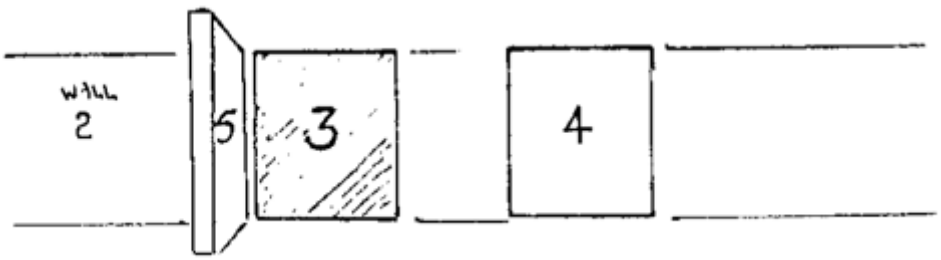
The loop command is used to produce a more fluid motion and not have the vehicle leap from point to point.

This routine could easily be modified for motion vertically along the Y axis by using one more variable in the move command and adding two more arrows to the controller. I would be very interested to find out if it is possible to rotate the vehicle to produce more natural motion so if anyone can come up with anything please do let me know through Mandy.

MAKING DOORWAYS MORE REALISTIC

Some of the routines that I used in the manual for creating doors were, of necessity, rather simple. To create the effect of a door opening to reveal the open door and dark doorway and then closing once more to show the closed, solid door is very simple, looks good in your environments and can be very realistic especially if accompanied by the thudding sound of a door closing.

First we must design our objects by using an expanded cube (2) to form our back wall, a rectangle (3) coloured black and placed flush up against the wall. On top of this we create our "closed" door which will be cube (4) and to the side and flipped to represent our "open" door another cube (5). It should be something like this:



We set cube (5) to invisible via the ATTRIBUTES in the Object Menu or via the ATTRIB icon. Now create a condition for the "closed" door (4) as follows:

```
IF ACTIVATED?
THEN INVIS (4)
VIS (5)
SYNCSND (2)
ENDIF
```

Note that this time we are using the SYNCSND instead of SOUND. This is to make sure that the sound of the door opening is syncronised with the action - there is nothing worse than having the door open followed by a short silence and then a thud

Now create a condition for the "open" door (5) as follows:

```
IF ACTIVATED?
THEN INVIS (5)
VIS (4)
SYNCSND (2)
ENDIF
```

MAKING STAND-ALONE GAMES

AMIGA

I have had quite a few letters asking me exactly how members can successfully implement the MAKE command on the Amiga. The problem is really not with the Kit itself but in the fact that on this machine the disc that is going to be used to contain the finished game should be a made to contain a BOOT. I apologise for not explaining this sufficiently in the manual. The disc can be prepared using the CLI as follows:

With WORKBENCH in the drive (and CLI loaded of course)

Type INSTALL?

The Install program should load and you will be presented with:

```
DRIVE/A,NOBOOT/S,CHECK/S:
```

Insert your formatted disc into the drive and immediately type in DF0: it should look like this on screen:

```
DRIVE/A,NOBOOT/S,CHECK/S:DF0:
```

Now press RETURN. The drive will whir for a moment and you should see the CLI prompt 1>

The disc now has the BOOT and is ready for use with the MAKE command.

To FORMAT a disc through the CLI the command you need is:

```
FORMAT DRIVE DF0: NAME (whatever the name will be)
```

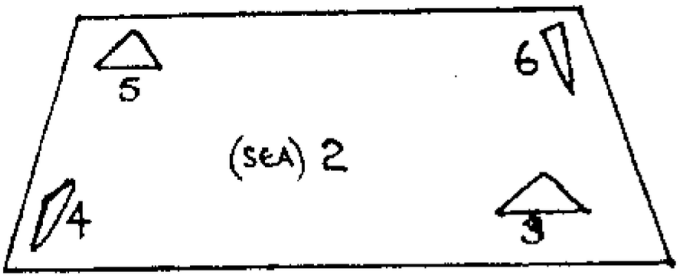
Wait for a moment until you are asked for the disk to be initialised, insert the disk and press RETURN.

When using the MAKE command follow all the on-screen prompts and when you are asked to SELECT MAKE PATH, insert the prepared disk and select OK then continue to follow the on-screen prompts.

When you have made your stand-alone environment you should load it through WORKBENCH and when you see the CLI prompt 1> just enter the name of the game you have selected and press RETURN.

SHARK-FILLED SEA

To create the effect of a shark-filled sea with the sharks apparently swimming round in circles you should first create the objects using one flattened cube coloured blue and four dark grey "flipped and turned" triangles:



Now create four animators (one for each "shark") and edit them as follows:

```
ANIMATOR 1
INCLUDE (3)
START
LOOP (30)
MOVE (-40,0,0)
AGAIN
MOVETO (4440,40,5040)
AGAIN
RESTART

ANIMATOR 3
INCLUDE (5)
START
LOOP (30)
MOVE (40,0,0)
AGAIN
MOVETO (3160,40,5880)
AGAIN
RESTART
```

```
ANIMATOR 2
INCLUDE (4)
START
LOOP (30)
MOVE (0,0,40)
AGAIN
MOVETO (3100,40,5000)
AGAIN
RESTART

ANIMATOR 4
INCLUDE (6)
START
LOOP (30)
MOVE (0,0,-40)
AGAIN
MOVETO (4680,49,5800)
AGAIN
RESTART
```

The whole animation can be triggered by say, selecting the "sea" as the trigger and inserting a condition for this as follows:

```
IF SHOT?
THEN STARTANIM (1)
STARTANIM (2)
STARTANIM (3)
STARTANIM (4)
ENDIF
```

In the animation you will see that each "shark" will glide to the other side of the sea and jump back to the start position and move along once more - thus giving the illusion of each shark taking the place of the preceding one and swimming in a circle. To obtain the coordinates for the MOVETO command (because for obvious reasons yours will undoubtedly be different to mine) you should take a note of the coordinates given immediately after you change the objects status to MOVEABLE in the ATTRIBUTES. As soon as you change to moveable the starting coordinates will be shown and these are the ones you should make a note of for use within the animation.

3D Construction Kit

★ Build and create your own Real Time walk through Virtual Worlds.

★ Includes ready made environments to edit.

★ Features the Freescape 3D Graphics System.

★ Complete with comprehensive manual.

incentive
SOFTWARE

ZEPHYR ONE, CALLEVA PARK, ALDERMASTON,
BERKSHIRE RG7 4QW

©1991 NEW DIMENSION INTERNATIONAL LTD., ZEPHYR ONE, CALLEVA PARK, ALDERMASTON, BERKS. RG7 4QW

3D

CONSTRUCTION
KIT USERS GROUP

3D Construction Kit Newsletter

Issue Number 3
October/November 1991

CONTENTS

EDITORIAL 52
LETTERS 52
HALL OF FAME 59
VARIABLES - VARIATION ON A THEME 59
DEMONSTRATION OF COMMANDS 64
HOW TO GET YOUR GAMES NOTICED 67
16 BIT ROUTINES 68
LOADING SCREENS AND MUSIC 69
HARDER THAN IT LOOKS 69
GETTING YOU STARTED 70
8 BIT ROUTINES 72
EXTRA OPTION FOR CPC6128 USERS 73
INFORMATION SCREEN 73
TWO COLOUR INSTRUMENTS 74
PROBLEM PAGES 75
HINTS AND TIPS 77

3D CONSTRUCTION KIT USERS GROUP

NEWSLETTER Oct/Nov 1991
Issue No. 3

Hints, Tips and much more...

EDITORIAL

Welcome to Issue 3 of the 3D Construction Kit User Group Newsletter.

Goodness me, it certainly doesn't feel as if half a year has gone by already! Doesn't time fly?! But it does mean that games created by you with the Kit are starting to be produced now. This month I have been lucky enough to get the chance to see some of them. Three of them stand out in particular as being very professionally produced. They are PLANET OF THE DALEKS by Steve Hilder and RESCUE and RESCUE 2 (the sequel) by Paul Ramsell. All of these were produced on the Amiga - I will, no doubt, be seeing games produced on other machines very soon. Planet of the Daleks is not on general release yet but I will let everyone know the details when I receive them. Rescue and Rescue 2 are available from Deja Vu Licenceware, 25 Park Rd, Wigan, Lancs, WN6 7AA at £3.50 (UK), £3.75 (Europe) and £4.(R.O.W). I really recommend that all Amiga owners get Rescue and Rescue 2 if they possibly can. Not just because they are very enjoyable games but they demonstrate just what can be achieved with the Kit. There are excellent loading screens, instructions screens, sound FX or music (very pleasant it is too!). The standard of all three games is excellent!

I had a suggestion this month that I will pass on to you all to see what you think - after all, this is your Club so your wishes are my commands. The suggestion was for the formation of a telephone helpline, where any members wishing to offer their help or advice to other members and exchange ideas etc, be included in the Newsletter. If you think this is a good idea then let me know. If anyone would like to offer their services then all you have to do is to write in with your name, address, telephone number (if you wish to offer telephone rather than postal help) and your computer, and I'll publish them with pleasure. This would also be of immense benefit to overseas readers if they had contact nearer at hand. I think it would also make the User Group extremely friendly if members had direct contact with each other. Anyway, its up to you, let me know what you think.

Quite a few overseas readers have sent me stamped, self addressed envelopes with stamps from their own countries but these are of no use to me at all. If you ask your post office to supply you with an International Reply Paid Coupon (Coupon-Response International or Union Postale Universelle) that will be just right. Speaking of stamps, I have had so many letters from all over the world that I now have three carrier bags full of them and our house is fast becoming a phyl... philat... stamp collectors paradise! I am now getting around 35 letters a day - keep on writing please, I love to hear from you - but for obvious reasons there may be a delay in replying to them all so, if you are waiting to receive a reply from me please be patient. I will reply to them all as soon as possible. Reading your letters, especially if they contain routines/contributions for the Newsletters, is the main pleasure for me in running the User Group. You are all so friendly that I wish I could convey this warmth and friendliness within the Newsletters so that you can all share in it.

Well, that's about all from me for this issue. I will be seeing you all again in December with Issue 4 when I hope to be able to send Christmas greetings all around the world. I hope that by that time I will be able to tell you about more games I have received from you! *…….***Mandy**

LETTERS

Dear Mandy,

I find the 3D Kit package quite interesting, but I have a few queries: The rear cover of the newsletter (Issue 1) shows a picture of the menu bar which contains the word "PRINT", but my menu does not contain this word. How do I get round wheels as on the car shown on the box? In the June issue of CU Amiga, there was an advert for the 3D Kit in which a user described how he made a game and used one of the control panels from several included in the Kit. How many borders should be on the disc? Mine only has two (KG and DR). When I use LOAD OBJECT from the menu, I find one object already there (Chopper), which when loaded creates a picture of a helicopter. Is this correct? Finally, when I play the Kitgame, I cannot find a way to open the treasure chest on the Desert Island. I did try removing the lid from the chest, using the editing controls but then I could not enter the chest to descend the staircase as shown in the video. Can you help? I have a 16 bit version of the Kit.

A. G. Simpson, Walthamstow

I'm sorry if I have confused you, Mr Simpson, but when I was designing the cover of the first Newsletter I used a screen shot of one of the very early versions of the Kit (before it was finally produced). Don't worry, nobody has missed out, there is no PRINT command on the versions that were finally released. The way that "round" wheels are produced is by using a lot of small inverted pyramid shapes which, when joined together, do give a round effect. There are only two borders provided with the Kit. Yes, the Chopper is an object provided on version 1.0 and 1.1. The way into the chest on the Desert Island is to find the key which is hidden at the top of the palm tree. Just "bump" yourself up the tree to "climb" it.....Mandy

---

Dear Mandy,

I really enjoyed reading the first Newsletters. Especially the bits about animation and special programming hints for better effects, those were extremely interesting. I hope there will be a lot more animation hints and algorithms in the next newsletters. It's a pity there were so few pages and hope that, as you suggest, more readers send in routines to pad out the pages of future issues. I am enclosing some hints and tips that I would like to share with everyone that I discovered whilst creating my outer space game called Robolab.

Jurgen Thurow, Germany
ATARI ST

Yes, Jurgen, the more hints and tips, routines etc that I receive will determine the size of the Newsletters. You will see that it has already grown from Issue 1. It not only makes life easier for me in producing the Newsletter but a wider range of ideas is so much better. If it was just my ideas all the time the Newsletters would become uninteresting very quickly indeed. All members are invited to send in hints etc, even a very small one is welcome and will be used. When a package is as new as this one all information is valued by the other members.....Mandy

---

Dear Mandy,

Just got the first newsletter, liked it, though the stuff on animation wasn't a lot of use. I hope the 8 bitters do get a reasonable say in later issues. You asked for comments on the Kit. I have a few. It's brilliant, easy to use and very versatile. Since I got my copy I haven't done anything else on my computer and I've had it nearly a month. There are three faults with the Kit and the manual is one of them. It is just a list of functions, with insufficient explanations and no tutorial. Saving is where the most serious bug occurs. Very often the kit will lock up when you try to save. When it happens the only thing you can do is reset, reload and start again from a previous save. The more you save the more it happens. The idea of the PD Library is excellent. I sent my first game off to Robot PD. This was so people who don't have the Kit can see what it can do. Is it OK to send games off to both yourself and ordinary PD libraries? Lastly a question, can you transfer the value of one variable to another?

John Hilton, Bristol
AMSTRAD CPC6128

With a strictly limited number of pages to work to it wasn't possible to go into greater detail on so many aspects of the Kit as I would have liked in the manual. The problem with saving on the Amstrad version has been noted and the programmers are working on a solution to this. As soon as I get any further information I will let everyone know. I appreciate just how frustrating this must be but I am confident that it will be sorted out as soon as possible. Actually I have had very little response for the PD library so far and may have to drop the idea. However, there is no reason why people cannot send their games to both the User Group PD and other PD Libraries but do make sure that they are not Licenceware as in that case it would be a breach of contract to do so.....Mandy

---

Dear Mandy,

I am writing to let you know what I like about the 3D Construction Kit. It's amazing just what this program can get my 128K Spectrum to do, (I thought this sort of thing was only possible on those very expensive dream machines, that you see at computer shows), but this has proved me wrong. I thought including a demonstration video with the software was also a great idea, as getting to grips with software can be difficult at first. It not only shows how it is done, but also gives you ideas for your own environments and was very interesting to watch in its own right. Also I am sure joining the user group will be of great help to me. The first edition (June 1991) Newsletter was very interesting to read, and I found it has given me ideas even if it was all based on 16 bit versions of the Kit. I would like to take this opportunity to wish you the best of luck with the User Group.

J.P.Messenbird, Mitcham
SPECTRUM 128K

Thank you for your good wishes, they are appreciated. I am delighted that you are enjoying the Kit so much. The Tutorial Video was a Domark Promotion and was not available with the Computer Club versions of the Kit. I'm afraid, it is not possible to obtain the video separately in case anyone was wondering about it.....Mandy

---

Dear Mandy,

I just thought I would write a few lines once again, without being a pest, as I know you must be kept quite busy. If you remember when I last wrote, I explained the problem I was having when using my Kit program, it crashed without warning. Well, just to let you know, I wrote to Incentive first, explaining the problem and I received a nice letter back from Anita Walker (Office Administrator) asking me to return my faulty disk. This I did and within a short time I received an upgraded version (01.200) of the 3D Kit, minus the bugs, and even my original postage was refunded. There is a text file on this version which explains the problems and improvements made. Also version V01.200 includes a few more objects and, believe it or not, a type of naughts and crosses game. What more can I say? CONGRATULATIONS and WELL DONE Incentive!

Gordon Barr, Kilmarnock

Dear 3D Construction Kit User,

I thought I would just drop you a line via the User Club Newsletter to thank you for your support and to say that I hope you've found the Kit everything you wanted it to be. If you have any bright ideas on how we could improve it in the future I'd be delighted to hear them. I thought you'd like to know that we're planning to publish a library disk of 3D objects for use in the Kit. If you've designed any 3D objects which you feel are particularly spectacular and would like them to be featured on the disk, please send them to me at Domark's address, or to Mandy, and we'll do our best to include them. The objects can be modelled on any subject - we only ask that they're interesting and well designed. (a full credit and free Domark product will be given to creators of included objects). Lastly, we've just released a compilation of 4 of Incentive's best 3D games called VIRTUAL WORLDS, featuring Driller, Total Eclipse, Castle Master and The Crypt. It's in the shops now so if you missed out on any of the games at the time, here's your chance to catch up. A treat not to be missed, I think. Bye for now, Look forward to hearing from you.

***Matthew Tims*, Publisher, Domark**
Domark Ltd, Ferry House, 51-57 Lacy Rd, Putney, London, SW15 1PR

Dear Mandy,

Having just recently acquired my Amiga and 3D Kit, I'm really looking forward to learning as much as I can about my computer and the Kit which I feel I will with yours, and other members help. Also I wish the club every success in the future. I would be grateful if you could help clarify some points for me. I'm a bit unsure about Variables, say variable 40, to do a particular function, will that variable be forever set to that function or can it be re-used differently in a different game, environment etc? If I have a door, which I've instructed to close by activating a rectangle on a pillar, how can I instruct the door to open (or the other way round) by activating the same rectangle? Do I need some sort of a variable?

David Spencer, Manchester
Amiga

When you create a new environment all the variables are cleared ready for use each time. It is only during a particular game that variables continue to store numbers etc so don't be afraid of using them. Each time you load in the Kit the slate is wiped clean, ready for work on a completely new environment. If you load in a datafile from a previous environment then the variables will be automatically set to the values you set in that environment only. The first two Newsletters have articles on the use of variables together with some examples for you to use. This Newsletter is no exception and contains the final article on variables, this time from an 8 bit users point of view to complete the set. I hope you find them interesting and that they will clear up any fears users may have about them. In answer to your other question, you don't need a variable to open and close the door using just one trigger. What you need is to simply ask the system to check if the door is open or closed and to act accordingly when the trigger is activated (the rectangle pressed). This can be done as follows:

```
IF ACTIVATED? ... ..... if our trigger on the pillar is pressed.
AND VIS? (7) ...........and the open doorway (7) is visible.
THEN INVIS (7) ........ make the open doorway (7) invisible.
VIS (8) ............... make the closed door (8) visible.
ELSE IF SHOT? ......... if our trigger on the pillar is pressed.
AND VIS? (8)........... and the closed door (8) is visible.
INVIS (8)............... make the closed door (8) invisible.
VIS (7) ............... and make the open doorway (7) visible.
ENDIF
ENDIF
ENDIF...................there are 3 IF's so we have 3 ENDIF's.
```

I think you will find that this will do the trick nicely. Don't forget to make the open doorway invisible both initially and currently via the attributes before you start.....Mandy

---

Dear Mandy,

I am very pleased with the results of my 3D Construction Kit and would like to know if the RUNTIME MODULE is ROYALTY FREE and if games created with the Kit can be released as Shareware?

Mr R.Stirling, N Ireland

The information you are looking for can be found on page 16 of the 16 bit manual (at the end of the "MAKE" explanation) and the second to last paragraph of page 44 of the 8 bit manual (Using the Compiler section). It says "Free distribution of stand alone runnable data files is permitted providing that the 3D Construction kit is acknowledged on screen and in any accompanying documentation". In other words, you can do as you wish with games you create but to give acknowledgement that you used the 3D Construction Kit - something along the lines of "This software was produced with the aid of The 3D Construction Kit".....Mandy

---

Dear Mandy,

Many thanks for replying to my letter re my query on loading borders into the Compiler of 3D Kit. I have loaded the Kit game since writing to you and made a stand-alone game with Border Screen loaded okay. I do agree it seems as if it was a loading problem. I did make a couple of copies of the Kitgame Screen and tried loading these into the Compiler - with the game of course - I think it was an error on my part in the saving level not being correct. The code (or badly saved screen) saved by me sounded as if it was loading into the compiler okay, then the rest of the on screen prompts were followed through until the end - a stand-alone game resulted and worked - but with no border screen. You will probably find that if you had a badly saved screen it will appear to be loading okay and it doesn't seem to corrupt the compiler. I feel that at the border loading stage of the compiler program it would be a good idea if you could press BREAK or ANY OTHER KEY if there was an error in loading and start to reload (as many times as was necessary) instead of having to finish off and save the compiled program as it is, and if you find afterwards that your border hadn't loaded you have to go completely through the whole procedure again from the start - that's the only fault I can find with the compiler. As regards the 3D Kit program generally it is absolutely excellent, I say what a superb program for the Spectrum. Many thanks for Newsletter 2 (Aug/Sept issue) - very interesting. The simulated animation routine plus the other bits by Mr George Dixon were really excellent - it helps a terrific amount, especially with the diagrams, I hope Mr Dixon will provide more routines - keep up the good work. Also your explanation of the use of Variables was very easy to understand, I like your style of writing - so straightforward - thanks. If all the future Newsletters are like this they will be worth looking forward to. It seems from the letters in the Newsletter that the old Speccy doesn't seem to have the troubles that the other machines have. Once again, thanks for your reply and keep up the standards.

Ron Dungey, London
SPECTRUM

Dear Mandy,

I think the 3D Construction Kit has a very good price-quality relationship. You get a superb device for unfolding your own creativity and the newsletter is a brilliant idea to explore the possibilities of the system together. I had a problem with the save and load data part and couldn't figure out what was wrong. But through issue 2 of the Newsletter I found out that I could replace my version V1.1 for version V1.2 which overcomes this problem. I have worked with CAD programs like AUTOCAD and CADVANCE and have designed 3D objects with them through a wire-mesh system. What I like about the 3D Construction Kit is its direct and fast approach. What I miss are more basic geometrical forms like circular forms (necessary for mobile objects like cars etc), and a degree-wise rotation in all planes; furthermore a relative coordinate system in addition to the absolute C.S. which is helpful in construction, especially if you have made a scale drawing. Another suggestion could be that you have negative forms which you can subtract from positive forms. Like this you can construct an attic with two roof forms - one positive and one negative. I think the continuous colour shading which you can achieve in VGA mode is great. I hope the 3D Construction Kit will develop further with time and will also be able to use extended hardware to its full extent. For example the present resolution is 320 x 200 whereas VGA can use 640 x 480 (this would reduce the sawtooth-effect). Also the use of extended memory would enhance the program. What I am dreaming of in the near future is a system with the graphic images of a "Renderman" program (a program with photo-realistic effects where you can imitate different materials and which has superb light source and reflection options) and the uncomplicated directness of the 3D Construction Kit.

Daniel Bernoulli, Germany
PC

Actually, Daniel, you don't have to wait any longer for your dreams to come true. The SUPERSCAPE Virtual Reality Toolkit will be launched this Autumn! This truly amazing system, developed by Incentive/Dimension International has everything you could wish for. There are so many features that I cannot list them all here but to give you some idea here are just a few of them: Superscape features a Fully Interactive Editor which allows views in perspective 3D plan, or side and front elevations with all aspects of objects able to change in real time.

Multiple Viewpoints which may be either user controllable, attached to static or moving objects, and may themselves move and track other target objects. Object Control can be either first person viewpoint (eg driving a car) or second or third (eg flying a model aircraft). Multiple Moving Objects with realistic physical movement model incorporating friction, gravity, collisions and restitution. Users may take direct control of objects, they may move along pre-set routes or they may use the in-built programming language for intelligent control. Objects may launch projectiles which can then behave independently.

Objects can rotate freely in all three axes, under user control. Object Bending allowing sophisticated movement modelling of objects which are traditionally difficult to animate. Transparency (including colour tints) is possible and especially suitable for windows. allowing a visual link between interior and exterior spaces. Multiple mobile point light sources together with ambient lighting. All the shapes you could wish for are possible such as circles, cones etc. VR resolution/size equates to size of British Isles with 1mm accuracy. Update speed variable up to 70 frames per second. Image resolution of 640 x 480 x 256 colours. With network capabilities with up to 8 workstations sharing the same virtual reality. Superscape offers much, much more than this and is designed to cater for design in the building industry, landscaping, interior design, research, space planning and creative services such as Cartoon/animation specialists, Film/TV production companies and Advertising agencies. There will be full backup/training and support but, the one drawback for most of us ordinary home computer users. will of course be the price. Superscape systems start at £12,500 but include the hardware ie. Computer (Gulp!). Full details are available from Incentive.....Mandy

---

Dear Mandy,

With reference to the last Newsletter, I noticed that there was only one reader with an Amstrad CPC6128 - all the others were for AMIGA, ATARI, mostly!!?; there was one CPC464, where have all the other CPC's got to?, never mind perhaps our numbers will increase as time goes on. I was very interested in the article by David Sambrook and the one regarding a routine for creating more realistic doors and doorways, it has given me an idea, for I am in the process of making a "walk-through" of my flat (and there are many doors to contend with, also cupboard doors). Bearing in mind that my machine is the Amstrad CPC6128, I have a couple of queries regarding the 3D Kit. How does one CAT the disc to see how much space is left for further saving of Progs? As it is I have NO WAY of seeing what I have on disc or how much room I have to spare. How can I get a line vertical? I've tried the TURNING icons in all sorts of ways but still can't do it. (I did manage to do it once but believe it or not I've forgotten how I did it!) Is it possible to make a back-up copy of the 3D Kit? I assure you it will only be for my own use. This is in case of accidental damage to the original disc. I'd be grateful for your advice.

George Baxter, Sevenoaks
AMSTRAD CPC6128

A fair proportion of the User Group members own Amstrad CPC's both 464's and 6128's, George, it is just a matter of time before they begin to see more of them through the pages of the Newsletters. The 8 bit versions are a lot "newer" than the 16 bits (these were released a couple of months before the 8 bits), so they haven't had as long to become familiar with the Kit. I'm afraid there is no way to CATalogue the disc under program control but perhaps this feature can be incorporated in future versions - I'll pass the suggestion on to the programmers. Use the POINT in conjunction with the TURN icons to get your line in the position you prefer. You can make one backup copy for your own use - in fact it is recommended in the manual that you do so for safety reasons, just in case you damage your original.....Mandy

---

Dear Mandy,

My name is Mieke (Annemieke) Van Der Poll-Vervest. I am a 45 year old woman. When I sent you my registration card I forgot to mention if I was male or female, so I received your Newsletter addressed to Mr Van Der Poll instead of Mrs. At the end of May this year I was staying for a short holiday with my brother and sister-in-law in Wales. Whilst there I bought some computer magazines and in one of them I read about the 3D Kit and immediately wanted to buy it but it wasn't generally available at that time. So it was only when back in Holland in July that I was finally able to buy it. I've been using the Kit ever since and I enjoy every minute working with it.

I followed the instructions and started building a house with several rooms in it. I am getting quite familiar with the basics of designing things, going through doors etc and I've started my first little animation, I built a garden with a swimming pool and created a simple figure who is swimming in it. I do not understand the whole language of the Kit yet, especially working with variables, but I think I have about the same problem as you, seeing things too difficult in the beginning and then, after trying out some things for a while I begin to understand that it is all much easier than I had thought. I hope to read a lot of tips in your Newsletters and when I have something of use for others I will send it in.

I wish you and your family a lot of success and fun with the program and the User Club. I think making a public domain club is a very good idea and if I am able to make a nice program I would love to share it with others and vice versa.

Mieke Van Der Poll, Holland
PC

My apologies, Mieke, for presuming that you were a man. It is difficult sometimes to get it right especially with names that I am unfamiliar with. I remember waiting 3 years before writing to a gentleman reader of Adventure Probe magazine to ask if he were male or female (I didn't want to insult him) but as he is called Paraskevas Tsourinakis I just had to ask in the end. If I have made a similar mistake with anyone else then please do let me know. We have members all over the world and it isn't always possible to get it right in every case and, as I am not really into women's lib, I follow the old rule of "when in doubt, choose Mr". I am so pleased to hear that you are enjoying using the kit so much. Actually I am sure other members would be interested in knowing how you programmed the animation of the swimmer in your pool so you don't have to wait until you have a suitable routine to send in, as that one will be most informative. In case anyone is wondering about my reference to Adventure Probe, it is a magazine for computer adventure players that I edit (plug, plug!, so if anyone would like further details then let me know and I will be delighted to oblige.....Mandy

---

Dear Mandy,

I really had to write to thank you for sending me the latest Newsletter - my first sample copy. I hesitated about sending for it at first as I honestly thought that "Newsletter" meant just that - a short letter sized paper with some news on it! How wrong I was, and how pleased I am that I decided to send for a sample copy! I am now going to become a full member of the User Group. The hints and tips, letters, articles - in fact, everything, was most interesting and very useful indeed. Thanks to everyone who sent in the articles etc, I am now beginning to use the Kit to its full potential (well, at least I hope so!). I was particularly pleased with the explanation of ENTRANCES as I too had thought that when you created an entrance it automatically appeared where you wanted it to be and you could just walk through it to another area! I have just one little grumble, I wish that the manual had stated that only 60 objects per area were possible! I couldn't understand what was going wrong with my environment until I sent you my datafile to check out.

Simon Davidson, Huddersfield
AMIGA

Yes, I'm afraid that as soon as you create more than 60 objects in any area things can start to go wrong in very peculiar ways, from areas suddenly having their names changed to objects appearing in strange places, in fact, all sorts of things. If anyone experiences strange problems with their datafiles it is always worth checking the number of objects first. There are ways to overcome this and some hints are included in this newsletter on that particular aspect. I am always happy to check out your datafiles provided they aren't send in as stand-alone environments and if I cannot come up with the answer, I know a man who can!.....Mandy

---

HALL OF FAME

Sincere thanks to the following members who kindly send in contributions for the User Group Newsletter during the past two months:

FERNANDO CARVALHO, JURGEN THUROW, MIEKE VAN DER POLL, GEORGE DIXON, BRIAN WOODLEY, JAMES NEILL, STEPHEN FLANAGAN, PAUL RAMSELL, LEON BOROUKH, J.C.LATTY, A.P.SMITH, GEORGE BAXTER, RICHARD HORN and D.G.MARLEY.

Everyone is cordially invited to send in contributions, no matter how small they might be. Everything helps! Next issue will be in December!

VARIABLES - VARIATION ON A THEME

Further to Mandy's article on Variables in the last Newsletter (Issue 2 AUG/SEPT) I would like to enlarge upon this and attempt to explain some of the variable manipulation commands. This article is written from the 8-BIT slant, but, might be of some use/interest to 16-BIT users.

BACK TO THE BEGINNING

A variable can be thought of as a slot or mailbox within the memory of the computer. This mailbox has for the purposes of the "3D-KIT" a fixed address or variable number between 0 to 127 (8-BIT), but we can only use variables 0 to 111 to store information ourselves. The remaining 16 variables (112 to 127) are known as SYSTEM VARIABLES and are used by the "3D-KIT" control program (SYSTEM) to keep track of such things as the player's viewpoint position within the environment. Although we cannot use these 16 System variables for normal data storage we can still alter the values held in the variables to good effect. Some particularly interesting effects can be created ! All will be revealed later!!!!

BIT BY BIT

In the "3D-KIT" (8-BIT), a variable can be regarded as an 8-BIT store capable of holding a number in the range 0 to 255. What is a BIT? Well, a computer can only understand one thing: the presence or absence of electric current which can represent 'YES' or 'NO', 'ON' or 'OFF', or '1' or '0'. This state of being 'ON' or 'OFF', or '1' or '0' can provide a means of counting or representing numbers/values using only 8 digits. When counting in DECIMAL we use the digits 0 to 9. To carry on counting after 9 we must go back to 0 and carry a 1 into the "TENS" column and so on thereafter. We know that $152=1\times100+5\times10+2\times1$ and we can also write 152 in its expanded form by expressing it as, $1\times10^2+5\times10^1+1\times10^0$. Any number raised to the power of zero (10^0) is equal to 1. The BINARY system uses only digits 0 and 1---(great that's all a computer knows-remember?). When we count in BINARY the same rules apply as in the DECIMAL system, but this time, after counting to 1 we go back to zero and carry 1 into the next column left. In binary, each position or column represents a power of 2 rather than a power of 10. The BINARY number 0111 can be written as:-

$$(2\times2)+(2\times1)+1 \text{ or } 1\times2^2+1\times2^1+1\times2^0=7$$

Each BINARY column position or BINARY digit is known as a BIT (Binary digit). 8 BITS are known as a BYTE.

A variable's 8 binary digits (BITS) are numbered 0 to 7 from right to left, each BIT representing a power of 2. Refer to the diagram below; you should see that as you move from right to left, so each BIT position doubles the previous value.

BIT NUMBER	7	6	5	4	3	2	1	0
POWER OF 2	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
POSITIONAL VALUE	128	64	32	16	8	4	2	1

If all of the POSITIONAL VALUES are added together, we find that one 8-BIT variable can hold a maximum value of 255 DECIMAL or 11111111 BINARY.

HIGH AND LOW

This idea can be extended over two variables (TWO BYTES) to allow 16 BITS to represent numbers between 0 to 65535.

i.e.

VARIABLE 2

BIT No.	15	14	13	12	11	10	9	8
POWER OF 2	2^{15}	2^{14}	2^{13}	2^{12}	2^{11}	2^{10}	2^9	2^8
POSITIONAL VALUE	32768	16384	8192	4096	2048	1024	512	256

VARIABLE 1

7	6	5	4	3	2	1	0
2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
128	64	32	16	8	4	2	1

Once again adding all the POSITIONAL VALUES together gives us a maximum value of 65535.

If two variables are used in this way for storage of numbers over 255 then the variable holding values 256 upwards (variable 2 above) is termed the HIGH BYTE and the other variable is termed the LOW BYTE. Because the LOW BYTE of our 16-BIT store can only hold a value upto 255 we need to have the means of working within the HIGH BYTE when we go above 255. If we wish to set the store to a particular value above 255, then we must first determine by how much our parameter value would overrun the LOW BYTE i.e. how much should be stored in the HIGH BYTE. This is easily achieved by division of our value by 256, this being the first POSITIONAL VALUE of our HIGH BYTE or the value at which a binary CARRY is set when counting 1 up from 255. The value obtained from this division is stored in the HIGH BYTE with the remainder being stored in the LOW BYTE.

e.g. We want to store 7000 in variables 1 & 2

7000÷256=27 (6912)

7000-6912=88

Therefore we would store the value 7000 in the following way:-

```
SETV 88 1     (SET VARIABLE 1 TO 88.....LOW BYTE)
SETV 27 2     (SET VARIABLE 2 TO 27.....HIGH BYTE)
```

8-BIT VARIABLE COMMANDS

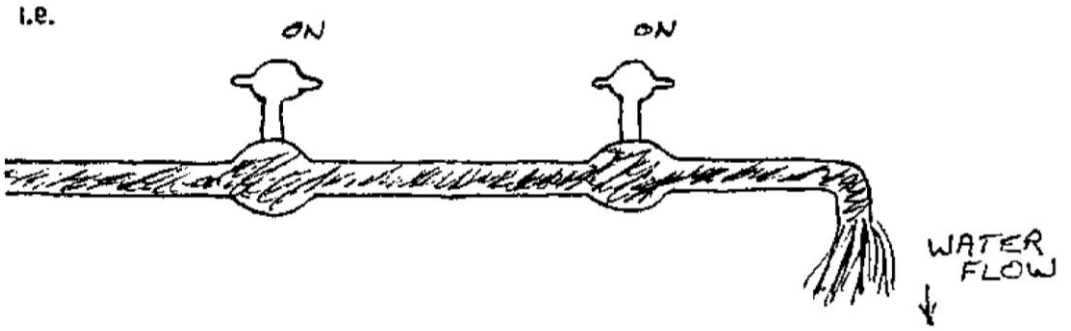
Hopefully, I have not lost too many of you but that you all have got the 'BIT' between your teeth!!!!! I feel that an understanding of the construction of a variable is necessary in order to make full use of the '3D-KIT FCL'. I will now try to explain the 8-BIT commands that allow manipulation of the variable values.

8-BIT commands are:- ADDV; ADCV; ANDV; TESTV; CMPV; ORV; SETV; SBCV; SUBV; XORV.

Of these ten commands which can directly access/read or alter the contents of a variable, I will explain the use of four:- ANDV; TESTV; ORV, and XORV. I feel that the remaining commands are explained sufficiently within the '3D-KIT' MANUAL. These four commands rely upon an understanding of the POSITIONAL VALUES of each BIT of a variable as they require these values as their parameter to carry out BINARY LOGIC functions.

ANDV

Consider a water pipe with two taps along its length controlling the water flow. You will only get water flowing through the pipe if both taps are turned ON.



This is the basis of the AND function in that you will only get a result of YES(1) if both values are set to YES(1).

The ANDV command is similar to trying to pass current through the BITS of a variable compared to the BITS of a parameter (represented in BINARY). The command looks at each BIT of the variable comparing it to its equivalent BIT (with same POSITIONAL VALUE) in the parameter. If two equivalent BITS (variable to parameter) are set to 1 then a 1 results; if one or both of the two equivalent BITS is set to 0 then a 0 results. The result is stored back into that particular variable BIT position.

i.e. ANDV 8 1

This means that the number 8 is to be AND'ed with variable 1. For this example, let us assume that variable 1 is set to 8 already.

Decimal 8 is equivalent to 1000 Binary.

BIT NUMBERS	7	6	5	4	3	2	1	0
BINARY VALUE OF 8	0	0	0	0	1	0	0	0
CONTENTS OF VARIABLE	0	0	0	0	1	0	0	0
RESULT OF ANDV	0	0	0	0	1	0	0	0

If variable 1 were set to some value other than 8, say for instance 64, then the result would be quite different:-

BIT NUMBERS	7	6	5	4	3	2	1	0
BINARY VALUE OF 8	0	0	0	0	1	0	0	0
VARIABLE SET TO 64	0	1	0	0	0	0	0	0
RESULT OF ANDV	0	0	0	0	0	0	0	0

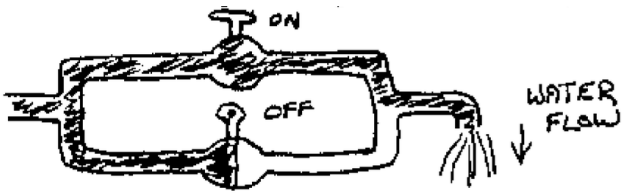
As can be seen from the diagram, using the ANDV command will only return a 1 if two equivalent BITS are set to 1. Because the result is stored back into the variable tested, the previous value of that variable could be corrupted. For this reason I recommend the use of the command TESTV.

TESTV

This command carries out an ANDV between the parameter and the variable, but in this the result is not stored into a variable but remains as a 1 or 0 to be read by a command such as IFEQ. Such a command is to immediately follow the TESTV command.

ORV

Consider the following drawing of our water pipe:-



I hope that you can see that water will flow if one OR both of the taps are turned ON. This explains the OR function.

The ORV command simply looks at each individual BIT of the particular variable comparing it to its equivalent BIT of the parameter value you set. A 1 is set in that BIT if either OR both of the two BITS are set to 1.

i.e. ORV 16 1

This means perform a logical OR between the value 16 and variable 1:-

BIT NUMBERS	7	6	5	4	3	2	1	0
BINARY VALUE OF 16	0	0	0	1	0	0	0	0
CONTENTS OF VARIABLE	0	0	0	0	0	0	0	0
RESULT OF ORV	0	0	0	1	0	0	0	0

As you can see, this provides a means of setting a 1 or YES into a particular BIT of a variable. This could be used for storing information relating to objects carried say for instance is a certain numbered key carried(?). One variable could store information on upto eight keys. You would simply say that each of the eight BITS of the variable related to keys 1 to 8. As you pick up each key found around the environment, so you would set the relevant BIT in the variable to 1 using the ORV command

i.e.

BIT NUMBER	7	6	5	4	3	2	1	0
KEY NUMBER	8	7	6	5	4	3	2	1
ORV VALUE	128	64	32	16	8	4	2	1

It follows that if you were programming for collection of key 6, then you would enter the command;

```
ORV 32 1 (if using variable 1)
```

The TESTV command provides the means of reading this information. For example, if we want to check if key 6 has been collected just enter the command:

```
TESTV 32 1
TESTV 128 1 if you were checking for key 8.
```

In the last NEWSLETTER (ISSUE 2) I explained a routine for collecting a key and opening a door with the correct key.

XORV

XORV is a slightly more complicated command in that I cannot think of a simple drawing analogy. All I can say is that you study my diagram below:-

PARAMETER BIT	VARIABLE BIT	RESULT OF XORV
0	0	0
1	0	1
0	1	1
1	1	0

I hope you can see that this command (EXCLUSIVE-OR FUNCTION) only sets a 1 as a result if only one of the two equivalent BITS being compared is set to 1. If both BITS are set to 0 or both BITS are 1 then a 0 is the result.

We can use this command to good effect for toggling FLAGS i.e. switching switches ON and OFF.

e.g.

SWITCH 8 ON

SWITCH No.	8	7	6	5	4	3	2	1
XORV 128	1	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0	0
RESULT XORV	1	0	0	0	0	0	0	0

SWITCH 8 OFF

SWITCH No.	8	7	6	5	4	3	2	1
XORV 128	1	0	0	0	0	0	0	0
VARIABLE	1	0	0	0	0	0	0	0
RESULT XORV	0	0	0	0	0	0	0	0

DEMONSTRATION OF COMMANDS

There now follow some routines that do nothing more than (hopefully) demonstrate the variable commands. When you have programmed in each section, I want you to go to the TEST screen where you will be able to see the results of your variable manipulation in the SCORE window.

ANDV/ORV

The aim of this routine is for you to first press key "T", you should see the SCORE set to 8. Now press key "C", the SCORE will now increase to 10.

1. CREATE and EDIT the following LOCAL conditions:

```
CMPV 84 121    (THIS IS LOOKING FOR KEY T TO BE PRESSED 84 BEING ASCII FOR T)
IFEQ
THEN
ORV 8 1        (SET BIT 3 -POSITIONAL VALUE 8- IN VARIABLE 1 TO ON)
END

CMPV 67 121    (THIS IS LOOKING FOR KEY C TO BE PRESSED 67 IS ASCII C)
IFEQ
THEN
ORV 2 1        (SET BIT 2 -POSITIONAL VALUE 2- IN VARIABLE 1 TO ON)
END

CMPV 68 121    (68 IS ASCII FOR D)
IFEQ
THEN
ANDV 2 1
END
```

The last condition is looking for key D to be pressed; when it is then the ANDV command carries out a LOGICAL AND of the positional value 2 (BIT 1) with variable 1. As BIT 1 is already set to 1 then a 1 results, but a 0 results in all other BITS. Variable 1 is therefore left with one bit set, this having a positional value of 2 therefore, on the TEST screen you should see the SCORE go to 2.

XORV

The purpose of this routine is to demonstrate XORV. You are to press key "E". Upon the first press you should see the SCORE set to 64; each subsequent press of the "E" key will TOGGLE the SCORE between 0 and 64.

```
CMPV 69 121
IFEQ
THEN
XORV 64 1
END
```

NOTE:

Users may find that adding the command DELAY 10 after the actual XORV command will improve the routines. If a delay isn't used you may find that the XORV will work so fast as to make the score too difficult to read. It would be as well to remember this when using any XORV command in your routines.

TESTV/ADDV

This routine requires that you press key 'T'. Upon each key press then 1 is added to variable 1, you should see the SCORE increase by 1. The TESTV commands are looking at variable 1 testing for particular BITS to be set. Messages on the screen will inform you of the BITS set!

```
CMPV 84 121
IFEQ
THEN
ADDV 1 1
ENDIF
TESTV 1 1
```

```
IFEQ
THEN
ELSE
TEXTCOL 3
PRINT 2 10 4
ENDIF
TESTV 2 1
IFEQ
THEN
ELSE
TEXTCOL 3
PRINT 3 10 5
ENDIF
TESTV 4 1
IFEQ
THEN
ELSE
TEXTCOL 3
PRINT 4 10 6
ENDIF
TESTV 8 1
IFEQ
THEN
ELSE
TEXTCOL 3
PRINT 5 10 7
END
```

CREATE and EDIT the following messages:

```
MESSAGE 2:BIT NOUGHT SET
MESSAGE 3:BIT ONE SET
MESSAGE 4:BIT TWO SET
MESSAGE 5:BIT THREE SET
```

Now for the interesting BIT where we combine all that we have "learnt(?) so far into what I think is an exciting routine. It's not just the 16-BIT users who can have automatic player movement, I have managed to crack the secret of the "SYSTEM VARIABLES" and bring to you at no expense:

AUTOMATIC MOVEMENT OF PLAYER ACROSS AN AREA

ZAXIS/X AXIS

The X and Z axes have viewpoint ranges of from 0 to 8191. Object positions available are 0 to 127 (128 positions). One unit in object position is equivalent to 64 area viewpoint positions.

Y AXIS

The Y axis has viewpoint range of from 0 to 4093. This provides object positions of 0 to 63 (64 positions).

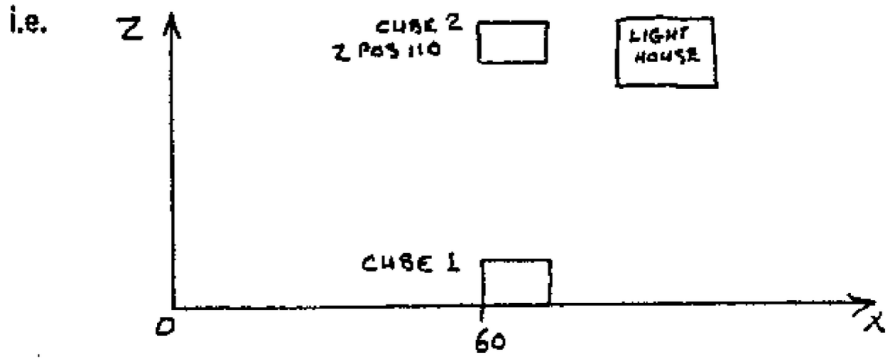
VIEWPOINT VARIABLES

The SYSTEM VARIABLES 112 to 117 keep track of the Player's viewpoint throughout the environment and can be easily programmed to alter the position of the player.

ROUTINE FOR Z-AXIS MOVEMENT

The object of this routine is to demonstrate how to achieve movement across the area in the Z-AXIS. Additionally it demonstrates several other features achieved by use of the SYSTEM VARIABLES.

The routine requires that the player step onto a flat block (CUBE 1 below) and be automatically transported across the area to CUBE 2 position. The player has to press a switch to activate the motion.



1. CREATE cube (object 2) and shrink in height to size 1. Position this cube at X=60, Z=000. This is cube 1 on the sketch.
2. COPY this cube and position at X=60, Z=110.
3. CREATE a rectangle and flip it to enable positioning flat on top of cube 1. This will provide a trigger pad. Make this rectangle INVIS via the SHADES edit function (object 4).
4. CREATE a cube and position alongside CUBE 2. Increase height of this cube (object 5) to say 16. This will be our "LIGHTHOUSE" and will give a sense of perspective to the movement.
5. Set cube 2 (object 3) to CURRENT and INITIAL states of INVISIBLE via ATTRIBUTES.
6. CREATE and EDIT the following LOCAL conditions:

```
1. IFHIT 4
   THEN
   TEXTCOL 3
   PRINT 2 4 7
   END

2. CMPV 71 121     (VARIABLE 121 RECORDS KEY PRESSES--71 IS ASCII CODE FOR "G")
   IFEQ
   THEN
   ORVI 1 1        (WE ARE SETTING A FLAG IN VARIABLE 1 TO INDICATE KEY G PRESSED)
   END

3. CMPV 28 117     (THIS IS Z POSITION HIGH BYTE. WE WANT THE ACTION TO STOP WHEN
   IFEQ              WE REACH OBJECT POSITION 112. THIS EQUATES TO VIEWPOINT
   THEN              POSITION 7168. DIVIDE THIS NUMBER BY 256 TO CALCULATE HOW
   SETV  0 1         MUCH IS SEEN IN THE HIGH BYTE i.e. 7168÷256=28)
   INVIS 2         (MAKE CUBE INVIS SO IT LOOKS AS IF WE HAVE MOVED ON IT!!)
   VIS 3           (MAKE CUBE 2 VIS)
   SETV 7 118      (THIS GIVES 35° VIEW ROTATION DOWN)
   ELSE
   ORV 2 1
   ENDIF

4. CMPV 3 1
   IFEQ
   THEN
   SETV 0 118       (THESE NEXT THREE LINES SET THE SYSTEM VIEWPOINT ROTATION
                     VARIABLES TO 0 TO MAKE THE PLAYER LOOK STRAIGHT AHEAD.)
   SETV 0 119
   SETV 0 120
   SETV 16 113      (BRING PLAYER TO X-OBJECT POSITION 64 i.e. CENTTRE OF BLOCK)
   SETV 0 112       (DITTO)
   ADDV 64 116      (MOVE PLAYER BY 1 OBJECT POSITION STEP AT A TIME)
   ADCV 0 117       (ADDING CARRY IF THERE IS ONE TO Z-POSITION HIGH BYTE)
   SYNCSND 2
   REDRAW           (THIS IS ESSENTIAL AFTER EACH MOVE TO ENABLE UPDATE OF CHANGES)
   END
```

CREATE MESSAGE 2: "PRESS KEY G TO START THE MOTOR"

Faster movement can be obtained by editing condition 4 such that ADDV is either 128 (2 object positions), 192 (3 object positions) to variable 116 (Z-position LOW BYTE). Faster movement still can be obtained by deleting line ADCV 0 117 and editing line ADDV 64 116 to read ADDV 1 117 (add 1 to Z-position HIGH BYTE). This will give a speed increase of four times the original.

George Dixon

AMSTRAD CPC6128

My thanks to George for a most interesting and in-depth look at how variables work and for the excellent and useful routines. 16 Bit users will also find them useful as only a little adaptation is needed to convert the commands/routines to the 16 bit machines.

HOW TO GET YOUR GAMES NOTICED

By Mandy

You've completed your masterpiece. You are as proud as can be. You have a game ready to launch onto the unsuspecting public that is going to knock them for six! Problem is..err.. what to do next? How to go about it?... Read on.

Most people find to their amazement that the actual programming of their games is the easy part. It is when they enter the world of marketing, glossy magazine reviews and so forth that they realise just what a complicated business it can be. It is especially upsetting when you submit your game to a software company and they return it almost immediately (that is if they bother to return it!), with a polite (or sometimes not so polite), note saying "Thanks, but no thanks!" Especially when you know that they cannot possibly have had time to explore your game properly. Here are a few hints and tips that might just help to get your game that "second look".

When submitting a game to a software house, or a reviewer in a glossy magazine, you should bear in mind the following. The person who is going to take a look at it is not going to play it in the same way as you or I would. You need to provide something to catch their interest. It is a good idea to have the first few areas "open" to reviewers and testers. There is nothing more off-putting, especially if you are a reviewer, than to enter the first area and immediately become stuck with a difficult problem to solve. They quickly become bored and the game is put to one side. So make those first areas as interesting as possible with lots to see and lots to do. You can leave your lovely mindbending problems until later on in the game. In this way the reviewer will have plenty of room to explore and to get an idea of how well your program works. Then his interest might be sparked and he will spend hours working on it.

It is also a good idea to have one of your initial areas very well drawn and designed with nice colourful objects etc., because the magazine may well decide to publish a screenshot and it is usually one of the very first areas that are selected.

Packaging is also important, and I don't mean beautiful colourful plastic cases with maps, 100 page booklets and so forth. They are, of course very nice but I am talking about presentation. Make sure that you provide a solution, or at least some hints and tips to help the reviewer along the way. A storyline of what the game is all about with the player's objective and as much information as you can think of that might be of help.

But, before you even consider sending your game to a reviewer or software house, you must make sure that it has been playtested properly by more than one person. Running through the game yourself is no good at all. You know what you have to do and bugs only show up when someone tries to do something that you haven't planned for them to do! So someone who has never seen your game previously is the ideal person to spot the errors. Many people will be more than happy to playtest your games. Ask your friends, certainly, but try to find someone who has had experience in evaluating games if at all possible. These are just some ideas to bear in mind. If you would like to know more then let me know and I will also be happy to put you in touch with someone who can playtest for you if you wish.

16 BIT ROUTINES

FOLLOW MY LEADER!

By Brian Woodley on ATARI ST

I have written a little routine which causes an object to chase the player's view point around and if it catches them then various effects can happen. The first thing to do is to create an object to chase you around, so CREATE a cube and mark it as MOVEABLE in its ATTRIBUTE menu. This is object (2). You should also make a note of its start coordinates. Two variables are used V40 and V41, these hold the X and Z coordinates of the block. Enter this in the first GENERAL CONDITION

```
SETVAR (X,V40)
SETVAR (Z,V41)
```

Substitute the starting X and Z coordinates of the block for the X and Z in the commands above. Now enter the following commands in the AREA conditions:

```
IF VAR<? (V40,V0)
THEN ADDVAR (20,V40)
ENDIF
IF VAR>? (V40,V0)
THEN ADDVAR (-20,V40)
ENDIF
IF VAR<? (V41,V2)
THEN ADDVAR (20,V41)
ENDIF
IF VAR>? (V41,V2)
THEN ADDVAR (-20,V41)
ENDIF
STARTANIM (1)
```

Create animation 1 and enter:

```
INCLUDE (2)
MOVETO (V40,20,V41)
RESTART
```

This is assuming that the starting Y coordinate of the block is 20. If it isn't then change the 20 in the animation to whatever it is. Remember to set the initial condition in the DEFAULTS to 001. Press RESET and the cube should be chasing you around like a maniac dalek!. If it isn't then check your typing because it works for me! To speed it up or slow it down, change the 20's in the area condition, increase it to speed it up or decrease it to slow it down (minimum 1), but be warned, the faster it gets, the jerkier it gets. This is great but it is a bit boring, lets make it buzz when it catches you! Enter this as a condition on the object:

```
IF COLLIDED?
THEN SYNCSND (6)
ENDIF
```

Now turn up the volume and let it catch you. All that is left now is to add arms, legs etc and change the INCLUDE number in the animation to use this group. Change the condition so that instead of just making a noise it drains your energy or similar and voila, you have a moving guard to foil players. There is one drawback to this routine, the guards will walk through your walls. Perhaps they are not guards but ghosts! (Yeah, that should work!). I'll leave it up to other geniuses to work that problem out!

LOADING SCREENS AND MUSIC

By Paul Ramsell - AMIGA

Here are some tips on how to include a music soundtrack and IFF loading screens into a finished Kit game. Members will need the following programs/files in order to create the startup-sequences that I will describe below, but all are available on Public Domain disks and are therefore very cheap:

```
MED V3.0     - Music program
MEDPLAYER    - MED V3.0 file player, should be on MED program disk
SHOW         - IFF picture displayer
UNSHOW       - turns off IFF picture
CLS          - in C directory of Workbench disk
RUN          - in C directory of Workbench disk
```

First you must create two IFF pictures with Dpaint III or a similar graphics package. The first picture will be your startup screen so do a drawing that will portray the mood of your game. Save this picture to a blank formatted (and installed) disk as PIC1. The second picture ought to give a brief scenario and instructions (in suitable text font) for your game, save this to your disk as PIC2. Now using MED V3.0, compose (or if you are as musical as I am, get someone else to compose) a suitable soundtrack and save the tune onto your disk as SND1. Then copy the MedPLAYER file that comes with MED V3.0 onto the disk. Next create a C and S directory on the disk and copy the files RUN, CLS, SHOW and UNSHOW into the C directory and then save the following into the S directory as STARTUP-SEQUENCE using a text editor:

```
CLS
SHOW PIC1
SHOW PIC2
UNSHOW PIC1
RUN MedPLAYER SND1
GAMENAME
```

Reset the machine and insert your disk and (if you've done everything correctly) the disk should autoboot and display the startup screen (PIC1) closely followed by the instruction screen (PIC1) followed by your tune and your game. The tune will continue to play in the background while you play the game. There is no need to UNSHOW PIC2 because when your Kit game has loaded it will assume screen priority and clear the screen of anything else that it was displaying. I hope the above tips will be of use to other members and that my instructions are understandable! Oh by the way, you will need 1 meg of memory to run a soundtrack with your program.

HARDER THAN IT LOOKS

By Richard Horn - PC

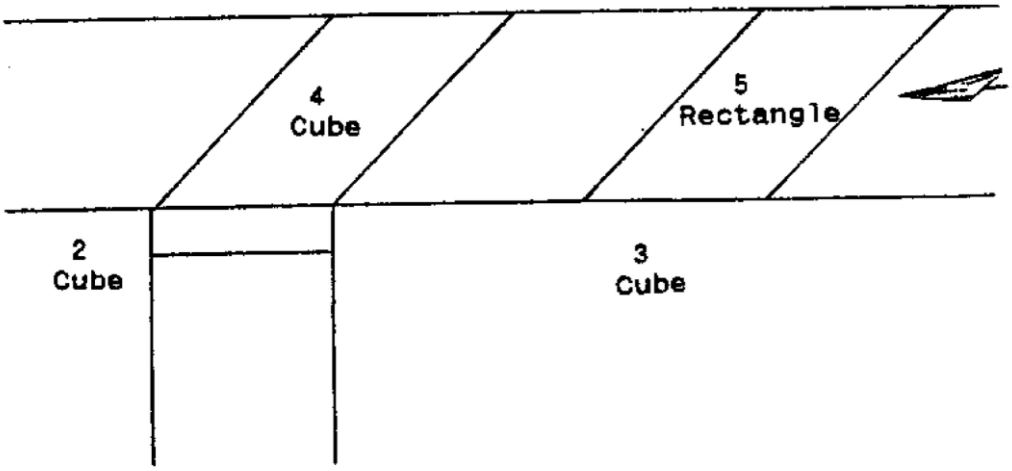
It is known that many puzzles involve getting something from somewhere, to be able to pass on to the next section. My idea below makes the entrance to the next bit look easy, but it ends up being just as hard as before.

CONDITIONS

FOR OBJECT 3:
```
IF COLLIDED?
THEN VIS (4)
ENDIF
```

FOR OBJECT 4:
```
IF COLLIDED?
THEN INVIS (4)
ENDIF
```

FOR OBJECT 5:
```
IF COLLIDED?
THEN INVIS (4)
ENDIF
```



As you walk in from the left, the trapdoor will disappear for a second giving you enough warning. If you carry on walking left the trapdoor will reappear but you will still fall through if you try to walk over it. All that is needed is for you to invent a suitable solution to the puzzle, say, pulling a lever in another area and entering suitable conditions to prevent the trapdoor from disappearing if the lever is pulled prior to entering the current area.

GETTING YOU STARTED

By Jurgen Thurow - ATARI ST

PLANNING: Get used to your 3D Kit by working on it as much as possible, until using it becomes as easy as walking. Try out all the examples in the Newsletters as this helps enormously. Start a collection of ideas and write them down. Ask your friends for ideas too. When you think you have enough for one or more games then start to think about your first real project. When you have thought of a project then see which of your ideas are best suited to it and try to create an interesting story round your ideas.

Before you start to create your first object or the first border your game should be already created on paper. This means that every detail should be worked out. When I started I didn't think this too important and this was my first mistake. I had either too big or too small objects, wrong colours, wrong controls, wrong conditions and so on. It would have been easy to avoid all this if I had planned it.

There are some very good hints in the first newsletter about colours and borders, and Atari ST users should think about this especially due to the split screen. A full screen border may use a lot of colours that you will have to provide in every area so you are not free to make use of every colour you want to. You may find it easier to use a kind of scale in your planning, I use x=10 to have the correct proportions and assume it to be 1 inch. My first object was 15x3x15 instead of X=150, Y=30, X=150. When you plan your world, make sure that your player is able to reach every area you think he should. Is there enough fuel? Is the level too high? etc. Include animation sequences such as swinging view if you enter a planet's atmosphere or if you are hit by something. Try to use only 40 visible objects at a time to improve the performance. Make invisible parts of objects/primitives by colouring them invisible. Objects can be made invisible by a single trigger or sensor, if you are too far away to see them eg. on an upper floor of a house or behind it.

VARIABLES: Make an extensive use of variables 0 to 21. Some of you, who try their first project may think that 225 variables (255-30 used by the system) is a lot and that you will never need this many but believe me, it is very easy to use a lot of them. Up to now I have finished about 2 percent of my project and have already used 50 variables. Very often you will have variables used as flags such as:

```
V200: Gun on = 1, Gun off = 2.
V201: Lazer weak = 1, Medium = 2, Strong = 3.
V202: Rope available = 1, No = 0.
```

Using variables like this is very easy but very soon there will be no variables left for use. Here is the way I use my variables: Each variable in the range of V31 to V255 uses 32 bits to code all values. When I need variables as flags I use the bits as follows:

```
0 = False, 1 = True.          no hope   no medium laser   not weak laser

EG. V200:  31 30 29 28 27........5  4  3  2  1  0 - (Number of bit)
            0  0  0  0  0........1  0  1  0  0  1 - (Information)

                          autopilot on   strong laser    gun on
```

This means that I can use "one" variable to code 32 different kinds of flags. Of course information like amount of money, amunition, fuel and so on should be coded as usual. I am just using variables used as simple flags or carrying little information (as a maximum 32 different values). But how to use the bits? Heres how I do it:

```
To set a bit:   bit no

     ORV (2,V200)  eg. ORV (2s ,V200) = ORV (8,V200) = 0...01000
                                                       bit no.31...43210
```

As you can see you simply use an ORV command and the duel system to set a value of 1 to bit number 3 of variable V200. If you now want to set the gun to on and laser to strong and autopilot to on this would meant you set the bits with the numbers 0, 3 and 5 at the same time. Therefore you add each value of the duel system as follows:

$$2_0 + 2_3 + 2_5 = 1+8+32 = 41$$

and use the command ORV(41,V200) to get

```
31......5 4 3 2 1 0 - bit no.
 0......1 0 1 0 0 1 - value
```

To read a bit you use the ANDV command. For example if you want to know if the autopilot is on (ie. check bit number 5) you would enter:

$$2_5 = 32$$

```
IF ANDV (V200,32) THEN..... ENDIF
```

The effect is a bitwise logical combination:

```
31 30 29          5 4 3 2 1 0        31 30 29          5 4 3 2 1 0
 0  0  0 ......  1 0 1 0 0 1   ANDV    0  0  0 ......  1 0 0 0 0 0
 \_____________________________/      \_____________________________/
            V200=41                                  32
```

Here the result is 1 which means that bit number 5 is set and therefore the autopilot is on. If you use the command:

```
IF ANDV (V200,16) THEN... ENDIF
```

the result would be 0 because bit number 4 ($2_4 = 16$) was not set (no rope carried) and the IF clause would react accordingly. Make sure that your variable is placed on the LEFT HAND SIDE within the brackets, otherwise the result 0 or 1 would be the new value of V200 which would mean that all your set flag values are lost.

TIPS: Write down a list of how you use the variables as you go along so you don't forget what they do. If many objects use the same condition, write this condition once in the General conditions with variables and no exact values so you make it flexible. That way you can use this condition from every object by using the EXECUTE (n) command.

Members are cordially invited to send in their routines for inclusion in these pages, whether it be a simple or complicated animation, a longer article or just a few hints or tips, they will be most welcome. If you have found a way to do something then why not share it with the other members so that everyone can benefit from your experiences.

8 BIT ROUTINES

SIMULATING FREE FALL

By James Neill - AMSTRAD CPC6128

You can use variables 112 to 120 for automatic movement around an area and I've used these to simulate free fall after jumping out of an aeroplane. First of all start at the top of the area looking down as if you have stopped while falling to the ground, this position should be the entrance to the area (make sure you are in FLY2 mode). Now take note of all the viewpoint values (X, Y and Z). Now move down as if getting closer to the ground, then take note of the viewpoint values again, move downwards again and take notes again and keep doing this until you hit the ground. You should end up with 15-16 viewpoints. Now the hard bit... You must now set variables 112-120 with the first viewpoint, lets start with viewpoint X in the first step of the free fall, the high byte goes in variable 113 and the low byte goes in variable 112. If viewpoint X = 3209 then high byte = 3209/256 = 12. Low byte = remainder = 137. Use the SETV command to load 112 with 137 and to load 113 with 12. In my case the first part of the free fall is:

```
X = 3209   Y = 4031   Z = 3249
```

So I set the variables in the following way:

```
SETV   137   112      137
SETV   012   113      +12X256 = 3209
SETV   191   114      191
SETV   015   115      +15X256 = 4031
SETV   117   116      117
SETV   012   117      +12X256 = 3249
REDRAW                Shows the new position on screen.
```

Remember the REDRAW else it will seem like you are missing steps. Of course this is only one step towards the ground there is another 15 or so to go. To call the free fall routine I used the following LOCAL condition in Area 1 (the aeroplane).

```
IFHIT 009      -  If the player hits the door
THEN
GOTO  001 002  -  Goto entrance 1 in area 2 which positions the
                  player looking down towards the ground.
CALL  001      -  These procedures contain the variable settings
CALL  002         for animating the free fall. You can fit a
CALL  003         number of steps in each procedure.
```

Here is a routine to turn the cross (the one which looks like + not the moveable one) on and off using the "C" key. It should be put in as a General Condition. It uses variable 111 as a toggle. Note that this routine also solves the problem of nested IF's!

```
CMPV      067      121
IFEQ
THEN
ELSE
END
ENDIF
CMPV      001      111
IFEQ
THEN
CROSS     000
SETV      000      111
ELSE
CROSS     001
SETV      001      111
ENDIF
END
```

EXTRA OPTION FOR CPC6128 USERS

By James Neill

The following progette works on the Amstrad disc version and is really only useful for the CPC6128 users as we are the only ones who display a screen during testing. The program is in BASIC and replaces the file DISC. It adds an extra option, which allows the user to change the screen which is shown in TEST mode by replacing KIT1282.DAT with the new screen. The new screen should be a standard screen dump. The down arrow can be achieved by pressing CNTRL/J. This amendment will make designing screens easier as previously you had to compile the game with the screen to see what it looked like.

```
10   ' 3D CONSTRUCTION KIT LOADER inc. CHANGE BORDER
20   ' NOTE : BORDER IS ONLY SHOWN ON 128K VERSION
30   ' BY JAMES NEILL
40   '
50   MODE 1:MEMORY &3FFF
60   PRINT "↓↓       3D CONSTRUCTION KIT"
70   PRINT "↓↓↓    1 128K EDITOR"
80   PRINT "↓      2 64K ENVIRONMENT EDITOR"
90   PRINT "↓      3 64K CONDITION EDITOR"
100  PRINT "↓     4 FREESCAPE COMPILER"
110  PRINT "↓     5 DATA DISK FORMATTER"
120  PRINT "↓     6 CHANGE TEST SCREEN BORDER"
130  INPUT "↓↓↓   ENTER SELECTION (1-6)";A$
140  IF A$="1" THEN RUN"KIT128
150  IF A$="2" THEN RUN"KITENV
160  IF A$="3" THEN RUN"KITCOND
170  IF A$="4" THEN RUN"COMPILER
180  IF A$="5" THEN RUN"FORMAT
190  IF A$="6" THEN GOSUB 220
200  RUN
210  ' CHANGE TEST SCREEN BORDER
220  MODE 2
230  INPUT "ENTER NEW BORDER FILEMANE (FILENAME.EXT): ",FILE$
240  PRINT "INSERT BORDER DISC AND PRESS A KEY ...":CALL &BB18
250  MEMORY &3FFF
260  LOAD FILE$+"", &4000
270  PRINT "INSERT 3D CONSTRUCTION KIT DISC AND PRESS A KEY ...":CALL &BB18
280  ;ERA,"KIT1282.DAT"
290  SAVE "KIT1282.DAT",B,&4000,&4000
300  PRINT "NEW BORDER IS INSTALLED PRESS A KEY FOR MENU...":CALL &BB18
310  RETURN
```

To save this program type SAVE"DISC." remember the full stop after disc else it will be saved as DISC.BAS and when you try to run it DISC. will run instead.

INFORMATION SCREEN

By D.G.Marley - SPECTRUM +2

After reading Issue 2, I had an idea about the Information Screen that was mentioned. The variable 124 stores the area you are in, so place the following into a General Condition. We will use area 14 for the Information Screen:

```
CMPV  73  121    - if I is pressed
IFEQ
AND
CMPV  (1) 124    - I in area 1
IFEQ
THEN
SETV  (1) 100    - stores area that I was pressed in
```

```
GOTO   1   14
ENDIF
```

Repeat the above procedure, increasing the number in brackets until all the areas are covered. Now when I is pressed you will goto Area 14 and the area you were in is stored in variable 100. Now go to area 14 and enter the following into a Local Condition:

```
CMPV   73  121    - if I is pressed
IFEQ
AND
CMPV   (1) 100    - checks  what  area  you  called  the
                    information screen from
IFEQ
THEN
GOTO    1  (1)
ENDIF
```

Repeat the above procedure, increasing the number in brackets until all areas are covered, include messages at will. The only problem with this is you can only return to entrances you have placed in these areas. Hopefully someone else may have an idea on how to shorten it or make it possible to return to the position you pressed "I", or alter it to work on 16-bit machines.

The following procedure is useful for Title Screens, just to make them that more interesting, it moves the characters printed on the screen up and down:

```
TEXTCOL     2
PRINT       1   0  10
GOTO        1   1
ADDV        1 126
CMPV        2 126      NOTE: Create this procedure in area 2 as a
IFEQ                   Local Condition, create message and enter
SETV        0 126      "Press ENTER to start".
ENDIF
CMPV       13 121
IFEQ
THEN
SETV        0 126
SETV       61 127
```

TWO COLOUR INSTRUMENTS

By A.P.Smith - AMSTRAD CPC6128

Here is a routine to create a two-colour instrument. Set two instruments to lie alongside each other then use:

```
IFTIMER
THEN
SUBV   001  001
ENDIF
CMPV   254  001
IFGT
THEN
SETV   000  001
SUBV   001  002
ENDIF
CMPV   254  002
IFGT
THEN
SETV   000  002
ENDIF
END
```

PROBLEM PAGES

Dear Mandy,

While reading the manual and studying the 3D Kit, I cannot see the difference between SAVE DATAFILE, SAVE OBJECT and SAVE POSITION as on the test screen in the game. Every time I created and edited an object I just cannot save it. Must I first format a disk of my own? Sometimes I also get a DOS.ERROR like: File Not Found. When I then turn on my computer and try to load the object it has vanished. Please can you tell me how to save an object in the right way?

A.C.M.Tammer, Holland
AMIGA

For your problem with saving and loading OBJECTS - first you should, as you suggest, have your own formatted disk ready to save your data to. As an example I suggest you create two pyramids one above the other and flip the lower one and join them together to form one shape (rather like a diamond shaped stone). Then create a group and select the two pyramids into the group. Now go to the file menu and select SAVE OBJECT. You will be presented with the file selector. At this point you should either insert your formatted disk or, if it is in a second drive, click on DF1: and click on the lower FILE (below PATH) and delete whatever is there and enter your own filename - say PYRAMIDS. Now click on OK and your object will be saved to your save disk. Remember to ensure that the disk you wish to save your object to is selected by clicking on either DF0: or DF1: - if it is just an empty initialised disk the file selector should show only two items - TRASHCAN and TRASHCAN.INF. After the save it will show PYRAMIDS, TRASHCAN and TRASHCAN.INF.....Mandy

---

Dear Mandy,

Occasionally rooms "freak out" - no matter which direction I move in I keep seeing the same object overlaid on itself lots of times, it is difficult to explain but it has happened quite a few times. Most notably it usually occurs if I deleted the initial cuboid in a room.

Matthew Clementson, Birmingham
ATARI ST

What has obviously happened is that you have turned your HORIZON OFF. Never do that unless you are working in a completely enclosed area, ie. after having selected all the global objects (all four walls, roof and floor) otherwise strange effects will happen....Mandy

---

Dear Mandy,

When I create an area I find it impossible to change the scale properly. I also find it impossible to load the Kitgame and other items from file selectors because I keep getting a dialogue box telling me that it is not the correct format. When I select FLY 2 or CAMeras 1-5 I cannot get out of the horizontal level. Please help.

Paul Jarleton, France
ATARI ST

Make sure that you don't change the scale of the area beyond about 12 for it to work properly. You must load the Kitgame from within the data FOLDER not 3DKit.File from the root directory. Fly 2 and the Camera modes force forward and backward movement to remain parallel to the horizon. This isn't a bug but is an intended attribute of these movement modes. To move out of the horizontal plane use up/down arrows and you should have no further trouble.....Mandy

---

Dear Mandy,

I have just received my 3D Kit through the post. On trying it out I find that clicking on the arrows to move an object moves the object in the opposite direction to that indicated, up down or sideways.

I know this is not a great problem but as it is new it would be nice if it worked correctly. Should I get the disk changed?

M.C.Loveland, Exeter
ATARI ST

I have checked the disc and there is no problem, Mr Loveland. I think the answer lies in a little confusion on the function of the arrows. The set of directional arrows which are always on screen are to control YOUR movement around the environment. If you create an object and select edit object a second set of icons with directional arrows will appear and it is these that will move your object. If you use the top set of arrows it will, indeed, appear as if the object is moving in a contra direction as it is your viewpoint that is moving. I can well understand the initial confusion (I had it myself) but with a little practice you will soon become totally familiar with all forms of movement.....Mandy

---

Dear Mandy,

I am having problems when creating borders for 3D Construction Kit. I draw my borders on Deluxe Paint III, as NTSC, 16 colours, 320 x 200 pixels and Lo-res format, and save then under the name Border.IFF on a blank disk. Next I load up 3D Construction Kit and after selecting LOAD BORDER and the border I created, an error saying "The selected file is not of the correct format" appears. When I select Degas or Neo format, my border loads but looks very distorted.

Jill King, Huntingdon
AMIGA

It is much better if you save your borders as a BRUSH instead of a picture, Jill. If you save a screen in PAL format the program will save it at minimum size which is 320 x 256, even if you set the page size to 320 x 200. Saving as a brush prevents that happening.....Mandy

---

Dear Mandy,

I am writing to solve David Turner's problem of using the demonstration game (Issue 2, page 16), as your reply wasn't exactly mind-blowing. To view the Kitgame you must have the condition editor loaded. This is on side two of tape 1, or if you have the Kit on disk then select condition editor from the boot menu. Now select LOAD and select file 9. The Kit demo is on side 2 of tape 2. If you have disk then the demo will load automatically. The demo will now have loaded and you can select TEST to see what the final game would be like, except no border will be displayed. To comple the demo as a complete game on cassette, load the compiler which is on tape 2 side 2. Now select file 9 to load and insert tape 2 side 1. Press play. The border is saved immediately after the demo, so leave tape 2 side 1 in the cassette player. When the compiler asks you if you want a border, press Y and type in KITSCR as the filename. Press play and the border will load. The compiler will now allow you to save the whole lot on a blank tape. If you are using disk then you will have a problem as there is a bug in the compiler, it will not allow you to load a border from disk. To solve this problem you have to transfer the file to tape. You will need a machine code monitor for this or a cartridge such as the Action Replay or Power Cartridge. Turn your C64 off and on again to clear the memory. Insert the 3D Kit disk and type LOAD"KITSCR",8,1 and when it has loaded, enter your monitor and type T 2000 4720 6000 T 6000 8720 3800 S"",1,3800,5F20 Insert a blank cassette and press RECORD. When you enter the compiler load the demo from disk and the border from tape.

Steven Flanagan, Sheffield
COMMODORE 64

Thank you also for telling me about the "bug", Steven, which I will pass to the programmers for their attention.....Mandy

A PROBLEM SHARED IS OFTEN A PROBLEM SOLVED!

Don't suffer in silence, write in with your problems - you never know, someone else might just need the answer too but was too shy to ask!

HINTS AND TIPS

By J.C.Latty - AMIGA

One irritating feature when using 3DKit on a hard drive is the fact that it was programmed to expect to be in df0: all the time. There is a way round it but not for the faint hearted and always on a backup copy. If you have a Hex file editor like NewZap or similar and scann the ASCII strings till you find the line that says df0: just change it to dh0: save it out and voila! no more irritating dos error messages.

One feature I find invaluable which wasn't mentioned in the manual is the ability to save a screen shot by pressing F2.

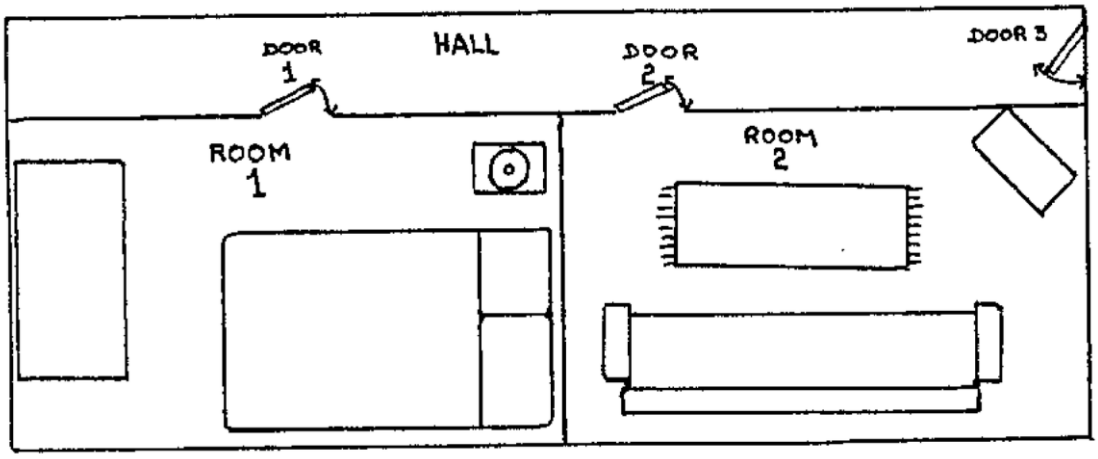
COPYING AN AREA
By Paul Ramsell - AMIGA

It is really quite simple to copy an area. What you should do is to make a GROUP which includes ALL the objects in your area and then save it as an OBJECT. Next you create another area and simply load in your OBJECT and the area is "copied".

TO IMPROVE PERFORMANCE
By Paul Gregory - Programmer

If your area has many objects but some cannot be seen from certain positions you can use conditions to make them visible and invisible at certain times, ie.

OVERHEAD VIEW OF AREA

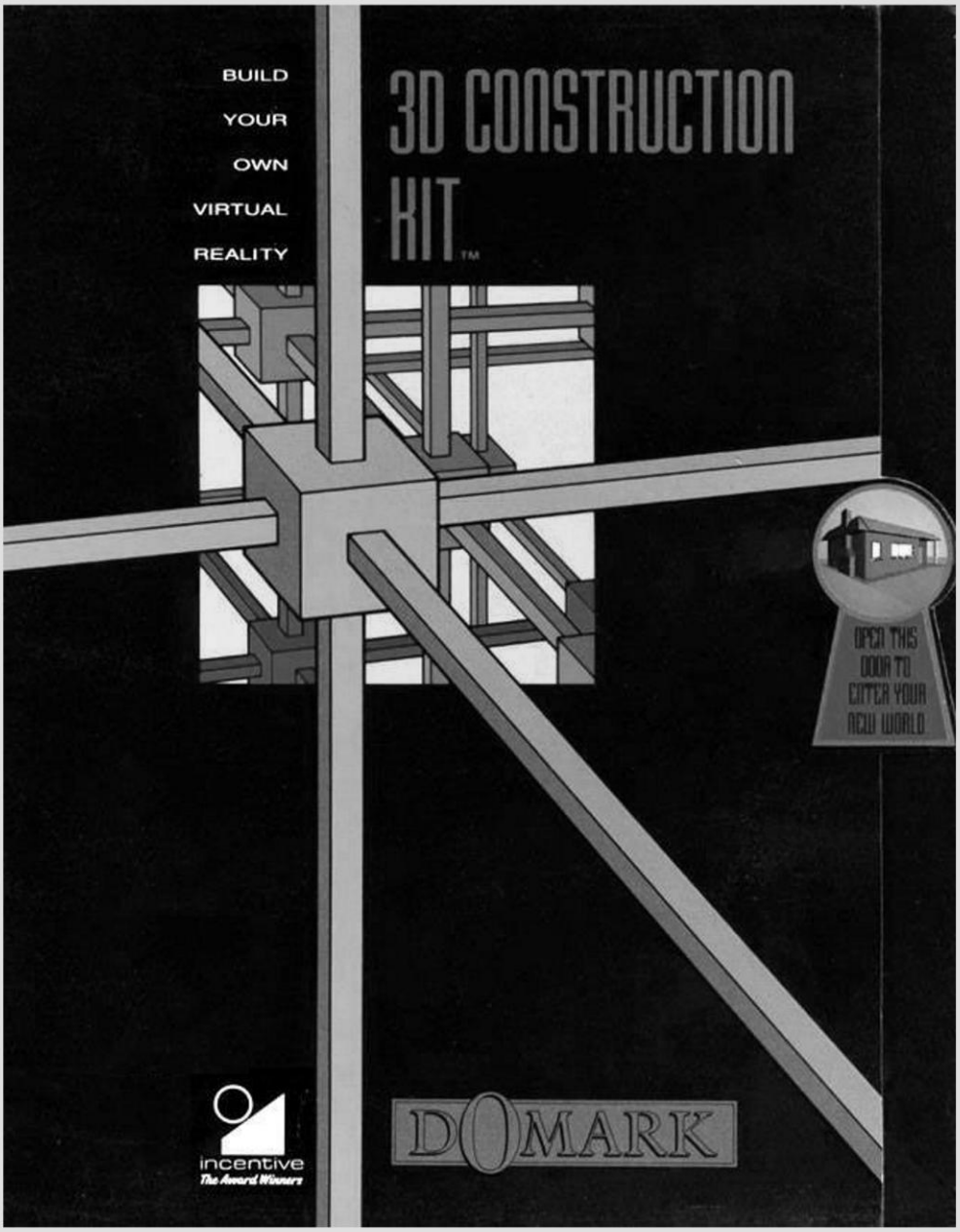


When door 2 is opened make all furniture in room 2 visible and all furniture in room 1 invisible. On exiting room 2 make all furniture in room 2 invisible and close the door and similarly for room 1 and door 1.

HINT FOR DRAWING BORDERS
By Mieke Van der Poll

I believe I have a hint for everyone, including myself, who is not so hot on drawing borders. Try using an overhead transparent sheet with quick drying waterproof ink to trace borders from flight simulators, racing games etc, by sticking it over the screen and tracing it. When you have done this you can load in an art package and draw the same picture on the screen (you can see through the transparent sheet to do this). Then remove the sheet and colour in as you wish. It may not be exactly legal but it will help train you to draw your own borders.

ALL HINTS AND TIPS ARE WELCOME FOR THIS SECTION PLEASE



3D CONSTRUCTION KIT USERS GROUP

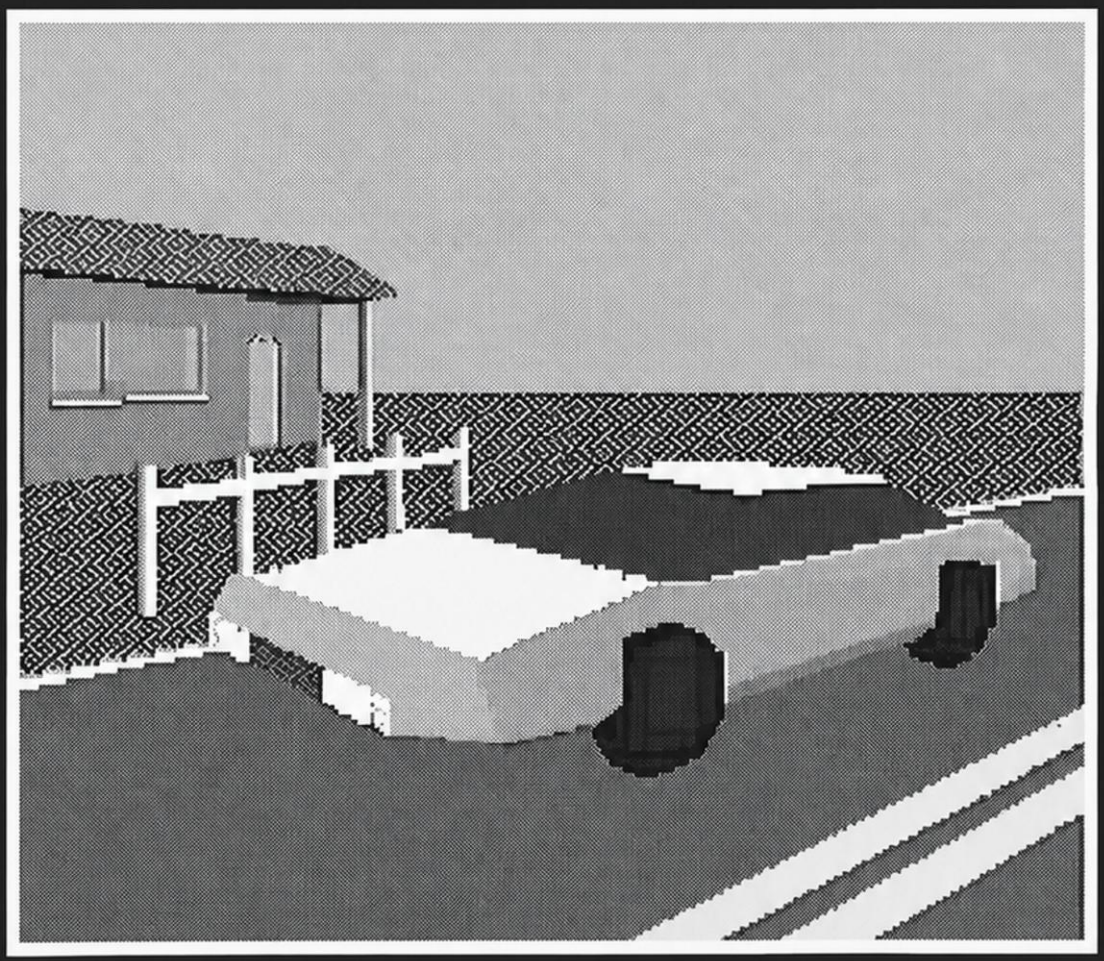
3D Construction Kit Newsletter

Issue Number 4
December/January 1991/1992

CONTENTS

EDITORIAL 81
TRANSLATING ROUTINES 82
LETTERS 83
HINTS AND TIPS 86
MEMORABLE THINGS! 86
DOORS WITH A DIFFERENCE! 87
PROBLEM PAGES 87
8-BIT ROUTINES 89
VARIABLES - THE ART OF USING THEM 93
16 BIT ROUTINES 95
VIDEO TITLE ANIMATION 98
ANIMATING THE PLAYER 101

NEWSLETTER Dec/Jan 91/92
Issue No. 4



3D CONSTRUCTION KIT USERS GROUP

EDITORIAL

Welcome to Issue 4 of the 3D Construction Kit User Group Newsletter.

At last games, routines etc., are starting to arrive for the Public Domain library in sufficient quantity to start the ball rolling. As soon as Christmas is over I will test them all, sort them all out and a list should be ready for the next issue of the Newsletter. Any routines, hints or tips, letters etc are also most welcome for the next issue of the Newsletter. As I said previously, if all the contents of the Newsletters were written by myself alone we wouldn't have the variety of ideas that a large group of members can provide, so I hope I will hear from many more of you in time for the next newsletter, which will be sent out in February.

I have just heard that the programmers are currently working on a version of the 3D Construction Kit for the Archimedes computer so, no doubt we will soon have more members joining the User Group with, hopefully, even more information and ideas to exchange. I'll give more details as I soon as I hear more. One of the benefits of being a member of the User Group is hearing of up to the minute news on new developments, versions and products from the programmers through the Newsletters.

I hope that the Christmas post won't delay this issue of the Newsletter getting to you all too much. Things get rather hectic here, as everywhere else, during the run-up to the festive season but I am hoping to get everything well organised and all my work completed before the school holidays start. As many of you will know, all too well, once the children are at home they expect Christmas to start immediately and it is difficult to get other things done! Isn't it amazing how they all join in when it is time to put up the Christmas decorations and how they mysteriously vanish when it is time to take them all down again?! Still, it is a lovely time of year and, despite my grumblings to the contrary, I wouldn't miss being a part of it all for anything.

One thing about Christmas time, which I thoroughly enjoy, is being able to send warm greetings all around the World. Indeed you may be surprised to learn just where our Newsletter goes to. We have members in Germany, Holland, Portugal, Italy, Pacific Ocean, France, Spain, Norway, Denmark, United States, Canada, Japan, Indonesia, Belgium, Switzerland, Sweden, Finland, Australia, New Zealand, Tasmania, Cyprus, Greece, Austria, Luxembourg and Singapore as well as all over the United Kingdom. Obviously I cannot possibly send Christmas greetings in all the languages but I will do my best to include as many as I can. So here goes: Felices Fiestas, Frohiliche Weihnachten, Joyeau Noel, Bon Nadal, Gledelig Jul, Boas Festas, Feliz Natal, Buon Natale, God Jul, Glaedelig Jul, Gellukkie Kerstfeest, Nadolig Llawen, A Ver y Merry Christmas and a very Happy New Year to each and every one of you. Perhaps overseas readers would be kind enough to let me know the Christmas greetings in the languages I have missed so that I can become even more international in time for next year.

I sincerely hope that you find this issue of the Newsletter helpful and interesting and I will see you all again in February. Meanwhile, I hope to hear from you so do write in. Before I close I must thank those of you who sent me so many lovely Christmas cards - I've never had so many, thank you very much much indeed. Well, byeee for now,

Mandy

TRANSLATING ROUTINES

Quite a few members have asked me for help in translating between 8 bit and 16 bit routines. There is very little difference between the two Freescape Command Languages although, because conditions are entered rather differently they do appear to be. To give you some idea of what I mean. Here are some identical routines written for both 8 and 16 bit machines. These conditions can be found in the chapter entitled EXAMPLES which can be found in ALL the manuals. I use these simple routines so that you can compare them easily by referring to this chapter.

TO GO TO ANOTHER AREA

```
(16 BIT)                    (8 BIT)

IF ACTICATED?               IFACTIVE    3
THEN INVIS (3)              THEN
VIS (4)                     INVIS       3
ENDIF                       VIS         4
                            ENDIF

IF COLLIDED?                IFHIT       4
THEN GOTO (1,2)             THEN
ENDIF                       GOTO        1   2
                            ENDIF
```

TO MAKE AN OBJECT INVISIBLE OR VISIBLE

```
IF SHOT?                    IFSHOT      3
THEN INVIS (o)              THEN
ENDIF                       INVIS       3
                            ENDIF
```

As you can see the main difference is that with the 8 bit language you are limited to a command per line of input, whereas with 16 bit you are not. Most of the FCL commands are exactly the same for both machines but it may help members, who wish to use ALL the routines (apart from animation which is 16 bit specific) within the Newsletters, to do so if some of the differences are explained here.

```
              (16 BIT)                    (8 BIT)

ACTIVATED?  --------------------   IFACTIVE
ADDVAR      --------------------   ADDV
COLLIDED?   --------------------   IFHIT
VAR=?       --------------------   CMPV (compare variable)
                                   IFEQ (if equal)
VAR>?       --------------------   CMPV
                                   IFGT (if greater than)
VAR<?       --------------------   CMPV
                                   IFLT (if less than)
SHOT?       --------------------   IFSHOT
TIMER?      --------------------   IFTIMER
VIS?        --------------------   IFVIS
SUBVAR      --------------------   SUBV
SETVAR      --------------------   SETV
```

IFSENSED is 8 bit specific and 16 bit users will have to use System Variable 11 to check if the player has been shot by a sensor. I hope this will be of some help to you all. If I have missed any command that you would like translated then please let me know.

LETTERS

Dear Mandy

I was wondering whether there were many Commodore 64 members of the User Group as, judging from the previous Newsletters, there doesn't seem to be many at all. Anyway, the main point of my letter: Could you please tell me what the variables 122 and 123 are for? They are labeled Interrupt Counters. If you can't answer this then don't worry as I will probably manage to work it out for myself with time. One last thing, I know now to alter the kit so that it is capable of playing music. I have not done it yet but I know how to do it, I know it is illegal to tamper with the innards of a program, so I expect I will have to obtain permission to change it so that it will play music. I can't promise success but it would be a great advantage for C64 users. I must say that you do a great job running the User Group, well done! I wish you luck for the future.

Steven Flanagan, Sheffield
COMMODORE 64

Thank you for your good wishes, Steven. There are a great many Commodore 64 members but I haven't heard from many of them yet. As time goes on I hope that more of them will make themselves known through the Newsletters. Same goes for all computer users, we would love to hear from you all so do write in with your news and views. The variables 122 and 123 are Interrupt counters and the value of these increases every 50th of a second. These can be used to time events and are most useful as they can be reset. You can modify your own copy of the 3D kit to be able to play music without any problem, if you so wish. What you cannot do, as it is illegal, is to modify a program for any other but your own personal use.....Mandy

---

Dear Mandy,

I just thought, while I'm sending my registration and application to join, I might as well include my first letter to your Newsletter. I was wondering if anyone has sussed how to create solid 3D wheels like the ones on the tutorial video. Is it possible? How do you do it? or is this something you can only do on the 16-bit machines? Also how do you go about creating new items for the Global Area, as my program seems to have everything invisible or something in the Global Area. Are there likely to be further developments, and so further editions or add-ons for 3DCK, such as a design-your-own sound effects option, as while the sound effects are useful they are a might limited. For example, what would you use for a car engine for the car design the video shows off so well? Anyway, I'm not moaning; my 3D Construction Kit is now about the most used item in my software collection. Oh and before I forget, I know it is illegal to sell unauthorised copies of the kit, but is it OK to merely back it up? I ask this because of the disclaimer in the manual, so if anything went wrong with my copy I would have to shell out another £24.99, which I can't well afford.

Matt Moran. Solihull
AMSTRAD CPC

The wheels are created using small, inverted pyramids which, when fitted together, form what looks like a circle. I have to admit that, when starting to fiddle about with the Global area's - on all machines - that problems tend to occur. I have found that area to be extremely sensitive and personally prefer to create my own objects in whatever area I am in than to try to add any to the Globals. If you add an object to the global area it will, when selected, always appear at the same position which could create an overlap of objects if one is not extremely careful. News of any upgrades, new programs or add-ons will be announced in the Newsletters as soon as the programmers give me the "thumbs up" so you won't miss out on anything, Matt. If anything untoward happens to your original program disc you will be provided with a replacement so no need to worry on that score. I hope you continue to get the same pleasure and enjoyment out of using the program as you obviously have so far.....Mandy

---

Dear Mandy,

Would it be possible to incorporate CyberScape .3D2 files/objects into the 3D Construction Kit? I would like to do so if at all possible and if you could give me some information on the 3DCK data format, perhaps I will be able to work out how to do it.

Andy Caldwell Liverpool
ATARI ST

Unfortunately the data format used within the 3DCK is not really capable of the level of complexity many objects created with CyberScape exhibit. The only way it would be possible to display CyberScape objects with the 3DCK would be to create TRIANGLE object type for each facet within the CyberScape object. As I'm sure you will appreciate this would be very memory intensive and also, more importantly, processor intensive thus slowing the frame rate to an unusable level. However, there is a possibility of a new release of the 3DCK in the near future aimed at the more technical user. This new version (subtitled "Professional") will allow, amongst other things, for the inclusion of user code modules. This feature will allow programmers, such as yourself, to write their own programs to do anything from a simple instrument type, to a complete subgame, and have these programs called from within the 3DCK. Another possible feature of the "Professional" version (perhaps of more interest to you) is the inclusion of new and more flexible OBJECT types. This feature may help in converting the more complex CyberScape data to 3DCK format. As a member of the User Club you will be informed as more information of any new versions become available.....Mandy

---

Dear Mandy,

I would be grateful if you could clarify a point about the C64 manual. The IFSENSED command, on page 35, will not work on my machine. Whenever it is typed in on its own line the border flashes to show an error. I presume some other parameter must follow it. However, the manual doesn't give any indication of what it should be.

Robert Pomfret Manchester.
COMMODORE 64

Yes, the IFSENSED command should be followed by the number of the sensor you are referring to. If you create a sensor it will be given its own number in the object list. So if your sensor was given the number 7 you would enter the command:

```
IFSENSED 007
```

I think you will find the article entitled 8 Bit Routines by George Dixon, in this issue, of special interest to you as it goes into great detail on the subject of sensors.....Mandy

---

Dear Mandy,

Ciao Gran Supremo Mega Direttore Galattico Mandy. Mi chiamo Giorgio e ti sto' skrivendo da Genova. I seemed to understand, in the last issue, that you know something about Latin languages. but I had better translate. Ciao (this is international) Supreme Great Chief Galactic Mega Director Mandy. I am Giorgio and I am writing to you from Genoa (beloved Italy). I must say that I read my first issue (Aug/Sept) of the Newsletter with great interest. In particular. I had to agree with readers who have had some problems in loading and saving using the 3DCK on the PC with the mouse. It might be an idea to build an album with photographs of all of us in the 3DCK User Group, this album might be published at the end of each year in the relevant issue of the Newsletter. It might be a long job for you but please do think about it. I like the spirit of the publication, concise but full of interesting advice and useful routines. What do you think about the idea of building a Mega-Game in which every member of the User Group could participate by sending you his or her contribution as a ready made area? Each area might contain a visible recognition number and the purpose might be to discover the name of its author (something only you would know). You could prepare the main area from which everyone could enter in each of the others and the first people to discover completely the number/name table might see his or her name published in the Newsletter with the solution! E colgo l'occasione per porgerti i miei piu' grandi complimenti per la rivista e per farti gli auguri (porta meglio pero' un "in bocca al lupo") per una sempre migliore continuazione... But this time I don't translate.

Giorgio Oliveri Genoa, Italy
PC

Thank you for your good wishes, Giorgio. Yes, I do manage to be able to translate Latin languages. It is French and German that I have the greatest difficulty with. Being married to a Portuguese, and speaking that language, helps a lot (hence my surname, I add that as some of you have been wondering about it!). I appreciate your ideas and suggestions but, herein lies the difficulty, there are hundreds of members of the User Group and all the different computers are represented so producing the photographs would be extremely difficult - as well as the fact that photocopies of photographs rarely produce flattering results! The Mega-game would be difficult to organise unless there was one for each different computer and I just wouldn't have the time to organise it. Perhaps you would care to start the ball rolling with a PC Mega-game though? Perhaps other members have some useful suggestions on how this could be done? Ciao.....Mandy

---

Dear Mandy,

I've just bought the 3DCK for the Atari 520ST and find it completely fantastic!! Please find enclosed my registration and membership. I'm currently involved in a major game project and have a number of questions on obtaining features that I've seen in Incentive games. How would it be possible to create a day/night situation so that the background sky colour would change when it becomes night and subsequently when day arrives? This would ideally be taken from a reading of a time bar so that when the player enters an area it would either be day or night, depending on the TIME reading. Is it possible to update graphics in the borders as done in the water jar from TOTAL ECLIPSE? Finally, it is possible to load in data from within a game, as I am finding that my game may not all fit into one load? I would be grateful if you could shed some light on these questions.

Liam Johnston Belfast

ATARI ST

I'm afraid it isn't possible to update borders or load in data from within a game, at least on this version. See the reply to the letter from Andy Caldwell about future versions as I think these may be possible with the "Professional" version. The DAY/NIGHT problem is possible but rather difficult to program. In DRILLER the programmers had a command to change the colours which isn't available in the present 3DCK. What may overcome this would be to create two identical areas, one with black "sky" and the other with "blue" sky and to move the player from one to the other depending on the "time of day" (determined by the time). Of course one problem would then be to determine exactly where, in the current area, the player was and to place them in EXACTLY the same spot in the other area. This could be done by storing the player's coordinates within variables. I confess that I haven't yet had time to try this myself, but when I do I will let you know how it should be done. Perhaps another member has, or will, work it out. If so, I would appreciate the routines for the Newsletters very much indeed.....Mandy

---

Dear Mandy,

Thank you for your letter and the Oct/Nov issue of the 3D Construction Kit Users Group Newsletter (what a mouthful!). I was in two minds about subscribing as most of the correspondence seems to be for Amiga's and CPC's whereas I have a humble old Tandy IBM compatible. Would it be possible to give translations for the routines in the various formats as most of them are quite short? In issue 3 there was a quite complicated routine by George Dixon for the player to hop on an object and be moved to another point. The comment was "16 bit users will also find them useful as only a little adaptation is needed to convert the commands/routines to the 16 bit machines." How? Perhaps I am still wet behind the ears and could do with issue 2 with your article on Variables. One routine I have been trying to work out is to be able to move an object with the viewpoint. Eg. to have an object representing the bonnet of a car at the bottom of the screen, which when a button is activated would move forward as the player moves forward. This would enable the player to simulate getting in or out of the car. I know you would normally have the border depicting, perhaps the dash panel of the vehicle but you can't change the border in the middle of a program. One other thing I am not sure of is the point on page 8 about Free distribution of stand alone data files. Does this mean they can be freely distributed in whatever way deemed suitable at whatever charge thought reasonable. Or does it mean free and gratis "Here mate have a copy, doesn't cost you a penny" type free?

Stephen Shield, St Helier, Jersey

PC

Firstly, Stephen, let me explain that the Freescape Command Language is exactly the same for ALL 16 bit machines so routines for Atari ST or Amiga can be entered in the PC without any modification or translation. Similarly the 8 bit FCL is the same for all 8 bit machines. This issue I have included a short article which I hope will enable all members to convert ALL the routines within the Newsletters for their machines. I've explained what the translation of unusual commands are between 8 and 16 bit machines and, hopefully, demonstrate just how similar the languages really are. I have tried to include ALL the commands which are slightly different between 8 and 16 bit machines but if I have missed one then please do let me know. Having all the routines available right across the board will be most useful for members. I am sure. However, please remember that Animation Routines are 16 bit specific, although previous Newsletters do contain routines for "simulated animation" for 8 bit machines. Remember also that the CALL command for PROCEDURE conditions is 8 bit specific. These PROC conditions are similar to GOSUB commands and routines in BASIC so 16 bit users will have to include the relevent conditions for these within their routines. The reference to "Free distribution of Stand Alone Games" means that you can sell, swap, give or whatever you wish to do with your completed games. The only stipulation is that you inlude an acknowledgement that the game was created using the 3D Construction Kit.....Mandy

ALL YOUR NEWS AND VIEWS ARE WELCOME FOR THE LETTERS SECTION

HINTS AND TIPS

SILENCE IS GOLDEN!

By J. C. Latty AMIGA

I'm afraid I have discovered that one of the Hard Drive tips I sent you for the last issue will not work with version V1.2 of the 3DCK. I had said with version 1 you could put ALL the program files into a drawer if you assign it first. For some reason, I haven't worked out yet, this will not work with version V1.2. So its back to the original instructions for now. One quick tip before I sign off! If, like me, you sometimes find it annoying to hear the built in sound every time you go through an entrance, you can kill the sound by using the number of an undefined sample. For example, if you are using the default sample.bnk, use the following lines:

```
IF COL?
THEN
GOTO (2)
SYNCSND (7)
ENDIF
```

MEMORABLE THINGS!

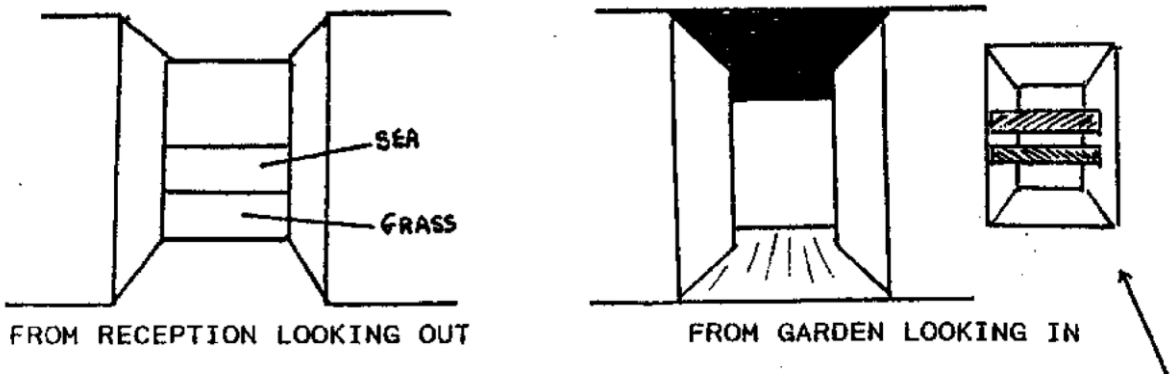
By Liam Johnston ATARI ST

Users of the Atari ST version of the 3DCK can get more memory to work with from the Kit by going to PREFERENCES and typing in 7000000. The machine will reset this to 5000000 and then give the user about 78K to work with. Far more than the default memory it boots up with. And players who have already started to program data can still avail themselves of this without having to re-program from scratch. Simply carry out the above instruction before you load in your data and you still have the extra memory to play with!

DOORS WITH A DIFFERENCE!

By R. Spreadborough ATARI ST

Here is an alternative method of creating doors and exits:



In fact these are wafer thin pyramids with rectangles placed over them but the visual effect is extremely realistic!

HINTS AND TIPS ARE NEEDED FOR THIS SECTION PLEASE

PROBLEM PAGES

I have an ICL DRS Model 40 PC and have a problem when I select MCGA graphics mode and serial mouse. Unfortunately, as soon as the mouse is moved, the pointer freezes and a white band appears across the screen. Strangely, this only happens in MCGA, the mouse and program combine perfectly in CGA and EGA modes. Do you have any idea as to why this should happen and how it can be solved?

Peter Griffiths, Northants

If at all possible, try another mouse driver or check the CONFIG FILE and AUTO EXEC.BAT and remove any non-standard programs or drivers. PC problems with memory or conflict always suggest these two ideas. Let me know how you get on!.....Mandy

---

I have noticed that, even on FINE mode, walls are 2 units adrift when "joined" together. If you then walk into this joint and keep bashing your VR body passes through the gap and you eventually find yourself outside the game confines. Is there a solution to the 2 unit gap?

Paul Sayer, Ramsgate
16 BIT

2 Units is the smallest "move" available. To overcome this type in the actual co-ordinates into the ATTRIBUTES dialogue box.....Mandy

---

My first problem concerns the disc accessing. It sounds similar to Angela Bishop's problem in a previous issue. When I select the LOAD option, the old disc drive hums, accesses the master disc, and then gives the contents of that disc, no problem. When I now swap the disc for my save disc, I click on the A: icon, I type in the path A:\ in again, nothing happens, the program refuses to read the disc. I hear you say "why doesn't he put his save disc in, in the first place", good point, that's OK if you only want to access from one disc. I want to be able to use multiple discs to store various items etc onto. If I have to, I will use one disc, but another problem associated with this is that I cannot tell what is stored on any disc?

Paul Hough, Grimsby
ATARI ST

If you return your disc to the address on the back of the box, Paul, and ask for it to be replaced with version V1.2 they will do so with pleasure and I am sure you will experience no further difficulties with that version.....Mandy

---

I have tried to create more than 60 objects in an area and actually managed to do this, the only problem was that some of the objects were almost transparent. Is this due to the extra objects?

Paul Sayer, Ramsgate
16 BIT

Yes, Sorting will have problems with more than 60 objects.....Mandy

---

Is it possible to create messages on the walls of my 3D environment similar to CASTLE MASTER where you clicked on the yellow boards which brought up a screen with the message on?

Chris Troth, Bradford
16 BIT

It is possible to achieve the effect of messages, similar to CASTLE MASTER, by making an instrument the same size and position as the VIEW window. Make the instrument into a TEXT window. You can then write messages to this window. See the condition that controls the instructions in the Kitgame for an example on how this is done……..Mandy

---

Is there likely to be a "save" option available on a completed stand alone game when posted off to all friends etc. I think there's nothing worse than not having a "save" option when playing? Also, is there any limit to the number of objects that can be animated in one scene?

Paul Sayer, Ramsgate
16 BIT

There is a save command within the 16 bit versions of the Kit, Paul. You can define the keys or icons for both SAVE and LOAD in the same way you define for movement controls within your borders etc. There is no limit to the number of objects that can be animated in each scene.....Mandy

---

If I expanded the memory of my ST, from half meg to full meg, would the 3D Kit run faster, and therefore, would I be able to have more objects in each area? What I am asking really is, does the 3D Construction Kit support memory upgrades?

Paul Hough, Grimsby
ATARI ST

If you have more memory available it won't make the Kit run faster but it will allow for larger areas.....Mandy

---

I have noticed that LOCK/EXCLUDE doesn't work properly when inside the bungalow supplied with my version of the 3DCK. When I am inside the livingroom and select a part of the settee, for example, and try to exclude, this does not work. Using the move icons copies the selected part on the screen confusing it. Disabling the exclude icon restores the badly confused screen. Similar effects occur if I use the LOCK icon.

Jurgen Thurow
ATARI ST

The problem you experienced is because you were inside a room which has no horizon. Excluding objects in an area with no horizon will not appear to work because the background is not redrawn over the excluded objects.....Mandy

---

I bought this software for my son's birthday but already we have experienced a problem. After defining all the controls and indicators for DRBORDER.IFF and saving using F2 we find that the bitmap has been lost, only the controls and indicators remain. I retraced the steps using KGBORDER by loading it in as usual. I pressed F2 and a SAVE SCREEN menu appeared with PATH and FILE as per the original load sequence. I pressed ENTER. I then attempted to load in the border and got the message THE REQUESTED FILE IS NOT OF THE CORRECT FORMAT. Now, both the borders are inaccessible. Shouldn't the manual give some kind of warning that this might happen?

Martin Sennett, Southampton
AMIGA

You have discovered something extremely unusual, Martin! One Amiga owner told us that using F2 would save a screen dump to your printer, but this is the first I have heard of a save option occuring by pressing F2. There is no warning in the manual because I had no idea that this would happen. The save and load options should be accessed by using the FILE menu under the top menu bar and from nowhere else. I am sending you a replacement disk as you lost both the borders and I will pass on the information to the programmers about what happened for their comments. I would be surprised if you had the same effect with the replacement disk as I get the feeling that there may have been a "one off" fault within your original program.....Mandy

Sharing your problems within the Newsletters may also help someone else! So do write in, a problem shared is a problem solved!

8-BIT ROUTINES

By George Dixon

SOME SENS(OR)IBLE ROUTINES

My aim this issue is to demonstrate the use of SENSORS and although the two routines that I include are written for use on 8-BIT machines I am sure that they can be easily adapted for use on 16-BITS.

Sensor Range

To accurately calculate the range of a sensor, first calculate the X, Y and Z distances from the maximum Viewpoint position that you require from the sensor. Add these distances together; this gives a value known as the MANHATTAN DISTANCE. This value divided by 64 gives the range in Object position units, i.e. 1 RANGE UNIT = 1 OBJECT POSITION UNIT.

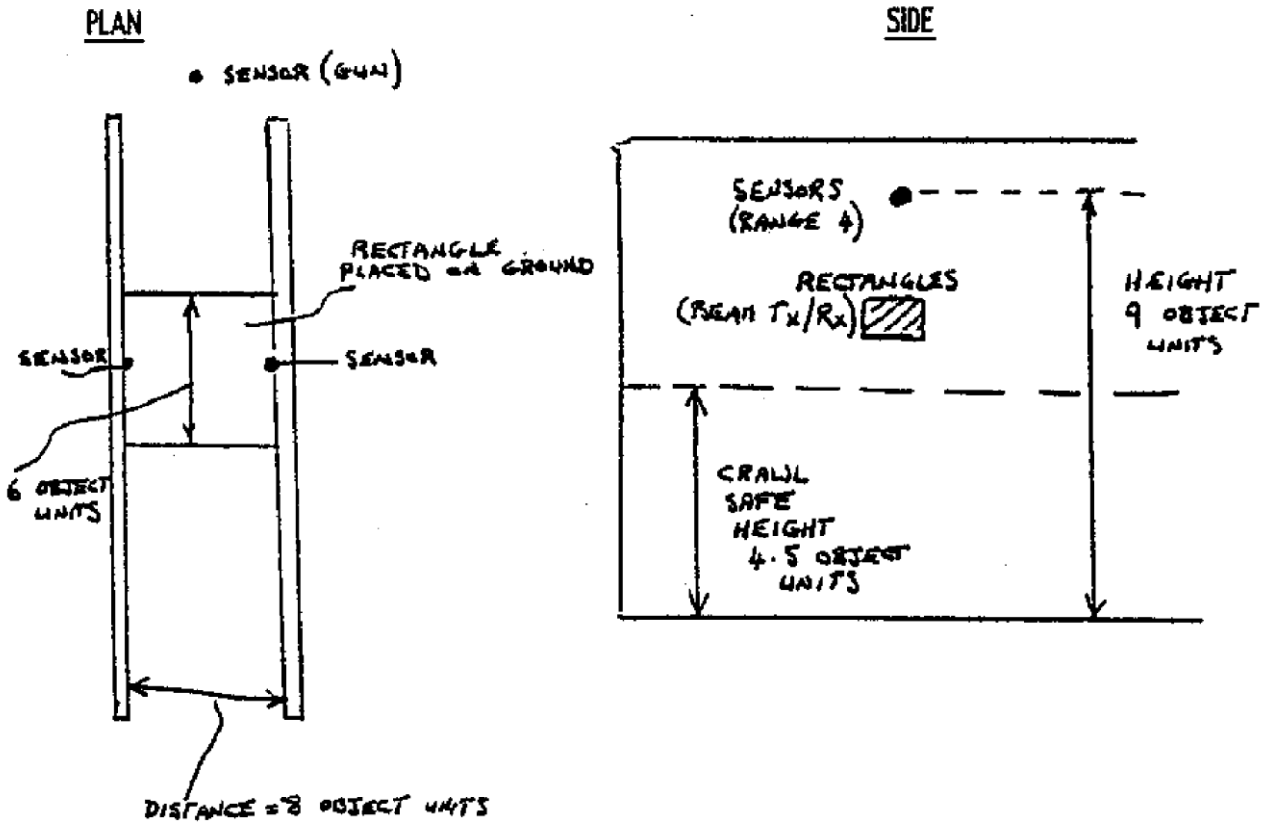
There now follow two routines that I hope you will find useful and informative:-

INVISIBLE (INFRA-RED) BEAM

The aim of this routine is to produce an "INFRARED BEAM", which is invisible, positioned across a corridor at waist height. The beam will be broken/interrupted by an explorer walking or running down the corridor, but can be crawled under to ensure his safety. If the beam is broken then a gun set at waist height will be activated to shoot at our intrepid explorer. Three hits to his abdomen and it is curtains for him! If, however, he drops into a crawl after breaking the beam he will be able to crawl forward/backward under the gun's "hail" of bullets; but, should he stand up before safety is reached then he will become a prime target again.

The head height (Y VIEWPOINT POSITION) when walking or running is 544 which equates to 8.5 (544÷64) object position units. When crawling the head height reduces to 288 viewpoint position units or 4.5 object position units.

The routine was originally devised as a demonstration of Sensor Range, but, could be developed for inclusion as a hazard in someone's game.



CREATE the following objects in AREA 1 and position them as per the two sketches above:-

```
OBJECT 2.........CUBE (left wall)
OBJECT 3.........CUBE (right wall)
OBJECT 4.........RECTANGLE (shade invisible for use as a trigger pad)
OBJECT 5.........RECTANGLE (shade red for use as beam transmitter)
OBJECT 6.........RECTANGLE (shade blue for use as beam receiver)
OBJECT 7.........SENSOR (set range to 4 and frequency to 0)
OBJECT 8.........SENSOR (set range to 4 and frequency to 0)
OBJECT 9.........SENSOR (set range to 100 and speed to 10)
```

CREATE and EDIT the following LOCAL CONDITIONS:-

```
 1. IFSENSED 7
    AND
    IFHIT 4
    THEN
    ORV 2 1
    ELSE        THESE TWO CONDITIONS ARE BEAM
    END         BROKEN DETECTION ROUTINES
    ENDIF

2. IFSENSED 8
   AND
   IFHIT 4
   THEN
   ORV 2 1
   ELSE
   END
   ENDIF

3. CMPV 70 121 (looking for key F to be pressed i.e. CRAWL select detection)
   IFEQ
   THEN
   ORV 1 1
   ELSE
   END
   ENDIF

4. CMPV 82 121 (looking for key R to be pressed i.e. WALK select detection)
   IFEQ
   THEN
   ANDV 2 1 (note the use of ANDV to ensure that BIT 1 is SET on walk selection
   ENDIF    only if BEAM is broken previously)

 5. CMPV 2 1         6. CMPV 3 1
    IFEQ                IFEQ
    THEN                THEN
    VIS 9               INVIS 9
    ELSE                ELSE
    END                 END
    ENDIF               ENDIF
                        IFTIMER
                        THEN
                        SOUND 3
                        ENDIF

7. IFVIS 9
   AND
   IFTIMER
   THEN
   ADDV 1 2
   ELSE
   END
   ENDIF
   CMPV 3 2
   IFEQ
   THEN
   TEXTCOL 3
   PRINT 2 11 7
   DELAY 200
   ENDGAME
   ENDIF
```

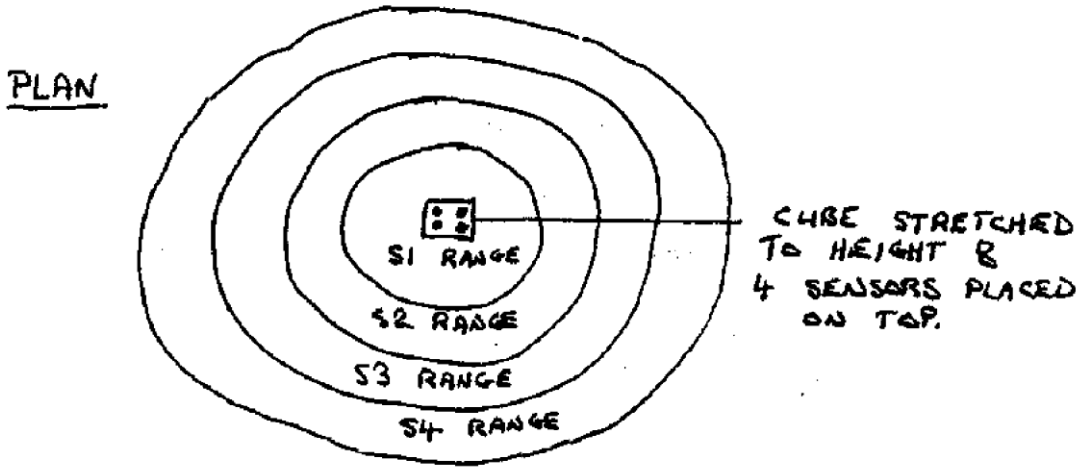
CREATE and EDIT the following GENERAL CONDITION:- 1. TIMER 50

CREATE and EDIT the following MESSAGE:- 2. YOU ARE DEAD

RANGE/PROXIMITY DETECTOR

The aim of this routine is to have an audible warning of coming within range of a particular point within an area with the frequency of the warning increasing as the player gets closer to the point. Uses for this routine could be a) as a warning device in an area b) audible proximity for docking of a space vehicle to space station airlock.

Study the following sketch which I hope shows the basic concept of my routine:-



CREATE the following OBJECTS and position as per the sketch:-

```
OBJECT 2.........CUBE (make X and Z size 1, make Y size 8)
OBJECT 3.........SENSOR S1 (set range to 5 and frequency to 0)
OBJECT 4.........SENSOR S2 (set range to 15 and frequency to 0)
OBJECT 5.........SENSOR S3 (set range to 25 and frequency to 0)
OBJECT 6.........SENSOR S4 (set range to 35 and frequency to 0)
```

This routine uses VARIABLE 1 as a range "cell" with a threshold of 200. When the sense count reaches 200 the alarm will sound and the count will reset to zero.

If the **TIMER** is set to 1 i.e. every 50th of a second then we can use the varying **SENSOR** ranges to good effect:-

SENSOR 1 will cause 1 to be added to variable 1 every 50th of a second i.e. count of 200 gives 4 seconds.

SENSOR 2 will cause 2 to be added to variable 1 every 50th of a second which will halve the time to reach count of 200 i.e. 2 seconds.

SENSOR 3 will cause 4 to be added to variable 1 every 50th of a second which will take 1 second to reach 200.

SENSOR 4 will cause 8 to be added to variable 1 every 50th of a second which will take half a second to reach 200.

I hope from the above that you can see that we will be varying the frequency of the sound as we get closer to the cube and come within the different sensor ranges.

CREATE and **EDIT** the following **LOCAL CONDITIONS:-**

```
1. IFSENSED 6
   AND
   IFTIMER
   THEN
   ADDV 1 1
   ELSE
   SETV 0 1
   END
   ENDIF
   IFSENSED 5
   AND
```

```
2. CMPV 200 1
   IFGT
   THEN
   SOUND 3
   SETV 0 1
   END
```

GENERAL CONDITION

```
TIMER 1
```

```
IFTIMER
THEN
ADDV 1 1
ELSE
END
ENDIF
IFSENSED 4
AND
IFTIMER
THEN
ADDV 2 1
ELSE
END
ENDIF
IFSENSED 3
AND
IFTIMER
THEN
ADDV 4 1
ELSE
END
```

VARIABLES - THE ART OF USING THEM

By Steven Flanagan CBM 64

The idea of altering variables 112 to 117 have already been covered in the last Newsletter, but this subject can still be developed further.

Demos could be designed, where the program plonks you in an environment with weird and wonderful scenery with graphical effects such as invisible parts, and revolves you around in a prepared route. This introduces a completely different side to the 3D Construction Kit.

You could do a guided tour of your environments, with text popping up telling you what's what. You could even do an art gallery, with various sculptures in the room.

Another way of using these variables is to have animated start and end sequences to a game. For example, the storyline of your game might be that you were on a plane that crash-landed on a deserted island or whatever. The sequence could show you in the plane, flying normally and then start to dive and crash-land.

You could even give the impression of the plane spinning out of control by changing variables 118 to 120.

Using similar methods, you could give the user a degree of control. For example, the start sequence may involve you gliding the plane towards a runway. Your Y position would decelerate at a constant speed and your speed would be constant. The user must steer left and right and control the rate of fall to land the plane on the runway rectangle.

This can easily be tested by a local routine such as:

```
CMPV    001    114    - Test if viewpoint Y low position is zero.
IFGT
THEN
END                   - If you are above ground then routine ends.
ENDIF
CMPV    001    115    - Test if viewpoint Y high position is zero.
IFGT
THEN
END                   - If above ground then routine ends.
ENDIF                 - Reaching this point means you must have touched
IFHIT   001             ground. This tests if you are on the runway.
THEN
GOTO    001    002    - If you are then goto area 2 to continue game -
```

```
END                     successful landing.
ELSE                  - Otherwise you missed the runway and crashed. PROC
CALL    001             1 should have the end sequence, ending with an
                        ENDGAME command.
```

This sort of thing may eat up memory, but it will be worth it in the end. It ties in with what was said last issue in the feature. "How to get your games noticed". If the first thing the player sees is a dazzling introduction sequence, he or she is bound to be interested.

If these sequences take up too much memory, you could omit the end sequence out of the game and save it as as a seperate game. When the player completes the game, he could be prompted to load the next file on the disk or tape. To stop people just loading in the end sequences without completing the game, you could have a password system.

This means that when the player completes the game, he will be given a password to type in at the beginning of the end sequence "game".

The start area in the end sequence should be completely black with no objects at all. In the password LOCAL routine below, the password is ST (2 letters).

Message 1 should be "ENTER PASSWORD".

```
PRINT      001    010    010    - Asks for password.
CMPV       083    121           - Tests if S key is pressed (ASCII (s) = 83)
IFEQ
THEN
ORV        001    001           - If processed, set a flag.
ENDIF
TESTV      001    001           - Test flag to see if S has been pressed.
IFEQ
THEN
ELSE
END                             - If not then end.
ENDIF
CALL       001                   - PROC 1 is the routine to test for T.
TESTV      002    001           - If T flag is set then password is complete
IFEQ
THEN
GOTO       001    002           - If the password has been typed in, goto
                                   area 2 to begin the end sequence.
```

Now the routine for PROC 1:

```
CMPV       084    121           - Tests if T is pressed. (ASCII (t) = 84)
IFEQ
THEN
ORV        002    001           - If pressed, set flag.
```

As soon as both letters are pressed in order, you will be transported to area 2 where your end routine should start. This method leaves loads of memory for a spectacular ending to your game.

Here is a list of the ASCII numbers for all of the letters. This is the number to look for in variable 121:

A=65 B=66 C=67 D=68 E=69 F=70 G=71 H=72 I=73 J=74 K=75 L=76 M=77
N=78 O=79 P=80 Q=81 R=82 S=83 T=84 U=85 V=86 W=87 X=88 Y=89 Z=90

For example, if you want to see if Z is pressed, use:

```
CMPV   090   121
```

Thats all there is to it.

16 BIT ROUTINES

SWIMMING POOL ANIMATION

By Mieke Van Der Poll - PC

I created a swimming pool with a pyramid and a diving board with a cube. The animation starts when you shoot the diving board and stops when shooting the pool. The figure of the swimmer stands on the diving board at the start (group 4). When the animation starts it is moving towards the water, jumps in it and disappears. Another figure becomes visible (group 12) facing to the right, swims to the right and disappears. Group 17 becomes visible swimming forward, vanishes and group 32 (becoming visible) swims to the right. When group 32 vanishes it seems it is diving under and reappears again somewhere else on the screen (which is group 12 again) and continuing swimming! This animation will continue until you shoot the pool and stop it.

I made the first figure (group 4) consisting of an upper and a lower part. I made another group of the upper part (head, part of body, two arms) and saved it as an object. When I made group 4 invisible I loaded in the upper part on that spot, turned it to the right, made it invisible and movable and did the same with the other groups on the different spots in the pool.You have to place each upper part on the spot where the previous one disappears, turning it the right direction and making every part of it movable and invisible. Make sure, when you edit a group, everything is still static and only when it is in the right place, make every part of it movable and invisible. The only group that is not invisible at the start is group 4. All groups have to be made movable though!

SWIMMING ANIMATION ROUTINE

```
INCLUDE (4)
START
LOOP (17)
MOVE (0,0,17)
AGAIN
MOVE (0,-70,0)
SOUND (7)
AGAIN
INVIS (4)
VIS (12)
INCLUDE (12)
LOOP (10)
MOVE (10,0,0)
AGAIN
INVIS (12)
VIS (17)
INCLUDE (17)
LOOP (30)
MOVE (0,0,30)
AGAIN
INVIS (17)
VIS (22)
INCLUDE (22)
LOOP (35)
MOVE (-35,0,0)
AGAIN
INVIS (22)
VIS (27)
INCLUDE (27)
LOOP (30)
MOVE (0,0,-30)
AGAIN
INVIS (27)
VIS (32)
LOOP (35)
MOVE (35,0,0)
AGAIN
INVIS (32)
RESTART
```

RADIO CONTROLLED VEHICLE

You can achieve the same animation with the "vehicle" in Newsletter number 2, page 27, which is "radio-controlled". You have to make the conditions for the different arrows of the radio control unit. I have been trying this out for the four horizontal directions and will give you this routine also.

All four vehicles are first placed in the right position and made invisible and movable at the start. In each condition you have to make three vehicles invisible in order to choose any direction at random and the right vehicle becomes visible. The numbers of the groups depend on the amount of cubes, pyramids etc, you need to create your vehicle.

```
RADIO CONTROL UNIT:
Movement forwards:                    IF ACTIVATED?
  Condition:                          OR SHOT?
                                      THEN VIS (2)
                                      INVIS (20)
                                      INVIS (38)
                                      INVIS (56)
                                      SETVAR (0,V40)
                                      SETVAR (75,V41)
                                      STARTANIM (1)
                                      ENDIF
VEHICLE (GROUP 2)
Animator 1:                           INCLUDE (2)
                                      START
                                      LOOP (2)
                                      MOVE (V40,0,V41)
                                      AGAIN
                                      STOPANIM (1)
                                      RESTART
RADIO CONTROL UNIT:
Movement to the right:                IF ACTIVATED?
  Condition:                          OR SHOT?
                                      THEN
                                      INVIS (2)
                                      INVIS (38)
                                      INVIS (56)
                                      VIS (20)
                                      SETVAR (75,V40)
                                      SETVAR (0,V41)
                                      STARTANIM (2)
                                      ENDIF

VEHICLE: (GROUP 20)
Animator 2:                           INCLUDE (20)
                                      START
                                      LOOP (2)
                                      MOVE (V40,0,V41)
                                      AGAIN
                                      STOPANIM (2)
                                      RESTART

RADIO CONTROL UNIT:
Movement backwards:                   IF ACTIVATED?
  Condition:                          OR SHOT?
                                      THEN
                                      INVIS (2)
                                      INVIS (20)
                                      INVIS (56)
                                      VIS (38)
                                      SETVAR (0,V40)
                                      SETVAR (-75,V41)
                                      STARTANIM (3)
                                      ENDIF
```

```
VEHICLE: (GROUP 38):
Animator 3:                                INCLUDE (38)
                                           START
                                           LOOP (2)
                                           MOVE (V40,0,V41)
                                           AGAIN
                                           STOPANIM (3)
                                           RESTART

RADIO CONTROL UNIT:
Movement to the left:                      IF ACTIVATED?
Condition:                                 OR SHOT?
                                           THEN
                                           INVIS (2)
                                           INVIS (20)
                                           INVIS (38)
                                           VIS (56)
                                           SETVAR (-75,V40)
                                           SETVAR (0,V41)
                                           STARTANIM (4)
                                           ENDIF

VEHICLE: (GROUP 56):
Animator 4:                                INCLUDE (56)
Condition:                                 START
                                           LOOP (2)
                                           MOVE (V40,0,V41)
                                           AGAIN
                                           STOPANIM (4)
                                           RESTART
```

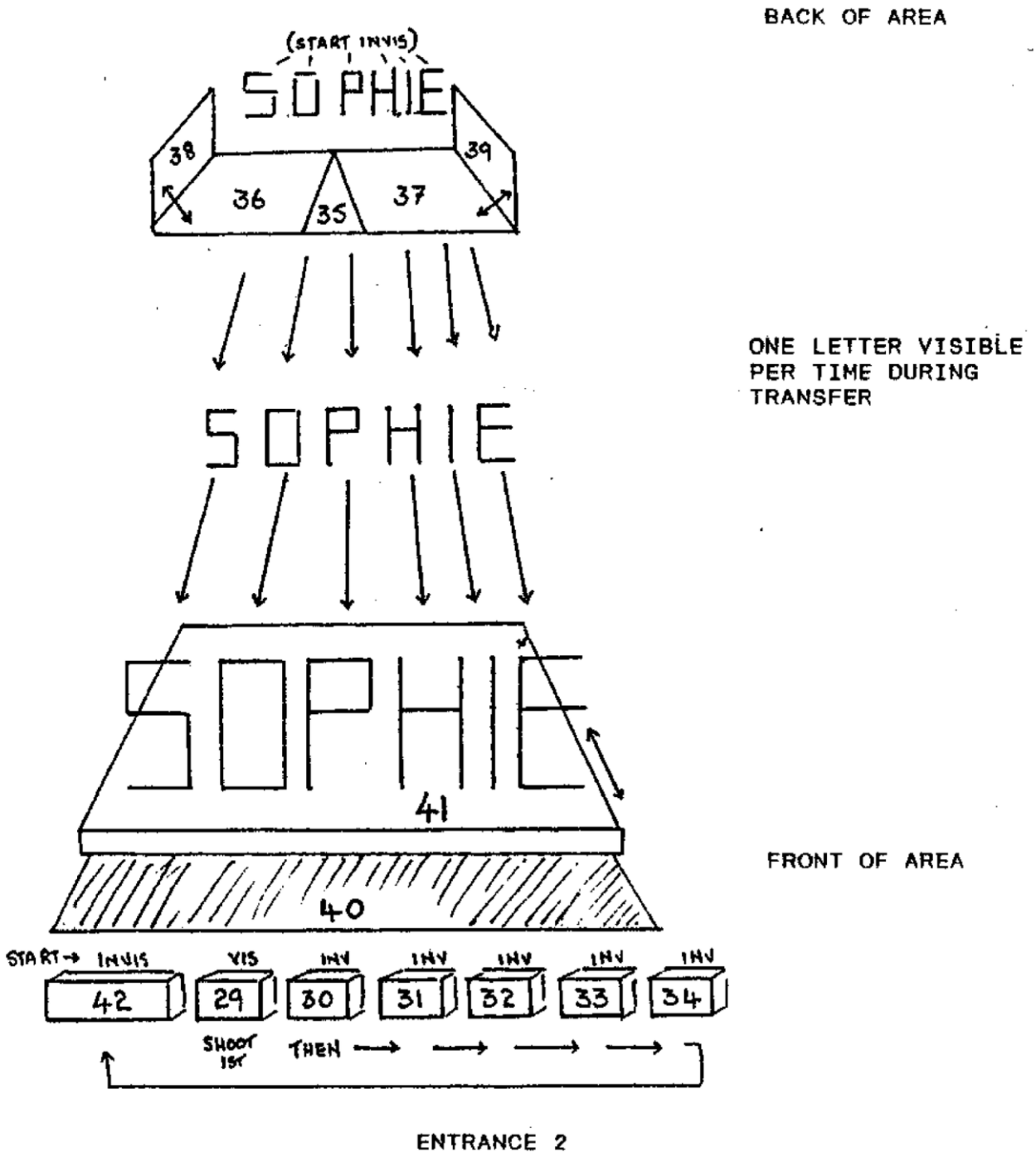
The only restriction is that you have to move in a kind of circle, because your vehicles are placed that way. I don't know yet how to solve that problem.

(Perhaps another member can come up with a solution to this problem and will write in and let us know his/her findings!.....Mandy)

VIDEO TITLE ANIMATION

By Chris Heslesby ATARI ST

Here is my (very) basic but WORKING! program to animate my 17 week old baby daughters name. This, when developed more will be used as the opening few seconds of the homemade video we have of her growing up. I hope that other users, who like me don't fully understand variables, will find it easy to follow and possibly use some of the conditions/animations etc for their own programs:



Shoot (29) - Letters S, then O, etc will move from back of the area to the front, then vanish. When all have moved across, shoot (42), this closes the trap (41) and the full name SOPHIE appears.

OBJECTS USED

No.	DESCRIPTION	INITIAL/CURRENT	ANIM.
1	FLOOR	.VIS	STAT
2	GROUP - for S		
3	cube	INVIS	MOVABLE
4	cube	INVIS	MOVABLE
5	cube	INVIS	MOVABLE
6	cube	INVIS	MOVABLE
7	cube	INVIS	MOVABLE
8	cube for O	INVIS	MOVABLE
9	cube "	INVIS	MOVABLE
10	cube "	INVIS	MOVABLE
11	cube "	INVIS	MOVABLE
12	cube for P	INVIS	MOVABLE
13	cube "	INVIS	MOVABLE
14	cube "	INVIS	MOVABLE
15	cube "	INVIS	MOVABLE
16	cube for H	INVIS	MOVABLE
17	cube "	INVIS	MOVABLE
18	cube "	INVIS	MOVABLE
19	cube for I	INVIS	MOVABLE
20	cube for E	INVIS	MOVABLE
21	cube "	INVIS	MOVABLE

No.	DESCRIPTION	INITIAL/CURRENT	
22	cube for E	INVIS	MOVABLE
23	cube "	INVIS	MOVABLE
24	GROUP - for O		
25	GROUP - for P		
26	GROUP - for H		
27	GROUP - for I		
28	GROUP - for E		
29	BLOCK - S	VISIB	STATIC
30	BLOCK - O	INVIS	STATIC
31	BLOCK - P	INVIS	STATIC
32	BLOCK - H	INVIS	STATIC
33	BLOCK - I	INVIS	STATIC
34	BLOCK - E	INVIS	STATIC
35	HOLE 1	VISIB	STATIC
36	TRAP down	VISIB	STATIC
37	TRAP down	VISIB	STATIC
38	TRAP up	INVIS	STATIC
39	TRAP up	INVIS	STATIC
40	HOLE 2	VISIB	STATIC
41	TRAP-SLIDE	VISIB	STATIC
42	BLOCK SOPHIE	INVIS	STATIC

ITEM CONDITIONS

```
(29) IF SHOT?
     THEN INVIS (36)
     INVIS (37)
     VIS (38)
     VIS (39)
     STARTANIM (7)
     INVIS (29)
     VIS (30)
     VIS (3)
     VIS (4)
     VIS (5)
     VIS (6)
     VIS (7)
     STARTANIM (1)
     ENDIF
(30) IF SHOT?
     THEN VIS (8)
     VIS (9)
     VIS (10)
     VIS (11)
     INVIS (30)
     VIS (31)
     STARTANIM (2)
     ENDIF
(31) IF SHOT?
     THEN VIS (12)
     VIS (13)
     VIS (14)
     VIS (15)
     INVIS (31)
     VIS (32)
     STARTANIM (3)
     ENDIF
```

```
(32) IF SHOT?
     THEN VIS (16)
     VIS (17)
     VIS (18)
     INVIS (32)
     VIS (33)
     STARTANIM (4)
     ENDIF

(33) IF SHOT?
     THEN VIS (19)
     INVIS (33)
     VIS (34)
     STARTANIM (5)
     ENDIF
(34) IF SHOT?
     THEN VIS (20)
     VIS (21)
     VIS (22)
     VIS (23)
     INVIS (34)
     STARTANIM (6)
     ENDIF

(42) IF SHOT?
     ADDVAR (1,V47)
     INVIS (42)
     STARTANIM (7)
     ENDIF
```

GENERAL CONDITIONS

```
001 INITIAL CONDITION
    GOTO (2,1)
    SETVAR (0,V40)
    SETVAR (0,V41)
    SETVAR (0,V42)
    SETVAR (0,V43)
    SETVAR (0,V44)
    SETVAR (0,V45)
    SETVAR (0,V46)
    SETVAR (0,V47)

002 IF VAR=? (V40,20)
    THEN INVIS (3)
    INVIS (4)
    INVIS (5)
    INVIS (6)
    INVIS (7)
    ENDIF

003 IF VAR=? (V41,20)
    THEN INVIS (8)
    INVIS (9)
    INVIS (10)
    INVIS (11)
    ENDIF

004 IF VAR=? (V42,20)
    THEN INVIS (12)
    INVIS (13)
    INVIS (14)
    INVIS (15)
    ENDIF

005 IF VAR=? (V43,20)
    THEN INVIS (16)
    INVIS (17)
    INVIS (18)
    ENDIF

006 IF VAR=? (V44,20)
    THEN INVIS (19)
    ENDIF

007 IF VAR=? (V45,20)
    THEN INVIS (20)
    INVIS (21)
    INVIS (22)
    INVIS (23)
    ENDIF

008 IF VAR=? (V46,8)
    THEN VIS (3)
    VIS (4)
    VIS (5)
    VIS (6)
    VIS (7)
    VIS (8)
    VIS (9)
    VIS (10)
    VIS (11)
    VIS (12)
    VIS (13)
    VIS (14)
    VIS (15)
    VIS (16)
    VIS (17)
    VIS (18)
    VIS (19)
    VIS (20)
    VIS (21)
    VIS (22)
    VIS (23)
    ENDIF

009 IF VAR=? (V47,1)
    THEN VIS (42)
    INVIS (38)
    INVIS (39)
    VIS (36)
    VIS (37)
    ENDIF
```

ANIMATIONS

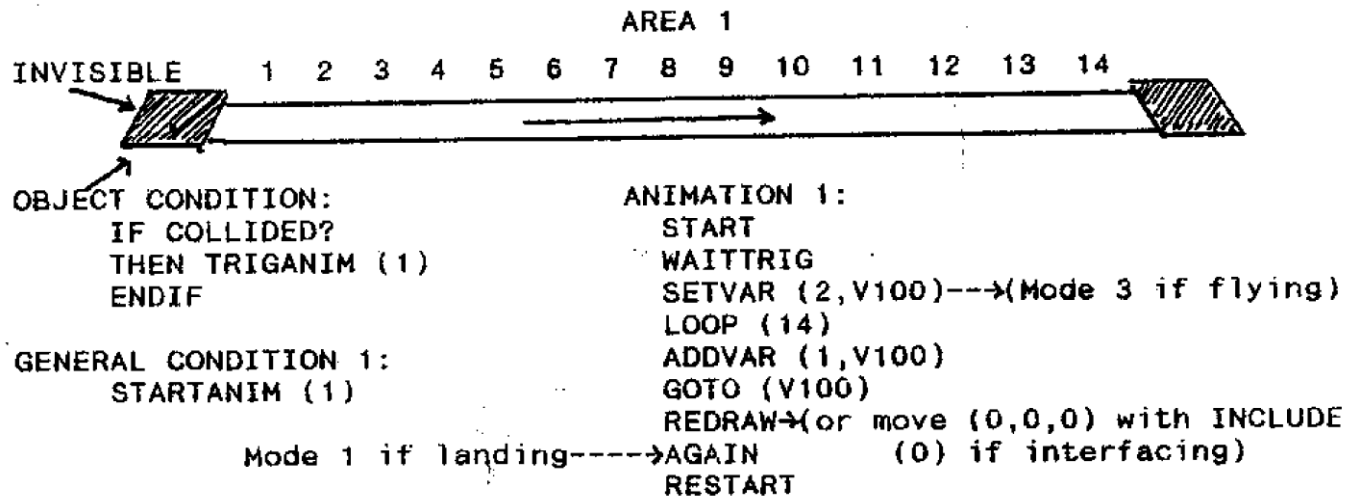
```
001 INCLUDE (2)
    START
    LOOP (20)
    MOVE (50,0,-170)
    ADDVAR (1,V40)
    AGAIN
    ADDVAR (1,V46)

002 INCLUDE (24)
    START
    LOOP (20)
    MOVE (50,0,-170)
    ADDVAR (1,V41)
    AGAIN
    ADDVAR (1,V46)
```

```
003   INCLUDE (25)
      START
      LOOP (20)
      MOVE (50,0,-170)
      ADDVAR (1,V42)
      AGAIN
      ADDVAR (1,V46)

004   INCLUDE (26)
      START
      LOOP (20)
      MOVE (50,0,0170)
      ADDVAR (1,V43)
      AGAIN
      ADDVAR (1,V46)

005   INCLUDE (27)
      START
      LOOP (20)
      MOVE (50,0,-170)
      ADDVAR (1,V44)
      AGAIN
      ADDVAR (1,V46)

006   INCLUDE (28)
      START
      LOOP (20)
      MOVE (50,0,-170)
      ADDVAR (1,V45)
      AGAIN
      ADDVAR (1,V46)
      ADDVAR (1,V47)

007   INCLUDE (41)
      START
      LOOP (10)
      MOVE (0,0,50)
      AGAIN
      ADDVAR (1,V46)
      STOPANIM (7)
      LOOP (10)
      MOVE (0,0,-50)
      AGAIN
      ADDVAR (1,V46)
      STOPANIM (7)
      RESTART
```

ANIMATING THE PLAYER

By R. Spreadborough ATARI ST

Here is a way of animating the players position within an area. It has a great number of advantages over the INCLUDE (o) method, and the SETVAR (X,Y,Z) method. It works rather like a film camera in your area that you can manover and click one shot after the other. If you wish to animate a journey on a conveyor belt you would use the following:



Now go and stand on the trigger pad and create an entrance from the menu. Take a few steps forward and create another. Repeat as many times as you wish making the animation smoother or faster, and just change the loop value. If REDRAW is used the player becomes locked into the animation and cannot use movement controls. However, if you use a MOVE command to move any object nowhere (MOVE (0,0,0)) then the controls are read each frame so it is possible to have some interaction during transit. If you wish to fly then board your craft and use Mode (3) to disable gravity. Make your craft invisible and create a take off sequence. It is possible, by selecting CAM 1-5 and Mode 2 or 3 to set yourself miles outside an area and fly in a circle around and land. Don't forget to set Mode 1 (walk) when you land!

HAPPY LANDINGS!

DOMARK

3D CONSTRUCTION KIT

TM

This box contains one excellent reason for you to own a home computer.

It holds a piece of software that has been developed by the award-winning INCENTIVE team, who for the last four years have produced hit after hit with their amazing FREESCAPE 3D graphics system.

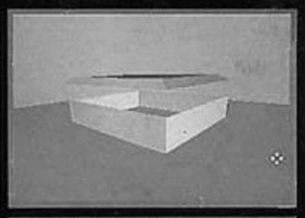
Now that unique system is available for you to "play around with". It's been designed for easy use – mouse/icon driven controls that require no programming skills at all.

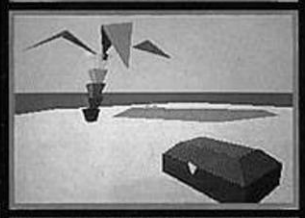
You can design a car, house, aeroplane (or whatever you want!) and then walk around it. See what it looks like from any angle. Change it. Add colour, detail, animation. The possibilities are endless.

And it's ideal for creating games. If you're not artistic, don't worry – there are lots of objects already included in the kit for you to use in your plans, but it's simple to create your own if you want.

So, if you enjoy playing games, but want to use your computer's real capabilities for a change, this is a perfect opportunity.

VIRTUAL REALITY – you've heard about it, read about it, and now it's here at your fingertips.





We know how frustrating it is to buy a piece of software and have to wade through a huge instruction manual just to get started. So we've included a short tutorial video to get you up and running quickly and give you a taste of what 3D Construction Kit is all about. Starting from scratch, the tape will show you how to create, manipulate and join objects, design landscapes and even make your own game! You'll also get a glimpse of some of the fantastic results that can be achieved once you've had a bit of practice

incentive
The Award Winners

Designed and Programmed by Incentive Software © 1991 New Dimension International Ltd.
Artwork, instructions and packaging © 1991 Domark Software Ltd.,
Ferry House, 51-57 Lacy Road, London SW15 1PR. Tel: (081) 780 2224.
Amiga & Atari ST Screenshots.

Domark Limited/Domark Software Limited accept no liability for loss of any kind arising from the use of this product with computers for which it is not intended to be used, nor will liability be accepted for loss of any kind arising from use of the product with third party software, nor use otherwise than in accordance with instructions accompanying this product or issued from time to time thereafter, nor from use of any illegal or unauthorised copy of this product. The consumer shall remain responsible for ensuring that no illegal or unauthorised copy of this product is used. Your statutory rights are not affected.

3D

CONSTRUCTION KIT USERS GROUP

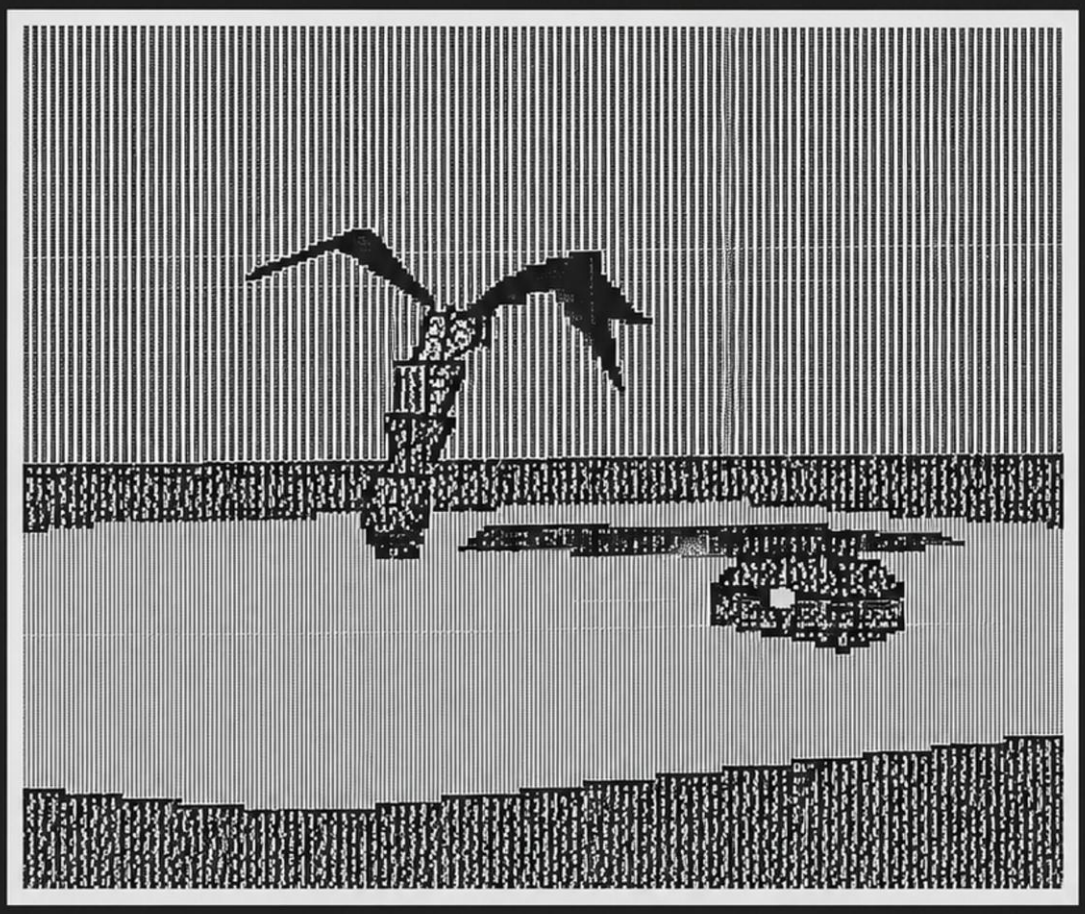
3D Construction Kit Newsletter

Issue Number 5
February/March 1992

CONTENTS

EDITORIAL 105
LETTERS 105
THE KITGAME 110
THE P.D. LIBRARY! 112
16-BIT ROUTINES 114
SCREEN ICONS 115
TRIGGER SWITCH FOR A SINGLE OBJECT 116
METRE LIMIT 116
8-BIT ROUTINES 116
HAVING TROUBLE WITH LIFTS? 117
MOVEMENT ON 8-BIT MACHINES 119
HINTS AND TIPS 119
PROFESSIONAL TOUCHES 121
PROBLEM PAGES 122

NEWSLETTER Feb/Mar 1992
Issue No. 5



3D CONSTRUCTION KIT USERS GROUP

EDITORIAL

Welcome to issue 5 of the 3D Construction Kit User Group Newsletter.

Since I last spoke to you I have been checking out the games and routines etc that have been sent for the PD Library. Many of them are of exceptional quality. In this issue I have given a brief review of each of them, so from this issue you can all send for them and find out what other users have been doing. Of course there are only a few on offer at the moment but I hope that you can remedy that. If you are interested in Public Domain programs (in particular, adventure games), then I will be delighted to send you a list of ALL the PD games I handle through Adventure Probe magazine also.

Also in this issue (and because of numerous requests to put many poor souls out of their misery), there is the full and complete step by step solution to the 16-bit version of the Kitgame. Perhaps an 8-bit member would like to send in the solution to the 8-bit version for publication in the next issue? As I have mentioned previously, if there is any particular aspect of the 3D Kit program that you would like to see covered in the Newsletters then please let me know.

As I mentioned in the last Newsletter the Archimedes version of the Kit is now out and Archimedes owners are joining the User Group. This version of the Kit is almost identical to the other 16-bit versions, apart from one or two machine specific items such as loading etc, so I know that Archimedes users will get just as much help from the Newsletters as users of the other computers do.

Hopefully, more of you will send in your routines, articles, hints, tips and problems for the next newsletter which will be the April/May issue (No.6). The more material I receive the more interesting and bigger the Newsletters will be so please do your best. I hope to have an interview with the programmers in that issue so, if you have any questions for them why not send them in and I will incorporate them in the interview?!

I have not, yet, had a firm release date for the new "Professional" version of the Kit. So many of you have been asking about it recently that I have been in contact with the programmers about it to see how things are progressing. The news I have is that it shouldn't be too long now and that "it will be well worth the wait!" - the programmers seem very excited about it so it seems that we have a great treat in store when we do finally get our eager hands on it. I will give you more news on this just as soon as I get it so watch this space. There are going to be many new additional features and lots of ideas that YOU have sent in will be incorporated. It was kind of so many of you to take an active interest and I would like to thank those of you who sent in your ideas, suggestions, moans and pleas about what you would like to see (or not see). All information was passed on and the programmers have taken note of everything you had to say. Ideas for the kind of Objects that you would like to have provided "ready made" are also needed for extra utility disks so do get in touch.

That gives me an idea! Why don't you clever people design various objects and send them to me so that I can make PD disks of them for the library? Well, that's all from me for this time. I will see you all again in April and meanwhile, I hope you enjoy this issue.

Mandy

LETTERS

Dear Mandy,

My congratulations to you and the other hard working people that have made the 3D Construction Kit possible. This is an excellent program with an easy to use interface that has been needed in the Amiga community for quite some time. My apologies for having taken so long to turn in my registration. I have been quite busy of late and wanted to take some time to try out the program before getting in touch with you. If it is possible, I would like to obtain a copy of this program that works with NTSC (the version I currently possess works fine in NTSC until I try to test the game I have created, then I loose the bottom portion of the screen; this is correctable if I boot in PAL mode, but I would prefer to be able to do all my work in NTSC if possible). I would also like to see some local support in the U.S. for this product. Again, my congratulations on a fine product. I look forward to hearing about future enhancements, upgrades and other news via the Newsletter.

Mark Whitaker, Washington, U.S.A.
AMIGA VERSION

I'm glad you are so pleased with the program, Mark. However, I cannot take any credit for it as it was entirely the creation of Incentive's excellent programmers. I just did some work on it after it was finished. There will be a new NTSC version out in the States very shortly although it will not be called 3D Construction Kit but The Virtual Reality Studio (quite a nice name for it too, I think). It should be out by the time you read this and is, I understand, entirely NTSC. I hope it solves your problems. I don't know of any local groups in your part of the world I'm afraid.....Mandy

---

Dear Mandy,

I am a Dutch artist working with photography and computers. I really like the 3D Kit software, mainly because of my Cyberspace interests. I have only one problem with the software, I can't make a working copy as described on page 3 of your manual. It gives a disk error and results in a non working copy. So I am sending you a disk in a S.A.E. with a request that you can send me a working copy. Thank you very much and I hope the success of the User Group and the 3D Kit will grow perhaps with a Cyber Helmet to enjoy the strange new worlds even more.

Peter Harmus, Rotterdam, Netherlands.
ATARI ST VERSION

It seems that a few of version V1.10 are still getting through to the customers, Peter. I can't send you a "working copy" but I am sending you a new version V1.20 so you can make your own. I had a vision of myself typing the Newsletter whilst adorned with a Cyber Helmet after reading your letter! Had to chuckle at the thought.....Mandy

---

Dear Mandy,

I enclose a few notes on the 3D Kit for the Archimedes. I ordered the 3D Construction Kit for my Archimedes (A420/1) in December. Delayed by packaging problems, it was sent at the end of January. The stout box held a 20 minute demo and tutorial video covering 8-16-32 bit versions, registration card etc and the program. The disk was not copy protected. The Kit is great fun. The control panel is complex, but includes UNDO. It behaves like a 3D version of Draw. It does not ray-trace! You start with a set of simple flat and solid shapes, then stretch, move, duplicate and stack them. It uses 1/2 cm units, but only triangles and your view can be rotated. All else must be NS or EW. The version 1.0 Kit is more LEGO than CAD, but Domark promise better to come. The Freescape Control Language provides easy animation and events. Play the Demo game, then explore it for ideas and 3D clip art. My version is single tasking, like the original PC Emulator. It needs at least 700K of Applications RAM. The manual explains how to fit it into 1Mb machines. It does not recognise a RAM disk. On exit, it returns to an intact desk-top. The environment is very PC, with pull-down menus and short-cut icons. The filing facilities are adequate. Up and Down tree buttons simplify directory searches. Objects, methods, data etc have their own prefixes so each part of the program knows its own files. There is one minor bug in the Save-File menu. You have to click off to the right of the NAME? prompt before a blank text box appears. I spent 45 frantic minutes finding this! The object editor is easy to use at first. Objects may be grouped, and moved as a set. Multiple areas provide isolation. Things get tricky when the number of objects increases. Cuboid34, Pyramid12, Group5, Routine43 is the editor's best. Objects are not named, and Grouped objects not indented or flagged. You need to access the Group editor and keep notes. Alas, there is no obvious LIST facility, and Edit can't read the files. Perhaps the official Kit User Group will offer some answers. Version 1.0 is great fun. Think of it as a 3D version of Draw, with those vital utilities still to come. Don't tackle a big project without careful planning. Domark promise library disks and support.

Nic Kelly, Liverpool.
ARCHIMEDES VERSION

I am delighted to welcome our first Archimedes Kit user to our friendly Group. Thank you for sharing your thoughts on the Archimedes version of the Kit with us, Nic. I will make sure that the programmers receive a copy so that anything that needs attention can be dealt with. You should be able to name your objects via the Object Attributes option. Select the Attributes then select the object you want to name. Click on the existing name and type in what you want. It should make life much easier for you.....Mandy

---

Dear Mandy,

I was very impressed by the sample Newsletter (No 4) you sent me so here's my subscription order and cheque. Is it possible to get back issues of the Newsletter? I am a programmer by profession so it is a bit embarassing to admit I have a couple of (probably stupid) questions to ask. What are the CCR flags? Could you explain about the logical AND, NOT and OR as used by ANDV, NOTV and ORV? I haven't had reason to use these yet, but it would help to know what to do with them. Thank you for your time and I look forward to some interesting construction in future.

Stephen Gill, Camberley, Surrey.
PC VERSION

The CCR flags are the CONDITION CODE REGISTER flags. They keep track of what is happening during your games. If the FCL (Freescape Command Language) commands perform an addition or subtraction the CCR flags will be set according to the result. For example if using ADDVAR with two variables and the result is 10 then the commands will check the CCR flags to see what is stored in them and act accordingly. To give you an idea of the logical ANDV etc; if you supply two variables the binery contents are ANDed together and the result is stored in the second variable.....Mandy

---

Dear Mandy,

Having got the 3D Kit for Christmas, I have now stopped using it long enough to send in the registration etc. There are a few minor queries that I hope you will be able to answer. The 16 bit versions of the Kit are intended for mouse operation whilst for the 8 bit versions (like mine) a joystick is assumed. Is it possible to use a mouse with the Amstrad CPC version? Would this require special software to be used in conjunction with the Kit? Is it possible to output from the program to a printer, either hard copies of the graphics or listings of the areas, objects etc? Is it possible to copy objects from one area to another or to copy a complete area to be further edited as a new area? Is it possible to re-number areas? Is there a way of merging areas from a file on disc with areas from another file which has already been loaded? Finally I have some comments arising from my (so far limited) experience of using the program which may be of interest to the publishers. These are concerned with the CREATE and EDIT etc. routines. The list of objects gives only the numbers of each and the primative type (cube, rectangle etc.); with a list of 20 or 30 objects it is not easy to keep track of which is which and so it would be useful to be able to add a short code of a few letters against each as a reminder. This also applies to a lesser extent to the Area Menu. A further perhaps trivial, point is that selection of an object for editing always begins with the cursor set at EXIT (before the start of the list) whereas the object to be edited in almost every case is the most recently created (at the other end). It would have saved a little time for each editing operation if the cursor start position had been set after the list. These comments are intended to be constructive and I hope they will be recognised as such. I realise that some of the features are determined by the limitations of the hardware, which the Kit is obviously "stretching" to the full. In particular, I would not wish the comments to detract from my view that it is an excellent piece of software.

Stewart Hughes, Heckmondwike, W Yorks.
AMSTRAD CPC6128

Whew! That's quite a list of questions you have, Stewart. Due to the amount of memory that is used by the program itself it wasn't possible to program to allow the use of a mouse on the 8 bit version. It isn't possible either to print out the conditions etc from that version. The option to copy objects from one area to another or copy areas is only possible on the 16 bit versions (ie. saving the whole area as an object and loading it in to another blank area), due to the memory restrictions, I'm afraid. There is no way to merge areas as when new data is loaded it overwrites the existing data in memory.

I regret to say that the ability to rename objects and areas is also confined to the 16 bit versions of the Kit. As you surmised the whole problem is shortage of memory on the 8 bit versions. The reason the programmers chose to put the cursor on the EXIT command on the object list was because it really was more convenient, especially if the user entered the list by mistake, they could get out again immediately without doing any further unwanted operations. Looking on the positive side, though, just read some of the 8 bit routines in the Newsletters to see just how much you can do with the Kit!.....Mandy

---

Dear Mandy,

Enclosed is my subscription for the User Group and registration. We have been using the Kit for nearly one month now and think it is a very powerful tool which is so easy to use! Our Blue Danube Atari Club, which has existed since 1986 covers Atari VCS, XL/XE, ST/TT and Lynx. The next issue of our newsletter will be in March and will contain a review of the 3D Kit. We will send you this with pleasure. Our first game, produced with the Kit, will be finished in about eight weeks (we'll let you know). Meanwhile we would like to send greetings to all colleagues and members of the 3D Kit User Group!

Dieter Konig, President:
BLUE DANUBE ATARI CLUB, JAXSTRABE 6, A-8642 ST LORENZEN, AUSTRIA

Thank you for your friendly greetings. I have printed the full address of your Atari Club here so that any other Atari owners in Austria can contact you for membership if they wish.....Mandy

---

Dear Mandy,

Please send me addresses or telephone numbers of Dutch users, preferably in my home town or nearby.

Aldo Quispel,
ZOETERWOUDSESINGEL 29, 2313 EJ LEIDEN, NETHERLANDS

It would be very wrong of me to send out any names or addresses of members of the User Group without their permission. I am sure you understand that unless permission is given the information remains confidential and it is for that reason that I do not print the full address of any member after the letters or problems etc. that appear in the Newsletters. I have printed your address in full (as you obviously want contact with other members) and any Dutch members can now contact you if they so wish. If anyone else would like to make contact in this way then I will publish their name and address within the Newsletter but I cannot send out any information on members.....Mandy

---

Dear Mandy,

There seems to be a bug with the PC version we have of the Kit program. When trying to exit (CGA version running but VGA, EGA drivers also loaded). When quitting with software it does not - it only goes back to the initial menu to select parameters. Is there an update to cure this?

John Barberio, Oxford.
PC VERSION

I understand the irritation that this causes you, John. Quite a few other members have mentioned this. I have passed on their comments to the programmers and I hope that they will take care of this within the "Professional" Version that is being prepared at present. Unfortunately, for the time being there is no solution.....Mandy

---

Dear Mandy,

I just acquired the 3D Construction Kit and I find it to be a very exciting product. However the package I bought contains two errors: There are 2 3.5" diskettes: Disk 1 for CGA and VGA and Disk 2 for EGA. I use VGA card and monitor. Therefore 3DKit was installed from Disk 1 on the hard disk. In the introductory menu there is no option for VGA, although the program files do exist. What is the reason? Also what is the reason for having to supply the four options (language, monitor, mouse and sound) EVERYTIME I run 3DKit? Isn't there a shortcut?

Elie Assouad, Paris, France
PC VERSION

As you will see from the previous letter, others have complained about the latter problem you mention. The reason for the lack of VGA option is that the very first versions of the Kit did not support VGA and this was added later - well I presume that the option is missing from the introductory menu for this reason. I have mentioned this to Domark and the programmers and am assured that they will look into this.....Mandy

---

Dear Mandy,

I received issue 4 of the Newsletter on December 24th and your Christmas greetings were wonderful. The reason I write to you is because of your reply to the letter from Andy Caldwell. You told him (and us) that there would be a "Professional" version of the 3DCK. This sounds great to me and I hope that with this release it is also possible to rotate objects so that we could animate the rotors of a helicopter or let the head of a robot turn left or right. I have a feeling that we might have to wait a long time for this new version, haven't we? So now I come to the point: Thinking also that it is impossible to incorporate more than one border, or to load a new datafile, it would be a good idea I think, if the programmers at Incentive could make it possible to leave the runtime module by activating a new command such as EXIT. That would have the effect that one could write part 1 of an adventure with a space shuttle border and when the adventurer has solved the main problems, we could leave the runtime module and start part two with a second border and another datafile. The only thing the programmer needs is a shell that calls first part 1 and then part 2 and this could be easily done with a compiled GFA-Basic or C program. What do you think?

Oliver Dorloechter, Germany

I don't think we will have to wait very long for the "Professional" version of the Kit, Oliver, as the programmers are completing work on it at the moment. I am sure that, as this will allow for users to add their own machine code programs etc to the program, that loading in borders and different datafiles will be catered for. I don't know yet if the rotation of objects will be allowed for in that version. I will bring you news of the new version just as soon as I get a release date.....Mandy

---

Dear Mandy,

We have an idea on how to make a game-like PC program which shows how to build a stamp collection. One way, a rather good one, is to make this using the 3D Construction Kit. In the manual you say that it is possible to make stand alone runnable environments and to freely distribute the games, but this is mentioned only under the Atari ST and Amiga section on the MAKE command. If we use the PC version is it . also possible to have free distribution in the same way? There is no mention of this under the PC section.

Petteri Hannula, President
FEDERATION OF YOUTH FINNISH PHILATELIST, Finland
PC VERSION

Yes, of course you may freely distribute your completed programs on ALL versions of the Kit providing that you acknowledge that the 3D Kit was used to write the program. My apologies for not repeating this under the section on the PC MAKE instructions.....Mandy

Dear Mandy,

I must say how nice it is to see a Newsletter where ALL the members can contribute items. It not only makes the Newsletters more interesting (no disrespect to your good self), but also seems to be so much friendlier. I am busy working on some routines that I will send you shortly. Thank you for your encouragement!

Peter Randolph, Tamworth, Staffs.

I try to encourage EVERYONE to feel free to send in contributions for the Newsletters, whether it is just the odd hint or tip or a full-blown article. In fact, the more material I receive the better for us all as we will have a wider range of ideas, the Newsletters will certainly be bigger if I get a lot of material for one particular issue and the more active interest the User Group receives the longer it will continue to thrive. Please, everyone, if you have anything that you would like to share with the other users then do not hesitate to sent them in. Don't be shy! We would love to hear from you....Mandy

MORE LETTERS NEXT TIME!

THE KITGAME

16-BIT STEP-BY-STEP SOLUTION

By Mandy played on Amiga

WARNING! If you haven't yet played the Kitgame for yourself, reading the following solution can seriously damage your enjoyment of the game! The solution has been written in easy sections so that if you get stuck on a particular section you can get help without reading too far and getting information that you DON'T want!

You start the game in the central Courtyard of the strange planet you find yourself marooned on and your objective is to try to find the means to escape - with treasure if you possibly can.

Move towards the door you see on the left hand side of your position and ACTIVATE the doorknob (using the right mouse button). When the door opens go inside and immediately SHOOT the Dragon's nose (using the left mouse button) until he stops shooting at you. Don't proceed further into the room yet as there is a force-field in operation further along towards the Dragon. There is a gold bar here but we must get it another way.

Return to the Courtyard and you are facing the door to the Kiosk. Move towards it and ACTIVATE the door to open it. Walk inside and walk right up to the Alien behind the counter. ACTIVATE the Alien to receive the message "Five gold bars if you want to buy my Scuba Gear". Move towards the left of the screen then forwards until you are positioned behind the counter at the back of the Kiosk. Lower yourself down (right mouse button on the arrow below the eye) and you will see a secret passage.

SHOOT the blue rectangle you see in the passage and it will open to reveal a trapdoor. Walk along the passage until you fall down the trapdoor and you find yourself in another passage which leads to another entrance to the Dragon Room. Walk along this passage and ascend the stairs at the far end and you will find yourself inside the mouth of the Dragon. Carefully walk forwards until you fall out of the mouth and immediately look down and you will see a gold bar. Take this (GOLD BAR 1!) and turn yourself towards the right until you see a small yellow square on the wall of the room. Walk towards this and when close enough, ACTIVATE it twice (or until it changes to blue) and you will receive the message "Forcefield deactivated). Move towards the left and you will see the exit along the hall in front of you (the door you first entered). Go towards the door and exit to the Courtyard.

Move towards the right a little until you face the steps to the right of the Kiosk. "Bump" yourself up them and turn to the left to face the roof of the Kiosk. Go onto the roof and you will see three blue pyramids and a gold cube towards the left side of the roof. Shoot the pyramid farthest from you and you will see that it changes colour to yellow and the gold cube vanishes to be replaced with a blue cube towards the right of the roof. Shoot the blue cube and then shoot the centre pyramid and then the pyramid nearest to you. They will all vanish to be replaced with a bar of gold. Take this (GOLD BAR 2!).

Now turn towards the right and move towards the edge of the roof until you see a stack of "boxes" coloured pink, orange and blue (x2). Shoot these in turn and the smaller boxes which appear until a doorway appears on the wall behind them. Return down the stairs and move to the back of the Kiosk and position yourself so you are facing this door (which leads to the Puzzle Zone).

Enter this doorway and lower yourself down and crawl carefully along the girders, carefully timing yourself to pass between the swinging orange/red cubes until you come to the orange platform at the end. Turn yourself towards the right until you can see the floating yellow platform with the red object on top and wait until it is near enough to you to ACTIVATE the object to obtain a coil of rope. Turn yourself once more until you are facing the girder and carefully make your way back through the swinging cubes and to the doorway once more. Go through back to the Courtyard.

Once outside (facing the rear of the Kiosk), make your way towards the right until you see a blue/green archway. Go to this and lower yourself down to fit into it and enter. Immediately shoot the orange triangles which shoot at you and crawl through the tunnel to the other side to find yourself on Beachy Head.

There is a gold bar hidden just behind the first tree that you see on entering this area so make your way towards it and take this (GOLD BAR 3!). Raise yourself up and turn to face the signpost that you see on the edge of the cliff. Walk towards it and, when close enough, ACTIVATE the post. The program takes over for a while as you tie the rope to the post and descend the cliff safely to land in the small dinghy at the base of the cliff. Look down until you see the outboard motor and rudder handle and ACTIVATE this handle to start another animated sequence which will start you sailing over the sea towards the lighthouse in the distance. As soon as you set off, turn yourself towards the left so that you can see the rocks just in front and near the lighthouse. Keep positioning yourself so that you can see the base of them and as you sail past quickly ACTIVATE the gold bar that you see at the base of the rocks (GOLD BAR 4!).

When the boat reaches the steps at the lighthouse and stops, go forward and up the steps onto the base of the lighthouse. Walk around towards the back (carefully!) and ACTIVATE the small brown square that you see next to the door. The door will open and you should then carefully make your way inside to the Changing Room. Inside you will see a small white rectangle lying on the chair. ACTIVATE this to find it is a note with the message "The Exit Pass was blown overboard!". Move towards the sink and ACTIVATE either of the taps to receive the message "You freshen up". Turn around and leave the Changing Room. Go outside and step into the sea! Walk forwards until you are transported through a short tunnel to find yourself on a Desert Island!

There on the sand is a gold bar, ACTIVATE this (GOLD BAR 5!). Look up at the Palm Tree and SHOOT the coconut you see there. It will fall and open up. Move towards it and ACTIVATE it to receive the message "You eat the coconut and are refreshed" and your Energy is replenished! (check Energy Bar at top of screen!). Take the wooden key that is also lying near where the coconut fell. Now make your way until you are standing in front of the Palm Tree (so that it is leaning slightly away from you) and climb the tree (bump your way up it!) and you will find a Gold Key hidden at the top. Take this and climb down once more. Now make your way towards the chest you see on the sand and ACTIVATE the lock when you are close enough. The gold key opens it. Climb into the chest and you are transported (in a puff of smoke) back to the Lighthouse and find yourself near the steps down to your dinghy.

Carefully make your way into the dinghy and ACTIVATE the motor once more. You will be transported (via the animation sequence) back to the base of the cliffs. Turn so you can see your rope and ACTIVATE the rope to climb back up the cliffs once more. Make your way back towards the tunnel entrance. Enter and once more, shoot the yellow triangles that shoot at you, and go through the tunnel back to the Courtyard. Walk around to the front of the Kiosk and enter it. Walk to the Alien and ACTIVATE him to swap the five gold bars for the Scuba Diving Suit!

Now make your way back to Beachy Head via the Tunnel and remembering to shoot the triangles as soon as you enter. Once through, turn and make your way back to the signpost. When near enough ACTIVATE the post to get back down the cliffs to the dinghy. ACTIVATE the outboard motor once more and sail back to the Lighthouse. Go up the steps and carefully make your way round to enter the Changing Room once more. As soon as you enter you will receive the message "You put the Scuba Gear on!). Exit the Lighthouse and jump into the sea. Walk forwards until you sink to The Bottom of the Sea.

Walk forwards a little, straighten up your "vision" via the centre eye icon and turn around until you see a Shark. Wait until it is close enough (or walk towards it) and carefully SHOOT the little Golden Fish that is swimming beneath the Shark. (Make sure you don't shoot the Shark by mistake as you will get bitten and lose a lot of energy!) When you shoot the golden fish you will receive the Exit Pass. As soon as you receive this raise yourself up by clicking on the upper arrow over the eye icon with the right mouse button and you will float up and be transported back to the Lighthouse steps.

Make your way back into the Changing Room in the Lighthouse to change back into your "Normal Gear" and make your way (carefully) back to the dinghy.

ACTIVATE the outboard motor and sail back to the cliffs. Climb up the cliffs by ACTIVATING the rope and head back towards the tunnel. This time there is a surprise for you – the tunnel is filled with gold bars! Shoot the triangles that shoot at you and collect all the gold bars as you make your way through the tunnel back to the Courtyard. Once there, make your way around the Kiosk until you find the large doorway (it was behind you when you started play) and go through it to the Shuttle Launching Pad.

Walk towards the golden triangle you see on the far wall alongside the black slot and ACTIVATE this. The barrier will lift and you will gain access to the Shuttle. Walk towards the Shuttle (ACTIVATE if necessary) and you will receive the message "You board the Shuttle", a beautiful animation sequence follows showing the Shuttle gliding upwards into space and you receive the final message....

"CONGRATULATIONS! YOU HAVE ESCAPED!"

THE P.D. LIBRARY!

At last we have the PD Library up and running! Here are some short reviews of what we have on offer so far:

DARKNESS CALLS - STAND ALONE PROGRAM.

This was written on the AMIGA by JAMES H. YUSUF. You start the game in your Eurocorp Patrol Craft which has landed on the planet Titan. Your task is to equip yourself and explore the planet and the Research Station in order to shut down the Reactor and locate the workers there. You have just one hour in which to do so. The game starts with an excellent loading screen and you have the options to go straight into the game or to view the information screens which are accessed through CLI windows. The information screens give the game instructions (the objective and background story), information on handling objects etc and the controls. There are some excellent music and sound effects once you get into the game. You can hear yourself breathing through your spacesuit and I have to say that these sound effects, coupled with the excellently drawn environment really lend an eerie atmosphere to the game. The game is most enjoyable as there is lots to see and tons of things to do to keep you busy for ages.

DARKNESS CALLS - DATA DISK.

This disk by JAMES H. YUSUF for the AMIGA contains the border and a file of all the objects used in the program as described above. I think you will find these most useful.

PLANET OF THE DALEKS - DATAFILE AND BORDER.

This AMIGA game written by STEVE HILDER is a must for all Dr Who fans. Steve has thoughtfully sent this in as a datafile and border so that you can load them into your 3D Kit and view the data. A good atmosphere is generated by the opening area which shows a lonely street in the dead of night which is eerily lit by street lamps. Your Tardis is immediately visible but entering it is another matter! Once inside you need to explore to find the necessary power crystals to activate the Tardis to take you to the planet Skaro where the main action takes place. Once there Dalek fans will immediately recognise the Dalek-shaped doorways which lead into the interior of the planet. Steve has created some excellent Daleks and Dalek type devices and machinery. There is lots to see and do and I found this a most enjoyable game. Getting into the Dalek complex isn't quite as easy as you might expect as there are loads of entrances hidden all over the surface of the planet and there are loads of very realistic Daleks to contend with - the blasted things keep popping up all over the place!

E.F.T.P.O.T.C.M - STAND ALONE PROG.
(ESCAPE FROM THE PLANET OF THE CARDBOARD MONSTERS!)

This game was written for the AMIGA by ANDREW HERBERT who admits that it isn't the best game he has produced but "Will show other users how to present their work using IFF pictures, soundmodules and utilities and may help people who haven't got a clue about programming start-up sequences or keymaps". Andrew has thoughtfully included on the disk a load of useful utilities that will help Amiga users to do just that as it contains such utilities as PICSHOW - this shows a standard IFF picture. PICEND - ends a standard IFF picture. BIGCLI, SETMAP and TBAR. There is also NOISEPLAYER - which runs music modules. There are two modules - MOD.DARK and MOD.RAP. What about E.F.T.P.O.T.C.M.? Well the program has a good loading screen and extremely good sound effects of a storm raging with heavy rainfall which is followed by some excellent music. An option for viewing the instructions is also offered. From what I have seen of the game I was quite impressed at this first attempt. Unfortunately I could do no more that discover a key and a chisel before my time ran out so I couldn't explore further to discover how to use them! I'll crack it yet though!

AMIGA BORDERS

This disk contains a selection of borders created by A.J.BEVAN which should be most useful for those who are not very artistic. I did find that a couple of them were a bit of a problem to load but I just loaded in DELUXE PAINT, loaded in the borders one by one and saved them out again and after that they loaded into the 3D Construction Kit program without any difficulty at all. Most useful to have on hand.

INFILTRATION - STAND ALONE PROG

A program written by ROBIN BALL on the ATARI ST. The game received a score of 70% in a review in ST FORMAT. This game is actually SHAREWARE which means that you should register with Robin and you will receive an excellently drawn map, a Secret Weapon Voucher and a beautifully drawn picture of the Spaceship orbiting a planet. This game is so well thought out that the many really devious problems should keep you busy for hours. The objective of the game is this: You find yourself on a massive Spaceship armed with a collection of detonators and you must find all the large "X's" and place a detonator on each of them - this is done by standing on them. Sounds simple? It isn't! The spaceship is huge, is full if hidden traps and devious transporters and the "X's" are well hidden. I still haven't finished it but it has that "certain something" that keep you going back for more.

THE MAZE - DATAFILE AND BORDER.

This game was written by DAVID SAMBROOK. for the ATARI ST. I am sorry to say that I can't tell you anything about it because I have to assume that you need a 1 MEG machine to load it. Each time I try to load it into my half meg I get the message "Insufficient memory in the edit buffer for this operation". One of the members has kindly agreed to review it for me for the next Newsletter.

ESKAPE - DATAFILE.

This game is written by STEVEN FLANAGAN for the COMMODORE 64. You are in the year 2002 and are imprisoned in a high security prison in Central for a crime you didn't do. The prison is hit by a powerful lightening bolt and you're the only survivor. The security systems are still intact (robots, detectors and cameras). You have a time limit to make your escape before reinforcements arrive. The game is very nicely programmed with plenty of problems to solve. You should find it most enjoyable. It comes with a detailed map and an instruction sheet.

RACER ROUTINE and ESKAPE - DATAFILES

This disk contains a very interesting Racing routine written by STEVEN FLANAGAN. It is a bit slow in operation but the routines within it are most useful and interesting. The disk also contains the datafiles for ESKAPE (as above).

I also received a FLIGHT SIMULATOR DEMO program by R.SPREADBOROUGH which is written for the PC. Unfortunately I will have to review this another time when my PC is up and running.

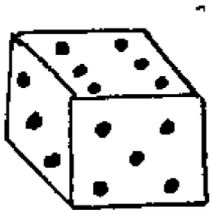
All the disks are available from the usual address and cost just £1.50 each UK (£2.50 for overseas members). You are all invited to send in your contributions for the Library and it would be helpful if the datafiles could be included, if possible.

16-BIT ROUTINES

RANDOM ROLLDICE ROUTINE

By Fernando Carvalho - ATARI ST

This rather interesting routine attempts to implement a RANDOM element into the Freescape system. The commands contained in this routine can be adapted for use in other types of routines where a random element is required. To use this routine you should first create six dice. Each die is created using a cube with tiny rectangles used for the spots (in each case use however many spots you want visible at a time. Rather like this:



When you have done so you should incorporate all the rectangles and cube into a GROUP. Continue in this way until you have six groups (one for each possible roll). Place each die on top of the previous one by making all of them invisible apart from the last one. In the routine below the groups (die) are numbered 18, 47, 70, 93, 117 and 140.

Create a TRIGGER object to "roll" the dice, in this case it is a flattened pyramid which is placed alongside the dice. A nice effect is also created by using a dark rectangle to form a shadow on the ground cube. When all this is done, create conditions as follows:

GENERAL CONDITION (1)
AREA CONDITION (1)

```
SETVAR (47,V100)
IF VAR<? (6,V19)
THEN SETVAR (0,V19)
ENDIF
```

NB.Variable 19 is the 50Hz counter for accurate timing

TRIGGER CONDITION (Pyramid)

```
IF ACTIVATED?
THEN SETVAR (V19,V101)
EXECUTE (1)
ENDIF
```

CONDITIONS FOR THE ROUTINE

```
IF VAR=? (1,V101)
THEN INVIS (V100)
DELAY (25)
SETVAR (47,V100)
VIS (47)
END
ENDIF
IF VAR=? (2,V101)
THEN INVIS (V100)
DELAY (25)
SETVAR (93,V100)
VIS (93) (Continued overleaf....)
```

```
END
ENDIF
IF VAR=? (3,V101)
THEN IVNIS (V100)
DELAY (25)
SETVAR (117,V100)
VIS (117)
END
ENDIF
IF VAR=? (4,V101)
THEN INVIS (V100)
DELAY (25)
SETVAR (140,V100)
VIS (140)
END
ENDIF
IF VAR=? (5,V101)
THEN INVIS (V100)
DELAY (25)
SETVAR (70,V100)
VIS (70)
END
ENDIF
IF VAR=? (6,V101)
THEN INVIS (V100)
DELAY (25)
SETVAR (18,V100)
VIS (18)
END
ENDIF
```

This routine was very exciting as none of us expected anyone to come up with a way of implementing a random element into the 3D Kit. I wonder what other exciting possibilities the Kit holds. If anyone doesn't feel like typing this all in, or would like to view the finished program then it is available complete in the PD library.

SCREEN ICONS

By *James H. Yusuf* - AMIGA

In the Kitgame, included with the 3D Kit program, there is a General Condition that if you select a certain area of the screen it operates a function. In the game it activates the inventory list. This routine is a simpler version that prints a message if you click a small square in the top right hand part of the screen:

```
IF VAR>? (V18,50)
AND VAR<? (V17,300)
THEN IF VAR<? (V18,60)
AND VAR>? (V17,290)
THEN SETVAR (0,V17)
SETVAR (0,V18)
SOUND (4)
IF VAR>? (V100,0)     This variable can be used
                      for specific tasks.
THEN SETVAR (20,V35)  This variable is text
                      the timer.
PRINT (" Icon Activated ",5)
END
ENDIF
ENDIF
ENDIF Three ENDIF's for three IF's
```

TRIGGER SWITCH FOR A SINGLE OBJECT

By James H. Yusuf - AMIGA

This is a routine for an object such as a button to open a door. Usually you need two switches, one to open the door and one to close the door. In this routine you only need one switch, activate once to open and again to close:

```
IF ACTIVATED?
AND VIS (1)      - Is the open door visible?
THEN INVIS (1)   - Then make it invisible.
VIS (2)          - And make open door visible.
ELSE IF VIS? (2)
THEN INVIS (2)   - Same as above but vise-versa
VIS (1)
ENDIF
ENDIF
```

A neat trick to use is if you have two guns to pick up. Use this trigger routine so that if one disappears the other appears. This can be used in a great number of ways with other objects too.

METRE LIMIT

By James H. Yusuf - AMIGA

If you have an object, say, a medical pack for your health level metre and you take this to cure yourself. Let us say your metre is from 0-100, 100 being the maximum and you have found your way into a room ful of such medical packs. If you kept taking the packs your metre would increase above the maximum level and could make the game a tad awkward, especially as you don't know how much health you have when it should be at 100. So a limit is needed. The limit will not be on the metre itself but on the medical pack, so it remains visible until used.

```
IF COLLIDED?
THEN IF VAR<? (V11,30)  - If health is less than 30.
THEN ADDVAR (59,V11)    - Then add 50 to health metre.
PRINT (" You are well.",5)
INVIS (1)               - Object 1 is the medical pack.
ENDIF
ENDIF
```

Have YOU created any routines that you would like to share with the other users? If so, then please send them in for the next Newsletter - the more contributions received the more pages it will contain!

8-BIT ROUTINES

ACCESSING AREAS

By Mick Jolley - SPECTRUM 128+2

It is time to grab the programmers by the short and curlies and pin them up against the wall to ask why can't you scroll past the bottom of the page in the GOTO AREA editor to be able to access the other 207 possible areas? If, like me, you have an adventure game with 130 areas needed, using the GOTO editor you can't access further than area 47!

Fear not me-hearties, there is a solution. Well a possible solution anyway. When you get to area 47, set up a local condition:

```
IFSHOT  129 - Global number for the floor.
THEN
GOTO    1   48
ENDIF
```

Do the same thing for all areas above 47. In area 48 the GOTO statement will read GOTO 49 and so on. This I fear maybe the only way, unless anyone knows an easier one?

The programmers suggest that you create an area (say area 1) which contains say, 20 cubes and put a condition on each one such as:

```
IFSHOT  1
THEN
GOTO    1   48
ENDIF
```

And make a similar condition for each cube to take you to the areas you want. Of course this is only useful for you whilst programming and normal conditions will take the player wherever you wish during play. They suggest you use a couple of areas in this way and, of course, make them inaccessible to the player in your finished game. Whilst programming you then only have to use GOTO AREA and then shoot the cube that you need. You will still have to keep notes of which cube will access which area.....Mandy

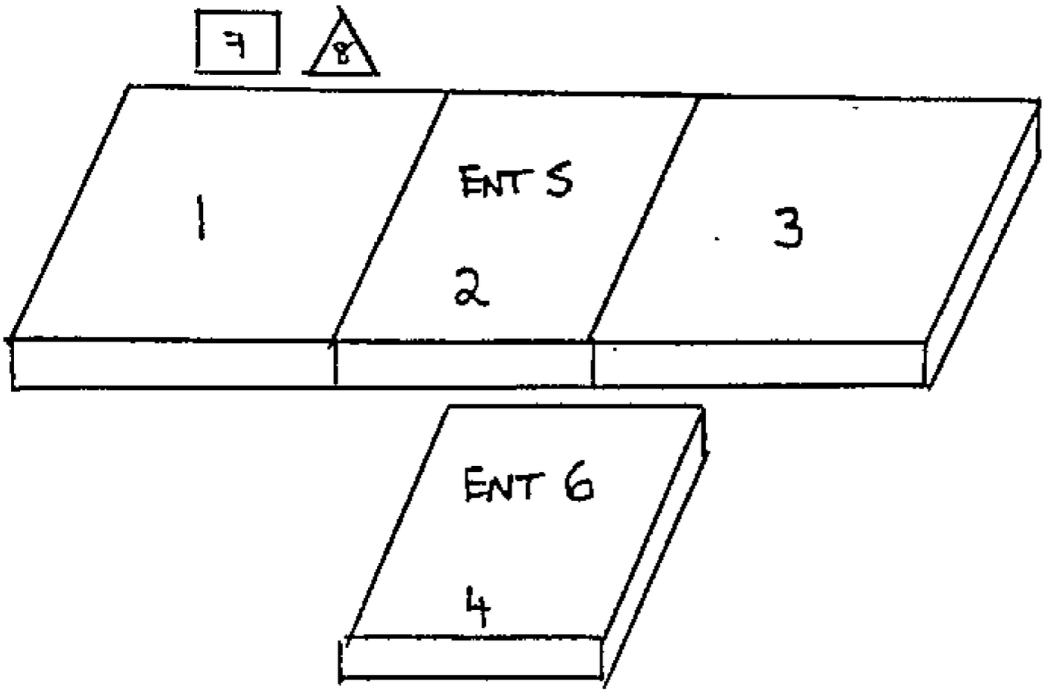
---

HAVING TROUBLE WITH LIFTS?

By *Mick Jolley* - SPECTRUM 128+2

If you are having trouble with lifts then here is one solution. Let us say that you want the player to use a lift to get to a platform. Create your platform (Objects 1 and 3), then create your lifts (Objects 2 and 4). Stand on the lifts and create two entrances (5 and 6). Set the attribute for objects 2 and 4 both initially and currently to invisible.

Now create two switches say, 1 Quad and 1 Triangle (Objects 7 and 8) so that you have something which looks rather like this:



Now create the following conditions:

LOCAL CONDITION 1

```
IFHIT         129
OR
IFHIT         001
OR
IFHIT         003
THEN
SETV          000    010
ENDIF
IFHIT         002
OR
IFHIT         004
THEN
SETV          001    010
ENDIF
```

LOCAL CONDITION 2

```
IFSHOT        007 -    This bit ensures that when you hit
THEN                   the Quad switch, only the lower lift
INVIS         002      is visible.
VIS           004
SYNCSND       004
ENDIF
IFSHOT        008 -    If the triangle is shot then each
THEN                   lift in turn will be visible whether
TOGVIS        002      you are on the lift or not.
TOGVIS        004
CALL          001
ENDIF
```

PROCEDURE CONDITION 1

```
CMPV 000    010 - This checks if you
IFEQ              are on the floor or walkway
THEN
END
ENDIF
SYNCSND     004
IFVIS       002
THEN
GOTO        005
ELSE
GOTO        006
ENDIF
```

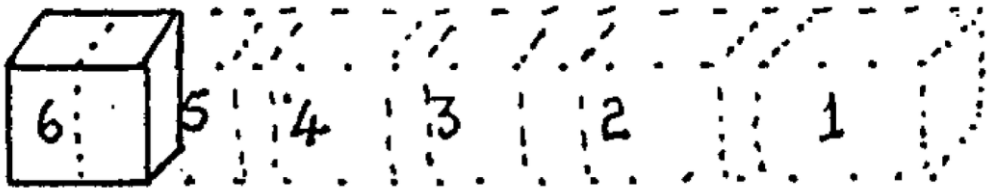
Now it's time to boil an egg, dip it in honey and throw it away -because I don't like eggs dipped in honey. I'll try to have anotherroutine for next issue.

One more tip before I go. Please remember to record your effortsevery step of the way. There is nothing worse than spending six hoursor more on your game, deciding that it is time to get back to reality,only to realise that with your finger on the button you haven'trecorded your game! Now I know what it is like to be a complete winkle!

MOVEMENT ON 8-BIT MACHINES

By A. P. Smith

Here is an idea for creating the illusion of movement on an 8-bit machine. Place the object in its FINAL position and via the ATTRIBUTES make it invisible. Now place the second object to overlap the position of the first by one or two units. Repeat the process until the object is in its starting position:



A simple condition routine such as:

```
TOGVIS      003
TOGVIS      002
REDRAW
etc.
```

can be used to "move" the object from one spot to the other.

Any routines you have created for the 8-Bit machines will be greatly appreciated for the next issue so do please send them in.

HINTS AND TIPS

TIPS by Steven Flanagan - COMMODORE 64

USING FLY MODE

If you want your game to use FLY1 or FLY2 mode, entering the MODE command into GENERAL condition 1 doesn't work. This is because after the program has executed GENERAL CONDITION 1 it resets back to walk mode. So say you wish to use MODE 3 (FLY1) you must enter the command MODE 3 into either a LOCAL condition or a General condition above 2.

MESSAGES

Don't print messages on your border as the message stays there indefinitely and ruins your border. Print messages in the View window.

VERTICLE LINES

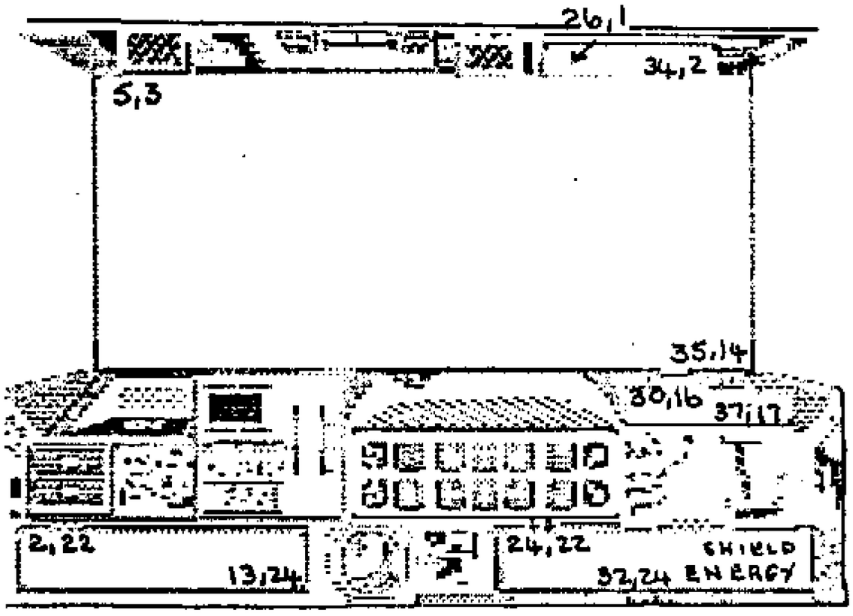
If you are having trouble getting straight lines to be verticle. If you wish to use two dimensional shapes do not use the POINT icons as each object has its own BOUNDING CUBE. No other objects can overlap the bounding cube and you cannot walk inside it. When you create a line it has an initial bounding cube of 8 x 8 x 8, which means that even if you use the point icons to make the line verticle and small it will still use up the same volume. To make it verticle use the shrink commands as this also shrinks the bounding cube. Shrink it as far as it will go in the X and Z planes, it will be verticle. Making sure that the bounding cube of a 2D object is as small as possible allows you to place other objects nearer to it.

NIGHT AND DAY

In issue 4 Liam Johnston wondered how he could create a day/night situation so that the background sky colour would change when it becomes night or day. This could be done by creating five Rectangles. These could be moved to each edge of the area and stretched as far as they can go so they they form a complete box around the area. If you now colour all five of these rectangles black they give the illusion that the sky is black. Using a timer you can toggle the visibility of the rectangles to switch from night to day. 8-Bit users can use a much more atmospheric way. Select COLOUR AREA in the environment editor and colour the sky blue. Do this to all of your outdoor areas so that the sky is always blue outside. Now some sides of objects will be shaded blue. When you want the game to change to night, use the COLOUR command to change the sky colour to black (on CBM64 use COLOUR 0 0). This not only changes the sky to black but also turns all blue object sides to black too. This creates very atmospheric shadow illusions.

PLACING INSTRUMENTS JUST RIGHT

If you want to use the DRILSCR border in your game it is very difficult to get your instruments in the right place. The following information is for C64 and I am not sure if it is accurate for other computers.



If you have just completed your masterpiece and now want to make a border you will have one heck of a problem fitting the border around your game instruments, as the only time you see them both together is when you have compiled the whole lot. If you own an Action Replay or similar cartridge then your problems will be solved. First load in the Condition Editor then your game. Select TEST from the menu so that your instruments can be seen. Now FREEZE the program with the cartridge and save the screen to tape or disk in the format of your Art Studio. Load in your Art Studio and load in the screen. You can now draw your border around the instruments to give perfect results. For those who have Action Replay but don't have an Art Studio I suggest you try to get hold of issue 3 of Commodore Format as the art package VIDCOM is included on the cassette.

TIP by David Sexton - SPECTRUM

This tip is useful for tape users. Instead of re-loading the editors or deleting loads of objects to clear the environment which is very time-consuming just SAVE the empty environment when first loading the editor. When you want to clear the environment you just LOAD your empty environment! This takes seconds only and you are ready to work.

TIPS by James H. Yusuf - AMIGA

CHEATPROOFING!

Make all controls that are not needed the same on the CONTROL Menu, otherwise a smart player can activate one, such as change from WALK to FLY1 and cheat to get around a puzzle. By making them all the same the first one on the list will operate but none of the others that share the same key will.

FAST MOVER

To move even faster in your 3D World, press the forward key on the keyboard and the forward icon with the mouse (use right mouse button as it moves a lot faster). This can be used in both TEST and EDIT modes. Be careful not to exit the area you are in as some strange things can happen, like a Guru!

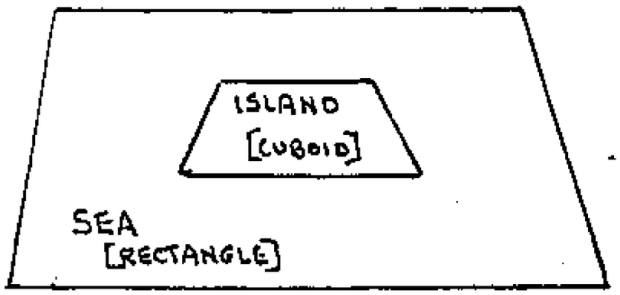
PROFESSIONAL TOUCHES

If you have a computer within your world, make the information that is contained inside it appear on the main screen and not the small text window that you use, like the beginning of the Kitgame. It is a simple idea but it makes the game look more professional. Also make sure you put a REDRAW command at the end of your text condition' and that the text window is the same size as the View window.

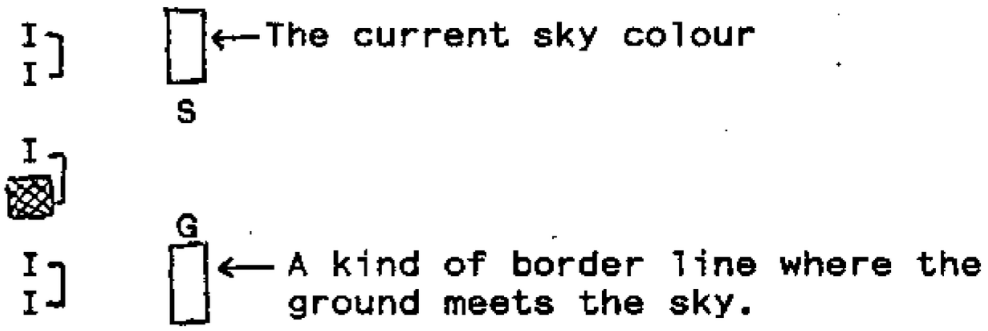
TIPS by Andrew Herbert - AMIGA

A BETTER DESERT ISLAND

If you have ever tried to create a desert island you would know that if you wanted to have the sea surrounding the island like this:



The sea would have a kind of "rough edge". You could always use Horizon Off but that sometimes can be the long way round as it takes a lot of time to implement. In colour mode at the far left is a gadget to colour the sides of an object. Simply colour the box marked "G" to the colour of the sea and Hey Presto! you have a sea with no "rough edges".



SAVING THE IFF WAY

By pressing F2 at any time during work you may save the current screen as an IFF file which can be loaded into any paint package which handles IFF files. You can even save the control panel on the editor!

STOP THE IRRITATING F1!

You must have noticed, whilst in TEST mode that when you want to return to the Editor pressing the F1 key tends to repeat itself, returning to the Editor for a brief second and then turning back to the Test window! You can prevent this by placing the curser at the top of the screen, then pressing F1. The menu bar now stops the Test screen reappearing!

Have YOU any helpful hints or tips that you would like to share with the other members? All contributions will be gratefully received so don't be shy!

PROBLEM PAGES

Dear Mandy,

Is it possible to animate an object so that it rotates? If so, how? On the Amiga how do you use a Sensor to start an animation or some other routine (I have looked everywhere in the manual and can't find the information). Also whenever I edit an entrance and then come back into that area I always find myself in a completely different place from where I set the entrance to put me. Perhaps you could tell me how I could get it to work properly?

Richard Pepper

It isn't possible to animate an object to rotate it on this version of the Kit. I hope in a future version it will be possible. To use a Sensor to start an animation, or indeed another routine, you should use System Variable 11 which counts the number of times you have been shot by a Sensor. For example create a Sensor and make it invisible via the ATTRIBUTES (both currently and initially) then use the ground cube as a trigger to make it visible when the ground cube is shot. 1.e.

```
IF SHOT?
THEN VIS (2)
ENDIF
```

Then enter the following Area Condition:

```
IF VAR=? (20,V11)
THEN ENDGAME
ENDIF
```

Select RESET before we try this as when we created the Sensor it shot at us before we could make it invisible. Shoot the ground and after the Sensor has shot us 20 times the game will end (well for our purposes it will RESET and the Sensor will become invisible again.

I think your problems with the Entrances could be that when selecting GOTO AREA you forget to select GOTO ENTRANCE so that you may select the entrance that you want. Don't forget that using the CAMeras you can also set your viewpoint to desired spots all around the area you are creating which makes life a lot easier. Hope this information helps.

Dear Mandy,

Please can you help me? After working on my environment for a time, when I load some more objects they don't appear clearly on the screen and then if I delete some or other the elements of the objects seem to appear one by one. This happens when I have about 70 elements in the table for an area. If I then select an invisible group whose component attributes are visible and select HIGHL its envelope is flashing, if I select EXCL the object appears normally. Can you please help me so I can draw my kitchen or house?

P. Codron

I think all your problems will be solved if you limit the number of objects strictly to 60 in each area. If you use any more objects than that then things start to go wrong in all sorts of weird and wonderful ways. Perhaps you could use a little care by say, making all the objects in the first part of your area visible and the other half invisible and when you move towards the second half of your area you would have a condition to toggle the visibility of the objects. In this way you could have more objects and the speed of movement would be much quicker but I wouldn't like to advise you to have more than 60 in any case as things may look okay but it might have created a problem in another area! I created 65 objects once and everything seemed alright until I selected GOTO AREA and found that instead of having my area names on the list I had things like CUBOID 6 and PYRAMID 10 mixed up with the Area list. I had to scrap the lot!

Dear Mandy,

I have a small problem. I am not quite clear about Variables. Looking at the Kitgame thoroughly so as to understand the makeup of the conditions I have established that Variables 1, 6, 7, 8 and 9 ralate to the four Instruments used in the game. I also realise that Variables 120 and 121 are System Variables. What I don't understand are the Variables 10, 11, 12, 13, 14, 15, 16 and 17. I keep coming across them in General/Local/Procedure Conditions but I am at a loss as to how they are established and what they relate to.

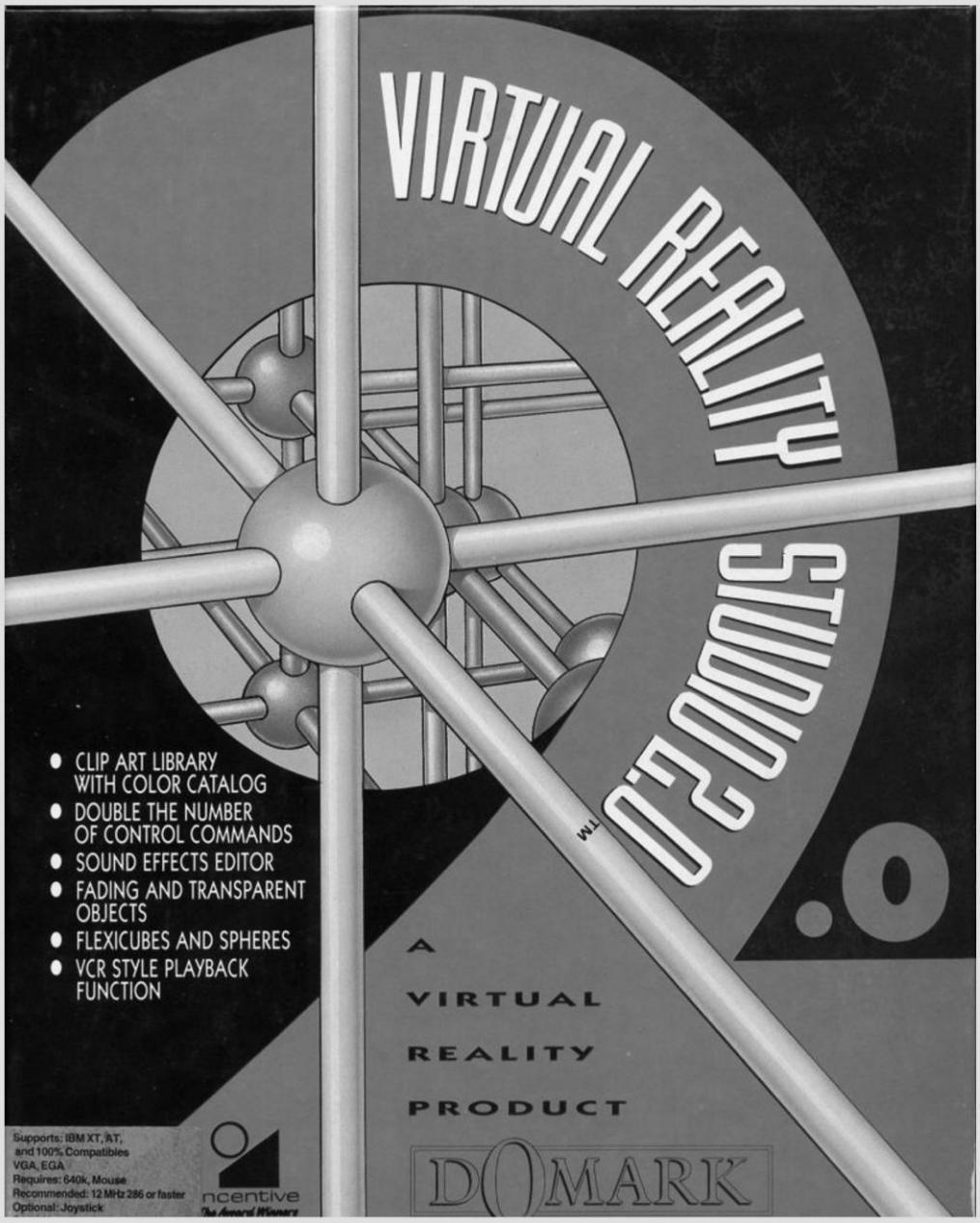
George Rawson

As you only just subscribed to the User Group you missed out on the early issues, one of which contained the complete list of all the Variables used in the Kitgame. For those who missed them they are:

```
1 - Time
2 - Combination carried? 0 - No. 1 - Yes.
3 - Exit pass carried? 0 - No. 1 - Yes.
4 - Key carried? 0 - No. 1 - Yes.
5 - Teleport counter       0 - Initial. 1 - Demon Head. 2 - Desert
                           Island. 3 - Not Operated.
6 - Score
8 - Energy
9 - Treasure Found
10- Stamper position (0-3) Area 9
11- 0 - if on floor. 1 - if on lift platform.
12- Area 3 mode.           0 - walking. 1 - Crawling.
13- End of game.           0 - No. 1 - Yes.
14- Energy past minimum.   0 - NO. >1 - Yes.
16- Shoot counter
17- Commodore 64 version Text Clear Flag.
```

There are many interesting routines, hints and tips in ALL the Newsletters. All the back issues are available if anyone has missed them. They cost £2 each (UK), £2.50 each (Europe) and £3 (Rest of the World). If anyone wants back issues just write, enlosing payment and tell me which issues you require and I'll send them on to you. It is worth noting that issue 1 contains material which is 16-bit specific as the 8 bit versions of the Kit were not out at the time of going to press. From issue 2 onwards equal coverage has been given to both 8 and 16 bit versions. Should be something to interest everyone there somewhere!

Send your problems in and I'll do my best to solve them. Please remember that a problem shared is often a problem solved. It might be that someone else has been stuck with the same problem so don't be shy - you could be helping someone else at the same time!



3D CONSTRUCTION KIT USERS GROUP

3D Construction Kit Newsletter

Issue Number 6
April/May 1992

CONTENTS

EDITORIAL 127
LETTERS 127
CHATTING WITH THE WIZARDS 132
HINTS AND TIPS 134
COMPETITION! 136
THE KITGAME SOLUTION 138
16 BIT ROUTINES 138
A PUSH IN THE RIGHT DIRECTION! 140
INVENTORY WITH A DIFFERENCE 141
8 BIT ROUTINES 144
INVENTORY/INFORMATION SCREEN 145
8 BIT ANIMATION 147
PUBLIC DOMAIN LIBRARY 148

3D CONSTRUCTION KIT USERS GROUP

NEWSLETTER Apr/May 1992
Issue No. 6

Hints, Tips and much more...

EDITORIAL

Welcome to issue 6 of the 3D Construction Kit User Group Newsletter.

It seems amazing how time flys doesn't it? Here we are at the end of our first year of the User Group already! It is nice to see that this issue is a bit bigger than usual to celebrate the occasion - although that had nothing to do with me, of course, but to everyone who sent in contributions since the last issue. The more contributions I receive the bigger each issue will be. Lets hope that there will be many fatter issues during the next twelve months!

That isn't the only way we are going to celebrate the first very successful year of the Group. This issue brings with it a mega competition with some fabulous prizes - first prize is a CDTV!! and entry just couldn't be easier. See the centre pages for further details on how to enter and what you have to do. As the competition is for 16 bit owners I am planning a competition in the next Newsletter for 8 bit owners so they don't feel left out of things.

Also in this issue we have a rather interesting interview with the programmers of the Kit and with Ian Andrew himself - the man behind it all - if it wasn't for Ian's initial idea we wouldn't be owners of the 3D Kit now - thanks Ian for all the pleasure you have given us. Thanks also for allowing members of the User Group to have the opportunity of upgrading at a reduced cost to the new version when it comes out. More details about that in the interview with the man himself.

The advent of Easter this month has put this issue a bit behind schedule I'm afraid. Also an extremely nasty dose of that horrible flu knocked me off my feet for nearly two weeks and I have been trying to catch up with all correspondence ever since. If you are waiting to hear from me please be patient, you will hear from me soon, honestly!

After mentioning Adventure Probe's PD Library and Atlas Software in the last editorial quite a few of you have been in touch asking about them. Also I've had letters from 8 bit owners who, because of the lack of support for their machines in other magazines and clubs, have been begging me to ensure that 8 bit machines continue to get their fair share of coverage in the Newsletters. Don't worry, equal coverage for ALL versions will continue as long as I keep receiving contributions from you. Also, just to show you that I don't just use my 16 bit computers all the time, you will see that one of my own games will be on the cover tape of Zzap 64 in both the May and June issues. There, that should prove that I am faithful to the old 8 bit machines too!

Talking about 8 bit and 16 bit, it seems that I'll never manage to catch up! I thought when I upgraded to 16 bit that it was the "bees knees" but now I hear that 32 bit machines are going to be the "in thing" for home use and there is mention of 64 bit machines too! It isn't fair! I reckon I'll always be one step behind at this rate! But just imagine what the 3D Kit would be like on one of those monsters?!

Well I see the bottom of the page rapidly approaching once again so I had better sign off. I sincerely hope that you all enjoy this issue and that I will hear from more of you soon with your lovely letters and contributions for future issues. See you all again in issue 7 which will be the June/July 1992 issue. Bye for now,

Mandy

LETTERS

Dear Mandy,

I read the latest issue of the club newsletter and was pleased that you like my game INFILTRATION. I released it as Shareware in the hope that I could cover my costs and to enable me to release more stuff as PD. Unfortunately, I've only had one registration so far (even though the game has been available since last October). I would like to point out that the datafile for INFILTRATION is available to registered users of the game. I was also a little disappointed at the small number of contributions to the PD Library so far so I decided to send in a disk of borders and a tutorial file to help users with little graphical ability to produce their own quality borders! I think it might be a good idea to offer some kind of incentive to people to send in PD contributions. Perhaps a disk from the collection in exchange or maybe even a free year's membership for the best contribution of each issue. I am looking forward to the release of the 3D KIT PROFESSIONAL and hope that it will enable me to produce even better games with more complicated objects.

I think it might be a good idea to have some sort of light source shading available. Please ensure that the new version has a large library of samples as the ones with the first KIT were pretty grotty. Is there any chance that registered users of the KIT might get the professional version at a reduced cost (I don't think I could afford it otherwise). PS. If you do decide to let users have a free PD disk in exchange for their contributions I would like a copy of THE MAZE for Atari ST (as I have a 1 meg machine I would be able to run it).

Robin Ball, Devises, Wiltshire

ATARI ST

What an excellent idea, Robin. The PD disk you asked for is on its way to you. Anyone who has sent in PD contributions can select from the other PD list. Those who have already sent in PD contributions please let me know what you would like! I think that your idea of some form of reward for the best contributor to each Newsletter may well be an excellent one. It might encourage more of you to send in routines, tips etc. Watch out for the next newsletter to see what develops.....Mandy

---

Dear Mandy,

Recently I purchased a game of yours called 3D Construction Kit. I am pleased with it but am wondering how to draw curves. Because in the tutorial video it says you can even create your own car games and things but without a curve function I cannot see how this can be done. Can you tell me if it is possible. Please reply to this letter because previously when I have written letters to other companies they have not replied and since you are a big company I would like you to reply.

Christopher Horler Nottingham

AMIGA

There is no facility to draw curves in your version of the Kit, Christopher. The wheels of the objects you have seen are done by using inverted pyramids which are slotted together to form a circle. You can see how this was done if you use the HIGHlight or EXClude function on the kit. I am sorry that you have been ignored by some companies when you wrote to them for help. However, you have come to the right place as that is what I am here for!.....Mandy

---

Dear Mandy,

Please could somebody help me? I have an Amstrad CPC464 with 64K expansion and have the ADVANCED ART STUDIO on cassette. Please could somebody advise me how to load the programs on side B of the cassette, ie. Raytrace, Cycle dem., the windows library with the clouds, doors, drawbridge etc? I just cannot get them to load and returning to the company who sold it to me for help just elicited another copy of the program which is exactly the same. I would be extremely grateful for any help that a member of the User Group can give me.

Guy Cook

2 FONTWELL ROAD, SELSEY, W. SUSSEX, PO20 0PE

AMSTRAD CPC464

If anyone can help Guy out, please write to him direct as soon as you can as he is almost pulling his hair out in frustration!.....Mandy

---

Dear Mandy,

I have been a member of the user group since it first began, but this is the first time I have written to you. There are several reasons for this. I wanted to get to grips with the kit and give it a good trial, for one thing. I must say that, although the kit is the most user-friendly piece of software that I have ever seen, there were a coupld of things which I wasn't quite sure how to handle at first - but these were soon sorted out, all thanks to the User Group! It has really been invaluable to me, and I shall have no hesitation in renewing my membership for another year! I am still not quite sure how to use the TIMER. Can you give me any help on this?

Specifically, to program a delay for my Text output before it automatically clears (as it stands now, my program temporarily halts while the text is shown, particularly as the credits roll at the end of my game!). Before I sign off I must add my voice to all the others and say how eagerly I am looking forward to seeing the "professional" version of the Kit! I hope it is as easy to use as the original! What I would really like to see would be a "virtuality" style headpiece and guidance unit for use with the Kit! Then we could REALLY get into our environments! I look forward to another successful year of the User Group and hope to be contacting you again soon.

Peter Ward, Dartford, Kent

ATARI ST

You need to bring system variable 19 into the program to overcome your TIMER problem, Peter, what you should do is to multiply the number of seconds that you want the message to appear by 50 and store that amount in variable 19. Do this in the condition that prints the message on screen. You should have a General Condition which constantly monitors the value of variable 19 and when it reaches 0 it prints a blank line on the instrument. This should sort out the problem you have been experiencing. I am delighted to hear that you will be renewing your subscription to the User Group. The hints and tips you enclosed with your letter were extremely useful and I hope you will send us some more of the same for future issues. We won't have much longer to wait now for the new version of the Kit, Peter. Good news is that following the interview with the programmers - which you will find tucked away somewhere in this issue - members of the User Group will definitely be able to upgrade instead of paying full price for the new version. One thing I can tell you about the new version is that it will be, in fact, much EASIER to use that the version we have already! I don't think your dreams of the headpiece will be realised yet though!.....Mandy

---

Dear Mandy,

I was having a problem when loading my C64 version of the 3-D Kit in that, the Disk Drive motor continued running after I had loaded either the Environment Editor or the Condition Editor. As you suggested I returned the disk to Domark with a letter and I received a Disk back but with no covering letter of explantion and found that I still got the same effect. I wrote to them again, but did not return the Disk but enclosed a SAE and so far I have had no response. In the meantime, in desperation, I phoned Steven Flanagan who proved to be most helpful. He gets over this problem using his Action Replay cartridge. After loading the Editor(s), you Freeze the screen, the motor stops, and then you press F3 and you can start editing. Another way out if you do not possess Action Replay is, after loading the Editor, go to the Load Icon, select Disk and enter 1 and this stops the motor. I was very grateful to Steven and he suggested that I wrote to you, giving this information for other C64 users who might be having the same problem. Finally, if C64 users want to know where to get Advanced Art Studio, I have just obtained one from Datel Electronics, Govan Road, Fenton Industrial Estate, Fenton, Stoke-on-Trent, ST4 2RS. Telephone 0782 744234. I thought Issue 5 of the Newsletter was excellent! Keep up the good work!

A. Rawson South Norwood, London

COMMODORE 64

Many thanks for your kind remarks and for your most useful tip for Commodore 64 users. Anyone else got any tips for overcoming annoying things like this?.....Mandy

---

Dear Mandy,

I have just finished reading the back issues you sent me and they were exellent and thank you for your reply regarding the character sets. I am enclosing two routines which you may find useful. Did you know that there are three undocumented commands on the Spectrum version of the Kit? These are SETWPOS X, Y, which sets the X and Y positions of the top left hand corner of the playing area. SETWSIZE, Width, Height which determines the width and height of the playing area. Note though, that these two commands can cause the Kit to crash if you set the ranges too large to fit onto a Spectrum screen. The last command is CALLMC, first byte, second byte, this command is used to call machine code routines outside of the Kit. These commands were printed in Your Sinclair Spectrum magazine and I want to know if it is alright to use them to set the windows and to call machine code routines?

Antony Quinn, Catchford, Warrington
SPECTRUM

Yes, I did know about the other commands. David Hoggan wrote to me recently about them. In all versions you will probably find that there are quite a few different commands hidden within the program that the programmers have put in that were not documented. This was not an oversight. In some of Incentive's other products, such as STAC, users discovered quite a few useful commands or routines that were most useful that the programmers had crammed into the system. Part of the fun of that User Group was in discovering them and passing the information on to other users. If I hear of any more I will publish them here.....Mandy

---

Dear Mandy,

Please find enclosed my owners registration card and membership fee for the User Group. As you can see from the card I own a CPC6128. In the instruction manual the X, Y and Z values are quoted as 0-127, 0-63, 0-127 respectively for both object position and size. Unfortunately I am only able to achieve 0-118, 0-55, 0-118. Is this a disc fault or an error in the manual? After at first formatting as per the manual instruction all attempts as saving produced an error message - Possible errors. press ENTER. On CAT the only entry was a 25K BIN file. The disc was re-formatted and on CAT two 16K files, 3D DATA and DISK were present, and now the SAVE operation worked! As the 3D Kit has been on the market now for a few months, is there any chance of obtaining back issues of the Newsletter for late starters like me?

R. Wright BFPO 140
AMSTRAD CPC6128

All back issues of the Newsletters are available from issue 1 so everyone can catch up with any that they have missed. New members are joining all the time so it is only fair to give them the opportunity of access to all the data we have covered so far. I am sorry you have had problems with the values quoted. I will check this for you with the programmers but I think it is probably the manual that is at fault. In many cases the final versions were changed slightly before release and the manual was written earlier so there was no time to make the changes.....Mandy

---

Dear Mandy,

I have recently become the proud (and somewhat startled) new owner of the 3D CONSTRUCTION KIT. I bought it because the salesman explained what he thought it would do. As usual, the competence level of some sales people leaves a lot to be desired. I'm happy to say that, although I bought the software with the expectation of being able to do some of what I want, ie. house re-design and 3D Modelling, I've found, since purchasing the product, that it'll do that and considerably more. I am a user, not a software designer, so I always look for software that will do what I hope it will do. It appears, at this early stage anyway, to be exactly what I've been looking for since I first became interested in computing. I look forward to a long, interesting, developing experience with your produce. My congratulations to the designers and writers of the software!

***Mark Nicholson*, Wellington, New Zealand**

Dear Mandy,

I have a question to ask. Will the 3D Construction Kit User Group stay faithful to 8 bit computer owners like Spectrum owners, or will it eventually become an all 16 bit User Group? The reason I ask is because the decline of the amount of Spectrum software in the shops recently concerns me. In some places you can only buy budget software for the Spectrum. All the full price software tends to be for the Amiga or Atari ST. Your Sinclair magazine started a Support Our Speccy campaign because, naturally, they are concerned about this. I hope that you will stick with us 8 bit owners as it would be a very sad day if the User Group became all 16 bit User Group.

***J.P.Messenbird* Mitcham, Surrey**
SPECTRUM

When Ian Andrew and I discussed all the details about the User Group way back in February of last year, we both agreed that every effort should be made to provide equal coverage for ALL versions of the Kit within the Newsletters with a view to ensuring that your fears would be groundless. With Adventure Probe magazine too, I always ensure that fair coverage is given to all machines, so please don't worry. One thing will ensure that this doesn't change and that is if I keep on receiving contributions from both 8 and 16 bit members for the pages of the Newsletters. Keep the contributions coming in and I'll make sure that both versions are covered.....Mandy

---

Dear Mandy,

I enclose my registration card for the very astute financial investment I have made. It is a good piece of software and I'm already using it creatively. I'm working on a 3D Steelwork package, (I'm a civil engineering student: Aston University), and I'm thinking about having a routine in PASCAL which would call up various 3D Stand-alones. Calling the EXE is no problem but it will look a bit messy with the English? French? Mouse? questions, and quitting is subsequently impossible (or is it?), even back to DOS. Can anyone help? Also, I can't afford another £60 for Delux Paint. Will Splash Paint use the IFF format? (it might work but I haven't got around to trying it yet). A good looking environment is important. Finally, can objects be other than squarely, horizontal or vertical? Any other angles possible? Also why the 60 object limit as this is very restricting when each beam is made up of 3 or four objects. Anyway, thanks for an impressive package. I might some day make as much money as it cost!

Phil Nelson Erdington, Birmingham
PC

I think that all your problems will be solved with the advent of the new version of the Kit, Phil. Just be patient for a little while. I am not sure if the Splash Paint package is compatible as I have not used this - maybe another reader can come up with the answer to that one - I suggest that you try loading one of the supplied borders into Splash Paint to see what happens. I would suggest that if you draw your borders to the correct size and save them out as a brush, having given the filename the .IFF you should be alright. Let me know what happens.....Mandy

---

Dear Mandy,

Many thanks for your highly informative Newsletters concerning the 3D Construction Kit. I am a SYSOP (Systems Operator) of a Bulletin Board in the South/East Kent area, and am in the process of setting up a files and message area for the club so users can leave messages outlining problems and leaving tips etc on their experiences with the Kit. What I would like to ask the members is, would they let me have their borders/utilities etc which they feel would be of use to other members so I can make them available on my BBS. The message area and file area for the club would be a closed area to other "public" callers, and access to this closed area would only be available to "current" members of the club. Ie. you would have to complete an on-line survey so as to be able to access the 3D Construction Kit area.

My Bulletin Board details are:

KING OF THE CASTLE (0233) 620228
Baud Rates: 300/300., 1200/75, 1200/1200 on 8m
The system is available from 20:00 to 06:45am
Every night and other times at weekends.

Chris King

I don't know what the members think about the idea but I think it is excellent! I am all for spreading as much information about the Kit as possible. I see that Kit games are being produced now and are being marketed very successfully. The more members who can get their games onto the market the better!.....Mandy

MORE LETTERS NEXT ISSUE SO WRITE IN SOON!

CHATTING WITH THE WIZARDS

(AN INTERVIEW WITH THE PROGRAMMERS!)

Many of you have been asking me if I could tell you a little more about the programmers of the 3D Construction Kit and what has been happening at Incentive recently. I decided that I would put together all your questions and put them to the team. Here is what they had to say;

A visit to Incentive Software is a delightful experience. The place where all the action takes place is a spacious, air conditioned suite on two floors in a new building in Aldermaston. Anita and Ursula are usually the first friendly smiling faces to greet you when you arrive. Upstairs the programmers are hard at work together with Ian Andrew, the head of operations, who also has his spacious office on the upper floor. The atmosphere is extremely friendly, informal and peaceful. In fact after spending a day with the team I cannot in all honesty think of a nicer place to work! As one would expect, coffee abounds and hospitality takes first place.

My first question was put to Ian Andrew the friendly and extremely nice boss of Incentive:

MANDY: Ian, could you tell us how Freescape first come about and who was responsible for the original concept?

IAN: Actually I thought of the concept for Freescape back in 1986 when I was assessing where Incentive's future lay. I wanted to develop software that was unique at the time. I knew it would be difficult to develop but reckoned that the effort would be rewarded. My brother, Chris, joined the company to begin programming Freescape in September of 1986.

MANDY: What made Incentive decide to market such a great concept as Freescape for the general public when one would assume that you would like to keep it exclusively to yourselves and market more Freescape games?

IAN: Well, we were asked on many occasions by individuals throughout the industry when we were going to make a product to build Freescape games and so, after four years of producing games, we bowed to pressure and created the 3D Construction Kit.

At that point I decided to ask a few questions of the programmers and directed my first question at Paul Gregory who programmed the Atari ST and the Amiga version.

MANDY: Paul, how did you come to be involved with the programming of Freescape initially and with the 3D Kit in particular?

PAUL: I started work at Incentive just as Freescape began. Eventually I took over the programming of the Freescape system when the 16 bit versions of DRILLER and DARKSIDE had been released. I coded Total Eclipse, Castle Master and then the 3D Construction Kit.

MANDY: What was the very first computer that you owned?

PAUL: My first computer was a Sinclair ZX Spectrum.

Turning to Eugene Messina, who is the designer of the Kitgame on all versions, I put the same questions to him.

MANDY: Eugene, how did you come to be involved with the programming of the Freescape system and the 3D Kit initially? Also what was the first computer that you owned?

EUGENE: Well, I answered an advert for a 3D graphics designer in a computer magazine, after spending a year or so building up a portfolio of 3D graphics and bit mapped graphics on the Amiga. I used to do some work in programming games software and graphics for Rainbird and Mirrorsoft. I have always been interested in 3D graphics and like a good editing and design interface. I too started on the good old ZX Spectrum.

Kevin Parker, the programmer of the PC, Spectrum and Amstrad versions was the next to tell me how he came to be involved with the programming of the Freescape system.

KEVIN: My first computer was a ZX 81. I used to work for Interceptor Ltd who did some tape and disc duplication for Incentive. The 3D Kit PC and 8 bit versions were my first Freescape projects.

MANDY: Everyone appreciates the way Incentive has always supported the 8 bit computers as well as the 16 bit's when other software houses have decided to ignore them in many instances, Ian. What do you feel about the 8 bit computers and their future?

IAN: I believe that 8 bit computers will be around for a long time to come. The question of a software company supporting any computer is answered by assessing the commercial reward likely to come from a certain amount of effort and investment. The other issue is of course, that the computer must be capable of operating the software at a satisfactory speed and have enough memory.

I turned my attention to the clever fellows responsible for the 8 bit versions of the Kit to follow up on this point.

MANDY: Can I ask you Eugene and Kevin to tell us a little more about this. It must have been quite a task to write the 3D Kit for the 8 bit computers considering the memory limitations. Where there any particular difficulties that you came across that you would like to tell us about?

KEVIN: Memory limitations; fitting all of the code, data and icon graphics in memory at once.

EUGENE: Yes, when designing a game on the 8 bit kit you must always consider how best to compact the Freescape Command Language logic by using procedures, and how to make the best use of global objects so as to squeeze as much as possible into the 8 bit machines.

MANDY: Ian, All the members of the User Group have expressed a keen interest in the new "Professional" version of the Kit and are eagerly awaiting its release. Could you tell us when we can expect its release and, as the "Professional version" is only the temporary title during the programming period, what it will be called?

IAN: It is expected to be released in the August/September period. The name of the product has yet to be announced.

MANDY: Will members of the User Group be able to upgrade their existing versions at a small charge? How much will this cost?

IAN: Yes. The cost is still to be confirmed but will be considerably less than buying it at full price.

MANDY: Which computers will the new version be available for?

IAN: Well, for now it will be available for Atari ST, Amiga (1 meg), PC - EGA, Tandy and VGA.

MANDY: Have you any plans to produce the new version for other computers in the future?

IAN: It is possible.

MANDY: Paul, I know you are hard at work on the new version at the moment. Can you tell us a little more about it and any new features that the new version will have?

PAUL: No, I'm afraid I can't! The new program is still under wraps at the moment, but it will have many new features!

Although the broad smiles on everyone's faces at the mention of the new version indicated that the final product would be extremely well worth waiting for, it seemed that I wasn't going to get much information about the new version until it is nearer to the release date. Having had first hand experience of the need to keep "mum" about new developments while everything is still under wraps, I decided to turn my attention to a slightly different subject.

MANDY: Ian, I know that you are all deeply involved in the new Superscape System. Can you tell us a little more about it?

IAN: Superscape is our latest development - a complete development system which currently costs £15,000 for the software. Its use at the moment is to provide interactive visualisation at a very high level. We will gladly send our latest information pack to any User Group members who request this.

I could see that by this time the team were itching to get back to their keyboards and, being one of the many people who can hardly wait for the release of the new version of the Kit, I decided that I could best help in that department by leaving them in peace to get on with it! So I thanked them heartily and took my leave!

I too am not at liberty to tell you much about the new version of the Kit until given the go ahead by Ian Andrew and the people at Domark. I do assure you that it will be well worth waiting for and I am grateful to Ian for arranging to let members of the User Group upgrade their existing versions for the new ones when the time comes. I will let everyone know immediately when this can be expected. Meanwhile, why not take a look at the competition in this issue?! You will see that taking part to win one of the new versions just couldn't be simpler!

Once again, my thanks to Ian and the lads from Incentive for taking their time off to give us a little insight into the workings behind the scenes!

MANDY

HINTS AND TIPS

TIPS by Peter Ward - ATARI ST

I noticed that if I loaded my datafile before loading my border, this sometimes caused the sound effects to become switched off! If anyone else has experienced this problem, the solution is simply to always load in your border first!

I have also noticed that several users seem to be experiencing difficulty using the area scaling. I wonder if perhaps I might have the solution to the problem. Several users report "no noticable change" after altering the area scale. Perhaps they do not realise that once you have altered the area scale you must "take a step" (any direction, it doesn't matter) to see the effect the scale-change has.

On the subject of scales, I thought users may be interested to see a "scale table". This can be useful if you are trying to model a true-life area. I am afraid my measurements are Imperial, but this seemed to work out the best. They can always be converted to Metric, of course. The following scale is calculated assuming the default "view height" when standing as being an average human male.

3D Kit scale	No. of 3D Kit units to one imperial foot	Maximum area size (in feet) to nearest complete imperial foot
1	25	327
2	50	163 (default size)
3	75	109
4	100	81
5	125	65
6	150	54
7	175	46
8	200	40
9	225	36
10	250	32
11	275	29
12	300	27

That's about it. I only took it as far as scale 12 since you recommended in the Newsletter that this should be the maximum area scale used. As you see, it is straightforward mathematical progression.

HINT by Mark Rose - PC

Some people have asked about exiting the package on the PC. Well, when you quit from the package (file menu) and you are back at the language choice screen, select the appropriate language. On the second screen, No 5 allows you to return to DOS, select this (it may be long winded, but it works ie., no reboot necessary).

TIP by Robin Ball - ATARI ST

I have recently discovered a Public Domain package that seems to be ideal for making your stand alone games look more professional. It is called THE INTRO CONCEPT DEMO MAKER. It enables you to produce a small program which displays a picture along with a piece of music and a scrolling message. You don't have to have any programming knowledge at all to use it (though it would be useful if you can understand a little French as the program is from France). The whole lot is menu driven, you simply load up your picture file, select the text font and type in your message. Then select a piece of music and grab a sprite if you want one. Then simply compile the data and the resulting program can be put into an AUTO folder on your game disk along with the stand alone game program. Then when you reset the computer with the disk in the drive, your intro sequence will be displayed. Then by simply pressing the space bar you exit the intro and the main game loads. This is what I did on my borders disk. I think you'll agree, it looks great to start a game this way.

HINT by Steven Flanagan - COMMODORE 64

The pointer and cross-hair are sprites and can be changed with a sprite editor. The cross-hair is at $c5c0 and the pointer is at $C600. If you save these icons, you can load them into a sprite editor and then load your customised pointers back into your game.

TIP by J.P.Messenbird - SPECTRUM

Here is a tip for Multiface users. Select test mode, freeze the program and save the screen, then load it into your art package. There you have it, a template to draw your own borders around. You must not use this screen for any other reasons though because of infringement of copyright.

HINTS AND TIPS by David Hoggan - AMSTRAD CPC6128

Some objects use more memory than others so it is worth experimenting to find a substitute which uses less memory. For example: Object (129) in globals is a cube. Replacing this with a rectangle uses less memory.

Saving a backup copy of "KIT128.BIN" from side (1) of the Amstrad disc and using the backup copy saves wear and tear on the original disk.

Using these lines in conjunction with a memory editor, the user can examine and alter parts of the 3D program in memory and experiment:

```
Lines (1) open out "d":memory &1FF:load"kit128.bin",&2000
      (2) call memory edit routine.
```

Run these lines. Line (2) point to the memory edit program stored from &9000 onwards.

By altering position or size variables stored on user disk, objects can be displayed outside the normal playing area or size can be altered by using a disc editor.

Example: File (0) on the users data disc is stored at track (0), sector (&C5)

Examining this area you will discover that a rectangle created on file (0) at position (1,2,119), size (8,0,8) is stored on disc as:

POSITION	SIZE
&01,&02,&77	&08,&00,&08

Altering these variables to change SIZE and POSITION to the chosen position outside the area etc. The maximum value being (&FF) or 255.

At the end of each file is a number of bytes stored and used to trap errors etc. When adding to or subtracting from variables the amount must be added or subtracted from the bytes at the end of the file. Add if you add, subtract if you subtract. If the value is wrong the file will not load and error messages will appear.

Don't worry, the file isn't corrupt it is just the values you have mis-calculated so make notes.

Example: Value stored at end of file = &40DF which is displayed as (&DF), (&40)

When you add &7F to the variables, also add &7F to the value at the end of the file which becomes (&415E) which is stored as (&5E), (&41).

If you've calculated the right amounts and re-saved the data to disc all should work out.

One more thing on this subject. Once you alter the variables above the limit you cannot alter them in the 3D Kit but you can change them back through the disc editor as before and then you can alter them in the Kit if they are within the variable limit.

Altering the System Variables (X, Y, Z) you can get interesting effects.

Example: This is a simple effect just to demonstrate the abilities. Much more complicated effects can be made - fly past lands etc.

In LOCAL or GENERAL conditions type this in:

```
CMPV    Key,  121  -key (defined by the user)
IFEQ
THEN
ADDV    10  117
REDRAW
ENDIF
```

On the CPC6128 I used key "F8" which equals (136)

IF ANYONE HAS ANY HINTS OR TIPS PLEASE SEND THEM IN FOR THE NEXT ISSUE

WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN!

COMPETITION!

To celebrate the first extremely successful year of the 3D Construction Kit User Group, here is a great opportunity for you to walk off with some fabulous prizes!

WIN YOUR VERY OWN CDTV!
(DONATED BY DOMARK LTD)
LIKE THE ONE SHOWN ON THE OPPOSITE PAGE!

PLUS LOADS OF THE BRAND NEW "PROFESSIONAL" VERSION OF THE 3D CONSTRUCTION KIT ARE UP FOR GRABS FOR ALL THE RUNNERS UP!

Entry into the competition just couldn't be simpler! All you have to do is to design an object - not a fabulously extravagant or fanciful object either - just a domestic object that you would find around a home or garden! It's as easy as that!

Not only will you be in for the chance of one of the fabulous prizes but you will also get the chance to see your work published! All objects selected by Domark Ltd to be included on a disk of objects to be included with the new version of the 3D Construction Kit will win their own version of the new program and the object which Domark select as the winning object will win the designer their very own CDTV!

LOTS OF OBJECTS ARE NEEDED SO LOTS OF PRIZES TO BE WON!

The competition is open to all members of the User Group who are owners of the Amiga, Atari ST and PC versions of the Kit.

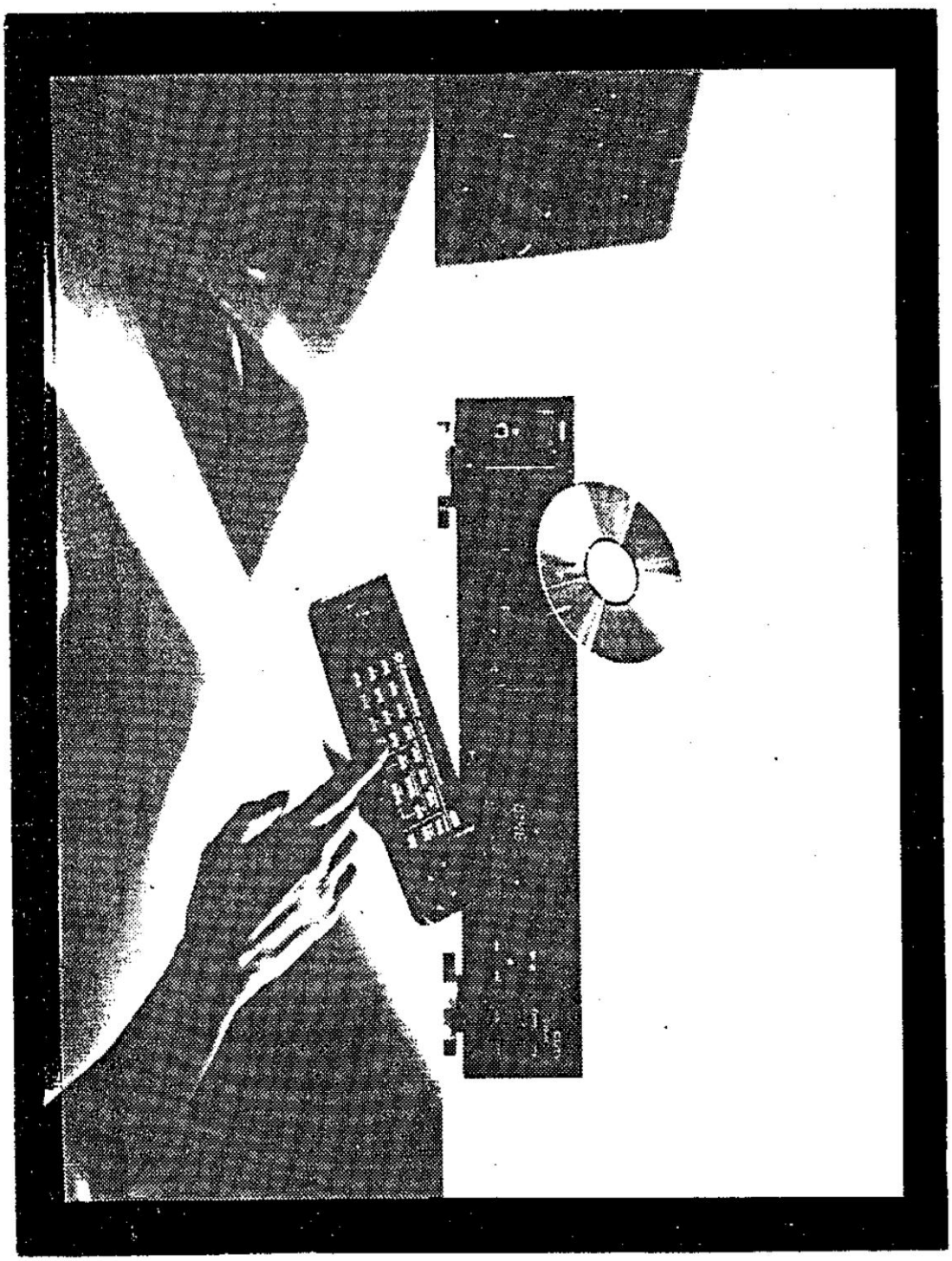
(So members with 8-bit machines don't feel left out of things, watch out for the next issue of the Newsletter to find a competition just for you!)

Send a disk containing your object (saved of course, as an OBJECT) and please don't forget to include details such as your name and address, the computer the object was designed on and your registration number to:

MANDY RODRIGUES
3D CONSTRUCTION KIT COMPETITION
67 LLOYD ST, LLANDUDNO, GWYNEDD, LL30 2YP

The competition is open to all Atari ST, Amiga or PC members of the 3D Kit User Group. The objects will be judged by Domark Ltd and the winners will be announced in a User Group Newsletter following the closing date of the competition which will be 31st May 1992. The judges decision is final and no correspondence will be entered into about their decision.

WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN!



THE KITGAME SOLUTION

8 BIT VERSION
By David Hoggan

1. Enter the Computer Room of the house on the starting screen and activate the keyboard that you find there.
2. On leaving the room, head down the passage next to the Computer Room. Keep following the passages until you reach a hidden room.
3. Shoot the Guards to the left and right of you. Retrieve the the safe combination and head for the exit which is directly in front of the house.
4. In the new room, shoot the dark wall and walk under and past it. Do a U-turn and shoot the triangle that you see. Now head for the exit which is next to the teleport machine.
5. In the next room, shoot the nose of the mask on the wall and go back into the previous room and enter the teleport.
6. Do a U-turn and shoot the triangle then press the "K" key until you leave the mask. Now pan left and head for the exit to the left of the mask.
7. In the new room, shoot the cross beam until the block moves above the guard. Now shoot the block and the guard will be crushed. Pan left and head for the new exit.
8. Shoot all the steps. Go through the exit above the steps and walk along the ledge into the new room.
9. Shoot the triangle which is hidden under the steps - on the back of the second step down.
10. Step onto the block which has appeared in the room and shoot the triangle next to the safe.
11. Activate the pentagon on the safe and retrieve the Pass Card on the wall where the safe was.
12. Now head for the door to the right of the house on the starting screen.
13. In the last room, activate the panel on the right hand wall and head for the Shuttle to complete the game.

- If you want to visit the Island. Instead of going to the exit mentioned in direction number 6, go to the teleport a second time.
- To leave the island, retrieve the key which is hidden at the top of the palm tree. Open the chest and jump inside.
- If you want to collect the gold coins which are hidden around the adventure - e.g. behind the house - holding down the activate key over the coins will double the points per coin retrieved.

---

16 BIT ROUTINES

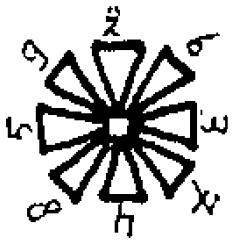
If any 8 bit members wish to adapt any of these routines to use on their machines there is just a little translation needed between the two FCL languages. Please refer to Newsletter 4 (page 5) for a list of the differences in commands. Please note though that animation is 16 bit specific and only simulated animation can be performed on the 8 bit machines.

GOING ROUND IN CIRCLES
By Mieke Van Der Po11 - PC & AMIGA

In the last Newsletter I read that some members were wondering whether rotation of an object was possible. I discovered that in some cases the illusion of a rotation is possible. For instance, rotating the wings (or vanes) of a windmill, rotating the rotors of a helicopter or rotating a flying saucer whilst moving it in space.

It can be done by an animation I found in the Kitgame, in the area where the lamp of the lighthouse goes on and off.

For the wings of the mill you have to create 8 triangles as shown below:



Create two groups:

Numbers 2, 3, 4 and 5 are in one group (10)

Numbers 6, 7, 8 and 9 are in the other group (11)

Make objects 6, 7, 8 and 9 INVISIBLE.

Select say the floor as our trigger (cuboid 001) and make a condition for it as follows:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

Create Animation 1 and enter the following condition:

```
INCLUDE (10)
INCLUDE (11)
START
VIS (10)
INVIS (11)
END
INVIS (10)
LOOP (4)
VIS (11)
END
AGAIN
RESTART
```

You see group (10) vanish and group (11) appear and vice versa and so on. It seems as if the wings are rotating.

The loop command can be set lower and higher, lower is faster and higher is slower to create different effects.

When creating a "flying saucer" (which I did with two pyramids and two cubes), you save the object twice as a group with a different name. Once with "front look" and once turning it a quarter, so either the right or the left side is in front. Give the front and the side two different colours. After saving your objects, clear the screen, colour the area black and load in the first group. Make the parts of the object invisible and at the same time movable. Load in the second group and make sure all the parts of it are set as moveable and let it be visible.

Make a trigger condition for cuboid (001) as follows:

```
IF SHOT?
THEN STARTANIM (1)
STARTANIM (2)
ENDIF
```

Create animation 1 and enter the following condition for it:

```
INCLUDE (2)
INCLUDE (7)
START
INVIS (2)
VIS (7)
END
INVIS (7)
LOOP (4)
VIS (2)
END
AGAIN
RESTART
```

Create animation 2 and enter the following condition:

```
INCLUDE (2)
INCLUDE (7)
START
LOOP (20)
MOVE (20,20,-20)
AGAIN
LOOP (20)
MOVE (-20,20,20)
AGAIN
RESTART
```

For the loop and the move you can take any number you like to go in different directions. The effect should be that the flying saucer rotates as it flies into 3D space. Add an appropriate sound to make it more realistic and there you go!

A PUSH IN THE RIGHT DIRECTION!

By Brian Woodley - ATARI ST

Here is a little routine which lets you "push" an object or group of objects around an area. The first thing to do is to create your object which is to be moved. Call this cube 002 then create four rectangles and place them against the sides of the cube. You should now group these into GROUP (7) and make each object in the group moveable.

On each of the rectangles place the following conditions:

```
IF ACTIVATED?
THEN
SETVAR (x,V30)
STARTANIM (1)
ENDIF
```

Each rectangle must have a different value in (x) and for this example I will use the values 1, 2, 3 and 4.

Now create animation 1 and enter the following condition:

```
INCLUDE (7)
START
IF VAR=? (1,V30)
THEN
MOVE (-20,0,0)
STOPANIM (1)
ENDIF
IF VAR=? (2,V30)
THEN
MOVE (20,0,0)
```

```
STOPANIM (1)
ENDIF
IF VAR=? (3,V30)
THEN
MOVE (0,0,-20)
STOPANIM (1)
ENDIF
IF VAR=? (4,V30)
THEN
MOVE (0,0,20)
STOPANIM (1)
ENDIF
RESTART
```

Now if you activate the rectangles on the side of the cube, the cube (and the rectangles) should move, probably in the wrong direction! The way to alter this is to change the number (x) in the rectangle conditions, after a bit of trial and error you should have the cube working as it should. The best way to do this is to get one side right and then go on to the next side.

The distance the cube travels with each "push" can be changed by changing the +/- 20 in the MOVE statements in the animation. The routine works by detecting which rectangle is activated and then by moving the whole group in the correct direction.

The main strength of this routine is that it allows a player to change the environment from within the game. I think that variations of this routine could be used for game puzzles such as making a set of stairs from different sized blocks or putting chess pieces on the right squares on a giant chessboard.

INVENTORY WITH A DIFFERENCE

By J. Hayes - AMIGA

This routine is a method of informing the user of the objects they may be carrying in an inventory. The current object on view to the user is then available for use providing a more precise way of interacting with the environment.

It uses only one variable to keep an eye on what may be carried, up to a maximum of 16 items. It works by allocating a particular object to a particular bit - the value of this bit is then used to refer to that object throughout the environment. Also the presence of this value determines whether the object is carried or not. It works like this:

BIT (ITEM NO.)	VALUE IN THIS BIT WHEN SET	REPRESENTING OBJECT
1	1	OB 1
2	2	OB 2
3	4	OB 3
4	8	OB 4
5	16	OB 5
	and so on until:	
16	32768	OB n

Value = 2 ^ (BIT-1)

Object numbers refer to individual objects or a group.

To discover whether a certain object is carried, simply use its corresponding bit value and do a ANDV (Vinv, VALUE) - Vinv = Inventory store. If this is true the object is carried.

ROUTINE IN DETAIL:

To make this easier to transfer into other uses, games/environments, variables will be referred to by name:

```
Vinv     = Users Inventory.
Vitem    = A pointer to an item (bit) in the inventory.
Vvalue   = The bit value for Vitem.
Vcur     = The current object (referred to as a value) on view to user.
Vgen     = Any general purpose variable.
Vobnum   = The object number as it will be in the environment.
Vobval1  = The bit value of this object number, as it will be
           represented in the users inventory (ADD TO).
Vobval2  = As above, but remove from.
```

First it is necessary in some way to place objects into the users inventory. An object can be "set" into an inventory with

```
ORV (Vobval,Vinv)
```

Rembering Vobval IS NOT an object number, but the value selected to represent it.

There are two ways it can get there:

1. Allow the user to already carry them when the environment starts up.

   If so, these objects shouldn't exist until called for - ie. made visible.

2. Interact with the objects which already exist and the user is allowed to pick up, with the following:

For object conditio n enter:

```
IF ACTIVATED?
THEN SETVAR (obnum,Vobnum)  -  provide the object number.
SETVAR (obval, Vobval)      -  provide the value for it.
ENDIF
```

In a General Condition enter:

```
IF VAR>? (Vobnum,0) THEN
INVIS (Vobnum)          - remove object from environment.
ORV (Vobval,Vinv)       - add to inventory.
SETVAR (Vobval,Vcur)    - make this the current object.
SETVAR (0,Vobnum)       - clear.
SETVAR (0,Vobval)       - Clear.
SOUND (4)               - Ping!
ENDIF
```

This condition takes the data given to the variables when a selected object is activated? and removes it, adding it to the inventory. Now we come to the main routine allowing the user to "see" what they are carrying. A text instrument has to be created, long enough for the object text to fit into. It will display whatever the current object is, in terms of the value representing it. Vcur holds this value and will remain visible until another is selected.

SHOW OBJECTS CARRIED:

In a General Condition enter:

```
IF VAR=? (Vcur,0)
THEN PRINT ("NOTHING {fill with spaces}",1)
ELSE
IF VAR=? (Vcur,obval1)
THEN PRINT ("OBJECT A",1)
ELSE
IF VAR=? (Vcur,obval2)
THEN PRINT ("OBJECT B",1)
ELSE  and repeat for all the objects to be described
ENDIF
```

To select the next item in the inventory, the "?" key is used here to advance it onwards.

VIEW NEXT OBJECT:

In a General Condition enter:

```
IF VAR=? (V15,47)
AND VAR>? (Vinv,0)          - "?"pressed and INV. not empty.
THEN ADDVAR (1,Vitem)       - move pointer to next item in it
IF VAR>? (Vitem,16) THEN    - if end of list
SETVAR (1,Vitem)            - reset this pointer and
SETVAR (1,Vvalue)           - reset the value associated with it.
ELSE                        - else
ADDVAR (Vvalue,Vvalue)      - double value each time rund.
ENDIF
SETVAR (Vvalue,Vgen)        - copy this value
IF ANV (Vinv,Vgen) THEN     - and test if it exists in inventory
SETVAR (0,V15)              - if yes, stop this condition repeating
SETVAR (Vvalue,Vcur)        - make this value the current reference
PRINT ("  {spaces}  ",1)    - and erase last object text.
ELSE                        - if not,
SETVAR (0,Vcur)             - nothing was found in that
ENDIF                         particular item position - if the
ENDIF                         bit was not set and the object
                              refered to by this value isn't
                              carried.
```

This last condition is the heart of the routine. It constantly loops around the inventory list, looking for the next occupied bit position, which contains the value refering to an object. It resumes when "?" key has been pressed.

It stops when one has been found and the value in Vcur is then used to print the object description out. What value an object represents is up to the game designer, so a little thought before hand is required to calculate it, given the item position (or bit position) it occupies.

If an object needs to be removed from a users inventory, a check has to be made if it is actually carried.

`ANDV (Vinv,obvalue) will do this.`

Only if true, can it safely be removed.

`SUBVAR (obvalue,Vinv) will do this.`

`SETVAR (47,V15) - only required if object removed is currently referenced.`

However, if the currently referenced object in Vcur needs to be removed, there isn't a need to check if it is carried first.

I trust that this routine will be of use to other users and I hope my explanations about it are clear enough to understand.

Mr Hayes has also sent a disk for the PD library which contains a small demonstration of this routine with a number of objects and various doors to be opened if you are holding the correct key. This is extremely useful for any Amiga owners who would like to see the whole inventory routine working without the need to type it all in.

See the item on PD disks for details.

---

8 BIT ROUTINES

Remember that if 16 bit users wish to use any of the 8 bit routines, only a simple adaptation is needed between the two FCL languages. Please refer to issue 4 (page 5) for the information on translating routines between the two. 16 Bit members should also note that PROCEDURE conditions which are 8 bit specific are subroutines and the CALL command is the same as GOSUB in BASIC.

FADE OUT!
By Antony Quinn - SPECTRUM + 3

Here is a routine for a fader which can be used for an endgame sequence:

PROCEDURE 001

```
COLOUR      0     7
REDRAW
COLOUR      0     6
REDRAW
COLOUR      0     5
REDRAW
COLOUR      0     4
REDRAW
COLOUR      0     3
REDRAW
COLOUR      0     2
REDRAW
COLOUR      0     1
REDRAW
COLOUR      0     0
REDRAW
```

The less objects you have in your area the faster the fade will be. You can swap the listing around to give a fade-in instead of a fade-out. To use the fader routine just use the CALL command, for example:

LOCAL CONDITION:

```
IFSHOT      8
THEN
CALL        1
ENDIF
```

ADDING A BIT OF BOUNCE
By Antony Quinn - SPECTRUM + 3

This routine could be used when, for example, you are landing a space craft on a landing pad to give the more realistic effect of your craft bouncing before finally coming to rest.

PROCEDURE 001

```
ADDV      4     115
REDRAW
SUBV      4     115
REDRAW
ADDV      3     115
REDRAW
SUBV      3     115
REDRAW
ADDV      2     115
REDRAW
SUBV      2     115
REDRAW
ADDV      1     115
REDRAW
SUBV      1     115
```

This routine can be activated when needed, for example:

```
IFHIT     001    (Big landing pad)
THEN
CALL      001
ENDIF
```

INVENTORY/INFORMATION SCREEN

By Anthony Quinn - SPECTRUM + 3

D. G. Marley sent in an excellent routine which was featured in issue 3 for an Information Screen but the only problem with it was that you could only return to the positions (entrances) in those areas. With the following routine you don't have to go to another area or store your position.

First of all you should create three objects. Object 1 is a closed door (a rectangle shaded number 12). Object 2 is a key (you can make this any shape and colour). Object 3 is an open door (a rectangle shaded number 2). Colour your area number 5. Your list should look like this:

```
001 ENTRANCE
002 RECTANGLE
003 (KEY SHAPE)
004 RECTANGLE
```

Now you should create four messages as follows:

```
001 INVENTORY
002 Carrying the key
003 The key is needed
004 Access is granted
```

The Variables we will use are as follows:

Variable 5

```
1 = Player holding the key
2 = Player not holding the key
```

Variable 14

```
Area colour (1 to 7)
```

Now enter the following conditions:

Note: Make sure you put the GENERAL condition AFTER General Condition 001. If you put it in condition 001 it won't register your keypress so any condition from 002 onwards is okay.

GENERAL CONDITION 002

```
CMPV       71       121
IFEQ
THEN
CALL      001
ENDIF
```

This ensures that pressing key "G" will activate the routine.

LOCAL CONDIITION

```
SETV        5       14 (set colour to 5)
IFACTIVE    3
THEN
TEXTCOL   115
PRINT       2       10       22
DESTROY     3
SET         1        5
ENDIF
IFACTIVE    2
```

```
                    THEN
                    CALL        3
                    ENDIF
```

PROCEDURE 001

```
                    SOUND       1
                    COLOUR    000      000
                    TEXTCOL    71
                    PRINT       1       11        3
                    CMPV        1        5
                    IFEQ
                    THEN
                    PRINT       2       10        6
                    ENDIF
                    DELAY      50
                    REDRAW
                    CALL        2
```

PROCEDURE 002

```
                    CMPV        7        14
                    IFEQ
                    THEN
                    COLOUR    000         7
                    REDRAW
                    ENDIF
                    CMPV        6        14
                    IFEQ
                    THEN
                    COLOUR    000         6
                    REDRAW
                    ENDIF
                    CMPV        5        14
                    IFEQ
                    THEN
                    COLOUR    000         5
                    REDRAW
                    ENDIF
                    CMPV        4        14
                    IFEQ
                    THEN
                    COLOUR    000         4
                    REDRAW
                    ENDIF
                    CMPV        3        14
                    IFEQ
                    THEN
                    COLOUR    000         3
                    REDRAW
                    ENDIF
                    CMPV        2        14
                    IFEQ
                    THEN
                    COLOUR    000         2
                    REDRAW
                    ENDIF
                    CMPV        1        14
                    IFEQ
                    THEN
                    COLOUR    000         1
                    REDRAW
                    ENDIF
```

PROCEDURE 003

```
                    CMPV      000         5
                    IFEQ
                    THEN
```

```
TEXTCOL    113
SOUND        7
PRINT        3        11        22
ELSE
SOUND        2
TEXTCOL    115
PRINT        4        10        22
SETV       000         5
DESTROY      2
VIS         4
ENDIF
```

When you have typed it all in, ACTIVATE the key. Press key "G" and it will show you that you are carrying the key. Then open the door. That's all there is to it! Just remember to set Variable 14 (the AREA colour) to whatever colour your area is. If it is red then set Variable 14 2, and once you have used the object like a key remember to set Variable 5 to 0, so that the system knows that you have used it and will not print it in the inventory.

---

8 BIT ANIMATION

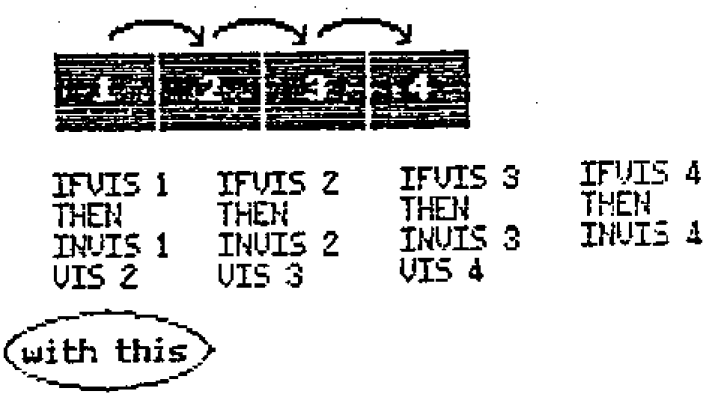
By Steven Flanagan - COMMODORE 64

When programming simulated animation on 8-bit machines you should follow these simple guidelines:

1. Use IFVIS instead of TOGVIS. This means that you can have more than one animation at once, because there is no set pattern to the animation sequence.
2. It is best to trigger the first object in the animation sequence randomly. This makes the animation less predictable. Unfortunately the Kit does not have a command to generate a random number so you will have to write your own generator.

The only way a computer can make a random number is to use its internal clock. In the Kit variables 122 and 123 are interrupt timers. Variable 122 increases 60 times a second, so you can randomly trigger the animation off by using:

```
CMPV   15   122
IFLT
THEN
VIS    1
```



The above routines should be put in seperate LOCAL conditions so that the player can move in mid-animation. The animation routines given in previous Newsletters only let the player move at the end of the animation.

There is no limit to how many stages your animation can have using these methods. This is the way I programmed my RACER routine in the PD of the User Group. If you own a C64 and are having problems with animation then I suggest you have a look at it. It consists of the road with cars on it coming towards you. You have to move left and right to avoid them. I used IFCRUSH to detect if one of the cars hits you. It is advisable to include a REDRAW at the end of all conditions containing visibility commands. This does slow the game down, unfortunately. If you do not include this command, the animation can only be seen if you keep moving.

I hope this routine has been of interest to you. If you have any queries you can contact me through my hotline number.

PUBLIC DOMAIN LIBRARY

NEW ADDITIONS TO THE LIST!

SOUND SAMPLES - AMIGA

Mieke Van Der Poll, bless her, was extremely frustrated that she couldn't get the Make Sample Bank program to work so I sent her another program that did the trick. She was so grateful that she has kindly donated a disk for the PD library that contains no less than 26 new sound samples on it together with the new MakeSampleBnk program that I sent her. The sound samples are. extremely varied - which is why she has chosen to call the file "various.bnk". There is a sound for every occasion here! What more could you ask for? The sample bank is quite a big one - 219.588 bytes but it still loads together with the 3D Kit and all the sounds work very well indeed.

INVENTORY ROUTINE - AMIGA

This is the routine that is listed here in the newsletter by J. Hayes. It is an extremely interesting and useful routine and the demonstration datafile and the border provided on the disk show just how well the routine works. Very clever programming and a most useful routine to study and learn from!

SPIELRAUM - ATARI ST

Sent in by Peter Ward who said "this is not exactly an earth-shattering adventure, really more of a trial to see what could be done with the kit". Well if that is a first attempt I'm impressed. I got completely and utterly lost in the maze of passages - I can't figure out if pressing the PANIC BUTTON that I found helped or not! However, I'm going to keep trying to find my way about. Also on the disk you will find two objects, a galleon and a very well known starship! The disk has the runnable version of the program, the datafile and the objects. I played from the datafile as I couldn't get the runnable to load properly. Maybe I'm thick!

BORDERS - ATARI ST

This suite of borders sent in by Robin Ball will be a godsend to people with no artistic talent. What a clever fellow he is! The three borders that I saw were very well drawn indeed. There is a border to suit different types of games and my favourite just has to be the border made up of the bones with the skull peeping out at me and the green eyes peering at me from various points. The more I viewed the border the more I found to interest me.

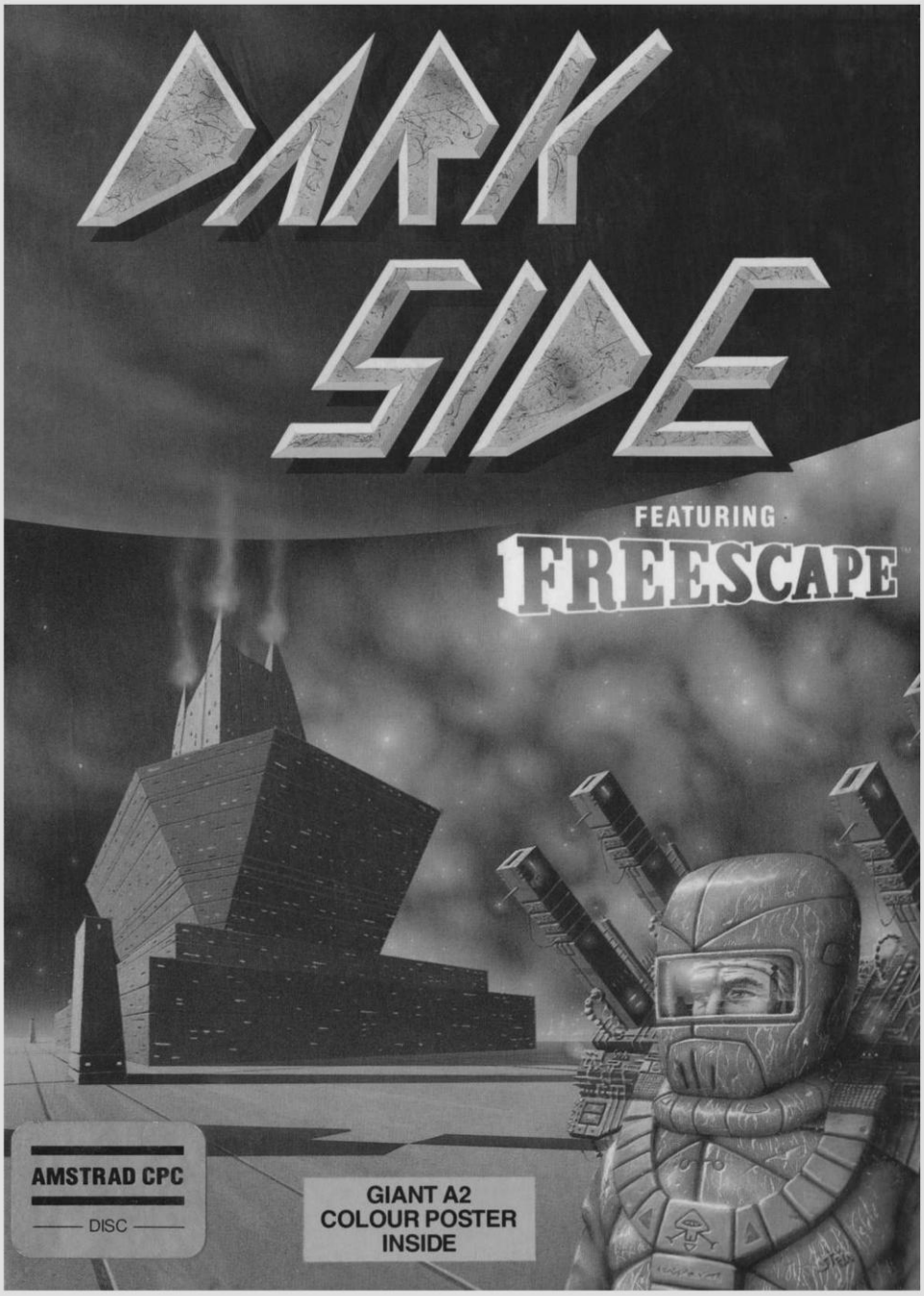
The other items on the PD list so far are as follows and were reviewed in the last issue of the Newsletter:

DARKNESS CALLS	stand alone program for AMIGA by James Yusuf.
DARKNESS CALLS	objects datafile for AMIGA by James Yusuf.
PLANET OF THE DALEKS	datafile and border for AMIGA by Steve Hilder.
E.F.T.P.O.T.C.M	(Escape From The Planet of the Cardboard Monsters) a stand alone game and utilities for Amiga by Andrew Herbert.
AMIGA BORDERS	a suite of borders for the Amiga by A.J.Bevan.
INFILTRATION	a stand alone game for ATARI ST by Robin Ball.
THE MAZE	datafile and border for ATARI ST (1 meg.) by David Sambrook.
ESKAPE	a datafile for COMMODORE 64 by Steven Flanagan.

RACER ROUTINE and ESKAPE datafiles for C64 by Steven Flanagan.

All the disks are available from the usual address and cost just £1.50 each (UK) and £2.50 for overseas members (extra postage costs,sorry!). You are all invited to send in contributions for the Library and it would be helpful if datafiles could be included, if possible.

HOPEFULLY THERE WILL BE MORE FOR THE NEXT ISSUE!



3D

CONSTRUCTION KIT USERS GROUP

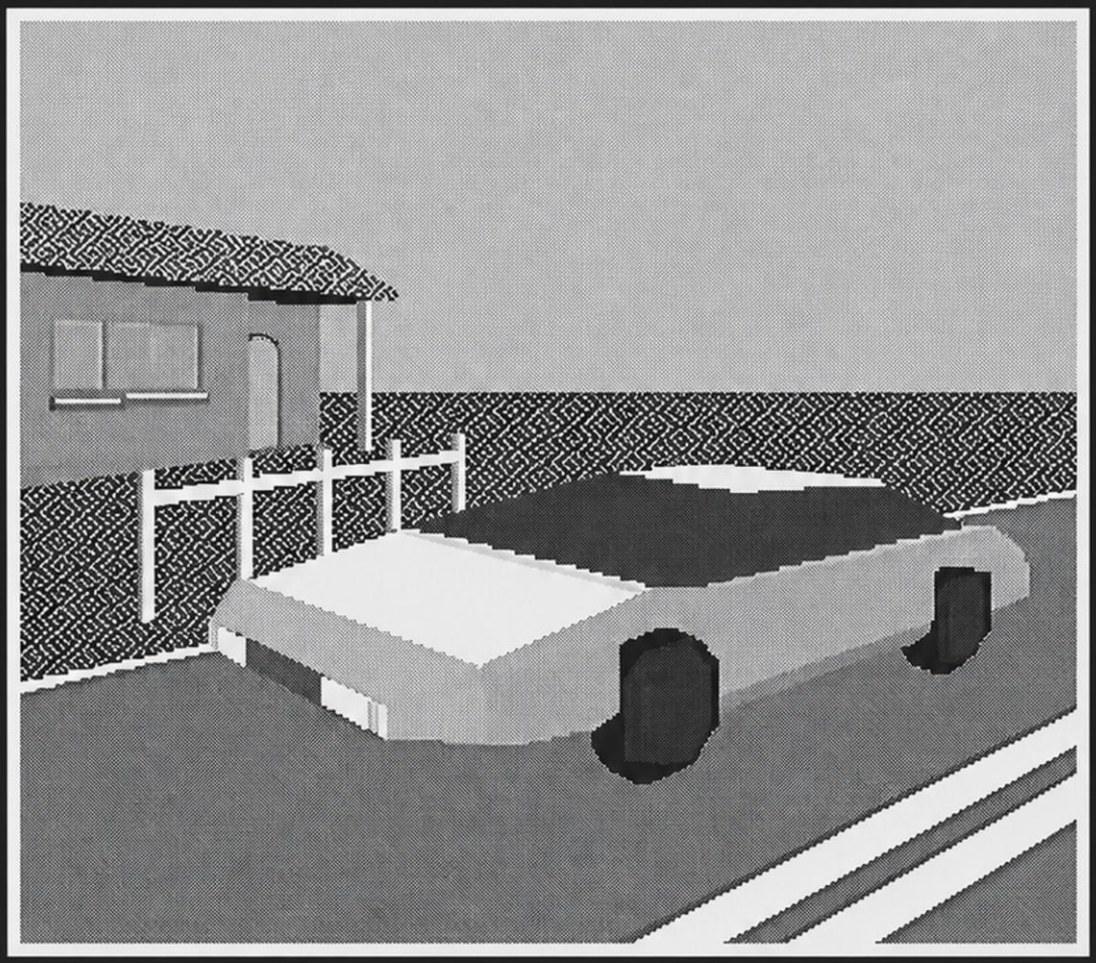
3D Construction Kit Newsletter

Issue Number 7
June/July 1992

CONTENTS

EDITORIAL 152
LETTERS 152
COMPETITION! 156
3D KIT GOES ON-LINE 157
THE USER GROUP GAME! 157
WHAT KIND OF GAME TO MAKE? 159
PUBLIC DOMAIN LIBRARY 161
16 AND 32 BIT ROUTINES 162
INVENTORY WITH A DIFFERENCE 164
DRIVING AROUND 164
REALISTIC BOUNCING BALL 165
8 BIT ROUTINES 166
BUTTON PUZZLE 167
PROBLEM PAGES 168

NEWSLETTER Jun/Jul 1992
Issue No. 7



3D CONSTRUCTION KIT USERS GROUP

EDITORIAL

Welcome to issue 7 of the 3D Construction Kit User Group Newsletter.

Since the last Newsletter I have been tinkering about with a new modem, thanks to Chris King. Chris was kind enough to lead me gently and painlessly through my initial tentative steps with handling this new beast. As you will all probably know by now, I am not the worlds finest at getting to grips with strange technology and usually make a dreadful mess of things when I start to dabble in something new. Actually, it was the strangest of feelings to dial into someone else's computer and take a peek ('scuse the pun) at what's on offer there. I decided to try and leave a message for Chris before I logged-off - whole new language opening up for me again here - and, being totally new to the PC keyboard I couldn't find the apostrophe. I wanted to say "I don't know what I would have done without your help" and only got as far as "I don...." followed by a long pause as I frantically searched the keyboard. Imagine my astonishment when the apostrophe suddenly appeared on the screen for me!! It was Chris putting it in for me! I had no idea that he had been watching everything I had been doing (and probably chuckling to himself at my efforts), and that he could break in for a chat! - aren't computers wonderful? Boy were my cheeks rosy though at the thought that he had been watching all my mistakes! He is SO nice, he didn't mind a bit letting me use his BBS to practice on!

I was delighted to see that nearly all of you who were due to re-subscribe after the first year have joined up for another year. I hope that you will enjoy the second year's Newsletters just as much and find them just as interesting. Of course, how interesting they get does rather depend on other members sending in contributions for the various sections. I have had very little these last two months in the way of routines, especially from 8 bit users which is a great pity as, if everyone sent in a little routine for their machine then we would really have a mine of useful information at our fingertips. There are hundreds of members out there, all over the world, come on, don't be shy I would love to hear from you. I promised to do my best to give fair coverage to both 8 and 16/32 bit versions but I cannot do so without the support of 8 bit users. At this point I would like to give my sincere thanks to all of you who did send in contributions which made the first year's Newsletters so successful. I would like you all to know just how much I appreciated all your help and support and I hope that you will continue to help during the next year as well and that many more contributors will join you.

All entries for the competition featured in the last Newsletter have been passed on for judging by Domark Ltd and I hope to have the results in time for publication in the next issue. I hope also that by that time the new version of the Kit - 3D Kit II - will be released so that eager members can see for themselves what delights there are in it. So watch out for the next issue. This issue contains a competition, as promised in the last Newsletter, for 8 Bit users. That is because they were left out of the previous competition. I will have to come up with something for 32 Bit users too so that I can be fair to all. Meanwhile, I sincerely hope that you enjoy this issue and I will see you all again in August for issue 8. Meanwhile, I would love to hear from you so do please write in, don't let the hot summer days stop you - drag your computer out into the garden! and if you can send in a contributions or two it will be greatly appreciated.

Bye for now,
Mandy

LETTERS

Dear Mandy,

I have recently received your Newsletter number 5 after registering with the User Group:, for which many thanks. I have completed the Kitgame which wasn't too difficult after all (when you know how!). I have also just received your latest Newsletter number 6. However, I must be really slow or something as I just cannot get started into creating anything exciting or writing routines. I'm afraid it is all still very confusing to me. I find it very difficult to do things with this kit parrot-fashion without fully understanding exactly what it is I am supposed to be doing and what all the different functions on the menus do. What I am really in need of is a step-by-step tutorial guide either in the form of writing or a demo on a floppy disc which will explain the whole business of creating a simple game or environment. You see I am just a beginner in this home computing business although I have had a go on a proper Amstrad set-up and I am familiar with Deluxe Paint (but not the animation part).

The list of routines and the variables still look a bit incomprehensible at the moment. Any help or suggestions you can give me would be greatly appreciated. Are you yourself a computer programmer?

Reg McLoughlin Birkenhead.
AMIGA

I have had quite a number of letters recently just like yours, Reg, and you will see that in this issue a simple step-by-step guide to creating a simple game has been started which I hope will help you and others to take things gently from the very basics up to the more complicated puzzle conditions. I hope to be covering each function of the kit in depth over the next issues for anyone who is experiencing difficulties in understanding them too. I hope it will help. No, I don't really consider myself a computer programmer although I can knock together various programs and utilities that I need in BASIC on a number of machines. Machine Code is left to my husband as he is very handy for a lazy person like me so I usually tell him what I need in the way of programs and the like and leave it up to him to provide the more complicated ones. I, like thousands of other people, am a great user of other programmers utilities such as 3D Construction Kit, STAC, STOS, GAC, AMOS, various paint packages etc.....Mandy

---

Dear Mandy,

Hello, it's me again. This time just sending you my entry for the competition and at the same time to mention a little problem I encountered when trying to save an object. Well, in trying to load them back in from a floppy. You see, what happened was that I kept getting an error message saying "Not enough space. Make room before trying again." Many frustrating hours later, I discovered what I had done. After creating my object as a group and saving it, I inadvertantly added cuboid 1 with the rest (which is, of course, the earth/ground cube!). So what was happening was that I was trying to load two cuboids for the earth and there was just no room. Just thought, if you print it, it may save someone else from making the same error. By the way, have you ever considered writing a guide book for the 3D Kit? One that gives a more step-by-step procedure. It strikes me that there is a need for this - especially for dunderheads like me!

Margaret Christmas, Askrigg
PC

Many thanks, Margaret, for sharing your problem with us. It is indeed extremely easy to make the mistake of including cuboid 1 within a group when you are creating just one group of objects and loading them back in is impossible unless you delete cuboid 1 from your empty area before attempting this. I am sure that this information will now prevent other users from making the same mistake in the future.....Mandy

---

Dear Mandy,

Thank you for sending the P.D. disks I ordered and for the friendly note you enclosed. Initially I had some difficulty loading the borders from A.J.Bevan's Amiga Borders Disk, despite loading them into DPaint and saving them out again as you suggested once in the Newsletter. After much experimenting and gnashing of teeth, I discovered that the problem was caused by embedded spaces in the filenames. Once I had removed these, the borders loaded easily. Presumably when you loaded them into DPaint you then saved them out under a different name, which is what cured the problem. Perhaps you could amend the filenames on your master copy of this disk, to spare future users having to rack their brains quite so much? Many thanks for your sterling work on the Newsletters. They are a mine of information and I don't know what we'd do without them. Keep up the hard work!

Geoff Barker, Cheltenham
AMIGA

I will indeed make the necessary changes to the filenames, Geoff, and thank you for discovering what was causing the problem. I believe I did change the filenames when I saved them out the second time, something like 1, 2, 3 etc but I hadn't realised why the problem existed in the first place. Hopefully, now we should have no further trouble.....Mandy

---

Dear Mandy,

Firstly I must thank you for sending the back issues of the User Group magazines. I recommend anyone who has not got them all to send for them at once. They are full of hints and tips to help all us new-comers to the Kit. I have found that by trying out the routines and then storing them on disk, I can play about with them, maybe adapt them for my own use, and learn an awful lot in the process. And, of course, if I discover a good routine from it all, I will send it in to the magazine immediately. I was interested in Phil Nelson's letter in issue 6. I also have had trouble loading things into the Kit. I have got Graphic Workshop which converts between any two formats and I converted a B/W PCX picture to an .IFF file but it would not load into the kit. I have also tried to load pictures in from Fingerpaint and also TheDraw, unsuccessfully. Will the new professional version cater for more paint packages, Mandy? I haven't been able to create any Borders because of this and when I try to load in the two supplied with the PC version the test window slides down and promptly covers them. So I was hoping that some genius would send some to the PD Library. BUT... where are all the PC Whiz-kids?! Come on... we can't let the Amiga and Atari programmers have all the fun! I am not a programmer myself, although I have dabbled and, before the PC, I had a C64. I find playing around with the 3D Kit is helping me to understand how my computer works, as well as having lots of fun! I have been a fan of adventure gaming since before computers were ever popular in the home and I still have a board version of "Railway Rivals" that I purchased from an offer in The Gamer magazine. Why I remembered was because I had to send to Wales for it and I had to look to see if it was your good self. Although, now I realise you were probably too young!. (What a nice lady.....Ed) I still have an adventure game called The Morrow Project. The Liberation at Riverton. Which is very complicated and I have never played, mainly because I have no like minded friends. That is where the beauty of the computer comes in. You don't have to have anyone but yourself, do you? Having said that, I was wondering if it might be possible to arrange some sort of get together for Kit Users? Maybe starting out with regional workshops and ending with one big rally. What do you think? Sorry to have gone on at great length, but it is a change for me to talk to someone with similar interests to my own. You don't have to print all of my epistle, if you don't want to, just what you feel is relevent. How about a pen-friend club? OK, I'll shut up now.

Margaret Christmas, Askrigg
PC

Thank you for a lovely letter, Margaret. I am glad to hear that you are finding the back issues a lot of help and when you do get a routine or two to send in I would be delighted. The more input from other users that we get the better the Newsletters will be. There are hundreds of members out there, all over the world, who seem to be too shy to contribute and that is such a pity as we could have bumper sized newsletters coming out on the monthly basis instead of bi-monthly if sufficient material was sent in to fill them. Quite a lot of people who have a PC are finding it difficult to find compatible paint packages and, as many of them point out, Deluxe Paint III is rather an expensive package to rush out and buy just to draw a border for the Kit. I would be extremely grateful if PC owners would write in with their recommendations for suitable art packages, PD or Shareware would be even better, so that a suitable list can be published here. At the same time why not have other computer owners doing the same so that a fully comprehensive list of compatible packages were available for everyone to chose from within their budget? You mentioned that when you loaded in the supplied borders the test window slides down and promptly covers them? You can overcome this if, before you go into TEST mode to view the border, you select SET VIEW WINDOW from the General Menu at the top of the screen. Then you can set the window to sit within your border and it will no longer be covered. Your point about the PC PD Library is a valid one. I hope that more PC owners will contribute to help their fellow PC members. I now have an Amstrad 1640 PC so I can easily handle them providing that all the contributions are sent in and sent out on five and a quarter inch disk - I don't have three inch drive yet. As I mentioned in a previous newsletter, I do have one game that was sent in for PC and I am at present trying to get this transferred to 5.25" so that it can be included in the PD Library. As I am also the editor of Adventure Probe magazine I was naturally delighted to hear that you are interested in Adventure Games.

That consists of a group of about 500 computer adventure enthusiasts and it also covers R.P.G and some Strategy games. I am playing one at the moment that I can thoroughly recommend to any PC owner who loves text adventure games. It is called Unnkulian Underworld and is an American Shareware game. There are about five in the series so if you like the first one you can always send for more. In reply to your idea of a get-together for User Group members, well this could easily be arranged if there was sufficient interest. The members of Adventure Probe decided that they wanted an annual convention and it was a great success. We meet in Birmingham each October on a Saturday. We book a convention suite in the Royal Angus Hotel and most of us stay over the weekend too so the fun doesn't last for just one day. The atmosphere is electric as would be the case when groups of like minded enthusiasts meet to discuss their favourite topics. There are local groups who meet too at various times during the year to hold mini-conventions as they hate to have to wait a full year for the annual convention. As for pen-friends - why not? I would be more than happy to print names and addresses in the Newsletters for everyone to get to know each other. That's what happens with Adventure Probe - everyone now knows each other very well outside the pages of the monthly magazine as well and it makes the magazine one of the friendliest you could find. This reply is beginning to sound rather like a huge plug for Adventure Probe but honestly it isn't supposed to be. Anyone interested in further details can always contact me but not every home computer enthusiast is a computer adventurer.....Mandy

---

Dear Mandy,

Thanks for the Newsletters issues 5 and 6, which I found interesting and inforative. I have, as you may remember, telephoned you on a couple of occasions regarding the Sound Bank data file, and how to link my own sound samples so as to incorporate them into what I think is an excellent piece of software. This, I believe from our last conversation is now underway, after a little pushing on your part (THANK YOU). As I understand it the *3D Construction Kit* is now produced on most major computers and formats, this being the case means that the User Group is doing something that not many programs can do, and that is bringing together different computer users who can help and encourage others, instead of the rivalry I have encountered at times, like "*mine is bigger, faster, better sound, clearer graphics, more keys etc., etc*". The topic covered in the last two issues of your Newsletter, I needn't mention which, (*3D Professional!!!*) seems to be making all the group squirm in their computer swivels. I for one, am not squirming because there has been no mention of a version for the 32 bit user. Now you Mandy, have promised in our eagerly awaited bi-monthly pages, to be fair to all users and I know that you include us in that promise. I also know that you have been promised full backup in the User Group by *Incentive*, so please ask them when (not IF) they will be writing a version for 32 bit users. I don't think I would be understating the fact that it would be well received and supported. In the course of our conversations you mentioned the lack of 32 bit machines at your disposal, although they have given you a PC recently, this being the case, and until someone gives or loans you an *Archimedes* (you never know!). I would like to offer my services, limited as they are, to you and fellow users. Perhaps to test routines and or Kit games, or set up some PD system. I am, of course, prepared to deal with members direct so as not to increase your workload or their postage. If this is not treading on anyone's toes, then please accept it for the reason I offered, to help all users to help each other.

John Bidmead, Torquay
ARCHIMIDES A3000 4MEG

What a kind and most generous offer of help, John. I would be delighted to accept your offer. Now we will be able to expand the PD Library to include 32 bit as well thanks to you. I will include your name and address and telephone number in the helpliners page and I hope that you will soon be contacted by other 32 bit users to get things started. As for the problem with the sound samples. I have indeed been "nagging" poor Kevin at Incentive about this. Aparantly, providing the necessary basic program you need isn't quite as easy as we thought. With Kevin fully occupied with programming the new version of the Kit he has not been able to supply the routine for me to print in this issue but I hope that I will have it for publication in the next one. As the routine is a bit complicated and, being a careful programmer, Kevin refuses to rush any old untested program at us the only thing I can do now is wait a little longer. I'll keep reminding him about it also (sorry, Kev!). Well, the previously titled "Professional" version of the Kit is nearly ready. It is going to be called 3D CONSTRUCTION KIT II.

OK, I suppose it is a little lacking in imagination, and some lovely titles were originally suggested but then the 3D Kit already has a very good established reputation so it is only sensible to call it 3D Kit II. For Amiga, Atari ST and PC owners, it should be available by the time the next newsletter comes out. I surely will keep pressing for this to be produced for other computers too. The Archimedes version of the Kit is the newest of them all and so I doubt if any plans will be made for a second version for your computer for a while yet. I will let you know what develops within the pages of the Newsletters.....Mandy

---

Dear Mandy,

I enclose my cheque to renew my membership to the User Group and also for the PD sound bank disc supplied by Mieke Van Der Poll. I look forward to receiving the disk and to another year of excellent Newsletters which I have found both useful and enjoyable. I have noticed, however, that now having 6 Newsletters (and more to follow as they are produced), that it is becoming increasingly difficult to find any particular reference or advice without having to go through all the booklets again. I have started to make a sort of cross referenced index, and I have done this by sticking a post-it sticker to the back of each issue reminding me for the future of any possible hints or tips enclosed. It might be useful for all members if you could give some thought to either leaving the outside back cover blank for notes or even marking off blank columns which can be used for reference. I have also noticed that some subjects are mentioned in several Newsletters (eg. Make, Borders etc), but these seem to often be in bits and pieces, and at times a little bit technical (to me at least!). It would certainly be of help to me (and I am sure to others) if you could provide a fully tested, step-by-step, idiots guide to both these subjects and also to others such as how to create an intro-screen which then boots into the game from scratch etc, and I look forward to your views on this point. I would also like to know if it is possible to have a "Jet Pack" type effect as used in Dark Side. I would like to thank you for your efforts over the first years membership and also those regular contributors (I won't name them in case I miss anyone out), who are making teh continued effort to share their expertise with others less technically minded such as myself.

Martin Sullivan, Stockport
AMIGA

I'll try to leave the back cover blank for you in the future, Martin. Perhaps some kind member could come to the rescue by providing an index of the contents of the first 12 issues for publication in the next issue? I will certainly try to give the step-by-step guides to all the various functions of the Kit and hope that each issue will contain at least one. It would be particularly helpful if some of the more experienced members who have produced games with introduction/loading screens, sound effects and music would write in with their step-by-step guides on how they did this on the various machines for the next issue of the Newsletter together with recommended programs that they used to produce the effects, the listings of what they used to compile the auto-booting of the whole lot etc, as this would be extremely helpful for all. I hate to admit it but I never played Dark Side myself (sorry Ian, and programmers!) so I will have to rely on some kind member to supply me with the necessary details, please do write in so that this point can be cleared up either way, many thanks in advance.....Mandy

---

WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN! * WIN!

COMPETITION!

Now it is the turn of the 8 Bit members of the Kit to win some lovely prizes kindly donated by Incentive Software. Six lucky winners will each receive a copy of VIRTUAL WORLDS and A YEAR'S FREE MEMBERSHIP TO THE USER GROUP! Virtual Worlds consists of the games DRILLER, TOTAL ECLIPSE, THE CRYPT and CASTLE MASTER.

All you have to do is to design a screen with the Kit that could be used as a cover picture for the User Group Newsletters. This can be a screen dump or if you have no printer you could do a free-hand drawing of your screen.

The competition is open to all Commodore, Spectrum and Amstrad members of the User Group. Two winners will be selected from each of Commodore, Spectrum and Amstrad entries and not only will they win prizes but their entries will be used for future covers of the Newsletters. Closing date for entries is 1st August 1992. When entering please don't forget to enclose your name, address, computer, and state (if Commodore or Amstrad) if you prefer disc or tape of Virtual Worlds.

3D KIT GOES ON-LINE

Since the last Newsletter went out I, thanks to Chris King, became the proud owner of a modem! Not only did I immediately dial into King Of The Castle - Chris' own BBS (see letters last issue for further details) - but I found that within a couple of days I was receiving and leaving messages for one of the programmers of the Kit who was a caller to the BBS too! This means that anyone who has a modem can leave messages for me there too and I can chat 'back! (Aren't computers wonderful?). Chris has set up an area especially for 3D Kit User Group members and the way things are going this will soon be packed full of useful information and routines etc for members to access and exchange. Anyone with a modem, why not dial up the board and see for yourself - and remember that I would love a message from you! The number is (0233) 620228 8pm to 6.45am every night and other times at weekends.

The good news for modem users doesn't end here though - Marco Grubert of Germany also wants to set up a 3D Kit area on his BBS so German members can get Kit on-line information, message etc. The board is called Alpha-Box-Berlin and the telephone number is (030) 744 71 06 and is open between 7am to 1am. Sysop are Prochnow, . Cosysop, Crossfire (that's Marco).

As Marco also hopes to have lots of borders, datafiles etc on offer, the sooner members begin Uploading/Downloading their files to both bulletin boards the better for all! Wouldn't it be great if Chris and Marco could exchange all the routines etc so that both German and English users could have access to a huge bank of material?

To help the Sysops know who are members of the User Group, perhaps they could use the current issue to check, ie. "What is the third word on page 16 of the current issue?" or something like that - just a thought! Well done to both of them and thanks for their support.

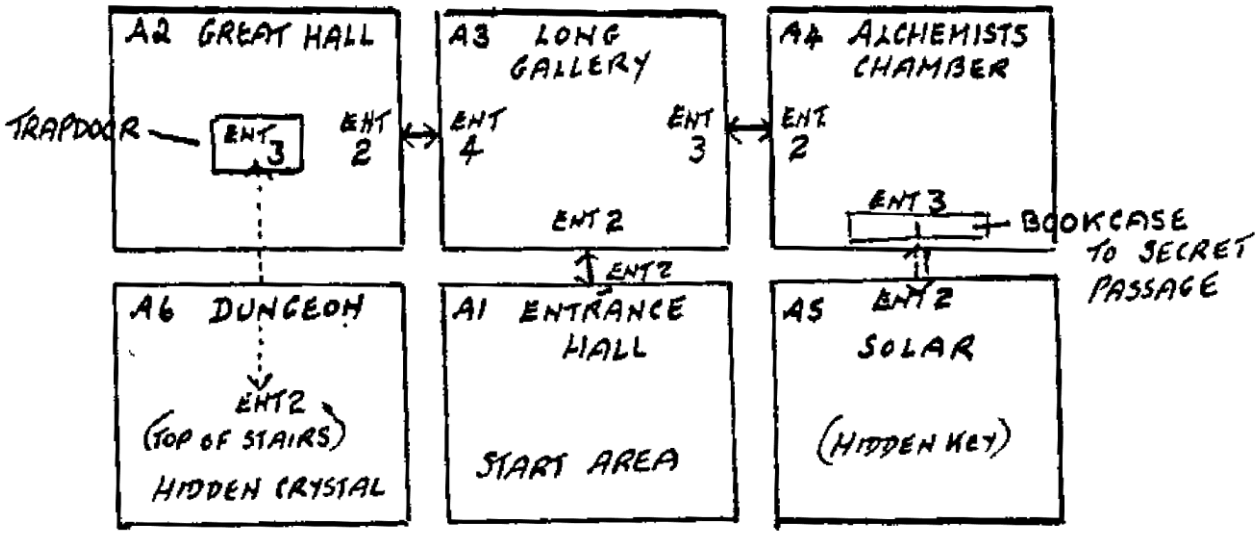
THE USER GROUP GAME!

In recent weeks I have received a great many letters asking if I could provide some sort of step by step tutorial to writing a game to help beginners to get started and to help explain some of the basics that are causing trouble for a lot of people. I immediately agreed that this would be an excellent idea but then found myself wondering just what was the best way that this could be done. Obvious a very large game is out of the question so a short adventure of around 4/5 areas would be just about right. Readers are most welcome to join in and help with ideas and routines for inclusion in the game. Each issue we will do a little more work until the whole game is completed. If anyone has any particular worries about the use of the Kit then please let me know and perhaps that particular aspect can be covered somewhere within our game. Right, let's get on with it.

First we must set out our scenario and some initial ideas and make a map of the game itself before we start. It may sound a bit silly to make a map but I think you will find that creating entrances between the different areas and planning your game in this way will make everything much simpler in the long run. Our game is going to consist of a castle with six rooms (areas). The basic object of the game is to try and discover the valuable crystal that has been hidden in the dungeon (area 6). To get into the dungeon via a locked trapdoor we will get the player to try to find the key to the trapdoor which is hidden in the solar. The solar can only be entered by a secret passage which is hidden behind a bookcase in the alchemists chamber which is opened when the player moves (activates) a certain book upon the shelves. The puzzles will make sure that the crystal isn't as easy to find as one would expect.

Quite a simple plot but quite sufficient for our needs at present. All members are cordially invited to send in ideas and routines for the puzzles both for 8, 16 and 32 bit versions. For now, though, we will start with the basic skeleton of our game.

Using the map shown below create the six areas and, in the versions that allow renaming, rename the areas to those we have chosen, to simplify matters. You can design and furnish your areas however you wish but please remember to include a locked trapdoor in the Great Hall and a bookcase full of ancient tomes in the alchemists chamber. A staircase in the dungeon leading up to the trapdoor and a cupboard or iron maiden (whatever your imagination comes up with) for a place to hide the crystal. Don't worry yet about animations etc as these will follow later as will all the little effects that make a game complete.



Once the areas have been created (it isn't necessary at this stage to have the furnishings designed), we should make the logical entrances to take the player between each area. First mark the entrances that you are going to create within each area as shown on the map so that you know exactly which entrance is going to lead where, and create the entrances as follows.

AREA 1: ENTRANCE HALL.

Create a black rectangle placed close up against the far wall. You can use the globals to create the walls if you wish. Walk right up to the rectangle until you look as if you are just about to walk into it and do a U-Turn so that your back is against it. Now create an entrance there. This is so that when you return through the door you will have your back to it - logical if you imagine yourself walking through a door. Now enter the following condition for the rectangle:

8 Bit Versions

```
IFHIT (r) (rectangle number)
THEN
GOTO   2   3
ENDIF
```

16/32 Bit Versions

```
IF COLLIDED?
THEN GOTO (2,3)
ENDIF
```

AREA 3: LONG GALLERY

Create entrances 2, 3 and 4 in the same way as you did for area 1 by creating rectangles and placing your viewpoint with your back towards them and enter the following conditions:

For rectangle on the south side of the area:

```
IF HIT (r) (rectangle number)
THEN
GOTO   2   1
ENDIF
```

```
IF COLLIDED?
THEN GOTO (2,1)
ENDIF
```

For rectangle on the east side of the area:

```
IF HIT (r) (rectangle number)
THEN
GOTO   2   4
ENDIF
```

```
IF COLLIDED?
THEN GOTO (2,4)
ENDIF
```

For rectangle on the west side of the area:

```
IF HIT (r) (rectangle number)     IF COLLIDED?
THEN                              THEN GOTO (2,2)
GOTO   2   2                      ENDIF
ENDIF
```

AREA 2: GREAT HALL

Create a rectangle on the east side of the area and create a black rectangle in the centre of the floor to represent the open trapdoor. As soon as the conditions are entered for the trapdoor we can cover this with a flattened cube to represent the closed and locked trapdoor, and enter the following condition for the rectangle on the east side of the hall:

```
IF HIT (r) (rectangle number)     IF COLLIDED?
THEN                              THEN GOTO (4,3)
GOTO   4   3                      ENDIF
ENDIF
```

For the trapdoor rectangle:

```
IF HIT (r) (rectangle number)     IF COLLIDED?
THEN                              THEN GOTO (2,6)
GOTO   2   6                      ENDIF
ENDIF
```

Continue in this way until all the entrances have been created. Walk through them all to check them. Now you can furnish your castle until we come to the puzzle conditions in the next issue. Have fun!

WHAT KIND OF GAME TO MAKE?

By Mandy

Over the past few months one question has cropped up time and time again in the help mail. It is "Do you know what are the best kinds of games that I can make with the 3D Construction Kit?".

I suppose when you look at the software on the market at present it is quite a valid question as some of the software on offer would be rather difficult to produce with the 3D Kit - difficult but by no means impossible! Obviously the program really lends itself to an adventure type of game with wonderful worlds to be explored and puzzles to overcome. Adventure games fall into various categories and we can immediately discount the possibility of producing the good old text type adventure. Looking at the games being produced by companies such as Sierra On-Line we can see distinct possibilities for use with our Kit. In games such as the Leisure Suit Larry series we wouldn't find it at all easy be able to have a type of "Larry" sprite/figure to control but all the rest of the gameplay would be quite easy to reproduce and with the advantage of being totally 3D!

We wouldn't have to find the various exits on each screen in order to move on to other screens but our players could take on the part of the main character and actually explore thoroughly the scenarios presented to them.

The Role Playing type of game would present us with quite a few problems - character wise, but if we look closely at very successful games such as Dungeon Master and Chaos Strikes Back, which are both of the 3D kind, we get far more in the way of inspiration for our type of 3D Kit games. What utility is better suited to create the dungeons and passages needed? We can easily reproduce the same kind of portcullis/door and button method of operation for moving our players about. Admittedly it would be a tad more difficult to reproduce the horrible monsters that frequent those games (anyone remember those 'orrible worms on level 4?).

On the other hand, one of our readers, Paul Ramsell beautifully portrayed a body lying on the floor surrounded by a pool of blood in one of his adventures and there were plenty of characters dotted here and there which, when activated, would bring up messages on screen as they spoke to you. Pits, traps, teleports and the like are a doddle to produce with the Kit.

With animation we can easily produce eerily floating ghosts, hideous moving traps and complicated puzzles such as those produced in Castle Master and The Crypt.

With a little thought and careful planning we can produce a quite effective flight simulation and, with the ability to fire at objects it would be quite easy to produce some form of "shoot 'em up" game. Other types of puzzle games are equally feasible, for an example we have the roll-dice routine (featured in a issue five). Steven Flanagan has also produced a racing routine on the Commodore 64 which is extremely effective. For ideas on how to do this kind of thing, here is an extremely simple idea to start us off. We use one area to design a road and all along it we can put various vehicles at strategic points. When we reach the boundary of our area we can either transport the player into another similarly prepared area or put him back to the start. Now when we press "forward" and pass along the road we are effectively "passing" other vehicles along the road.

I said it was extremely simple but you see what I mean? Of course, if our border was made to represent the dashboard and controls of a car the whole thing would look even more realistic.

It is rather difficult to come up with the original ideas for games when you first start using the Kit. I know from the thousands of letters that I have received during the past year that most users decide that the very first thing they are going to try to reproduce is a scale model of their very own home. Once this has been done it is only a small step to moving on to designing another building such as an eerie castle to be explored. As each section is designed, ideas for cunning traps and puzzles emerge and if we let our imagination take flight then we have the makings of an excellent and extremely enjoyable game at our fingertips.

I believe that I have said previously that the 3D Kit is ideal for producing desert landscapes with pyramids and the like. The idea of starting the player off in the middle of a desert area and presenting them with a vast pyramid to be explored would make a great game. Castles, old mansions and all sorts of locations can be created. If we move much further afield, and this often helps when we are not too clever at producing ordinary landscapes, we can create whole new strange worlds on different types of planet which can be really fantastic. Planet of the Daleks is one such example where you take off in your Tardis and land on a beautiful red planet. In this kind of scenario ordinary, everyday types of objects can be left out altogether and you can design the most outrageous types of alien artifacts as you wish.

We don't have to stop at just one world either. It would be quite easy to present the player with a space vehicle of some kind which they could enter (another area for the inside perhaps) and once there, there could be a series of buttons to be pressed to act as controls or to set course for the various destinations. Another area could be used to represent flying through space. Black ground and sky with distant stars (small shapes coloured white, shrunk and moved far away). It would also be possible to move the player through this space in the same way as the player was moved via the boat in the Kitgame from the Beachyhead area to the lighthouse. Then another area could be used to represent the landing site on yet another planet.

As for problems and puzzles, well, for inspiration the newsletters are packed full of little routines to produce all sorts of illusions and puzzles from trapdoors, lifts, invisible triggers and barriers to moving guards that follow you around the area. Trying out some of the routines will provide inspiration for improvement and new ideas and soon you will find that you have collected far too many ideas for puzzles than can be contained in one game alone!

In my experience, such as it is, and knowing many games writers I have learned that they all have one thing in common. They all tend to carry round a little notebook with them at all times in which they jot down ideas that come to them for plots, puzzles and the like. Can you always remember that fantastic idea you had on the train going to work in the morning when you sit down at your computer that night after all the problems and hassles of a full days work? With your notes you are never short of inspiration.

If anyone else would like to write on this subject with their ideas and advice then please feel free to do so - the more ideas the better!

PUBLIC DOMAIN LIBRARY

NEW ADDITIONS TO THE LIST!

THE MOUNTAIN ADVENTURE - AMIGA 1meg

An adventure by Mieke Van Der Poll. You find yourself just outside a vast mountain maze and must enter to find the key to unlock the huge gate which closes behind you as you venture in. Very nicely presented game with a lovely loading screen, atmospheric and very pleasant music and, of course, featuring the 26 sound samples that Mieke produced on her other PD disk. The opening screens show a spaceship landing which is extremely well done and effective. There are lots of objects to find and manipulate and in true adventure style you need to light various lamps and chop down doors, apply a little lubrication where necessary and find the necessary objects to perform various tasks to get you through the game. I have not completed it yet but I did manage to kill off a blasted scorpion with the aid of my trusty sword when attacked. There is a time limit and it is easy to get lost so I have to keep trying. I'll get there in the end! I was making extremely good progress when that blasted alien sneaked up behind me and stole my bottle of oil just as I was about to fill up the little lamp I had found. The maze is very well planned and can be quite confusing - I would strongly advise that you make a map as you go along as it is very easy to get lost! A very nice and well presented game which I am sure you will enjoy. Items I especially enjoyed are the OUCH! sound effect you get if you bump into things by accident and the way that you are gently led to do the correct things such as being told how to activate objects to pick them up if you do the wrong thing.

THE MOUNTAIN ADVENTURE DATA DISK - AMIGA

This disk contains the border, complete datafile with all conditions etc and the sound sample bank. A most useful disk of routines and essential if you want to cheat if you get completely stuck in the game!

SECRET WEAPON - ATART ST

This large demo game of Secret Weapon by Robin Ball is beautifully presented with loading screens and atmospheric music. This maybe only a demo of the final game but there is still lots to see and places to explore. I found myself in a strange town where all the inhabitants had been frozen into immobility! Even a mugger and his victim are to be found frozen in the very act. Very useful too as I managed to filch some money from the mugger! The town is beautifully portrayed and very realistic indeed. I was surprised just how much there was to explore. An especially nice touch was when in the public gardens, which is delightfully designed, a robot gardener is liable to throw you out if you step on the flower beds. If you can find the ID card (with the aid of another object), you will gain access into a building where you can search through filing cabinet drawers to find a secret file which tells you that a secret weapon has been invented which freezes all living things. All beautifully presented - well done Robin! A must for Atari ST users to see just what can be achieved with the Kit. Also included on the disk is a datafile containing objects used in the game. Robin tells me that the final version of the game will have many more areas added to it, in which case, judging by the size of the demo, should make it a very large game indeed. Robin would like to get players opinions of this demo so if you send for it please write in and I'll pass your letters on to Robin. The intro screen and the instructions were written with STOS and the presentation is excellent. The final version may be released as Licenceware as Robin has received no registrations for INFILTRATION, which is a pity. If all who have bought Infiltration send the registration they will get a map and other goodies for the game. The address is on the helpline pages.

OTHER DISCS IN THE LIBRARY:

SOUND SAMPLES - AMIGA 1 meg

By Mieke Van Der Poll. 26 Sample sounds suitable for 1 meg Amiga owners to install on their programs. Also contains a new MakeSampleBank program.

INVENTORY ROUTINE - AMIGA

By J. Hayes. Extremely interesting and useful routine to show how to handle your inventory problems. Listed in the last issue and update in this issue.

SPEILRAUM - ATARI ST

An adventure by Peter Ward which was reviewed in the last issue. The disk contains the runnable game, the datafile and border and two objects.

BORDERS - ATARI ST

A set of very well drawn borders by Robin Ball - very useful for those with no artistic talent.

DARKNESS CALLS - AMIGA

Stand alone program by James Yusuf which was reviewed in the issue 4 Newsletter.

DARKNESS CALLS DATA DISK - AMIGA

A disk containing all the objects used in the stand alone game by James Yusuf. Reviewed in issue 4 Newsletter.

PLANET OF THE DALEKS - AMIGA

By Steve Hilder. This adventure comes in datafile form together with border. This was reviewed in issue 4 Newsletter.

E.F.T.P.O.T.C.M - AMIGA

True title is Escape From The Planet Of The Cardboard Monsters and is a stand alone game written by Andrew Herbert (who I had the pleasure of meeting in person a short time ago!). Also contains many useful utilities for creating loading screens, music etc.

AMIGA BORDERS - AMIGA

A suite of useful borders by A.J.Bevan. Reviewed in issue 4 Newsletter.

INFILTRATION - ATARI ST

Shareware: A stand alone game by Robin Ball which was reviewed in depth in issue 4 Newsletter.

THE MAZE - ATARI ST 1 meg

Datafile and border by David Sambrook which has proved popular.

ESKAPE - COMMODORE 64

Datafile of game by Steven Flanagan. Also contains RACER routine.

All the above discs are available from the usual address at a cost of £1.50 each UK. Overseas £2.50 to cover extra postage and packing.

All members are invited to send in contributions to the library. It would be helpful if datafiles could be included also whenever possible as they are most useful for struggling beginners to see how things can be done. If you are sending in items for the PC please send them on 5.25 disk.

Anyone sending in PD contributions are invited to select freely from the list as a small thank you for their contribution and help. Let me know what you would like. You can select a back issue instead if you prefer or a free issue added to your subscription.

HOPEFULLY THERE WILL BE MORE ITEMS AVAILABLE FOR THE NEXT ISSUE!

---

16 AND 32 BIT ROUTINES

INVENTORY

By Ozzy Omara - ATARI STE

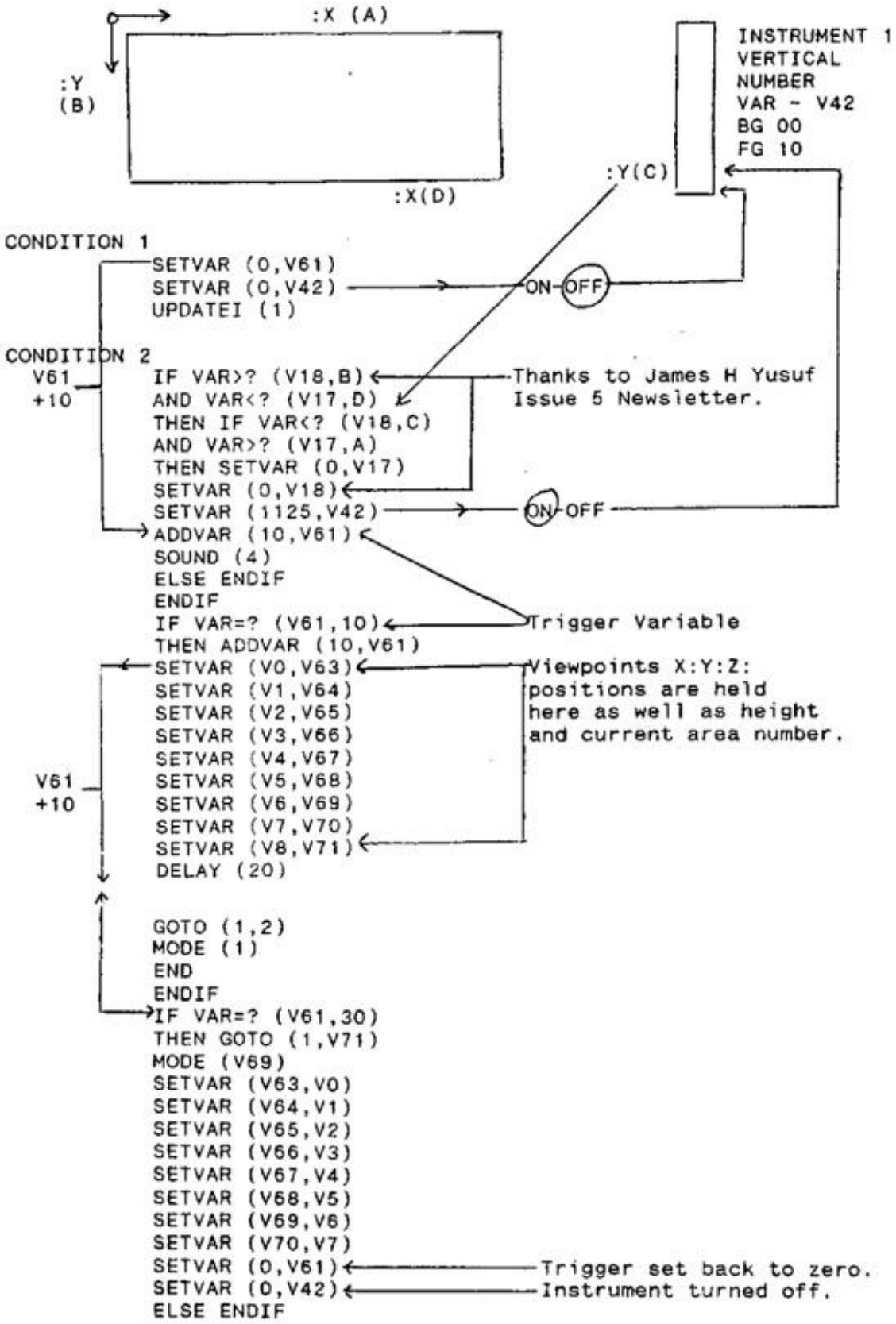
Following the excellent Screen Icons Routine that was printed in number 5 newsletter, Ozzy came up with a routine that would allow the player to be able to actually store their exact position in Area 1 so that another area could be set up as, for example, an information screen and then return the player to the exact position from which they called up the routine.

OBJECTIVE

To move from Area 1 via a border icon to Area 2 and return from Area 2 to the same position you left in Area 1.

PROCEDURE

Create Area 1 and Area 2 and define the Icon Border. (I used Neochrome Master art package). A, B, C and D are the X:Y:values from the art package.



The response is sticky but fast.

INVENTORY WITH A DIFFERENCE

(UPDATE)
By J. Hayes - AMIGA

Since my Inventory Routine was published in the last issue of the Newsletter I have developed it further. Now it is possible to have one Inventory List for Objects to held in the left hand and another for the right! The "<" key and ">" key selects the list to look at. However, during this I discovered a slight flaw, which was an oversight on my behalf. If the currently referenced object in Vcur is to be removed and it is the ONLY object carried, by doing

```
SETVAR (47,V15)
SUBVAR (Vcur,Vinv)
```

clears out the Inventory - but the VIEW NEXT OBJECT condition relies on having something in the inventory for it to display the next object. The result is, the object the user thought they had "dropped", remains on display - oops! The answser is to include

```
SETVAR (0,Vcur)
```

whenever the current object is removed. This is picked up by the SHOW OBJECT CARRIED condition which prints "NOTHING" in its place. As it ought to when the user hasn't anything to carry!

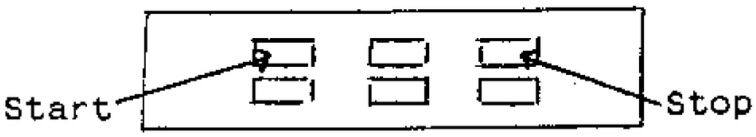
My apologies for this, but it is a technical point you may wish to inform the other users about. Rest assured it will not effect the demonstration you have kindly used in the PD Library as it isn't possible for the user to drop everything!

DRIVING AROUND

By Stephen Shield - PC

Here is a possible solution to being able to give the impression of driving around your environments by being able to move a car dashboard or similar with the viewer:

First create a dashpanel, eg. a cube and any knobs and controls and make them into a GROUP. Move them to the base of the view and make all the items in the group MOVEABLE once in the new position.



GENERAL CONDITION 2:

```
SETVAR(V0,V40)    X position.
SUBVAR(130,V40)   Adjust X position to keep dash in view.
SETVAR(V2,V42)    Y position.
SUBVAR(64,V42)    Adjust Y position to keep dash in view.
```

Create Animator (1) and edit to:

```
INCLUDE (g)          (Group number)
MOVETO(V40,20,V42)
RESTART
```

Condition for start button:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

Condition for stop button:

```
IF SHOT?
STOPANIM (1)
ENDIF
```

When run the movement is a bit jerky and only moves forwards, backwards, left and right but this can easily be improved upon.

REALISTIC BOUNCING BALL

By Bobby Rodrigues - AMIGA

First we must create our "ball" and for this I used six pyramids, edited and slotted together to form a quite acceptable ball. Make them into a group (in my case it was group 8), and for effect I created two "walls" but these can be left out if preferred. I then moved the group (ball) close up against the left hand wall. Once in position, make all the pyramids in the group MOVEABLE. We will use the GROUND cube as our trigger to start the animation and so for couboid 1 make the following condition:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

Create Animator (1) and edit it as follows:

```
INCLUDE (8)
START
LOOP (4)
LOOP (5)
MOVE (40,140,0)
AGAIN
LOOP (4)
MOVE (40,70,0)
AGAIN
LOOP (3)
MOVE (40,35,0)
AGAIN
LOOP (2)
MOVE (40,17,0)
AGAIN
MOVE (40,8,0)
DELAY (5)
MOVE (40,-8,0)
LOOP (2)
MOVE (40,-17,0)
AGAIN
LOOP (3)
MOVE (40,-35,0)
AGAIN
LOOP (4)
MOVE (40,-70,0)
AGAIN
LOOP (5)
MOVE (40,-140,0)
AGAIN
AGAIN
LOOP (4)
LOOP (5)
```

```
MOVE (-40,140,0)
AGAIN
LOOP (4)
MOVE (-40,70,0)
AGAIN
LOOP (3)
MOVE (-40,35,0)
AGAIN
LOOP (2)
MOVE (-40,17,0)
AGAIN
MOVE (-40,8,0)
DELAY (5)
MOVE (-40,-8,0)
LOOP (2)
MOVE (-40,-17,0)
AGAIN
LOOP (3)
MOVE (-40,-35,0)
AGAIN
LOOP (4)
MOVE (-40,-70,0)
AGAIN
LOOP (5)
MOVE (-40,-140,0)
AGAIN
AGAIN
RESTART
```

Quite a long condition but a simple one and the smooth bouncing effect and slight irregularity in the bounce pattern is extremely realistic. Of course the idea would be to adapt this to form part of a puzzle in a game, perhaps a ghost, monster or lethal barrier of some kind. This routine is especially suitable for beginners as it isn't complicated, to enter a simple animation to see how the animation works.

---

8 BIT ROUTINES

KILLING CUBE
By Peter Bergmann - SPECTRUM

The illusion we want to create is that of a cube which moves backwards and forwards across a room which if the player bumps into it will kill him off. First you should create a series of cubes which are placed side by side to stretch right across the room forming one long barrier, rather like one long cube.

To give the illusion that the cube is moving backwards and forwards we will make each one visible and invisible in turn with the following local condition:

```
TOGVIS       n     (Number of the cube on the left side)
TOGVIS       n     (Number of the cube next to it, second cube)
REDRAW
TOGVIS       n     (Number of the second cube)
TOGVIS       n     (Number of the next cube along, third cube)
REDRAW
```

Continue in this way until you have covered all the cubes in the series. So effectively we are making the first cube invisible and the second visible, then the second invisible again and the third visible. When all this is done you should continue with the condition to reverse the procedure until they are each made visible in turn once more to give the effect of the movement back to the starting point. Then by selecting the attributes for all your cubes, make all but the first one INVISIBLE (both current and initial).

To kill the player off if they attempt to pass the cubes and happen to bump into one you would have another set of conditions which say:

```
IFHIT        n          (number of each of the cubes)
PRINT        n   n   n  (Option for printing message)
DELAY        200
ENDGAME
```

To trigger the whole simulated animation you could provide an invisible trigger on the floor of your room just in front of the entrance by creating, say a rectangle, and entering the following condition at the start of the animation routine:

```
IFHIT        n   (Number of the trigger)
THEN
TOGVIS       etc (as above)
```

The player will have to shoot the "moving" obstacle to be able to pass it safely so for this you should add a simple routine to ensure that if any of the cubes are shot all of them will be destroyed. Ie:

```
IFSHOT       n  (number of first cube)
OR IFSHOT    n  (number of second cube)
etc.....
DESTROY      n
DESTROY      n
etc.......
ENDIF
```

BUTTON PUZZLE

By Sonja Phillips - COMMODORE

The idea of the puzzle is to create a series of buttons that, when pressed (activated) by the player in the right sequence the hidden doorway will be revealed. The first button will be visible on the wall of your chamber somewhere and when the player finds and activates it, it will vanish to be replaced by another button somewhere else in the chamber. Only when all the buttons have been found and pressed (activated) will the secret exit to the next room be revealed.

First you should create the buttons you want, I created four, and via the attributes made the second, third, and fourth button invisible whilst leaving the first one, which was rather well hidden in a corner of the chamber visible. The conditions for this are extremely simple but the whole effect is good.

```
IFACTIVE    2   (first button)
THEN
VIS         3
INVIS       2
SYNCSND     11
ENDIF
IFACTIVE    3   (second button)
THEN
VIS         4
INVIS       3
etc.....
```

until you have the conditions to change the visibility of all your buttons in turn. Then with your last button you would have the following:

```
IFACTIVE    5
THEN
VIS        10   (the doorway)
INVIS       5
ENDIF
```

You would, of course, just need the usual condition to transport the player to the next area when they bumped the doorway of:

```
IFHIT      10
THEN
GOTO        2  a (number of the area)
ENDIF
```

The button puzzle could be made even more difficult for the player by placing the various buttons in different rooms (areas). In that case the conditions would have to be changed only to specify the area in which the buttons were hidden such as:

```
IFACTIVE    5  8
THEN
etc
```

This simple puzzle can easily be adapted for all sorts of different puzzle ideas.

(8 BIT ROUTINES WOULD BE APPRECIATED FOR THE NEXT NEWSLETTER)

PROBLEM PAGES

"Please can you help me? I just cannot programme an object to come towards me wherever I am."

Christopher Batchelor-Wylam
16 BIT

As you are a new member you will not have seen the excellent routine in Newsletter issue 3, page 21, by Brian Woodley which explains how you can solve your problem. Here, once again, is Brian's routine:

Make the object that you want to come to you MOVEABLE via its attributes and make a note of its starting coordinates. Variables 40 and 41 hold the X and Z coordinates. The first General Condition should contain: SETVAR (X,V40) SETVAR (Z,V41) Substitute the starting coordinates for the X and the Z within the brackets. Now enter the following in your AREA condition:

```
IF VAR<? (V40,V0)
THEN ADDVAR (20,V40)
ENDIF
IF VAR>? (V40,V0)
THEN ADDVAR (-20,V40)
ENDIF
IF VAR<? (V41,V2)
THEN ADDVAR (20,V41)
ENDIF
IF VAR>? (V41,V2)
THEN ADDVAR (-20,V41)
ENDIF
STARTANIM (1)
```

Create animation 1 and enter:

```
INCLUDE (n) (number of object)
MOVETO (V40,20,V41)
RESTART
```

Brian added that this is assuming that the starting Y coordinate of the object is 20. If it is not then change the 20 in the animation to whatever it is.....Mandy

---

I would like to know if there is any way that I can use a joystick with the PC version of the Kit. I can use a joystick to select icons only but would like to fully use one if it is possible."

Vic Tandy
PC
Faculty of Social Biological and Health. Coventry University, Priory Street, Coventry.

I am afraid that I know of no way in which a joystick can be used for PC, Vic. Perhaps other PC owners can help and write direct.....Mandy

---

I recently purchased the 3D Kit for my Amiga 500 Plus. It appears that the Kit will work only on the Amiga 500 and not the Plus. Can you advise me if there is a batch program available for the Kit so that I can run it on the A500 Plus?"

Gary West, Ashford, Kent
AMIGA

I am assured by the Programmers that the Amiga 500 Plus will work perfectly with version V1.2. Perhaps you have acquired one of the original versions? If so then please return it to be exchanged for Version 1.2, the address you should sent it to is on the back of the box.....Mandy

---

Please tell me how to make an object (say a key) and let the player pick it up, then later on in the game only let the player perform an action (say open a door) only if he has first picked up the key.

Gary Wishart, Cumbria
SPECTRUM

One way that this could be done would be to create your object (key) - say it was OBJECT 20 in AREA 4. You could make a condition that if the player picked it up (activated it) it became invisible, with:

```
IFACTIVE  20  4
THEN
INVIS     20  4
ENDIF
```

Then when you came to the locked door you could check if the key were picked up by checking if it were still visible or not with:

```
IFHIT     n         (number of the door)
AND IFVIS 20  4
THEN
GOTO      e   a     (entrance and area)
ELSE
PRINT     n   n   n (no key message)
ENDIF
```

Checking the visibility of objects in various areas is one extremely useful way of incorporating lots of ideas into your puzzles.....Mandy

---

What is the best time to put the border, instruments and messages into my game, at the beginning or the end? I am having trouble getting an instrument number to count down. What I have done so far is:

```
General Cond. SETVAR (25,V30)
```

All object conditions that use variable 30 have:

```
IF ACTIVATED?
THEN DESTROY (o)
SUBVAR (1,V30)
```

But it doesn't subtract 1 from variable 30. Can you suggest an alternative please?

Peter J R Laws, Enfield
AMIGA

First create your general condition and insert SETVAR (V30,25) - note that this is the other way round from your condition as I find it works better that way. Your object conditions should be:

```
IF ACTIVATED?
THEN SUBVAR (1,V30)
UPDATEI (n) (instrument number)
DESTROY (o)
ENDIF .......Mandy
```

I am writing to you for help as I am very frustrated with the 3D Kit. I am not stupid (I think!) but you may think so after reading this, as judging by the letters in the Newsletters I have received the other users of the Kit are far more advanced than I am. I do like the 3D Kit and would like to get more out of it, it is just a case of not being able to. I should say that the first User Group Newsletter I received was issue 4, so perhaps I have missed some vital tips. As far as I can see, there is no way to make, save and reload my own borders. Please advise. In the back of the manual it says variable 00 is viewpoint x position 01 is viewpoint Y etc. In Newsletter 5, page 25, you say variable 1 is time and so on, so I am now completely lost, I also keep seeing mentions of variables above 21 but it has no mention of these in my manual (it does say that there are 256, but does not say what they do). I would like to get more from 3DK but my lack of knowledge of variables that is stopping me. How do you start animation in a stand alone program without the user having to activate anything???? How would I use Deluxe Paint 1, 2 or 3 with the 3DKit?? There is more to ask but I probably wouldn't stop so I'll leave it there. Please help me if you can

Mark Martin, Hanworth
PC

Understanding Variables is the key, Mark, once you understand what they are you can handle them. I'll explain as simply as possible. Variables can be used rather like little notes, switches, reminders and so forth to tell the computer what the current state of affairs is during a game or program. An example in an adventure type game would be to check if the location the player was currently in was either light or dark. You would select a variable, say variable 40 for this and enter something like - if the location is dark then variable 40 = 0 but if the location is light, or if the player has a lamp, then variable 40 = 1. To use this example with the Kit we could use the following: AREA 10 (is the room which is set as dark at the start of the game). CUBOID 4 (is the lamp). In GENERAL CONDITION 2 we would say SETVAR (V40,0) to ensure that variable 40 is going to be used and is set to 0, to show that the area is dark. Then during play the player found the lamp in area 2 we would say something like, if the lamp is taken (say ACTIVATED) then the player has a light source so they wouldn't die if they entered the dark area (10) as follows: Condition for our cube (lamp) IF ACTIVATED? THEN INVIS (4) SETVAR (V40,1) ENDIF Now we would enter a condition for Area 10 to deal with either situation. IF VAR=? (V40,0) THEN ENDGAME. So you see, in this case the variable (40) is being used rather like an on/off switch.

Variables can be used for all sorts of things. A useful way of using variables is to check how many times a player has done something and then take action at the appropriate time. Ie. suppose you had a dangerous area that contained poisoned gas. You could use a variable as a counter for each time. that the person entered that area and then kill them off when they entered it ten times without the gas mask. This would be done in almost the same way as the previous example. The basic rule with variables as far as the 3DKit is concerned is that if you want to use a variable, either a system variable or a variable of your choice then it must be set at the start of the game in the general conditions. Then you can call up and use it at any time during play adding and subtracting from it etc. The confusion you found with Newsletter 5 on page 25 was my fault. I was referring to the variables used in the 8 bit version of the Kitgame - I forgot to mention this. The actual variables used by the system are listed on page 61 of your manual and as you can see they run from 0 up to 29. The other variables from 30 up to 255 are there blank ready for your own use. YOU select which ones you want to use and what you want to use them for. It might help you to understand variables better if you study the list used by the system. For example variable 11 controls the number of times the player have been shot by a sensor. So if you create a sensor you could use the following condition to let the player be killed off after he has been wounded 20 times:

```
IF VAR=? (V11,20) - if variable 11 reaches 20
THEN ENDGAME      - then kill him off
```

Don't be afraid of using the system variables and practice a lot and you will soon get the hang of them. BORDERS: If you have DPaint III ther should be NTSC option on the opening options so a lot of the work is done for you as the borders that are accepted by the system are NTSC. Load DPIII and select NTSC, 320x200 pixels and, depending on if you are using EGA or VGA select the number of colours (see page 15 of the manual). Now design a simple border to try. When you have finished, save it with a filename such as BORDER.LBM. This can now be loaded into 3DKit. Don't forget to SET VIEW WINDOW when the border is loaded or it will be covered with the editor screen and will appear only to flash on briefly. If you have difficulty in loading borders then it is always as well if you save your borders from your art package as a brush instead of a picture. ANIMATION: If you want to start an animation as soon as a player enters an area you could use an AREA condition for that area such as STARTANIM (1) so that as soon as the area was entered it would start.....Mandy

3D CONSTRUCTION KIT USERS GROUP

3D Construction Kit Newsletter

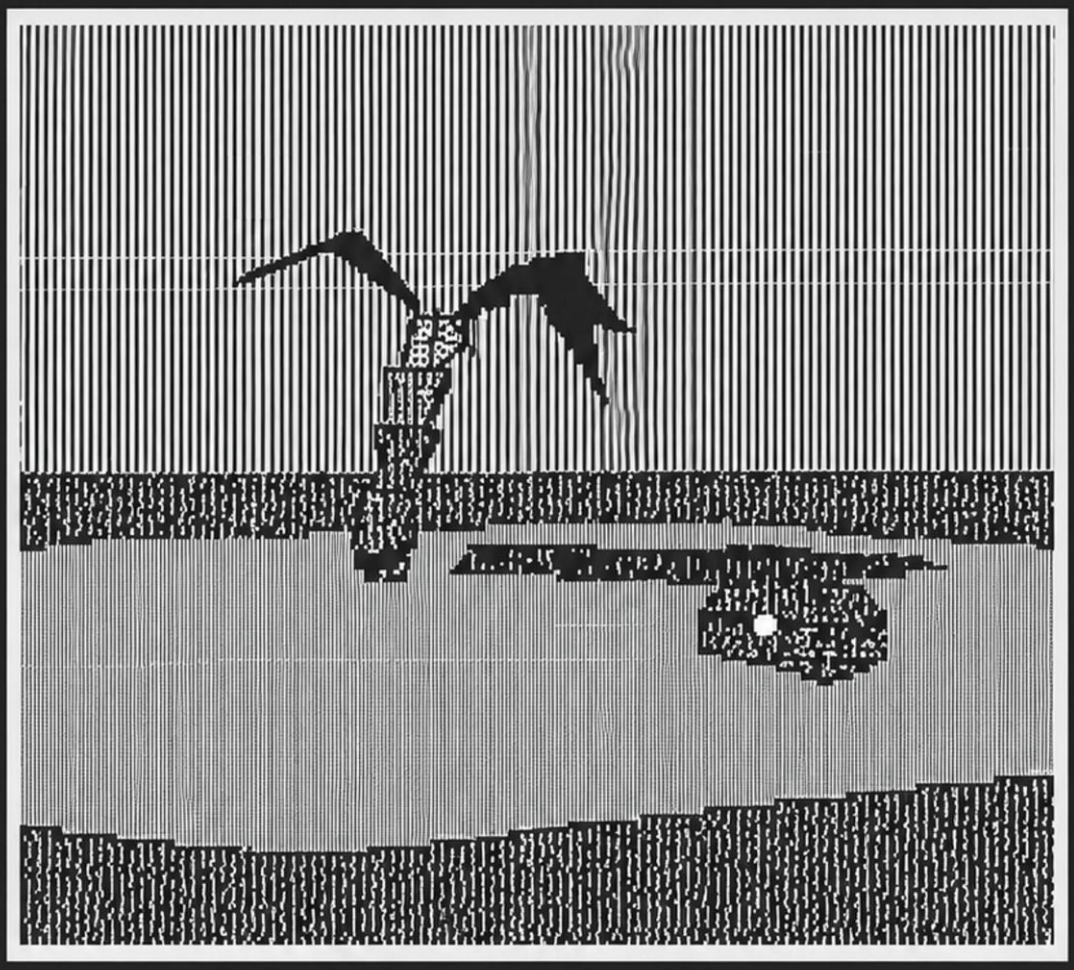
Issue Number 8
August/September 1992

CONTENTS

EDITORIAL 175
LETTERS 175
THE USER GROUP GAME! 180
STEP-BY-STEP GUIDE 182
DOWN TO BASICS 184
16/32 BIT ROUTINES 186
A VARIATION! 188
HALL OF FAME 189
8 BIT ROUTINES 189
CHANGING THE FONT 190
KILLER CUBE II – THE REVENGE! 192
GLOBALS 193
LIGHTING 195
HINTS AND TIPS 196
PROBLEM SECTION 197
NEWS 199

NEWSLETTER AUG/SEPT 1992

Issue No. 8



3D CONSTRUCTION KIT USERS GROUP

EDITORIAL

Welcome to issue 8 of the 3D Construction Kit User Group Newsletter.

Thanks to everyone who sent in contributions for the Newsletters following my plea in the last issue. I was intending to make this a real bumper issue with loads more extra pages but I think you will fully understand my reasons for not doing so when I tell you that my workload increased while I was typing this all up - and in a way that will please the majority of you - I am doing the playtesting on the long-awaited Kit II!! Yes I've finally got my hands on it! I got the distinct impression over the last few months that you are all extremely eager to get hold of this new version so I thought that the sooner I got down to working on it the sooner you would all have it! But, this issue IS bigger than previous issues AND you will have found a bonus in the envelope too! An index of everything that was contained in all the issues to date! Quite a few of you sent in an index, following the plea by Martin Sullivan in the last issue, and I thank you all for your kind efforts. I was only sorry that I couldn't use them all. The index enclosed was kindly provided by Mark Rose and should help you all to make full use of your Newsletters and to find items you were searching for without difficulty. I've also received quite a few new games and routines for our PD library for review but those too will have to wait until the next issue when I will have more time to devote to them. I feel that it is only fair to everyone that I play the games properly and not just give them a cursory glance - especially after all the months or work that go into them.

I am afraid that I cannot release any details about 3D Kit II to you all just yet as it is still under wraps until all the playtesting is complete so you will have to be patient with me. As soon as I have finished work on it and passed it back to the programmers I will be able to tell you all about it. What I can tell you is that I was absolutely delighted and that my flabber has never been so ghasted as it was when I saw all the extra incredible features included on it! You are all in for a real treat! You shouldn't have too long to wait now for its release - a lot now depends on how thoroughly and how fast I can do the playtesting so you will understand why I am devoting a lot of my time over the next few weeks to doing the best job I can.

Many of you have written asking if I have the results of the competition for the CD TV yet. Well, to be honest, I do actually know who the outright winner was but until Domark have finally decided on all the objects they are going to include on the disk I cannot publish the complete list of winners so you are going to have to wait a little longer. I hope to have the complete results in time for the next newsletter. Speaking of competitions reminds me to mention that I have only had THREE entries for the 8 Bit competition featured in the last issue!! What's happened to the 8 Bitters? In case anyone else would like to enter the competition I am extending the deadline for entries to 1st October and hope that I will get more entries by then. So the next Newsletter will have the results of both the competitions in it! Also, hopefully, the next issue will contain a complete review of 3D Kit II - all being well that is.

Yikes! The bottom of the page is rapidly approaching once more - I do go on, don't I? Hope you enjoy this issue and find it useful. See you all again with the October/November '92 issue so byeee for now,

Mandy

LETTERS

Dear Mandy,

I have some questions that I wonder if you can answer. Are the datafiles between the Atari ST and Amiga versions of the same format? would it be possible to transfer the data from one machine to the other by saving from ST to PC compatible disk then copy it to an Amiga disk using a utility like MessyDOS then directly load it into the Amiga version of the Kit? I am pretty keen on the idea of a 3D Kit User convention, it sounds like it could be fun. I would certainly go if it isn't too far away. It would be very useful to members who have problems with the Kit as they could be shown directly by someone with a lot of experience how to get around their troubles.

Robin Ball, Devizes
ATARI ST

I am not very good at the technical side of things, Robin, but I have recently been discussing this problem with Ozzy Omara and Chris King. The problem is mainly with the Amiga as it is extremely fussy about what types of disks it will handle. Chris assures me that the problem can be overcome with the use of a null modem lead. Perhaps Chris or Ozzy would like to write in with news of what they have discovered and between us all we might come up with a solution to the problem...Mandy

---

Dear Mandy,

Here are some ideas I have had about what types of game can be created using the Kit. 3D games tend to fall into several categories such as: Rescue, Sabotage, Treasure Hunting or Escape (many are even a mixture). You have to have limits in what can be put into a particular game setting. For instance you wouldn't put a flying saucer from the planet Zob in a game set in the Middle Ages now would you - at least I hope not! When you are looking for ideas, try turning to films and other computer games for inspiration. Ideas can also be gleaned by taking a look at the games on offer in the PD library. If you are totally hopeless at animation or variable handling don't despair as many types of games don't need them, eg. if you create a maze all the player has to do is find their way out again so no need for any animations or vexing variables. An interesting idea to try would be to mix various settings so you could end up on an alien planet where the inhabitants build in the same style as the ancient Egyptians. So go now o potential producers of pixel perfect polygon pandemonium and start creating those games!

Stephen Forsyth, Cumbria. Age 13
ATARI ST

Dear Mandy,

The User Group Game is an excellent idea which has revived my interest in the Kit. This had waned as I found creating the objects rather a struggle and I wish it were possible to use the attributes box to fix the size and position of objects or have an accelerator key to make one key press equal to, say, ten. The most frustrating snag is, however, the unreliability of the saving to disc. So many of my saves fail causing the machine to hang up and I have to reboot the program and data. I have found that my problem with saving to disc is lessened if I save two or three times during the creation, editing and shading of each object. I then have less failures - about 1 in 25 saves, so the amount that the data has changed seems to be a factor. I would appreciate knowing more about the Global Objects, a subject which is not fully covered in the manual so an article on that would be welcome. One suggestion for castle-builders (Amstrad variety), is to replace 09 (green) by 10 (cyan) in the default area colouring. This then gives a nice range of greys for stone castle walls, floors etc, with bright red and yellow and a pale green for interesting "fixtures and fittings". Having joined in my childrens games of "Hero Quest" I shall have small boxes of gold hidden around, and shall populate the rooms with hostile robots (suits of armour?).

Humphrey Bolton, Mirfield
AMSTRAD CPC

Thank goodness it isn't only me who gets roped into games of Hero Quest with the children! (Actually I love it, however, I don't see why I should never be allowed a turn at being "The Evil Wizard" chap who commands everything!) Never mind, Humphrey, the school holidays will soon be over. I am sorry you have had such a frustrating time with the saving of data. When this problem was first pointed out to me I passed the information on to the programmers but I am still waiting to hear if they have found a fix for that. I'll let you know when I hear anything.....Mandy

---

Dear Mandy,

Please find enclosed my subscription for a further year of Newsletters and my very best wishes for the next year to everyone. I'm also requesting some PD disks, hopefully I'll get a bit more insight as I am stuck in a rut at the moment. I can't seem to get the hang of the variables, especially when reading about making full use of the 32 bits variables have, and the flags?, things like ORV and ANDV commands, I know that I'm just not grasping all the facts that are staring out at me in the Newsletters, even though the members make it as simple as possible, it's just all those 11111s and numbers and how to allocate conditions (flags?) to the separate bits, it just seems so easy to some people. I'm really glad that you are starting a User Group Game for us members who are still struggling, it is going to be a great incentive for us to try and catch up a little.

D. Spencer, Salford
AMIGA

I think I may have confused you even further in my explanations of Variables by mentioning flags. I used the terms "Flags", "Markers", "Counters" etc within my comments as an aid in explaining variables to people who have used other utilities for programming such as PAW, GAC, QUILL, STAC etc, but of course they would be confusing for people who have never come across those utilities. Variables are the "heart" of more complicated conditions used to create problems for the player to solve. For a beginner to try and understand the different bits is a might too complicated so stick to using variables in their most simple form to start with and the rest will come with time. For an example you could start with a simple problem such as finding the rope in the Kitgame and being able to use it to climb down the cliff to the boat only if you have obtained it first from the puzzle zone. The programmers used variable 42 for this and decided that if variable 42 was set to 0 then the rope hadn't been found so the player couldn't get down the cliff but if variable 42 contained the number 1 then the rope had been found. When the rope is activated in the puzzle room it vanishes (into the inventory of the player) and the variable is set to hold the value of 1. Enter the following Object Condition for your rope object:

```
IF ACTIVATED?
THEN INVIS (18)                  (number of the rope)
PRINT ("YOU FIND SOME ROPE",6)
SETVAR (25,V35)                  (variable to set the time
                                  that the text is held on screen)
SOUND (4)                        (a ping noise for effect when
                                  you get the rope)
SETVAR (1,V42)                   (Setting our variable to tell
                                  the computer that the player
                                  has the rope!)
ENDIF
```

You now come to the cliff where the player should ACTIVATE the post to descend the cliff. Enter the following on the Object Condition for the post:

```
IF ACTIVATED?                            (if you haven't found the rope)
THEN IF VAR>? (V42,0)                    (then just make a sound
THEN SOUND (3)                           when activated)
IF VAR=? (V42,1)                         (if the player has the rope)
THEN PRINT (" YOU ATTACH THE ROPE TO THE POST ... ",5)
```

etc... there now follows all the conditions which take the player down the rope into the dinghy ready to sail to the lighthouse - the rest of the conditions are too long to print here but can be examined if you check out the object condition for the post in the Beachyhead area of the Kitgame.

As you can see, variable 42 has been used in its simplest form just to allow the system to know if the rope has been taken or not and telling it what to do in either situation.....Mandy

Dear Mandy,

I had the pleasure of phoning you today and, if you remember, asked if it might be possible to issue basic, step by step, instructions of the sort found in handbooks:

1. Switch on the machine.
2. Wait for the following picture to appear.
3. Insert disk A.
4. If you want a pyramid see page 25.
   If you want a sphere see page 30.
   etc, etc.

Personally I am not into games at all but should like to design a house, a car, a "what have you". Allow me please to make a general observation on the handbooks issued with software. The handbooks are clear if you already know how the whole thing is supposed to work but very few people, not brought up with computers, understand them first or even fifth time round. Might it not be easier to begin the hand-book with a "hands on", "foolproof", "designed for ignoramuses", flow-chart kinds of instruction leaflet? Once the victim has struggled through the "flow chart", he knows what to expect and can thereafter study the handbook proper. I hope you don't find this suggestion impertinent?

John Mensink, Pembroke, Dyfed

AMIGA

I didn't find your suggestion impertinent at all, John. I know exactly what you mean about handbooks. In fact, when we first discussed the manual for the Kit and its layout etc our main concern was that it should be clear and easy to understand. Obviously we didn't succeed in many ways and the restriction in the number of pages allowed for the manual didn't help a lot. However, I do understand exactly what you mean as I too sometimes long for a manual to explain a manual! I hope to provide the sort of information you want in the Newsletters as we cover each different subject of the Kit and to try and cater for the absolute beginner as well as the more experienced user. I'll do my best and hope that the other members will help me in this perhaps by sending in some step-by-step guides to various items under the menu headings, aimed at beginners. It would help a great deal and various subjects can be covered in each Newsletter.....Mandy

---

Dear Mandy,

The last time I wrote I mentioned writing again with my problems. Your No 7 Newsletter is to hand for which many thanks, and after seeing your "User Group Game" (Part 1), I feel now is the time. To put you in the picture as to the kind of person you are dealing with, just a few facts. My set-up is an A3000 (Archimedes) with 2MB and double 3.5" drives with Star LC10 printer. Have just started my eighty-fourth year (I know!) - but computers and I are like two peas in a pod, don't laugh, but my first one was a hex. keyboard with an enter key mounted on a small open chassis). We have come a long way since then and I hadn't a clue as to what hex. was! My object in purchasing the 3DCK was not to play and build games. What interests me really is the Virtual Reality bit. Nevertheless I will be building up your game for it has to be a good exercise for me. I do have to confess that I do not spend a lot of time with the Kit (at least, not up till now), perhaps because of the frustration. I do get a bit impatient these days when I cannot get the result I want and can find no documentation to help me. I also have lots of other computer interests like music, painting, simulations, A.I. and expert systems being the main ones. You would think with all that I should be able to cope easily - not necessarily so, even when I have documentation,

I often find programmers usually assume too much of the novice. When I saw John Bidmead's letter (A3000) I thought good - until I read it to find he was talking about game and routine testing. However, I may write to him later. But to come to my problems, for I hope I am not wearying you. I can deal with creating the areas, can put something there, like a building (expanded cube), adorn it with door and entrance, open the door and walk through into (and here I was probably a little naive) what I thought was going to be the interior walls of my cube. Imagine my surprise , then, when I found I was out in the field. Now I have tried to build the inside of the cube using some rectangles and sometimes squashed cubes, but to date have had no success. The walls, ceiling and floor look OK from where I am standing but when I move to a different view point I find the back wall, which was my first creation, is far away from the ends of the side walls, and the ceiling is not where I thought it was, sitting nicely on top of my walls, and with a gap one side or overlapping one side. There surely must be a simple way (like all things when you know) of constructing an interior.

I do hope you can help me without too much trouble, for I know your time must be precious. I have twenty-four hours every day, little sleep, and still can't find enough of them. Referring to your game directions pp12 Area 1: you mention "You can use the globals to create the walls if you wish." I can find no reference to globals except in index pp61 relating when it cannot be used. There is, as the last item in the pull down "Object" menu a LIST GLOBALS, but the item does not get highlighted nor dealt with in the manual. There is one item that Archimedes users generally are no doubt aware of, but it did puzzle me for a while. It was to do with COLOUR and "getting" with the left mouse button, and "putting" with the right button (see pp8 and pp37/38 of the manual). I was mystified as to why my right button just kept duplicating what the first was doing. We have three buttons on our mouse (the middle one we use for menues) and eventually I found that the programmers had used the menu (second) button for what was described as the right button. So to put a colour or to ACTIVATE use the middle button.

John Wright, Baldock, Herts
ARCHIMEDES

I am no spring chicken myself, John. One of the delightful things I have found in dealing with so many people within the world of computing is the wide age range of so many like-minded enthusiasts. I receive letters from people from around eight years old to people in their nineties. Computers are a great form of bringing all age groups together with a common interest and the only thing I have found that deteriorates as we get older is our dexterity with a joystick and distinct lack of interest in the old arcade "shoot-em-up" type of computer entertainment. When I mentioned that you can use Globals to create your inside walls in the User Group Game I should have pointed out that Globals are only available with 8 bit versions, Atari ST and Amiga versions. The PC and the Archimedes do not have Globals. If an Atari ST or Amiga datafile were loaded into the Archimedes (yes, the Archimedes is able to do that without problem), the LIST GLOBALS would appear on the pull-down menu but would NOT be available to the Archimedes user as the Globals wouldn't actually be there, just the menu item. The only solution would be to create your own Globals - see the article on Globals later on in the Newsletter for further help.....Mandy

---

Dear Mandy,

In reply to Margaret Christmas's letter in issue no. 7 about using Graphic Workshop to convert to IFF/LBM files. I have had the same problem with Graphic Workshop 4.6 which was distributed with PC Today Magazine in January 1991. The problem is with Graphic Workshop's compressed IFF/LBM format. There are two solutions to the problem:

1. Set up GWS to generate uncompressed IFF/LBM images - run GWSINSTL and select IFF/LBM compression OFF.
2. Get a newer version of Graphic Workshop. I now use version 6.1 which works fine with both compressed and uncompressed IFF/LMB images.

Stephen Cross, Bishop's Stortford
PC

Dear Mandy,

I feel that I have to write to you to congratulate you on an incredible piece of work. The User Group magazine has been as well put together and presented as the Kit itself. It has been informative and fun to read and, although I myself am not a technical person and have not as much as put two blocks together on one screen, it has filled me with a longing to try. Is it possible for real computer idiots like me, to buy an easy step by step guide to doing just about everything that is available in the Kit. If not, why not? Anyway, congratulations again and keep up the good work.

Darren Griffiths, Coventry
AMIGA

I wish that I could write the kind of guide that you want, Darren. Unfortunately I just haven't got the time to devote to such a project at the moment but, when I have finished testing 3DKit II I fully intend to get started on one as so many people seem to want one.

I am trying to do the same sort of thing within the Newsletters whenever I can such as with the User Group Game and I hope you will give it a go. Might I suggest that the best way for you to start creating something and to get yourself really into things is to try and recreate a room in your own home - or even your whole house if you are feeling ambitious - perhaps the room where you do your programming? You can then look around and see what needs building and where you are going wrong if anywhere. Start on the design of your room only without any puzzles or conditions, just to get the feel of how everything works then you will soon find yourself wanting to expand your knowledge and start creating something different. To give your confidence a boost just remember that if you enter ANY of the conditions you find in the newsletters you are able to tell everyone that you have done some programming in "C" language!.....Mandy

MORE LETTERS NEXT NEWSLETTER!

THE USER GROUP GAME!

PART TWO

Now that we have created our "skeleton" game we are ready to start entering some of the main features. But first, I told you all to enter an IF COLLIDED? or IFHIT condition for the rectangle in the ceiling at the top of the steps in the Dungeon. I have since realised how difficult it is to collide with an object in the roof! So I suggest that you change that particular condition to read: IF ACTIVATED? or for 8 bit, IFACTIVE instead of IF COLLIDED? or IFHIT.

Now we are going to create our problem with the moveable bookcase in the Alchemist's Chamber which is triggered when a particular book is activated by the player. This problem involves animation for 16 and 32 bit users and simulated animation for 8 bit users. First create a bookcase with a couple of shelves which covers the exit to the Solar. First for 16/32 bit users: For the animation we will allow the whole bookcase to glide to one side revealing the doorway so we should make a GROUP. Select CREATE and select GROUP from the object icons. A group will be created with a number and shown on screen so select this. You will be presented with a list of all the objects currently in your area. To make things simpler you might like to RENAME the objects which form part of your bookcase (don't forget the books too!), so they are easy to select from the list do this by selecting ATTRIB icon and clicking on each object of your bookcase in turn and where you see Object Name, click with the mouse and a cursor will appear allowing you to change the name. At the same time make sure you change the STATIC icon on each object to MOVEABLE. Now select each object that forms part of your bookcase by highlighting them by clicking on them with the mouse. When you have selected them all then click on the TICK at the top left of the list and your new group will be created.

For 8 bit users the only method I could come up with to create the same situation would be to have two identical bookcases one, with all the component objects visible, covering the doorway and another identical bookcase with all the objects invisible positioned at the side of the doorway. To create the simulated animation we would enter the following condition:

```
IFACTIVE    o    number of our book object
THEN
INVIS       o
INVIS       o    all the objects in the
INVIS       o    visible bookcase
VIS         o
VIS         o    all the objects in the
VIS         o    invisible bookcase
ENDIF
```

For 16 and 32 bit animation conditions we need to enter the following object condition for our book as follows:

```
IF ACTIVATED?
THEN STARTANIM (1)
ENDIF
```

Create an animator via the top area menu bar and then select edit animation and enter the following condition: Note that in this animation we are going to program it so that when the book is activated the first time the bookcase will slide to one side and if the book is activated a second time the bookcase will close again.

```
ANIMATOR (1)
        INCLUDE (g) the number of our group

                    START
                    LOOP (30) this depends on the width of the
                              bookcase! Check how many steps it
                              takes for the bookcase to clear
                              the door (you can count them if
                              you watch the animation, and ajust
                              as required.
                    SYNSND (3) Amiga explosion sound
                    MOVE (10,0,0)
                    AGAIN
                    STOPANIM (1) end of first part to move right
                    INCLUDE  (g) same as above
                    STARTANIM (1)
                    LOOP (30)
                    SYNCSND (3)
                    MOVE (-10,0,0) note it's the other direction
                    AGAIN
                    STOPANIM (1)
                    RESTART
```

Now we are going to turn our attention to the programming for the trapdoor. For this we need a key. In the next newsletter we will deal with separate problems with hiding the key but for now all we need to do is to create a small object in the Solar to represent our key. In my case it was object 6. We need a condition to represent the player taking the key so enter the following for our "key" object:

```
  16/32 BIT                          8 BIT
IF ACTIVATED?                      IFACTIVE      6
THEN INVIS (6)                     THEN
ENDIF                              INVIS         6
                                   ENDIF
```

Go to the Great Hall and create two flattened cubes, one to neatly cover the open trapdoor (black rectangle) and one flipped to stand upright beside it as if it were an open trapdoor. Make the second invisible as this will only become visible when the trapdoor is "opened". For the following conditions let us say that the closed trapdoor is object 8 and the open trapdoor is object 9 and enter the following conditions for them:

```
    16/32 BIT
IF ACTIVATED?          if player activates the closed trapdoor
THEN IF INVIS? (6,5)   and if the key in the solar is taken
THEN INVIS (8)         make closed door invisible
VIS (9)                make open door visible
SYNCSND (5)            Amiga thud sound
ELSE SOUND (4)         or if the key isn't taken make ping sound
ENDIF
ENDIF
```

```
        8BIT
IFVIS       6     5   this is to check if the key has been taken
THEN                  and if not to do nothing. You can add a
ELSE                  sound condition here if you wish.
END
ENDIF                 if it has been taken then
IFACTIVE    8         if the closed trapdoor is activated
THEN                  then
INVIS       8         make it invisible
VIS         9         and make the open trapdoor visible
ENDIF
```

Next issue we will add more puzzles so watch this space!

STEP-BY-STEP GUIDE

MAKING INTRODUCTORY/LOADING SCREENS AND MUSIC ON THE AMIGA!

By Mieke Van Der Poll - AMIGA

Firstly, on my PD disk of MOUNTAIN ADVENTURE you can find all the files and the start-up sequences that are needed for loading screens, music etc. I followed the instructions of Paul Ramsell published on pages 21/22 of Newsletter 3 but I used Protracker and Noiseplayer instead pf Ked amd Medplayer. I also bought the PD disk by Andrew Herbert (E.F.T.P.O.T.C.M.) which contained all the utilities I needed such as PICSHOW, PICEND, THAR, NOISEPLAYER, POWERPACKER LIBRARY and his start-up sequence. The only difference in my case is that each time you boot the disk you have to go through the loading screens, whereas on Andrew's disk he gives you the choice: F1 to play the game, F2 to get instructions. I couldn't figure out how he programmed that, so perhaps he can write about it sometime? (Come on, Andrew, we wait with baited breath! -. Ed). Well, here is how to go about it:

Firstly make a nice picture that is relevant to your game. It does not matter in which size or with how many colours you make it. You can even make a picture in 3D-Kit, save it as an .IFF file by pressing F2 and giving it a name. You can then use it as it is or load it into your art package and make the changes or adjustments that you want and save it again. In the art package you can choose a suitable font to make a text file containing the title, the author, etc.

The next picture could be an instruction screen on how to play the game. You could do these text files in 3D-Kit also using the text animation and condition that is included in the Kitgame and make a text instrument for it.

As for sound effects: Most music packages do have a couple of modules included from which you can derive sound samples and save them seperately on a disk, so you can include them into the MakeSampleBnk program. if you are not that good in making a music module for your game you can choose from several PD Libraries which have special music disks containing modules and even sound samples (see Amiga Format or CU Amiga etc).

So what you need is:

1. Your runnable game including the sound sample bank.
2. Several pictures/text pictures.
3. A music module.
4. PD utilities such as: picshow, picend, noiseplayer, powerpacker library, TBar and the commands CLS and WAIT.
5. A start-up sequence.

NB:

Before using Noiseplayer, try it out once by typing Noiseplayer (Enter) and you will be presented with a little explanation on how to use the program. These are, for instance, different numbers for keys to be pressed when you want to stop the music.

Somewhere in one of your introduction screens you must remind the player to stop the music by pressing a key before the game is loading because otherwise he ends up with a GURU!

Work as follows:

(When you have a disk utility such as Diskmaster all the work hereafter is much easier!)

LOAD in your workbench and format a blank disk and change the name EMPTY into a name you want, for instance the name of your game.

When you have just one drive you can copy some commands on the ram disk in the Amiga's memory using the CLI. So open your workbench window and go into SHELL. Enter the following lines:

```
cd c                 (Enter)
copy copy ram:         "
copy dir ram:          "
copy makedir ram:      "
copy install ram:      "
copy delete ram:       "
copy cd ram:           "
copy list ram:         "
copy ed ram:           "
```

Put your blank disk in df0 and type:

```
cd df0:                (Enter)
```

Delete Trashcan files:

```
delete Trashcan          "
delete Trashcan.info     "
```

If you use Workbench 1.3 you must include a disk validator file in a directory L, so you can check this out by typing: dir (Enter) and if it is there type: cd l (Enter), type: list (Enter) and the file Disk-Validator appears on your screen. If it is not there type: makedir 1 (Enter).

First we make the other directories we need and then we go on with copying the necessary files:

```
makedir c     (Enter)
makedir Libs    "
makedir S       "
```

```
Type: cd ram:        "
Type: list           "
Type: install df0:   "
Type: copy ed df0:s  "
```

and you will see the files you copied on the ramdisk.
You have made your disk bootable now.
You have the text editor for your start-up sequence in the right directory.

Now in order to have enough memory to copy the necessary files to the ramdisk we delete the files we do not need anymore:

```
Type: delete makedir      (Enter)
Type: delete ed              "
Type: delete install         "
```

Change your blank disk with the disk your runnable game is on in drive df0. Copy all the files of the game to ram: in the same way as described above. Then swap the game disk with the blank on and type: cd ram: (Enter).

Then copy all the game files to df0:. Delete them on the ram disk.

You do the same with the music module, the picture files and the file Noiseplayer. Having done that and you are still in the ramdisk mode, and you do not have the Disk-Validator on your game-to-be disk you put in the Workbench disk, type: cd df0: (Enter), open the Workbench window, go into the SHELL and type:

```
cd L (Enter)
```

Copy the Disk-Validator to ram: copy Disk-Validator ram: (Enter)

Then put the disk with the utilities in drive df0 and copy to ram:

```
copy cls ram:                          (Enter)
copy picshow ram:                         "
copy picend ram:                          "
copy wait ram:                            "
copy Tbar ram:                            "
copy Powerpacker Library ram:             "

Put your game-to-be disk in df0 and type: cd ram:       (Enter)
                             type: copy cls df0:c          "
                             type: copy picshow df0:c      "
                             type: copy picend df0:c       "
                             type: copy wait df0:c         "
                             type: copy Tbar df0:c         "
                             type: copy Powerpacker Library df0:libs "
                         Event. type: copy Disk-Validator df0:L   "
```

Now we are going to make the start-up sequence by using the text editor ED. So type:

```
cd df0: (Enter) cd s (Enter). Then you type:
ED startup-sequence (Enter)
```

Now type in the following:

```
cls
picshow pic1 (or your picture name)
noiseplayer -p2 mod.name (name of the module)
picshow pic2 (your own picname)
picend pic1
wait 20 (a number of seconds you want pic2 to appear)
picshow pic3 (your own picname)
picend pic2
wait 30
picend pic3
wait 01
cls
Tbar Please wait LOADING
Gamename (the name of your game)
```

Then press ESC X and again ESC X to save and leave the text file.

It is now in the right directory and you can delete the file ED if you wish. Now if all goes well your disk will boot up with the introductory screens, the music and the game.

Next issue Mieke shows us a step-by-step guide to doing exactly the same on the PC. So watch this space!!.....Mandy

---

DOWN TO BASICS

By Frank Carr - ATARI ST

I've been using BASIC for five years in the form of Fast Basic, STOS and now 3DCK BASIC and, believe me, 3DCK is the easiest. To answer the question what to do after playing the Kitgame, the newcomer really needs to understand why Incentive put it there. Load the Kitgame into the Editor, from there you can access every part of the program, you can check General Conditions, Area Conditions, Attributes for each object and Object Conditions. I would recommend that newcomers take this line, for example, from the Kitgame in Area 1 go to the door that leads to the puzzle room - the one with the moving bricks behind it. If you activated the door it opens, no go to conditions, click on the door and up comes the program for that object. Nearly all the Object Conditions require an IF, THEN and ENDIF loop. Basically it means IF that block is shot THEN invis that block ENDIF. If the object is activated then start animation.

If you break down most programs in 3DCK thats all it is within reason. The biggest problem seems to be the word VARIABLES. For members who understand programming it is simple but for the novice is it a nightmare! It is difficult to explain on paper but I will try. We need a small program to demonstrate it:

TUTORIAL STEP BY STEP

We need a room with a table in the middle and a door at one end plus a key on the table. Create a cube, edit cube, stretch cube 1000, make 400 high and shrink to 20. The screen dialogue should read S:1000,0400,0020. Now move it down to ground level, copy cuboid 2 above, edit it by turning sideways and moving into position, repeat for the other two walls, colour the walls so they stand out. To create a table, shrink a cuboid to 200,20,200. Create a rectangle for the door coloured black. Create another rectangle for the key (shrunk to 20,20) and place it on the table. Stand in the room, say, at the end of the table, facing the door and create an entrance which will be entrance two.

Load KGBorder and go to General Condition and click on SET VIEW WINDOW. Set the window to the size you want within the border screen. Click on controls, click on Move Forward with the LEFT mouse button, click with RIGHT mouse button. You will be presented with the border screen again, use left mouse button on the top left corner of the forward arrow icon and drag to the opposite bottom corner and click left mouse button. Select EITHER from the menu. Repeat the procedure down to Rotate Right.

Now we will set up a Text window at the bottom of the screen. Create Instrument and Edit Instrument (1). Click on Type until it comes up TEXT WINDOW. At X POS enter 060, at Y POS enter 189. At LENGTH enter 244, height enter 008. Click on View Box to show you where it is positioned. One other thing, it is a good idea to go to ATTRIBUTES and put a name to your objects, table, door, key etc.

Now we are ready to program:

Condition for DOOR:

```
IF VAR=? (V40,2)
THEN IF COLLIDED?
THEN GOTO (1,1)
END

ENDIF
ENDIF

IF VAR=? (V40,1)
THEN PRINT ("       YOU UNLOCK THE DOOR   ",1)
DELAY (100)
PRINT ("                                 ",1)
SETVAR (2,V40)
END
ENDIF

IF ACTIVATED?
THEN PRINT ("       DOOR LOCKED           ",1)
DELAY (100)
PRINT ("                                 ",1)
ENDIF
```

Condition for KEY:

```
IF ACTIVATED?
THEN PRINT ("      YOU HAVE THE KEY      ",1)
SETVAR (1,V40)
DELAY (100)
INVIS (8)
PRINT ("                                 ",1)
ENDIF
```

Let us examine the program, three routines for the door and one for the key. Look at the door routine first: When activated it ignores the V40 routine because we haven't called it yet and it uses the locked door routine. Now we need the key. On activating the key we set variable 40 to hold the value of 1. We then go back to the door and it now uses the unlock door routine and sets variable 40 to hold the value of 2, which then uses the first routine to tell it to go to Area 1, entrance 1. Notice that the routine has two ENDIFS. If there are two IFs then there should be two ENDIFs. Save it and run it. To re-run it just hit ESCAPE key as this sets all variables to zero. Press F1, select Area Menu and select GOTO ENTRANCE. Click on 002 and select TEST.

We have used variable 40 as our counter. At 0 the door is locked, we set it at 1 when we picked up the key. We set it to 2 when we unlock the door so that we can go through the door to another area.

Variables are just counters. Study the program, play around with it, alter the delays, take out the END to see what happens. Try to understand the program.

Here is a tip for people building up the User Group Game: In the Area Conditions enter:

```
IF VAR>? (V16,0)
THEN PRINT ("      ENTRANCE HALL      ",1)
SETVAR (0,V16)
ENDIF
```

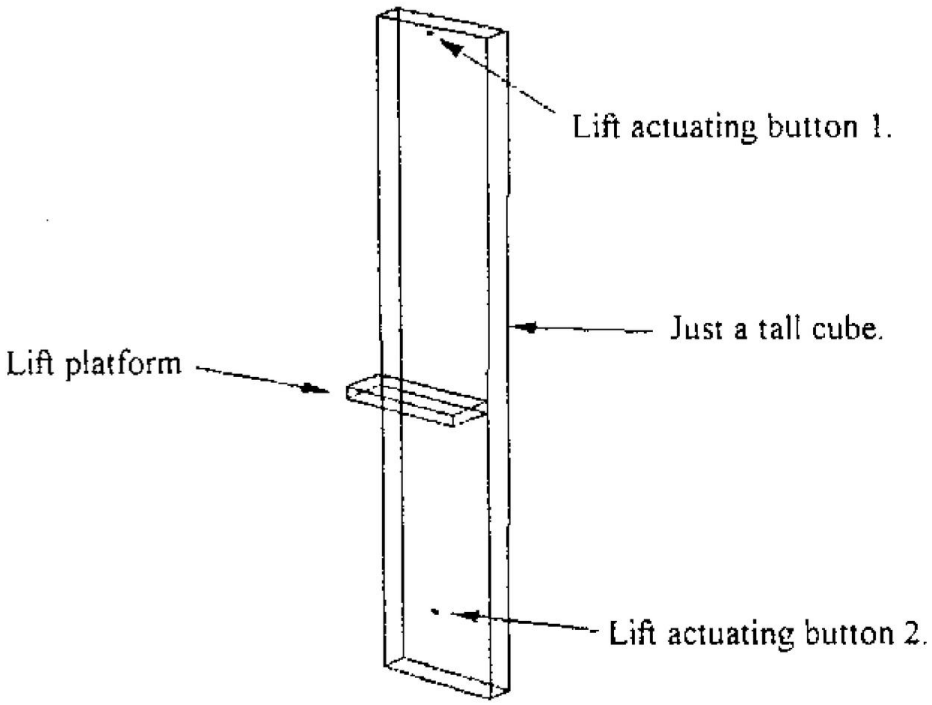
Do the same for all the other rooms (areas).

(Thanks, Frank, for this article. If any other readers would like to write a similar article to explain in a step-by-step manner any other feature of the Kit to help fellow members it will be greatly appreciated, I am sure, especially for beginners.....Mandy)

16/32 BIT ROUTINES

GIVE YOURSELF A LIFT!

By Mark Rose - PC



Conditions and Animator

1. Area condition - STARTANIM(1)

2. Ground condition -
```
IF COLLIDED?
THEN SETVAR (0,V100)
ENDIF
```

3. Lift button condition (both buttons) -
```
IF ACTIVATED?
THEN TRIGANIM(1)
ENDIF
```

4. Lift platform condition -
```
IF COLLIDED?
THEN SETVAR (1,V100)
ENDIF
```

5. Upper floor condition -
```
IF COLLIDED?
THEN SETVAR (0,V100)
ENDIF
```

6. Animation (1) -
```
INCLUDE (lift platform object)
START
WAITTRIG
WAITTRIG
LOOP (247)
IF VAR=? (1,V100)
THEN ADDVAR (30,V1)
ENDIF
MOVE (0,30,0)
AGAIN
SOUND (5)
WAITTRIG
WAITTRIG
LOOP(247)
MOVE (0,-30,0)
AGAIN
SOUND (5)
RESTART
```

The variable for the users verticle location is only changed if the user is actually standing on the lift platform. So the lift can go up and down without you needing to stand on it.

You can alsao go up the lift, step onto the upper floor platform (not shown on the diagram) and press the button for the lift to descend without you on it. Of course you have to press the button again for the lift to come back up if you want to get down.

Just enter the conditions as I have written them and don't forget the ground condition. This is actually on Cuboid 1 because if you press the lower button and the lift ascends, you will not be able to move without the condition on the ground.

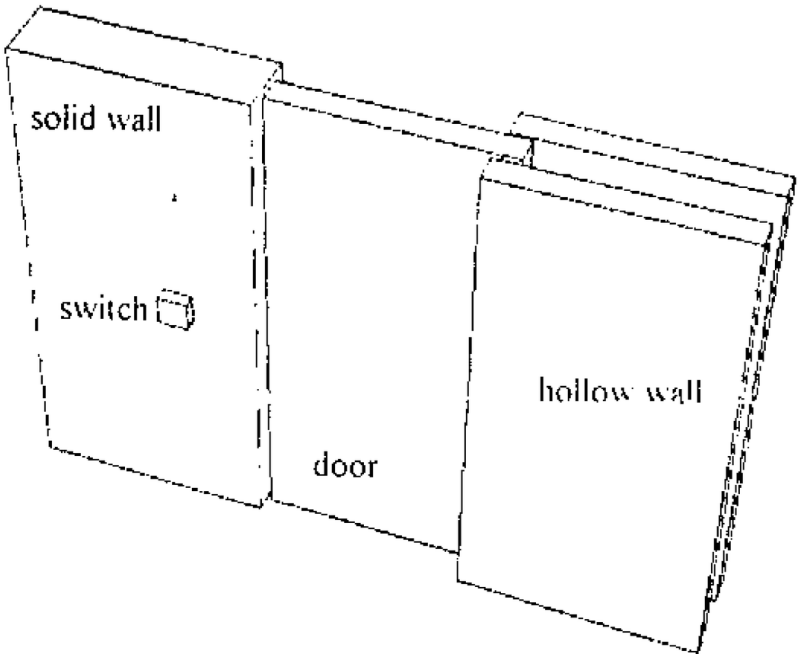
Again the condition on any higher level must be included (the same as the ground condition), or again, when the lift platform is moving you will not be able to move. This variable used here just sets the "is user standing on the platform" variable to true or false. If true, then the animator includes the ADDVAR to the users verticle value. Hence you then move up with the lift platform.

The loop value of 247 is just the number of times the sequence of commands is executed and can be changed to suit the individuals needs. You can also change the amount of movement. This will either speed up or slow down the movement of the lift platform, but it is important to make sure that the amount that you add to V1 (users verticle position), is the same, or strange things happen.

I am still working on improving this routine and future upgrades will include the ability of the lift platform to stop at various floors on the way up or down, depending on the users floor number selection.

A VARIATION!

By Mark Rose - PC




```
Area Condition   -      STARTANIM (1)

Switch Condition -      IF ACTIVATED?
                        THEN TRIGANIM (1)
                        ENDIF

Animation (1)    -      INCLUDE (sliding door object)
                        WAITTRIG
                        WAITTRIG
                        SOUND (8)
                        LOOP (30)
                        MOVE (10,0,0)
                        AGAIN
                        WAITTRIG
                        WAITTRIG
                        SOUND (8)
                        LOOP (30)
                        MOVE (10,0,0)
                        AGAIN
                        RESTART
```

As you can see, this is just a variation of the lift routine. The loop value is dependant on the distance between the walls. The sound (8) is from the PC version of 3DKit and it sounds for the duration of the animation. A second switch with the same condition as above is (obviously) necessary on the other side of the solid wall. Of course it is possible to add other objects to the door and create a door similar to that found in films like StarTrek for example.

Next issue will feature more 16/32 Bit routines including a feature telling you everything you need to know about messages by J. Hayes so watch this space!.....Mandy

HALL OF FAME

My sincere thanks to all the following members who took the time and trouble to send in contributions for the Newsletters during the past two months:

STUART SHELTON, STEPHEN CROSS, TOM REILLY, DANIEL FOSTER, DARREN GRIFFITHS, FRANK CARR, PETER LAWS, M. HARRIS, MARK ROSE, J. HAYES, DAVID SAMBROOK, MIEKE VAN DER POLL, STEVEN FLANAGAN, HUMPHREY BOLTON, ROBIN BALL and STEPHEN FORSYTH.

ALL members are cordially invited to send in contributions for the Newsletters. If you have just a hint or tip, routines of any kind, complex or simple, or a full-blown article they are all most welcome. Don't worry if your routine doesn't appear in the immediate issue, it will appear in the following one. ALL contributions will be printed, nothing is ignored! Let's hear from you! There are hundreds of members and most of you appear to be quite shy - don't be, we would love to hear from you so do write in. Advanced users are waiting for more complex routines to give them ideas and the beginners are all waiting for step-by-step routines and articles to get them off the starting line. It would be generous to share your prized routines, hints and tips with fellow members so, everyone, try to put pen to paper (or fingers to the keys) in time for the next deadline which is the 1st October 1992 ready for the October/November issue.

---

8 BIT ROUTINES

TRANSFER VARIABLE VALUES

By Steven Flanagan - COMMODORE 64

Many times I have wished there was a TRANSV command in the FCL to transfer the value from one variable to another but there isn't. When I was writing an experimental routine I discovered a way. It is so simple, I can't believe that I haven't thought of it before, or that none of you have written in about it. The routine below transfers the value of variable 1 to variable 2.

```
SETV    0  2       TESTV   16  1
TESTV   1  1       IFEQ
IFEQ               THEN
THEN               ORV     16  2
ORV     1  2       ENDIF
ENDIF              TESTV   32  1
TESTV   2  1       IFEQ
IFEQ               THEN
THEN               ORV     32  1
ORV     2  2       ENDIF
ENDIF              TESTV   64  1
TESTV   4  1       IFEQ
IFEQ               THEN
THEN               ORV     64  2
ORV     4  2       ENDIF
ENDIF              TESTV  128  1
TESTV   8  1       IFEQ
IFEQ               THEN
THEN               ORV    128  2
ORV     8  2       ENDIF
ENDIF              XOR    255  2
                   END
```

What the routine does is to test each bit of variable 1 and if the bit is set then it will set the same bit in variable 2. I will not attempt to explain binary here as it is very well documentated in issue 3 by George Dixon. TESTV tests a bit in the variable and returns a truth if the bit is 0 (clear). For example:

```
TESTV   1  1 - tests bit 0 of variable 1.
IFEQ
THEN
....    any commands here will be executed if the bit was
        0 (clear).
ELSE
....    any commands here will be executed if the bit was
        1 (set).
ENDIF
....    any commands here will be executed regardless of
        the state of the bit.
```

The routine can be in a General, Local or Procedure routine depending on its use. You can change the variables used in the TESTV and ORV commands to any variables you wish. This routine is a lot more useful than you might think. It opens up many new possibilities for the Kit. For example the Information Screen that has been talked about before was just about impossible to program until now. All you have to do is transfer the viewpoint variables and area number into storage variables, goto the area with the information screen and when you want to return to the program, transfer the stored values back into thair variables to begin from exactly where you left off. It allows you to store results of tests for future use.

I hope you put this routine to good use, and if you do use it, please write in to Mandy to let her print it in the Newsletter so everybody will learn about it.

(In the next Newsletter Steven gives a complex and most useful routine to compare the values of variables so watch this space!.....Mandy)

CHANGING THE FONT

By Stuart Shelton - SPECTRUM

In this program, by altering variables 126 and 127 you can have fully italic text at all times. First you should enter this BASIC program:

```
10 PAPER 0: BORDER 0: INK 0: CLS
20 CLEAR 64599: LOAD "chars." code 64600,768
30 POKE 23606,88: POKE 23607,251
40 LOAD""

     SAVE "3D LOADER" LINE 10
```

Then save it at the start of the tape. Reset then type all of this! There are two ways of doing this next bit, I'll show here the easiest one to type. The other way is change lines 50.90 and 130 of the following to "READ B" instead of "INPUT B" and add (linenumber) "DATA" (numbers), the advantage being that you can see if you have made a typing error.

```
10   FOR A=15616 TO 16383
20   POKE 48984+A,PEEK A
30   NEXT A
40   FOR A=1 TO 80
50   INPUT B            (READ B)
60   POKE 64727+A,B
70   NEXT A
80   FOR A=1 TO 208
90   INPUT B            (READ B)
100  POKE 64683+A,B
110  NEXT A
120  FOR A=1 TO 208
130  INPUT B            (READ B)
140  POKE 65119+A,B
150  NEXT A
```

Then if you are using the READ B version, continue with

```
160 DATA 0, 60, 70, 74, 148, 164, 120, 0
```

When you are ready type RUN and the screen will either go blank for a couple of seconds and then say 0 OK. 150:1. If you are using the other version the screen will immediately have a flashing C at the bottom requesting you to type in the next number. Type all of the data (it acts like the usual redefine graphics data when you are programming, so if you used this you could have 97 user defined graphics, just change the numbers. When you have typed all the data in save it using:

```
SAVE "chars" CODE 64600,768
```

Save it next on the tape after the loader. Reset your machine and load your 3D Kit game's DATAFILE. Make your first area all black and set all of your variables in this area before going to area 2. The condition should look like this:

LOCAL CONDITION 1:

(set all vars.)

```
SETV   008    126
SETV   251    127
CROSS    0
GOTO     1      2
END
```

Then IMMEDIATELY save it. Load in the compiler and save your finished game on the tape after the character code. Reset and just load it in and watch it go! Note: Variable 126 acts as address 23606 and variable 127 acts as address 23607. The normal setting for addr 23606 is 0 and 23607 is 60. By changing these two variables you can chop and mix text.

LISTING 1 (DATA FOR NUMBERS)

```
0   60   70   74  148  164  120    0
0   48   80   16   32   32  248    0
0   28   34    4   56   64  124    0
0   30    4   24    4   72   56    0
0    6   10   20   36  126    8    0
0   30   16   60    2   68   56    0
0   30   32   60   66   68   56    0
0   30    2    4    8   16   32    0
0   28   36   56   68   68   56    0
0   28   34   34   28    4   56    0
```

LISTING 2 (DATA FOR CAPITALS)

0	12	18	34	62	66	66	0
0	28	18	60	34	66	124	0
0	28	34	32	64	68	56	0
0	24	20	34	34	68	120	0
0	30	16	60	32	64	120	0
0	30	16	60	32	64	64	0
0	28	34	32	76	68	56	0
0	18	18	60	36	72	72	0
0	62	8	16	16	32	248	0
0	2	2	4	68	72	56	0
0	18	20	55	40	68	66	0
0	16	16	32	32	64	124	0
0	34	54	42	66	68	68	0
0	18	26	42	44	68	68	0
0	28	34	34	68	68	56	0
0	28	18	34	60	64	64	0
0	60	66	66	164	148	120	0
0	28	18	34	60	68	66	0
0	28	34	24	4	68	56	0
0	62	8	8	16	16	32	0
0	17	34	34	68	68	56	0
0	34	34	36	36	40	16	0
0	33	33	66	66	90	36	0
0	34	20	24	56	68	130	0
0	34	20	8	16	32	64	0
0	62	4	8	16	32	124	0

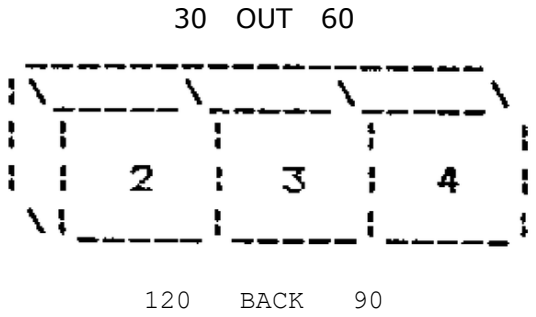
LISTING 3 (DATA FOR LOWER CASE)

0	0	12	2	60	68	56	0
0	16	16	60	34	66	124	0
0	0	28	32	32	64	56	0
0	2	2	28	36	68	56	0
0	0	28	34	124	64	56	0
0	6	8	12	16	16	32	0
0	0	14	18	34	60	4	120
0	16	16	62	34	68	68	0
0	4	0	24	8	16	120	0
0	2	0	4	4	8	72	48
0	16	20	56	48	72	68	0
0	8	16	16	32	32	24	0
0	0	54	73	73	146	145	0
0	0	60	34	34	68	68	0
0	0	28	34	36	68	56	0
0	0	28	18	34	60	64	64
0	0	30	18	36	60	8	30
0	0	14	16	16	32	32	0
0	0	30	32	24	4	120	0
0	4	30	8	16	18	12	0
0	0	34	34	68	68	56	0
0	0	34	34	36	40	16	0
0	0	65	65	146	146	108	0
0	0	34	20	24	40	68	0
0	0	18	36	60	8	16	96
0	0	60	8	16	32	120	0

KILLER CUBE II – THE REVENGE!

By M Harris - 8 BIT

This routine has the advantage over the original as the player can move between frames and switching is controlled by the same part for f/b movement. The delay of 30 between each switch is just to slow the routine down so you can see what's happening to variable 1 by watching the score counter - useful for debugging routines. On setup block 2 should be visible and all others invisible:



```
TESTV        128   050    - Check if cube destroyed. If so then go to next Local
IFLT                        condition. * If you need more cubes make  sure to
THEN                        include these 4 lines at the top of any  other locals
END                         you use to speed up processing.
ELSE
ADDV         001   001    - Increase frame count.
IFSHOT       002          - If any of the cubes are shot then destroy the lot.
OR
IFSHOT       003
OR
IFSHOT       004
THEN
DESTROY      002
DESTROY      003
DESTROY      004
ORV          128   050    - Switch all anim routines attached to this off.
END
ELSE
CMPV         030   001    - If the frame count is 30, switch blocks 2+3
IFEQ                        forward movement
OR
CMPV         120   001    - If the frame count is 120, switch blocks 3+2 for
IFEQ                        backward movement.
THEN
TOGVIS       002
TOGVIS       003
CMPV         120   001    - If full circle then reset and repeat.
IFEQ
THEN
SETV         000   001
END
ELSE
CMPV         060   001    - If the frame count is 60, switch blocks 3+4 for
IFEQ                        forward movement.
OR
CMPV         090   001    - If the frame count is 90, switch blocks 4+3 for
IFEQ                        backward movement.
THEN
TOGVIS       003
TOGVIS       004
END
ELSE
IFCRUSH                   - If player under block then S-P-L-A-T!!.
THEN
ENDGAME                   - This should be replaced with a call to your endgame
END                         routine
```

GLOBALS

On some versions of the Kit, ie. Amiga, Atari ST, Spectrum, Commodore and Amstrad, the programmers kindly provided a special area in which they had already created four walls a roof and a floor to represent the interior of a room. These were placed there so that you could quickly create a room by selecting the Globals and either clicking with the mouse button on which facets you wanted to select or, as with the 8 bit versions, by selecting with a plus or minus sign. Then when you selected OK and providing you had first created a new blank area the Globals you had selected would appear within the new area ready for you to colour and work with in whatever way you wished. On the 16 bit versions this is as far as you could go with the Globals but on the 8 bit versions you have the added ability to create extra Global objects, such as trees etc, to add to the Global area and to call up when you want them.

There are, however, a few drawbacks to using the Global objects in that they are, admittedly, far from perfect and certain problems and error messages can arise when doing so. If you create new Global objects with the 8 bit versions you must remember that whenever you wish to use them they will appear in EXACTLY the same spot on the new area as they were in the Global area which, if you are not careful could make the objects try to appear within the space of another object with dire results. On the Atari and Amiga versions if you select the Globals and use them in a number of different areas and try to colour them differently you will recolour the previous Globals you used in earlier areas. Other little niggles such as the floor changing colour as you walk across it can also occur. I hate to say it but my advice is - unless you really know exactly what you are doing then it is best to avoid using the Globals.

I find that it is much easier for me to create my own Globals on 16 bit - something which I hadn't thought of doing until I received a tip about this from Daniel Foster (PC) who gave me the idea (thanks Daniel!). This can be done quite easily and will enable ALL Kit users to have Globals. Firstly, you should create a blank area to work on and with the aid of expanded and aligned cubes carefully create four walls, ceiling and floor to the size that you think would be most useful. Then create a group and make sure that all the objects APART FROM THE GROUND CUBE (001) are included. Now save the group as an object to disk so that they can be loaded in and coloured as you wish whenever you wish by creating a new blank area and selecting LOAD OBJECT.

When creating your Globals you may find, as some people have, that it is a bit fiddly getting your walls aligned so there are no gaps that the player can walk through. I do this by creating the four walls, ceiling and floor and, before closing them up together I make sure that when I am in ENTRANCE 001 I am in exactly the centre of them. I than draw up the east and west walls to the position I want and then make the north and south walls quite a bit wider than necessary before closing them up tightly against the other walls. I do the same for the ceiling and the floor also. This usually ensures a snug fit in all the corners where the Gobals join together, and, if the player is going to be completely enclosed by them they can't see if any are wider than the others anyway!

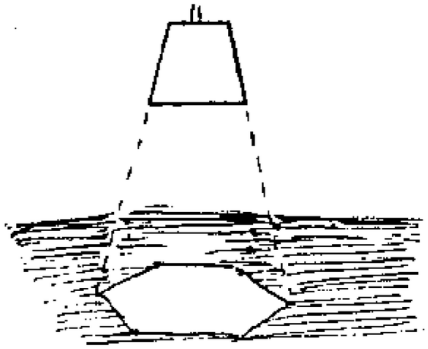
If anyone else would like to write something about Globals, or any other aspect of the Kit then please feel free to send them in...Mandy

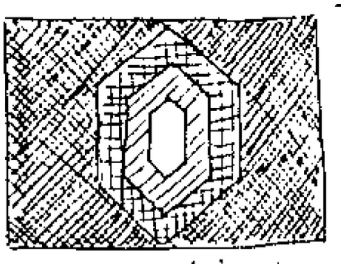
LIGHTING

By Robin Ball - ATARI ST

You can improve the look of your environments a lot by adding some lighting effects. The Kit won't do this for you as it takes an incredibly long time for the computer to work out the calculations for light, but you can create the illusion of light very easily if you understand how light works and how it is cast by lamps and such things. It is quite complicated to understand and also to explain. (Thankfully Robin has send in another PD disk with all the lighting effects done for you - I'll review it next issue...ED).

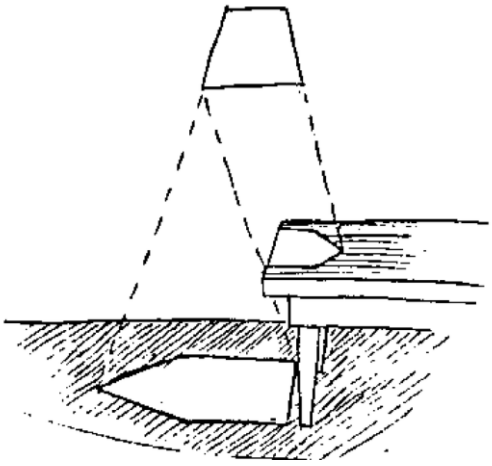
Firstly I will explain how to create a pool of light from a hanging lamp. To start with, create a lamp shade, a single pyramid is ideal, then create a shape for the pool of light, a hexagon will do, it doesn't have to be round. Then place the hexagon on the floor and colour it a shade lighter than the surrounding floor. You must then increase the size of the hexagon. To work out the size it needs to be, simply project the edges of the lamp shade down onto the floor then extend the hexagon to fill that space. This diagram should help.

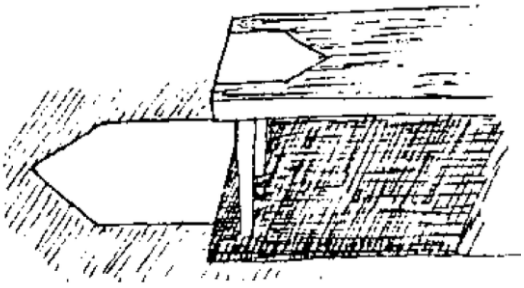




If you haven't used many objects in your area, you can increase the effect by creating several circles inside each other then colour the inside one brightest and the outside one quite near to the floor colour. It should look something like thie diagram shown here on the left.

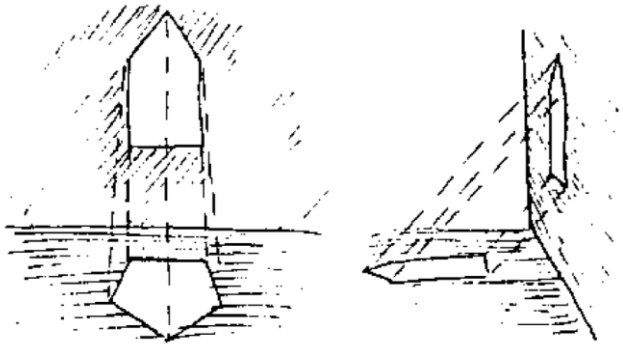
If there are objects in your area, you will have to cast your light over them also, again projecting the rays of light down from their source. You could cast light over the edge of a table for example as I have done in the diagram shown here on the right.





Once you do this you should create shadows as well. It now becomes quite complicated but so long as you remember to project the rays of light from the source over the objects and onto the floor you can work out a pretty good approximation. To help you work out how light falls you could always set up a lamp in a darkened room and place objects in the path of the light.

When you have worked out how light falls from a lamp, you can work out how light from the sun works also. You don't need pools of light of course but some cast shadows would be good. What you could also do is to create pools of light through windows. This is done in the same way as cast light over an object. Simply guess where the light is coming from and create a rectangle on the floor or even from an open doorway. To demonstrate all of these effects I've created a small collection of areas based on the Club Game. It is on the PD disk under the name CLUBGAME1. Practice the light effects, it may be difficult to start with but once you've got the hang of it your games will look much more professional.



HINTS AND TIPS

TIPS by Andrew Hull - AMIGA

Write down your variables and what they are used for. This is extremely important when programming in a language such as FCL because your variables have fixed names. A "life counter" for enemies/doors/etc can be implemented by having lots of rectangles stacked behind each other. As each one is shot it disappears revealing a darker rectangle. When the last (black) rectangle is shot then the enemy/object/whatever is de-activated. This saves having to use variables for each enemy. Try to work around the area limitations of the Kit by enclosing your areas to give the player less of a feeling of the game being made from floor tiles! For example, avoid large open areas if you can by enclosing them with barriers, buildings etc. This can really improve the atmosphere of a game. Lighting effects can be created by having two sets of objects, one light and one dark. When the "switch" is activated, swap from light to dark (or vice versa) objects. This can be combined with a timer to re-create day and night.

TIPS by Robin Ball - ATARI ST

Firstly a tip for relatively easy but impressive borders. To start with, this will only work with Deluxe Paint ST so get a copy of that (you can get it with Golden Image Brush Mouse for only £25). Create a range of 8 greys, or another colour if you want, from black through to white with black as the background. Then select the third lightest grey and select the medium sized round brush and spray lots of light grey in a thick (about 1/3 screen), strip right across the screen. Make sure that there is more white than black showing through. This will form the basic display panel. It doesn't look very impressive yet but now comes the fun part. Select TO BRUSH from the ellipse menu then draw a circle of about 1 inch across. Select SMEAR from the FX menu and smear the spots together to form an uneven mass. Then when they're to your liking, select SMOOTH from the FX menu and slowly draw over the whole panel. It creates a range of tones between the light grey and the black making a pretty good marble effect. Flatten the top with a large black rectangle then lighten a two pixel wide line across the top and down the left side by two tones (which is why we used the third lightest grey and not the white). You will have to do this in Zoom pixel by pixel and will take quite a long time. Then darken the right and bottom edges in the same way. You now have a basic block of marble. You now need some instruments, mark off a series of boxes (just a point at each corner will do, then highlight the top and left if you want the box to stick out or the right and bottom if you want it to look as if it sinks in. Shade the opposite sides and it is almost finished. Select a range of colours that contrast well with the basic marble colours, red through yellow is quite good. Then draw your movement icons and anything else you might need. I have included one example on my latest PD disk (to be reviewed next issue - Ed), and all of the data files to work with it.

Another tip to make your border look better: For the energy meter, create three instruments (all verticle bars in my case) then colour one a dark tone, one a middle tone and one a light tone. Place the darkest one in first then place the middle one over the top leaving two pixels of the darker one showing either side. Then do the same with the lighter one but only leaving one pixel. You now have a 3D looking bar. In my border I drew a beaker around the energy bar to look like a cup of blood. Make sure that all three instruments have the same variable and have the same length (100 or so). In my data files, if you shoot the floor, your energy will be reduced.

PROBLEM SECTION

"I have a couple of problems. Regarding the opening screen where there is a picture of the words 3D Construction Kit in three dimensional form, on my VGA monitor it appears in black and white whereas on the video the logo was seen to be in colour. When I choose quit, instead of returning to the DOS environment I am again given the screen where the user is prompted to enter a number from the languages. Whatever response I supply the computer "hangs up" on me."

Neil Broom, Hull
PC

The screen you saw on the video is the Amiga version and, as far as I am aware, is the only version that the logo screen appears in colour. The problem with the QUIT on the PC version has been noted and the programmers are going to fix this in the next version of the Kit. I am sorry that PC owners have had to cope with this annoying problem. I'll keep everyone informed when the programmers have a fix.....Mandy

---

"What do I have to do to specify camera's 1 to 5? However I try I can never get back to their positions, obviously some stupidly easy action I am doing incorrectly."

John Hayward, Croydon
16 BIT

You cannot use Cameras in the Test Mode or within Stand-alone games but to use them within Edit Mode you should position yourself with the view that you wish the camera to hold, then select the MODE icon and flip through the different modes to the Camera you need. Then use the RIGHT mouse button on this to set the camera.....Mandy

---

"I have written an energy bar routine but my problem is that if you destroy the "baddie" while you are within its sensor range the energy bar routine keeps draining the energy off the player. Please could you find a way to stop the energy draining even if you kill the baddie? The conditions I used are as follows:

```
CONDITION 1:
                IFSENSED    4
                THEN
                CALL        1
                ELSE
                ENDIF

PROCEDURE 1:
                ADDV       50    1
                CMPV      150    1
                IFGT
                THEN
                ADDV       25    2
                CMPV      100    2
                IFGT
                THEN
```

```
ADDV       10    3
CMPV       50    3
IFGT
THEN
ADDV        5    4
CMPV       25    4
IFGT
THEN
ADDV        2    5
CMPV       12    5
IFGT
THEN
ADDV        1    6
CMPV      184    6
IFEQ
THEN
ENDGAME
END
```

The energy bar is 23 characters long and is controlled by variable 6."

Tom Reilly, Liverpool
SPECTRUM

The only problem that I can see is that you need to add a condition to reset the variable if the "baddie" is shot. This can be done in a number of ways. Assuming that your "baddie" is the sensor itself you could reset your variable, or set it to hold a different value as soon as the sensor is shot and becomes invisible. In the 8 Bit versions of the Kit you will note that there is no command such as IFINVIS (which I must admit I really miss), however, the manual does explain how to check if an object is invisible or not and to act on a FALSE outcome, such as:

```
IFVIS     4
THEN
ELSE
SETV      0    6
ENDIF
```

The 8 Bit FCL has some advantages over the 16/32 Bit language but the lack of IFINVIS is a disadvantage, however, the programmers have provided alternative methods of reaching the results you need wherever possible.....Mandy

NEWS

NEW PD CLUB FOR AMIGA

One of our members, Peter J R Laws, informs me that he is setting up a PD CLUB for Amiga users which will cost £7.50 for UK members and £13.50 for Europe. For this Peter tells me you get a bi-monthly newsletter with TIPS and POKES (for games and PD) and will also contain Letters, Adverts, Reviews of PD disks, Mail order etc. It will be around 14 pages and A4 size. Not only that but Peter tells me that there will be 2 FREE PD GAMES WITH EVERY ISSUE! Sounds good to me. For more information and to get a PD list why not write to Peter at Aztec PD, 60 Standard Road, Enfield, Middx, EN3 6DP. Telephone/Fax 0992 717824 between 9am and 8pm.

MORE ON-LINE NEWS

If you have a modem then why not take advantage of it to get more information and help about the 3D Kit? There are three sources that I know of where you can log on for Kit info. The first of these is: 3D Construction Kit CIX Conference - this is run by one of the programmers, Paul Gregory, and is open to all registered users and only registered users can gain access to it. Anyone wishing to gain access should simply MAIL Paul under the username DIMENSION with your registration number and as soon as possible Paul will contact me for confirmation of registration and you should receive a reply in your MAIL basket within a few days. The conference is used by people wishing to contact other users to exchange ideas, environments, FCL programs etc. The conference is regularly moderated by Incentive so any problems and queries could be answered by them. The conference also has a filelist so if you have an interesting environment or object or anything relating to 3D Kit you wish to share, simply upload it to the conference.

As I mentioned in the last Newsletter, Chris King has set up a section of his BBS devoted entirely to 3D Kit. Chris is already preparing a filelist of material for downloading but would like quite a lot more so please, if you have any routines etc that you would like to share with other users then why not upload them to Chris, or have a word with him about it first to find out more details. There is also quite a lot more to interest you on Chris' BBS which is called KING OF THE CASTLE. Go on, why not give him a ring on (0233) 620228 and see what it is all about. I understand that the board is now open 24 hours!

Don't forget that Marco Grubert also has a 3D Kit area on his BBS in Germany. This means that there will be lots of 3D Kit information available easily to everyone. The board is called ALPHA-BOX-BERLIN and the telephone number is (030) 744 71 06 and is open between 7am and 1am. Sysops are Prochnow, Cosysop Crossfire (that's Marco!).

If you log on then it might be a good idea to have your latest issue of the Newsletter handy as you might have to answer a couple of questions just to make sure that you are a bona fide member of the User Group.

If anyone has any information they would like to pass on to other members such as clubs, bulletin boards etc then please write in and I will gladly print details here for you. Obviously preference will be given to items which are specifically 3D Kit related but if there is room I will print other items as well.....Mandy

3D CONSTRUCTION KIT USERS GROUP

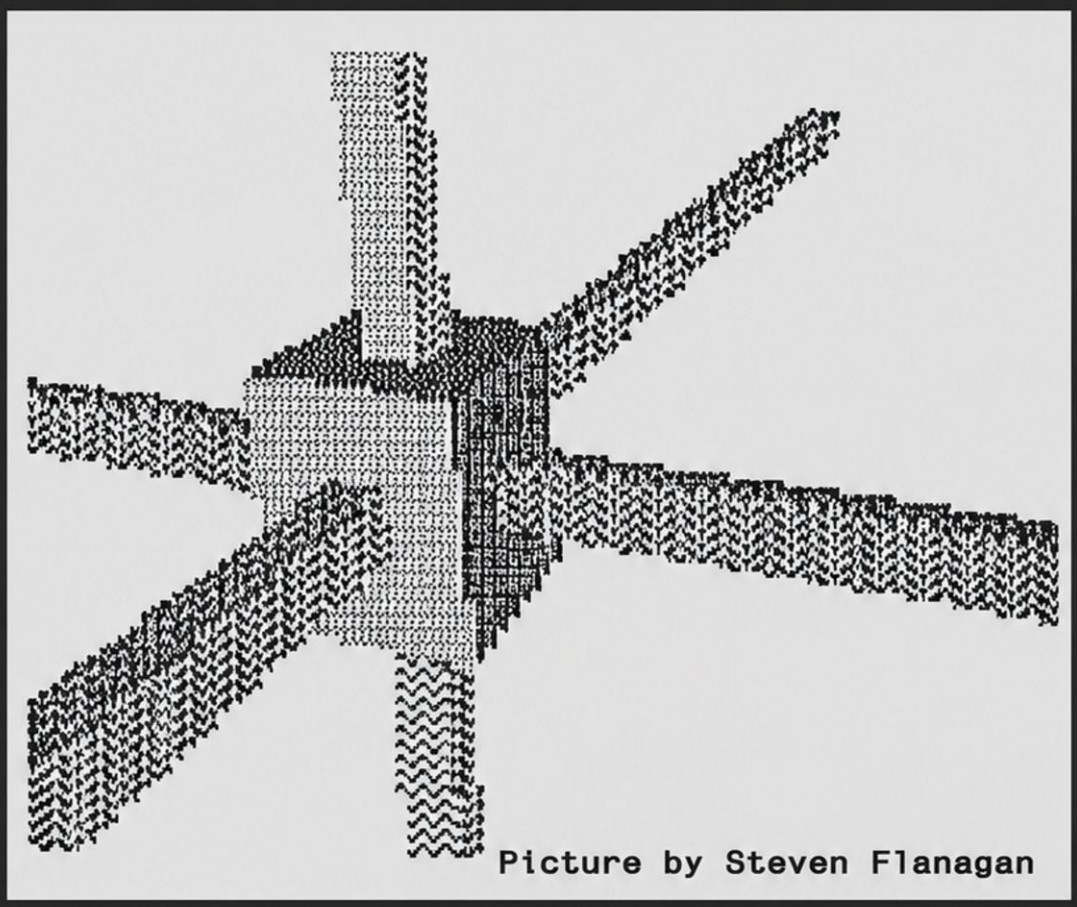
3D Construction Kit Newsletter

Issue Number 9
October/November 1992

CONTENTS

EDITORIAL 203
LETTERS 203
16 BIT COMPETITION RESULTS 209
THE 3D CONSTRUCTION KIT II 209
HINTS AND TIPS 211
STEP-BY-STEP GUIDE 212
PUBLIC DOMAIN LIBRARY 213
STEP-BY-STEP GUIDE FOR SAVING KITGAME OBJECTS 215
16/32 BIT ROUTINES 216
MESSAGE HANDLING 219
HALL OF FAME 222
8 BIT ROUTINES 222
GEOGRAPHICAL LINKER 225

NEWSLETTER Oct/Nov 1992
Issue No. 9



Picture by Steven Flanagan

3D CONSTRUCTION KIT USERS GROUP

EDITORIAL

Welcome to issue 9 of the 3D Construction Kit User Group Newsletter.

My goodness, doesn't time fly? I have been so busy again this last couple of months that newsletter time has arrived again and caught me on the hop! What with the children being home for the half-term holiday and wanting to monopolise every computer I need to work on, and being laid low with yet another nasty flu bug, I've also had a busy time playtesting the new version of the Kit and, thank goodness, you can read all about it in this issue. Not that I had space to tell you everything about all the new features - there are far too many to be able to include in one review. I was talking to a member on the telephone this afternoon about it and realised that I didn't even mention the ability to have interesting video-type sequences during play, in the review. However, I know that you will all be delighted with Kit2 when you see it. It should be out by the time you read this. Details of how User Group 16 bit members can upgrade are also included at the end of the review. I am grateful to Incentive and to Domark for allowing members of the User Group to upgrade at a greatly reduced price when everyone else has to fork out the full £50 for it.

I should imagine that we will soon have routines in the newsletter to cover all the extra features of Kit2 and I can hardly wait to see them. I think it will take some of you really good programmers out there to discover all the many interesting features and how to use them properly as I haven't had time yet to really make good use of all the many new features within a working environment. Not that you have to be a good programmer to get working on Kit2 as the operating system is so easy to use - just click buttons for most of the new interesting attributes of the objects and you will soon be creating some truly fantastic effects.

I have also now received the results of the 16 Bit competition and the winners of that, and the 8 Bit competition are in this issue - I would like to be a fly on the wall when the winner of the CDTV sees the results - no, I'm not telling here - you'll have to check out the results page to see who it was. There should be some whoops of delight too from all the other lucky winners who get a FREE copy of Kit2! Well done to all of you.

We haven't even had Halloeen yet so you may be surprised if I mention Christmas in the middle of October. However, the next issue of the newsletter (issue No 10) will be out just before Christmas, so I would like to ask our overseas readers to drop me a line to teach me how to write Christmas Greetings in as many different languages as possible. This will enable me to increase my list of seasonal good wishes to cover many more countries. Long time members will know what I mean if they had the last "Christmas" newsletter. While on the subject, would anyone like to have a go at creating a 3D Kit Christmas Tree or a Father Christmas as a screen dump suitable for use on the December/January issue? - Don't panic if you think it is impossible - it was just a thought. As I said at the start of the page, I've had such a lot to do this last couple of months that I have got a bit behind with answering all the many lovely letters and requests for help. Please be patient with me as I will catch up and reply to everyone just as soon as I can. I have forgotten what colour the bottom of my in-tray is! I'll find out shortly - I promise! See you all again in the next issue. Bye for now...

Mandy

LETTERS

Dear Mandy,

Thanks for the Newsletter. It's the first newsletter of any usersgroup I know where you get that much information about your program. I too have had the problems Margaret Christmas has with paint programs on the PC. I tried Fingerpaint 2.0 and found out the PCX files saved in Fingerpaint were not supported by the PC Paintbrush standard. Moreover, Fingerpaint doesn't support the screen format used by 3D Construction Kit (it has, for example, 640 x 200 CGA, 3D Construction Kit needs 320 x 200 CGA). So I guess the Graphic Workshop isn't the problem, Fingerpaint is. Before buying Deluxe Paint I tried quite a number of shareware paint programs and with one named Turbopaint I could save in LBM format that I could use in Deluxe Paint, it couldn't use VGA on the other hand. If you like drawing and painting on the PC, you couldn't go wrong with Deluxe Paint though.

Geert Rayserhove, Damme, Belgium
PC

Dear Mandy,

After reading the letter from Margaret Christmas about the problem converting files for use with the Kit, it seemed to me the best bet was to find a program that produces LBM files direct. I've used Graphic Workshop too and it has great difficulty converting files to IFF (which is the Amiga Deluxe Paint format and meant to be the same as LBM; though I wonder?). This difficulty seems to be with the colour palettes. A shareware program which creates drawings and outputs LBM is Turbopaint. It also imputs or outputs GIF and PCX files so can be used to convert too. I've tried it on 256 colour VGA files but these don't appear correctly in the Kit border and the only format which seems to be satisfactory is EGA. It can also create CGA files so it covers all formats the PC needs. Anyone who would like a copy can send me a blank disk and a stamped envelope and I'll copy it for them (3.5" preferably, though I can manage 5.25" if necessary). As Incentive gave us complete control over the 256 colours we use in our datafiles. I suspect it will be very difficult to load in a 256 colour border and have it appear the same in the Kit. This is because the two palettes involved are extremely unlikely to be the same - if anyone has worked around this problem, I would like to know. I don't know if it has been mentioned in previous newsletters but there are two SUPERSCAPE demo's available for VGA hard-drive PC users. One is a benchmark for the display speed and involves a 3D animated sequence of a spinning computer and falling letters (!). The other an interactive virtual reality where you either guide a man around an industrial park and explore the vehicles and buildings; or go off on your own. I can supply copies of these too if requested as they are in the Public Domain. Keep up the good work on the newsletters - I wait eagerly to find out what 3D Kit II has to offer!

Nigel Alefounder
PC
23 Aston Close, Oswestry, Shropshire, SY11 2XU

Bore Da, Mandy Fach,

That's about the extent of my Welsh. "Thank God!", I hear you say. Can't speak any Portugese at all, so you will have to say hello to your long suffering husband for me, and with twits like me taking up so much of your time, he must indeed be long suffering, and I am, without a doubt, a twit. To business! Although I have been a member of the "Club" for some months I have not found time, until this recently to do much except read the newsletters with avid interest. Oh I did try the Kit Game but didn't get very far. Wasn't surprised - know I'm thick. Started to get to grips with a few little routines this weekend. Wanted to create a text window on an instrument. Remembered seeing your answer to this in a previous copy of the newsletter so I dug it out. You said to go into the Kitgame and crib from that. Did so, used the crib - spoilt the game for me - never mind - I couldn't have played it anyway - no messages! The disc has been write protected from the moment I received it, so this is nothing I have done to it as I use a copy to work from. So here I am, no game to play, no messages to copy from, no way to write messages to my own instruments and another thousand questions to ask. What a life, ain't it? I'm enclosing my original disk in the hope that it can be replaced with one that I can crib from. Just one more thing. From the tips in the newsletter I get the sneeking feeling that an "intelligence potion" must have been packaged with the Kit. If this is so - mine was missing! Any chance of getting one of those as well? One last thing, I have created a KEY in area 1, each section of which is conditioned to make the whole key (group 33) invisible. In area 2 I have a door (cuboid 9) which I want to set so that you can only open it if the key (32,1) is invisible. I have tried many calculations and thought the following might work but it doesn't!

```
IF ACTIVATED?
AND INVIS (32,1)
THEN INVIS (9)
ELSE IF VIS (32,1)
THEN VIS (9)
ENDIF
ENDIF
```

The door (9) becomes invisible whether I have the key or not - HELP!

Pete Spooner, Abingdon, Oxon
ATARI ST

By the time you read this, Pete, your replacement disk should be with you and working fine. Nice thing about Incentive is their excellent after-sales service, these days it is nice to know that someone like our Ian Andrew puts that in his top priority list and a comfort to everyone should anything untoward happen to their programs. Unfortunately Ian didn't put an "intelligence potion" in the package - he kept that for himself! Looking at your condition, Pete, I can see that there are a couple of vital question marks missing from it and it is a bit too long - you don't need the extra line 4 either. The condition should work if you use:

```
IF ACTIVATED?
THEN IF INVIS? (32,1)
THEN INVIS (9)
ELSE SOUND (4)
ENDIF
ENDIF
```

There you are cariad bach, that should work for you.....Mandy

---

Dear Mandy,

I am about to treat myself to a +D interface for my Spectrum (grey +2), and wondered if anyone has ever customised the 3D Construction Kit to work with disk. I wasn't meaning just transferring the Kit itself to disk, by the way - what I had in mind was, could its internal load and save options for game data be made to work with disk instead of tape. I would find this very helpful if it was possible, but I realise this may not be at all easy since the tape operations are implemented in machine code. Have you had any other enquiries about this? By the way, did you receive my new subscription for the next six Newsletters? The only reason I ask is because I have not yet received the next issue but perhaps it is simply not due out yet? I can never remember whether they arrive at the end or the beginning of the two-monthly period.

Miles Kinloch, Edinburgh
SPECTRUM

No, Miles, I haven't heard from anyone on the subject of the +D in relation to the Kit before, but perhaps someone can write in with the information you need and I will pass it on. I couldn't decide on whether to send out the newsletters at the start or the end of the bi-monthly period either so I plumped for the middle! It is a bit flexible though, sometimes it will arrive early and, if I am waiting for some piece of information in particular then a trifle later. They always arrive though!.....Mandy

---

Dear Mandy,

I have been lucky in getting to grips with the Kit and have found no real problems so far. I worked out the ones I had with a bit of trial and error. I have used your idea for the User Group game which I have now completed. My version has a few surprises such as spikes emerging from the floor in the Great Hall and a monster awaiting around a corner in the Solar Room. I also used "A1 Entrance Hall" as the outside of the castle area. One of the problems there is finding out how to cross the drawbridge over the moat which surrounds the castle. You have to activate the portcullis to gain entry to the castle. The drawbridge has to be lowered over the moat. Anyway I am pleased with the newsletter but (moan, gripe, ha ha), it could be a lot bigger with more info inside it, especially the routines section. I intend sending in routines for the newsletter but I don't know if you want them on disk or on paper? I was also thinking of putting a few useful objects on disk for people to use if they want them for free, but I don't know how they would go about getting a copy of the disk.

Anthony Hartley, Lockwood, Huddersfield
ATARI ST

The size of the newsletter really depends on you all sending in material to pad out the pages. As I've said before, the more material I get the bigger the newsletters will be. Contributions can be sent in on paper, handwritten or typed - it doesn't matter which. I would like more routines for the 8 bit section as 8 bit readers seem to be rather backward in coming forward when it comes to sending in items for the newsletters. All the enthusiasm, apart from a few dedicated 8 bit members, seems to come from the 16 bit owners. It would be a shame if the 8 bit coverage fell off completely wouldn't it? I would hate to see that happen. I am glad you have found the User Group game useful and that it has given you ideas for improvement - that was the intention. I hope to continue with the game but would love more ideas from readers to give me inspiration! When your objects disk is ready you can either send it in for inclusion in the PD library or I can let everyone know where to send for it in the same way that Mr Alefounder suggests in his letter.....Mandy

---

Dear Mandy,

I've nearly completed a, I hope, good flight simulator and I am working on an adventure game. But it is very frustrating if each time I am working on a game when, after completing the dullest part - the paper-phase - of the game development and after some weeks in front of the monitor, I get the message "unknown error" or a guru meditation. Another bug, and more frustrating that the other, happened each time I tried to make a stand-alone program from my flight simulator. For some reason the view window on the stand alone game is black and I can't see the surrounding objects. I have made stand alone games before with no problem and I don't think it is a mistake that I have made. Can you help me find out what has gone wrong?

Thomas Stufe
AMIGA

Dear Mandy,

The last time I wrote I enclosed a copy of my PD game "Spielraum". This time, I enclose the sequel, entitled "Kakrivs". However, I do have a problem with this. As the program currently stands it has to be loaded into the 3D Kit before it can be played. Everything appeared to be operating okay but when I tried to make the environment into a "stand-alone" game a strange thing happened: Upon loading the finished game I found the view-window screen colours had become corrupted in strange ways! I know that I am not the only one to suffer this problem - it was first reported - to my knowledge - by David Sambrook with his game "The Maze", I wonder if you would be able to use your contacts with the Kit creators to see what could be causing this problem? Incidentally, it never occurred with "Spielraum", so I'm not quite sure why it should occur now. It must be something to do with the new routines I've used, or something! I'm still using version 1 of the Kit (the one I can't back up). I wonder if this is a bug that has been solved in the newer version of the Kit? If so, I had better trade-in my disk for the newer version! It is a shame about this bug, because, obviously, it would be nice to be able to distribute the game as widely as possible after so much work has gone into it, but as it stands, I can only offer it to other Kit users, if you print this, I would appreciate it if David (assuming he is still a User Group member), could contact me if he has solved the problem, offering the solution! After all, that is what a User Group is for! If he does, and has solved it, he is welcome to a free copy of Kakrivs! Now on to other things, I know you have just run an 8 bit competition for newsletter covers, but what about using screen shots from the PD library too? I know I, for one, would be delighted to have screen-shots from my environments used, and I'm sure others would, too. Not only that, but this would also give potential buyers the chance to see the quality of the games/environments on offer.

Peter D Ward, Dartford - ATARI ST

When I first heard about the fault from David Sambrook, I thought it was just a fault with David's program alone, not a bug and sent David's datafile to Paul Gregory at Incentive to take a look at. I heard from David some time later that Paul had solved his problem and, although I didn't receive an updated PD disk from David, assumed that everything was okay. From your letter and the preceeding one I now see that this could be either a fault in the program itself or perhaps somehow you have both done the same thing as David. Even if it is a fault of your programming we had better find out what happened so that we can warn everyone else about it.

If you would like to send me your datafiles I will pass them on to Paul for him to look at and perhaps we can find out just what is happening. It isn't a fault with just version 1 of the Kit as Thomas Stufe has been using version 2. Also both David and yourself use Atari ST whilst Thomas uses the Amiga. I am anxious to get this sorted out and will report back when I get some news. I would also like to hear from anyone else who has experienced similar problems in making stand-alone games. Nice idea about the screen-shots. If anyone would like to send some in then I will use them for cover pictures with pleasure. Thanks also, Peter, for your hints and tips, they will appear elsewhere in this newsletter……Mandy

---

Dear Mandy,

Here I am again. My apologies for all the time of silence from me but so many things have been happening this year. (My"PicCino" among a change of mainboard - from 386SX to 486SX - and damage to the video monitor set me back for three months). However, here is my subscription for another year - I still avidly read the newsletters with great interest and found the routines and ideas very useful for a game I have begun. I'm sorry I didn't participate in the 16 bit competition but maybe you have something boiling in the pot for us 32 bitters. I am excited about 3D Kit II, having read a lot about it. I have a SoundBlaster Pro and hope that the new version of the Kit will be compatible with my card. I would like to be useful to the User Group so will offer my services as a playtester. Before I close I would like to express my compliments to you, Mandy, and to all your collaborators, for the Newsletters - they have now become part of my life. Now I must go but... I'll be back! (Who said that?! Maybe Arn... Sw...!). See you again soon! Ciao.

Giorgio Oliveri, Genova, Italy
PC

Hi, Giorgio! Nice to hear from you again after so long. I hope all your troubles are over now. Good luck with your new game. Ah, another Arnie fan! What a hunk! He can be back anytime as far as I am concerned! Ciao.....Mandy

---

Dear Mandy,

I have been meaning to write to you for a very long time, and everytime you ask for contributions in the newsletter I feel really guilty. However, I'm really busy with my University studies and have not had time to spend on the Kit or send in any news since my Christmas holidays! (our Summer ones as well!). But now my subscription needs renewing I am forced to write to you. When I first got the Kit I had so many ideas for games. My first effort took me about a month to do, but has been left for almost a year just needing a few finishing touches. I'm attempting to get these done very soon and then I'll send the game to you. I'm afraid the programming is a bit shoddy as I just blindly went into it like a bull at a gate, so there won't be many useful procedures, but I think the game has a few good ideas in it (some of which have since been sent in by other users, but I didn't copy them really). Although I haven't been able to use the Kit for ages, I still enjoy reading the newsletters and looking forward to when I can next get back on my computer. The index was a great idea and will come in very handy when I get back to work. A few ideas I've had for games include a P.O.W. type escape game complete with tunnels and hidden doors/compartments. A murder mystery taking place in a cluedo-type house, with secret passages and moving bookcases etc. A Doctor Who type game or Back To The Future part 6 with seperate loads, as different times with landscapes to match. An exploration game taking place in a sunken ship. There are numerous possibilities for detective games. A nuclear reactor on the verge of meltdown needing someone to get the coolant rods down. Games on space stations. Games taking place in hotels. I hope these will give inspiration to others. I tend to get inspiration from movies.

Just reading through my letter I realised I must sound like a know-it-all, but this couldn't be further from the truth. I'm hopeless at FCL programming so I am begging all you intelligent 8-bit programmers out there to keep sending in routines. Here are a few things I have thought of incorporating into games but have had no idea how to do them. Perhaps other clever 8 bit members can send in routines to help me out. I would like to know how to: move from one area to another while keeping the same co-ordinates like "Driller", when you fly into a blank wall at the right or left side of one area and arrive in the next area at the same height at either the right or left side. When I go from walk mode to fly mode during a game (eg. picking up a jet-pack), suddenly the scale changes and I move very slowly. Is there anyone who can help me on this one as it is driving me mad.

Is it possible to get a percentage rating for nearness to a point such as the drilling process in "Driller"? Is it possible to simulate a large outside area, such as outside the pyramid in "Total Eclipse"? I know this sounds really easy, and is probably only a tiny procedure, but would someone supply a listing for making something move a bit, dependant on time (such as the eclipsing sun in "Total Eclipse"? There are other problems I have, but this letter is already far too long. I'm sorry, but all the questions and ideas have been building up over the last 10 months! I hope you won't think me impertinent to suggest this, but I did think that maybe runners up in the 8 bit competition could be given one of the games from the User Group collection such as one of those that went on the front cover of Zzap 64! It can be very hard to get that magazine over here and I'd love to get my hands on one. Anyway, just an idea.

David Lacey, Tasmania, Australia
C64

Thanks for all the great ideas, David, I am sure they will be a source of inspiration to other members. Now 8-bitters, there are a few problems for you to solve in David's letter. Let's hear from you with your routines and ideas to help David program them into his game. It will also help everyone else if they were printed in the newsletters. As everyone was a winner in the competition there were no runners-up! I wonder if the cover tapes you mention are my games? If so I'm afraid you are going to be disappointed, David, as they are not 3D Kit games but text adventure games that I wrote long before I got my hands on the 3D Kit (I did use one of Incentive's other products though, the Graphic Adventure Creator). The rights to use the games on the cover tapes for a month each were given to Zzap but the games themselves have been passed to another software company to sell so I can no longer supply them. I closed down my software company in June and handed everything over to another company.....Mandy

---

Dear Mandy,

I own an Amstrad CPC6128 plus with disc. I have no other extensions such as Rambox or extra memory. Will you help me and my mates work out how to make score if we shoot an object, how to make energy and how to make ammo. I would be very grateful. Thanks for all and please make me a list of all the variables. In the magazine 3D Kit Club please put how we can order your own magazines as lots of people would like to know. Please put all the information in the magazine.

Alan Holloway, Bexley Heath, Kent
CPC6128

All the points you are wondering about have already been covered in the newsletters, Alan. If you send me a stamped, self-addressed envelope I would be delighted to photocopy and send you all the relevent extracts from the newsletters to answer your questions rather than re-print them all here. I won't ask you to buy all the back issues as I know that you only have your pocket money. I think the magazine you mean is Adventure Probe? Actually I have now passed on the editorship of that to Mrs Barbara Gibb of 52 Burford Road, Liverpool. If you send Barbara £2 she will send you a sample copy and details of how to subscribe.....Mandy

SORRY NO MORE ROOM FOR MORE LETTERS THIS ISSUE
MORE NEXT ISSUE - DO WRITE IN AS I'D LOVE TO HEAR FROM YOU!

16 BIT COMPETITION RESULTS

Here are the results of the competition which was held in the APRIL/MAY issue (No 6). Which was for members to send in objects to be published on an objects disk to accompany 3D Kit II. Designers of the selected objects would each receive a copy of 3D Kit II and the best object selected would win a CDTV.

The lucky member whose object was considered the best by the judges, Domark Ltd, and so wins for himself a fabulous CDTV was:

PETER D WARD of Dartford Kent

Congratulations Peter, I sincerely hope that you get hours of fun and enjoyment out of your CDTV - very well done indeed!

The other lucky winners who sent in objects for the competition that were selected to go on the objects disc, and who each receive a free copy of 3D CONSTRUCTION KIT II are:

ROBIN BALL	**of Devizes, Wiltshire.**
MIEKE VAN DER POLL	**of Zevenbergen, Holland.**
MARC EPSTEIN	**of Cyprus Gdns, London.**
LIAM JOHNSTON	**of Belfast.**
STEPHEN DAY	**of Durar Of Appin, Argyll.**
SUE MEDLEY	**of Sidcup, Kent.**
MARTIN SULLIVAN	**of Reddish, Stockport.**
S. SHIELD	**of St Helier, Jersey.**
S.M. HINDLEY	**of Cropwell Bishop, Nottingham.**
STEVE ROGERS	**of Bradwell, Milton Keynes.**
STEFAN GOETZKE	**of Bremen, Germany.**

Congratulations to you all, you should be receiving your 3D Kit II shortly - I know you are all going to have hours of pleasure in store!

8 BIT COMPETITION WINNERS

8 Bit members were invited to send in printouts or hand drawn copies (if they didn't have a printer) of a suitable Kit-created cover picture for the front of the Newsletter.

Not many entries for this competition, only four (and there were SIX possible winning prizes!). However, well done to the following who each receive a copy of VIRTUAL WORLDS (Driller, Total Eclipse, The Crypt and Castle Master) plus a year's free membership of the User Group. They are:

RICHARD COLE	**of Co Durham. SPECTRUM.**
STEVEN FLANAGAN	**of Sheffield. C64.**
YANNICK GOUR	**of France. CPC464.**
DAVID LACEY	**of Tasmania, Australia. C64.**

Congratulations to all the winners of both competitions. I was sad to see so few entries to the competitions as I had hoped to run more in the future. Maybe you don't like competitions? Let me know what you think about future ones. I'll leave the decision to you.

THE 3D CONSTRUCTION KIT II

Imagine, if you will, some changes to your datafiles - take your favourite one for example - imagine walking through it until you come to a door that tantalizingly fades and appears before your eyes but, no matter how you try you cannot get through it. Imagine that your buildings have windows that you can actually see through, the glass being just a hint of colour that is transparent and the contents of the buildings visible but inaccessible - just like real windows. Imagine a sun in the sky and columns topped with globes all made with real spheres.

Imagine that as time passes evening draws on and as night approaches the sky darkens to a deep velvety black which is relieved only by the occasional flash of lightening as a storm rages overhead. Imagine that your objects can suddenly become wireframe, just like the objects in Elite or Mercenary and also imagine having the ability to make a solid object become intangible so that you can walk right through it. Imagine that you enter a vehicle in your landscape and your border changes automatically to represent the controls of the vehicle and the view from the windscreen.

With Kit I it would be impossible but with Kit II all these functions are easily available and easy to implement (and I do mean EASY). These are just a FEW, a very few of the new features that are available with the long-awaited 3D Kit II. I would need pages and pages of space to be able to tell you about all the new features that will be available to you but having to confine myself to a couple only, I will try to cram as much in as possible.

Loads of new commands carry your programming of the Kit further than you would imagine. You have the ability to have strings which will say things like "Hello" and you can add to them to say "Hello there!" You can print messages and numbers to screen with the ability to set the parameters for the coordinates that you wish. You can change fonts and text colour and so much more. There are PROCEEDURE CONDITIONS (like subroutines). Loads more mathematical procedures including COS, TAN, SQUARE ROOT etc. You can set the size of objects in different areas of your world. You can RESET objects, object colours, areas and worlds. You can force a redraw without a recalculation of the Freescape View, change the sights for shooting. If your game gets too big there is the ability to load another world so that you can have part 2, 3, 4 etc. Load in different borders as you wish, check if an area has been previously visited or an object touched. You can lock the players viewpoint onto an object or use the GOTO CAMERA to send the player somewhere if you wish.

There are loads of exciting new conditions such as the ability to plot a brush, animate a brush, set the sky, ground and object colours. The list is endless. You can open and close files and write numbers and strings to the opened files. Perhaps if I take you through some of the different commands you will discover with Kit II, you will understand what I am trying to tell you about.

As well as all the normal commands we are familiar with from Kit I, we come across CLIMBABILITY, FALLABILITY, ACTIVATERANGE, LOADSCREEN, LOADWORLD (eg. LOADWORLD("PART2.KWD")), BRUSH (eg. BRUSH(1,50,50) - plot a brush whose number is the first parameter at coordinates specified by the second and third parameters to the foreground screen). There is STARTANIMBRUSH, STOPANIMBRUSH, ANIMBRUSHACTIVE?, BORDER1 (or BORDER2 etc - display the border whose number is the first parameter), SETPIXEL, GETPIXEL, DEFFIRE (define the fire line), DEFSIGHTS, DRAWONLY, PCHAR (eg. PCHAR($41,10,10) - print the character specified by first parameter to the screen at position specified by parameters two and three), PNUMBER, PSTRING, CIRCLE (draw a circle with coordinates specified), DISC (draw a disc with specified coordinates), LINE, BOX, FRAME, (all with coordinates as with CIRCLE), SETFADER, MAKEWIRE, MAKETAN/INTAN, DEFARRAY (define array), RANDOM (eg. RANDOM (100,V20) - place a random value between 0 and the first parameter into the variable whose number is the second parameter), SETBIT, BITCLEAR, SHIFTLEFT/RIGHT, MULT, DIV, SIN, COS, UNDEFARRY, SWAPVAR, SETSTRING, ADDSTRING, SWAPSTRING, STREQ?, TOASCII, GETFADE, DISTANCE, MAKEWIRE, MAKESOLID. Whew! The list is endless!

I had better stop the list of new commands there so I have room to tell you about the objects. New objects available include a SPHERE and a FLEXICUBE! I mention the latter as this is the object that I have had the most fun with. It is difficult to describe really, it is a cube made up of lots of shapes, each with POINTS so that it can be stretched and shrunk into almost any shape you might wish to see. I pounced on the sphere immediately thinking that I could now make a vehicle with wheels but was disappointed at the results. What I ended up with was a box (my car) with four footballs at each corner! The sphere cannot be used for wheels but can be used for loads of other items. They make great bushes in pots when positioned on top of upturned pyramids!

I especially liked the ATTRIBUTES menu of each object. There is, apart from the usual attributes, the ability to select at the click of the mouse button (rather like a push on, push off panel), attributes such as TANgible and INTangible, WIREframe and solid, SNS (make object a sensor) and, most useful indeed is TRN (make the object into a transporter). The latter means that once you have set the attributes so that the object becomes a transporter you just need to enter the object condition with a simple GOTO (2,4) and when you collide with it the program takes care of the rest. Via the attributes you can also get to the DEFAULT menu for that object. With the attributes you can also use the FADE button which will give you FADEIN, FADEOUT and FADEBOUNCE so that you can easily make objects appear slowly, vanish slowly or gradually appear and vanish continually. The fade value can also be set as you wish.

In fact, even though I have only managed to tell you about just a fraction of all the features contained in Kit II, you can already see that the programmers have taken all your suggestions for improvements and what you would like to see on board. To sum up: I think you will be delighted with the new version, your programs will be much easier to build and with all the added flexibility of the new commands.

Best of all, being a member of the User Group means that you will have the opportunity to upgrade to the new version with a saving of around £30! Atari ST, PC and Amiga owners of the User Group just need to send their old program disk/s together with a cheque/postal order for just £20 (made payable on this occasion to DOMARK LTD) and send them to me at the usual address. In return I will send you the complete new package (box with disk/s, video, manual, extra manual etc), and you are fully equipped and ready to start programming environments like you've never been able to do before! Do remember to enclose your name, address, computer, cheque payable to Domark Ltd and your disks only (no need to enclose the whole box), and I will take care of the rest! The long wait is over, folks! I wonder which one of you will be the first to send in a routine for Kit II?! The race is on!

HINTS AND TIPS

HINTS by Peter Ward - ATARI ST

For people who use DEGAS ELITE to make borders, this is pretty common knowledge now, but there may still be one or two people :who do not know of this undocumented function. In TEXT mode, holding the CONTROL key down while pressing olthers can produce some interesting - and useful - characters. Most useful for 3D Kit users are ARROWS - CONTROL/A = UP ARROW, CONTROL/B = DOWN ARROW, CONTROL/C = RIGHT ARROW, CONTROL/D = LEFT ARROW. Other interesting ones are CONTROL/I = CLOCK FACE, CONTROL/J = BELL, CONTROL/K = MUSICAL NOTE. CONTROL/N & D gives you both halves of the ATARI LOGO on ST. You can experiment to see if any other characters are useful to you. I don't know if this applies on other art packages or machines other than the ST.

In issue 7, Martin Sullivan asked about a "jet pack" type effect as used in "Dark Side". Well, Martin, what you want to use is the MODE option. This is set to 1 initially, which is WALK. Setting it to 2 or 3 will give you different types of flight. You can set a control to change between walk and fly modes. For more detail, see pages 49 and 64 of your instruction manual, where you will see on the latter that the default control key is "V".

Someone once asked if it was possible to rotate objects during animation. Well, as far as I know, it is not, but it IS possible to give the ILLUSION of rotation by making symetrical objects and using the VIS and INVIS commands. This is quite difficult to explain, but any ST users wanting a demonstration of what I mean are advised to study the moving robots in the KAKRIVS game I've just created, as they use this technique. There is actually an advantage to using this method too: carefully selected side-shading of objects remains in the correct orientation!

To save memory when making "rooms": Colour the ground the colour you want the floor to be. Keep the horison ON. Colour the sky the shade you want the ceiling. Delete the ground cuboid. Now, providing your player does not have the option to fly (easily fixed), you only need four cubes (the walls) instead of six for walls, floor and ceiling. Just because there is no cuboid 1, it does NOT mean the player has nothing to stand on! Try it and see.

TIPS by David Lacey - COMMODORE 64

If you have an ACTION REPLAY cartridge you can use it to "freeze" your environments and print screen-shots from it by saving it as an ART STUDIO file.

A tip for clearing the Kit's memory without having to re-load the whole editor again. Just have a file on your Kit disk (eg. Kit-data 1), which is saved completely empty. When you want to clear the memory just load this file in - saves loads of time.

TIP by Alan Holloway - CPC6128 PLUS

A good Public Domain program is GPAINT. You can use it to design borders, load the Kitscreen and edit it.

STEP-BY-STEP GUIDE

MAKING INTRODUCTORY LOADING SCREENS ON THE PC!

By Mieke Van Der Poll - PC

See also the beginning of the Amiga guide to loading screens featured in the last newsletter.

It is a pity that you cannot use the F2 function key within the 3D Kit on the PC to save pictures, which you can do on the Amiga. It would be possible to even draw your borders within the Kit. Making pictures on the PC for loading screens can be done with any paint package that you have. What gives the difficulty is the program with which you will load your pictures to view them on screen and if you will be able to exit it. With the shareware programs EGAdmp or VGAdmp you can grab a picture out of a paint program. The conversion program EGA2VGA will convert any viewable EGA 640x350x16 colour and 640x480x16 (EGA/VGA) into a real VGA 320X200X256 colour picture. In your paint package you have to draw in one of these two modes. The conversion program converts the picture in a bloadable file which you can then load with VGAbld.exe and press ESC to get pack to DOS. You have to put an instruction on your picture: Press ESC.

The other utility I have, showit.exe, shows only pictures which have a .GIF extention. Now if you have a paint package with another extension you need a program to convert the extension such as Graphics Workshop. You can put an instruction on your picture: Press any key or Press ESC. By making a batchfile and calling it for instance start.bat you can put in all the relevant commands as shown below: Take any text editor and type in the following text:

Using VGA.bld.exe	Using Showit.exe
Echo off	Echo off
cls	cls
vgabld pic1	showit pic1
vgabld pic2	showit pic2
vgabld pic3	showit pic3
Runvga gamename.run	Runvga gamename.run

Save the batchfile as start.bat or game.bat and copy it on a blank formatted 5.25" disk. Copy the pic.files, pic.utility, runvga.exe and your game.run file on the same disk. By typing the name of the .bat file you can start everything running.

As not everyone boots his computer with a 5.25" disk (some have their 3.5" drive as the a:drive), there is no need to make a bootable disk. If you want to do so anyway, you can make your disk bootable when you format it with the command format a:/s or format b:/s and afterwards copy the command.com to the a:- or b:- drive. You then have to change your start.bat in autoexec.bat. Then you have a problem with formatting low density disks on high density drives together with the different DOS-versions. When you have DOS 3.3 or 3.31 and high density drives for both 5.25" and 3.5" high density disks, you format a 720 kB 3.5" disk with the command: format a:/n:9 /t:80 or format b:/n:9 /t80. A 5.25" disk 360 kB with the command: format a:/4 or format b:/4. When you have DOS 4.0 or DOS 5.0 you use: format a:/720 or format b:/720 for 3.5" disks 720 kB and format a:/360 or b:/360 for 5.25" disks 360 kB. To make them bootable add the parameter /s to the command and afterwards copy the command.com to the relevant disk. These are the formats I use.

Next issue Mieke shows us how to offer a choice of instructions or entry into the game on the loading screen for Amiga so stay tuned!

PUBLIC DOMAIN LIBRARY

LATEST ADDITIONS TO THE LIST!

MESSAGE DEMO ROUTINES by J.Hayes for the AMIGA.

DATAFILE, BORDER and OBJECT. This disc contains an excellent suite of routines showing how to scroll descriptive messages when objects are activated. Written as a small game in which you must escape from the cold. Also includes the Inventory Routines. The disk features the routines which will be serialised in the Newsletters for the benefit of other machine owners over the next couple of months. Added bonus on the disk is the best 3D black cat I've ever seen! An excellent and extremely useful addition to your collection of routines.

LANDSCAPE DEMONSTRATION DISK by J.Hayes for the AMIGA.

DATAFILE and BORDER. This datafile gives you the impression of a never-ending landscape! There is an instruction sheet supplied with the disk which explains how everything works. To make it more interesting the files are presented in the form of a short game where you must locate and obtain a hidden gold bar. I was not only impressed with the whole landscape and the feeling of space but I had loads of fun trying to locate the gold too! The border screen contains a fantastic compass which shows which direction you are facing at all times. The routines will also be serialised over the next couple of issues of the newsletter so everyone can make use of them. Sorry but both these routines are a bit too big to fit in one newsletter.

FLIGHT SIMULATOR DEMO by Thomas Stufe for the AMIGA.

DATAFILE and BORDER. This is an extremely effective demonstration of how a flight simulator can be programmed. You can rise up to a height which appears to be miles above the landscape who's features appear as small dots far below. There are quite a few areas including Egypt, Desert, Hill Country, Lake, Tanks etc. The routines will be serialised in the Newsletters so that everyone can build up their own flight simulators if they wish.

BUILDINGS by Allan Hern for the AMIGA.

DATAFILES. Allan wrote to say that he would like to see more PD disks offering people the chance to view detailed models of various famous buildings, landmarks and monuments. To start the ball rolling he has supplied a disk full of extremely well created buildings for you to view from all angles. These include Stone Henge, Salisbury Cathedral, castles and, what I guess to be homes that Allan has lived in - all of which are beautifully created. The file WW on the disk is a whole complex to explore - I don't know what it is supposed to represent. Perhaps the place where Allan works? All finely created - I enjoyed exploring them all.

KAKRIVS by Peter D Ward for the ATARI ST.

DATAFILE, BORDER, USEFUL OBJECTS FILE and README FILE. This is the new sequel to SPEILRAUM and a very worthy sequel it is too. Take your Tardis to enable you to explore Kakrivs and you are in for a treat. Watch out for Daleks though - mind you, if they do get you, a nice touch is that you don't die but take a nice little holiday in the company of a Terry Pratchett fan. There is lots to see and do if you manage to arrive in the right place. Correct study and operation of the Tardis should ensure you avoid no-mans land! Have fun - I did!

SPEILRAUM V1.2 by Peter D Ward for the ATARI ST.

This is the updated version of Peter's game. Anyone who would like to exchange their disks for the updated version can either send the old version to me or to Peter but please do enclose S.A.E.

LIGHTING EFFECTS by Robin Ball for the ATARI ST.

DATAFILES and INTRO CONCEPT DEMO MAKER. This disk features all the lighting effects that were in the last issue of the Newsletter plus quite a few more. The Clubgame is also on the disk and, not unexpectedly, our Robin has really designed it well - it knocks spots of my puny effort! - the castle look really authentic and the dungeons are really eerie. These datafiles together with the Demo Maker make this a useful addition to your collection.

THE MAZE by David Sambrook for the Atari ST.

RUNNABLE PROGRAM. I owe you all, especially David, an apology. I said in the letters that I didn't have the updated version of The Maze. Well, as you can all now see, I have! At last I can review it as it now runs on a half meg Atari ST so everyone can join in the fun. And I DO mean fun. This really is a proper maze. You enter the maze to find that there are four keyholes near a doorway which obviously means that you have to find them. Sounds easy but it is not as each of the keys is hidden in a devilishly cunning maze zone! Each zone contains a different kind of maze puzzle which has to be solved within a time limit! This game is what I call ADDICTIVE!! I can't wait for my next free session to get back to this fantastic game.

WEST ONE by Frank Carr for the ATARI ST.

This adventure game casts you in the role of Harris Tweed (agent 005.5). The evil General Dralon is holed up in the West One Complex and you have got to find him and dispose of him. The game starts with a nice loading screen followed by instructions which then takes you directly into the game. The border is very nicely laid out and easy to operate with an eye icon to examine things, a hand icon to get items etc. You are, thankfully, supplied with a gun which you soon find you need - in the good old spy tradition - so use it. As with all true adventure type games it pays to examine everything carefully for useful clues. The game is beautifully designed with realistic areas to explore. Lots to see and do to keep you happily coming back for more!

OTHER DISCS IN THE LIBRARY:

Key to what's on the disc/s:

G=Complete Game. D=Datafile. B=Border. R=Runnable Program. 3DU=3D Kit Utility. U=Other Utility. O=Objects.

SOUND SAMPLES (3DU)	**by Mieke Van Der Poll - AMIGA.**
INVENTORY ROUTINE (3DU)	**by J. Hayes - AMIGA.**
SPEILRAUM V1.2 (G/D/B/R/O)	**by Peter Ward - ATARI ST.**
BORDERS DISK (3DU)	**by Robin Ball - ATARI ST.**
DARKNESS CALLS (G/R)	**by James Yusuf - AMIGA.**
DARKNESS CALLS OBJECTS DISK (O)	**by James Yusuf - AMIGA.**
PLANET OF THE DALEKS (G/D/B) Game	**by Steve Hilder - AMIGA**
E.F.T.P.O.T.C.M. (G/R/U)	**by Andrew Herbert-AMIGA**
AMIGA BORDERS (3DU)	**by A.J.Bevan - AMIGA.**
INFILTRATION (G/R)	**by Robin Ball - ATARI ST.**
ESKAPE (G/D/U)	**by Steven Flanagan - COMMODORE 64.**

All the above disks are available from the User Group address at a cost of £1.50 each (UK). Overseas £2.50. All members who send in PD contributions can select freely from the above list as a small thank-you for their contribution and help. Back issue can be sent if preferred or a free issue added to your subscription. PC PD Library can be found on the seperate sheet enclosed with this issue.

STEP-BY-STEP GUIDE FOR SAVING KITGAME OBJECTS

TIP FOR BEGINNERS (16 AND 32 BIT USERS)

By Mieke Van Der Poel - AMIGA/PC

The Kitgame is a real provider of all kinds of objects ready to use in your own environments and games.

Before you start saving those objects you have to bear a few things in mind, though, (it isn't that simple).

1. Always work with a COPY of your original 3DCK-disk.
2. Have a blank formatted disk on hand.
3. In each area firstly look in which local scale the objects are created. Go into the area menu and click on EDIT AREA. Choose the area you are in and click the TICK icon. Make a note of the Local Scale number. Click on the OK to leave the Edit window.
4. There are two ways in which you can save objects from the Kitgame:
   - either make groups yourself from parts you want to combine, (for instance the stairs next to the Kiosk in area 1)
   - or look for already made groups in the different areas.

   When you choose Edit from the shortcut menu you are presented with all the objects and groups in that area. When clicking on a group-number twice you can edit it, so back in the editor choose HIGHL(ight) to see where it appears in the view window.

5. TO MAKE A GROUP: Click on Create in the shortcut menu and click on Group. You are presented with a group-number (or more than one if there are already groups in the area). Click twice on the last line that appears, then click on the objects in the view window that you want to include in your group. The numbers are highlighted. Click on the TICK icon and your group is ready either to edit or save. If there are a lot of objects in an area you have to scroll sometimes through the different numbers to find the ones highlighted (as is the case on the Amiga).
6. TO SAVE A GROUP: Put your blank disk in a drive. Select Save Object from the File menu and select your group-number and click on it twice. When the File Requester appears, click on the drive with the blank disk in it, click in the fileheader and delete the name (if any) next to it. Type in your own object name and press ENTER. Click on OK and the object will be saved to disk. When you save a group look at its coordinates, because at that place it will appear in a blank area when you load it in.
7. Sometimes sides of objects may be coloured invisible. So if you saved an object to disk and if, after loading it in again, you cannot see the exact shape of it, colour all sides of the cubes, pyramids, etc.
8. It may be that some parts of a group are invisible initially. This is, for instance, the case with the shark and the fish. If you save them as an object and load them in you will see in the attributes of some triangles that they are invisible. They are, however, placed on the exact place of the visible ones, so cannot be made visible. This has to do with the animation used in the Kitgame to let them really swim. You can either delete them or leave them as they are (and perhaps study the animation routine in the Sea area).
9. As there are different area (local) scales used in the Kitgame, it is best to save your object together with the local scale i.e. stair(s) ls4 or roomls12. You can then edit your area first, choose Edit Area Menu, click on the Local Scale number, type in the wanted scale number, press Enter and click on OK. Press ESC to reset the environment and then load in your object.

A good example of a "small area" is the area of the Changing Room, scale 12. When you go into its Entrance 1, you can see it is a small room compared, for instance, with the interior of the Kiosk (scale 6).

You can save this room by creating a group and adding the four walls and the ceiling to it. You now have your globals for an area scale 12. You can obtain a bigger room when you alter the area scale but you will notice that you yourself become smaller looking up against huge walls. In this way you can create some interesting effects with other objects too.

When you load the Room-object in onscale 12 you don't see every wall because parts of it are coloured invisible. When you colour them in you see you have a closed environment but you cannot yet go inside it.

Now the best way to make an entrance is to walk to a wall until you bump against it. The easiest way is to stand in front of the wall where your rotation is 0000 in every direction. Create an Entrance (Entrance 002). In the Area Menu, select Edit Entrance, choose Entrance 002 by clicking twice on it and you will see the coordinates of it. In the first line look at the most right number. If it is, for instance, 0400 then click on it and add 500 to it, so type 0900. Press Enter and click on OK. Then choose GOTO Entrance in the Area Menu. Click on Entrance 002 twice and you are probably in the room now. Move backwards until you collide with the wall behind you and then again edit Entrance 002 and put in the coordinates you see in the information bar under the view screen.

16/32 BIT ROUTINES

PROGRAMMING A FLIGHT-SIMULATOR - PART ONE

By Thomas Stufe - AMIGA

HOW TO PROGRAM A LARGE LANDSCAPE:

One of the problems appearing when programming a flight (or tank or whatever) simulation is that there are only small areas to use as a landscape. Of course it is possible to compensate it partly by creating very small objects, such as small buildings, tanks, aircraft, SAMs... But that does not seem a satisfactory solution for everyone. So the following routine might offer another way.

The routine links a group of areas to form a large landscape. The first thing to do is to develop the landscape on paper. Like this:

On each area one entrance is sufficient and its position isn't important.

The following variables are necessary:

seca, secb	- coordinates of the current area.
x, y, z	- V0, V1 (Alt), V2 - Position of aircraft.
xr, yr, zr	- V3, V4, V5 - View angle.
x, y, z	- intermediate memory for x, y, z
xr, yr, zr	- intermediate memory for xr, yr, zr
f	- Flag variable from the game - I use only the first bit.

It is necessary to initialise the variables seca and secb (pointing to the start area, the area containing the base). Bit 1 of f has to be 0 on each call of this routine, you cannot use it in other parts of the game. That's a rough outline of the routine (of course in a general condition):

Call:

```
IF X < 200
OR X > 8000
OR Z < 200
OR Z > 8000 THEN:
```

save the view position and -angle:

```
SETVAR X = X'
       Y = Y'
       Z = Z'
       XR = XR'
       YR = YR'
       ZR = ZR'
```

Calculate new area position, new view position:

```
IF x < 200,  THEN secb=secb-1, x'=8000, ENDIF
IF x > 8000, THEN secb=secb+1, x'=200, ENDIF
IF z < 200,  THEN seca=seca-1, z'=8000, ENDIF
IF z > 8000, THEN seca=seca+1, z'=200, ENDIF
```

New area (for this example):

```
  IF seca=1, THEN
  IF secb=3, GOTO area "Hills"
  set bit 1 of f
  ENDIF
  IF secb=4, GOTO area "Lake"
  set bit 1 of f
ENDIF
  IF seca=2, THEN
  IF secb=1, GOTO area "Tank platoon"
  set bit 1 of f
  ENDIF
  IF secb=2 or secb=3, GOTO area "Hills"
  set bit 1 of f
  ENDIF
ENDIF
  IF seca=3, THEN
  IF secb=3, GOTO area "Base"
  set bit 1 of f
  ENDIF
ENDIF
  IF seca=5, THEN
  IF secb=3, GOTO area "Cairo South"
  set bit 1 of f
  ENDIF
  IF secb=5, GOTO area "Sam's"
  set bit 1 of f
  ENDIF
ENDIF
```

That means: Bit 1 of f is 0, if none of the above mentioned areas is entered and that means, for my example, that the aircraft is flying ever dull desert:

```
IF ANDV (1,f)         : if bit 1 is set
THEN SUBVAR (1,f)     : then delete it
ELSE                  : else
GOTO area "Desert"    : go to the desert
ENDIF
```

This spares a lot of work as one has to program the most used area (empty desert, sea, grassland...) only once. Now long-distance flights over hundreds of kilometres of desert are no problem any longer.

Now it is necessary to give the saved view position and - angle to V0 - V5, as the aircraft has to appear exactly on the right point in the new area:

```
SETVAR x' := x
       y' := y
       z' := z
       xr' =:xr
etc, etc
```

When creating the landscape it is necessary to make sure that the objects are not placed near the border of the area. Imaging the face of a pilot if suddenly a big mountain appears in front of him. The transformation from one area to another is abrupt enough as it is. Make sure that all areas use the same sky colour etc.

It is possible to set any flags = 0 for further use on each call of this routine:

```
IF ANDV (f,2^(x-1))        : if bit x set
THEN SUBVAR (2^(x-1),f))   : then delete it.
ENDIF
```

These flags will be deleted on each transformation from one area to another and it is possible to initialize actions only once on each area (the start of a SAM, for instance or the assault of an enemy aircraft, or...).

Area condition:

```
IF ANDV (f,2^(x-1))        : if bit x set then
THEN END ENDIF             : go ahead.
ADDVAR (2^(x-1),f)         : lock up after using it once,
                           : do the following orders only once.
```

In comparison to commercial software, this landscape may not be regarded as extremely good-looking but we have to keep in mind that the 3D Kit was not developed primarily for simulations.

NEXT ISSUE THOMAS SHOWS HOW TO PROGRAM WEAPON SYSTEMS FOR A FLIGHT SIMULATOR SO WATCH THIS SPACE!

MESSAGE HANDLING

By J. Hayes - AMIGA

Here is a routine which allows messages to be issued to the player. It uses only one line of a single text instrument for output, but the messages themselves can be of any length. A message needs to be organised into convenient "sentences" that will fit the instrument. The routine will take each sentence in turn, print it to the screen, then wait for a delay before printing the next. The player is still free to interact with the environment while this occurs.

A message must be limited to a set number of sentences, as the routine will work around this principle. However, this isn't the drawback it seems as any limit can be used. Once a message is composed of its component sentences it can be assigned to its own block. The next message will occupy another block and so on. They can be in any order, providing each block starts at the correct point. The advantage of the routine is the ability to expand a message by concentrating on the text involved rather than altering the parameters of the main routine. It will take care of itself, once the limit initially decided upon is adhered to.

EXAMPLE OF THE MESSAGE STRUCTURE:

	BLOCK 1		**BLOCK 2 ..... etc**	
SENTENCE LIMIT	**MESSAGE 1 SENTENCES**		**MESSAGE 2 SENTENCES**	
(examples)	*Start*	*To*	*Start*	*To*
5	1	5	6	10
9	1	9	10	19
20	1	20	21	40
etc...				

OR: SENTENCE START = (MESSAGE - 1) X SENTENCE LIMIT + 1

Although a message will occupy one block, it isn't necessary to define sentences that are not used within it. If a message only consists of one sentence the rest can be ignored. The routine will still count through the block up to the limit, but unless a sentence has been described for it, it will take no notice.

VARIABLES USED:

(Refering to them by name)

Vsent - Sentence Number

Set initially to the start of a message. It is taken by the routine and used to print sentences.

Vsentcount - Sentence Counter.

Set initially to zero at the start of a message. It is then used by the routine to count up to the sentence limit.

Vdelsent - Delay Sentence.

Handled by the routine. Delays each sentence before next is printed.

MESSAGES:

As the routine progresses, it extracts from the message block the next sentence to print and sets it into Vsent. The sentence itself is described in either LOCAL or GLOBAL (General) conditions. It is wise to organise them into seperate conditions (blocks) for each message so that they are easier to send and amend.

If a message is issued from one area only, either by interaction with objects or called from within a Local condition, put the sentences into a Local condition. Each condition (block) can be restarted from 1 with each area. Should a message be required in any area, put it into a Global condition.

It must then have assigned to it a unique message block that will not clash with any other sentences anywhere else. It can be called from any point. To clarify:

MESSAGES IN THESE CONDITIONS (order unimportant)

AREA 1	AREA 2	AREA 3 etc	GLOBAL
Message 1	Message 1	Message 1	Void
Message 2	Message 2	Message 2	Void
Void	Void	Void	Message 3
Message 4	Message 4	Message 4	Void
These messages are local to these areas, so the same blocks can be used. Skip the blocks used for global messages.			This message is global to every area and must occupy a unique block. Skip blocks used in areas.

Whatever the condition chosen, the format remains the same:

```
IF VAR=? (Vsent,Sentance start) THEN PRINT ("Text1",n)
ELSE IF VAR=? (Vsent,Sentence start+1) THEN PRINT ("Text2",n)
ELSE IF VAR=? (Vsent,Sentence start+2) THEN PRINT ("Text3",n)
     Repeat for every sentence in the message. Ignore any not used
     and remember the limit. Limit=Sentance start+sentence limit-1.
ENDIF
               n = Instrument number.
```

ISSUE MESSAGE:

To get a message printed, the main routine has to be enabled. This is achieved with:

```
SETVAR (Sentance Start,Vsent)   -point to first message in mess.block
SETVAR (0,Vsentcount)           -reset the limit counter
```

These two commands must be used together.

MAIN MESSAGE ROUTINE Enter in General (Global) Condition.

```
IF VAR>? (Vsent,0) THEN      }       - If message still active.
IF VAR=? (Vsentcount,0) THEN }       - Check if just issued.
SETVAR (1,Vsentcount)        }->*C   - If so, disable check,
SETVAR (0,Vdelsent)          }       - and reset delay
ENDIF                        }
ADDVAR (1,Vdelsent)                  - Increase delay.
IF VAR>? (Vdelsent,25) THEN   ->*A   - If reached *A then,
SETVAR (0,Vdelsent)                  - reset delay.
PRINT (" fill with spaces",n)        - Erase last sentence.
ADDVAR (1,Vsent)                     - Point to next sentence.
ADDVAR (1,Vsentcount)                - Update count.
IF VAR>? (Vsentcount,9) THEN  ->*B   - If count reached limit,
SETVAR (0,Vsent)                     - Disable current message
ENDIF                                  and the routine will remain
ENDIF                                  idle until another is issued.
ENDIF
```

```
*A = Delay used.
*B = Sentence Limit.
*C = This part is needed to reset the delay if a message is issued
     before another has a chance to finish.
```

MESSAGES IN USE:

Certain actions can be timed to coincide with the appearance of a sentence. This can either be handled in the message block where the sentence is described or tested for separately in another condition.

```
IF VAR=? (Vsent,5) THEN...
(whatever...)
ENDIF
```

Messages issued before others have finished will be printed instead. This cannot be avoided altogether, but with care they can interrupt each other without spoiling the overall effect. Actions that rely on the appearance of a sentence must be carefully used in this respect. However, there is a solution!

QUEUED MESSAGES:

This technique puts messages into a queue until the display is free for them to be seen. A variable - Vwaitmess, stores the bit values used to represent a message. A total of 14 global messages and 14 local messages per area can be withheld in this way.

```
BIT VALUE          1   2   4   8  16   etc
REPRESENT MESSAGE  1   2   3   4   5
```

With this method, a message is issued from any point with:

```
ORV (Bitvalue,Vwaitmess)       - Provide the Bit value.
SETVAR (area or V8,Vapplymess) - Point to the area its needed in.
       └(Set to 0 for global)
```

To translate this value into the required message, enter in a global condition:

```
IF VAR=? (Vsent,0) THEN         - If no message printing and
IF VAR=? (V8,Vapplyarea) THEN   - in correct area
IF ANDV (Vwaitmess,Value1) THEN - test for correct message
SETVAR (Sentence start,Vsent)   - and translate it.
SUBVAR (Value1,Vwaitmess)       - remove from queue
ELSE IF...
   Repeat for other messages applying to this area (14 max.)
ENDIF
ELSE IF...
   Repeat above for another area
ELSE...
   Repeat above for global (14 max.) - treat as an area.
ENDIF
SETVAR (0,Vsentcount)                - Reset count as before.
ENDIF
```

Text is entered in the same format as before, ensuring global messages occupy a unique block. This addition to the main routine will solve the problem of messages interfering with those already printing. If the display is free and there is a message waiting it will be seen and will apply to the selected area the user is currently in. Otherwise it will be withheld until ready. Should this area change suddenly from where a message was needed, it will not be seen. Should the area be returned to and the original setting remain unchanged, it will be seen.

I have prepared a disk for the User Group PD Library which will enable Amiga users to see at first hand how the messages work. I hope this routine will be of some use.

HALL OF FAME

My sincere thanks to all the following members who took the time and trouble to send in contributions for the newsletters in order to help their fellow members:

M.HARRIS, THOMAS STUFE, PETER D WARD, TONY HARTLEY, NIGEL ALEFOUNDER, ALAN HOLLOWAY, J. HAYES, MIEKE VAN DER POLL, PETE SPOONER, GIORGIO OLIVERI and DAVID LACEY.

Why don't YOU send in a contribution for the next issue and see YOUR name in the Hall Of Fame?

---

8 BIT ROUTINES

COMPARING VARIABLE VALUES
By Steven Flanagan - COMMODORE 64

Following on from my article in the last newsletter, another thing I discovered was how to compare one variable with another. The CMPV command only allows you to compare a variable with a fixed number, but what if you want to compare one variable with another? The following routines compare variable 1 with variable 2. If they are both the same, variable 3 will be set to 1. The routines are very complex so spend time reading them to understand how they work.

PROC 1

```
TESTV    1    4   -  Tests if the variables have already been XOR'd.
IFEQ              -
THEN              -
ELSE              -
SETV     0    3   -  If they have then the two variables are different.
SETV     0    5   -  So reset everything to start again.
ENDIF             -
XORV   255    1   -  This toggles every bit in variables 1 and 2.
XORV   255    2   -
XORV     1    4   -  Makes a record that variables are toggled.
END
```

LOCAL or GENERAL CONDITION 2

```
CMPV    0   5
IFGT
THEN
END
ENDIF
TESTV   1   1
IFEQ
AND
TESTV   1   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    1   5
TESTV   1   4
IFEQ
THEN
ELSE
ANDV    1   4
CALL    1
END
```

LOCAL or GENERAL CONDITION 3

```
CMPV    1   5
IFEQ
THEN
ELSE
END
ENDIF
TEST    2   1
IFEQ
AND
TEST    2   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    2   5
TESTV   1   4
IFEQ
THEN
ELSE
ANDV    1   4
CALL    1
END
```

LOCAL or GENERAL CONDITION 4

```
CMPV    2   5
IFEQ
THEN
ELSE
END
ENDIF
TESTV   4   1
IFEQ
AND
TESTV   4   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    3   5
TESTV   1   4
IFEQ
THEN
ELSE
ANDV    1   4
CALL    1
END
```

LOCAL or GENERAL CONDITION 5

```
CMPV    3   5
IFEQ
THEN
ELSE
END
ENDIF
TESTV   8   1
IFEQ
AND
TESTV   8   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    4   5
TESTV   1   4
IFEQ
THEN
ELSE
ANDV    1   4
CALL    1
END
```

LOCAL or GENERAL CONDITION 6

```
CMPV    4   5
IFEQ
THEN
ELSE
END
ENDIF
TESTV 16   1
IFEQ
AND
TESTV 16   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    5   5
TESTV   1   4
IFEQ
THEN
ELSE
ANDV    1   4
CALL    1
END
```

LOCAL or GENERAL CONDITION 7

```
CMPV    5   5
IFEQ
THEN
ELSE
END
ENDIF
TESTV 32   1
IFEQ
AND
TESTV 32   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    6   5
TESTV   1   4
IFEQ
THEN
ELSE
ANDV    1   4
CALL    1
END
```

LOCAL or GENERAL CONDITION 8

```
CMPV    6   5
IFEQ
THEN
ELSE
END
ENDIF
TESTV 64   1
IFEQ
AND
TESTV 64
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    7    5
TESTV   1    4
IFEQ
THEN
ELSE
ANDV    1    4
CALL    1
END
```

LOCAL or GENERAL CONDITION 9

```
CMPV    7   5
IFEQ
THEN
ELSE
END
ENDIF
TESTV 128   1
IFEQ
AND
TESTV 128   2
IFEQ
THEN
ELSE
CALL    1
END
ENDIF
SETV    0    5
SETV    1    3
TESTV   1    4
IFEQ
THEN
ELSE
ANDV    1    4
CALL    1
END
```

The routines test each bit of variable 1 and variable 2 and if both are the same the program continues to test the next bits in the variables.

If the two variables are the same, variable 3 will be set to 1 until the variables are different. If the two variables tested hold different numbers, variable 3 will be set to 0. You can change the variables to be compared by altering the variables tested in the conditions.

The routines do not have to be in the local or general numbers that I have labeled them, but they should be in the same order as they are shown. Unfortunately, the above routine continually inverses the values of the variables being compared - in the above case variables 1 and 2. This means that if variable 1 was the player's strength and had a value of 10 the routine would constantly change the value to its inverse value which is 245. If this variable had an instrument, the instrument would show this constant jumping. Testing this strength value to see if it is over the limit would also be a problem as the inversed value of the strength may be tested. There is a simple way to solve this, all you have to do is transfer the values of the two variables to be tested and store them in two storage variables which can be compared.

For example, if we want to compare variables 1 and 2 but don't want to change their values in the process, we can first transfer the value of variable 1 into variable 3 and variable 2 into variable 4. The compare routines could now compare variables 3 and 4. To do this you would need two more routines before the compare routines so the routine number shown above need to be added with 2, so routine 5 would become routine 7. Routines 1 and 2 should be as follows:

ROUTINE 1: Transfer the value of variable 1 to variable 3.

ROUTINE 2: Transfer the value of variable 2 to variable 4.

(The information needed to program these routines are given in the transfering variable values article in the previous issue.)

Routines 3 and above should contain the compare routines to compare variables 3 and 4.

(My thanks to Steven for this excellent routine. I had the pleasure of meeting Steven in person a month ago when we spent a delightful evening delving into 3D Kit together. What a nice fellow he is..Mandy)

GEOGRAPHICAL LINKER

And other tips by M. Harris - SPECTRUM

I write yet again! Just this once though, I have decided not to slag off 3DCK at all. Basically all I want to do this time is pass on a bit of info and a totally crucial routine that will leave people wondering why the hell they hadn't written it! Ok then, first up is the info. This is for the Spectrum version but should work for the other 8 bit version as well.

Right then, if you need to force a redraw but don't need it instantly thereby slowing the program down, use TOGVIS 255 or any other undefined object number. The second bit of info ties in with the following routine. If you want to get to another area with your viewpoint/coordinates intact use GOTO 0 AREA. Now the routine. This should be set up as 2 Procedures, the second procedure using the numbers in brackets.

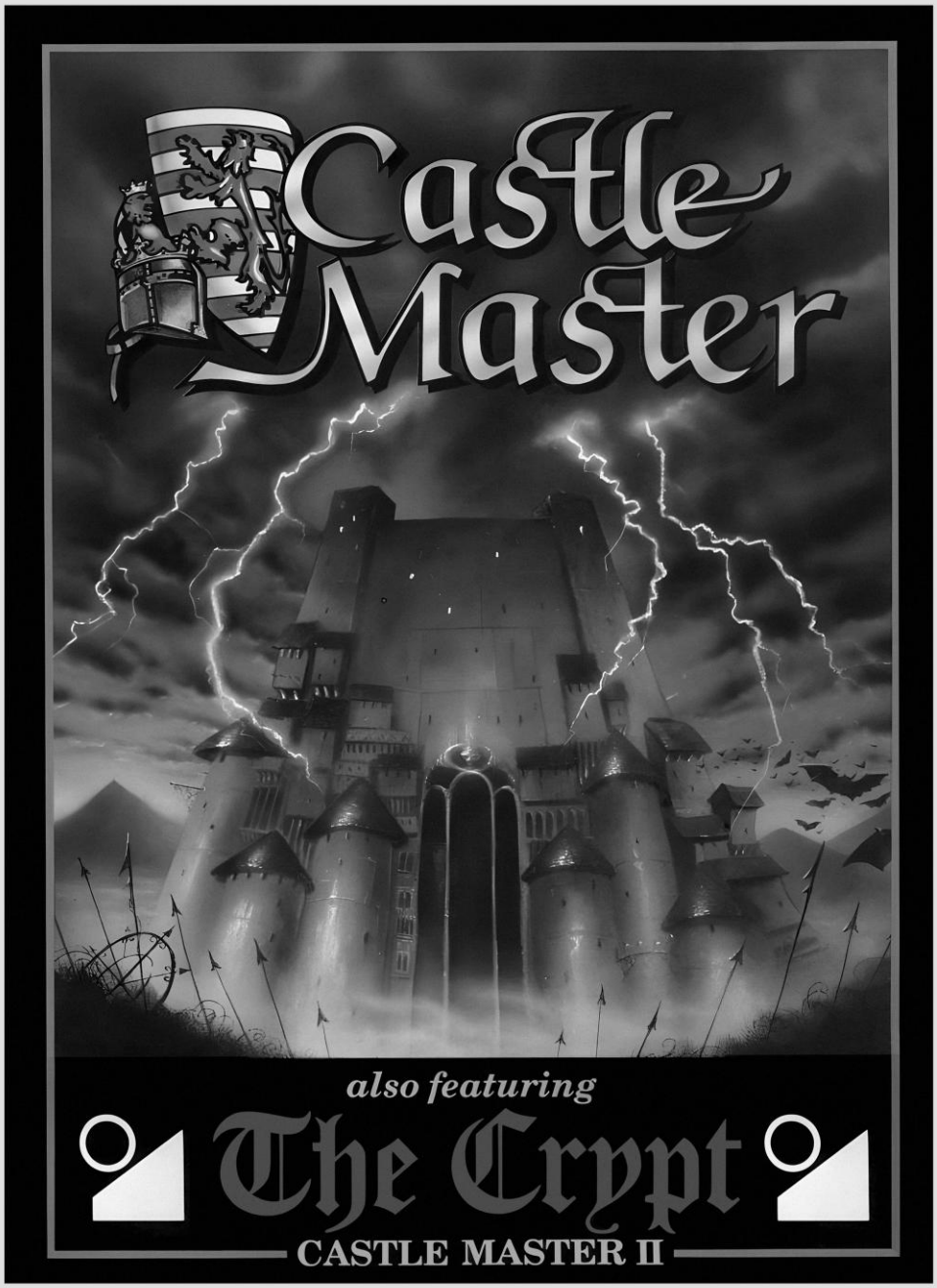
```
                X-E/W    Z-N/S
CMPV    000     113      (117)      XORV    031    113     (117)
IFEQ                                CMPV    000    113     (117)
THEN                                IFEQ
SETV    184     112      (116)      THEN
SETV    031     113      (117)      SETV    008    112     (116)
END                                 END
ELSE                                ELSE
SETV    008     112      (116)      SETV    184    112     (116)
SETV    000     113      (117)      END
END
```

Smartass method!

Personally I prefer the one on the left. Anyway to use it you need to set up 4 invisible walls in the globals area. The walls should have a maximum height and length and a thickness of zero. When you want to leave an area use:

```
IFHIT EAST-WALL      (X-Wall is the global No of X-Wall)
THEN
CALL PROC 1          (Proc 1 is assumed as E/W toggle)
GOTO 0 EAST-AREA
ENDIF
IFHIT WEST-WALL
THEN
CALL PROC 1
GOTO 0 WEST-AREA
ENDIF
IFHIT NORTH-WALL
THEN
CALL PROC 1         (Proc 2 is N/S toggle)
GOTO 0 NORTH-AREA
ENDIF
IFHIT SOUTH-WALL
THEN
CALL PROC 2         (For this routine to work really well
GOTO 0 SOUTH-AREA    it is best to hack out the "bump" SFX!)
END
```

(obviously you need to substitute the number of your objects which represent your walls and the area numbers.)



3D

CONSTRUCTION
KIT USERS GROUP

3D Construction Kit Newsletter

Issue Number 10
December/January 1992/1993

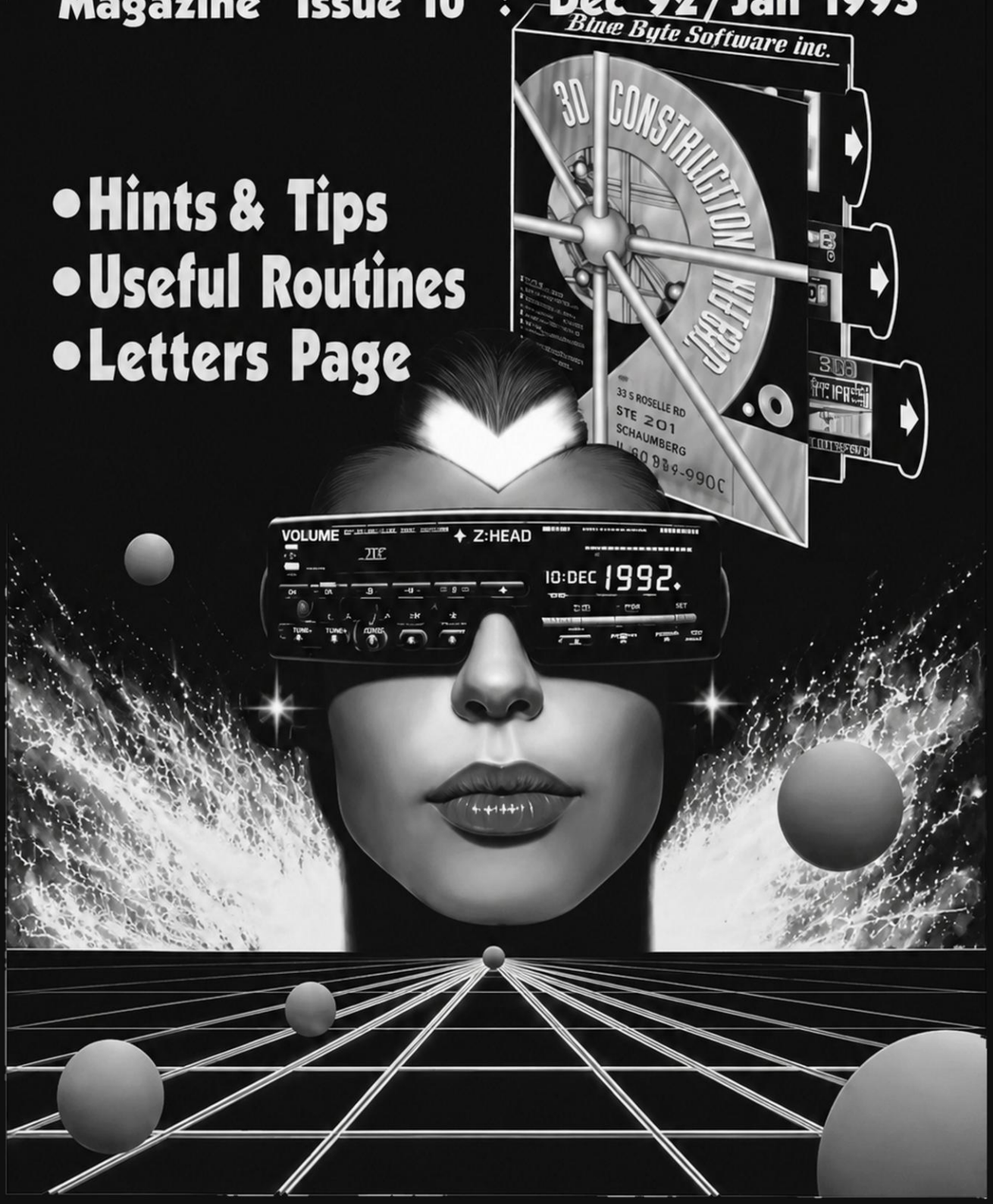
CONTENTS

EDITORIAL 229
TEETHING TROUBLES – NEWS 229
LETTERS 230
8 BIT ROUTINES 236
MAKING PUZZLES 237
MORE ABOUT GLOBALS 241
BEGINNER'S SECTION 242
BOXES INSIDE YOUR GAME 243
16/32 BIT ROUTINES 244
DRIVING AROUND 245
STEP-BY-STEP GUIDE FOR LOADING SCREENS ON THE AMIGA 246
MAKING THE MOST OF PYRAMIDS 247
STOP PRESS!! 249
HINTS AND TIPS 249
MAXIMUM MEMORY ON 1 MEG AMIGA 250
SPECIAL EFFECTS 250
TUNNEL ILLUSION 250
TIPS BY DAVID LACEY 251
HALL OF FAME 252

3D CONSTRUCTION KIT USER GROUP

Magazine Issue 10 : Dec 92/Jan 1993

- Hints & Tips
- Useful Routines
- Letters Page



EDITORIAL

Welcome to issue 10 of the 3D Construction Kit User Group Newsletter.

Once again it has been a particularly hectic month here. I thought I would have loads of time to get the Newsletter typed up, copied and dispatched well before Christmas. Unfortunately, as many of you will know, there have been one or two problems with the upgrades to Kit 2 which have taken up an awful lot of my time so, once again it is arriving at the end of the month instead of near the start! My telephone has literally been RED HOT this month due to the calls from many, rather mystified people, who received an upgrade and wanting to know if they were losing their minds or whether I was! You should all find an explanation for the "teething troubles" somewhere within this newsletter so you all know what is going on. I am hoping that you will all receive this before Christmas or shortly afterwards. I'm afraid that I won't be available over the Christmas holidays so the helpline will be closed for a week, except for emergencies. I'm sure you will all understand that it can be a little hectic trying to answer the telephone when you have your hand full of stuffing and sausage meat stuck up inside a Christmas turkey! Blame the family, not me! They demand a lot of time over Christmas. If it were up to the children we would have decorations up at the start of November and turkey, nuts and crisps all year round!

I asked for a suitable Christmas cover for this issue and a few of you sent in some really nice screen-dumps which you will find here and there in this issue. The cover of this issue, although not festive, was one done by a professional CAD (computer aided designer for novices who may think I am being unkind), and is far too good not to use instead so I hope you will understand my reasons when you see it.

Actually, now that the festive season is almost upon us I am getting full of the Christmas spirit. (Not THAT kind of spirit either - I can't drink - my confession that after one glass of cider and I go completely bananas has put paid to that!). I would like to take this opportunity of thanking you for all your lovely Christmas cards - I've never had so many in my life! I just wish that I could have sent you all one in return but there are so many of you that it would be impossible to do so (without breaking the bank), so I would like to send you all my warmest wishes for the festive season here, and, as the Newsletter travels to so many far flung regions of the World I will try to incorporate as many languages as I can. Bare with me over the spelling - I'll do my best - so here goes; Prettige Kerstdagen en een Voorspoedig Nieuwjaar, Frohe Weihnachten und ein gutes Neues Jahr, Hyvaa Joulua, Gledileg Jol gott og farsaelt komandi ar, Felices Fiestas, Frohiliche Weihnachten, Joyeau Noel, Bon Nadal, Gledelig Jul, Boas Festas, Feliz Natal, Buon Natale, God Jul, Gellukkie Kerstfeest, Nadolig Llawen, and a Very Merry Christmas and a prosperous and peaceful New Year to each and everyone of you.

Well, that's about all from me this issue. I sincerely hope that you will enjoy it and find lots to interest and inspire you within the pages. I have had to postpone the User Group Game and the PD Library list and reviews, I'm afraid, but with a thousand and one other things to attend to this month I hope you won't mind having to wait until the February/March issue for them. Bye for now and I will see you all again next issue as usual.

Mandy

TEETHING TROUBLES – NEWS

I would like to apologies to everyone who sent off in response to the upgrade offer in the last issue for the long delay they experienced (and in some cases are still experiencing). At the time the plan was that all members of the User Group would be able to receive the upgrade to Kit 2 before they arrived in the shops. Unfortunately, because of some teething troubles this was not to be. The first batch was dispatched to me quite quickly but, on checking them out, I discovered that they were slightly faulty and that if I had sent them out you would only have had to return them for replacements. It was decided that it would be better to wait a while until replacement disks could be sent to me to swap for the ones in the boxes. Unfortunately, when the disks arrived I didn't check them but swapped the disks and dispatched them all straight away (so they would arrive in time for Christmas), and much to the embarrassment of all concerned it turned out that they were all in the wrong language! The language choice option has been removed on Kit 2 and French and German disks were dispatched in error. All at Domark and myself sincerely apologise to you for this.

The Amiga replacement disks arrived and were dispatched but I am still waiting for the English PC disks which will be sent out to you all as soon as I receive them. It has been reported that the Amiga replacement disks may, in a few cases, be faulty also in that the Clip Art disks are for the PC and not for the Amiga. If that is the case then please return the disks to me for replacement.

The Atari ST Kit 2 programs were delayed for quite a while but just as I was about to write a note of explanation to everyone for the delay I had some good news that they were arriving any day. Happily I can report that they are now here and will be dispatched just after Christmas.

Other good news is that the programmers at Incentive have come to the rescue and have supplied me with a full set of the very latest disks for each version so that I can replace and return any faulty disks myself that are sent to me. If the replacement disks already ordered for the PC and Amiga are delayed for any length of time it might be better if we used this method rather than wait for them. It is up to you. I will be extremely happy when everyone has a perfect working version of this fantastic program up and running and, once again, please accept apologies from everyone for the difficulties and thank you all for your patience, good humour and understanding of the situation. You all have a wonderful sense of humour and understanding and the many amusing telephone conversations over the language problems cheered me up just when I was feeling like running away and camping on the top of Snowdon in a tent!

Please be assured that future orders for the upgrade will experience no delay and that the very latest version will be dispatched so if you haven't yet ordered your upgrade to Kit 2, don't be afraid of doing so as all the teething troubles are now over.

All you need to do is to send your old Kit 1 disks to me together with a cheque, which in this case only should be made payable to Domark Ltd, for £20 and please state if you require 3.5" or 5.25" versions if you are a PC owner. The offer is available to full members of the User Group only who are owners of Atari ST, Amiga and PC computers.

NB: Please note that 1 meg minimum is required to run Kit 2.

LETTERS

Dear Mandy,

I have been in Australia for the last five months because of the serious illness of my eldest granddaughter, but I'm back!! One of the pleasures of being home is catching up with the last few Newsletters and reading the review of Kit 2. I was disapointed, but not surprised, that my name was not among the winners. I am having the same problems as John Wright in newsletter 8 in that my objects, when viewed from the side floated apart. So jolly well done and my sincere congratulations to the over-all winner Peter D Ward and to all the other winners of the Kit 2. It was most heartwarming to get such a response in the letters of back issue 8 and 9 about the difficulty with using Graphic Workshop and my paint package. Will the new Kit support more formats, I wonder? Anyway, thanks to all that sent in suggestions. I am eager to get started in the User Group Game as I'm sure I will learn a lot from it. Which brings me to another problem. A nice one, but still a worry. I am thinking of changing my Amstrad PC 1640 for either a 386 DX or 486 SX with VGA screen. At the moment I have an EGA. Will my present Kit load on a VGA and will the 3D Kit 2 support such a machine? Should I contain myself from rushing you my £20 to upgrade until I know for sure what machine I end up purchasing? I think I may have mentioned before about my hope that perhaps we could have a get-together day for Kit Users. I would be interested to hear if other members inthe North think it might be a viable proposition. Maybe York would be a central point, with Mandy, of course, as the guest of honour. Perhaps we could interest Incentive Software or even Domark to sponsor it with a loan of hard and software. Pre-season accommodation for group bookings for B and B could be quite reasonable in early Spring. What do you think Mandy?

Margeret Christmas, Askrigg, Nr Leyburn
PC

I hope that your granddaughter is much better now, Margaret. Glad you're back home in time for Christmas. You shouldn't have any difficulty running 3D Kit 1 or 3D Kit 2 on your new PC. Domark have just exchanged my Amstrad 1640 for a Samsung 386 (mini tower system) in order that I can sort out PC queries more easily and both Kit 1 and Kit 2 load and run beautifully in the new VGA mode.

The computer came with DOS 5 and its massive manual and I am trying hard to work my way through it. I did think of taking up flower pressing instead but decided to keep at it. I think the idea of a get-together is a lovely one and, if there is sufficient support I would be happy to organise one. Let's see what everyone else thinks about it.....Mandy

---

Dear Mandy,

Thanks for printing my last letter to you and for starting the User Group Game. I have found this to be very useful, although I have come across a couple of problems. The first is that after I have programmed in the syncsnd command in the Animator (1) routine to move the bookcase, there is NO sound produced at all. I have tried SOUND also but to no avail. I have followed the printed routine exactly but still no sound is forthcoming. It's the same result for the trapdoor routine, so what's causing this to happen? My other problem seems to be lack of memory or a slow processor speed. When I have more than about 20 objects on screen in an area the speed control starts to slow down drastically so that when more objects are created or loaded in (still being less than 60) the speed of movement slows right down to a crawl. This is so frustrating that I give up using the kit for weeks at a time and am now left well behind. My Amiga 500 has 1 meg of rom. If it had more, or a faster processor chip installed would user movement be faster? Thanks for producing an interesting newsletter every two months. I find the index to issues 1-7 to be very useful indeed. I wish I had more time to spend on my computer but there always seems to be something else that needs doing doesn't there? So I am still at the beginners stage after a year. I suppose I'll have to go through all the newsletters again from issue 1 and try and catch up. I just hope I don't feel like giving up when the speed slows right down again. Surely the program was designed to run with only 1 meg of RAM?

Reg McLoughlin, Bidston, Birkenhead
AMIGA

Having worked on the Kit on all formats I have to admit, Reg, that out of the 16 bit versions the Amiga is the slowest. The Atari ST is the second fastest and the PC the fastest of all. I really don't know why that is and I agree that it can be rather frustrating. However the speed is the same on half meg and full meg machines and upwards. It is rather ironic that I get letters from PC owners asking me if there is any way to slow down the movement on their machines because it is too fast to do acurate positioning of objects! I assume from what I have seen that it is the computer that is to blame, perhaps. I haven't tried any utility to speed up the Amiga response time so perhaps another member who has tried it can advise of any improvements? It may comfort you a little, Reg, to know that with all the different computers available for me to program the Kit on, the Amiga is still the one I head for first! As for you being worried about being left behind, well don't. As long as you get pleasure out of programming with the Kit it doesn't matter how fast you master it. Besides, because of all the people who have only just bought the Kit and joined the User Group, there are people at all stages of understanding of the Kit so there should always be help for both beginners right up to advanced users in the Newsletters. Now for your problem with the sound. I cannot think why it doesn't work properly for you, Reg. I can only think that there might be a problem with your version of the Kit. If you would like to send me your disk and a disk with your datafile on I will check it out for you and exchange the disk if necessary and see how we go from there. Your disk may be corrupted in some way but unless I can see it I cannot tell.....Mandy

---

Dear Mandy,

First of all, congratulations on a year and a half of the Club, and here's looking forward to the next 300. I have a little problem (but the doctor says it will get much better if I don't wave it about so much), my animators don't seem to be working very well. If I set the MOVE (x, y, z) control to say MOVE (10,0,0) instead of moving left to right it moved back to front! I've also tried Mark Rose's lift routine, but can't get it to work, any ideas before I commit Hiri Kiri with an overdose of Coronation Street? Many readers will have recognised me from the lift routine I gave tips for for the Spectrum (8 bit), well I still use the Speccy, but have now obtained an Atari STE, upgraded to one meg, and still stuck on lift routines, ironique isn't it?

Mick Jolley, Blackthorn, Northampton
ATARI ST

Well, Mick, there is another poser for me! Why your animations are working back to front? Has anyone else come across this problem? I believe honesty is the best policy always so I have to admit that I haven't the faintest idea what could be causing this. As with the reply to the previous letter, can you send me your disk and datafile for me to investigate please? The problem intrigues me and I want to sort it out as soon as possible. The lift routine problem is probably my fault as checking it out I see that I have left out a START command on page 18 which might be causing the trouble. This should, of course, be inserted between the INCLUDE and the WAITTRIG commands. Now to really cause you distress, does anyone remember the episode in Coronation Street when Ena Sharples and Elsie Tanner got stuck in a lift.....Mandy

---

Dear Mandy,

In reply to Peter Wards letter in issue 9. I'm afraid I can't offer anything more than your own comments. As you mentioned, you sent my datafile to Paul Gregory and he replied saying my saved file had become corrupt. Obviously the corruption can't be too serious since all the data was still there. I would advise anyone sending their files off to be fixed to ensure they finish the game first. I didn't and only sent a saved copy of the first half so when I got the working copy back I had to re-write the last half. Finally I would like to apologise for my lack of contributions over the last few months. I've been busy with exams and now with re-sits for the ones I failed. Rest assured as soon as they are over I'll be back. PS. To everybody that complained about the ending to THE MAZE, I'm sorry. Yes, it is bad but I was rushing to get it finished before the start of the term.

David Sambrook
ATARI ST

I didn't get any letters of complaint about the ending to The Maze, David. Maybe someone wrote to you with some constructive criticism perhaps. Mind you, I'm still struggling to complete it myself so I haven't seen the ending. You have a devious mind to devise puzzles like that.....Mandy

---

Dear Mandy,

Well here I am again. First of all, I must tell you how thrilled I was to learn I had won the 16 bit competition! When you hinted that I had won something when I sent you my KAKRIVS game, I thought "Smashing!" and expected to be a runner-up! I never thought I could possibly win the CDTV! I had to re-read the results several times to convince myself it was really true! Now on to other matters, you will see that I have sent you quite a plethora of material this time. First of all, thanks tremendously for offering to send my Kakrivs datafile to Paul Gregory at Incentive to have a look at. It is great to think that my program will be examined by a professional programmer! I really hope the problem of the "Sambrook Bug" can be sorted out, and that it's not too serious. I am really intrigued to discover what is causing the problem. Since I last communicated, I have finished part three of the planned four-part SPEILRAUM saga. It says a lot for the user-friendliness of 3DCK when such a good-looking environment can be produced in such a short space of time once you have used the Kit a few times! I just can't wait to get my hands on 3DCK 2 now that it is finished. It sounds even better than I had hoped. I plan to finish the saga using the new Kit. With all the new features I should be able to make quite a finale! Top marks to Incentive and Domark. Never before, to my knowledge, has such support been given to a program as to 3DCK. Not only do they put the most easy-to-use 3D Construction program on release to the general public, but they actually go on developing it, taking on board ideas and suggestions from users, improve the product and release that to the public, and offer upgrades to User Group members at a reduced rate! I must say, though, that it probably wouldn't have happened without the User Group. If the setting up of the group was your idea, which I suspect it was, we have much to thank you for, Mandy. You have really put a lot into the club to make it successful. I'm afraid I've no hints or tips to offer this time, just one minor observation that folks may find helpful. If considering sending in tips: I've found that what may seem obvious to YOU is not always obvious to other people. If you use a routine or method regularly, seriously ask yourself, "Is this really made clear from reading the Instruction Manual?"

If the answer is no then you have a handy hint to give away! It was this train of thought which enabled me to send in my previous hints and tips. They don't all have to be super-brilliant technical routines like those by J. Hayes!

***Peter Ward*, Dartford, Kent**
ATARI ST

I echo your advice about the hints and tips, Peter. Let's hope that more of the hundreds of members start to send in contributions as the more information we get the more helpful the newsletters will be. The original idea for the User Group came from Ian Andrew, the head of Incentive, himself. I was delighted when he asked me to take charge of it. I do enjoy running the User Group very much indeed. It has given me endless pleasure gradually getting to know everyone via letters and the telephone and, in some cases, meeting members personally. I have noticed that the User Group is really getting a friendly atmosphere now that you are all beginning to get to know each other through the pages of the newsletters and also with the members hot-lines giving you contact. I knew from experience that this would eventually happen, it just takes a little time.....Mandy

---

Yo!

Greetings and that! This is the second time I've tried typing this, the first time by +D went mad on me and trashed the lot. Ho hum. Oh well I suppose it was because the beastie realised that I was writing about it or something. First of all I have to say that I felt a bit sick reading the 8-bit compo winners list. To think I could have created a cube, printed it and STILL won! Oh well, what's done is done I suppose. By all means do run more compos as this one has taught me a valuable lesson! Now I suppose I had better get onto the main point of this letter otherwise I'll miss Saturday Night Live! As stated above it concerns the +D. By the way do you realise that just by printing Miles' letter you are condoning piracy? After all to make a disk version of the program involves copying said program! I wonder what Domark would say if they read the letters (Don't you just love getting people wound up?!). Anyway I have actually done a full conversion of the 128K editor and the compiler AND as I mentioned last time I wrote added a few more routines to allow animation of as many blocks as you want under loop control. Also there is a block shrink/grow bit as well, for spooky effects like growing a house from a pea (Return To Eden?). If any plus D owners want more information on how it is done etc then they can contact me. Veni, Vidi, Vici,

Mark Harris
1 Salters Lane, Faversham, Kent, ME13 8YD

Printing Miles' letter wasn't condoning piracy at all, Mark. You are entitled to make a copy of the Kit FOR YOUR OWN USE. It is if you make a copy to pass to someone else that it becomes Piracy. If a tape owner wishes to make his back up to disk for his own use I see no problem at all. Careful editing and a little rewording of some letters show that I am extremely concerned about piracy. By the way, both Incentive and Domark do receive the newsletters. Piracy is a problem that will always be with us, I fear. Protection is put on programs to prevent this but as long as Hackers feel that cracking the protection is some kind of a challenge then unfortunately they will always be with us. When my first program was published, within a month I saw a letter in C and VG magazine asking for help on it from a chap in the, then, Yugoslavia! I knew very well that I hadn't sold a copy over there! I even had a lady ring me for help on one of my games recently and confessing that it was a copy she had had from a friend. She said she was enjoying it and wondered if I knew who had written it so she could look out for others. When I told her that I had written it the silence at the other end of the phone was deafening! If, as sometimes has happened in the past, someone sends me a pirate copy of a game. If I intend to use it then I make sure I buy an original copy for myself. It pays, really it does, after all I wouldn't have the trust of companies like Incentive or Domark if I didn't draw the line somewhere, would I?.....Mandy

---

Dear Mandy,

Many thanks for the latest issue of the Newsletter and the wonderful news that Kit 2 is available and at such a hefty discount. In your reply to the letter from Pete Spooner you mention Incentive's excellent after-sales service. I would like to echo your observation. It is indeed refreshing to find a software house so obviously interested in the end users continued satisfaction with their product. Although I have not had cause to contact Incentive, my copy of the Kit seems to work without problem, it is obvious from the type of comments which repeatedly surface in the newsletters that Incentive expend significant time and effort to resolve users problems either directly or through the newsletter, and yourself of course, Mandy. I can think of no better way to convey my satisfaction with both the initial product and the user group's guidence via the newsletter than to place an order for a copy of Kit 2.

Peter Sharp, Highworth
Swindon

Dear Mandy,

I have an oddity to report with my version of the Kit. Upon selecting a language the program waits for a mouse click before continuing. I have blamed my wonky HDE (hard disk interface), which sits between the machines processor and motherboard and currently carries the can for a large number of gurus and things, but I wondered if anyone else has had the same problem?

Jamie Knight, Malvern, Worcester
AMIGA

I haven't heard of the problem from anyone else, Jamie, but perhaps anyone who has experienced this would write in and we can perhaps discover what is happening.....Mandy

---

Dear Mandy,

This is the first time of writing to you apart from applying for membership in the first place. I have read every issue in my first years membership with great interest. I have to admit, I haven't really used the Kit yet, but I plan to this winter time permitting. So, why, you ask, if I haven't used the Kit am I buying Kit 2? Well, you seem so excited over it and gave it such a good review that I felt I couldn't miss such a brilliant offer. So, thank you Incentive, thank you Domark for such a tempting offer. I hope it sells better than the original. Thinking about it, I think Mandy would make a good saleswoman for Kit 2 as she seems so interested in a product that is having such an impact on so many people. Thanks must go to the programmers for writing what sounds a very impressive product and also listening to what people wanted in a program. Why can't all company's be so friendly, software quality would improve dramatically as this product will prove. Still, that's enough of your valuable time taken up with my rantings, thank you for the good work you do with the newsletter. If my help is needed in any way helping with the newsletter (if it gets too big or too time consuming for you), then just drop me a line and we'll see what can be done, also if you haven't enough playtesters by now, mine and my family are at your disposal. My family include me, Stephen, my wife Carol, my son Marc and last but not least my daughter Lianne. We are all interested in computers as Carol and I share the Amiga, Marc has an Amstrad 464, Lianne has a Spectrum 48. So here's to another exciting year of 3DCK, thanks once again for creating such a wonderful product.

Stephen Dennis
Newton Abbot, Devon

Many people will envy you, Stephen, as they may be the only member of their family who is interested in computers. It is great when the whole family gets involved - especially when each have their own computers. (Can be hell if you only have one and everyone is fighting over it though!). My family is exactly like yours and thank goodness we have enough computers to go round. One question though, which one of you has to leave the keyboard to make the coffee? I bet it is Carol. A complete family of computer freaks can have its drawbacks though. Take ours for instance. I only remember to leave off and feed them when I hear three thuds and find them all in a heap outside the kitchen door.....Mandy

Dear Mandy,

I have a little problem. My A500 having finally given up the ghost, I decided to invest in a posh new Amiga 1200. Great machine. I'd recommend it to anyone, but 3DCK is a little problematic - everything will load up fine and you can create and edit to your hearts content, but the menus don't work. You can call them up but they don't respond to your mouse clicks. I wonder if you could check with the lovely lads and lasses at Incentive to see if its just my copy or version, and if 3DCK 2 will work on the A1200?

Barry Metcalfe, Salford, Manchester
AMIGA

Paul Gregory at Incentive tells me that the Menu problem was a fault in version 1 of the Kit and was fixed with version 2. He also assures me that Kit 2 should work without problem on the Amiga 1200. I am sending you version 2 of the original Kit and I hope you have no further trouble. But, as usual, if you do then please do not hesitate to let me know.....Mandy

---

Dear Mandy,

I wondered if anyone has found a way to link Soundblaster VOC files into the 3D Kit?

R. P. Nash
15 Ullswater Ave, Roath Park, Cardiff, CF2 5PT
PC

I hope someone out there can come up with an answer to this question for Mr Nash. If so then either write via the Newsletter or directly to Mr Nash. His address is printed in full.....Mandy

---

Dear Mandy,

Please find enclosed my registration and cheque for membership of the User Group. My main reason for purchasing 3DCK 2 is to model building interiors, although I expect to indulge in the sheer entertainment value of the product as well. Having only installed the prodcut for the first time yesterday, I have not really had sufficient time to evaluate its features, but I have discovered a few problems. The product fails to install the Adlib sound driver with my Soundblaster Pro card. In fact the problem is fatal. I get a text screen with the message Divide Error at the top and a dead machine. All the graphic primitives must be aligned with the axis. This means that all the edges of cubes, pyramids etc, lie in the same direction and objects only rotate with 90 degree granulality in each axis. This might cause me a few problems with my "serious" use of the product and personally I would strongly recommend an enhancement in this area for future release. I would like to see an ability to edit an objects orientation in each axis as well as changing the size and other attributes. Anyway, having got those two issues off my chest, I must say that I am pleased that a User Group exists for 3DCK 2 and look forward to contributing where I can.

Luke Evans, Colchester, Essex
PC

I am afraid that there is a problem with the Soundblaster sound card at present, Luke. It is being fixed and I will keep everyone informed via the newsletter of when the problem has been solved. Then of course, everyone who has had this problem can return their disks for replacement. Meanwhile, I'm afraid that you will have to select PC bleep or PC sound during the 3Dedit phase to get it to run properly. I would also advise that Kit 2 be loaded directly from DOS as problems may be found if you try to run it through "windows". These are just a couple of teething troubles with the new program and, although annoying to you at present, will be ironed out as quickly as possible. Keep watching this space for news!.....Mandy

3D SEASONAL GREETINGS BY PETER D. WARD

ATARI ST

---

8 BIT ROUTINES

MODE CHANGE PROBLEM SOLVED

Thanks to Yannick Gour - AMSTRAD CPC

I would like to offer some help to David Lacey (Issue 9) with his problem but first a few remarkd: the speed in an area depends on the scale of the ared (see EDIT AREA). It is the case too for the point of view. The more the scale, the more the X or Z step is affected. Remeber too that the standard height of view in fly 1 mode is half of the one in WALK mode. That means that if we change from WALK to FLY 1 (by using icons or by writing in FCL "MODE 3"), the height (Y position) is suddenly divided by two.

TO GO FROM WALK MODE TO FLY (1) MODE WITHOUT CHANGING SCALE

I propose to use a FCL solution which should be much better than trying to explain in sentences:

```
CMPV "J" 121     - test if key J (for Jetpack) has been pressed
IFEQ
THEN
XORV 1 100       - yes: change flag
ENDIF
TEST 1 100       - test if jetpack activated (1=yes 0=no)
IFEQ
THEN             - jetpack ACTIVATED:
MODE 3           - select FLY 1 mode
SETV 224 114     - set Y position as Y position for WALK mode and
SETV 001 115     - scale 2: 480 = 224 + 1*256
ELSE
MODE 1           - jetpack DEACTIVATED: select WALK mode
SETV 224 114     - (if Y position is not set, the height is
SETV 001 115     - multiplied by 2 for the first screen in
ENDIF            - walk mode!)
```

It is necessary to adapt this routine to the scale of the area.

THE SAME THING BUT WITH CHANGING THE SPEED

I think there is no other way but to create two areas with the same objects of the same size at the same positions BUT with different scales. For example Area A with scale2 for WALK mode and Area B with scale 8 for FLY 1 mode. The FCL routines are:

```
FOR AREA A
    CMPV "J" 121
    IFEQ           - jetpack ACTIVATED
    THEN
    MODE 3         - select FLY 1 mode
    SETV 224 114   - set Y position
    SETV 001 115
    GOTO 0 Area B  - same position in Area B (see GEOGRAPHICAL
    ENDIF          - LINKER by M Harris (issue 9 p.29))
FOR AREA B
    CMPV "J" 121
    IFEQ           - jetpack ACTIVATED
    THEN
    MODE 1
    SETV 224 114
    SETV 001 115
    GOTO 0 Area A  - same posiiton in Area A
    ENDIF
```

MAKING PUZZLES

BY STEVEN FLANAGAN

Following the idea of the user group game in newsletters 7 and 8, I decided to contribute a little room puzzle that I have included in my latest game. The room contains five stepping stones that are far above the ground, so that the player will fall if he/she steps off of one. At both ends of the room are doors. On the northern wall are two triggers which transport the player from one stepping stone to another when shot. The puzzle is to get to the other side of the room to go through the door and continue the adventure. See diagram A.

The four walls and floor should be global objects. The walls should be as high as possible. The numbers before the comma shown in the diagrams are the object numbers. The numbers after the comma are the entrance numbers. All the entrances should be in the middle of the stepping stones and facing north. Load in the kit and create the room. Here is a list of the objects:

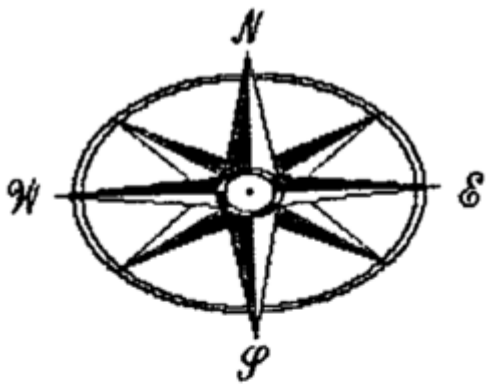
```
1 & 2   - RECTANGLES - DOORS
3 & 4   - CUBE AND ENTRANCE
5 & 6   - CUBE AND ENTRANCE
7 & 8   - CUBE AND ENTRANCE
9 & 10  - CUBE AND ENTRANCE
11 & 12 - CUBE AND ENTRANCE
13 & 14 - TRIGGERS CAN BE ANY SHAPE
```

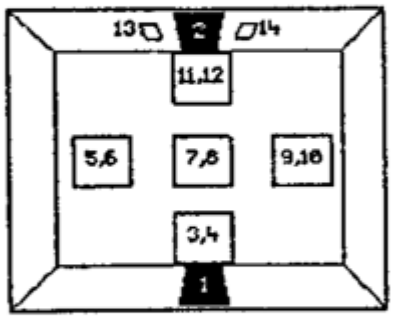
It does not matter what object numbers the walls and floor are.

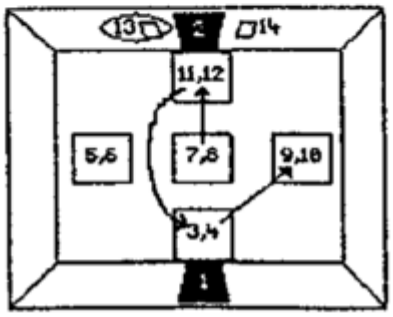
Let's review the puzzle again and sort out the details. The player arrives in the room via door 1. He/she starts at entrance 4, on stepping stone 3.If the player falls off any of the stepping stones, the game is over. In order to get to the other side, the player needs to shoot the triggers which will transport him/her to another stepping stone. The two triggers move the player differently. The stepping stone that the player is transported to depends on which trigger was shot and which stepping stone the player is standing on. Diagram B shows where the player will be transported if trigger 13 is shot. Diagram C shows where the player will be transported if trigger 14 is shot. For example, if the player is on stepping stone 3 and shoots trigger 13, he/she will be transported to entrance 10 on stepping stone 9.

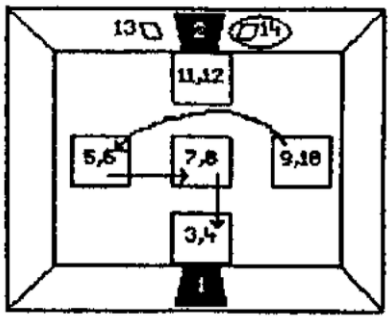
If you study the two diagrams you will see that the solution to the puzzle when standing on stepping stone 3 is to shoot trigger 13, then 14, then 14 again and finally 13. You will now be at the other door.

Hopefully you should now understand the idea. Please note that in my version of this puzzle the stepping stones, doors and triggers are very high up above the ground so you can't walk from one stepping stone to another. You can use other methods such as the stepping stones being islands above water and the player drowns if he/she falls in. You would need to create another rectangle coloured blue to be the water.









Right, you've got the basic idea and should have the objects finished so load in your condition editor and let's start writing some conditions.

It's always a good idea to plan what your conditions are going to do before you write them. So here's the plan:

The first thing that needs to be done is to test if either of the two triggers have been shot. If they have, the player needs to be transported to the relevant entrance depending on which stepping stone the player is standing on. But how can the computer tell which stepping stone the player is standing on? I suspect your initial response will be to use IFHIT to test which platform the player is standing on but this will not work for reasons I will explain.

Imagine we created a mat in an empty area and entered the following routine:

```
IFHIT   2  -  The mat
THEN
SOUND   1  -  Ping sound
ELSE
SOUND   2  -  Buzz sound
END
```

If we were to stand infront of the mat the buzz sound would continually be heard as we would not be standing on the mat. If we then walked foward across the mat then the ping sound would be heard as we crossed the mat and the buzzing sound would return when we walk off it. This is as we would expect. The problem is that if we walked onto the mat and stayed on it, the kit would ping as we move onto the mat but when we stop on the mat the buzzing sound would return even though we would be standing on the mat. The IFHIT command only returns a truth if the player moves on or into an object. It will not return a truth if the player is just touching or standing on the object without moving. I know I am going on a bit about this but I have seen a few routines in the newsletters which would not work as they should because they use the IFHIT command incorrectly. I am also guilty of this crime as the routine I had printed in newsletter 4 which tested if the player had landed would not work for the above reasons.

So you see we can not test if the player was standing a certain stepping stone with IFHIT unless the player keeps moving all the time. The answer to this problem is to store the object number of the stepping stone the player is standing on in a variable. Let's use variable 1 for this purpose. When the player first enters the room, the variable should be set to 3. When the player shoots a trigger we can test if he/she is standing on a certain stepping stone and if so, set variable 1 to the stepping stone number the player will be transported to and then move the player to the entrance at that stepping stone. Thats the theory completed. Now the conditions.

LOCAL 1

```
IFFALL
THEN
(Insert any end of)
game messages here.)
ENDGAME
```

If your platforms are not high up as you are using another idea such as water, you need to change LOCAL 1 to suit your needs.

LOCAL 2

```
IFSHOT   13        -       Tests if the left trigger has been shot
THEN
ELSE
END
ENDIF
CMPV    3   1      -       Tests if player is on platform 3
IFEQ
THEN
SETV    9   1      -       Player will be transported to
GOTO    10         -       entrance 10 at platform 9
ENDIF
CMPV    7   1      -       Tests if player is on platform 7
IFEQ
THEN
SETV    11  1      -       Player will be transported to
GOTO    12         -       entrance 12 at platform 11
ENDIF
CMPV    11  1      -       Tests if player is on platform 11
IFEQ
THEN
SETV    3   1      -       Player will be transported to
GOTO    4          -       entrance 4 at platform 3
END
```

LOCAL 3

```
IFSHOT   14        -       Tests if right trigger has been shot
THEN
ELSE
END
ENDIF
CMPV    5   1      -       Tests if player is on platform 5
IFEQ
THEN
SETV    7   1      -       Player will be transported to
GOTO    8          -       entrance 8 at platform 7
ENDIF
CMPV    7   1      -       Tests if player is on platform 7
IFEQ
THEN                       Player will be transported to
SETV    3   1      -       entrance 4 at platform 3
GOTO    4          -
ENDIF
CMPV    9   1      -       Tests if player is on platform 9
IFEQ
THEN                       Player will be transported to
SETV    5   1      -       entrance 6 at platform 5
GOTO    6          -
END
```

That completes the routines for the puzzle. All that needs to be added now are the local routines to allow the player to walk through the doors. It would be a good idea to create another entrance on platform 11 with your back to the door for when the player enters the room from the north.

The last thing to be done is to ensure that variable 1 is set the the right value when the player first enters the room, for example, if the player enters the room from the south he/she will be standing on platform 3 so variable 1 needs to be set to 3 before the player is transported to the entrance in the room.

In the area to the south of the room, add a SETV 3 1 command to the condition that tests if the player has walked through the north door, so it would look like this:

```
IFHIT  ???        -  If the player has walked through a door
THEN
SETV   3   1      -  Sets variable 1 to the platform you will
                     transported to.
GOTO   4   (area) -  Transports player to the room.
```

Similarly, the area to the north of our puzzle room needs a SETV 11 1 command in the door routine before the player is transported to entrance 12.

This puzzle room is a cut down version of my original puzzle, which had nine platforms and five triggers.

UPDATE: Members may remember me mentioning that Incentive kindly sent me an Amstrad 1640 PC with 5.25" drive last year and that if you wanted to send me anything to look at it would have to be in that format. Good news is that Domark have swapped the old PC with a Samsung 386 mini tower system PC with full VGA. As this computer only has 3.5" drive at present if anyone has anything they would like me to take a look at please send on 3.5" disk and not 5.25". The PD library for PC will still be run by Mark Rose but now I can get chance to see all your great datafiles too!.....Mandy

---

MORE ABOUT GLOBALS

By Pete Spooner - ATARI ST

There was considerable input, in the last issue of the newsletter, about Globals, so I thought that I might as well add to the debate.

The first thing to realise is that there is, in fact, only one "Global". Every time that you use this, you just get a copy of the same room. That is why, if you change the colour of one Global Area, all those that have been created previously, change to the last selected palette, as reported in issue No 8.

Personally, I find the dimensions of the default Global area to be disproportionate. The area is too large and the ceiling too high for the sort of atmosphere I am trying to create. I, therefore, set about altering the area after it was created and found myself, for a time, quite confused.

Oh, it was no great problem shrinking the walls and dropping the ceiling; it was, however, a problem to create any objects inside this suitably claustrophobic zone that I now had.

I had to raise the ceiling back up out of the way in order to get my "starting blocks" into the room before I could work on them. *(I know **EXACTLY** what you mean - Ed).* I suppose that I could have created them elsewhere and saved them as objects, but that would have meant working out sizes, mathematically - and my maths is about as good as my literary style - pretty basic.

The next problem that I encountered was that, when I programmed a door, in area 1, to take me to area 2 (the new global area, as I thought), I found myself in the right area, but OUTSIDE my global room with no way to enter it. Of course, I had arrived at the default entrance in area 2, which was, now, not inside my shrunken room. Logical, isn't it? Not to me it wasn't. It took me ages to come to that simple conclusion.

What to do? I started by lowering a wall, walking into the room, raising the wall again and creating a new entrance. Imagine my surprise when the new entrance had a number that read 257. I didn't like the look of that - thought that I must have done something horribly wrong so I scrubbed that and thought again. After working my single brain cell really hard I realised the solution. I plotted the positions of the east and south walls of my global room (from the outside), projected a point west and north of these co-ordinates and modified the default entrance to bring me to this point when the door in area 1 was activated.

Eureka! It worked! I was quite chuffed with myself. How silly and vain we human beings are, at times, aren't we? All that I had to do then was to modify the entrance, once more, to take me into the exact location, within my global room, that I wanted.

Simple when you know how, isn't it? I'm sure that other members have worked their way through other similar mundane, but to them, baffling problems and I urge them not to be shy - but to share them with the rest of us. There must be dozens of members out there who need these very basic concepts explained to them - just as I do. So come on, write in.

(I couldn't agree more - so come on, lets hear from you....Mandy)

BEGINNER'S SECTION

STEP-BY-STEP GUIDE TO USING THE MAKE COMMAND ON THE AMIGA
By Mieke Van Der Poll - AMIGA

Firstly have a blank formatted and installed (being made bootable) disk ready (see my step-by-step guide for loading screens for Amiga in issue 8).

SINGLE DRIVE USERS:

Load Workbench, go into Shell.

```
Type: cd c                Press Return/Enter
Type: copy copy ram:      "
Type: copy cd ram:        "
Type: cd ram:             "
```

Put your 3DKit disk in drive df0.

```
Type: cd df0:             "
Type: copy runner ram:    "
Type: cd ram              "
```

Put your blank formatted disk in drive df0:

```
Type: copy runner df0     "
```

Put your 3DKit disk, containing your game-datafile, border (and maybe a relevant sample sound bank) in df0. Re-boot and load 3DKit (+ sample sound bank), load border and datafile.

Swap 3DKit-disk with the blank one (with Runner on it) in df0. Save your datafile to df0. Now choose the MAKE command from the top menu bar. When the file-requester appears, it asks for the Runner-file. Click on the file Runner and click on OK. The next question in the file-requester is "Select Make Path". Click on the name of your game and click on OK. The drive starts whirring and a couple of times you get the questions such as "are you sure this is the runner disk?" and "are you sure this is the destination disk?". Click on OK until the drive has stopped whirring and the drive light is out.

If all has gone well you have the four files of your stand-alone game on the right disk. You can delete runner from it now. Reboot your computer. When the CLI window appears just type in the name of your game followed by Return/Enter and it will be loaded.

TWO DRIVE USERS:

Load 3DKit (+ samplesnd.bnk). Load Border and your game-datafile. Put your blank formatted disk in drive df1 and save your datafile on it. Then select the MAKE command. The requester asks for the Runner-file. Put your 3DKit disk in drive df0 and click on df0:. After whirring of the drive look in the file-requester for the Runner-file and click on it and click on OK. The next question is "Select Make Path". After the drive has stopped whirring click on df1 and click on the name of your game. Click on OK. After a while and whirring of both drives without questions, your stand alone game is ready in df1. Re-boot in df0 and type the name of your game followed by Return/Enter.

BOXES INSIDE YOUR GAME

(VARIABLES FOR BEGINNERS)

By Stephen Moore - AMIGA

If you are a beginner you are probably wondering what's so magical about variables. The answer is NOTHING AT ALL! Everyone has to start somewhere and sadly you may have started in the wrong place! Members will have looked at George Dixon's (very good) article on variables and said WHAT? Well, while the article is SUPERB for those who can program already it is no good to those who can't. So here is the potted guide for variables.

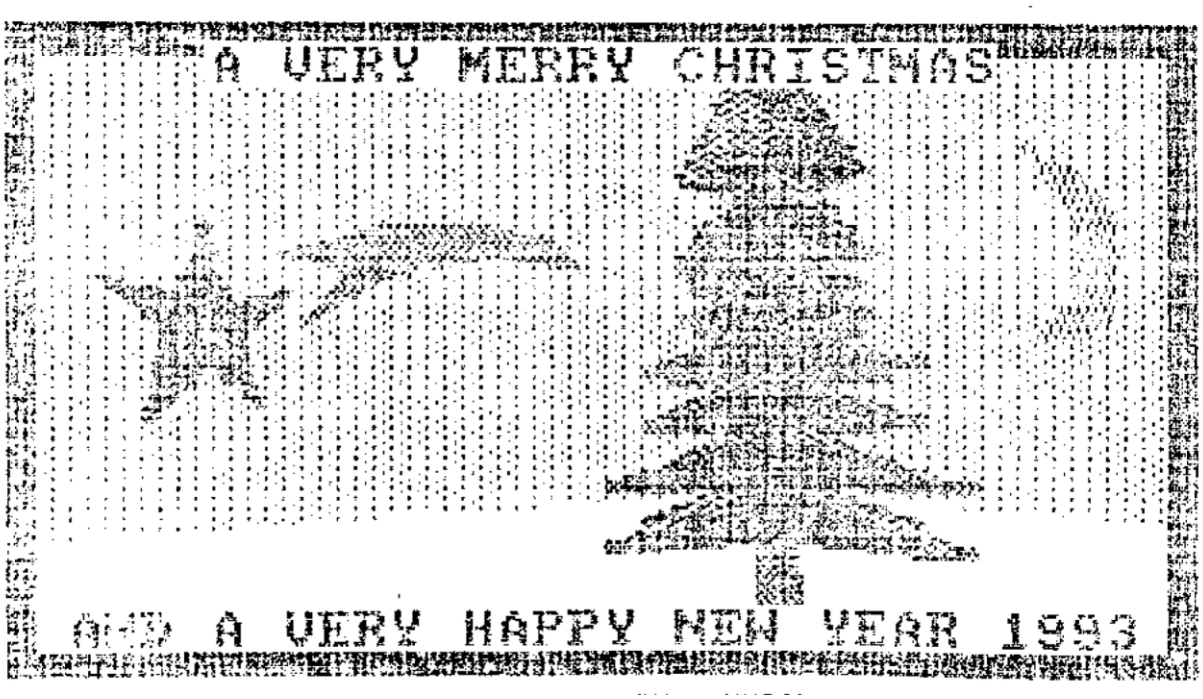
Variables can be looked at as boxes with a piece of paper and a pencil in them! Pardon, you say. Well a variable is a place to keep a number, the variable has a name (V a number), and can be used to look up a number. If you want to remember things you might have a notepad, well a variable is one stage better. A variable is like a notepad but it also has a name. So if you forget which piece of paper you wrote on all you need to do is look at the box's name.

Admittedly that was a very simple explanation, it doesn't touch on variables problems. Variables can NORMALLY only be one thing at a time, and cannot contain words. It is possible to use a variable for more than one thing but it is VERY tricky for beginners.

So how can you use variables? Well one could be used for score, one could be used for energy, another could be used to tell you if you had the fabulous laser cannon of doom or not. They are just electronic notes for you the programmer. Now go and mess around with variables and when you have an idea of how to use them try Mr Dixons brilliant article.

THE START...

Newer members of the User Group may be wondering, if they haven't yet purchased the back issues of the Newsletters, where the article by George Dixon is to be found. It is to be found in issue 3 (Oct/Nov 1991). Other issues which contain help and explanations on how to use variables, together with routines to try using variables for yourselves, can be found in issue 1 (June/July 1991), issue 2 (Aug/Sept 1991) and issue 4 (Dec/Jan 1991/1992). See page 3 for prices of back issues and how to order them.....Mandy



3D SEASONAL GREETINGS BY YANNICK GOUR

AMSTRAD CPC6128

16/32 BIT ROUTINES

PROGRAMMING A FLIGHT-SIMULATOR - PART TWO

By Thomas Stufe - AMIGA

Continued from last issue.

HOW TO PROGRAM VARIOUS WEAPON SYSTEMS:

This routine allows the user to program various weapon systems, as many as he thinks necessary. In my example I have programmed four systems. The following variables are needed:

```
ws           - current weapon system (1... x, in my example 1...4)
a1...a8      - ammunition of the various systems
a            - this variable contains the ammunition of the current system
V20, V21     - system variables explained in the manual
Instruments:
Instrument 1 - text
Instrument 2 - numerical, variable a
```

The routine consists of two general conditions. The first is:

```
IF VAR=? (81,V15)                - if key Q is pressed then:
THEN
SETVAR (0,V15)
SETVAR (15,V20)
ADDVAR (1,Vws)
IF VAR=? (5,Vws)                 - count ws from 1 to 4
THEN SETVAR (1,Vws)
ENDIF
IF VAR=? (1,Vws)                 - first weapon system:
THEN SETVAR (a,a4)               - save ammo of old system
SETVAR (a1,a)                    - and get the new ammo
PRINT ("NAME WEAPON SYSTEM 1",1) - print name of new system
ENDIF
IF VAR=? (2,Vws)                 - and so on...
THEN SETVAR (a,a1)
SETVAR (a2,a)
PRINT ("NAME WEAPON SYSTEM 2",1)
ENDIF
IF VAR=? (3,Vws)
THEN SETVAR (a,a2)
SETVAR (a3,a)
PRINT ("NAME WEAPON SYSTEM 3",1)
ENDIF
IF VAR=? (4,Vws)
THEN SETVAR (a,a3)
SETVAR (a4,a)
PRINT ("NAME WEAPON SYSTEM 4",1)
ENDIF
ENDIF
```

Second General Condition:

```
IF VAR<? (0,V21)                 - if fired since last check
THEN SUBVAR (V21,a)              - then reduce current ammo.
SETVAR (0,V21)                   - (once only)
ENDIF
IF VAR>? (1,a)                   - if a is 0
THEN SETVAR (0,V20)              - switch off V20
ENDIF
```

The result is that the ability to fire is switched on each time the button "key Q" is pressed and the weapon system changed, but, if the ammunition is used up, it will immediately be switched off by the second routine. In the object conditions of the targets it is possible to request the variable ws, and, according to its value, to vary the effect of the bullets or missiles.

Next issue Thomas will show how to handle flying characteristics to achieve a realistic aircraft movement.

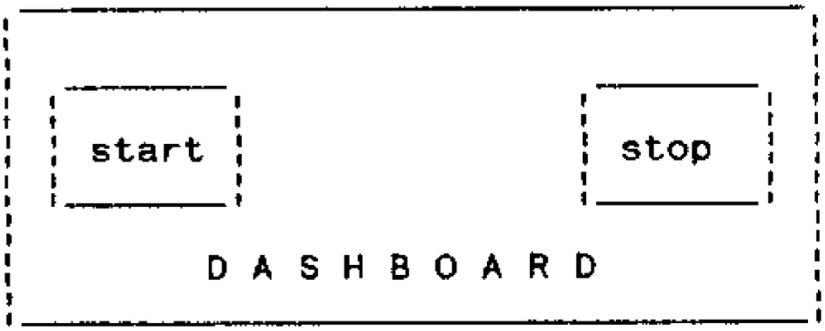
DRIVING AROUND

By Ozzie O'Mara - ATARI STE

UPDATE FROM STEPHEN SHIELD'S ROUTINE IN ISSUE 7

This routine gives the impression of driving around by being able to activate a car dashboard.

First you must create a dashboard, a cube and knobs together with controls and make them into a group. Move them to the base of the view and make all the tiems in the group moveable once they are in the correct position. A very simple dashboard might look like this example:




```
CREATE ANIMATOR (1)
        INCLUDE (5)       (Group number)
        START
        LOOP (10)         (The speed of the group)
        SETVAR (V0,V40)
        SETVAR (V1,V41)
        SETVAR (V2,V42)
        ADDVAR (10,V42)
        MOVE (0,0,10)
        LOOP (10)         (The speed of the viewer)
        SETVAR (V40,V0)
        SETVAR (V41,V1)
        SETVAR (V42,V2)
        RESTART
        AGAIN
CONDITION FOR START BUTTON:
        IF ACTIVATED?
        THEN STARTANIM (1)
        ENDIF
CONDITION FOR STOP BUTTON:
        IF ACTIVATED?
        THEN STOPANIM (1)
        ENDIF
```

This routine is open for a lot of improvement but the basics are there so have fun and perhaps if you improve it you can send in your routine for the newsletter.

STEP-BY-STEP GUIDE FOR LOADING SCREENS ON THE AMIGA

SUPPLEMENT TO ARTICLE IN ISSUE 8

By Mieke Van Der Poll

I have now found a way in which the player can choose to go directly into the game or read game instructions first. You can use some Amiga-Dos commands to obtain this. These commands are:

```
Ask
Echo
Endcli
Else
Execute
If
```

They can all be found in the C-directory of the Workbench disk. You have to copy the commands in the C-directory of your game-disk. Then, instead of one, make two start-up sequences as shown below:

Using the text-editor ED type the following:

```
ED startup-sequence (press Enter/Return)
```

Then type in the following text:

```
cls
picshow pic1
noiseplayer -p2 Mod.name
picend pic1
cls
echo"                                          " (blank line)
echo"                                          "
echo"                                          "
echo"              Welcome to                  "
echo"                                          "
echo"                                          "
echo"        The name of your game             "
echo"                                          "
echo"                                          "
echo"              created by                  "
echo"              your name                   "
echo"                                          "
echo"                                          "
echo"     Using the 3D CONSTRUCTION KIT        "
echo"         Domark/Incentive                 "
echo"                                          "
echo"                                          "
echo"       Do you want instructions?          "
echo"                                          "
echo"      Type (Y)es or (N)0 + Enter          "
if warn
echo"                                          "
echo"                                          "
echo"         Please wait a moment...          "
echo"                                          "
cls
picshow pic2
wait 20
picshow pic3
picend pic2
wait 30
picend pic3
wait 01
cls
```

```
tbar Please wait LOADING..
gamename
endcli

else
cls
execute s/startup2
```

Then press ESC x and again ESC x to save and leave the textfile.

Then again type:

```
cls
tbar Please wait LOADING..
echo" Press right mouse-button to stop music!"
gamename
endcli
```

Then press ESC x and again ESC x to save and leave the textfile.

Make sure these startup-sequences are both in the s-directory of your game-disk.

MAKING THE MOST OF PYRAMIDS

By Tony Hartley - Atari STE

All the following ideas involve using pyramids. The first one is for creating a space passageway as used in TV/Films like Aliens, Star Trek, Star Wars etc. It is very easy to do and very effective. First you have to make a normal tunnel using three flattened cubes just like the one made in the video that comes with the Kit (Fig 1). Then use a pyramid to make a triangle by shrinking one side of it (Fig 2). Next you place the pyramid in one of the corners of the tunnel and stretch it along its length (Fig 3). Copy the pyramid three more times placing one in each corner of your tunnel (Fig 4). Make all sides of the pyramids and walls that won't be seen invisible. Colour the pyramids grey and the walls white with a white roof also. Then finish it all off with a few black rectangles on the walls for windows. There you have it - the space tunnel. It looks great with an animated robotic type dog moving along its length which you could arrange to kill you if it hits you.

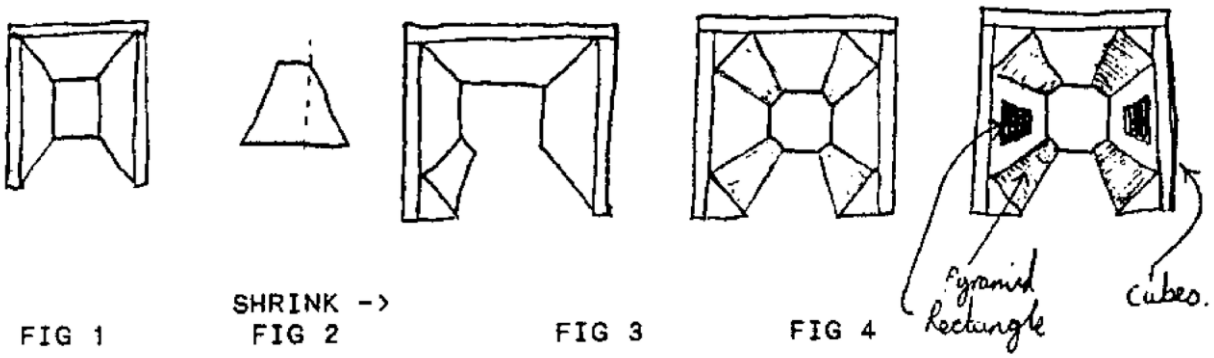


FIG 1 SHRINK -> FIG 2 FIG 3 FIG 4

A great volcano spewing lava can be achieved by using a large brown pyramid as a mountain with another smaller red one on top. You could also animate a few hexagons moving up out of the top for smoke effect (Fig 5). A simple wigwam can be made with a pyramid with a few short lines on the top of it (Fig 6). Pointed pyramids on the roof and floor of tunnels or caves gives a very realistic feeling (Fig 7).

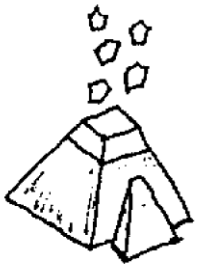


FIG 5

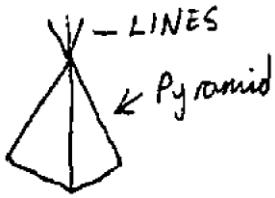


FIG 6

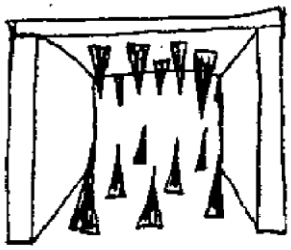
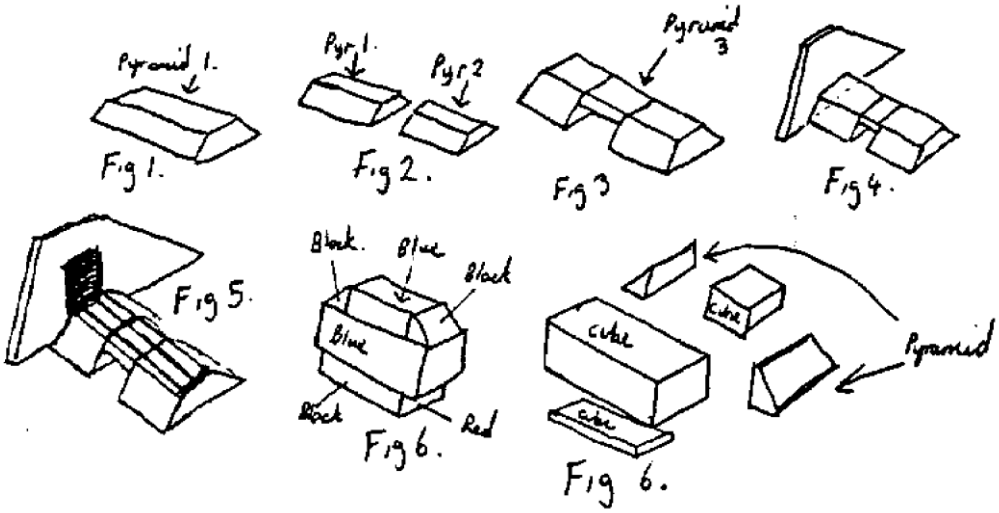


FIG 7

Here is an idea for using a full area using simple pyramids. First you need to create a pyramid and stretch it to the ground then stretch it left until it is almost at the edge of the area so that it looks like a railway embankment (Fig 1 (below)). Make another pyramid by copying the first one to the right of it and leave a space between the two wide enough for a tunnel (Fig 2). Use a third pyramid to make a bridge between the first two (Fig 3). There you have a railway embankment. Next use another pyramid on the far left to use as a tunnel and squeeze it into the gap (Fig 4), making it larger and wider than the embankment. Next use a rectangle on the left for a tunnel mouth (Fig 5). After than, make railway lines using two long, thin cubes on top of the embankment along its length. You can make a simple train using three blocks and two pyramids for the windows (Fig 6). Make the windows black and the sides of the train blue. Make the cube used for the wheels black at the sides and red front and back. Save the engine as a group with all its shapes made moveable using the attributes.



Animate the group (train) to move along the tracks back and forth. Then you could use the whole area so that you have to climb up the steps (create these where you like to get you up the embankment), and run into the tunnel without being hit by the train. This is easily done by makine the condition for the tunnel mouth (rectangle):

```
IF COLLIDED?
GOTO (n,n) - next area
ENDIF
```

The train cube condition:

```
IF COLLIDED?
THEN SOUND (6)
ENDGAME
ENDIF
```

Why not send in your routines for the next newsletter?

STOP PRESS!!

For everyone who has been enquiring about how to use the Video Record facility in Kit 2 I have found out what the problem is. Unfortunately an important FCL command was left out of the manual. The command is

SEQUENCE (n)

single parameter after the command is the number of the recorded sequence. When you record a sequence it is stored in memory with the datafile (and saved with the datafile) and can be recalled at any time by using this command within the program so it can be used for items such as the boat/lighthouse sequence in Kit 1 or an endgame routine. This can be incorporated into a command such as:

```
IF COLLIDED?
THEN SEQUENCE (2)
ENDIF
```

Another command not stated in the manual is EDIT SEQUENCE which is used to call up your recorded sequence for editing. When you use the SEQUENCE (n) command your recording is immediately played and when finished the player will be put back into the game at the same point as they were prior to the recording being shown.....Mandy

---

HINTS AND TIPS

CORRECTION BY STEPHEN FLANAGAN - COMMODORE 64

STEPHEN wrote in to say "You made a small mistake in an 8 bit routine for the User Group game. It is the routine that tests if the key has been taken. The routine should be:

```
IFVIS 6 5
THEN
END
ENDIF
Etc...
```

So that the routine ends if the key is visible (not taken). It is ironic that in the same issue you wished there was an IFINVIS command which would have prevented this."

I don't suppose it would wash if I said that I did it on purpose just to see if everyone was paying attention, would it? -- No, thought not.

USEFUL SHORTCUTS BY NIGEL ALEFOUNDER - PC

NIGEL wrote in to say that the PC function keys are used for shortcuts as follows:

```
F1 - TOGVIS (
F2 - SETVAR (
F3 - ADDVAR (
F4 - SUBVAR (
F5 - IF VAR=? (
F6 - IF ACTIVATED? (
F7  - PRINT (
F8  - UPDATE (
F9  - MOVE (
F10 - GOTO (
```

All very useful and not pointed out in the manual.

MAXIMUM MEMORY ON 1 MEG AMIGA

BY MIEKE VAN DER POLL

If you load in 3D Kit you can, with a clear screen, choose GENERAL in the top menu bar and click on PREFERENCES. You are then presented with a requester in which you type in a different number in the buffer size to allocate more memory. The first time I typed 1000000 bytes, trying to obtain as much memory as I could get. When you press Enter and click on OK the next requester tells you that all data will be lost. As you didn't have a datafile loaded in this doesn't matter so click on OK. The next requester informs you how many bytes are allocated. With me it was over 200,000. Do not use your Workbench to load the Kit. Instead use a blank formatted, installed disk containing the 3D Kit files you need to load it and, if you created a new sample sound bank, copy that one on this also. Then type in 3DKIT -SSAMPLE.BNK (name of your sample bank) and ENTER and in this way you can allocate the maximum memory for your game.

MIEKE also gives a tip for PC users: When you run a stand-alone game of 3DKit on PC you can quit the game by pressing SHIFT + ESC and you are back in DOS, so you don't have to reboot after playing a game.

SPECIAL EFFECTS

BY BARRY METCALF - AMIGA

Take a tip from the Hollywood special-effects men and use forced perspective to create an illusion of greater scale than actually exists. For example, I've created a room with a window (actually a hole in the wall, plugged with an invisible cube) and on the other side of the window I have created a miniature landscape with little buildings and mountains (pyramids), getting smaller in scale as they go towards the horizon.

The effect can be strengthened with carefully chosen colours to create an illusion of atmospheric perspective (haze), and in addition I have used mis-shapen polygons to make one or two clouds which move v-e-e-e-e-e-ry slowly across the sky!

Note that the illusion will be destroyed if the player can wander freely in that part of the area (hence my enclosed room).

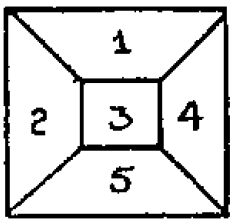
Another thought I had. I play role-playing games (mainly Dungeons and Dragons) with my friends and, whilst working on some maps the other day I had the idea of making an interactive dungeon map! This is not a complete game in itself, but a visual aid for the players, controlled - of course - by the Dungeon Master. A reasonable working scale would be 200 units per ten feet. The border should be minimal, just the basic controls and a numerical instrument giving the room number so the DM can consult his maps.

The immediate benefit would be in, say, an area full of teleporters (pains to deal with!) which would be automatically taken care of by means of a few IFF COLLIDED? commands and area entrances. This will simplify the job immensely, especially if (and when!) my powers of verbal description dry up!

TUNNEL ILLUSION

BY MICK JOLLEY

Tunnels don't have to be as short as you think. Create your tunnel, colour the walls, ceiling and floor anyway you like, but don't block off the end yet. Facing the end of the tunnel, take a pyramid, turn it so the top of it is facing you (like this:)



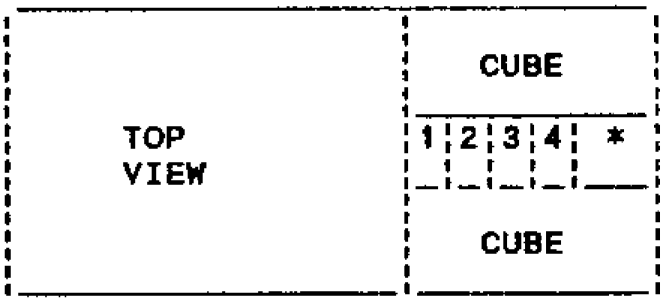
You can now make it fit the end of the tunnel. Colour it as follows. 1. same as the ceiling. 2. same as the left hand wall. 4. same as the right hand wall. 3. same as the end door or exit. 5. same as the floor. Now use the point editor to move colour zones 1, 2, 3, 4 and 5 around to match the way the walls and ceiling and floor are angled. You now have a tunnel which appears twice the length it was before.

TIPS BY DAVID LACEY

COMMODORE 64

First I would like to thank that genius, M Harris for answering my first query about moving between areas without changing the coordinates - I can't believe how simple it was when it was explained. My next question was about getting a percentage for nearness to a point. Well the only way I have been able to think of doing this so far is to use invisible triggers. Here is a short example to illustrate what I mean. Create an area something like this:

Objects 1, 2, 3 and 4 are rectangles placed on the ground and coloured invisible.



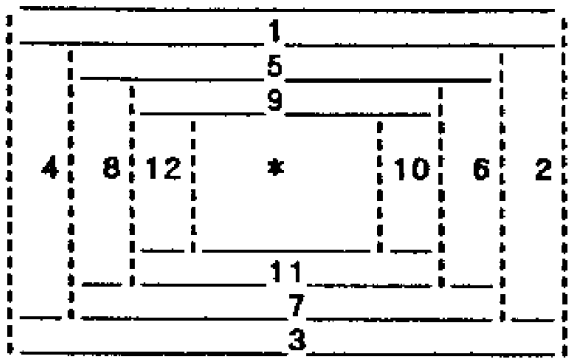
The asterisk is the spot we are judging nearness to.

Create a LOCAL CONDITION:

```
IFHIT     1
THEN
SETV      0    10
ELSE
IFHIT     2
THEN
SETV     33    10
ELSE
IFHIT     3
THEN
SETV     67    10
ELSE
IFHIT     4
THEN
SETV  100   10
ENDIF
END
```

Note that variable 10 notes the percentage of nearness, if that makes sense. 100% = next to and 0% = far from.

Then edit an instrument to be numerical, and display the value of variable 10, and you will see the process at work. Of course in a game you could use this variable to test if other actions can be carried out such as a drilling process. Also if your point is out in the open you obviously need more triggers:



Rectangles 1, 2, 3 and 4 will set 10 to 33, rectangles 4, 5, 6 and 7 will set 10 to 67 and so on.

This clearly is quite memory consuming, but is the only way I can think of solving this question. Perhaps someone else can come up with a better way, if so, please write in with your routines.

MORE HINTS AND TIPS REQUIRED FOR THE NEXT NEWSLETTER PLEASE - MANDY

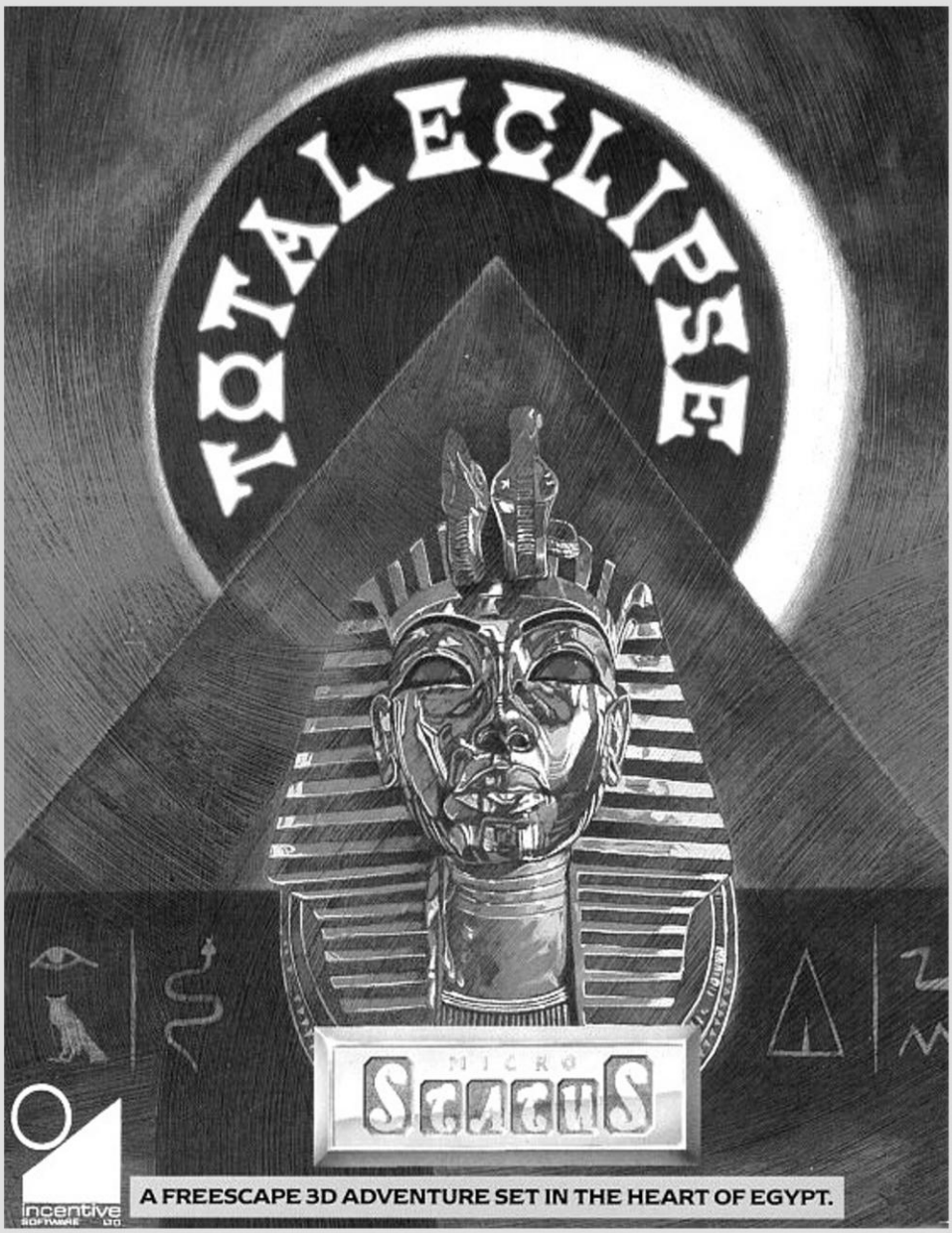
HALL OF FAME

Sincere thanks to the following members who took the time and trouble to send in contributions for the newsletters during the past two months:

MICK JOLLEY, STEVEN FLANAGAN, MARK ROSE, OZZIE O'MARA, TONY HARTLEY, S.T.DENNIS, YANNICK GOUR, MIEKE VAN DER POLL, AL STRAKER, PETER D. WARD, CHRIS LOWIS, DAVID LAACEY, STEPHEN MOORE, NIGEL ALEFOUNDER, MARGARET CHRISTMAS and PETE SPOONER.

All members are cordially invited to send in contributions for the newsletters. Anything from just a simple hint or tip right up to a full blown article are all very welcome indeed. Why don't YOU send in something for the next issue and get your name in the Hall of Fame. You will also be helping your fellow members. The wider our sources of information, hints, tips, routines etc the better for everyone. Don't be shy, if you have discovered a way to solve a programming problem that was giving you trouble then the chances are that someone else is struggling in just the same way and could do with a little help, so do write in with your routines.

The next newsletter will be the February/March 1993 issue and should be sent out around the end of February. Copy date for inclusion is the first week in February. Hope to see lots of contributions from you all by then so that we might be able to make it a bumper issue..ED



3D

CONSTRUCTION KIT USERS GROUP

3D Construction Kit Newsletter

Issue Number 11
February/March 1993

CONTENTS

EDITORIAL 256
LETTERS 256
PIRATES CUT THEIR OWN THROATS! 263
KIT 2 UPDATE 264
BOUQUET BOX 264
THE USER GROUP GAME (PT 3) 265
HALL OF FAME 266
PALETTE CHANGES 267
PUBLIC DOMAIN LIBRARY 268
COMPLETE LIST OF P.D. LIBRARY 269
PC PUBLIC DOMAIN LIBRARY 270
BEGINNER'S SECTION 270
TIP FOR BEGINNERS WITH 3D KIT 2 271
16/32 BIT ROUTINES 272
PLAYING WITH TIME 272
MAKE THOSE LIFT MOVEMENTS LOOK REAL 274
PROGRAMMING A FLIGHT-SIMULATOR 275
STOP PRESS! 276
INVENTORY/INFORMATION SCREEN 277
CREATING A REAL-TIME CLOCK 278
MAKING SOMETHING MOVE WITH TIME 279
TIPS ON COMPILING 279
TAKING A DIP 281

3D CONSTRUCTION KIT USER GROUP

Magazine Issue 11
Feb/Mar 1993

BD270 '33

EDITORIAL

Welcome to issue 11 of the 3D Construction Kit User Group Newsletter.

I've been quite busy again, since the last newsletter went out, not as busy as between the previous issue though - thank goodness. I've managed to sent out English disks to everyone now and also arranged for Domark to replace all the videos that went out with the Atari ST version that happened to be in German. You should all have received them by now, if not, or if I have missed anyone, then please let me know. Work is progressing nicely on the very latest version which, hopefully, will eliminate all the little niggles that everyone has been telling me about on previous versions and I'll arrange to swap all your disks as soon as I get a stock in. I can't wait for you all to get versions that you are all completely happy with. Kit 2 is a fantastic program!

There have been a lot of new members joining us, with Kit 2 recently, so for the new members, please note that the 16/32 bit routines contained in the newsletters apply to ALL 16/32 bit machines - it doesn't matter if the contributor uses a different computer - the language is the same. Also some of the 8 bit routines can be adapted for your machines also. I did print a little translation of the differences between the 8 and 16 bit commands in a previous newsletter so if you don't have that and would like the list then please let me know and please don't forget to enclose a S.A.E.

For new members with Kit 1 and for 8 bitters who have upgraded to 16 bit and would like to upgrade to Kit 2, upgrades can be obtained from me at a cost of £20 (together with your old program disks) at the usual address. On this occasion only please make cheques payable to Domark Ltd. I know it is a pain but please don't include payments to me in those cheques but make seperate ones payable to Mandy Rodrigues please or there will be a considerable delay in receiving everything you asked for. Oh! I nearly forgot AGAIN, Kit 2 will only work with a minimum of 1 meg. PC versions are compatible with EGA/VGA machines (NOT CGA), please state 5.25 inch or 3.5 inch disk as dual packs are no longer available.

We have another great jazzy cover this issue, provided by Dominique Watson. I like the piccy of me on the back cover! If anyone would like to try their hand at designing a cover for the Newsletter please feel free! Also I am getting a bit short on routines for 8 and 16 bits but especially 8 bit so if you have anything you think might help other members, why not send them in for the next newsletter. Also it would be nice to have more routines for Kit 2 in the next newsletter - I know you are all still learning how to use it and all the new commands but I'm sure you will do your best!

I hope you all enjoy this issue and find lots to interest you. There are quite a few useful tips for Kit 2 owners as well as some great routines for all versions, so I'll leave you all in peace to get on with the rest of the newsletter. I'll see you all again in the next issue which will be the April/May 1993 issue. Deadline for that is 1st April. You will all notice that this issue has come out a lot earlier that previous issues? Just shows what happens when I don't promise an early distribution date! I fooled Murphy this time! Ooops! I hope that doesn't mean we are going to have a postal strike - I'd better keep my mouth shut!

Mandy

LETTERS

Dear Mandy,

I'm in a quandary: I'm up the creek and in a jam,
3DCK, second version, needs one megabyte of RAM!
My Atari's a 520 - so, could you advise me, Ma'am?

I could wait until the "Falcon" comes on stream, eventually,
Or, I could just drop Atari and invest in a P.C.
The trouble with the latter would be DOS - it seems to me.

I'm getting on now (I'm a gran'dad) so I have no time to waste,
Learning DOS commands for everything from "close" to "cut and paste".
P'rhaps I am a WIMP, but I think GEM is better "interfaced".

Does the C-Kit run in "Windows"? That's an option, I suppose.
'Though I'll need a lot of RAM and hard disk space, if I use those.
If you can't say perhaps "Inventive's" Mr Andrews knows!

Have they modified the programme for the "Falcon" system yet?
And, have Domark dropped Atari? That's the latest news I get?
If they have, I may be forced to - though I'd do so with regret.

If I do change my computer can I get a cheap upgrade
On the software that I've ordered, or must full price still be paid?
A speedy answer would be helpful, as decisions must be made.

I could, of course, give up computing and go to the Rhondda. Tales
Tell me houses are quite cheap there - and I'm very fond of Wales.
'Twould be healthier for me, no doubt, walking in the hills and dales.

Pete Spooner, Abingdon, Oxon
ATARI ST

Dear Pete,

I'm awfully sorry and for your forgiveness I beg,
That I didn't state earlier that you need to have 1 Meg.

If you decide to change your computer to a PC with all that DOS
I'll swap your upgrade package with the greatest pleasure because

The fault was mine - I quite agree - I've had to add a half meg too
So Atari Kit 2 I can see. It's cost me £40 but that I do not rue!

I too heard Domark won't be supporting Atari but not heard direct
I wondered if it was a rumour but I'm assured 'tis a fact I suspect.

If I can use DOS then anyone can! 'Cause I'm not too bright I suppose
But sad fact is that problems occur if you load Kit through windows!

If you do decide to up your roots and head for the hills and dales
We'll do some computing together - there's always a welcome in Wales!

.....Mandy

Dear Mandy,

I have noticed through the letters pages that some people have difficulty in making certain objects. They can make a simple house, with a few blocks but other objects are a bit more difficult. Anyhow, the point is that if anyone with an Atari wishes to have/need something drawing for them, I will be only too glad to have a go for them for free, providing they send a SAE and blank disk and let me know what object it is they need. They should state the area size they need and how large in the area the object has to be, e.g. quarter the size of the area or some height co-ordinates etc. If they enclose a rough drawing it would help but isn't essential. Also state how complicated or detailed they want the object to be as more objects slow processing time down in an area. I just thought it was a nice way to help some people out who may have drawn an area, for example, but are finding it a bit difficult to get the main object (dinosaur, dalek, dog or whatever) drawn. For anyone else with another computer I can also draw an exploded step-by-step drawing on paper if they give details etc. Don't get me wrong though, I'm no Van Gogh but I have been to art collage and I can handle most drawings etc.

Tony Hartley
ATARI ST
19 Kipling Close, Lockwood, Huddersfield, HD4 5HA

What a kind offer, Tony, I'm sure it will be appreciated. I don't know about Van Gogh but after seeing your PD disk with Fast-Town I don't think you should under estimate your talent!.....Mandy

---

Dear Mandy,

I am involved in a project which realises an educational game. In general the player moves within a kind of temple. By selecting objects with the help of the mouse cursor the user gets information about the object or other support. So far as I know your Kit, which I bought in '91 is ideal but I am missing some features. Surfaces can't have a structure e.g. there are patterns on the walls of our temple and a fence surrounds the site. This has poles and so on but is not a wall. We have a painting on the wall and some rooms are separated by curtains. It seems that it is only possible to use the Kit with the original disk in the drive which may damage the disk eventually. Please can you help?

Hans-Juergen Thiess, Berlin
PC

It looks as if you are asking for Texture Mapping - i.e. mapping of a 2 dimensional image onto the 3 dimensional facets of an object. This cannot be supported in the 3D Kit for reasons of speed, the calculations required to map an image onto a 3D plane are quite considerable and the machines Incentive support are not capable of it.

An argument against this conclusion is, of course, the current spade of games using what appears to be texture mapping, however, as these are games products, certain assumptions may be made about the way the program works and these assumptions cause restrictions which will not be noticed in a controlled game situation.

The 3D Kit on the other hand, is a general product capable of producing a wide variety of effects and as such no assumptions may be made. This means that a true texture map algorithm must be implemented if at all, and as previously explained would be far too slow. From your other enquiry about having to use the disk in the drive, this, I presume, is because you have a very early version that Domark inadvertently put copy protection on in the initial release. If you return your disks for an upgrade this will solve the problem.....Paul from Incentive and Mandy

---

Dear Mandy,

Three weeks ago I purchased 3D Kit 2 - German version. But I have a problem in that the pull-down menu point BEDINGUNGEN doesn't work. All the other menus work apart from this - please can you help?

Marcus Schaffner, Germany

KIT 2

This was a bug in version 2.03 of Kit 2 which is fixed for version 2.05 and will be ready for exchange shortly.....Mandy

---

Dear Mandy,

I have a number of queries regarding Kit 2 (v.2.01) that you sent me just before Christmas. When you set MOV attribute of an object and them move it, its position is reset. If you do not set the MOV attribute you can move an object using MOVE in an animator (contrary to the manual) but then the new position of the object becomes its new set position. Why do we have a Border - Locate when all other load data menus allow us to move through the directories? What does the General Buffer Size do? Does the program only support LBM files?

Rafael Pelayo, Lewisham, London

KIT2

The reason why setting the MOV attribute and moving an object means that its position is reset is that when the MOV attribute is set the current position is stored as the default. This can be overcome by using the DEFAULTS button in the attributes editor which allows you to alter the default position. It also allows you to set the default position to the current position. Moving the object via an animator. This is because setting the MOV attribute gives the object a DEFAULT position chunk. If the MOV attributes is not set the object has no default position and therefore cannot be reset to its initial position when the world is reset. The reason we have a Border-Locate which is not like the normal load in Kit1 is because the borders are not actually loaded, when you "LOAD" a border you simply point to the border so that when a BORDER() command is issued the program knows where to look for it. As the border information chunks within the datafile must be a set length we cannot allow for pathnames as well as filenames in the border information chunk, as this would require about 256 bytes of name space to allow for deeply nested files, this in turn would increase the size of the datafile out of all proportion. Therefore the borders are restricted to being in a single directory which you must specify to begin with. In the PC version the General>Buffer Size doesn't do anything. The PC has no option to set the buffer size, However, on other versions there are and this menu option was mistakenly left in on the PC version, it has been removed for version 2.03 and onwards. The PC version doesn't only support LBM files but also supports PCX as long as the format is correct, i.e. 320 x 200 pixels in 256 colours. LBM files are IFF format files as saved from Deluxe Paint.....Paul from Incentive and Mandy

---

Dear Mandy,

I would like some info. on Cosine and Sine. Also a list, if possible, of graphic files that are 3DK2 compatible. 3DKit 2 is fantastic and I can forgive the manual for not being totally comprehensive as the imagination is unbounded. Rotation of objects in smaller increments that 180 degrees during gameplay is very hard for me to achieve, I would love some help on this matter.

Ben, Chorlton, Manchester

PC KIT2

*The sine and cosine functions in FCL return the sine and cosine values of the passed angle multiplied by 16384. This is because all maths in FCL **is** integer, i.e. no decimal places. As such, true sine and cosine values which range from -1 to 1 would be of no use whatsoever. Objects can be rotated in increments of 90 degrees, however smaller increments than this are not available because the FREESCAPE system requires that all objects are othogonal, that is parallel to the world axes.....Paul from Incentive and Mandy*

Dear Mandy,

I am trying to create a TARDIS effect for my brother. I have a large cube (object 2) with a small cube sitting on top of it (object 3). I want the small cube to FADEBOUNCE for about five seconds and after that both cubes to fade out. I have the following code for object 2:

```
IF SHOT?
THEN FADEBOUNCE (3)
*
FADEOUT (2)
FADEOUT (3)
```

If I put a DELAY (100) at *, the program pauses when I shoot the large cube but before object 3 starts to fadebounce. In this case, when I shoot, there is a pause, then both cubes fadeout. I have also tried the following code:

```
IF SHOT?
THEN FOR (V50,1,5)
FADEOUT (3)
FADEIN (3)
NEXT
FADEOUT (2)
FADEOUT (3)
```

In this case, nothing happens at all when I shoot, even if I define VAR (50) before the FOR - NEXT loop. Please could you help me? Aside from these problems I have found the program to be exceptional and the whole family has enjoyed creating scenes.

Oliver Mell, Camberley, Surrey
Kit 2

To obtain the effect required, i.e. FADEBOUNCE an object for five seconds and then fade out altogether requires that redraws are made, the code supplied has no allowance for redraws, this code should achieve the desired effect:

```
IF SHOT? THEN
FADEBOUNCE (3)
FOR (V30,0,100) Rem: 100 is delay value
WAIT
NEXT
FADEOUT (2)
FADEOUT (3)
ENDIF
```

Hope this gives the desired effect. Glad to know that you are so pleased with Kit 2, it is a fabulous program.....Mandy

---

Dear Mandy,

I have loaded 3DK2 ver 2.01 and have run 3DSETUP. When I run 3DEDIT I get the following message "System error! 2". I have also had the message "Fatal error resources file". My system is Amstrad PC2386 DX20 65 MBHD, 4MB extended memory through' windows, MS DOS ver 4.1. Could you advise me how I can get the system running?

Michael Schonewald, Kirriemuir, Angus
PC KIT 2

The problem lies on the amount of system free memory. This value can be obtained by typing CHKDSK at the DOS prompt, there will be a number of values displayed, one of which is the free system memory, or maximum program size, to run the 3DKit this value must be greater than 540K. If it is not the AUTOEXEC.BAT and CONFIG.SYS files must be altered to remove anything that uses memory and is unnecessary for the execution of the Kit.

Note that many problems such as this where the 3DEDIT program will not load properly or does not run at all have the same solution.This is because PC's only have 640K of base memory, the 3D Kit must run within this 640K and, because of the complexity of the product, it requires a great deal of this base memory for its own use. If there are other programs (such as DOS Shell, PC Shell etc.) started from within the AUTOEXEC.BAT or CONFIG.SYS files that use large portions of this base memory the Kit will not run.....Mandy

---

Dear Mandy,

We are looking for a freelance programmer/company to help us develop a simple interactive game. In depth knowledge of 3D Construction Kit 2, PC version and good creative skill is essential. The project is due to start in January or February 1993 and should last for approximately 1 month. Also any knowledge of interfacing other input devices such as joystick would be helpful. Please contact:

Peter Tysoe
Photosound Communications Ltd., Media House, Shire Hill, Saffron Waldon, Essex
CB11 3BD Tel:0799 526767.

Dear Mandy,

First of all I'd like to thank you for all your efforts in getting the upgrade to Kit 2 to me. I know that it's been hell for you the last few months, let's hope that Domark learn from all this! Well, now that I've got the Kit I'm now going to start to moan about it, ungrateful aren't I? The Manual: In the main it is quite good, although a bit patronising in the tutorial section, but very readable. However there is a glaring error in the FCL tutorial about arrays, one that is obvious to us "professionals" but may confuse the beginner no end, the manual says...

```
DEFARRAY (A1,10)   Give array A1 10 elements
SETVAR (4,A1[5])   Set 5th element of the array to 4
```

NB Array subscripts start at 0 rather than 1, so in our previous example the first element of the array A1 will be 0 and the last element will be 9.

Spotted it yet? yes, that's right "set 5th element" should be "set 4th element" 'cause the subscript starts at 0!!

By the way, I think you were wrong when we spoke on the phone, the members know you well enough by now not to think you're being unnecessarily picky if you point out problems with the manual, just because you wrote the first one for Kit 1 and not this one. Finally, I would like to add my name to the list of those who would like to see a 3D Kit Conference sometime, it would be a lot of fun to meet and greet everyone and put a face to the name of Mandy Rodrigues, no doubt you'd end up totally plastered after everyone's bought you a drink to thank you for all your help!

Richard Exton, Bury, Lancs
Kit1 and 2

I've had quite a few letters from people who have expressed a keen interest in the proposed convention, Richard, I'll see what develops, but as for my getting plastered - as I've said before I become completely legless after just one drink so you'd better decide to buy me a coke instead.....Mandy

---

Dear Mandy,

Hello to you and fellow Kit users, this being my first letter to the club. Although I do not get much opportunity to use the Kit at the present time, I nonetheless enjoy reading the Newsletters. First of all, in response to Reg McLoughlin's letter in the last issue: Predominantly, the speed of the processor is what determines how fast a program runs, the faster the processor, the faster the program. More memory only helps to speed up a machine if having it avoids/reduces the need to repeatedly reload data from disk, with a good example of this being virtual memory.

The only thing you and I can do is get a faster machine. I now own a 50mh 486 PC with 16mb of RAM. The difference between running something like Formula One Grand Prix on this machine and on my A2000 is quite something.

By comparison my Amiga looks like a snail, not that I would sell it, you understand. Anyway, what I would like to know is having purchased the Amiga version of Kit 2 at the clubs reduced rate, can I also do the same for the PC?

Orn Jonasar, Aylesbury, Bucks
PC Kit 1 and 2

Many thanks for the useful information, Orn. Yes, you can upgrade again through me for the PC version of Kit 2 if you like.....Mandy

---

Dear Mandy,

The last thing I would wish to do is to pry into your personal life but, as you treat us all as friends, when we write to you, I wondered if you would consider giving us a brief C.V., so that we can get a mental picture of the friendly soul that we are dealing with? This is only a suggestion and you may well think that it is better to keep your private and business life in separate compartments. That would be quite understandable and quite acceptable. Over to you!

Pete Spooner, Abingdon, Oxon
ATARI ST

I don't mind at all, Pete. I did tell everyone about myself in the first newsletter but a lot of people have joined since then and have wondered about me too. If it wouldn't bore you then here goes:

I am married with two children, a boy and a girl and, thank goodness, all the family are computer crazy (and we have enough of them to go round - though funnily enough everyone always seems to want to be on the computer that I happen to be on!). I used to be the editor of Adventure Probe magazine and ran my own software company but now I devote my time to running the User Group and what I have always loved to do, freelance writing. This is mainly for the monthly computer glossies where I write regular monthly columns under various (sometimes extremely stupid), pen names. I have had my own games published in the past but no longer do much programming - except on the Kit. Apart from these pastimes and looking after the home and family, I have various hobbies including oil painting (very rarely get time these days), singing (well, in Wales what do you expect?!), reading (favourites are Stephen King, Dean Koontz, Stephen Donaldson, David Gemmel and David Eddings), avid film watching (favourites are Ghost, Terminator II) and, perhaps most of all I enjoy playing computer adventure games. I run a telephone helpline for people who get stuck in adventure games as well as the Kit helpline.

I'm overweight (probably due to the time spent sitting in front of the computer instead of jogging), and will soon be middle aged but as they say that life begins at 40 I'm quite looking forward to it! Many of you have asked just how I got involved in this business in the first place. Well, quite a few years back, when Incentive released the Graphic Adventure Creator, I was asked to review, for a magazine, the game that won first prize in the GAC/Home computer club competition. There were some faults within the programming of the game and I rang Ian Andrew to mention this to him. He asked me if I could fix it and then I did another couple of jobs for him and we have kept in touch ever since. I later did an update on the GAC manual and became the sole distributor for the GAC Plus on the C64 and, did occasional playtesting for Incentive with Crypt, Castle Master and the like. Ian asked me if I would playtest Kit 1 and also write the manual for it and, later on we discussed the possibility of the User Group. So here we are!

I have a unique ability to make the most awful blunders, am quite a scatterbrain really. I tend to switch on blenders in the kitchen without the lid on them - that kind of thing and tend to format important disks by mistake! I'm fond of pets, we have a dog (as anyone who has used the telephone helpline will no doubt know already!), budgie, hamster and three tanks of tropical fish. All rather boring really - betcha wish you hadn't asked now, Pete!.....Mandy

PIRATES CUT THEIR OWN THROATS!

You may think that that is rather a strange statement. It isn't really. We all know that software piracy is rife - I suppose it will always be with us until programmers manage to come up with a fool-proof method of software protection that will beat the hackers. Legion, the notorious software pirate has boasted in the past - in print - that he makes a point of hacking into every program he comes across - despite the fact that many of them only cost a couple of ££'s to buy. Pirates are proud of the fact that they can beat the programmers protection - it is almost like a point of honour that they must crack into each and every game they can get their hands on. What the pirates don't think about is the fact that they are actually causing the death of their beloved computer!

I know I am not going overboard with that statement. It has been said before in reference to the fact that a lot of companies refused to support the Atari ST in the past because piracy was rife and they lost so much money because of this. It takes an awful lot of money to produce a piece of software commercially. Not only in basic costs, time and energy but in the fantastic sums that have to be laid out for advertising, promotion and the like that go towards the launch of a game. When, because of piracy, so few copies of a game are sold that the costs of producing the thing in the first place are not recovered and a loss is made then a company will think very carefully before venturing down that same road again.

This has happened recently and very close to home! It has happened with the Archimedes version of 3D Kit! I only discovered this when some Archimedes members wrote in to say that, following an upgrade on their machines the 3D Kit didn't work and asked if their programs could be exchanged for another version that would work. Sadly the answer that came back was this: As only a couple of hundred copies of the Archimedes version of Kit1 had been sold, despite the market being flooded with pirated copies of that version, neither Incentive or Domark had any intention of producing any other versions for that particular machine. A huge amount of money had gone into producing that version and that had been lost! So the Archimedes pirates have ruined things for the honest users of that particular machine! It is very sad. If they continue to copy software at that rate I wonder how long it will be before that fabulous computer becomes obsolete because eventually all software companies will drop it like a piece of red hot coal? It really makes you think doesn't it? How many types of computers in the past have vanished through the same thing? Is there anything that WE can do about the situation to prevent the same thing happening to OUR favourite computer?

Do you, like myself, groan everytime you have to turn a wheel which is black on black and try to read the dark grey numbers in order to enter a code to load a game, or have to skim through pages and pages of codes to match the question on screen or the other hundred and one different procedures we have to go through to load software? As long as pirates are allowed to continue the way they are doing then we will have to put up with it! It's nice to be able to load 3D Kit without all that rigmarole isn't it, but how long will we be able to do it without similar protection? If anyone out there is contemplating making a copy of their software to pass on to a friend, then all I ask is that they stop and think for a moment or two - are they perhaps sounding the death knell for their beloved computer? Will that one little copy make a difference? The answer is YES!.....Mandy

KIT 2 UPDATE

IBM PC COMPATIBILITY ISSUES USING V2.03 OR ABOVE

Incentive tell me that: "due to the wide variety of PC compatibles and the massive range of software and hardware available, some of which include Device Drivers and Terminate and Stay Resident (TSR) programs, there are an infinite variety of possible combinations and set-ups available. This means there may be compatibility problems between various hardware and software set-ups and a product as complex as 3D Construction Kit 2/Virtual Reality Studio 2.

CLEAN MACHINES:

We have tested the product on a quantity of PC compatibles. During each test we make sure that no unnecessary device drivers or TSR's are loaded, this can be done by simply renaming the files AUTOEXEC.BAT and CONFIG.SYS on the root directory of your hard disc to AUTOEXEC.OLD and CONFIG.OLD respectively and then rebooting the system, this results in a completely "clean" machine. When the tests have been carried out in this manner we have encountered no compatibility problems. Please note however that if this course is taken to ensure a clean machine it will be necessary to install the mouse driver by hand, to do this follow the instructions in your mouse documentation (usually simply typing "mouse" will suffice). Also when returning to normal operation of the machine you will need to rename the files to their original names and reset.

SOUNDBLASTER PRO COMPATIBILITY.

There have been reports of problems when using a Soundblaster Pro Card. We have noticed a problem with this card and certain mouse drivers and have included a small fix in the program at release V2.03 that should help to solve this problem. However the program requires that there are no unnecessary drivers or TSR's loaded and that the mouse driver used is fully Microsoft compatible, the mouse driver we used during the tests is the official Microsoft driver version 7.04.

MOUSE DRIVER PROBLEMS.

Some mouse drivers seem not to work with either the 3DEDIT program or the 3DSOUND program. We have tested these programs with various Microsoft compatible drivers and found no problem. As such the only solution is to try to obtain a different mouse driver and test the programs with that and ensure that the machine is "clean".

Useful advice would be perhaps to make a startup disk which has no unnecessary drivers on it and to boot from this disk when using 3D Kit2 only - this should save you the bother of re-installing all your other gear later. I'm no expert on the PC so if I am wrong in this then I'm sure someone will kindly let me know..... Mandy.

BOUQUET BOX

Apart from the usual HALL OF FAME to thank members for their contributions some people deserve a special word of thanks for the special help they have given. These people are:

MIEKE VAN DER POLL for the outstanding amount of contributions she has kindly submitted. Not only has she been regularly offering help to us all but almost as soon as she received Kit 2 she sent in loads of help, advice and routines for the newsletters on this version also!

TONY HARTLEY, MARK ROSE and MR J.C.LATTY for kindly agreeing to help out with the playtesting of Version 2.04 at a moments notice. Sorry to put you all on the spot like that!

The only way to adequately express my gratitude is a public THANK-YOU to you all - you have all been gems!

THE USER GROUP GAME (PT 3)

We haven't done any work on our game since the first parts in issues 7 and 8 and a plea for help from Margaret Christmas spurred me into action. Margeret wanted to know how to program another problem into our game. She wanted to make the Solar (where we hid our key) into a completely dark location unless we had first obtained a source of light. I also received a letter from Mr E.R.Horn telling me how to do exactly the same thing on the 8 bit computer so, here is how we do it.

The first thing we should do is to create an identical area to the Solar. On 16/32 bit it is very simple - 8 bitters will have to do it all by hand I'm afraid. Firstly we should go to Area 5, the Solar, and CREATE GROUP. Now we should select ALL the objects contained in that area APART FROM THE GROUND CUBE into that group and save that group as an object. Next we create another area (Area 7) which, via the EDIT AREA command we change the name to read DARK SOLAR. Now load in your saved object and you have an identical area.

Before we make it dark - and thereby confuse ourselves - we have to create a condition for the doorway to read exactly the same as that for the original Solar:

```
16/32 BIT                8 BIT
IF COLLIDED?             IFHIT     (r) rectangle number
THEN GOTO (3,4)          THEN
ENDIF                    GOTO       3     4
                         ENDIF
```

Now stand with your back towards the rectangle as if you had just entered the location and CREATE ENTRANCE. This will be Entrance 002.

Colour the rectangle (doorway) in dark grey and everything else within the location BLACK. This is so that we allow the player to at least find the way out if they get stuck inside the Dark Solar - we have to be fair.

Next we have to create our source of light. I went into the Great Hall (Area 2) and created a wall sconce with a flaming torch in it. The objects that made up the torch were 11, 12 and 13. Then on the handle (number 11) I created the following condition so that the torch would become invisible if activated (taken).

```
16/32 BIT                8 BIT
IF ACTIVATED?            IFACTIV    11
THEN INVIS (11)          THEN
INVIS (12)               INVIS      11
INVIS (13)               INVIS      12
ENDIF                    INVIS      13
                         ENDIF
```

Now go to the Alchemists Chamber (Area 4), activate the book in the bookcase to make the doorway visible and edit the existing condition on the doorway to read:

```
IF COLLIDED?             IFHIT      (r)
THEN IF INVIS? (11,2)    THEN
THEN GOTO (2,5)          IFVIS       11    2
ELSE GOTO (2,7)          THEN
ENDIF                    GOTO         2    7
ENDIF                    END
                         ELSE
                         GOTO         2    5
                         ENDIF
                         ENDIF
```

8 Bit users might like to try the alternative method sent in by Mr Horn who says that he created two identical rooms (areas) numbered 1 and 2 and coloured one black and white and the other one blue and yellow. Each rom has a switch (a pyramid mounted sideways on the wall).

Mr Horn says that the object numbers of the switch pyramids must not be the same in either area, or the change from Area 1 to Area 2 will just "toggle" back to the start area and spoil the required effect. Also the entrance numbers sed must not exist as entrance numbers in the entrance tables so in his construction of the areas, number2 was a cube not an entrance. This enables the players position to remain unaltered as the areas change.

The LOCAL CONDITION USED was:

```
AREA 1
            IFACT      009 (switch pyramid)
            THEN
            GOTO       002      002
            ENDIF
            END
AREA 2
            IFACT      007 (switch pyramid)
            THEN
            GOTO       002      001
            ENDIF
            END
```

If you would like to see the Clubgame expanded further - and this would be extremely useful for newer members - then please write in with your ideas for problems that could be included within the game. Just an idea will do as, if you don't quite know how to program what you want to do, then I can do this as with this issue on the light/dark problem. It will help me with ideas of what you want to see incorporated within the game. If you have the routine already worked out then send that in too as that will be extremely helpful.

HALL OF FAME

Sincere thanks to all the following members who kindly sent in contributions for the Newsletter during the past two months:

LIAM JOHNSTON, PETER D. WARD, DAVID SAMBROOK, IAN YOUNG, GERRY WISHART, CHRIS LOWIS, J.P. MESSENBIRD, STEPHEN MOORE, JOHN HAYWARD, MIEKE VAN DER POLL, E.R. HORN, TONY HARTLEY, JOHN ELLIOTT, FRANK CARR, ORN JONASAR, DOMINIQUE WATSON and MARGARET CHRISTMAS.

Special thanks to Dominique Watson for the cover for this issue. A few people have asked me who did the cover for the last issue as the name wasn't clear. It was Al Straker.

ALL members are cordially invited to send in contributions for the next issue, anything from a small hint to a full blown article will be gratefully received. The more ideas we have the more help for everyone and the bigger the Newsletter! Next issue is April/May 1993.

PALETTE CHANGES

By Peter D Ward - ATARI ST KIT 1 and 2

(I have received a lot of moans and groans from Amiga and Atari ST owners about the, rather unfortunate, colour palette in Kit 2. Peter has come to the rescue with some timely tips on this.....Mandy)

Atari ST users have probably noticed the strange choice of default palette on the Kit II. This can give a strange appearance to the clip-art supplied. For example, when loading my own contribution, I was confronted with a rather distasteful looking green chicken in an oven! (Well, I've heard of "Green eggs and ham", but green chicken?!)

Well the problem is easily solved, with a little work. Change area colours to those of the default palette of the original Kit 1. Not only will you then be able to have normal-looking clip-art, but you will have the old familiar decent spread of colours instead of the supplied palette of predominantly red and green!

Once this is done, if, like me, you find the palette of the original Kit suitable for most normal purposes without alteration, I would suggest you SAVE the empty area with altered colours to disk, and load this for each new area. For convenience, I saved mine to the EDIT FILE of my disk 1 (back-up copy, naturally!!).

For the convenience of those who have (a) never had a copy of Kit 1 and (b) those who returned it to get Kit 2, and (c) those who can't be bothered to dig out the original Kit disk, here are the original Kit 1 palette values from left to right. See page 15 of the Kit 2 manual to access and edit the colour palette.

COLOUR NO.	RED VALUE	BLUE VALUE	GREEN VALUE	COMMENT
1	00	00	00	Invisible
2	15	15	15	White
3	10	10	10	
4	06	06	06	
5	00	00	00	True Black
6	15	00	00	Bright Red
7	15	09	00	
8	15	15	00	
9	15	08	10	
10	09	05	04	
11	12	08	07	
12	00	08	06	
13	00	15	00	Bright Green
14	07	08	15	
15	00	00	15	Blue
16	09	00	06	

(Please note that the Amiga colours are exactly the same as those listed above. I performed the same procedure for the Amiga and it works beautifully on that machine too. Not only that but it only took me exactly eight minutes to do it. Remember that when you have your new colours done you will see that the sky and ground are now both a yucky shade of brown. Don't panic, just select colour as you would to colour an object and selecting a nice pale blue and deep green just click on the sky and ground to change them. I've now got my own area to load in whenever I want and it works beautifully. Thanks Pete for the good advice. I don't need to moan at the colours now!.....Mandy)

PUBLIC DOMAIN LIBRARY

LATEST ADDITIONS TO THE LIST!

ATLANTIS by Mieke Van Der Poll for AMIGA 1meg.

Once again Mieke has provided an absorbing adventure. This time you must explore the undersea world of Atlantis. You start on an island where you must find and gather up 9 pieces of equipment before you head for your boat and the open ocean where you can dive into one of the lost cities of Atlantis. The game is very well programmed with nice music and loading screens. The sound effects throughout the game are extremely good. I especially liked the bubbly underwater sound effects. A most enjoyable game.

TUNES AND SCREENS by Dominique Watson for AMIGA.

At last here is something that all Amiga users shouldn't be without! If you are not in the least musical or non-artistic then this most useful disk contains, not only three beautiful loading screens for your games but also no less than 13 excellent tunes ready for you to use! I cannot think of anything more useful. The screens are beautifully drawn with outer-space themes and the tunes can be played for your selection on the Octamed player provided with the disk!

UTILITIES DISK by Stephen Moore for AMIGA.

Stephen has thoughtfully provided a complete suite of programmes to enable users to create loading sequences for their games. Step by step instructions will be provided with the disk on how to use them. Also on the disk is a useful utility for reading ST and PC datafiles. You may find some difficulty in reading one of these but the whole disk is well worth getting for your collection.

DOCTOR WOW GAMES 1 AND 2 by David Lacey for COMMODORE 64.

At last we have a couple more games for C64 users. In DR WOW I we find the doctor sucked out of his Tardbof together with all his useful objects onto the surface of the planet Scloboros. You should have a great time gathering up all his scattered pieces of equipment and find out why the planet is sucking all your (and the Tardbof's) energy within 1 hour! Great fun! In DR WOW I (Dr Wow and the Dudleks) you discover that the dastardly Dudleks are mining Platercinonium - a powerful rocket fuel! You have to stop them by blowing up the four, interconnecting, mine-shafts, Two great games on one disk which is excellent value.

HYSULA by Peter Ward for ATARI ST.

This is the long awaited sequel to SPEILRAUM and KAKRIVS. What can I say? Yet another fantastic game from Peter which should keep you busy for hours!

FAST-TOWN by Tony Hartley for ATARI ST.

This disk kept me totally absorbed for hours! No, it isn't a game - it's a datafile packed full of objects that will allow you to design and build your own town! The objects include all manner of buildings, roads (including rounadbouts, T junctions etc), road-signs, vehicles, phone-booths, benches, trees, lights - the list is endless. I haven't had so much fun for years. Not only is this a most useful suite of objects (all suited to scale 1) but it is a most entertaining way of viewing the excellent objects that Tony has created! - Don't be without this little gem! Also on the disk are some borders which you will find useful too. A completed town is also provided as a datafile and there is a document file with full information. Within the ready-made town there is also a devious maze for you to find your way out of if you enter any of the buildings - serves me right for being nosey!

COMPLETE LIST OF P.D. LIBRARY

Key to what's on the disk/s:

G=Complete Game. D=Datafile. B=Border, R=Stand Alone (Runnable) Program. 3DU= Kit utilities. U=Other Utilities. O=Objects.

ALL PD DISKS HAVE BEEN REVIEWED IN FULL IN PRECEEDING NEWSLETTERS.

MOUNTAIN ADVENTURE (G/R) ..... by Mieke Van Der Poll - AMIGA.
MOUNTAIN ADVENTURE (D/3DU/B) ..... by Mieke Van Der Poll - AMIGA.
SECRET WEAPON (G/R) ..... by Robin Ball ATARI ST.
MESSAGE DEMO ROUTINES (D/B/O/3DU) ..... by J. Hayes - AMIGA.
LANDSCAPE DEMONSTRATION DISK (D/B/3DU) .. by J. Hayes - AMIGA.
FLIGHT SIMULATOR DEMO (D/B/3DU) ..... by Thomas Stufe - AMIGA.
BUILDINGS (D/3DU) ..... by Allan Hern AMIGA.
SPEILRAUM (G/D/B/R/O) ..... by Peter Ward - ATARI ST.
KAKRIVS (D/B/O/G/R) ..... by Peter Ward - ATARI ST.
HYSULA (R/B/O/G) ..... by Peter Ward - ATARI ST.
ATLANTIS (R/G) ..... by Mieke Van Der Poll - AMIGA 1MEG.
ATLANTIS (G/D/B) ..... by Mieke Van Der Poll - AMIGA 1MEG.
TUNES AND SCREENS (3DU/U) ..... by Dominique Watson - AMIGA.
UTILITIES DISK (3DU/U) ..... by Stephen Moore - AMIGA.
DR WOW I & II) (G/R) ..... by David Lacey - COMMODORE 64.
ESKAPE (G/D/U) ..... by Stephen Flanagan - COMMODORE 64.
FAST-TOWN (D/3DU/O/B) ..... by Tony Hartley - ATARI ST.
LIGHTING EFFECTS (D/U) ..... by Robin Ball - ATARI ST.
THE MAZE (R/G) ..... by David Sambrook - ATARI ST.
WEST ONE (G/R) ..... by Frank Carr - ATARI ST.
SOUND SAMPLES (3DU) ..... by Mieke Van Der Poll - AMIGA.
INVENTORY ROUTINE (3DU) ..... by J. Hayes - AMIGA.
BORDERS DISK (3DU) ..... by Robin Ball - ATARI ST.
BORDERS DISK (3DU) ..... by A.J.Bevan - AMIGA.
DARKNESS CALLS (G/R) ..... by James Yusuf - AMIGA.
DARKNESS CALLS (O) ..... by James Yusuf - AMIGA.
PLANET OF THE DALEKS (G/D/B) ..... by Steve Hilder - AMIGA.
E.F.T.P.O.T.C.M. (G/R/U) ..... by Andrew Herbert - AMIGA.
INFILTRATION (G/R) ..... by Robin Ball - ATARI ST.

All the above disks are available from the User Group address - Mandy Rodrigues, 67 Lloyd Street, Llandudno, Gwynedd, LL30 2YP - at a cost of £1.50 each (U.K.). Overseas £2.50 each to cover extra postage costs. All members who send in PD contributions can select freely from the above list as a small thank-you for their contribution and help. Back issues can be sent if preferred or a free issue added to your subscription instead.

PC PUBLIC DOMAIN LIBRARY

PC owners needn't feel left out of things as there is quite an extensive PD library being built up for them by Mark Rose who is kindly offering to run this side of things to relieve some of the workload. For a complete up to date list of what he has on offer please send a stamped, self addressed envelope to: Mark Rose, 3D PC PD, 39 Balfour Court, Station Road, Harpenden, Herts, AL5 4XT.

PLEASE NOTE that the public domain disks containing datafiles are compatible with 3D CONSTRUCTION KIT I and owners of Kit2 will have to modify the names of the datafiles to end with 3WD to be compatible. I hope that by the time of the next newsletter both Mark and myself will have had chance to check out the datafiles and, wherever possible, make them compatible for Kit2 and items will be marked as such.

WHY NOT SEND IN YOUR CONTRIBUTION TO THE PD LIBRARY?

BEGINNER'S SECTION

STEP-BY-STEP GUIDE
MAKING A STRUCTURED PLANNING FOR A GAME ON 3D KIT 2

By Mieke Van Der Poll - AMIGA AND PC

As already mentioned in previous Newsletters, it is useful to make and draw your game on a piece of paper, adding as much possibilities and variables as you think you may need to it.

In 3D Kit 2 it is possible to save a whole area with the click of a mouse-button. So if you have divided your game in areas on paper, the first thing you can do is draw the different areas containing all the relevant objects and save each area with an appropriate name so you can easily find which area comes after the other. Having done all this, combine the areas in a datafile. When you save an area, in fact two areas will be saved: Area one, which is always empty and the area you created. When you want to make a datafile, load in your Start-area (which will always be area 2), then, when you load your second area it automatically becomes area 3 - the next loaded area will be area 4 and so on. This means that you have to put area 2 as start-area in the defaults. Having area 1 empty, you could always use that one as the END area.

Make a border, or use one of the provided ones. Add your border in the way described in the manual and add it in the defaults window. Set the view-window and create the necessary text and numerical instruments and other ones if required - i.e. clock, animation etc.). Use the default sound sample file or create your own sounds and load the sound-file, (NB The first time you load the default sound-file you may get the message that the file is not of the required format, if so, quit 3D Kit and load 3D Sound. Load in the default sound-file and save it again. Then you will not have any trouble when loading it in 3D Kit 2).

Now it is time for the most difficult part of game-making: Making GENERAL and LOCAL CONDITIONS, making variables and let them work properly. In my experience the best way to test your program is in the TEST window with the border present, so you can see if your text pops up correctly and if your variables work. Another thing, I cannot emphasize it enough, save your game over and over again and even with different names, so you have spare ones in case something goes wrong. Believe me, with me a lot goes wrong and if I do not save enough I sometimes have to start all over again - and that is very frustrating!

After having gone through all those stages and everything is working fine it is now time to use the MAKE program. Consult your manual for this. If you are happy with your creation then why not send it in to the PD Library, so that many other members can enjoy it and learn from it.

TIP FOR BEGINNERS WITH 3D KIT 2

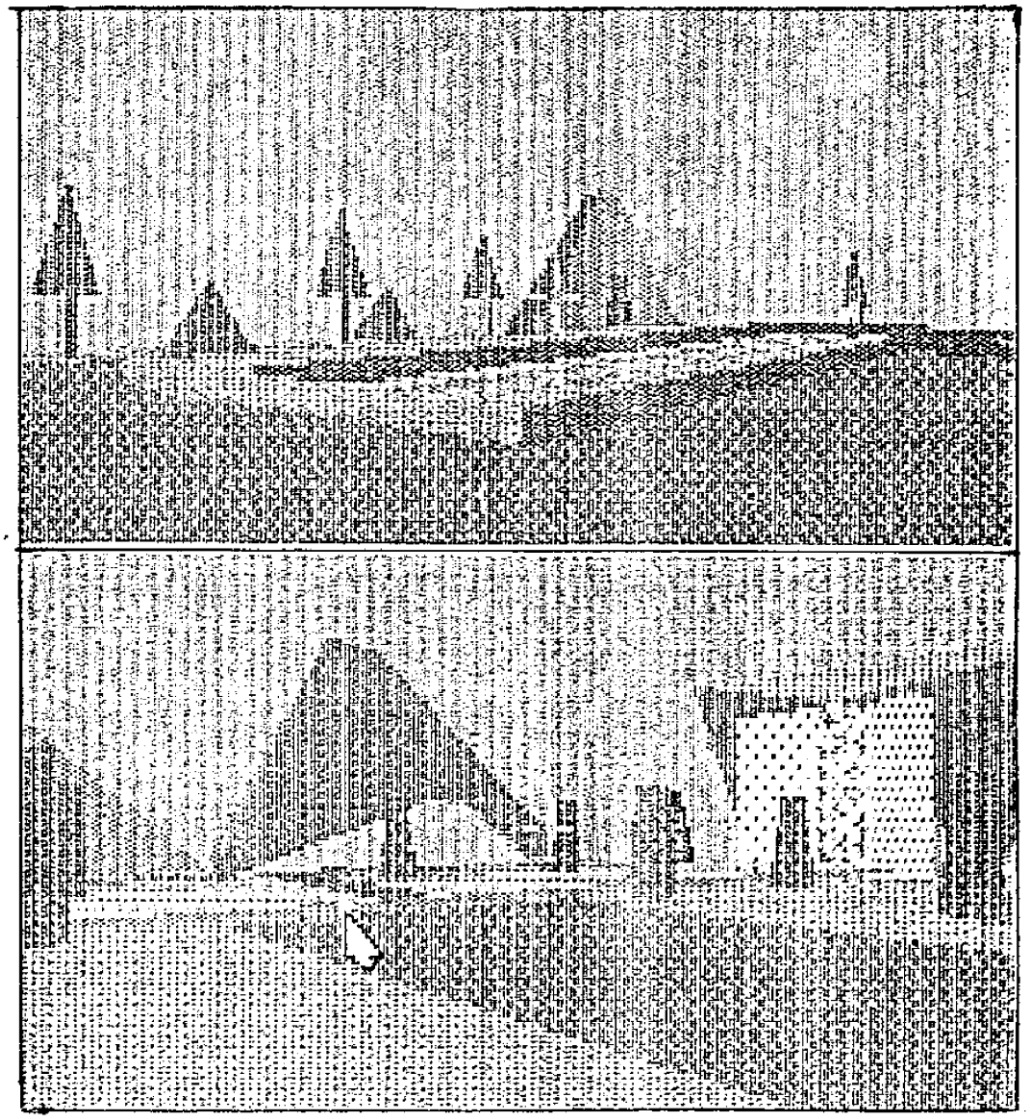
HOW TO MAKE BEAUTIFUL RIVERS WITH RUNNING WATER AND WATERFALLS

By Mieke Van Der Poll - AMIGA AND PC

Creating this realistic effect is extremely simple really. Create a rectangle, move it to the ground and colour it blue. Stretch it into the size you want. Create another rectangle, colour it a lighter shade of blue and place it on top of the first rectangle (002). Shrink it in width and stretch it in length, copy it to the right, move it a bit to the right, copy that one to the right, move it a bit to the right and perhaps copy another one (so that they overlap). Create a GROUP (mine was group 007) and add rectangles 3, 4, 5 and 6 to the group. Click on the object menu, choose the ATTRIBUTES, click on rectangle (3) and in the edit window click on the FADENUMBER and type in the letter 1. Click on the defaults in the same window - another window pops up - set the fadenumber to 1 also and click on OK. Again click on OK and look at rectangle (3). Do the same with rectangles 4, 5 and 6, then go to the CONDITIONS menu, click on LOCAL conditions, click on CREATE, click again on local conditions, click on EDIT. In the window click on LOCAL CONDITION 1 and type the following in the text window:

```
FADEBOUNCE (7)
SOUND (1)    - optional
```

Click on OK and look at your river, the water seems to be running. Try making an appropriate sound with the sound editor and that will add to the atmosphere. In the same way you can create a waterfall running from a mountain. See the screen dumps below:



16/32 BIT ROUTINES

LOADING OBJECTS FROM KIT1 TO KIT2

By Mieke Van Der Poll - PC AND AMIGA KIT 1 AND 2

In the manual it states that you can import objects from 3D Kit 1 to 3D Kit 2 if you save them in 3D Kit 1 as a datafile. This can only be done if you, after saving it out as a datafile, use the DOS rename command. So if you saved a hammer in 3D Kit 1 as Hammer.Kit type: rename hammer.Kit hammer 3wd. Then you can leave the file in the object or data directory of Kit 1. Go to the 3D Kit 2 directory, load the editor and load in the Hammer 3wd. Now you can save it out again by deleting the extension 3wd in the file window. 3D Kit 2 will automatically add .3od extension to it.

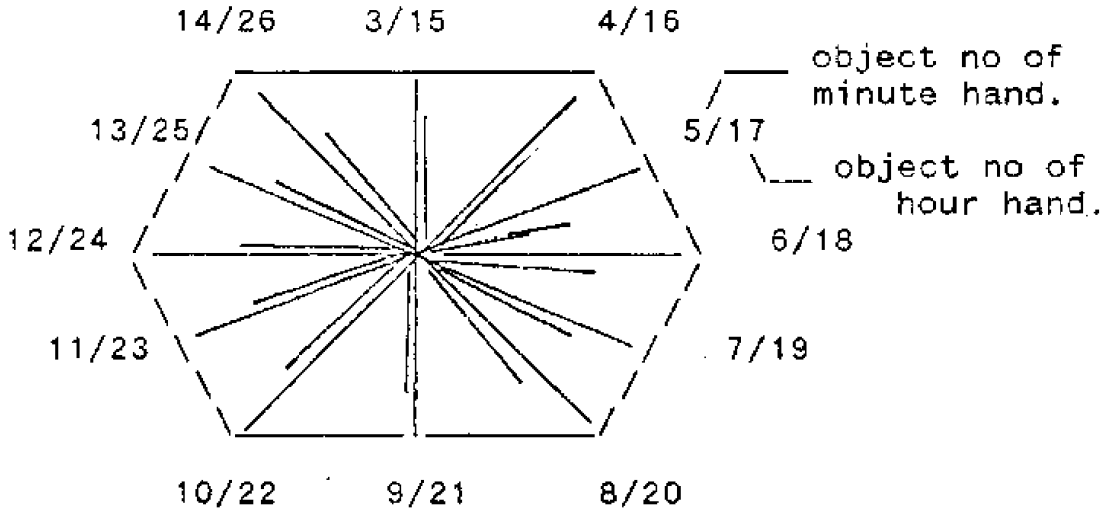
I have heard from other computer users of Kit 1 that changing the extension to 3wd will enable you to load datafiles and objects to Kit 2 in the same way.....Mandy

---

PLAYING WITH TIME

By David Sambrook - ATARI ST KIT 1

This is a routine to provide a real time clock inside a location which will constantly update its time as you play. So for example, if you enter the location to find the clock showing five past six and then you re-enter five minutes later the clock will be showing ten past six. For simplicity I will show the clock face as a simple Hexagon with lines for hands. Obviously you can add more detail later.



I have used the following variables: V40 = seconds. V41 = minutes. V42 = hours. V43 = five minute counter. V44 = which minute hand is visible. V45 = which hour hand is visible. In your initial General Condition you need to set the start time, e.g. If you want to start at 3 o'clock you would use:

```
INITIAL CONDITION 1
                    SETVAR (0,V40)
                    SETVAR (0,V41)
                    SETVAR (3,V42)
```

You also need to set all the hands attributes (under the OBJECTS menu), to initially INVISIBLE all lines other than lines 3 and 18 (to show 3 o'clock). You then need to add these General Conditions:

```
GENERAL CONDITION 2
                        IF TIMER?
                        THEN ADDVAR (1,V40)
                        ENDIF
GENERAL CONDITION 3
                        IF VAR>? (V40,59)
                        THEN ADDVAR (1,V41)
                        ADDVAR (1,V43)
                        SETVAR (0,V40)
                        ENDIF
GENERAL CONDITION 4
                        IF VAR>? (V41,59)
                        AND VAR>? (V45,26)
                        THEN ADDVAR (1,V42)
                        SETVAR (0,V41)
                        INVIS (V45,1)
                        ADDVAR (1,V45)
                        VIS (V45,1)
                        ELSE IF VAR>? (V41,59)
                        AND VAR=? (26,V45)
                        THEN SETVAR (0,V42)
                        SETVAR (0,V41)
                        SETVAR (0,V40)
                        INVIS (V45,1)
                        SETVAR (15,V45)
                        VIS (V45,1)
                        ENDIF
GENERAL CONDITION 5
                        IF VAR=? (12,V42)
                        THEN SETVAR (0,V41)
                        SETVAR (0,V42)
                        SETVAR (0,V40)
                        ENDIF
GENERAL CONDITION 6
                        IF VAR=? (5,V43)
                        AND VAR<? (V44,14)
                        THEN INVIS (V44,1)
                        ADDVAR (1,V44)
                        VIS (V44,1)
                        SETVAR (0,V43)
                        ELSE IF VAR=? (5,V43)
                        AND VAR=? (V44,14)
                        THEN INVIS (V44,1)
                        VIS (3,1)
                        SETVAR (3,V44)
                        SETVAR (0,V43)
                        ENDIF
```

You will notice that all the VIS and INVIS commands contain the number 1, this should be set to the location your clock is in and allows the clock to continuing updating even when you are not in that location. This also has the advantage that variables V40 and V42 always store the game time so for example you could place these onto the instrument panel to simulate a small digital watch carried by the player. On the down side, this clock does keep terrible time. It tends to lose seven seconds every five minutes. But still, this is only virtual reality!

MAKE THOSE LIFT MOVEMENTS LOOK REAL

By Frank Carr - ATARI ST KIT 1

Here is a simple routine to make a lift movement look real. Construct a lift with two sliding doors and small cube for the lift button. Reduce the button on attributes to 5 by 5 by 5. Create two animators for the doors.

Animator for the left door:

```
START    INCLUDE (x) - x being the number of the left door
         LOOP (16)
         MOVE (5,0,0)
         AGAIN
         STOPANIM (1)
         LOOP (16)
         MOVE (-5,0,0)
         AGAIN
         STOPANIM (1)
         RESTART
```

The above code is for animator (1).

For animator (2), x being the number of the right door, first move command will be:

```
MOVE (-5,0,0)
```

Alter the stopanims commands to:

```
STOPANIM (2)
```

Make the second Move command to be:

```
MOVE (5,0,0)
```

You now have two animators with two sets of code. Now for the condition for the lift button:

```
IF ACTIVATED?
THEN STARTANIM (1)
STARTANIM (2)
LOOP (10)
AGAIN
ADDVAR (10,V1)
REDRAW
DELAY (20)
SUBVAR (10,V1)
REDRAW
STARTANIM (1)
STARTANIM (2)
ENDIF
```

Study the code, see if you can work out what causes the little movement in the lift. As I said in my previous article, try to study other programmers work, buy my game from Mandy, then I won't have to keep writing these routines!

PROGRAMMING A FLIGHT-SIMULATOR

PART THREE

By Thomas Stufe - AMIGA KIT 1

Continued from the last issue.

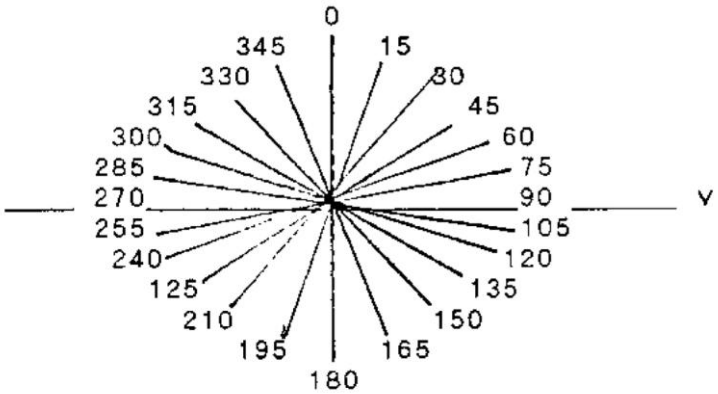
FLYING CHARACTERISTICS

The aircraft has to move without pressing a button. There is only one way to program this, that I know of, the following routine isn't very elegant, but does simulate a more realistic aircraft movement. Due to the lack of triganometrical functions in 3D Kit I had to "simulate" these functions.

The following variables are used:

v = speed of aircraft. hdg = heading (V4). cu = current use of fuel. x = V0. z = V2.

I split up the heading circle into 12 parts to 30 degrees:



V is used as a vector and is added or subtracted from the current position of the aircraft - from variables V0 and V2. Here is the code:

GENERAL CONDITION

```
IF VAR<? (344,hdg)    - if hdg between 345' and 15'
OR VAR>? (15,hdg)
THEN ADD (v,z)        - then add 2*v to z
ADD (v,z)             - it means that you go north
ENDIF
IF VAR>? (45,hdg)     - if hdg between 15' and 45'
AND VAR<? (14,hdg)
THEN ADD (v,z)        - add 2*v to z and add v to x
ADD (v,z)
ADD (v,x)
ENDIF
IF VAR>? (75,hdg)
AND VAR<? (44,hdg)
THEN ADD (v,z)
ADD (v,x)
ADD (v,x)
ENDIF
....
....                  - and so on...
....
IF VAR>? (345,hdg)
AND VAR>? (314,hdg)
THEN ADD (v,z)
ADD (v,z)
SUB (v,x)
ENDIF
REDRAW
```

The result is that the aircraft moves (approximately) to the point fixed on the cross. Now it is possible to delete the forward/backward movements (ndef) in the control menu. The following routine allows you to vary the speed - pressing the "+" and "-" buttons and calculates the current use of fuel:

GENERAL CONDITION

```
IF VAR=? (43,V15)
THEN
SETVAR (0,V15)
ADDVAR (10,v)
ADDVAR (1,cu)
IF VAR>? (100,v)
THEN SETVAR (100,v)
ENDIF ENDIF

IF VAR=? (45,V15)
THEN
SETVAR (0,V15)
SUBVAR (10.v)
SUBVAR (1,cu)
IF VAR>? (0,v)
THEN SETVAR (0,v)
ENDIF ENDIF
```

The movement routine is ralated to the circle on the x/z plane. It is possible to do the same on the y/z plane but there are difficulties. On the points v3 = 270 (zenit) and v3 = 90 (nadir), v4 and v5 have to rotate 180 degrees and v3 has to reflect on the 90-270 degree line. Also it is necessary to delete "move up", "move down", "rotate up" and "rotate down" in the control menu and to create a routine which calculates the angle v3 dependent on the tilt angle v5, requesting the keyboard, and which change the sign of the step of v3 on the zenit/nadir.

But for all those routines only one REDRAW is necessary! The calculations don't take time, but the painting of the surrounding area does.

For some people, the movement in this 3D-grade-split heading seems to be a bit rough. Of course it is possible to split it finer, but it is a lot of work. All these routines can be seen, working on my PD disk, available from Mandy.

STOP PRESS!

AMIGA KIT 2.

I've heard from quite a few Amiga owners who say they cannot load the Clip-Art files from disk two. I may be wrong but I think, from speaking to a few of them, that the problem only occurs on single-drive users. The problem is being fixed for version 2.05 but I would be grateful if anyone with double drive who has experienced this problem, could let me know if I am wrong in my assumption.

GENERAL KIT 2.

Quite a few people have complained that some of the FCL commands as printed in the manual don't work, such as ANIMBRUSH. In the addendum to the manual it is explained that some commands have been changed so that it should be BRUSHANIM. Others are BRUSHANIMACTIVE?, DISABLEBRUSHANIM, ENABLEBRUSHANIM etc etc. Don't forget to read the addendum to the manual for a list of all changes.

The programmers are working hard on version 2.05 at this moment and it should be ready within a few weeks. I'll arrange to swap disks once I get a stock in.

In the beginners routine by Mieke Van Der Poll, please make sure you load in your border first to avoid problems with colours later.

INVENTORY/INFORMATION SCREEN

By David Lacey - COMMODORE 64

Newsletters issues 2, 3 and 6 all had very good ideas onthis topic but, either they did not suit my game, or were a little bit complex. So I thought about making a black background for my information screen, and decided to make it using an empty message. The method I will outline now gives an information screen when the letter "I" is pressed, but note that "I" has to be held down for a short time depending on how complex the current 3D view is. To exit the screen "I" must be held down again. Variable messages (such as what you are carrying) will flash when they appear, but this actually creates a good effect. In my game the conditions and procedures used are: General conditions 11 and 4 and procedure 20.

The first General Condition is as follows:

```
CMPV     73      121    (73 = ASCII "I")
IFEQ
THEN
ADDV      1      105    (105 is just a variable
ENDIF                    initialized as 0 in Gen.Con.1)
CMPV      1      105
IFEQ
THEN
CALL      1
ELSE
IFGT
THEN
SETV      0      105
SETV      1       17    (Var 17 is text clear flag)
ENDIF
END
```

Second General Condition:

```
CMPV      1       17
IFEQ
THEN
SETV      0       17
COLOUR    0        0
ENDIF
END
```

Procedure 1:

```
TEXTCOL   3
PRINT     2        4        4   ┐
PRINT     3        4        6   |- Permanent Messages
PRINT     4        4       15   ┘

PRINT     1        4        5   ┐
PRINT     1        4        7   |
PRINT     1        4        8   |  Gaps between messages (note
etc                             |  exclude lines which messages are
                                |- on: In this case lines 4, 6
                                |  and 15)
PRINT     1        4       14   |
PRINT     1        4       16   ┘

CMPV      1        4            ]- Variable for key (1=yes 0=no)

IFEQ                            ┐
THEN                            |- Flashing messages of objects
PRINT     5        4        7   |  you have
ENDIF                           ┘
CMPV      1        1  ------------ Variable for having jetpack
IFEQ                                jetpack (1=yes 0=no)
```

```
THEN
PRINT     6        4        8
ENDIF
    and so on for as many objects as you wish.
END
```

Now create the following messages:

```
MESSAGE 1:    " (BLANK) "
MESSAGE 2:    "         INVENTORY SCREEN        "
MESSAGE 3:    "    YOU ARE CARRYING THE FOLLOWING   "
MESSAGE 4:    "    HOLD KEY "I" TO EXIT    "
MESSAGE 5:    "    THE KEY     "
MESSAGE 5:    "    THE JETPACK    "
```

Note that all messages must be the maximum length minus one. That is that there should be one "dash" visible at the end of each message, with spaces used to fill out short messages. The above routines work for a window set at X position 4, Y position 4 and with dimensions 32 x 13. For different sized or positioned screen just alter the number, and position of messages and the length of messages - messages too long will go off the inventory screen.

CREATING A REAL-TIME CLOCK

By David Lacey - COMMODORE 64

GENERAL CONDITION:

```
TIMER     250
IFTIMER
THEN
ADDV        1     49 (var 49 set to 0 in General
ENDIF                 Condition 1)
END
```

NEXT GENERAL CONDITION:

```
CMPV       (18)   49
IFGT
THEN
SETV        0     49
SUBV        1     50 (var 50 is initialised to
ENDIF                 60 in General Condition 1)
END
```

The number in brackets, 18, I found to be pretty accurate for my game, but for one less complex, a higher number will be needed. This is simple to check by just trying various values, and while playing your game, just time it with a watch.

Note that an INSTRUMENT of type "NUMBER" needs to be set up, running on variable 50.

MAKING SOMETHING MOVE WITH TIME

By Yannick Gour - AMSTRAD CPC 6128

A.P.Smith (issue 5) and Stephen Flanagan (issue 6) wrote something about this. It is necessary to create as many objects as there are positions for the simulated animation to be moved to. In this instance let us create a cube which is moving along four spaces. We need to create four cubes (only the first one being visible).

Create a cube and make it invisible by using the ATTRIBUTE icon. Repeat this procedure for each one placing them side by side. Make the first cube VISIBLE. The FCL code example:

```
IFTIMER
THEN
ELSE
END         - no animation if timer period not passed.
ENDIF
IFVIS      1- if cube 1 is visible
THEN          then
INVIS      1  make it invisible
VIS        2  and make cube 2 visible
REDRAW        redraw the screen
END           stop
ENDIF
IFVIS     2
  etc         toggle visibility from cube 2 to cube 4
END           then from 4 to 1 again
```

If there are too many objects to animate then a second possibility would be to design as many areas as there are positions and instead of toggling visibilities of the objects as in the previous example you have to change areas. This can be done if we write a FCL routine with four areas (from A to D) as follows:

IN AREA A	**IN AREA B**	**IN AREA C**	**IN AREA D**
IFTIMER	IFTIMER	IFTIMER	IFTIMER
THEN	THEN	THEN	THEN
GOTO 0 "B"	GOTO 0 "C"	GOTO 0 "D"	GOTO 0 "A"
ENDIF	ENDIF	ENDIF	ENDIF

TIPS ON COMPILING

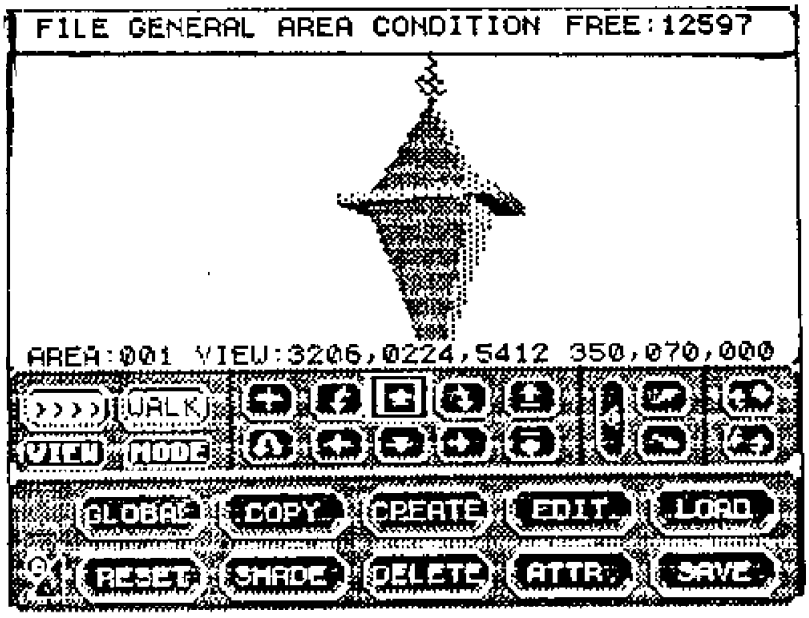
By John Elliott - SPECTRUM

If you want to change the border after compiling, it is stored in the file "3". It is a standard SCREEN$ file.

To display a loading screen, insert the instruction LOAD "SCREEN" SCREEN$ in the DISK file. Any new instructions in the DISK file must be placed in-between the CLEAR and USER instructions.

The 15 different shades are stored in the file "1" at base + 24187. Thus if you load the file CODE 32768, the first shade is at 56955. Each shade is like a half-height user-defined graphic and can be designed in the same way as a UDG. When the game is running you can change them using a Multiface - they are at 66147. Similarly, they are in the 48K environment editor at 65360, the 48K condition editor at 65267, and the 128K editor at 65263, banks 0 and 3 - change the shade pattern in both memory banks.

If you want to base objects on those in Driller or Dark Side, it is easy to measure objects in these games. Just line up your movements sights with the edge of the object and use the X, Y, ↑ values to measure the distance across the object. Divide by 64 to get "object" co-ordinates, X, Y, ↑ in these games correspond to X, Z, Y in the 3D Kit. Here is a picture of a Driller-type rig which I reverse-engineered this way:



PROXIMITY DETECTOR:

There is a way to get this done which hopefully will save memory. Instead of having all those rectangles on the floor, have four sensors at the same place (on or above the point you wish to measure from). Using ATTRIBUTES, set the first sensor's size to 100,100,1, the second sensor to size 80,000,1, the third to 60,000,1 etc. Then use David Lacey's detector routine (Issue 10), except that IFHIT should be replaced by IFSENSED.

CALLMC information and machine-code programming.

If you are not a machine code programmer, the information below will probably not make any sense. Also, this is specific to Spectrums. You have been warned! CALLMC only works once a game has been compiled. The form is CALLMC l h where L and H are the low and high bytes of the address to call. If you write a machine-code routine for CALLMC there are a number of interesting addresses. These addresses are only valid for the compiled versions of games - anyway, CALLMC has no effect in the editors. All addresses are given in Hex.

```
AA56   - If set to 1,reset the environment as if ENDGAME had been typed.
AAE5   - The text colour (as set in TEXTCOL).
B569   - The IF flag. If 0 the commands to next ENDIF will not be used.
B612   - FCL variable number 0, each variable occupies 1 byte so
         variable 1 is at B613 etc. This is probably the best way of
         passing parameters.
B693   - The IF combiner byte. If it is 0 there are no previous IFs. If
         it is 1, there was a previous IF-AND. If it is 2 there was a
         previous IF-OR.
B695   - The FCL zero flag. If set to 0 IFEQ will return true.
B696   - The FCL carry flag. It determines responses to IFGT and IFLT.
C073-4 - 16 Bit value for the TIMER, only low 8 bits set by the FCL
         TIMER command.
C077   - A sound number put there by SYNCSND waiting to be used.
C08A   - The crush byte, set to 1 to indicate death by crushing.
C08B   - The fall byte, set to 1 to indicate death by falling.
```

When a routine is entered from CALLMC, the DE register indicates the address of the routine. The IX register indicates parameter addresses; (IX+1) is parameter 1, (IX+2) is parameter 2 and (IX+3) is parameter 3. For CALLMC the first two are the address of the routine, and there is no third (this can be changed in the table of commands in the compiler, there is an entry for CALLMC beginning with "CALLMC ". Immediately after this is a byte containing the value 2; change this to 3 in both the editor and compiler. CALLMC will then take three inputs; the third is only used by your machine code program. The easiest way to do this modification is with a Multiface. If you actually want to alter or replace an FCL command, they are stored in the following format:

```
DEFB  "NAME    "  - 8 spaces.
DEFB  Numarg      - number of inputs afterwards
DEFB  Number      - probably the command number
DEFB  ADDR        - address of the routine used by the command
```

The only problem is where to load machine-code routines. The "1" file occupies all the memory from 40960 up; the game code "2" loads at 24576 and the machine code loader "LOAD" at 24064. There seems to be some spare space at 65384-65535 but code for here has to be loaded after the file "1". The best option seems to be to create a mini-program looking something like this:

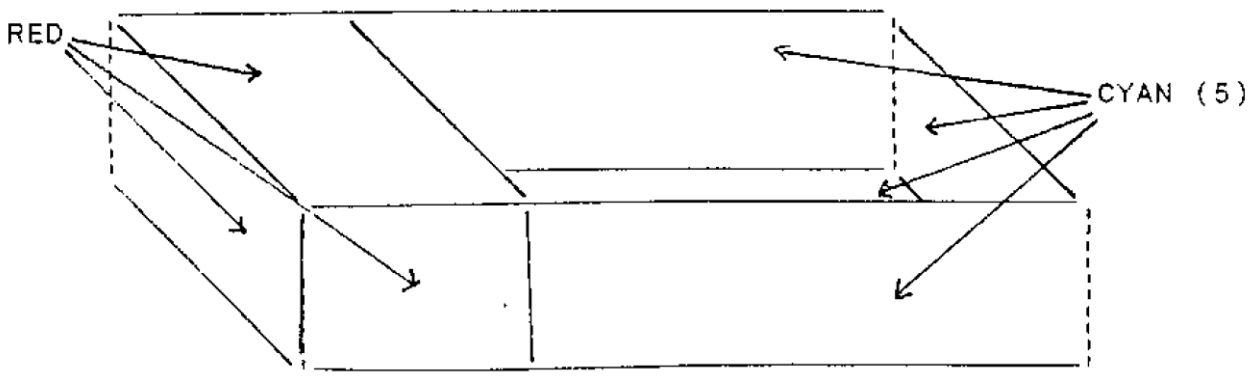
```
ORG  24320
LD   HL,MC
LD   DE,65384
LD   BC,MCLEN     - machine code length
LDIR
JP   41888        - enter the game
MC                - your machine code routine goes here
                    it is assembled to run at 65384.
```

Save this program as XCODE.BIN or something similar. Then modify the "LOAD" file so that the JP 41888 at the end becomes JP 24320. Save the modified "LOAD" file to replace the original one. Finally make a loader program which loads "XCODE.BIN" at 24320 and then loads the normal "DISK" program.

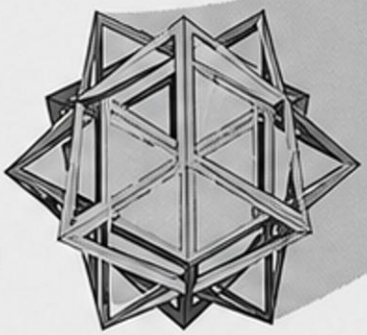
TAKING A DIP

By Garry Wishart - SPECTRUM +3

I have been trying to get the effect of a player getting into a pool of water. This allows the player to have their head half out of the water (if you know what I mean). The effect can be achieved by creating a large cube for the player to step off and then creating a rectangle the length of the area and the height of the cube. Colour the rectangle in a suitable "water" colour (say cyan). Copy the rectangle twice more and edit them so that they form a complete box around the area. If you are a bit bewildered by my explanation (even I was at first!), then refer to my diagram:



- Hints & Tips
- Usefull Routines
- Letters Page
- Beginner's Section



3D Construction Kit Newsletter

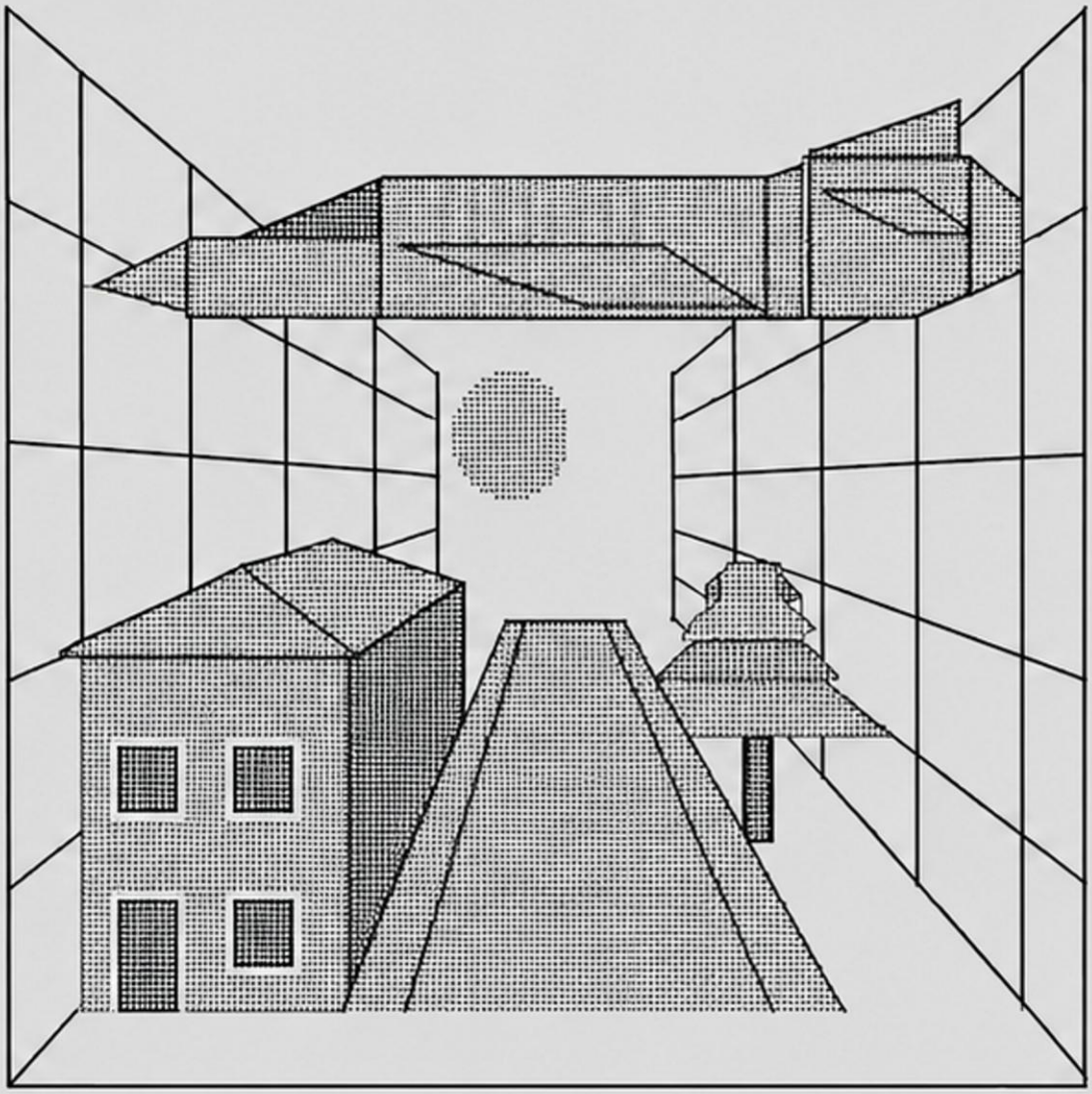
Issue Number 12
April/May 1993

CONTENTS

EDITORIAL 285
LETTERS 285
USING AN AREA MORE THAN ONCE 291
KIT 2 SPECIAL 294
THE USER GROUP GAME - PART 4 295
HALL OF FAME 299
16/32 BIT ROUTINES 299
CREATE A TRANSPORTER 300
THE ULTIMATE LIFT ROUTINE 301
8 BIT ROUTINES 305
VEHICLE COMMANDS 305
HINTS AND TIPS 307
DRIVING AROUND 309
ADDING INTRO SCREENS TO DATAFILES 309
BORDERS WITH A DIFFERENCE 310

3D CONSTRUCTION KIT USER GROUP

MAGAZINE ISSUE 12
APR/MAY 1993



Tony Hutchby.

EDITORIAL

Welcome to issue 12 of the 3D Construction Kit User Group Newsletter.

My goodness, doesn't time fly when you're enjoying yourself? Do you realise that the next issue will mark the start of the THIRD year of the User Group? It only seems like yesterday that we were starting out together with pooling our ideas and lending a helping hand to each other as we fumbled our way through the initial ins and outs of the new-fangled 3D Kit - everyone else seems to be getting on fine whilst I'm still fumbling but never mind. I'll have to see if we can do something special next issue to mark the occasion.

The initial "teething troubles" with Kit 2 seem to be vanishing now with the release of version V2.07 and routines are coming in for that version now quite well so there should be plenty to please owners of all versions of the Kit now. Four or five people have written in to express an interest in a get-together/convention of 3D Kit users but that's really not enough to get any real plans afoot yet, Perhaps later on this year or early next year there will be sufficient interest for us to go ahead and plan something. If any other members like the idea then please let me know. We could arrange a venue in a central city to make access easy for all and all get together to show each other what we have done and exchange ideas etc. I'll wait and see what happens - the ball is in your court!

I must apologise to anyone who is still waiting for a reply from me. I am sorry to keep you waiting but as I am sort of a one-man-band here I sometimes get behind when there are a lot of disks to be exchanged, problems to answer and newsletters to be typed. Please be patient with me and I'll catch up as soon as I can. I had a holdup when two of the computers went out of action for a while and I had to wait for repairs - that meant that PD discs and Kit2 updates were held back for a while. I got a new Atari STE and had a half meg fitted but it STILL isn't working properly with Kit2 yet. It'll have to be taken to pieces to sort the memory upgrade out again - maybe I put it in upside-down. As many of you know, I am not a very technical sort of person and the inside of a computer rather baffles me. I remember when I took the old commodore 64 to pieces to sort out a wonky key - it had been so long since it was opened up and cleaned that the inside looked like the contents of a hoover dustbag! It was full of crumbs which just shows what I usually do when I'm working at the keyboard doesn't it? No wonder I'm overweight! Isn't computing fun?!

I've decided to program my own game on the Kit - as soon as I can find the free time. I'm already working on a nice little problem of being mown down by a rampant cube as soon as I enter a long tunnel. I've got to get into an alcove as quickly as I can to avoid being crushed but the damn thing keeps coming back the other way behind me BEFORE I activate the button inside the alcove. The flipping thing seems to have a mind of its own. I'd better solve the problem before the next issue as I think I'll incorporate it into the User Group Game.

Ah well, that's enough rambling from me for one issue. Don't forget that you can upgrade to Kit2 by sending me your old disks and a cheque for £20. Full details in the last few issues. I sincerely hope you find this issue useful and informative. I'm off to do some more letters now, so, until the next issue (June/July), I'll sign off.

Mandy

LETTERS

Dear Mandy,

I have some problems with Kit 1. The program runs perfectly well from hard disc until I try to save or load from the data file. There is then an unusually long delay (up to 30 seconds when loading the sample game for VGA graphics). I have tried installing and running the program from my Amstrad 2086 and even that is quicker than my 386. Help!

Nial F. Ball, Westbury, Wiltshire
KIT 1 - PC

The problem you are experiencing is a fault connected to the Mouse driver that you are using. It has been discovered that certain mouse drivers cause severe delays when accessing the disc drive within the Kit. A possible solution was included in the upgrade to the latest version (V1.02), but this may not work in all cases and the only other solution is to change the mouse driver for a different one.....Mandy

---

Dear Mandy,

Thank you for being so helpful. It came as a shock to find out that I've been bothering you for so long with my problems and you have been very kind to assist me. As you will remember, my problem is with trying to install my own sample bank. I've used the new JOIN.TTP program you sent me and have been using many different sample formats, all of which the JOIN.TTP program WILL join together, that is except for the fact that the command line is so short I can only join about eight samples in a bank. The real problem starts when I try to install the NEW.BNK into either the KIT.PRG or my own programs. Every time I try to install it it crashes the computer. I get three bombs on screen which I believe to be some kind of ADDRESS ERROR. The same things happens on stand-alone programs. I've used MAESTRO.SAM, TRACKER.SPL, STEREO REPLAY.AVR, MASTER SOUND.SAM, OLD & NEW REPLAY.SPL and SEQUENCER ONE.IFF format samples. I didn't mix any of these formats but stuck to one type of sample at a time to try and find out which ones would work.

Brett Grace, N.S.W. Australia
KIT 1 - ATARI ST

I passed your letter to the programmer, Brett, and he tells me that he tested and tested this on all their ST's and have found no problem whatsoever, so he thinks it must be a problem with the samples that you are using. The only way that he can test this is to see the samples. If you can send me the samples you have used I will pass them over to Paul so that he can try and find the problem.....Mandy

---

Dear Mandy,

Hello again. Sorry for taking so long to reply to your last letter and thanks for the new JOIN.TTP program. I've tried it and it WORKS! The only problem now is that I can't get my samples to work within the 3D Kit program. I know that they are there because the memory space is affected but whenever I use SOUND (8) or whatever either the computer crashes or just goes "bip". I've copied my samples and the new JOIN.TTP command onto a disk and I hope that either yourself or someone from Incentive can work this out for me.

Liam Johnston, Belfast
ATARI ST - KIT 1

Paul Gregory of Incentive tells me that again the problem appears to be the sample format. As far as he can see the samples you supplied are not RAW 8 bit samples. Also the samples MUST have no zeros in them. The latest copy of the JOIN.TTP program that Paul sent me is supposed to fix this problem. If that is not the case then Paul says he will supply me with another one.....Mandy

---

Dear Mandy,

After playing on W Industries Virtual Reality at the Shot-Amusements Trade Exhibitions International at Earls Court in January I've had a brilliant idea. Why not integrate Incentive Software's 3D Construction Kit with some clever hardware such as an experimental home made VR Visette - in laymans terms, a helmet with miniature TV's stuck at the front. The idea would be to use an Infra Red or Radio transmitter on the helmet which would translate back joystick/mouse movements to the 3D Kit. Then using a joystick for forwards and backwards movement only and tilting your head forwards/backwards, left/right would in turn emulate a joystick/mouse/keyboard action to the toolkit. Other ways of control could be the use of tilt sensitive switches in the helmet. The nearest thing I've seen to this is the Super NES headset with the sights and Infra Red Beam. I've also heard that Sega are bringing out a little box which will interface to the MegaDrive and give Virtual Reality. Some March issues of certain Sega magazines have sneak reviews of what the system might be.

The Kit would probably have to be slightly modified to take joystick input or possibly someone could write some sort of a software filter between the hardware and Kit to emulate mouse direction commands which would in turn be interpreted by the Kit. I'm not knocking the Kit, but there must be someone out there who's had the same or similar idea to me. I believe the technology and tools are here, we have part of the solution in the Kit but not the whole solution and I believe that someone out there may already hold the answer. I believe there is a home market for VR. People are really turned on by this new technology and with the right backing and expertise there could just be a small opening for the home computer user and the Kit with such a device. I'd be grateful if someone with similar ideas could discuss this further, and if I'm lucky, possibly talking to Incentive Software themselves. On a lighter note, if you are experiencing any compatibility problems with any old software running on an A500+ then there is a utility called RELOKICK 1.3. This amazing piece of software has allowed me to play all my non-compatible games and even DARKNESS CALLS (club PD game) which was giving me grief. The utility also gives backwards compatibility to the A600 and A1200. I don't know if every game will work but it's the next best thing to a ROM sharer and ripping open your Amiga. The utility can be found in most PD databases but I got mine from CU Amiga March '93 issue.

Dominique Watson
AMIGA - KIT 1 AND KIT 2

Dear Mandy,

Thank you for sending me the back issues of the Newsletter that I needed. The very first one and the second one, I would say, are indispensable, containing as they do some tutorials on how to start using the Kit. I would advise anyone who has just got the Kit to get issue 1 immediately! I'm still having problems trying to program the Amiga version's sound samples into my FCL routines, specifically into the User Group Game. I've followed your instructions but there is no sound produced in the game. I enclose my data and original Kit disk to see if you can sort out what the problem is. By the way, will you be doing any further work on the User Group Game? I know you must be extremely busy but I really think it would benefit a lot of amateur users like myself who learn most by working through tutorials.

Reg McLoughlin, Bidston, Birkenhead
AMIGA - KIT 1

I've tried to find what could be causing the problem with your datafile, Reg, but without success. I've copied MY Club-game datafile onto your disk so that you can see that your program disk is not at fault and so that you don't lose out - I'm sorry that my club-game datafile is so sparse and functional, but I didn't yet get the time to furnish my castle as other members have done as I've been a bit busy. (Bet you thought my datafile would be outstanding! - sorry to disappoint). However, I would be interesting to discover just what did go wrong to cause the complete lack of sound. Mr Andrew Hull had the same problem and the programmers couldn't figure out what had caused the corruption - although they did manage to correct his file so we can only hope that this doesn't happen again. As you will see from this issue the User Group Game is continuing and I hope that it will continue for some time to come - or at least until members tell me they no longer want it. It does help beginners a lot. Anyone who has only just joined can still join in the game if they send me a stamped self addressed envelope I will send them the relevant extracts so that they can catch up with the rest of us.....Mandy

---

Dear Mandy,

Having read the letters from Reg McLoughlin in issue 10 and Orn Jonasar in issue 11, and having an Amiga 500 myself, I have been thinking about a solution to prevent the slowing down of movement when creating a lot of objects in an area. Not everyone can splash out on an accelerator and perhaps they are saving up for a A1200 perhaps. What could be done in the meantime to speed things up a bit? Well, the answer lies in the program itself. Under the GENERAL MENU, there is the PREFERENCES option where, both with Kit 1 and Kit 2 you can change the movement of your viewpoint in any direction by changing the default numbers. In 3D Kit 1 the default menu shows the following:

	(Mouse Buttons)	
	left	right
Viewpoint lin. vel.	020	100
Viewpoint ang. vel.	005	030
Object lin. vel.	020	100

When changing the numbers in the first line you greatly increase your movement. The default 020 moves you 40 units per left mouse button click, setting it to 050 move you 100 units per left mouse button click and so on (look at the co-ordinates in the view window). It is the same with the other numbers in the menu. Try to keep the numbers so that you get a reasonably smooth movement. The third line allows you to speed up the movement of objects during editing. The second line is the angle velocity and you can alter this in the same way. I tried out different numbers in my game Atlantis. In some areas the movement was very slow because of the number of objects created. I changed the left mouse button number to 100 and it really speeded things up. I just wish I had discovered this earlier - I would have changed the preferences ages ago! In Kit 2 the default preferences are as follows:

	(Mouse Buttons)	
Viewpoint	left	right
Movement	20	100
Turning	5	30
Object Movement	10	20

You can do the same thing with these apart from the Object movement which, in the version I have, seems to have no effect - I hope that later versions will correct this. The only thing you MUST test when making a game is how big you can set the numbers in order for the player to be able to put himself in the middle of an entrance to go through. The same applies when picking things up (although you can set the activate range higher in the defaults).

The other alternative is to buy an Accelerator or a new computer. In CU Amiga Feb '93 there is an article about accelerators pointing out that the A 5000 card is available in the U.K. for £160. It provides a Motorola 68020 processor and runs at 16.6 MHz. The A 5000 fits into the 68000 socket on the A500 motherboard. The 68000 is placed in a special socket on the A 5000 and this provides a special "fall back" mode for software that won't run with the accelerator (mostly earlier games). I should think that Kit 1 and Kit 2 could take advantage of such an accelerator. An add in the same magazine says that the Accelerator A 5000 plus 1Mb is available from Phoenix, Unit 19, Armley Park Court, Stanningly Rd, Leeds LS12 2AE. Tel 0532 311932.

Mieke Van Der Poll, Holland

AMIGA & PC - KIT 1 & KIT 2

Many thanks for the information, Mieke, once again I am wondering what on earth we would all do without you!.....Mandy

---

Dear Mandy,

Having received Kit 2 for Christmas I think it is an absolutely fantastic piece of programming. However I am having a few problems. When cutting the Demo Brush WORLD the manual does not specify how to do it properly and the world itself looks fuzzy compared to the video. Also how do I transfer a pre-defined border? I've tried but when I've set the view window, pressed F1 then ESC the border doesn't appear!

Nathan Bloy, Carlton, Nottingham

AMIGA - KIT 2

Nathan also mentioned a few other niggly problems he was having with V2.01. These should all be corrected with V2.07 which I have a stock of here. Anyone wishing to exchange their disks for the latest version please feel free to do so - details at the end of this section. Many letters have been received from people experiencing problems loading the Brushes and Borders. Perhaps the manual isn't very clear on this aspect so I will give step-by-step instructions here that may be of help to anyone who is a bit confused about how to do both:

Load in Kit 2 and select all the items in turn that I list here to load in the sample borders:

1. *Select: FILE MENU - BORDERS - LOCATE - BORDERS - OK - FILE - BORDERS - ADD - FUNVGA (or whichever border you wish to load) - OK - WINDOW OFF - OK - FILE - BORDERS - VIEW - 001 - OK - Click mouse button.*
2. *GENERAL - SET VIEW WINDOW - SET - click on small blue panel with XYZ coordinates on it - 001 - OK - position box as required within the border - Click right mouse button.*
3. *OK - GENERAL - DEFAULTS - change the border by clicking on it until the cursor appears and change to read BORDER 1 - OK - TEST - Press ESC.*

Loading in Brushes and animating them: Load in Kit 2 and select all the items in turn as above:

1. *Select: GENERAL - BRUSHES - CUT BRUSH - WORLDVGA - OK - move pointer to the first Globe with a box around it and Click right mouse button.*
2. *Repeat all the procedures up to this point (selecting every other globe working from left to right and top to bottom until you have selected every other one.*
3. *GENERAL - BRUSH - ANIMATIONS - CREATE - GENERAL - BRUSH - ANIMATIONS - EDIT - SELECT ABRUSH 1 - OK - select REPEAT and FORWARDS – EDIT*
4. *Now add each brush in turn until you have them all in order - OK - PREVIEW - set the speed as necessary by toggling between OK and PREVIEW - SELECT OK - SELECT TEST TO SEE THE WHOLE THING WORKING*

.....Mandy

Dear Mandy,

I was wondering if you could tell me, now that I have upgraded to Kit 2 and have a different registration number, which one should I quote in future correspondence and calls to you?

Chris Odell, St Albans

To make life a lot easier for myself I decided to use the number on the Registration Card as each members membership number too. If you are already a member of the club and upgrade to Kit 2 I will, to save confusion, still continue to use the initial registration number so that is the one that you should quote. Mind you, I am now so used to all your names and voices on the telephone I hardly ever have to ask for the number these days.....Mandy

---

Dear Mandy,

I have a little hint for setting up a "clean disk" for PC users. Format a new floppy disk in drive A on your system with the /s switch. This will make the disk bootable (if inserted on power up) in preference to the hard disk - a la: C:> FORMAT A: /s. You may also need to use the /F switch to format to the appropriate size, see your Dos manual. Copy your mouse driver onto this disk and then build an autoexec.bat file containing the following:

```
echo off
cls
echo 3D Kit disk now booting
rem Load in the mouse driver
mouse
```

The command "mouse" should be changed for whatever the mouse driver you have just copied is called. If you use essential device drivers, such as STACKER or SUPER-STORE you will need to examine your config.sys and autoexec.bat files and copy the relevant lines to these files on the floppy. You should now be able to reset your computer with this disk in drive A: and bypass your hard disk bootup system giving you a squeaky clean, or almost squeaky clean machine. Now you can access the hard drive as usual and load the Kit. Also remember when programming a PC version that the more people you want to use the program the less "powerful machine specific" it should be. As not everyone can use Super VGA or even ordinary VGA so you must do some research into the likely users.

Same goes for memory and soundcards. If your creation is larger than will fit on one disk then try using the PKZIP/PKUNZIP utility available from most good PD libraries. This can compress about 2 megabytes of information to about 800k on a good day, depending on the files you are compressing.

On the subject of Piracy. People do not appreciate piracy until they are affected personally (i.e. seeing their own programs ripped off). Personally I would be in favour of a card being developed that you could plug in a hardware Dongle to allow you to use the package, perhaps the dongle holding essential parts of the software that could not be hacked by Pirates. If the board were designed properly you probably have up to 10 dongles installed at a time preventing a lot of switching. Every time you bought a package it came with a dongle. Maybe it could even be called a STeevie Board (but maybe I am getting carried away....).

Steevie Day, Argyll, Scotland.

PC - KIT 1 & KIT 2

With the very latest version of Kit 2 that I have received the programmers have taken into account any extra memory that PC owners might have and the program utilises it. You still need to use nearly all the base memory to hold the Kit itself though and the programmers have thoughtfully provided two small batch files that you can use to boot up and return to your old config.sys files when finished programming. I have been sending out the information on these files together with all the upgrades to V2.07 that I've already exchanged for people. However, there is a fault on one of the files that instead of sending you back to your old config.sys it causes a lot of problems. It can easily be corrected though, all you have to do is to change the line in the batch file that says: COPY\AUTOEXEC 3D0\AUTOEXEC.SYS to read instead: COPY\AUTOEXEC 3D0\AUTOEXEC.BAT apologies from the programmers for the error. It will be fixed with version V2.08.....Mandy

---

Monsieur,

Avant achete 3D Construction Kit V.1 que j'ai baucoup aime (a part quelque defaut), j'ai recemment acquis la version 2, et la, j'ai un gros probleme, en effet quand je cree un bouton icone "save position" ou "load position" cela ne marche pas! Les outres icones marche tre bien. Pouves vous m'expliquer le probleme...

As you know, I don't speak French but, because I do speak one or two other languages, I was able to work out what the contents of this, unsigned, letter were about. I could be wrong so perhaps someone who does speak French will correct me - I think it says that, although the other icons work perfectly the Save and Load position icons do not. I got in touch with the programmers about this and, much to my surprise, was told that in fact the save position and load position commands do not work in Kit 2. Apparently this is a problem that, because of the enormous complexity of the program, cannot be fixed and the inclusion of those two commands in the manual was a mistake, Obviously this will not really effect us when creating our games but will be a bother to our players if they have to reload after making a mistake. I've been mulling over different ways to overcome this problem along the lines of - if a certain key is pressed then perhaps we could make the program reset or load in another area or world or whatever. I don't know ... I think I will throw the idea out to you all to see if you can come up with any suggestions (not rude ones), on how to overcome this one. Let me know what you think.....Mandy

You will notice that mention of upgrades to later versions of Kit 2 are mentioned quite a bit in the letters and replies. The latest version that I've been sent in version V2.07. Anyone who has earlier versions of Kit 2 can have this version in place of theirs if they wish by returning their disks for exchange to me. Please note that version V2.07 is not, I understand, the last version and that version V2.08 will be released fairly soon. You can either wait until that version is ready or upgrade now and again later when version v2.08 is ready. It is quite up to you. Version V2.07 has fixed all the problems that most of you have complained about. Version V2.08 will be the final version - the programmers are testing furiously and making sure that all problems are fixed before releasing it.

I will keep everyone informed of progress via the newsletters, or, if you would like up to the minute information before sending your disks or have any queries then you can telephone me. Please keep to the helpline hours of 2pm - 7pm weekdays if possible as I've had some calls at extremely odd hours (7am, 12.30pm and even 4am!!! - obviously from someone abroad in a different time zone). I've a habit of accusing people of not being members if they ring at the wrong times - sorry about that (especially John R and Pete). For those who cannot phone during those hours you may be able to catch me on a Saturday afternoon - but please don't phone on Sundays - thanks.

USING AN AREA MORE THAN ONCE

BEGINNER'S SECTION

By Mieke Van Der Poll

(SUITABLE FOR KIT1 AND KIT2 16/32 BIT USERS - 8 bit too!)

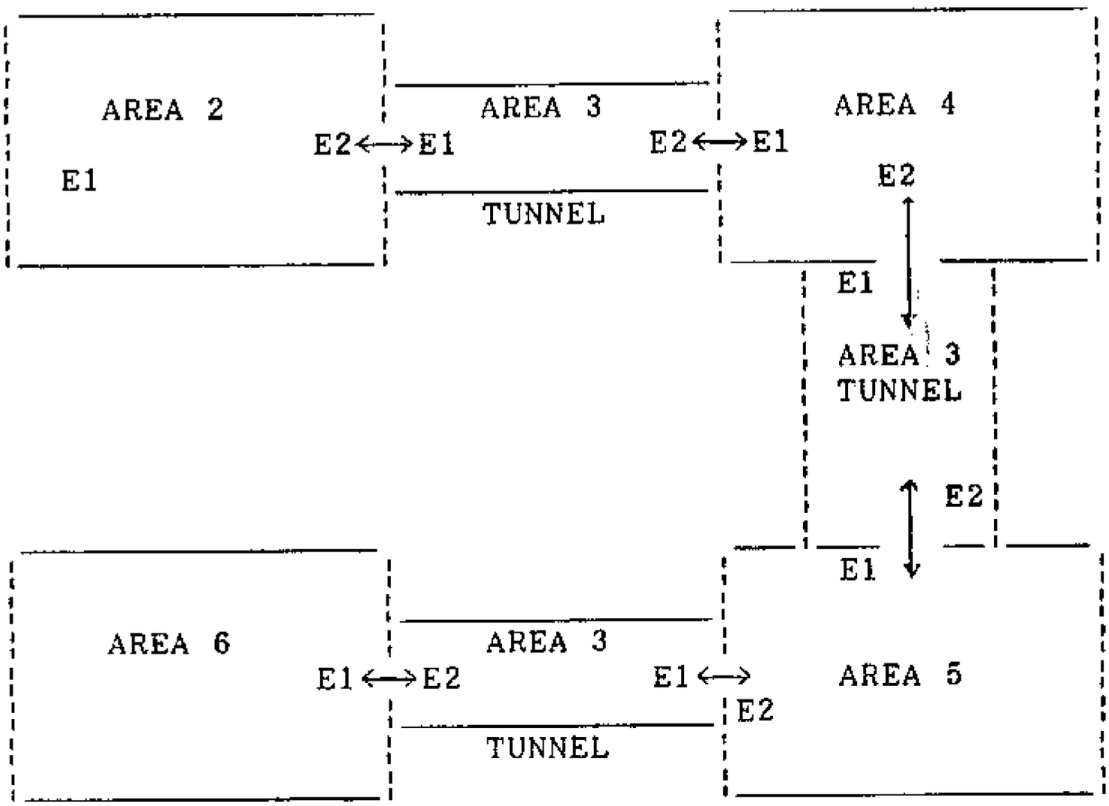
If you want to go from one area to another, for instance, through a tunnel or through the inside of a mountain, and you intend to have such an event more than once in your game, you can use that "tunnel area" for that purpose everytime. You don't have to load it it more than once, only have to design it once and it is extremely memory saving. The only thing you have to do is to select a variable and set it to a number. You can pick any variable above 29. Say for example you wish to use variable 45, you can set it to 1 -

```
SETVAR (1,V45)
```

the first time you enter the tunnel, set it to 2 -

```
SETVAR (2,V45)
```

when you enter it again from another area and so on. You also have to put the set variable command in a condition when you want to leave the tunnel to the different areas. Here is an example:



CONDITION FOR ENTRANCE 2 - AREA 2:

Go into the tunnel entrance 1 for the first time:

KIT 1 AND KIT 2	**8 BIT**		
IF COLLIDED?	IFHIT	n	
THEN GOTO (1,3)	THEN		
SETVAR (1,V45)	GOTO	1	3
ENDIF	SETV	1	45
	ENDIF		

CONDITION FOR ENTRANCE 1 - AREA 4:

Going back into entrance 2 of the tunnel for the first time:

KIT 1 AND KIT 2	**8 BIT**		
IF COLLIDED?	IFHIT	n	
THEN GOTO (2,3)	THEN		
SETVAR (1,V45)	GOTO	2	3
ENDIF	SETV	1	45
	ENDIF		

CONDITION FOR ENTRANCE 2 - AREA 4:

Going into tunnel entrance 1 for the second time:

KIT 1 AND KIT 2	**8 BIT**		
IF COLLIDED?	IFHIT	n	
THEN GOTO (1,3)	THEN		
SETVAR (2,V45)	GOTO	1	3
ENDIF	SETV	2	45
	ENDIF		

CONDITION FOR ENTRANCE 1 - AREA 5:

Going back into entrance 2 of the tunnel for the second time:

KIT 1 AND KIT 2	**8 BIT**		
IF COLLIDED?	IFHIT	n	
THEN GOTO (2,3)	THEN		
SETVAR (2,V45)	GOTO	2	3
ENDIF	SETV	2	45
	ENDIF		

CONDITION FOR ENTRANCE 2 - AREA 5:

Going into tunnel entrance 1 for the third time:

KIT 1 AND KIT 2	**8 BIT**		
IF COLLIDED?	IFHIT	n	
THEN GOTO (1,3)	THEN		
SETVAR (3,V45)	GOTO	1	3
ENDIF	SETV	3	45
	ENDIF		

CONDITION FOR ENTRANCE 1 - AREA 6:

Going back into entrance 2 of the tunnel for the third time:

```
KIT 1 AND KIT 2          8 BIT

IF COLLIDED?             IFHIT      n
THEN GOTO (2,3)          THEN
SETVAR (3,V45)           GOTO       2       3
ENDIF                    SETV       3      45
                         ENDIF
```

The conditions for the entrances in the tunnel (going out of them again), have to contain all the variable numbers set.

CONDITION FOR ENTRANCE 1 - AREA 3 (TUNNEL):

These are the important conditions that check the variables and depending on what value they hold, decide which area and entrance the player should be transported to.

```
KIT 1                    KIT 2                    8 BIT

IF COLLIDED?             IF COLLIDED?             IFHIT    n
THEN IF VAR=? (V45,1)    THEN IF VAREQ? (V45,1)   THEN
THEN GOTO (2,2)          THEN GOTO (2,2)          ELSE
ENDIF                    ENDIF                    ENDIF
ENDIF                    ENDIF                    CMPV    45    1
IF VAR=? (V45,2)         IF VAREQ? (V45,2)        IFEQ
THEN GOTO (2,4)          THEN GOTO (2,4)          THEN
ENDIF                    ENDIF                    GOTO     2    2
IF VAR=? (V45,3)         IF VAREQ? (V45,3)        ENDIF
THEN GOTO (2,5)          THEN GOTO (2,5)          CMPV    45    2
ENDIF                    ENDIF                    IFEQ
                                                  THEN
                                                  GOTO     2    4
                                                  ENDIF
                                                  CMPV    45    3
                                                  IFEQ
                                                  THEN
                                                  GOTO     2    5
                                                  ENDIF
```

CONDITION FOR ENTRANCE 2 - AREA 3 (TUNNEL):

```
KIT 1                    KIT 2                    8 BIT

IF COLLIDED?             IF COLLIDED?             IFHIT      n
THEN IF VAR=? (V45,1)    THEN IF VAREQ? (V45,1)   THEN
THEN GOTO (1,4)          THEN GOTO (1,4)          ELSE
ENDIF                    ENDIF                    ENDIF
ENDIF                    ENDIF                    CMPV    45    1
IF VAR=? (V45,2)         IF VAREQ? (V45,2)        IFEQ
THEN GOTO (1,5)          THEN GOTO (1,5)          THEN
ENDIF                    ENDIF                    GOTO     1    4
IF VAR=? (V45,3)         IF VAREQ? (V45,3)        ENDIF
THEN GOTO (1,6)          THEN GOTO (1,6)          CMPV    45    2
ENDIF                    ENDIF                    IFEQ
                                                  THEN
                                                  GOTO     1    5
                                                  ENDIF
                                                  CMPV    45    3
                                                  IFEQ
                                                  THEN
                                                  GOTO     1    6
                                                  ENDIF
```

This way you can use a particular area over and over again and it doesn't have to be a tunnel. These routines are particularly useful when memory saving is a must for larger games. They could be extremely useful when constructing some sort of a maze of areas too. If any other members have any useful ideas for implimenting these routines then do please write in and share your ideas with us.

KIT 2 SPECIAL

EXTRA COMMANDS NOT LISTED IN THE MANUAL!

In issue 10 I printed two commands that were missing from the manual -SEQUENCE (n) and EDIT SEQUENCE (n) which were the commands needed tocall up the video sequences and also to edit the video sequences. Iwondered at the time if there were more missing commands. Two eagle-eyed members decided to find out and here are the results!:

Martin Panton and Bernd Taenzer
discovered and sent in these commands:

```
TEXTDEBUG (P1)          SETWIN (P1,P2,P3,P4)          POINT (P1,P2,P3)
DEFFIRE (P1,P2,P3,P4)   DEFSIGHTS(P1,P2,P3,P4,P5,P6)  BRUSHANIMSPEED
SETSCALE (P1)           GETRGB (P1,P2,P3,P4)          AREASCALE (P1)
SETRGB (P1,P2,P3,P4)    SETHEIGHT (P1)                VISIT (misprinted
                                                        as VIST
```

Martin says that he doesn't know what most of these do and would love to hear from anybody who does.

Bernd Taenzer
discovered these shorthands not listed:

```
BRUSHANIMACTIVE? - BAACTIVE?        DISABLEBRUSHANIM - DISABLEBA
ENABLEBRUSHANIM  - ENABLEBA         FROMASCII        - A2D
GETBRUSHANIM     - GETBA            GETPIXEL         - POINT
GETXPOS          - GETX             GETXSIZE         - GETXS
GETYPOS          - GETY             GETYSIZE         - GETYS
GETZPOS          - GETZ             GETZSIZE         - GETZS
INSCOL           - INSC             INVIS?           - IV?
NEGATIVE?        - NEG?             NEGVAR           - NEGV
RANDOM           - RND              ROOT             - SQRT
SETBIT           - SETB             SETBRUSHANIM     - SETBA
SETPIXEL         - PLOT             SETSTR           - SETS
SETVAR           - SETV             SETXPOS          - SETX
SETXSIZE         - SETXS            SETYPOS          - SETY
SETYSIZE         - SETYS            SETZPOS          - SETZ
SETZSIZE         - SETZS            SHIFTLEFT        - ROL
SHIFTRIGHT       - ROR              STARTBRUSHANIM   - STARTBA
STOPBRUSHANIM    - STOPBA           STREQ?           - STR=?
SUBVAR           - SUBV             SWAPVAR          - SWAPV
TOASCII          - D2A              TOGBIT           - TOGB
TOGVIS           - TOG              TRIGGENERAL      - TRIGGEN
UNDEFARRAY       - UNDIM            UNDESTROY        - UNDEST
VIEWWINDOW       - SETWIN           XORVAR           - XORV
```

Quite a few people have written in complaining of the lack of an index to the manual for Kit 2. I mentioned this to a few members on the telephone and lo and behold I have received two beautifully collated and printed index booklets. These were kindly compiled and sent in by:

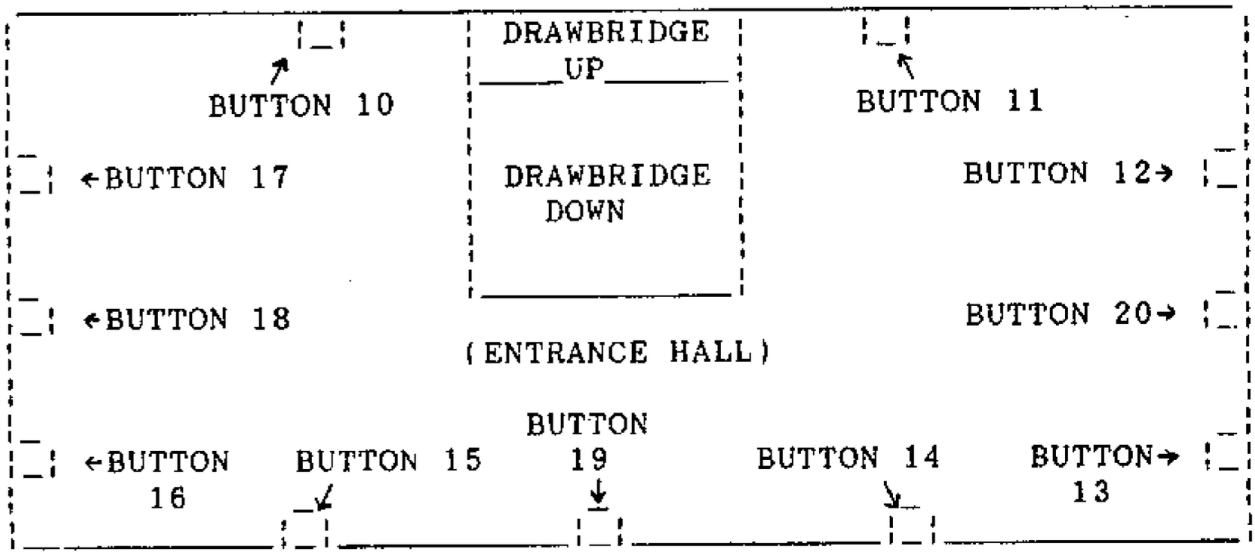
Mark Rose and Richard Exton

As these are specifically for the use of Kit 2 users it wouldn't befair to Kit 1 users to take up space and print them within thenewsletter but I would like all Kit 2 users to have them if they wish. So if you would like the indexes then please send me an envelope the size of the one the newsletter comes in and a stamp and I'll photocopy and send them to you with pleasure. They are a great help when programming and trying to look up that elusive command - I know, I rely on them now all the time! Come to think of it, there is quite a list building up of items that people may want that I don't want to charge for so I think I'd better publish a regular list from now on!

MORE NEWS ON KIT 2 ITEMS AS THEY COME IN - WATCH THIS SPACE!

THE USER GROUP GAME - PART 4

In this issue we are going to create a few extra, and more complicated puzzles to our game. Firstly it would be a good idea to make entry into our castle a little more complicated. The way we want to do this is to create a drawbridge which will open if the correct button is pressed - I say CORRECT button because we are going to create a series of buttons which will have to be pressed in turn until the button by the drawbridge is revealed. We will also complicate things for our players by adding some extra buttons just to confuse them. Below you will see a rather simple plan of the start area with all the extra bits and pieces we need marked on it:



Make all the buttons invisible via the attributes apart from button 13 which will remain visible to start the player off. Also make sure that the open drawbridge (drawbridge down) is also invisible. Using the attributes it is much easier if we change the names of our objects so that we know what they are whilst programming. Now, starting with button (13) enter the following object conditions: Note that the numbers of the buttons will perhaps be different on your game. Buttons 18, 19 and 20 are the red herring buttons!

```
CUBE 13
    IF ACTIVATED?
    THEN VIS (15)
    VIS (20)
    INVIS (13)
    SOUND (6)
    ENDIF

CUBE 15
    IF ACTIVATED?
    THEN VIS (11)
    INVIS (15)
    SOUND (6)
    ENDIF

CUBE 11
    IF ACTIVATED?
    THEN VIS (14)
    INVIS (11)
    SOUND (6)
    ENDIF

CUBE 14
    IF ACTIVATED?
    THEN VIS (12)
    INVIS (14)
    SOUND (6)
    ENDIF

CUBE 12
    IF ACTIVATED?
    THEN VIS (17)
    INVIS (12)
    SOUND (6)
    ENDIF

CUBE 17
    IF ACTIVATED?
    THEN VIS (16)
    INVIS (17)
    SOUND (6)
    ENDIF

CUBE 16
    IF ACTIVATED?
    THEN VIS (10)
    INVIS (16)
    SOUND (6)
    ENDIF

CUBE 20
    IF ACTIVATED?
    THEN VIS (18)
    INVIS (20)
    SOUND (6)
    ENDIF

CUBE 18
    IF ACTIVATED?
    THEN VIS (19)
    INVIS (18)
    SOUND (6)
    ENDIF

CUBE 19
    IF ACTIVATED?
    THEN VIS (20)
    INVIS (19)
    SOUND (6)
    ENDIF
```

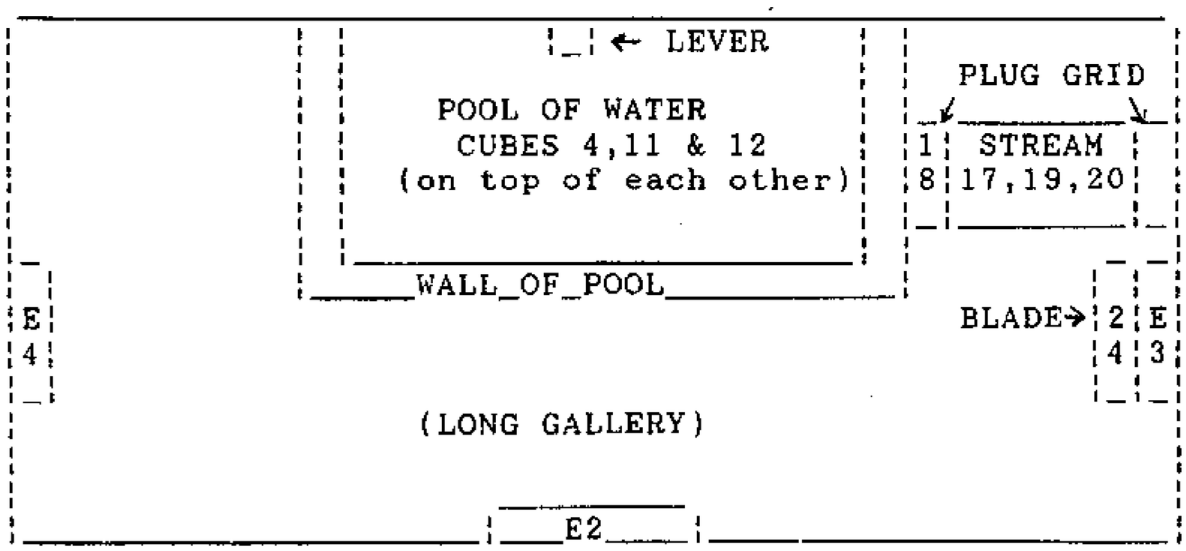
To make the drawbridge I used a flattened cube to represent the closed drawbridge and positioned it right up against and covering the entrance in the far wall. I then copied the cube, brought it. forwards and upwards a little to be able to flip it until it was lying flat and then moved it until it was on the floor in front of the entrance as if it was an lowered drawbridge. You can make the first cube invisible to enable you to position the lowered drawbridge cube into place. Make sure that you make the lowered drawbridge invisible both initially and currently BEFORE you make the raised drawbridge visible again. As you will have noticed, BUTTON 10 is the one that will activate the drawbridge for us.

To actually lower the drawbridge when the correct button is pressed is extremely simple. We just enter the following condition for BUTTON 10:

```
IF ACTIVATED?
THEN INVIS (6) (Raised drawbridge)
VIS (8)       (Lowered drawbridge)
SYNCSND (6)
STARTANIM (1,3) - Don't panic, more info
ENDIF             about this later.
```

The animation. command is to start an animation in the Long Gallery just before we enter there - I'll explain properly a little later on but put the command in now. Now, starting with the visible button, keep pressing each one as it appears (trying to avoid the red herring buttons) until BUTTON 10 appears and open the drawbridge to check that everything is working properly.

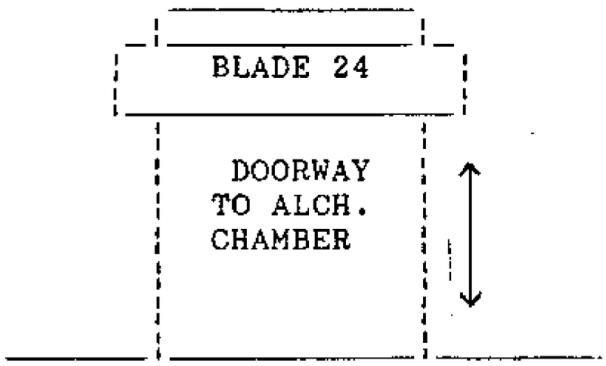
Our next puzzles/problems are going to be created in the Long Gallery (AREA 3). What we are going to achieve (hopefully) is to create a sharp blade which is swinging up and down over the doorway to the Alchemists Chamber and preventing entry. There is a lever on the wall opposite the door through which we enter the area but unfortunately it is at the far side of a pool of water (acid?!). The player will have to "pull the plug" to drain the pool in order to get close enough to activate (pull) the lever to stop the deadly blade. We also want to create some nice, realistic effects here of the pool draining away through a grid in the wall etc. The area with the extra objects should look something like this:



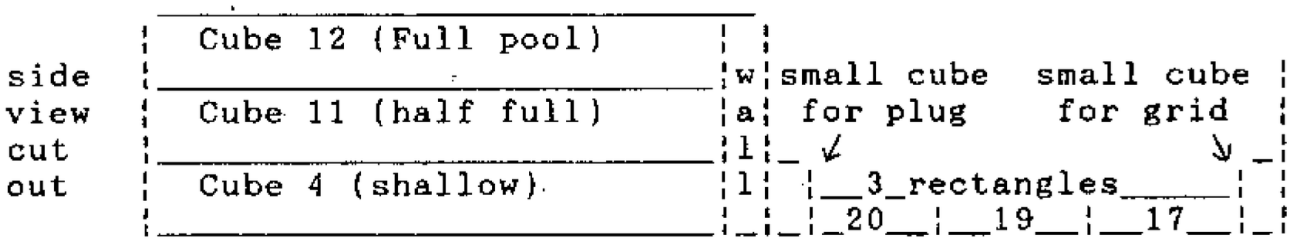
The stream of water draining out of the pool is done with three rectangles number 17, 19 and 20 (in my version).

To create the blade I put a flattened cube up against the doorway (cube 24) and made it moveable via the attributes. I created an animation and edited it as follows:

```
INCLUDE (24)
START
LOOP (30)
MOVE (0,-10,0)
SYNCSND (3)
AGAIN
LOOP (30)
MOVE (0,10,0)
SYNCSND (3)
AGAIN
RESTART
```



Create the pool and other objects as follows:



The lever can be created easily using a black rectangle for the "slot" and two small cubes one visible (placed at the top of the slot) and another one invisible (at the bottom of the slot).

To create the illusion of the pool draining when we pull (activate) the plug enter the following condition on the "plug" object:

```
IF ACTIVATED?
THEN VIS (20)
DELAY (50)  REDRAW
VIS (19)
DELAY (50)  REDRAW
VIS (17)
DELAY (50)  REDRAW
INVIS (12)
SYNCSND (5) (Amiga splash)
REDRAW DELAY (100)
INVIS (11)
SYNCSND (5) REDRAW
DELAY (100)
INVIS (4)
SYNCSND (5) REDRAW
DELAY (100)
INVIS (20)  REDRAW
DELAY (50)
INVIS (19)  REDRAW
DELAY (50)
INVIS (17)  REDRAW
DELAY (50)
ENDIF
```

Of course we want to prevent the player from surviving contact with either the blade or the pool so we enter the following object conditions on the BLADE object and the FULL POOL object (12):

OBJECT 12 (full pool)

```
IF COLLIDED?
THEN ENDGAME
ENDIF
```

OBJECT 24 (blade)

```
IF COLLIDED?
THEN ENDGAME
ENDIF
```

You can also include some appropriate sound effects such as splashing noises followed by delays to give a realistic drowning effect - I'll leave it to your imagination what a decapitation sounds like! It's probably akin to the sound of someone sitting on a ripe grapefruit!

The condition we need to stop the animation and to "pull down" the lever is as follows and is entered on the upper (visible) part of the lever:

```
IF ACTIVATED?
THEN VIS (23) - my "down" lever
INVIS (22)    - my "up" lever
SYNCSND (2)   - sound effect of thud
STOPANIM (1)
ENDIF
```

I've already started working on some further problems to be included within our game for the next issue but I'd love to glean some fresh ideas from someone else so if you would like to write in with your idea, or ideas and routines we can include them.

Any new members who would like to join in with creating the User Group Game but feel a bit deprived because they haven't the appropriate issues - don't despair! Just send me a stamped addressed A5 size envelope and a request for the first three parts and I'll send you the appropriate extracts with pleasure.

HALL OF FAME

Sincere thanks to all the following members who took the time and trouble to send in contributions for the newsletters during the past two months:

KEN COOPER, JOHN WRIGHT, STEVE DAY, ROBIN BALL, MARK ROSE, MARTIN PANTON, BERND TAENZER, L, MARKHAM, DANIEL PRENTIS, RICHARD EXTON, STEVEN FLANAGAN, TED HORN, MIEKE VAN DER POLL, LIAM JOHNSTON, TONY HARTLEY and JOHN ELLIOTT.

Special thanks to TONY HARTLEY not only for his contributions but for the great cover design for this issue.

If YOU would like to send in contributions for the newsletters then please feel free to do so as all contributions - from a single little hint to a full blown article - are ALL welcome. What baffled you until you solved it is probably still baffling someone else (and without doubt is STILL baffling me!), so why not write in and put someone out of their misery. Share your gripes, share your triumphs - we would love to hear from you.

16/32 BIT ROUTINES

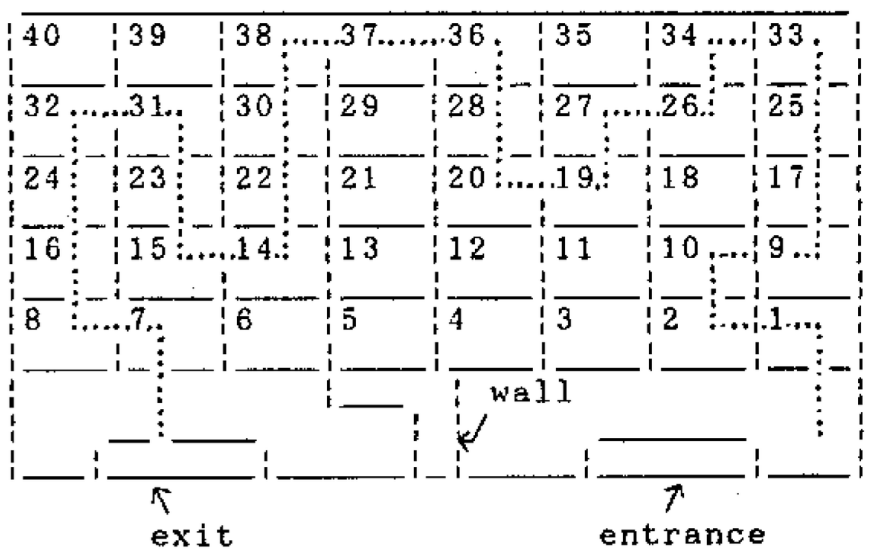
CHESSBOARD PUZZLE IDEA

By Tony Hartley - ATARI ST

(SUITABLE FOR KIT 1, KIT 2 AND CAN BE ADAPTED FOR 8 BIT TOO)

The idea is to make a Chessboard type floor halfway up the height of an area. The objective is for the player to make their way from square to square but, as they go, other floor squares will vanish and they need great skill to make their way from one side to the other.

simplified version



(tiles should alternate between black and white for proper effect)

As you tread on the first tile (1) the next tile (9) goes invisible so you have to turn left onto the next tile (2). This should be done all the way through the board leaving one exit tile open to the next.

It is easier to plan your route on paper first. The dotted line shows the proposed route in the example.

CUBE 1 CONDITION

```
IF COLLIDED?
THEN INVIS (9)
SOUND (6)
ENDIF
```

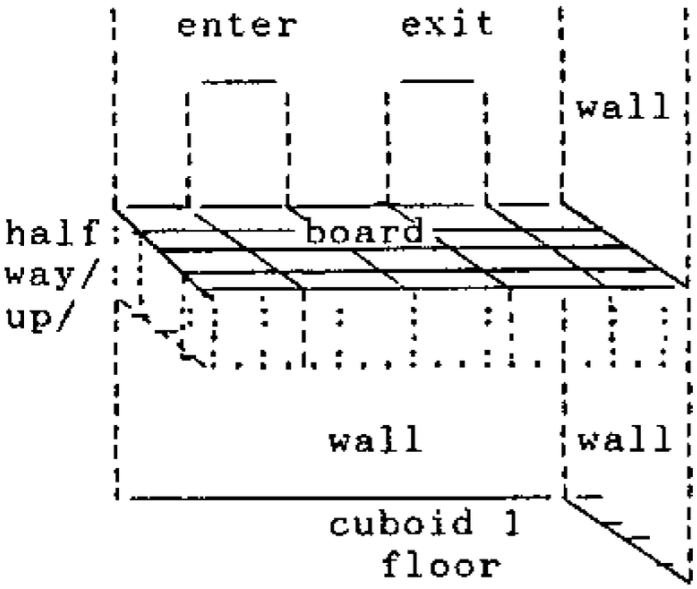
CUBE 2 CONDITION

```
IF COLLIDED?
THEN INVIS (3)
VIS (9)
SOUND (6)
ENDIF
```

CUBE 10 CONDITION

```
IF COLLIDED?
THEN INVIS (18)
INVIS (11)
VIS (1)
SOUND (6)
ENDIF
```

And so on and so forth until you have created all the conditions to get the player through to the other side. If they fall they die of course. Make sure that you make some tiles invisible and others visible again as you progress. This confuses the player more.



The board is simply made up of cubes placed next to each other halfway up an area so that you can fall through the invisible ones down onto the floor below. Just make one first, then colour the top white or black and make all the other sides of the cube invisible (just leave the part you walk on visible).

Then simply copy that cube to the side of the first and so on until you have created a board as large as you wish. Try to make each tile just two "steps" wide to make things more difficult.

CREATE A TRANSPORTER

By L. Markham - KIT 2

This routine is for the effect of being materialised into another area by the use of a transporter. First create a Rectangle (2) and place it on the floor and colour appropriately. Then surround the rectangle with four cubes (3, 4, 5 and 6) and make them invisible via the attributes. Then using object conditions, edit the condition for rectangle (2) to read:

```
IF COLLIDED?
THEN SOUND (n) (appropriate sound effect)
FADEIN (3)
FADEIN (4)
FADEIN (5)
FADEIN (6)
GOTO (e,a) (your selected entrance and area)
```

Then do the same in the area you are transported to, to transport you back to the area you transported from. It is a very simple effect but gives a very realistic transporter effect - reminds me of "beam me up Scotty" somehow. It could also be adapted for getting supplies sent up to you from earth if you are in a space station of some kind. Could also be used for a time machine if you want to send the player to certain time zones. The possibilities are endless.

THE ULTIMATE LIFT ROUTINE

By Liam Johnston - ATARI ST

Construct the lift as shown in diagrams BELOW, taking care to place the black rectangle behind the doors with enough room for the yellow rectangle to be able to slide down in front of it. Leave a gap between the doors of the lift sufficient to be allow the player to see the rectangles through it. The black rectangle gives the impression of the lift being elsewhere, while the yellow rectangle creates the impression that the lift is coming.

```
                                                  ^
                                                  |
  WALL                <---YELLOW RECT.            |
FRONT                       (c)                   B   The height of
VIEW                                              |    A and B must
  WALL                    WALL                    |    be equal.
                                                  A
LIFT BUTTONo              <----BLACK RECT.        |
 LEFT DOOR-->             <--RIGHT DOOR           v
                                                          FLOOR LEVEL

                    <---YELLOW RECT.
                          (d)
                                                  __AREA GROUND LEVEL
```

```
                                          ++++++++ POSITION OF BLACK
PLAN VIEW                                            RECTANGLE
                  ++++++++
                  --------    DOORS       -------- POSITION OF YELLOW
                                                     RECTANGLE
WALL==============            ================WALL
```

Now all we need to do is to write a few routines to make it all work. First of all we need some animations to open the doors.

ANIMATION 1 (FOR LEFT DOOR)

```
INCLUDE (o) (left door obj)
LOOP (10)
MOVE (-5,0,0)
SOUND (s) (approp.door sound)
AGAIN
STOPANIM (1).
```

ANIMATION 2 (FOR RIGHT DOOR)

```
INCLUDE (o) (right door obj)
LOOP (10)
MOVE (5,0,0)
SOUND (s) (approp.door sound)
AGAIN
STOPANIM (2)
```

This sound enable the doors to slide open simultaneously. The sound command is optional. It may take a bit of calculating to get the movement increments in the loops to work out to the size of your lift but as a general rule each door moves back 50 units leaving a gap between the two walls being 110 units (that's allowing 10 units for a gap between the doors of the lift. Taylor these figures to your individual needs. Now we need a routine to "call" the lift upon pressing (activating) the lift button:

```
IF ACTIVATED?
THEN INCLUDE (o) (yellow rect.)
LOOP (10)
MOVE (0,-5,0)
SOUND (s) (you could put a delay here if you
AGAIN      wish)
INVIS (o) (black rectangle)
INVIS (o) (yellow rectangle)
STARTANIM (1)
STARTANIM (2)
ENDIF
```

The result should be that when the button is activated the lift is seen to arrive and the doors open. If possible create your "floors" in successive area numbers - i.e. floor 1 is area 1, floor 2 is area 2 and so on. You would then need a variable (s) to record the number of the area in which the lift was last (in case you want to have stairs and trapdoors in your world also). This is included in the routine that deals with leaving the lift. Note that to have the lift coming either up or down your floor level must be raised above ground level. We also need a variable to record the area in which you currently are. This can be done by including it in your exit routines. Edit the condition on any object which allows you to leave the area:

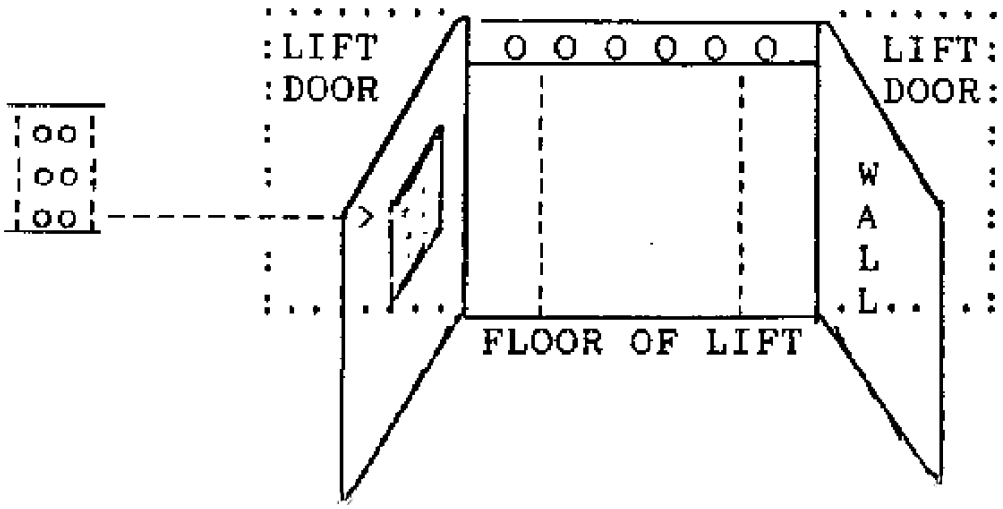
```
IF COLLIDED?
THEN SETVAR (area you're going to,variable
GOTO (e,a)                number (b))
ENDIF
```

We need to specify where our lift is at the start of the game. To do this place a command SETVAR (a(start area),v(variable of area)) in your default condition. Now that we have the floor set up to allow for the impression of a lift coming and our variable are initialised, we need to modify the condition attached to the lift button as follows:

```
IF ACTIVATED?
THEN IF VAR>? (b,a)
THEN INCLUDE (o) - yellow rectangle (d)
LOOP (10)
MOVE (0,5,0)
SOUND (s)
AGAIN
INVIS (o)        - black rectangle
INVIS (o)        - yellow rectangle (d)
STARTANIM (1)
STARTANIM (2)
ENDIF
IF VAR<? (b,a)
THEN INCLUDE (o) - yellow rectangle (c)
LOOP (10)
MOVE (0,-5,0)
SOUND (s)
AGAIN
INVIS (o)        - black rectangle
INVIS (o)        - yellow rectangle (c)
STARTANIM (1)
STARTANIM (2)
ENDIF
IF VAR=? (b,a)
THEN INVIS (o)   - black rectangle
INVIS (o)        - yellow rectangle
STARTANIM (1)
STARTANIM (2)
ENDIF
ENDIF
```

This may seem quite complicated but all it means is (given that "a" is the area in which the left was last and "v" the area in which the player is currently standing) - if v>a then the lift comes up, if v<a then the lift comes down, if v=a then the lift is already there. Now that we have simulated a lift coming on call from either direction we need to work out how to actually use it.

To minimise unnecessary programming it would be preferable if the lift unit was constructed in all areas at the same co-ordinates and orientation. This will help in easy and smooth movement between floors. For the next example I will use an example of a world with 6 areas with each lift construction at the same coordinates. (for beginners it might help to make your lift a group and save it as an object for loading in in different areas - Mandy). Inside the lift we need to design a control panel which can be done using a rectangle with six smaller rectangles to represent buttons and also a row of "lights" above the door to give the impression of them lighting in turn to show which floor we are passing. This can be done with a cuboid placed between the rectangles and the lift doors. Place six pentagons (circles in the diagram) evenly spaced along the cuboid and colour each of them green. Duplicate each pentagon exactly in front of itself and colour each red. Now change each duplicated pentagon INVISIBLE except for the floor you are on. In this case floor 1. So pentagon 1 only is red.



Now two more conditions are needed to close the doors;

ANIMATION 3 (FOR LEFT DOOR)

```
INCLUDE (o) -left door object
LOOP (10)
MOVE (5,0,0)
END
AGAIN
STOPANIM (3)
```

ANIMATION 4 (FOR RIGHT DOOR)

```
INCLUDE (o) - right door object
LOOP (10)
MOVE (-5,0,0)
END
AGAIN
STOPANIM (4)
```

Now the larger rectangle - which we will call the PANEL - we need to create a routine to simulate the lift passing through floors. This routine has no trigger conditions as it will be called on by the left buttons:

CONDITION FOR PANEL

```
IF VAR>? (var b,number of requested floor)
THEN SETVAR (requested floor,vbb)
STARTANIM (3)
STARTANIM (4)
SUBVAR (vbb,variable number b)
LOOP (vbb)
INVIS (pentagon number)
SUBVAR (1,pentagon)
SOUND (s)
VIS (pentagon number)
AGAIN
INVIS (black rectangle,requested floor)
SETVAR (1,flag)
SETVAR (no. of area going to,var no. b)
SETVAR (current area no.,var no. c)
GOTO (1,requested floor)
```

```
ENDIF
IF VAR<? (variable number b,requested floor)
THEN STARTANIM (3)
STARTANIM (4)
SUBVAR (variable no.b,requested floor)
LOOP (variable no.b)
INVIS (pentagon number)
SUBVAR (1,pentagon)
SOUND (s)
VIS (pentagon number)
AGAIN
INVIS (black rectangle,requested floor)
SETVAR (1,flag)
SETVAR (no. of area going to, var no.b)
SETVAR (current areas no.,var no. c)
GOTO (1,requested floor) ENDIF
```

Now each button on the panel needs to be given a condition. Starting with button 1 copy this condition into every button, modifying values as appropriate:

```
IF ACTIVATED?
THEN SETVAR (area floor 1, requested floor)
EXECUTE (o) - number of the panel
ENDIF
```

to button 6 which should read:

```
IF ACTIVATED?
THEN SETVAR (area floor 6, requested floor)
EXECUTE (o) - number of the panel
ENDIF
```

Each of the conditions and routines given here need to be copied to each area. We now need one last (!!!) routine to open the doors on arrival. This s hould be placed in each area condition:

```
IF VAR=? (1,flag)
THEN STARTANIM (1)
STARTANIM (2)
LOOP (50) - This bit allows you to leave the
END         lift before the doors re-close.
AGAIN
STARTANIM (3)
STARTANIM (4)
SETVAR (0,flag)
ENDIF
```

And just to tidy everything up we need a GENERAL condition to replace the black rectangle:

```
IF VAR=? (flag,0)
AND VAR>?(V0,X)
THEN VIS (black rectangle)
SETVAR (variable b,variable a)
ENDIF
```

Liam says that this might seem a bit confusing as he has presented it in a way to allow others to adapt and incorporate their own variable and dimensions, however, if anyone gets really stuck then they can write to him, preferably enclosing their disk, and he will help out. He says he can also provide a simpler version of this routine for Kit 2 users. If you would like to write to Liam then the address is 101 Norglen Parade, Belfast, BT11 8DS.

8 BIT ROUTINES

AT RANDOM

By Daniel Prentis - SPECTRUM

The following routine keeps everything in the Kit running at the same speed whether standing still or not. If no keys are pressed it forces a redraw:

GENERAL CONDITION 2:

```
CMPV        255        121
IFEQ
THEN
REDRAW
ENDIF
```

One problem with Kit games was that nothing could happen randomly - until now! Variable 122 can be used to cause "random" occurrences. To find out what variable 122 does, make a 3 character instrument of it. You will see that because it is the "low" of the interrupt counter it counts quickly from 0 to 255 and restarts at 0 again. Conditions that rely on this variable with IFEQ are not synchronised with it, which results in a random effect. Type in the following:

```
CMPV        100        122
IFEQ
THEN
SOUND         1
ENDIF
CMPV        200        122
IFEQ
THEN
SOUND         2
ENDIF
```

The two sounds will be generated at random intervals. To make the sounds more frequent add more conditions which rely on var 122 and generate the same sounds. This method could be used to randomly trigger opening and closing doors, firing missiles, booby traps etc.

VEHICLE COMMANDS

By Steven Flanagan

Most freescape games use walk mode only, as other modes can be difficult to use in places. This article is designed to expand your ability to use different vehicles.

Lets start with walk mode. There are a few improvements that can be made. If you look in the manual on page 37 you will find the exlpanation of the mode command. You will see that MODE 2 means run. This can't be accessed normally so you can write a little general routine to make it availiable, such as:

```
CMPV 83 121   -    Tests if the letter 'S' is pressed.
IFEQ
THEN
MODE 2        -    If it is then set mode to run.
```

I chose the letter 'S' as it stands for sprint. You cannot use 'R' as it is used by the kit for rise or walk.

Another improvement that can be made is that after the player has walked a number of steps, she/he goes faster. For example, if you are at the end of a long passage and want to get to the other side, you will walk foward towards the other end of the passage, but it would take some time if you walked all the way so after you have continiously taken eight paces, the mode will automatically switch to run so that you get to the end of the passage faster. As soon as you stop moving, the mode is changed back to walk again. This can be accomplished by another general routine, such as:

```
* CMPV  145  121    -    Tests if joystick is held foward.
  IFEQ              -    If it is
  OR                -    or
  CMPV  79   121    -    If '0' is pressed for fowards.
  IFEQ              -
  THEN              -
  ELSE              -    Then otherwise...
  CALL  1           -    Call proc 1.
  END               -    and end.
  ENDIF             -    If foward is selected then...
  ADDV  1    5      -    Add 1 to the counter.
  CMPV  7    5      -    Test if the counter has been increased 8 times.
  IFGT              -
  THEN              -
  SETV  0    5      -    If it has then zero counter and
  MODE  2           -    set mode to run.
  ORV   1    6      -    Set run flag.
```

This will set the mode to run after eight steps but will not change the mode back to walk after you stop moving. The Proceedure does this job.

```
PROC 1:
SETV  0    5      -    Zeros counter.
TESTV 1    6      -    Test if run mode is on.
IFEQ              -    If it is then...
THEN              -
ELSE              -
MODE  1           -    Set mode to walk.
ANDV  254  6      -    Clears run flag.
ENDIF
END
```

* 145 is the ASCII number in variable 121 when the joystick is held foward on a C64. It may be different on other computers. To find out what number it is, create a decimal instrument three numbers long and assign it to variable 121. Sellect TEST and press foward on the joystick to see what ASCII number it is. Use this number instead of 145.

The reason why I use variable 6 as a flag is because if I didn't, mode 1 would continuously be set when you are not moving foward and this would slow the update down.

The number of steps taken before the mode switches to run does not to be eight. You can easily change the number to suit the scale of your area.

I have talked about a car game in previous newsletters and you probably realised the idea is not very flexible, in that the car can't be steered around realistically. If it did handle realistically, if you held down the key to turn right, the car would travel round in a circle. This is VERY difficult to achieve.

It's even harder to use an aeroplane as your games vehicle. The problem is that the plane must always be moving fowards, but the only way for this to happen is if the player holds the joystick foward all the time. You could change viewpoint variables but this would only move the plane in one direction, and not necessarily the way the plane is facing.

For example, in fly2 mode if the plane was facing north-east and slightly down and the player pushed foward, the plane would move north-east and downwards, but changing viewpoint variables 116 and 117 would only move the plane north, which is not the direction the plane would go. It is possible to write many routines full of tests of viewpoints to move the plane in just about the right direction, but it would take a long time to program and would eat up a lot of memory so I don't recommend it.

Even if you do go to the trouble of writing these routines to make the plane handle realistically, there would still other problems. When changing the viewpoint variables the kit does not check if have bumped into any objects, so if you fly into a building you will just fly through it as if it wasn't there. A solution to this could be to say that if the plane does fly into anything, it has crashed so the game is over. This can easily be tested with an IFCRUSH routine.

Problem solved? not quite. If the object you fly into is thin enough, the plane could just pass straight through it without the viewpoints being inside the object, so the IFCRUSH routine would not know that you should have crashed. The same thing will happen if you fly down through the floor, the Y-viewpoint variables will be decreased past zero, which would result in the plane suddenly jumping to the highest position in the air. The solution to this problem is to keep all objects thicker then the maximum movement step of the plane, so that if the plane does fly into an object, the viewpoint will definely end up in the object. I hope someone understood all that!

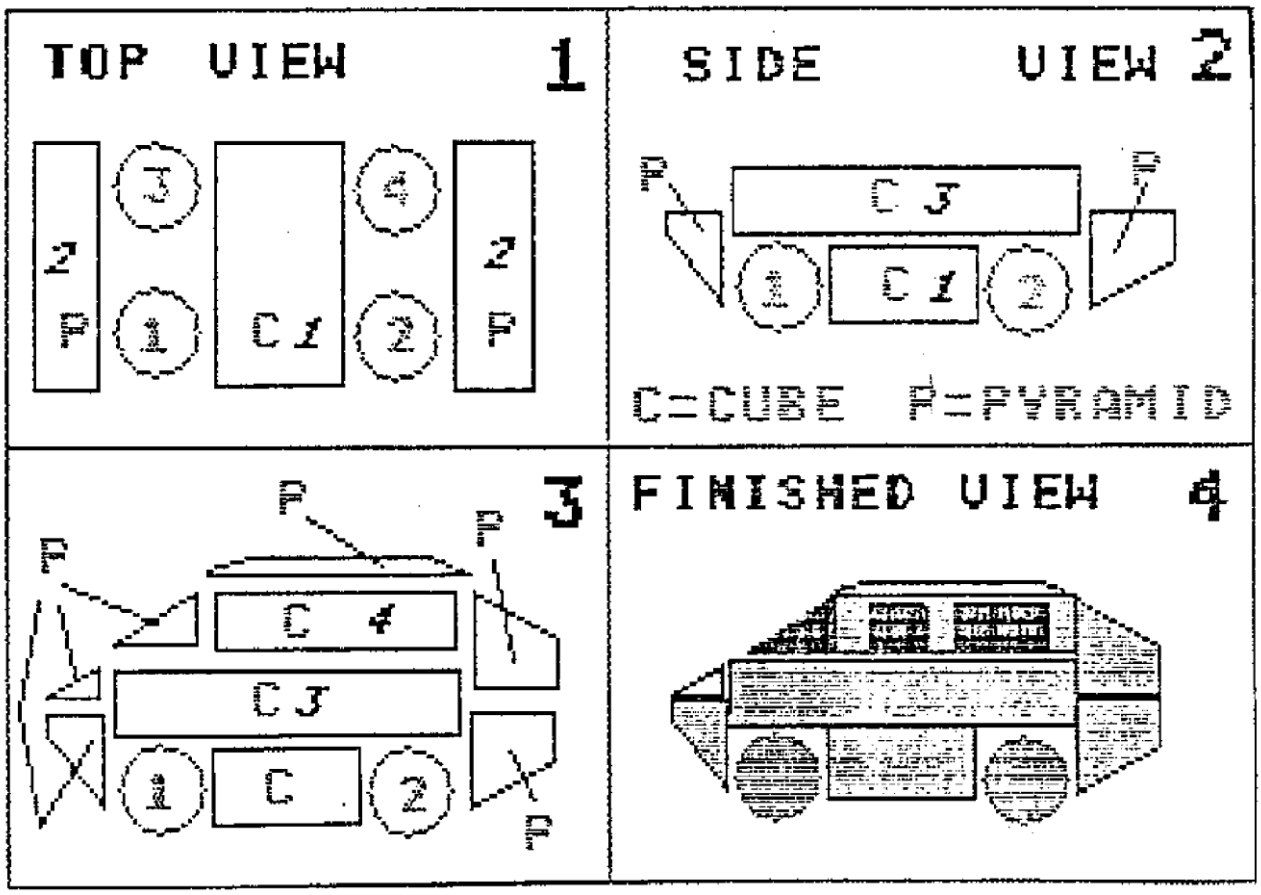
Any routines that alter the viewpoint variables should have a redraw at the end of them so that the new viewpoint can be seen. Unfortunetly, this causes update to take twice as long and that is the reason why racing or flight game would be so slow. I have just this second thought of a possible solution to this. I have not tried it but I see no reason why it should not work.

HINTS AND TIPS

CREATE A VEHICLE IN EASY STEPS
By Tony Hartley - ATARI STE - KIT 2

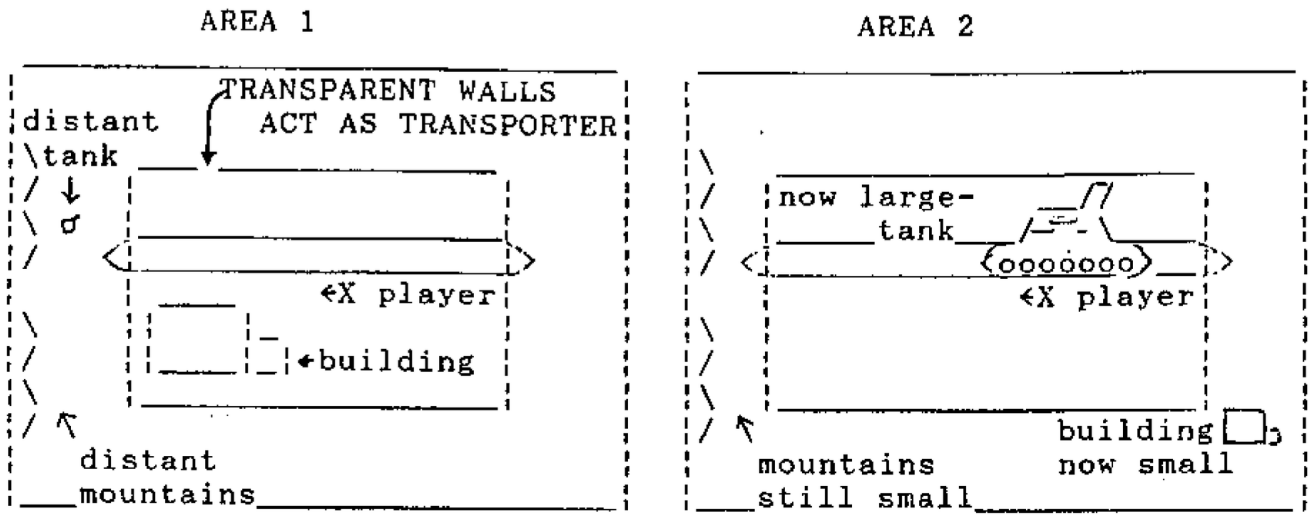
Here is a diagram to show that you can make a vehicle with wheels, made from spheres, using a clever trick so that they don't look like footballs, and more like wheels:

Make a sphere and copy it three more times and position them as in diagram 1 and 2. Make a cube (c1), place between the four spheres. It should be as tall as the spheres and tight up to all four of them and as wide as all of them. Place a pyramid front and back (p2) of the spheres. See view 1 and 2. Place another cube (c3) on top of the spheres that's tight onto them. So that if you look at the front or back of the car there shouldn't be any spheres sticking out at the sides. Colour all the spheres and every object facet that touches a sphere black - in other words all the faces inside the wheel arches black. Make more pyramids for the bonnet, front windscreen and back window. Add a few cubes for side windows (c4). Add a pyramid roof. Colour the windows grey at the front and black at the sides. Colour the rest of the car in a nice colour. The overall effect looks great.



TIP by Robin Ball ATARI ST - KIT 1 AND KIT 2

I have a suggestion to improve the flight sim routine by Thomas Stufe. You can increase the realism a great deal by confining movement to the central section of each area by putting up invisible walls to make a large box in the middle of the area and putting the player inside it. This reduces the size of each area but enables you to put some objects outside the box to give some indication of what you will find if you travel that way. It is easier to explain if I use a diagram:



Use forced perspective for the roads - tapering off to nothing outside the centre area towards the "distance". You can put objects inside the box that the player will interact with, ie tanks and buildings at full scale, then make some tiny buildings etc outside the playing area box. If you fly in that direction you won't reach the objects before you are transported to a new area, this one with the objects you saw earlier in it and with the objects from the last time duplicated smaller behind you. The basic effect is that it will appear as if there are objects outside the area but in reality you are in a larger area than you thought you were. Use scale 1 areas but put walls around an area about the size of a scale 2 area, or perhaps a little larger. The illusion of distant mountains isn't then spoiled by the fact that you can fly right up to them. The distant objects will always be distant. Just look at the diagram if you are confused.

DRIVING AROUND

By Ken Cooper - PC

In the Dec/Jan 93 issue of the newsletter there was a code for this by Ozzie O'Mara. Now Ozzie's code is OK but I think the second loop command shouldn't be there, when I load the code into KIT 2 I get the message unknown error! The code that works with my copy of the Kit reads as follows:

```
INCLUDE (g) number of your group
START
SETVAR (V0,V40)
SETVAR (V1,V41)
SETVAR (V2,V42)
LOOP (10)
ADDVAR (0,V40)
ADDVAR (0,V41)
ADDVAR (10,V42)
MOVE (0,0,10) same as the addvars above
SETVAR (V40,V0)
SETVAR (V41,V1)
SETVAR (V42,V2)
RESTART
AGAIN
```

To make the system go in reverse, just substitute SUBVAR for addvar and show the MOVE numbers as negative. I as yet have been unable to make the group go forwards and then reverse, it just leaves the object behind, but it will go either way from the original starting position.

ADDING INTRO SCREENS TO DATAFILES

By Mieke Van Der Poll - PC KIT 2

As I cannot make stand alone games with sound on the PC yet I decided to add my Introductory/Instruction screens to the datafile of the game. You have to put the loadscreen command into the Initial Condition. I will give you an example hereunder of the way it looks in one of my games:

<u>Creat Initial Condition and Edit Initial Condition:</u>

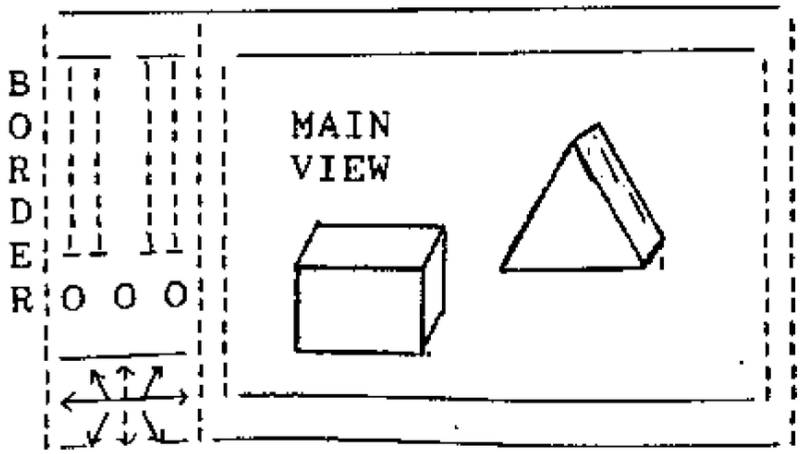
```
LOADSCREEN ("space1.lbm",0)- name of picture
DELAY (150)
CLEARSCREEN
LOADSCREEN ("space2.lbm",0)
DELAY (150)
CLEARSCREEN
LOADSCREEN ("space3.lbm",0) - about the game
DELAY (400)
CLEARSCREEN
LOADSCREEN ("space4.lbm",0) - instructions
DELAY (700)
CLEARSCREEN
BORDER (1)
SETVAR (0,V20) - disable shooting
SETVAR (0,V41) - in my case, score
SETVAR (0,V42) -   "   "   "   objects found
SETVAR (0,V30) -   "   "   "   timer
UPDATEI (2)    - score instrument
UPDATEI (3)    - object found instrument
UPDATEI (5)    - timer instrument
```

Instruments 1 and 4 are text instruments in this case.

It works beautifully. I only noticed that when loading the datafile into 3DEDIT, after adding the loadscreen commands, the loading time is increased. On the hard disk by about half a minute and about 1 minute on a floppy disk. A problem was finding in which sub-directory I had to put the .lbm screens. I found out that on the floppy disk you have to put them into the data-subdirectory where your game.3wd file is in, but on the hard disk I placed them into the 3DKit 2 directory itself as well as into the data sub-directory, because sometimes they did not load in when only placed into the data sub-directory. I think when making a stand alone game you can also use this method and so you have all your files into one game-file and then you have to place the .lbm screens into the game directory where all the other files will be.

BORDERS WITH A DIFFERENCE

By Tony Hartley - ATARI ST KIT1 & KIT2

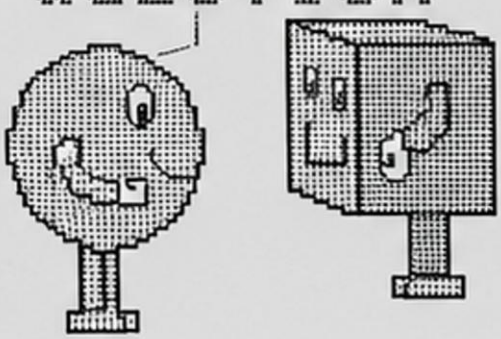


A border for a game can be just as effective if it is placed down the right/left hand side of the screen instead of along the bottom.

This gives a larger height picture in the main view window and bar timers can look better this way. It is also better for tall buildings as you see more in the picture as you get closer up to them.

FAMOUS SAYING

3D OR NOT 3D THAT IS THE QUESTION

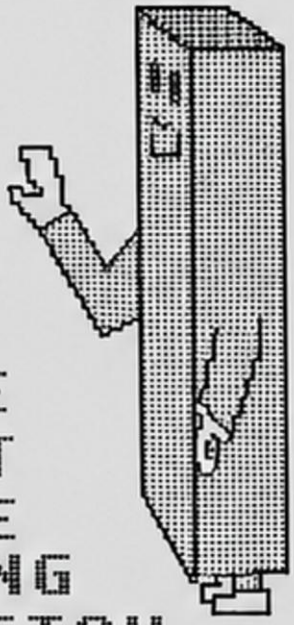


TV, FILM SAMING

SPHERES LOOKING AT YOU KIT

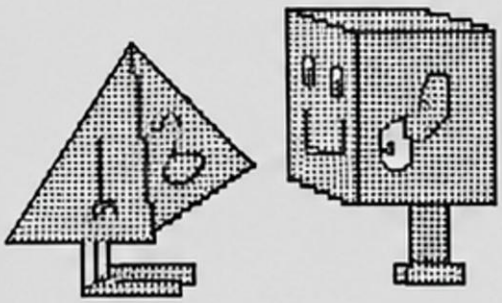
3D KIT

BY HUMPH3D BOGART



I,VE JUST DONE ALONG STRETCH

MY DAD WAS A STOCK CUBE



3D CONSTRUCTION KIT USER GROUP

3D Construction Kit Newsletter

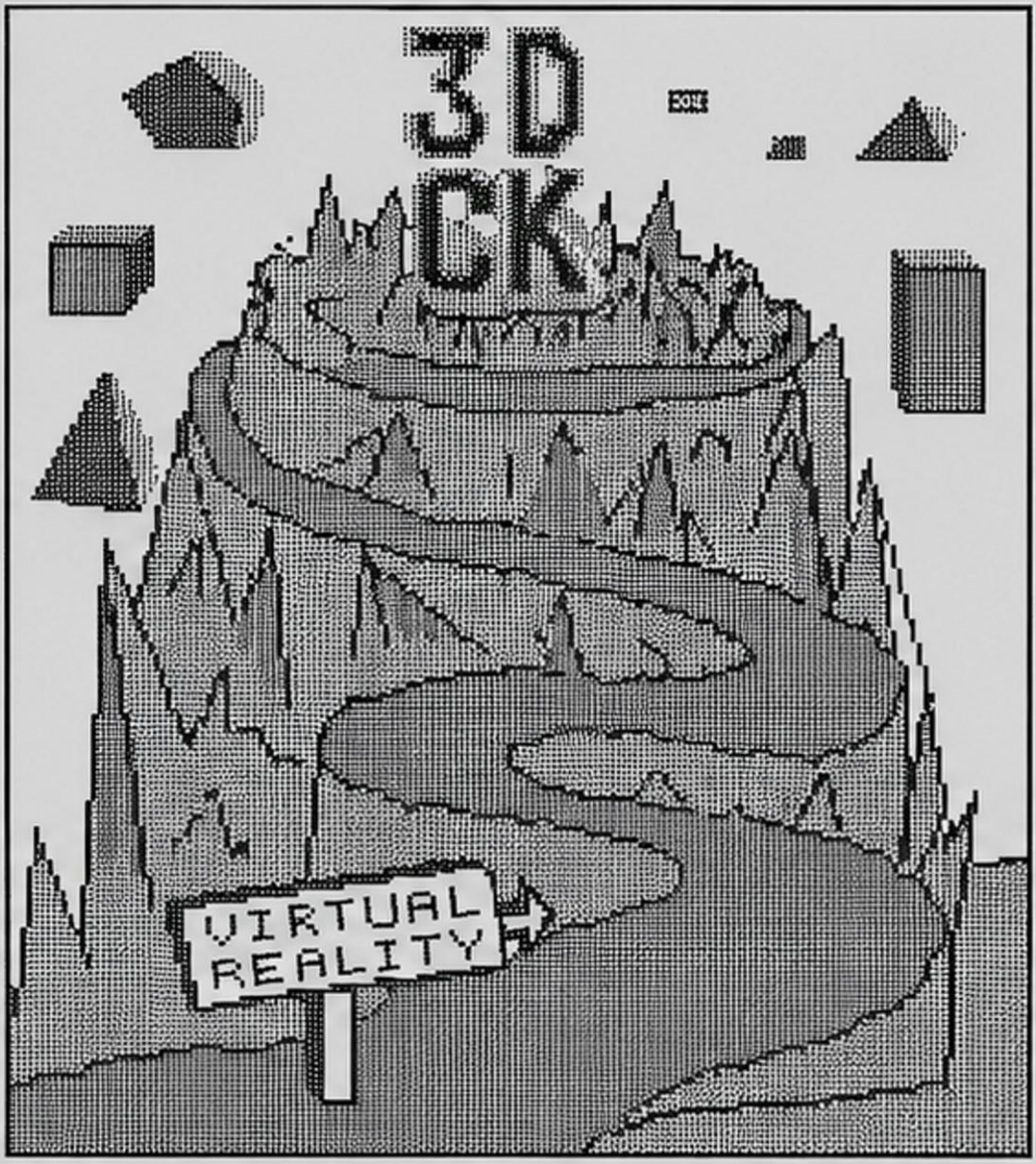
Issue Number 13

June/July 1993

CONTENTS

EDITORIAL 314
LETTERS 314
THE USER GROUP GAME 320
MULTIPLE OBJECTS IN THE TUNNEL AREA 322
CONDITIONS 323
AMIGA SOUND SAMPLE BANKS 325
8 BIT ROUTINES 325
MAKING MORE SOUND EFFECTS 326
16 BIT ROUTINES 327

3D CONSTRUCTION KIT USER GROUP



MAGAZINE ISSUE 13

JUNE/JULY 1993

EDITORIAL

Welcome to issue 13 of the 3D Construction Kit User Group Newsletter.

You must all be wondering what on earth has been happening for this issue to be so late in getting to you. I owe you all my profound apology for the huge delay. You see, on 10th June whilst I was about to start preparing this issue, a day which started out as a warm and sunny day, we were hit by a freak tropical storm the like of which I have never seen before - or want to see again! We had five inches of rain in just four hours. It is the first time in my life that I have looked through the door at the rain and not been able to see through it! Within a short space of time we all realised that the drains etc were not going to be able to cope with such a deluge and, sure enough, we were flooded. It was a dreadful sight. Anyone who has had the misfortune to experience flooding will know what I mean. We barricaded both the front and the back doors and stood guard with mops and buckets in the vain hope that we could keep it out but the water came up though the floor as well as through the doors and we had no option but to retreat! Unfortunately, the photocopier stood just at the foot of the stairs in the hallway and so prevented us from being able to salvage anything from the ground floor as there was no room to carry anything upstairs around it and it was far too heavy to move. As most of you may know I run the User Group from home. By the time that the storm - we live in a dip in the centre of Llandudno just below sea level - the water on the ground floor had reached a height of three feet and was still rising.

We were under water for five days and, because it wasn't just water that flooded us but also sewage from a sewage system that was also inundated and decided that the only way out was up, everything on the ground floor had to be thrown out. Not only that but the whole of the ground floor had to be completely gutted. We spent the subsequent 11 to 12 weeks camped out on the landing upstairs whilst all the floors, doors, walls down to the brick were ripped out and replaced after drying out. Most of my computer equipment went, together with the photocopier, fax and other items which I used for the User Group. During the repairs it was absolutely impossible to deal with any correspondence or Newsletters so everything had to be put on hold.

Thankfully we are now back to normal and I have been catching up with things, a huge mountain of mail has now been dealt with and thankfully I am now back at the keyboard getting an extremely belated June/July issue ready to send out to you. The August/September issue will be done at the same time so that we will all be up to date again as soon as possible.

You have all been so patient and understanding and the many messages of sympathy that I received from so many of you when you phoned to see what was going on brought tears to my eyes. You have all been so very kind and it was wonderful to know that you are not just User Group members but friends too. A couple of you pointed out that the issue due out during the flood was issue thirteen and I was seriously thinking of calling it issue twelve and a half for a while!

Well, enough of explanations for now - I am sure you all get the picture about our situation and I don't want to sound depressing, so let's get back to the newsletter. I sincerely hope that you all find this issue interesting and helpful - I'll see you all again soon.

Mandy

LETTERS

Dear Mandy,

Congratulations on the second anniversary of the 3D Kit User Group. These past two years have really been fun for me using the Kit. I do have a couple of observations to make on Kit 2 for the Amiga. Version V2.07 still has a couple of bugs which are a bit frustrating: when choosing colours from the border or from Freescape, either way you end up with different colours in the edit window and in test mode when the border is present. When you choose, say, green to colour your object in the test window pressing ESC to see the border the same object has a brown colour and so it goes with every colour. I had quite a job adjusting the colours to the border. I was really confused when, upon making a stand alone game I discovered the Freescape colours were back again. Once everyone knows of the problem it can easily be overcome providing that you don't mind, and can ignore, the different colours appearing in test mode when the border is present.

My next point is that I find that, although in this version you can increase the buffer size, when you do so you cannot make a stand alone game anymore when your datafile is greater than the default memory amount. I tested this out and I received a runtime error. I found this disappointing as I had only used about 20,000 bytes more than the default and it is difficult to split my game into two parts. All in all, despite all the many new and exciting features of Kit 2 it almost makes me want to go back to programming on Kit 1 as it is bug free and works much more smoothly.

Mieke Van Der Poll
Kit 1 and 2 AMIGA AND PC

Hopefully all these niggly bugs will be cleared up with version V2.9, Mieke, and then you will be as happy programming in Kit 2 and you are with Kit 1. Come to think of it - what better person could I find to give V2.09 a thorough bug-test? The disc is on it's way to you, Mieke, if you would be so kind as to help us out.....Mandy

---

Dear Mandy,

Have you seen PC Format this month? There's an article about SUPERSCAPE and the CYBERZONE T.V. programme, plus a round-up of the 3D software available and including an interview with Ian Andrew. The writers don't seem too impressed with Kit 2. This is a pity - and perhaps someone should point out to them that it is the only real-time 3D Interactive' software available to us mere mortals with low bank balances and average computers! How can you slate something when there is nothing to compare it with? There is Superscape true, but that's the professional version of what we use anyway. It is a bit like saying that the Sun isn't up to much, it is a bit yellowy, not very bright, covered in spots... when it is the only one we have and we'd be lost without it! I have only one minor tipette to offer this month. I've recently upgraded my MS-DOS operating system to version 5 and the computer's CPU to a 386SX. With this combination a lot of the operating system can be run from the UMB memory space the new DOS finds. There is also enough room to install a screen-grab utility - I haven't found a screen-save facility within the Kit - into the upper memory also, along with the mouse driver. All this leaves around 609K of free base memory and sidesteps all the juggling with CONFIG.SYS files necessary on some machines.

Nigel Alefounder
Kit 1 and 2 - PC

Dear Mandy,

I have something which might be covered under your licence from Incentive Software - that is making video films of 3D Kit routines. I would be interested in receiving film clips from User Group members with their ideas to be sent to me on video tape. I am going to set up a film studio soon. All members can describe and contribute their ideas as usual to the User Group Magazine and then they could contact me before sending their video tape off to be edited. Members should video record the graphics only and not themselves or their surroundings and show a visual of how they put their ideas together on tape using 3D Construction Kit Environment. Once I get a sufficiently large collection of film clips I will put them together onto one long film of 2, 3 or even 4 hours. To cover the cost of producing the film the members can buy the full length edited film with case and coloured sleeving. I think it will give a clearer understanding of how their ideas are put together. If the user is unable to put their own voice over on the tape then they should send written instructions with the film clip and I will do the voice over for them. If there are more film clips then a second or third film will be made for the User Group Members only. Each clip should be no longer than 20 minutes. Anyone interested in sending in their clips please telephone (0204) 373833 (24 hrs) and leave name, address and telephone number on the answering machine so that you can be put on the waiting list. Please state whether you wish to buy the finished film or send in a clip. The reason why I think a video film section for the club is needed is because people are still having difficulties such as loading borders or sound samples from Kit 2. So instead of new members having to keep sending questions in on how to overcome a common problem they could buy the video tape and see, in graphic detail, how to load borders etc. They would also save memory if they use a PC1 file - this is almost identical to the PII file but the image is compressed. I'd like to get in touch with anyone who can load a P11 file into their painting program and then save it as an IFF file.

Ronald Connell

That sounds like an interesting idea. Anyone interested can also write to Ronald at 16 Thorn Street, Astley Bridge, Bolton, Lancs, BL1 8LA.....Mandy

---

Dear Mandy,

Hi! How is life up there in Wales? I won't start a large letter because I know the Kit mag isn't very big and other people have bigger problems than me. My problem is that when I type in a longer than usual condition the screen crashes and some weird bits of writing appear at the bottom of the screen like this: "G)AH)FHT:!. I use an Amstrad 1640 with 640K ram with two 5.25" drives. Have you any idea why this happens 'coz it's a bummer having to type all that code in again. It isn't doing my game any good either! Moans aside, I think this mag is great! How do you find the time to do this? Tell Mark to print a hints'n'tips book for some of the PC games. I've been trying to complete the Kit game for ages without success.

Colin Chow
PC Kit 1

The problem you have is caused by you over-running the text buffer. There are so many things with DOS stored here and there and although the system tries to allocate as much memory as possible to the text buffer it sometimes just doesn't have enough. The only way to overcome this is to either split the long condition into two calling up objects as necessary or try to modify your AUTO.EXEC or CONFIG.SYS files to tidy things up and allocate some more memory for the text buffer. I don't know how I find time to run the User Group - I just enjoy doing it so other things usually have to wait. I did print a full solution to the Kitgame in one of the earlier issues of the Newsletter but you obviously missed it. Send me a stamped self addressed envelope and I'll send it to you .....Mandy

---

Dear Mandy,

Sorry to trouble you with my problems but the manual you/they sent me is a French one and my French isn't all that good! Could you please send me an English one instead? Could you please tell me exactly how to send for later versions of the Kit. Does it cost any money to do so? Positive vibrations now - I think this User-Group is really great, you get real help and not just ads for other products from the software company as other ones I could mention. I also think you are doing a great job yourself. As for your article on Software Piracy - I couldn't agree more, don't copy, there is enough good software around that isn't too expensive. No matter what anyone says I think Kit 2 is great for us outdoor people who want to build their worlds inside the comfort of their own computer!

Geert Reyserhove
PC Kit 2

English manual should be with you by the time you read this, Geert. To obtain upgrades all you have to do is to return your old disks and enclose a stamped self addressed envelope for the new ones. If writing from abroad then please enclose a couple of International Reply Paid Coupons available from your post office.....Mandy

---

Dear Mandy,

I am sorry that the Archimedes version 2 was abandoned. The version 1 had such promise despite its flaws. Now that version 1 will not work with the new OS 3.1 ROMs, my 3D Kit is effectively dead. Luckily I have lost fun stuff, not the serious work I had planned. Luckily too, your mag was so interesting that I can't begrudge the 3D Club subs. Think on this: I suspect your pirates thought they were getting a game-designer. Have many games come back from all those unregistered owners? Have any? The 3D Kit is hard work beyond the doodle stage. I paid my £50 for a walk-though sketch pad, but soon found that creating realistic room plans with version 1 would be very difficult.

I cannot and will not condone piracy, but I wonder how many actually used the 3D Kit after cheating their way through the game? If I must put a PC-486-Card in my Archimedes to learn and run PC business software then I'll be back for the PC Kit. Would a registered Archimedes owner qualify for a discount?

Nik Kelly
Archimedes Kit 1

I really feel sorry that Archimedes owners who upgrade to OS 3.1 have to abandon 3D Kit in this way. Perhaps all is not lost though as the following letter does contain some good news. If you do get the PC Card then I will swap your disks for the PC version with pleasure - it is the least I can do to ensure that you can still use 3D Kit…....Mandy

---

Dear Mandy,

I recently contacted Domark concerning the Archimedes version of 3D Kit. This was due to myself having found out how to run the program on Acorn's RISC OS 3.10 (by disabling the "ScreenBlanker" module in the ROMs). I also asked them a few other questions but they told me to contact you with any queries. When I create a wall section with two cubes, even if I place them as close together as possible there still appears to be a gap between them. Could you advise me on this please? I am wondering if you have any Acorn software in your PD Library that I could purchase yet? Is the lack of software something to do with the fact that, as Domark told me, they are no longer supporting the Archimedes any more?

Alan Stonebridge
Archimedes Kit 1

I hope other Archimedes owners can do the same as you, Alan. Perhaps if they are having difficulty then they might like to write to Alan for further help at 43 Front St, Framwellgate Moor, Durham DH1 5EE. No I haven't received any PD Archimedes software at all, Alan. It might be something to do with Domark not supporting your computer and the low sales etc., but I think it is because there are only a handful of Archimedes members of the User Group compared with hundreds of other computer users. This doesn't affect routines in the newsletters etc as they apply to all machines but Acorn specific disks with games or routines have yet to surface.....Mandy

---

Dear Mandy,

I am very pleased that you always seem to have material for us 8 bit users in the newsletters, although I would like to see more of them as the majority of writers seem to own the larger computers. Everyone these days seems to be saying that the life of the 8 bit computer is over which is very sad. What do you think? Are there a lot of 8 bit 3D Kit users out there?

Keith Marshall
Spectrum Kit 1

I hate to disappoint you, Keith, but the number of 8 bit owners is dwindling rapidly. Not because they are not re-subscribing to the newsletter but because they are upgrading to 16 bit machines. As far as I know, only Commodore are still producing an 8 bit computer these days and, because of the lack of software for 8 bit machines I have to say that it does, indeed, seem that we are seeing the last days of the faithful old 8 bits. It has always been a struggle to obtain contributions for the 8 bit version of the Kit for the newsletters as, apart from an enthusiastic few members who have kept us going all this time, the response from the majority of 8 bit owners has been very poor. The majority of the 8 bit contributors are now upgrading to 16 bit computers also (four of them this month alone!), and I doubt very much if the 8 bit sections can continue indefinitely. I'll keep on including them as long as I possibly can but if they dry up completely then I'm afraid that even the newsletters will eventually turn out to be 16 bit dedicated only.....Mandy

---

Dear Mandy,

I'm new to 3D Construction Kit and I'm having a number of problems, it might be best if I start by describing the system I am using. I have a PC 286 with 1 Mb of memory, maths co-ori, VGA, soundblaster and a hard drive. I run DRDOS version 6.0 with Superstore and have 3D Kit2 (v2.01). My questions are numerous and no doubt often answered in the newsletter but here we go. Why can Amiga users use sampled sounds and I can't. This may sound like sour grapes but I spent a lot of money on my sound blaster and I am very proud of it. If I tell my machine to use the soundblaster card then 3D edit won't work. It says in issue 11 that the PC can use PCX files (320x200x256 colours) as borders. Well mine doesn't - however, converting this to an LBM file using Graphics Workshop creates a useable file. You mention version 2.03 in issue 11, can I upgrade my version and if so how? If the datafile format is the same across different computing platforms, has anyone tried a straight data connection to transfer the wealth of PD from the Amiga and Atari to the PC? I think that is about my lot except to say that when viewing borders my machine has an annoying habit of hanging - not always but just often enough to cause me real headaches.

Colin Paterson
PC

I think the first thing we have to do is to get you the latest version of the Kit which should eliminate most of your problems - especially with Soundblaster as it was not entirely compatible with early versions of the Kit. Send me your disks and an S.A.E. and I'll swap them for you. Yes, we have tried various ways of converting Amiga and ST datafiles to work on PC. No success whatsoever with Amiga to PC but we have had some success with Atari to PC usually with an urgent need to change the colours to see exactly what the datafiles look like on the PC. We'll keep trying and let you know. Nigel Alefounder has had some success though - over to you Nigel.....Mandy

---

Dear Mandy,

Thanks very much for the last delivery of indexes and FAST TOWN for the Atari ST. The former are certainly immediately useful and no 3D-Kitter should be without them! Now to report on how I got on with the Atari files. Firstly there was NO problem with the PC reading the Atari disk. I've no idea how the ST version works, as I've never had access to one, so just started by copying all the files onto a PC formatted disk for safety, then I renamed the FASTTOWN datafile so the PC would load it. This meant adding an extension (.KIT) - like Kit1 used to use. After a slight, (but normal) wait the sample world appeared. The palette was completely wrong (unless the author has a very unusual sense of colour!). I notice that on the disk there wasn't the usual triplet of files which the PC version of Kit1 used to use i.e. .KIT .NAM .PAL, so conclude that either there is only one ST palette available or the colour info is stored in the main datafile as in Kit2. Anyway, apart from the psychedelia the only other problem seems to be in the maze. Like you I couldn't resist going where the author warns not to! Trouble is on the PC all that happens is that you are dumped at the beginning of the maze and the computer locks-up solid! Otherwise it was an enjoyable romp around galleons, factories, buses and the curiously nostalgic overhead power cables I remember from my childhood (too many years ago!). On the subject of the individual objects. Well Kit2 doesn't recognise Kit1 objects anyway as far as I can see so there was little hope of joy with the ST ones. The best thing to do would be to load the world, re-colour the objects, group them and save. Ah well, we can't have everything. Still all this DOES mean PC users can have access to the ST worlds/datafiles - which is very useful. Now all I need is a program to convert ST Neopaint files to a PC format...

Nigel Alefounder
Kit1 and Kit2 - PC

Dear Mandy,

I am pleased to say that I now have a working copy of Kit2. Thanks for sending it to me. I notice when you run your program after compiling it using 3DMAKE the program displays "Loading a Virtual Reality Studio 2 Virtual World" on the screen. I have found a way to by-pass this by writing an MS-DOS batch file. This comes in useful if you want to either remove this message or add your own message. I contacted Domark recently and asked them if I would be allowed to sell my game as shareware once I had created it. They said yes but only if I stated that it had been created using the Kit. Could you verify this as I am sure other members of the group might find this interesting?

John Clarke
PC Kit2

You can publish, sell, swap, give-away, use as shareware or PD, your finished programs or datafiles. In fact you can do whatever you want to do with them without asking prior permission from Incentive/Domark or paying any royalties etc. The only stipulation to this is that you acknowledge somewhere within the package, disk or documentation that you used the 3D Construction Kit to write the program.....Mandy

---

Dear Mandy,

I am writing in reply to Dominique Watson's idea of a Virtual Reality Visette. He said he hoped there is someone out there who knows how to implement joystick controls using infra red beam. Well there is a company called Spectravideo of Unit 27, Northfield Industrial Estate, Beresford Avenue, Wembley, Middx, HA0 1NU (Tel: 081 900 0024), who sell walkabout joysticks for just £14.95. This infra red joystick does away with leads and plugs, players can walk around the room and still play their favourite games. It sends infra red rays from as far away as thirty feet, the signals being picked up by a control box which plugs into the back of the computer. It takes the place of the old joystick so it should work with 3D Kit. As for the two miniature TV's inside the visette - they could research development using existing hand held games machines which use low cost screens especially made for computer graphics.

You could build part of it yourself. Hand held games in which you can load programs start from around £39.99 for Quickshot Supervision, up to Game Gear at £99.99. The idea is to buy two hand held games machines and build them into your own VR Helmet at low cost and then load the software to simulate the VR World. With this idea you could actually do away with a computer main base on the other side of the room and have a hand held joypad connected to the VR Visette. This low cost idea has never been exploited yet so the idea is up for grabs. Manufacturers would only build new products if they could keep the price down for the finished product. In the Kit 2 manual on page 18 it says that Incentive do not yet possess the knowledge to get a real human being into the world created by the program but with a few more years research and some powerful hallucinogens a solution could soon be at hand.

Well I have found a solution to reduce the number of years of research and just research the compass or altitude direction indicator to control the joystick action to the toolkit. Another method of introducing computer graphics to the two or four LCD colour TV's build into the visette is to use a video sender. This, which is connected to the computer, will send 3D Kit sound and vision signals through the air up to 1000 feet radius. You are able to tune in the miniature TV to pick up the Construction Kit sound and graphics. It is alright having a picture but you need something to move about in the 3D World. This is where the infra red joystick is used. With the joystick you are able to walk anywhere in the house and control the environment you can see through the visette. To improve the idea further you could build the joystick into the visette controlled by tilt switches or compass rotation. You could control shooting by connecting a wire down from the head set into your hand. Incentive is only a software company and not a hardware manufacturer so I don't think they could build it, although there is a big sales potential for any manufacturer who could sell it at low cost.

R. Connell
Bolton, Lancs

Dear Mandy,

I think the magazine is very good as it has something for all levels of expertise. I found the Beginner's section very interesting as I am self taught and have only had the computer for about three years. One thought I've had, is it possible to obtain a folder on the lines of the ST Format or ST User sort? I find the mag has a tendency to get lost amongst the paper work in my computer drawer.

B. Miles
Trowbridge

I did find the ideal binder a couple of years ago in W.H.Smiths, it was A5 size and had twelve thin metal rods in the centre to allow it to store up to twelve issues - rather like the old TV Times type binders. Unfortunately when I went back for more of the same I was told that it had been a promotional drive offer and there were no more to be had. I will investigate with some companies that I know of who produce various types of binder to see what can be found. Providing the cost is right it might be worth looking into.....Mandy

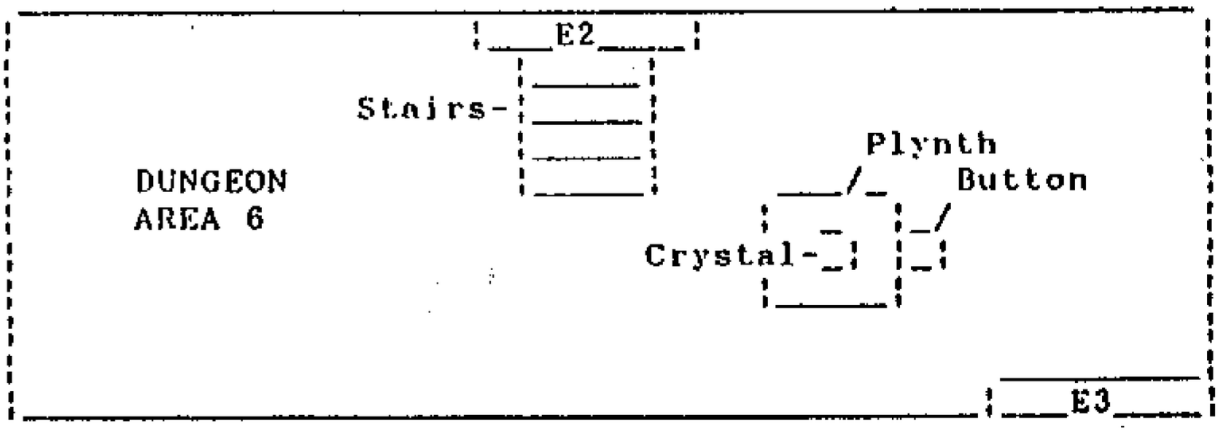
MORE LETTERS NEXT ISSUE!

THE USER GROUP GAME

PART FIVE:

We are going to enhance our game with a couple more puzzles for the player to solve. Basically what we need to do is to create a puzzle within our dungeon area which interacts with a hidden cell nearby. We are going to create a plynth in the dungeon with a crystal on top and also add a button on the bottom of the plynth - not exactly hidden but making it easy to miss if the player isn't searching properly - the button when activated will reveal a hidden door leading to a cell. Within the cell we are going to create another puzzle where, upon entering we will find a deadly wall, complete with nasty spikes, rushing towards us. Just inside the cell will be another plynth upon which we want the player to put the crystal they found in the dungeon. When they have done this the wall will stop moving. Within the cell is a pile of gold ingots hidden within an alcove halfway down the cell. The player has to stop the wall before it covers the alcove so that they can access the treasure.

The first thing we have to do is to create all the objects within the dungeon so that our dungeon area looks something like this:



Firstly we should enter the simple condition needed to allow the player to take the crystal from the plynth by activating the crystal and so making it vanish:

CONDITION FOR CRYSTAL (in my case Pyramid 15)

```
IF ACTIVATED?
THEN INVIS (15)
ENDIF
```

We need to be able to allow the player to take and replace the crystal on the plynth - set initially to vis - and also cover the possibility that the player might also activate the plynth when the crystal is on it, so we will include a "ping" sound effect.

CONDITION FOR PLYNTH (in my case Cube 14)

```
IF ACTIVATED?     -   If activated and
AND VIS? (15)         crystal is there
THEN SOUND (4)        just make a ping sound
ELSE IF INVIS? (15)   but if it isn't there
THEN VIS (15)         then make it appear
SOUND (4)             make a ping sound.
ENDIF                 Note: two endif's as
ENDIF                 we had two if's.
```

Create a rectangle, paint it black to represent a doorway and position it against the wall in the correct place, stretch it to the height you think appropriate for a doorway. Before you enter any conditions for the doorway you should walk right up to it until you are facing it squarely and, making sure you are not touching it but are just in front of it, make a U-turn so that you are standing with your back to it - to give the effect that you have just walked through it from the cell - and CREATE ENTRANCE. This should be entrance 3 and make a note of this so you can come back to this through the door from the cell by sending the player to Entrance 3 in Area 6 (i.e. GOTO (3,6)). When you have done this, turn around so you are facing the doorway - to make things easier - and enter the following condition for the doorway: Which in my case was Rectangle (17);

```
IF COLLIDED? -       If you bump the doorway
THEN GOTO (2,8)      goto E2 in A8 and start the
STARTANIM (1,8)      animation in area 8 – we
ENDIF                will program this later.
```

When you have done this, make sure that you make the doorway INVISIBLE both Initially and Curently via the ATTRIBUTES. Don't worry about the animation just now, that will be programmed when we come to the Cell area.

Now the almost hidden button, a very small cube, should be placed low down on the far side of the plynth, to make things more difficult I. coloured mine almost the same shade as the plynth so that it is only when the player goes round the plynth and looks down that it is seen. We now need to enter the condition for the button so that each time the button is activated the doorway will either appear or disappear, depending on its current state. There will also be a sound effect and, remembering that the player is standing with his back to the doorway he/she will have to turn around to see what has happened when they hear the sound effect.

CONDITION FOR THE BUTTON (in my case Cube 16)

```
IF ACTIVATED?    -    If button is pressed and
AND VIS? (17)         doorway is visible then
THEN INVIS (17)       make it invisible and give
SOUND (2)             sound effect. but if it is
ELSE IF INVIS? (17)   invisible make it appear
VIS (17)              and give sound effect.
SOUND (2)
ENDIF
ENDIF
```

You may have noticed that in all these conditions we have put the "negative" aspects first. I.e. We have told the program what to do in case someone does something twice first. This is simply because that is the way that the program works and we would have great difficulty in doing it the logical way, such as because the doorway was set to invisible we should program it firstly to appear when the button is pressed. With all FCL programming, if a condition isn't working the way we want it is always wise to check this out first in case we have put something the wrong way round.

Now test everything thoroughly to make sure that everything is working properly. Next issue we will program our final area - the Cell.

TO BE CONTINUED....

MULTIPLE OBJECTS IN THE TUNNEL AREA
BEGINNER'S SECTION

Supplement to the routine in Newsletter 12
Entitled USING AN AREA MORE THAN ONCE

By Mieke Van Der Poll - AMIGA & PC KIT 1 AND KIT 2

This is quite interesting when making a maze in which you have to solve a lot of problems by picking up objects to do so. I will give you an example, using the same entrance variable used in the previous article, making three objects, which each use a variable too.

Create 3 different objects, for instance:

Object 1: a match consisting of two cubes (say cube 2 and cube 3).

Create a group and add the two cubes to it: Group 4 = match.

Choose a variable for this group: Say V35.

Object 2: an arrow consisting of a cube (say 5) and a pyramid (say 6).

Create a group and add the two to it: Group 7 = arrow.

Choose a variable for this group: say V36.

Object 3: a bow consisting of a cube (say 6) and a pyramid (say 9).

In Kit 2 the pyramid could be made wireframe.

Create a group and add the two to it: Group 10 = bow.

Choose a variable for this group: Say V37.

Load the three objects into the "tunnel area" and make every part of all three invisible. You may end up with different group numbers, this being only an example.

In the tunnel area (3) create local condition 1. (When you enter the tunnel the first time the entrance variable is set to 1 (1,V45)).

Edit local condition 1:

KIT 1

```
IF VAR=? (V45,1)
THEN IF VAR=? (V35,0)
THEN VIS (4)
INVIS (7)
INVIS (10)
ENDIF
ENDIF
```

KIT 2

```
IF VAREQ? (V45,1)
THEN IF VAREQ? (V35,0)
THEN VIS (4)
INVIS (7)
INVIS (10)
ENDIF
ENDIF
```

The match will become visible when you enter the tunnel through that entrance.

When you enter the tunnel for the second time the entrance variable is set to 2 (2,V45). Create and edit local condition number 2 in the same way as above, this time the first variable is (V45,2), the second one is (V36,0) and object (7) must become visible and the other two invisible, and so on with the third object and, if you wish, many more.

Now when an object is visible in the tunnel you want the player to pick it up. You make an object condition for say cube 2:

KIT 1 AND KIT 2

```
IF ACTIVATED?
THEN PRINT ("YOU PICK UP A MATCH",1) 1=Optional
DELAY (150)
PRINT ("                        ",1)
INVIS (4)
SETVAR (1,V35)  (this is important!)
ENDIF
```

By setting variable 35 to 1 the object has been picked up and you prevent at the same time that the object will become visible again when you enter the area again, IF VAR=? or IF VAREQ? (V45,1). In the local condition the variable must be (V35,0) in order for the object to become visible (so not having been picked up yet).

When a certain object that has been picked up, has to be placed in another area again (to solve a problem), be sure to set the variable a number higher than 1 and not to zero because that is the number you reserved in your local condition for it to become visible. You use the above routine in the same way for the other two objects.

In this way you can put a lot of objects in the same area, even if you use it more than 20 times in a maze! You have to make a map when you want to do that. Each time you want a particular object to be visible, choose the entrance variable that has been set when entering the area at that particular place.

Remember: I created three local conditions, one for each object, but it might very well be possible to put all those commands in one local condition. I did not try that out though.

in Kit 2 you could also make a Procedure and put all those commands into it. Then you only have to create one local condition and edit it with the text: proc (1).

CONDITIONS

By Tony Hartley - KIT 1 & KIT 2 - ATARI ST

If you are new to any of the 3D Kit programs you may be wondering what the difference is between all the types of conditions and how they all work. There are four types of conditions - INITIAL, GENERAL, LOCAL and OBJECT CONDITIONS in KIT 2 and GENERAL, AREA, OBJECT conditions in KIT 1. The INITIAL CONDITIONS (or in the case of Kit 1 the 1st General Condition), are executed when the program first begins and also when it is reset. You need to firstly CREATE the condition ready for use then EDIT CONDITION to enter your text. These conditions are used for example if you want to load a picture file for use as an information screen in a game, also to load a border (Kit 2 only) and starter variables. In other words any commands that you want to happen when your game first begins. In this example we have one loading screen (drawn on an Art Package, one border and one variable which is used to disable the shooting. The shooting variable can be re-activated once you find a gun.

This condition is for Kit 2:

```
LOADSCREEN("INSTRUC.PI1",0)  - Name and type of picture.
DELAY (650)                  - Gives time to view picture.
CLS                          - Clears the picture.
BORDER (1)                   - Loads your border.
SETVAR (0,V20)               - Disables the shooting variable.
```

Next we come to GENERAL CONDITIONS, (from Condition 2 onwards in Kit 1). These are conditions that execute anywhere in your world. They are useful for countdown timers, updating instruments or anything that you want the computer to keep an eye on for any changes throughout the game no matter which area you are in. For example if you wanted to keep track of how long you had been playing your game you could use a general condition to keep track of the time for you. e.g.

```
TIME (V52,V53,V54) - see page 34 in 3DK2 manual.
This would have to be used with three instruments as well.
```

Next there are the LOCAL CONDITIONS or in the case of Kit 1 the AREA CONDITIONS. These are nearly the same as General Conditions but are only activated when you visit the area that they are in. A Local or Area condition could be used to start an animation, set an object fade (Kit 2), start a Brushanim (Kit 2) or anything that you want to apply once you reach that area. Although you can use these conditions to make something happen in another area. An example of this could be:

```
IF INVIS? (25)       - If object 25 is invisible
THEN STARTANIM (1,2)  start animation 1 in area 2
```

Thus the Local/Area condition is checking to see of Object 25 is invisible and when it is it will start animation 1 in area 2 which is another area.

Finally we have OBJECT CONDITIONS. These are only usually activated when an object is collided with, activated or shot. The Object condition could be used to check if someone has bumped into an object and then if this happens the object could vanish, e.g.:

```
IF COLLIDED?       - if you bump into this object
THEN INVIS (45)      then make it (object 45) vanish
```

Or another example could be to create a cube/pyramid into a gun shape then when someone takes the gun they are now able to fire. This would be used with an initial condition for example. after you have created and edited the Initial condition, as mentioned previously, to disable the shooting until the gun is found and picked up, you could enable it again by using these conditions:

```
INITIAL CONDITION:
        SETVAR (0,V20)  - disable firing (Kit 1 and Kit 2).

OBJECT CONDITION:
        IF ACTIVATED?   - if you have touched it
        THEN INVIS (45) - make it (object 45) invisible
        SETVAR (15,V20) - enable rapid firing
        ENDIF
```

So that is a brief explanation of the different conditions and what they do. Study the manuals for more help but, in a nutshell -

Initial Conditions Kit 2 and General Condition 1 Kit 1 are for one off settings after a reset, e.g. to set variables, load screens, borders etc before the start of a game.

General Conditions are for general purpose functions that happen every frame, e.g. Timers, setting the time or anything that you want to apply to every area.

Local Conditions Kit 2 or Area Conditions Kit 1 are for making things happen only when you are in the area that triggers the condition. E.g. if you enter an area the condition in that area could start an object FADEBOUNCING (Kit 2 only) or print the name of that area to a text instrument.

Object Conditions are for making something happen if you interact with a particular object.

I hope that helps a little, there are endless possibilities to using conditions and lots of examples in the manuals and the Newsletters so experiment and have fun!

AMIGA SOUND SAMPLE BANKS

By Mieke Van Der Poll - AMIGA KIT 2

On the Amiga it is possible to load a sound sample bank and edit the samples within the datafile you created in 3DEdit. The first thing you have to do though is to create your sample bank with the 3DSound Program and save the bank with the extension .3sm. Then start 3DEdit, load in your datafile and load in the sound sample bank. Under the sound menu there is also a command to edit your samples. In the manual nothing has been written on how to do that. It is not so difficult so if you haven't already discovered how to do that I will explain some things below.

When you start to edit the sounds, it seems as if there are only five sounds available, called sound 1, 2, 3, 4, 5, the names of which you can change in the first five of your sound bank samples. In the menu window of the sound editor there are, besides EDIT, two more important buttons: ADD and STORE. If you have edited the first five samples, don't forget to store each one, otherwise you end up with the same sounds you had at the start. When you click on ADD you see sample number 6 appear with the name empty. Change it into your sample name nr.6 and click on EDIT. In the next menu click three times on INSERT. In the first row click on NOP once. In the second row click on NOP twice and in the third row click on NOP three times. Then fill in a number in the first row under value 1, say 500. Fill in a number in the second row, say 64. Then in the third row you fill in the number of your sound sample, in this case it is number 6. Then press PLAY and you will hear your 6th sample sound.

There are lots of ways to change the sound by clicking on the different row buttons and by changing the relevant numbers in the first two rows. Find out for yourself. When you are happy with the sound click on OK and, don't forget! click on STORE in the first window.

In this way you can add all the samples of your sound bank to your datafile - I did so with 26 ones on the one meg Amiga 500 - and save the datafile. The next time you load in your datafile you also have to load in your sound sample bank but then all the edited sounds are present.

We are getting a bit short on contributions for the Beginner's section so I would be grateful if readers could put pen to paper - or pinkies to the keyboard and let me have some more as soon as possible please. I have just enough for the next issue but need more for October- Mandy

---

8 BIT ROUTINES

DARK AREAS

By Steven Flanagan - C64

I've spotted a tiny error in the 8-bit user group game. The routine at the bottom of page 13 of newsletter issue 11 does not work because it tries to nest IF statements, and this is not allowed on 8-bit machines.

<u>The routine should be:</u>

```
IFHIT (r)
THEN
ELSE
END
ENDIF
IFVIS 11 2
THEN
GOTO   2 7  -  Goto the dark area.
ELSE
GOTO   2 5  -  Goto the light area.
END
```

Now I can tell you that you won't need this routine because there is a better method. With the above routine you need two areas exactly the same but one with everything coloured black. (See last newsletter). This will use up a lot of memory if the area contains many objects.

Using my method, you only need to create one area. When you have done that, select COLOUR AREA in the environment editor and write down the four colours of the area on a piece of paper. I will call these numbers Col1, 2, 3 and Col4.

Next, load the condition editor and enter this routine instead:

```
IFHIT (r)   -  r = door rectangle number.
THEN
ELSE
END
ENDIF
IFVIS 11 2
THEN
SETV 0 1    -  Set flag to 0 if torch not taken.
ELSE
SETV 1 1    -  Set flag to 1 if torch taken.
ENDIF
GOTO 2 5    -  Goto the area.
END
```

In the area you wish to goto (in this case area 5), write this local routine:

```
CMPV 0 1        -  Test if torch is not taken
IFEQ            -  If not taken...
THEN            -  Then
COLOUR 0 0      -
COLOUR 1 0      -
COLOUR 2 0      -
COLOUR 3 0      -  Colour the whole area black.
REDRAW
ELSE            -  If the torch is taken.
COLOUR 0 Col1.
COLOUR 1 Col2.
COLOUR 2 Col3.
COLOUR 3 Col4.  - Colour the area with it's original colours.
REDRAW
ENDIF
SETV 3 1
END
```

The reason why variable 1 is set to 3 at the end is because if it was left at 0 or 1 the whole condition would be repeated every frame (Including the REDRAW command), which would take up processing time.

MAKING MORE SOUND EFFECTS

By Steven Flanagan - C64

The few sound effects provided with the kit are a bit limiting when you want the game to make a certain sound such as a car engine running. Here are two simple routines for making different uses of the sounds provides:

Method 1.

```
SOUND (N)
END
```

Method 2.

```
SOUND (N)
DELAY (D)
END
```

Where N is the number of the sound to be sounded. The best sounds to use are numbers 2, 3, 4, 5, 7, 8 and 11. D is the delay time. Experiment by altering the values of N and D until you get the your desired sound. Some of them do give a very good car engine noise.

Unfortunately, the noises created with these routines only work when the 3D world is not being updated. In other words, the sound effect is lost if the player moves.

An simple example of a use for these sound is as follows. A player enters a room to find a coffee machine next to the wall, on activating the machine, the humming sound is produced for a few seconds and his/her cup of coffee appears. This is a pretty useless example but it was all I could think of.

---

16 BIT ROUTINES

LANDSCAPE TECHNIQUE
By J. Hayes - 16 BIT KIT 1

The 3D Kit can create many environments, but supposing there is a need to create an actual landscape. This can take many forms but there is a problem here. How to show a vast landscape without using a number of areas or spend lots of time creating the features to fit into every one.

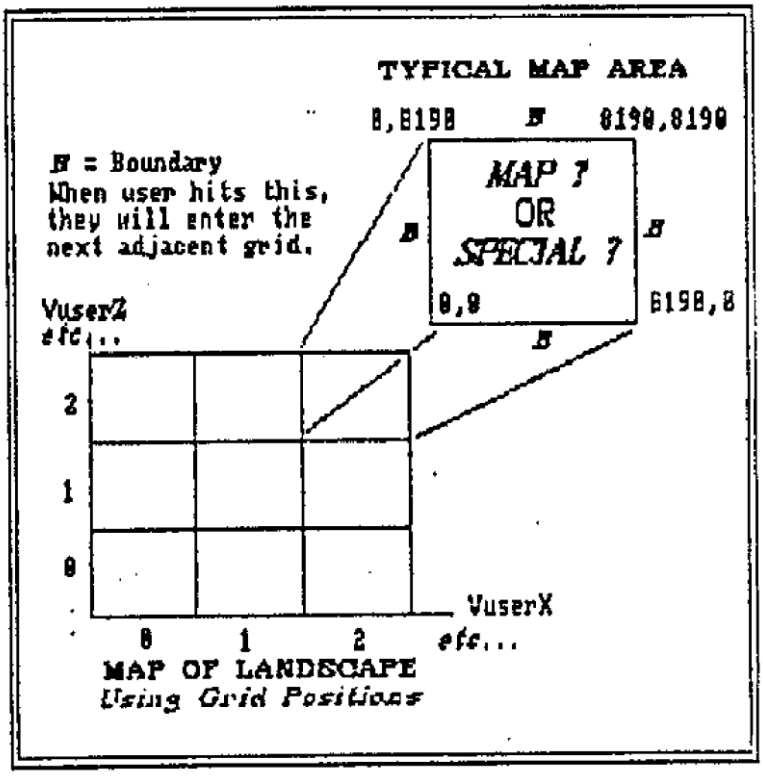
This idea provides a general way of implementing any size of landscape. It uses only one area for the main map, leaving lots of areas available for other uses.

To the right is a diagram showing the basic principle. The landscape is based around the *grid position* the user occupies.

This is also used by the landscape to refer to the features that will appear when the user is at a certain position on the map.

The map itself is built from only ONE area. At first this seems a little hard to imagine, but it is easy to give the impression of crossing a vast landscape by using it.

The method used to detect when the user has reached a boundary is described later. For now it is necessary to understand the mechanics behind using just the one area.



It is a simple illusion. The user remains in one area. When they reach the edge of it, they are transported to the opposite side. Their position on the map in terms of the grid position VuserX & VuserZ is updated to reflect where they now stand on the landscape as a whole.

The grid position is a unique label attached to user. It can be used to enable events or in this case, change the features seen on the landscape.

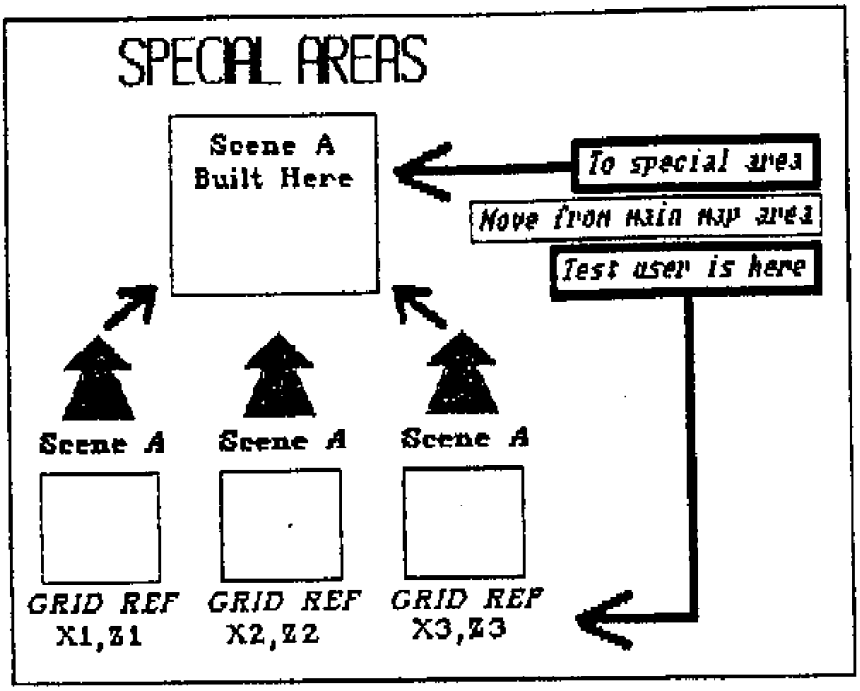
Another practical use of knowing where the user is on the map, is to move them to certain areas when they reach a specific grid. In this way, set scenes can be built where the main action to a game or environment will occur.

These other areas will obey the same movement rules governing the main map. The user will return to it if they hit a boundary, unless other special areas are detected.

To the right is a diagram showing how a special area will work. These individual scenes will be placed around the landscape at the appropiate grid positions. But remember these positions will only come into existence when the user has 'advanced' into them.

The diagram shows a possible case where the same scene can be used. It needs only to be built once in an area.

However, as the grid position they relate to is different for each similar scene, variations can be enforced.



FOR INSTANCE

Suppose SCENE A was a village. At one of them, an object representing food could be made to appear, while at the others, it will not. The same distinction can be used for other features, varying the appearance or layout of the village.

The same approach is used to determine what features will be seen on the map area. Except a more general method is employed, in an attempt to give an apparent 'randomness' to the landscape.

VARIABLES - Refered my name

Vmapsize	Size of landscape (X & Z)
Vuserx	X position of user on map
Vuserz	Z position of user on map
Vflag	Status marker
Vnewarea	New area to enter
Vvaryfeat	Determines the features seen
Vposx	User X coordinate in area
Vposz	User Z coordinate in area
Vlookx	User X rotation in area
Vlooky	User Y rotation in area

(Method assumes no vertical movement allowed)

STATUS IN Vflag when BIT VALUE is set

VALUE	REFERENCE	PURPOSE
1	Newgrid	User entered a new grid
2	Viewfeat	OK to view features

DEFAULT SETTING WHEN ENVIRONMENT IS RESET

General Condition 1

`SETVAR(Size,Vmapsize)`	*Define map size*
`SETVAR(x,Vuserx)`	*Put user somewhere in it at X*
`SETVAR(z,Vuserz)`	*Put user somewhere in it at Z*
`ORV(newgrid,Vflag)`	*Tell routine user is in a new grid*

The default condition will also need to be set to 1

MOVEMENT ACROSS LANDSCAPE

This is the test used to check if the user has reached the boundary of an area. It will apply to every area built, unless the user is prevented from reaching a boundary by a 'wall'.

These can be enabled when the user is at a certain grid. Providing the obstruction was built along with the other features, it can be made to appear. For invisible barriers, colour the obstacle 'invisible'.

General Condition 2

```
IF VAR>?(V2,8190) AND VAR<?(Vuserz,Vmapsize) THEN
    ADDVAR(1,Vuserz)
    SETVAR(1,V2)
    ORV(newgrid,Vflag)
ELSE IF VAR<?(V2,1) AND VAR>?(Vuserz,0) THEN
    SUBVAR(1,Vuserz)
    SETVAR(8190,V2)
    ORV(newgrid,Vflag)
ELSE IF VAR>?(V0,8190) AND VAR?<?(Vuserx,Vmapsize) THEN
    ADDVAR(1,Vuserx)
    SETVAR(1,V0)
    ORV(newgrid,Vflag)
ELSE IF VAR<?(V0,1) AND VAR>?(Vuserx,0) THEN
    SUBVAR(1,Vuserx)
    SETVAR(8190,V0)
    ORV(newgrid,Vflag)
ENDIF
```

NOTICE THE INSTRUCTION ORV(newgrid,Vflag)

This sets the bit in *Vflag* to the value represented by *newgrid*. It is used to find the correct area the user ought to be in when they have crossed a boundary on the map.

FIND CORRECT AREA

This will act on the bit newgrid being detected.

The users grid position is used to find any special areas that deviate from the map area , or return the user to the map when leaving special areas.

The map area must be built in AREA 1

General Condition 3

```
IF ANDV(Vflag,newgrid) THEN
  SUBVAR(newgrid,Vflag) disable this condition.
  IF VAR=?(Vuserx,SpecialX) AND VAR=?(Vuserz,SpecialZ) THEN
    SETVAR(specialarea,Vnewarea)
    ELSE IF VAR=?....etc
       follow with other special areas
       ....
       ....
    ELSE IF VAR>?(V8,maparea) THEN
    SETVAR(maparea,Vnewarea)
       If this becomes true, the user was in another area.
       Put them back on the map !
    ELSE
    ORV(viewfeat,Vflag)
       If this is true, the user is still on the map.
       Just instruct the VIEWING ROUTINE to work.
  ENDIF
ENDIF
```

PUT USER IN CORRECT AREA

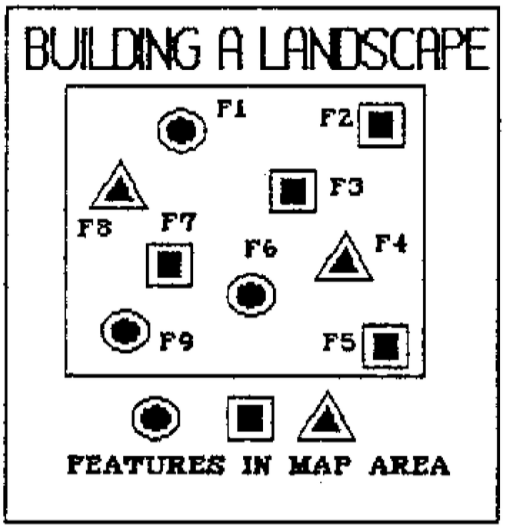
This will act when Vnewarea has a valid number in it. To keep the illusion of crossing a landscape, the users coordinates and rotation are transfered also.

General Condition 4

```
IF VAR>?(Vnewarea,0) THEN
  SETVAR(V0,Vposx)
  SETVAR(V2,Vposz)
  SETVAR(V3,Vlookx)
  SETVAR(V4,Vlooky)
  GOTO(1,Vnewarea)
  SETVAR(Vposx,V0)
  SETVAR(Vposz,V2)
  SETVAR(Vlookx,V3)
  SETVAR(Vlooky,V4)
  ORV(viewfeat,Vflag)
  SETVAR(0,Vnewarea)
ENDIF
```

VIEWING ROUTINE

The purpose of this is to create the features seen in the map area, then let the routine decide what will appear. The advantages are clear with a large landscape - it would be very tedious defining the appearence of objects over countless grids. First, a word on building features into the map area.



On the left are a collection of objects showing the features on the map area. Make a note of the groups they belong to. Due to the limit of *60 objects*, they will need to be carefully designed.

It is necessary though to construct a final group out of all the objects that will change, so ensure there is room.

Leave them all visible. Organise the features into batches, so that they form a priority list.

To each batch, a *bit value* is given.

The routine arrives at a figure to test this value with by adding together the users grid position x & z.

BATCH	PRIORITY	CONSISTING OF GROUPS	VALUE
0	Always seen	F1,F2,F3	N/A
1	1st seen	F4,F5	1
2	2nd seen	F6,F7	2
3	3rd seen	F8	4
4	4th seen	F9	8
etc until no more groups			

If the bits in this figure match the value for a batch, it will be shown.

User at	Figure	Bits set	Batch seen
4,2	6	4+2	2 & 3
8,3	11	8+2+1	1,2 & 4

In practice, the user can forget what will appear. The intention here is to vary the landscape features without any concern over what they ought to be. This is a 'hands off approach' and saves alot of work.

This example is used in the routine itself.

Local Condition 1 For map area

```
IF ANDV(Vflag,viewfeat) THEN
    INVIS(the group selected to vary) NOT F1,F2,F3
    SETVAR(Vuserx,Vvaryfeat)
    ADDVAR(Vuserz,Vvaryfeat)
    IF ANDV(Vvaryfeat,1) THEN
        VIS(F4)
        VIS(F5)
    ENDIF
    IF ANDV(Vvaryfeat,2) THEN
        VIS(F6)
        VIS(F7)
    ENDIF
    IF ANDV(Vvaryfeat,4) THEN
        VIS(F8)
    ENDIF
    IF ANDV(Vvaryfeat,8) THEN
        VIS(F9)
    ENDIF
    SUBVAR(viewfeat,Vflag)
ENDIF
```

Notice how the values pointing to a batch are detected, then the batch itself is given. If the *batch condition* is true, the selected objects will appear.

Due to the way it is arranged, more than one condition can be true. So a number of batches can exist. It is rather like fitting the pieces into a jigsaw;

SUMMARY

A game can be built around this landscape idea. The user is free to go anywhere, without the limits imposed upon travel in a conventional 3D Kit game. The number of conditions needed to do the same normally, even on a small map, would need some planning.

The landscape can be ridiculously large, but it is wise to populate it with good special areas away from the map area. Being in the wilderness for too long is not a good idea; there has to be an aim to using this method, otherwise the benefit will be lost.

A compass can be added very easily by examining the users 'y' rotation.

This is demonstrated on the disk provided.

The method described is meant for `external` landscapes. But it can be adapted for `internal` uses like mazes or passages, by leaving a gap between the walls in order to reach a boundary. If so, each room/passage must occupy a grid on the map and follow a logical route; any exterior views relating to them must match as well.

Putting locked doors in the path of an exit is available. It will be necessary to remember what door(s) are locked or open/closed at certain grids by using variables to test for them and then make the correct item appear.

'Teleports' are possible as well ! Just force the routine to believe the user has entered a new grid. THUS:

```
SETVAR(TeleX,VuserX) : SETVAR(TeleZ,VuserZ) : ORV(newgrid,Vflag)
```

The routine will handle the rest ! Use carefully as the user could end up as part of the scenary in another grid !

The marker, *viewfeat* in *Vflag* will be available in special areas if required to change the scenary. If used it must be reset with *SUBVAR(viewfeat,Vflag)*. Nothing disastrous will happen by forgeting, it only stops features from being re-defined.

For internal scenes, like buildings which also adopt the idea of using the same area, a *viewing marker* must be set on entry (via doors), as *viewfeat* will not be available for this purpose.

The following is general guidence for using any area more than once for different scenes/features:

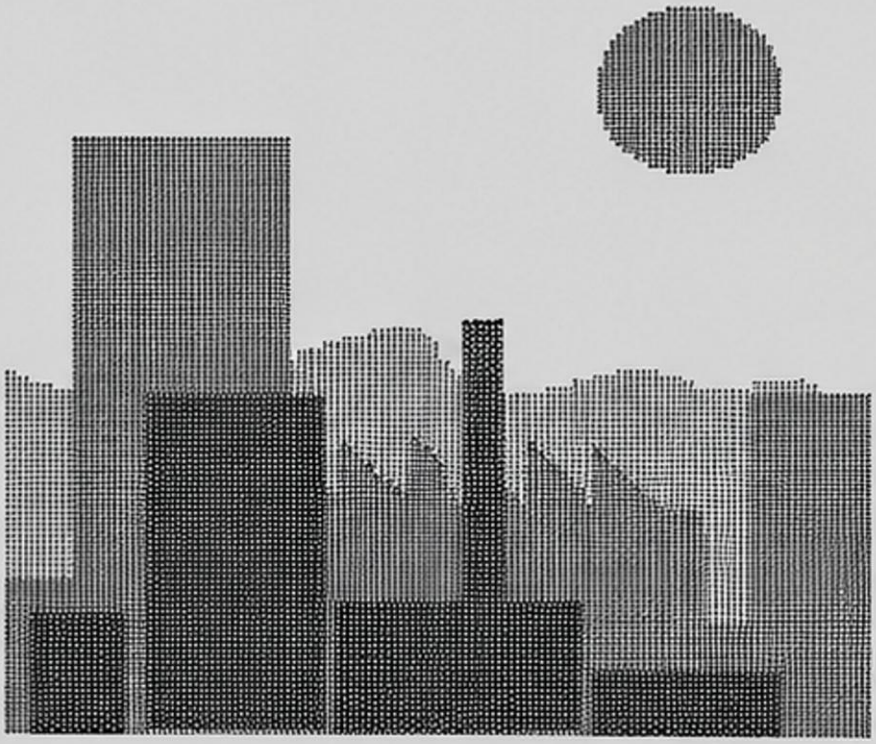
1: Create all the objects in one area. Leave visible.

2: In Local condition 1

```
If viewmarker set
   Reset viewmarker
   INVIS all objects that vary
   If at grid G1, VIS those that exist here... etc
OR If at grid G1 AND OK to see, VIS those ok to see
   (Like a door that was shut, must now be shown open)
OR If at grid G1 AND in building B1...etc
   (Assuming building entered shares the same area and a record of
    it was kept on entry)
Endif
```

I trust all this can be useful ! It works well, much to my astonishment, but took some time to figure out. I enclose a disk with a full description demonstrating these principles for you to study.

3D CONSTRUCTION KIT USER GROUP



MAGAZINE ISSUE 13
JUNE/JULY 1993

3D Construction Kit Newsletter

Issue Number 14
August/September 1993

CONTENTS

EDITORIAL 336
LETTERS 336
THE USER GROUP GAME 342
THE DELAY COMMAND AND HOW TO USE IT 344
MAKING GAME BATCHFILES WITH CHOICES 345
HALL OF FAME 346
8 BIT ROUTINES 347
COMPILING TIP 348
SIMULATING A LARGE OUTSIDE AREA 349
16 BIT ROUTINES 349
TEXTURE MAPPING - WELL, ALMOST! 354
ON THE LEVEL 355

LIFE | GENERAL | AREA | OBJECT | CNDITIONS

3D CONSTRUCTION KIT USER GROUP

MAGAZINE ISSUE 14
AUG/98P 1999

β

POS x4000 y 300 z3720
ROI x 0 y 0 z 0
MODI WALK HEIGHT 270

EDITORIAL

Welcome to issue 14 of the 3d Construction Kit User Group Newsletter.

The last editorial sounded so depressing with all that talk about floods etc., that you might have got the impression that I myself was depressed. Not so, now that everything is back to normal, apart from one doorframe on which the paint just refuses to dry for some strange and unknown reason. It is covered in dog hairs (down at dog level), and crumbs and fluff higher up. Any painters out there who can come up with any tips please get in touch. It has been washed down with turps etc three times and the paint still changes colour and refuses to dry even after six weeks wait. Like the ancient mariner, during the flood I hung out of an upstairs window and moaned, "Water, water everywhere and not a drop to drink!" Actually we had quite a few funny moments during that time. The Gas Board had just completed some digging before the flood and the water washed away the sub-soil leaving a thin crust on top. One of our friendly policemen was wading through four feet of water when he "discovered" a ten foot deep hole! His helmet floated - which was a good thing as he might have drowned if someone hadn't seen it! A neighbour was rescuing his children by carrying them on his shoulders one by one to dry land when, upon his return journey he spotted his black Labrador dog, together with its kennel, floating down the road. It was a strange and interesting experience watching the in-shore rescue boat sailing past the front garden too. We boasted for a while that we had an indoor pool - which incidentally intrigued our dog. He kept running downstairs and going for a splash-about and then running up to jump on my bed to shake himself during the night. I also never realised that house-training your dog so well could be such a bind! Every time he needed to go "walkies" he had to be carried, (if we wanted a dry dog), on our shoulders until we reached dry land, (only for him to do his best to wet that land too). Incidentally, the tropical fish went "walkies" too. The only creatures in our house that didn't get wet were the hamster and the budgie! Worst thing of all was the fact that everytime I had to go to the shops I had to wade there and all of Llandudno now knows what colour knickers I wear!

Right! No more talk about water or floods and on to things 3D - version V2.09 of Kit 2 is being playtested as you read this and should be ready shortly. I'll let everyone know when it is available. Any delay is due to the problems I had in getting it through to the playtesters so don't blame Incentive - the fault was all mine as they did send it to me in July! As the next issue of the newsletter is due out towards the middle to end of October you won't have to wait too long for a report and details of how you can exchange your disks for the latest version. Sadly there were a few of programs that people had sent me to take a look at before the disaster and they have been lost. I don't have a record of who they were from as they were in the envelopes with the letters so if you have sent me a disc for evaluation and you don't hear from me about it before the next newsletter then please get in touch so we can sort it out. Likewise, I have now replied to all the letters I have found so, if you haven't heard from me regarding anything you asked about, please get in touch. Most of the contributions I had on file have been used for this and the last newsletter so I am a bit short for the next one - hope you can help me out. Apart from all this we are back to normal and it is all systems go! I hope you enjoy this issue. See you all again in October!

Mandy

LETTERS

Dear Mandy,

Thank you very much for writing to Domark for me. I am sending you a photograph of my CPC set up so you can see what a great Amstrad fan I am. I use an old PC box with my good old Amstrad inside it. Could you please tell me which other programs Incentive have programmed for the CPC? I have DRILLER, DARK SIDE, VIRTUAL WORLDS and 3D KIT. Do you know of other programs like these in 3D with or without the Freescape system? I hope these aren't too many questions but I don't know anybody in Germany who can give me answers: By the way, is Kit 2 only available for 16 bit computers? Who could give me any hints for Driller or Dark Side, for example, where must I drill in the 18th Sector (Driller).

In the manual for Driller there is an order form for a "Full Colour Driller Poster" with the address of "Driller Poster Offer, Incentive Software, 2 Minerva House, Calleva Park, Aldermaston, Berks". Do you know if this is the actual address? Do you know of any addresses where I could order Amstrad software? Don't be angry about my bad English. It is a long time ago that I learned it in school.

Stephan Sander
AMSTRAD CPC
Hackethalstrabe 39, W-3012 Langenhagen, Germany

Firstly, let's get the address right as the one you have for Incentive is wrong. It is Incentive Software, Zephyr One, Calleva Park, Aldermaston, Berks, RG7 4QW. Unfortunately the poster offer is not valid any more though. Over the years Incentive have programmed a huge amount of software for the CPC and it would be impossible to list them all here, however, as far as Freescape programs are concerned they have produced CASTLE MASTER for CPC which I note isn't on your list. Unfortunately Kit 2 is only available for 16 bit machines and, in the case of PC is not available in CGA format. I cannot really help you with hints for Driller as (shock horror) I have never played it myself! You sound very lonely out there in Germany without any friends to contact regarding 3D Kit so I have printed your address in full - come on all you fellow German members, why not get in touch with Stephan and help him out a bit? By the way, I have to say that I am always profoundly impressed with the standard of English that I read in all letters from abroad. When you consider what a mess I would make of trying to write in German your command of the English language makes me ashamed of myself! .....Mandy

---

Dear Mandy,

I have had lots of problems with Kit 1 and my hardware - I think because I ordered the Kit 1 early and maybe I have an old version. I cannot run it with my accelerator cards or from my hard-disk. Maybe there are problems with the flicker-fixer with Kit 1 V1.1. With Kit 2 all seems to be well, but there is no hard disk install program on my program disk as advised in the manual so I copied the files by hand and found that I now cannot use my German keyboard without a lot of "trial and error" to find the right keys for programming. Maybe I need a special German version or a missing Install program? I use a lot of the PD disks as I try to learn from them so I have had to be using both Kit 1 and Kit 2 for some months now so I would really love to have up to date versions of both. My first explorations with Kit 2 have impressed me. This program is great and seems to offer far more than I am able to use in the near future. At the moment I am puzzling out how to have more gadgets working on different borders. It should, I think be possible to use the same gadget space once defined for several different movements with other pictures in one procedure and different effects. Many thanks for all the help you give us with the User Group and the newsletters.

Rolf Prietz
AMIGA KIT 1 AND 2

By the time you read this I hope that you will already have received V2.07 of Kit 2 and V1.2 of Kit 1 which should make life a lot easier for you. You should find that Kit 1 V1.2 works well with Amiga 2000 whereas the early version did not. Many people have complained that they cannot install Kit 2 on the Amiga HD. This is because the Install command should not be on the program disk. There was a HD Install version programmed originally for the A600 series of computers which came with internal hard disk but this wasn't implemented for other versions and, and I may be wrong here, I think it is no longer there for A600 either. I have to confess that I haven't yet tried putting other animations within other borders apart from the globe in one area so I will have to look into this and report back when I know what I am doing - that is, unless some other clever Kit 2 user would like to write in and let us know how it is done?.....Mandy

---

Dear Mandy – From a postcard received from Turkey:

Sitting on a beach in Turkey,
Looking tanned and feeling perky,
Mandy Rodrigues? It wouldn't suit her,
Nowhere to plug in her computer!

Pete Spooner

I couldn't keep that little gem all to myself now could I?.....Mandy

---

Dear Mandy,

At last I was able to devote a meaningful number of hours learning how to handle the Kit. Then despite my back-up, I mysteriously lost everything with a "Clearing Invalid Data" message. After repeating the experience I contacted you, (I hope you have finished with the bucket and sponge now), and assured that all would be well if I wrote to Domark and got the latest version. No, I'm not saying it hasn't solved the problem, I don't know yet, it will take quite a few hours before I am sure but I found some problems which I thought might interest fellow members. Firstly, Domark's address - Domark Software Ltd, Ferry House, 51-57 Lacy Road, Putney, London, SW15 1PR. They have a customer enquiry number 081 780 2224 which referred me back to you Mandy. I phoned them because the installation program of V2.07 (PC version) would not complete, reporting that the serial number of the second diskette was incorrect. Eventually I XCOPYed the diskettes (via Hard Disk), onto a HD diskette. (I copied disk two onto both its root and sub-directory, I'm not certain which one it found). That problem solved I went on to discover I had expensive printer problems. Next day when I turned on the PC I almost threw in the towel as everything went wrong. No Menu, no Path set, no colour, no full prompt. Eventually I realised that the 3D installation program had saved my Autoexec and Config files with a different suffix and installed new ones. Once discovered, reinstating was easy. Phew. An unexpected bonus is V2.07 includes the full complement of clip-art files. That inspired me to put my notes of their contents into a spreadsheet. I enclose a copy (in suitable format I hope), in case you think it might be useful. Finally a query, one problem I often find is an inability to enter (even in edit mode), a section of an area, possibly something to do with grouped objects, even though I delete the group the problem continues. A good example is clipart 0076 where although I can enter the fun palace I am not sure how I do it. Help please. So all in all I still haven't lost my novice status.

John Hayward
PC KIT 2

Sorry I had to put you on to Domark for the disks, John, it was because my supply was washed away in the floods. Yes I have now finished with the mop and bucket thank goodness! I forgot that both Domark and Incentive tend to refer everyone back to me. The problem with the report of a wrong numbered diskette was reported to me a while ago and was corrected so I think they sent you an earlier V2.07 by mistake. The installation problem has also been sorted out. I'm sorry you have had so much trouble. The problem with the invisible objects preventing entry into areas (or though doorways!), has been reported to the programmers - I've even sent quite a few datafiles from members to them so they can see exactly what was happening. I am keeping my fingers crossed (and everything else that will cross), that V2.09 or V2.10 will be bug-free and will be the final version of Kit 2 to be released. I'll report on this in the October issue and then arrange for all disks to be swapped, all being well.....Mandy

---

Dear Mandy,

I thought I would let you know that I have discovered why there is no "look down" option in the controls menu of Kit 2. When I looked through all the options I noticed that there were two "rotate right" controls. The second one is in fact the "look down" control. I have managed to get the move forward and up controls to work in my game although it was very fiddly. At least it works now, so there is no worry about a bug any more. I have also found a mistake in the manual (Kit2) which you may want to report in the newsletter. Page 83 describes the ACTIVERANGE(P1) command, but when I tried it in a routine the command was not accepted. I found that the accepted command is ACTIVERANGE(P1). I'm afraid my 8-bit articles may be coming to an end soon, as I don't spend much time with my C64 any more. I will probably be writing one more article for the next newsletter. I hope the 8 bit sections keep alive as, previously being an 8 bit owner I know how distressing it is to see all the newer computers take over the world. The other day I was using Kit 1 and altered the preferences so that I had 1.5 MEG of working memory - compare that to the 5K I had on the C64! The Amiga has 300 times the amount of memory to work with. This may give you the impression that I am abandoning the C64, but that couldn't be further from the truth. I still love that machine but I am simply not going to use it as much as I used to. As your 8-bit computers drowned in the floods I would be only too happy to assist you in any way possible.

Stephen Flanagan
AMIGA AND C64 KIT 1 AND KIT 2

Thank you for your offer of help, Stephen, and thank you also for all the great 8 bit articles you have sent in the past. I understand that it would be impossible for them to continue indefinitely - especially when you have your new computer to get to grips with. Let's hope that you will soon be sending in some 16 bit articles instead - we cannot let your talent go to waste!.....Mandy

---

Dear Mandy,

I have recently been using my 3D Kit and trying to create a car game. I had problems with the wheels but I think I have found the problem now. The problem was fixing the triangles together. When you highlight a triangle you see a box highlighted not a triangle. Can you get rid of this or reduce the size of it? It seems to act as some sort of force-field to stop other things colliding with it. If it is possible to do what I ask please send me step by step instructions of how to do it.

Christopher Horler
Nottingham

What you describe, Christopher, seems to be the "bounding cube" which is present around all Freescape objects. It cannot be removed and is one of the reasons that we have great difficulty in creating dormer type roofs or combined harvesters within our programs. I'm afraid that you have to learn to live with this small limitation and try to work around it.....Mandy

---

Dear Mandy,

I am interested in what can be done with 3D Kit to make a flight simulator. The question I have is whether the border can be modified to extend into the viewing screen. Something tells me that it can't. This makes drawing canopy bracing and gunsight/HUD into the border to overlay the viewing screen impossible. I hope I am wrong. Another question. Can the objects created by the 3D Edit program be exported to other drawing applications, edited, rendered and imported back into the Kit? What about in Superscape? What are the prospects of adding texturing and bump mapping to the Kit as modules? I plan to play with the animation. I want to animate a robot figure. From the manual it looks like I'll have to animate each of the arms and legs separately. Should be interesting. I'll let you know how I do. So far I think you have a great product.

Mike Anders
U.S.A.

Wow Mike, you are asking an awful lot of 3D Kit! What you really need is a 3D Kit Flight Simulator Creator - good news is that Domark are producing just that at the moment! Watch this space for news……..Mandy

---

Dear Mandy,

I am writing a game at the moment but I am having problems with memory. I'm finding that in some areas once I get past a certain number of objects the objects created first start becoming invisible of their own accord. Is there anything I can do about this? Apart from creating less complicated areas that is! I hope you, or a member of the club can help me out. Keep up the good work.

Alan Brown
AMSTRAD CPC

There are various ways around this problem which relate to ALL versions and ALL computers. If you don't want to delete objects or re-design your areas then firstly make sure that you colour each and every object edge that isn't immediately visible as INVISIBLE, i.e. backs and bases of doors, all but the top part of floor cubes. This will save a considerable amount of object memory. Another way is to be frugal with objects so don't use loads of small cubes to create window ledges or frames, just stick to rectangles for window panes - that kind of thing. Another fantastic way of saving objects is to make all objects in the first half of the area you are exploring visible and the far away objects invisible. Then use some kind of trigger such as an invisible floor plate to create a condition to make all the invisible objects visible as you approach them and the ones you leave behind invisible. This worked a treat when I created a building in one area that had an upper floor, (both floors full of objects), I just used one step of the stairs as a trigger to make all the objects below invisible and all the upstairs objects visible and reversed the procedure when coming back down again. Just for reference, the amount of objects allowed per area in Kit 1 is 60 - before things start going drastically wrong with your datafile - and in Kit 2 the limit seems to be somewhere around 130, (not confirmed exactly yet but I've had that many so far). If any other members can come up with other helpful suggestions for saving memory with objects then do please send them in as it would be one of the most useful sections we could have to help everyone as I know that all of us has come across this problem at some time or other.....Mandy

---

Dear Mandy,

The other day I was looking for Llandudno on the map and I found it to be in the upper northwest part of Wales. You, living so close to the sea have probably watched a sunrise from the beach sometimes. Therefore I enclose a disk containing a datafile made with Kit 2 VGA of a little animation of a sunrise which you can watch from the beach. I hope you like it. I hope to send it to Mark Rose for the PC PD library and I hope that other Kit 2 users will send in something soon as I understand from Mark that I am the only one to have sent in games written with Kit 2 so far.

Mieke Van Der Poll
AMIGA and PC KIT 1 and KIT 2

Yes, I do live near the sea. Actually on a peninsula so that we have not one but two beautiful beaches to choose from - I am lucky because our house is situated exactly in the middle between both of them. The sunrise datafile was lovely, Mieke. The waves lapping on the shore and the beautiful changing colours of the sunrise were astounding. You really have got to grips with Kit 2 and all the possibilities that it holds. Thanks also for the telephone call. You wouldn't have thought you were calling from Holland - you sounded as if you were calling from next door. It was lovely chatting to you and hearing your voice at last. It was also really nice of you to call to see how I was getting on during the flood, I appreciated it very much. I too hope that members will soon be sending in PD for all machines written with Kit 2. I have received one so far for the Atari ST from Tony Hartley called FAST CITY but we could do with loads more.....Mandy

---

Dear Mandy,

I am writing to you regarding an idea that I have for the User Group. As well as being a member of your User Group I am also a member of the C Users Group (UK). Every year that User Group sends a booklet to all of its members giving the addresses of everyone in the User Group. The members are informed about the booklet and if they do not want to be listed in the booklet they can inform the membership secretary. I think it would be a good idea to have a similar booklet for your User Group as it would allow other members to communicate with each other. I would like to hear what other members think of this idea.

John Clarke
PC
Penge, London

I don't know what others might think about the idea, John, I do know that quite a few members have written to me recently asking if I would be prepared to run a pen-pal page or something similar. I am happy to oblige providing there is sufficient interest in the idea. If you want a pen-pal page then send in your name and address etc to be included and I will do the rest.....Mandy

---

Dear Mandy,

You may remember a while ago I asked if anyone had found a way of successfully transferring the IBM PC format LBM graphic files from an art package to the Kit, while retaining the correct palette? What happened to prompt me to ask was, after spending hours designing a nice border I duly saved it and then reloaded it into the Kit, but all the colours appeared differently to those in the original. I put this down to the free-reign we have in the Kit to alter the palettes to suit our needs - the art package doesn't know this of course and provides its own. The way I've found around the problem is to use a screen-grabbing program. I'm sure there are versions for most of the 16 bit computers and there's usually one with the art package. You load the grabber into memory then start the Kit. Alter the palette as needed in the Kit and set your view-window size. Pull up the COLOUR option, select an item and get the palette displayed on the screen. Then "grab" it using the utility. When it is done load the screen into your art package and hey-presto, its palette should be the same as the Kits. You then carefully erase everything on the display, (don't New it), except as much of the outline of the view-window as you can, and begin your masterpiece! The only problem I have come across with this method is that you can alter the colours used by the art package to display its menus, and if that is then dark on dark you can't see them! If there is a much easier way can someone please let me know? I look forward to seeing what version V2.09 is like.

Nigel Alefounder
PC KIT 1 AND KIT 2

Thank you very much for the useful tip, Nigel. I understand from Mieke that, although the colours of your original borders do change when loaded into the Kit they do revert back to their original colours when included in a stand-alone game. But to see how effective your borders are and for ease of programming your method should be a boon to overcoming all those difficulties that everyone has experienced. It seems silly to have to work with a border that is totally the wrong colour whilst programming anyway. I'll have a word with the Programmers about this and see if it can be corrected so we don't have to go to all that trouble to overcome a fault.....Mandy

---

Dear Mandy,

I just had to write and tell you how impressed I am with the 3D Construction Kit. Just to have the ability to draw a picture on the television screen and then be able to walk into and around it and view it from all sides is extremely exciting in itself! I have copied my own home into a 3D environment, which is probably a bit tame, and am thoroughly enjoying getting all the rooms connected in the right way and duplicating all the furnishings to the best of my ability.

I haven't had so much fun in years! I expect that, with the help of the newsletters, I will soon be able to move on to bigger and better things and, considering that I have done nothing else on the computer since I bought 3D Kit, I reckon I am hooked. I am glad to see that you haven't forgotten the beginners in the newsletters as the step by step routines are proving invaluable to me in understanding how everything works. Some of the routines, especially the ones where you have to sort out the variables and put in your own are a bit beyond my understanding and capabilities just now but I am sure that with time I will begin to understand them a little better. It is strange that a middle-aged woman should be feeling just like a kid again but I cannot help feeling that I am building with lego bricks again with 3D Kit!

Paula Hanson
ATARI ST KIT 1

THE USER GROUP GAME

PART SIX:

To continue with our puzzle between the Dungeon and the Cell from last issue we should firstly create another area. AREA 8 and once this is done, call it THE CELL using the EDIT AREA option. What we want to create is an area that looks something like this: .

```
 _________________
|_________________| - Back wall (static)
|_ __ __ __ __ __|-- Inner (moveable) wall
 \/ \/ \/ \/ \/ \/   complete with spikes
|                 |  made from pyramids.
|                 |  Don't forget to make the
|   THE CELL      |  pyramids moveable also
|    AREA 8       |  via the Attributes!
|                 |
|                 |_________
|                 |  __ __  |
| Pile of ingots-/__\/_\    | - Alcove
|                 |         |   containing gold
|                 |_________|
|                 |
|     Plynth      |
|  __/            |
| |   |  ______   |
|_|___|_|_E2____|
```

In the Dungeon we already programmed the animation to start upon entering the cell so we will program the animation first. Create an Animation and Edit the animation as follows:

```
INCLUDE (5)     - Inner back wall and all the pyramids
INCLUDE (22)      (spiked). You could also include them
INCLUDE (23)      all within a group and animate that but
INCLUDE (24)      this is to show object nos.
INCLUDE (25)
START
LOOP (10)
MOVE (40,0,0)
AGAIN
RESTART
```

Now there is only one way to stop the animation and that is if the player has taken the crystal from the Dungeon and places it on the plynth by activating the plynth. So enter the following condition for the plynth which in my case was Cube 8: The other crystal which we want to appear on the plynth as if it was the same one is Pyramid 10:

```
IF ACTIVATED?
AND VIS? (15,6)
THEN SOUND (4)
ELSE IF INVIS? (15,6)
THEN VIS (10)
STOPANIM (1)
SOUND (4)
ENDIF
ENDIF
```

- If plynth is activated but crystal is still in Dungeon then "ping" but if it was taken then make a crystal appear and stop the animation with "ping" sound effect.

You should also create your Entrance in the usual way and enter a condition to take you back to the Dungeon so you can go back and check everything. The player can't if they haven't stopped the animation though as they will have to start again as once they touch the wall and spikes then it is game-over for them.

Now for the condition for the moving wall and spikes. This should be entered for ALL the object which were included in the animation or it will not work:

```
IF COLLIDED?
THEN GOTO (3,10)
ENDIF
```

You may wonder why we have entered another GOTO in this condition. Well we could have just put ENDGAME instead of the second line of the last condition but that doesn't look very professional now does it? So we are going to create another area - Area 9 and edit the name of the area to DEATH. What I have done in my "DEATH" area is to create a rather gloomy landscape with a grave complete with headstone upon which is written R.I.P. - this was done with edited cubes for ease. You can of course choose anything appropriate as you wish such as a skull or whatever. The idea is to let the player know, in a rather dramatic way, that he has died, give him chance to gaze upon the tombstone for a while and then to reset the game to the start.

To do this we should enter an AREA CONDITION - something we haven't done so far. Firstly, via the top Area menu bar we should CREATE CONDITION then via the same menu bar we should EDIT CONDITION and enter the following:

```
DELAY (500) - Give player time to view the
ENDGAME       scene and then reset to start
ENDIF         of the game.
```

Now that we have our death area ready, all we need to do is to go back through our conditions in the various areas where death is a possibility and change all the ENDGAME conditions to read GOTO (3,10). I used entrance 3 because after designing my grave, entrance 3 gave me the best possible viewing angle for the player.

Our User Group game is nearly complete but needs tidying up quite a bit so that we have introductory messages, congratulations messages and so forth appearing when appropriate. We may add one or two other puzzles but basically the framework is complete. Next issue we will sort out some messages and add the conditions needed for when the player finally gets the gold ingots. Of course, if anyone would like to add anything to the game then do write in and let me know. Up until now we haven't used the dreaded VARIABLES, simply because they can be off-putting for beginners. It might be a good idea to include some next time too to gently lead everyone into getting to know how useful they are.

For any new readers who would like to join in programming the User Group Game all the routines from the start are available at no extra charge so that nobody need feel left out of things. Check out the bottom of the "Contents" page for details of how to get the rest of the routines and, incidentally, some other useful bits and pieces that they might find useful.

TO BE CONTINUED...

THE DELAY COMMAND AND HOW TO USE IT BEGINNER'S SECTION

By Mieke Van Der Poll - AMIGA & PC - KIT 1 & KIT 2

The DELAY command can indeed be used in various ways. It can be used instead of a variable as a text timer, you can also use the delay command as such, for instance when you pick up an object:

```
IF ACTIVATED?
THEN PRINT ("You pick up an object",1)
DELAY (150)
PRINT ("                    ",1)
ENDIF
```

On faster computers it sometimes seems as if you (or the player), are constantly running through your environment, particularly in areas where the number of objects is small (tunnels in a maze). You can prevent this by using a combination of a sound effect and the delay command. Make a trigger command for the floor (Cuboid 1) as follows:

```
IF COLLIDED?
THEN SOUND (1) - walking sound
DELAY (5)
ENDIF
```

If you want a player to stumble because he is severely injured or lost a lot of energy you can create an appropriate sound and use the same routine as above for the floor, increasing the number of the delay command.

With the sound editor you can make sound effects and, of course, the delay command is very handy to obtain all sorts of sound effects, but it is also possible to create music notes and make little tunes using the delay command, which can be used during a game or as accompanying music in another environment. The command: LOOP (nr) ..... AGAIN is also very useful when you want to repeat some notes.

```
LOOP (2)
SOUND (1)
DELAY (5)
SOUND (2)
DELAY (8)
SOUND (3)
DELAY (10)
AGAIN
```

The above routine means that those three sounds or notes are repeated one more time. In the PC PD library there are some example music files (3wd-files) for Beeper and Soundblaster available on disk.

You can also use the delay command during animation of certain objects. If you have for instance an animation of the word END in your endgame area, you can move the object in different directions delaying it when moving it into another direction and by using sound effects you can create a kind of "dancing" or "bouncing" effect. You can also obtain a good effect with an aeroplane crashing animation and letting it bounce on the ground.

You can also use the delay command when showing pictures during a game and it is also possible to use the delay command together with the FADEIN and FADEOUT commands.

There are probably loads more possibilities for using delay but even just from the above it is clear that this command can be used in a very creative way indeed.

MAKING GAME BATCHFILES WITH CHOICES

(SUPPLEMENT TO ARTICLE IN NEWSLETTER 9 - PAGE 15)

By Mieke Van Der Poll - for PC users

On the PC it is possible to quit a stand alone 3DKit game by pressing SHIFT+ESC. In this way it is also possible to go on with PART II of a game. In the first part of the game you can put a message at the end in a text instrument. You can for instance have an entrance in the last area with the condition:

```
IF COLLIDED?
THEN PRINT ("press SHIFT+ESC to play part II",1)
ENDIF
```

In your Menu textfile you can include a line to let the player choose part II by pressing a key.

I will give an example of how to put choices in a batchfile and how to make the batchfiles connected to these choices. First make a textfile in a text editor (you can use any text editor that saves your text as an ASCII file - i.e. text-readable file:

```
*****************************************

            Welcome to

      the name of your game

            created by

            your name

     Using the 3D Construction Kit 1 or 2
            Domark/Incentive

Type in the number of your choice: (+ Enter)

1. See Introductory/Instruction Screens first.
2. Go directly into the Game Part I.
3. Go directly into the Game Part II
   *****************************************
```

You can add more choices if you want to. Save this text for instance as Menu.txt.

Then create your first batchfile with the editor:

```
@echo off
cls
type menu.txt
```

Save this batchfile for instance as start.bat.

Create your second batchfile:

3DKit 1

```
@echo off
cls
showit picture1.gif
cls
showit picture2.gif
cls
showit picture3.gif
cls
runvga gamename.run (of part I)
(runega or runcga)
```

3DKit 2

```
@echo off
cls
showit picture1.gif
cls
showit picture2.gif
cls
showit picture3.gif
cls
gamename (of part I)
```

Save this batchfile as 1.bat. Don't forget to place a message on the picture screens to press ESC to go to the next picture and finally to the game!

Create your third batchfile:

3DKit 1

```
@echo off
cls
runvga gamename.run (part I)
cls
type menu.txt
```

3DKit 2

```
@echo off
cls
gamename (part I)
cls
type menu.txt
```

Save this batchfile as 2.bat.

Note that in order to play part II of the game directly after part I, I have placed the menu.txt again in the above batchfile. So if the player presses SHIFT+ESC in part I of the game he will be back with the Menu.txt on the screen at the DOS command line.

Create your fourth batchfile:

3DKit 1

```
@echo off
cls
runvga gamename.run (part II)
```

3DKit 2

```
@echo off
cls
gamename (part II)
```

Save this batchfile as 3.bat.

You have four batchfiles now and one menu.txt.

3DKit 1: Copy them together with picturefiles, pictureviewer, runvga and gamename.run to a floppydisk and, if you have a part II game. copy that one too.

3DKit 2: Copy them together with picturefiles, pictureviewer and your gamename.exe file to a floppydisk. Create the _game sub-directory and copy the relevant files into gamename.exe file too and create the relevant _game subdirectory and copy the files belonging to that one into it.

In 3D Kit 2 it is also possible to load your introductory screens directly into your datafiles with the LOADSCREEN command. Then you can give the player two choices:

1. Go directly into game 1
2. Go directly into game II

If you don't have a second part to your game then no batchfile is necessary. If you do then place your introscreens into your datafile, they have to be copied into the _game subdirectory where the other relevant files are stored.

HALL OF FAME

It is a double hall of fame this month really as two issues are being posted out together. Sincere thanks to the following members who took the time and trouble to send in contributions and cover designs, hints and tips, articles etc, to help their fellow members out:

GEERT REYSERHOVE, MIEKE VAN DER POLL, NIGEL ALEFOUNDER, MARTIN PANTON, TONY HARTLEY, ROBIN BALL, STEVEN FLANAGAN, R. CONNEL, BERND TAENZER, JOHN HAYWARD, JOHN CLARKE, FREDDY MOEREMAN, PATRICK PEARSON, ANDY COLLINS, JASON DEANE, PHILIP BRADSHAW, VANDA COSTELLA, KATHERINE SHEPHERD, SUSAN WHISTON and DAVID SMITH.

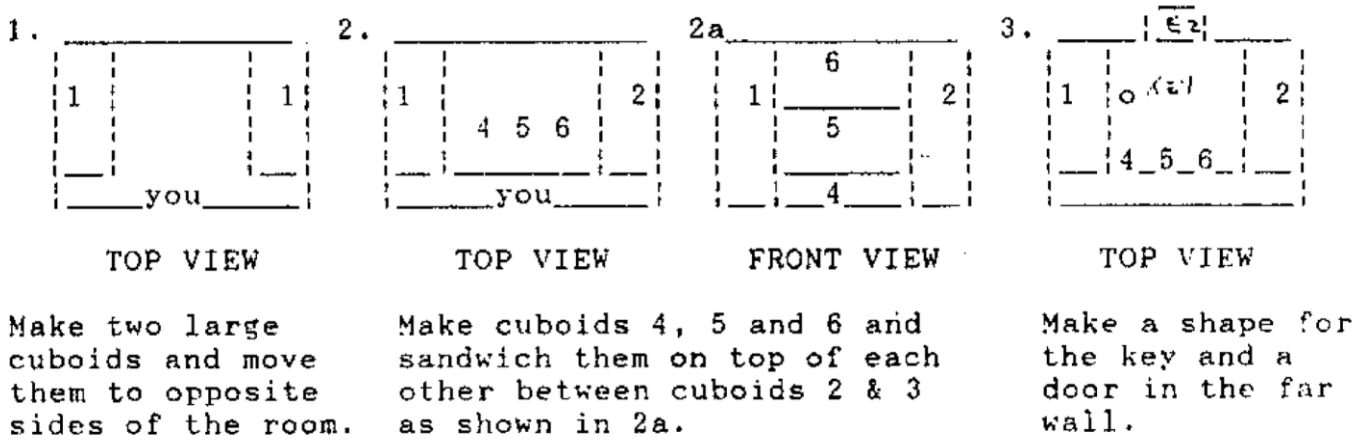
All members are cordially invited to send in contributions for the next newsletter. Even if it is just a small hint or tip right up to full-blown articles - everything will be gratefully received, especially as with putting out two issues together I am a bit short of contributions for the October/November issue which is due out in the middle of October. With this issue we are now, hopefully back to normal after the devastation and disruption caused by the floods but it has meant that I have used almost all the contributions I had on file. I would be grateful to you all if you could help me fill up the files again so that future issues are well-padded.

---

8 BIT ROUTINES
A RANDOM CAVE-IN

By Daniel Prentis - SPECTRUM

The object of this little sub-game is to get to the other side of the cave, get the key (by activating it), and leave through the door before the ceiling "caves-in". The ceiling lowers and raises again at random intervals so you'll need to be lucky as well as skillful to get through. You'll need two rooms for this - the room with the cave-in and the one you need to escape into. The first one should be constructed like this:



<u>Now type this condition into LOCAL 1:</u>

```
CMPV   111   122  ¯\
IFEQ              |
AND                \  triggers cave-in
CMPV     0     0   /  on the random
IFEQ              |   condition.
THEN              |
SETV     1     0  _/
ENDIF
CMPV   255   122  ¯\
IFEQ              |
AND                \  does the same as the
CMPV     0     0   /  first - the more of
IFEQ              |   these you add the
THEN              |   more frequent the
SETV     1     0  _/   cave-in
ENDIF
```

LOCAL 2 needs to be typed in three times, each time substituting a value for a, b, c and d from the table:

```
CMPV      a     0  ¯\
IFEQ                 \ X3
THEN                 /
VIS       b         /
ENDIF               _
CMPV      c     0  ¯\
IFEQ                 \ X3
THEN                 /
INVIS     d         /
ENDIF               _
```

a	1	5	10
b	6	5	4
c	15	20	25
d	4	5	6

- the first part lowers the ceiling the second part raises it.

Now type this into LOCAL 3:

```
CMPV     26     0  ¯|     This part resets the movement
IFEQ                 \  - variable after ceiling has
THEN                 /    risen.
SETV      0     0   |
ENDIF               =
CMPV      0     0   |      This checks if the ceiling
IFGT                 \   - has been activated and if so
THEN                 /     adds 1 to the movement
ADDV      1     0   |      variable.
ENDIF               =
CMPV    255   121   |
IFEQ                 \   - Forces a redraw.
THEN                 /
REDRAW              _|
ENDIF               _
```

You can easily add routines for the door and the key. I suggest something like this:

```
IFACTIVE   7
THEN
INVIS      7
SETV       1     1
ENDIF
CMPV       1     1
IFEQ
AND
IFHIT      8
THEN
GOTO       1     2
ENDIF
```

You will also need an endgame routine so use IFCRUSH. If you find the game play a little too easy then I suggest you reduce the walking pace or reduce the area scale. You could also make the cave-in a bit more frequent. Good luck!

COMPILING TIP

By Stephen Flanagan - COMMODORE 64

When using the compiler, if you make a mistake you can start again without reloading the compiler by either freezing or resetting the machine and typing G 2000 or SYS 8192 respectively.

SIMULATING A LARGE OUTSIDE AREA

By Yannick Gour - AMSTRAD CPC

It is impossible with using the WALK mode because the smallest scale (1) is not sufficient. The only way is using the FLY mode (especially Fly 1 to simulate Walk mode) with scale 1 and very little height (about 2 units above ground). By the way it's better to use a rectangle than a cube for the ground as it has null height and you can go as low as you want. It does really give a good impression. The area seems to be about 200 meters wide. Designing an horizon on the "walls" increases the overall effect of a really huge area.

---

16 BIT ROUTINES

PROGRAMMING A HIGH SCORE TABLE

By Martin Panton - 3D KIT 2 - PC

Here is a routine to create a High Score Table. It is only a rather basic routine and my documentation of it leaves a lot to be desired. It might not be much good for the beginner as yet but those of you who now know their way about Kit 2 should have no problems understanding it I hope.

Right, the first thing we have to do is to load up 3D Kit 2, CREATE and INITIAL CONDITION and EDIT the CONDITION. Type in the following:

```
SETSTR ("NAME ONE",S2)
SETSTR ("NAME TWO",S3)
SETSTR ("NAME THREE",S4)
SETSTR ("NAME FOUR",S5)
SETSTR ("NAME FIVE",S6)
SETVAR (5000,V32)
SETVAR (4000,V33)
SETVAR (3000,V34)
SETVAR (2000,V35)
SETVAR (1000,V36)
SETVAR (10,V37)
FOPEN ("SCORES.3DK",1)
FPUTS (S2)
FPUTS (S3)
FPUTS (S4)
FPUTS (S5)
FPUTS (S6)
FPUT (V32)
FPUT (V33)
FPUT (V34)
FPUT (V35)
FPUT (V36)
FCLOSE
FOPEN ("SCORES.TMP",1)
FPUT (V37)
FCLOSE
```

Now while still in the editor save it as scores.txt as you may need it again. Now exit the editor, click on TEST and press ESC then F1. Now exit 3D Kit 2. You should now have two files on your disk called SCORES.3DK and SCORES.TMP.

(1). The next thing we have to do is to create a border like the one shown in (FIG 1).

(2). Load up 3D Kit 2, colour cube 1, the sky and horizon the same colour as the background of your border.

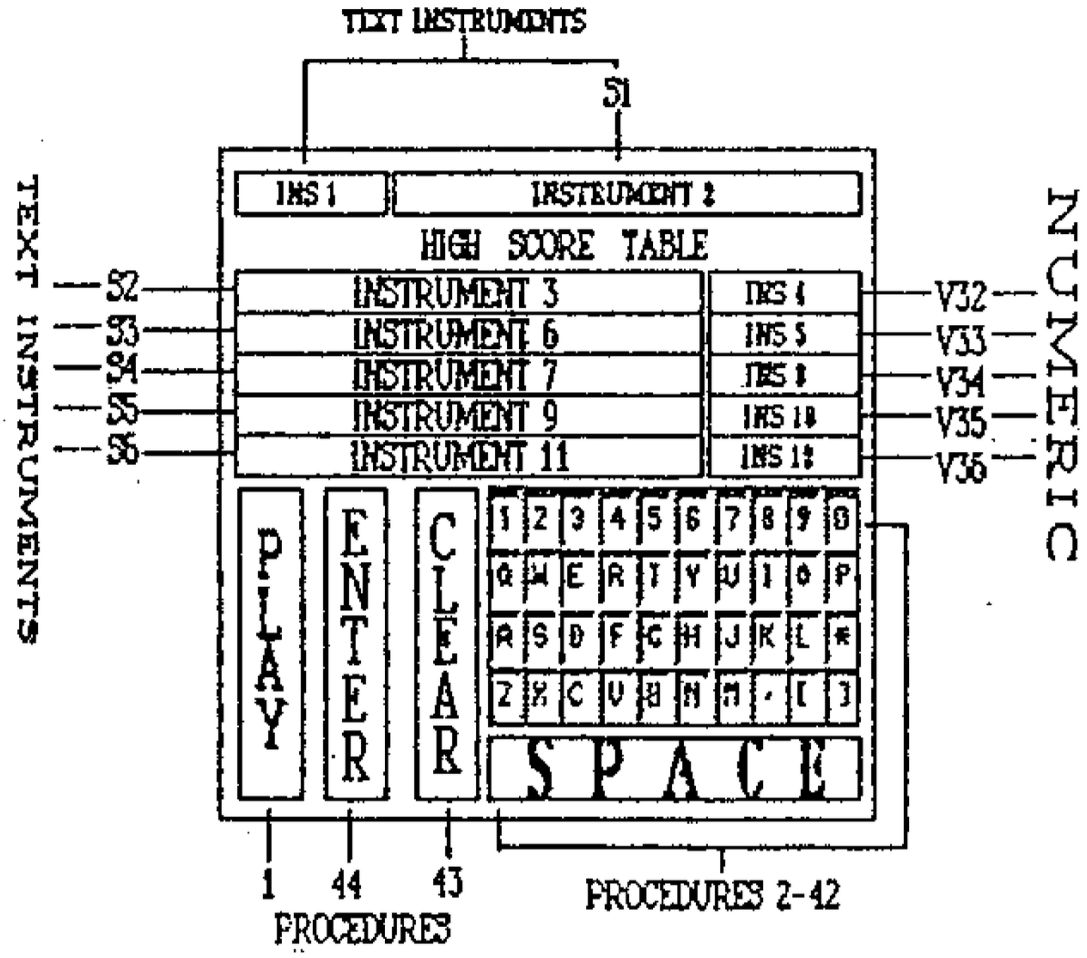
(3). Set the view window as small as possible in one corner of the screen.

(4). Load in your border and set it in the DEFAULTS as BORDER 1.

(5). Create 12 INSTRUMENTS as follows:

```
 1 TEXT
 2 TEXT
 3 TEXT
 4 NUMERIC       VARIABLE V32       SET VALUE 2  100000
 5 NUMERIC       VARIABLE V33       SET VALUE 2  100000
 6 TEXT
 7 TEXT
 8 NUMERIC       VARIABLE V34       SET VALUE 2  100000
 9 TEXT
10 NUMERIC       VARIABLE V35       SET VALUE 2  100000
11 TEXT
12 NUMERIC       VARIABLE V36       SET VALUE 2  100000
```

(6). Set them as shown in FIG 1.



(7). Create 45 procedures and edit them according to the Procedure List shown below:

PROCEDURE 1

```
LOADWORLD ("GAME.3WD")
```

PROCEDURE 2 TO 42

```
IF VAREQ? (1,V30)
THEN
ADDSTR ("1",S1)
DELAY (5)
PRINT (S1,2)
```

Note: Where "1" is replace with the corresponding key. I.e. 1-0, A-Z or a space for the space bar.

PROCEDURE 43

```
PRINT ("                    ",2)
CLEARSTR (S1,S1)
```

Note: Set the print command to the size of Instrument 2.

PROCEDURE 44

```
IF VAREQ? (1,V30)
THEN
IF VAREQ? (1,V31)
THEN
SETSTR (S1,S6)
PRINT ("                    ",11)
PRINT (S6,11)
SETVAR (V37,V36)
UPDATEI (12)
PROC (45)
ELSE
IF VAREQ? (2,V31)
THEN
SETSTR (S1,S5)
PRINT ("                    ",9)
PRINT (S5,9)
SETVAR (V37,V35)
UPDATEI (10)
PROC (45)
ELSE
IF VAREQ? (3,V31)
THEN
SETSTR (S1,S4)
PRINT ("                    ",7)
PRINT (S4,7)
SETVAR (V37,V34)
UPDATEI (8)
PROC (45)
ELSE
IF VAREQ? (4,V31)
THEN
SETSTR (S1,S3)
PRINT ("                    ",6)
PRINT (S3,6)
SETVAR (V37,V33)
UPDATEI (5)
PROC (45)
ELSE
IF VAREQ? (5,V31)
THEN
SETSTR (S1,S2)
PRINT ("                    ",3)
PRINT (S1,3)
SETVAR (V37,V32)
UPDATEI (4)
PROC (45)
ENDIF
END
```

PROCEDURE 45

```
FOPEN ("SCORES.3DK",1)
FPUTS (S2)
FPUTS (S3)
FPUTS (S4)
FPUTS (S5)
FPUTS (S6)
FPUT (V32)
FPUT (V33)
FPUT (V34)
FPUT (V35)
FPUT (V36)
FCLOSE
```

(8). Now click on controls, then on ADD, then press on FUNCTION with the LEFT MOUSE BUTTON until you reach RUN PROCEDURE. Type in number 1 then click on SET. Drag the box over the PLAY BUTTON, when this is set over the button press the LEFT MOUSE BUTTON then click on OK. Note: Do not test the play button yet!

Next do this for all the buttons on the keyboard so that the buttons 1 to 0 run the procedures 2 to 11 and the buttons Q to] run procedures 12 to 41. (Note that the keys mentioned here might have to be altered to suit your particular keyboard layout - Mandy). The SPACEBAR runs procedure 42 and the CANCEL button runs 43 and the ENTER button runs procedure 44.

Also, if you set the KEY section of the controls to the corresponding letter or number - i.e. Key Unshifted Q then if you pressed Q on the keyboard it would be the same as clicking on the Q button with the mouse.

(9). Create INITIAL CONDITION 1 and type in condition 1 from the Procedure List then save as GO.3WD and click on Clear All.

INITIAL CONDITION

```
FOPEN ("SCORES.3DK",0)
FGETS (S2)
FGETS (S3)
FGETS (S4)
FGETS (S5)
FGETS (S6)
FGET (V32)
FGET (V33)
FGET (V34)
FGET (V35)
FGET (V36)
FCLOSE
PRINT (S2,3)
PRINT (S3,6)
PRINT (S4,7)
PRINT (S5,9)
PRINT (S6,11)
UPDATEI (4)
UPDATEI (5)
UPDATEI (8)
UPDATEI (10)
UPDATEI (12)
FOPEN ("SCORES.TMP",0)
FGET (V37)
FCLOSE
IF VARGT? (V37,V36)
AND VARLT? (V37,V35)
THEN SETVAR (1,V30)
SETVAR (1,V31)
PRINT (" N A M E",1)
ELSE
IF VARGT? (V37,V35)
AND VARLT? (V37,V34)
THEN SETVAR (1,V30)
SETVAR (2,V31)
PRINT (" N A M E",1)
ELSE
```

```
IF VARGT? (V37,V34)
AND VARLT? (V37,V33)
THEN SETVAR (1,V30)
SETVAR (3,V31)
PRINT (" N A M E",1)
ELSE
IF VARGT? (V37,V33)
AND VARLT? (V37,V32)
THEN SETVAR (1,V30)
SETVAR (4,V31)
PRINT (" N A M E",1)
ELSE
IF VARGT? (V37,V32)
THEN SETVAR (1,V30)
SETVAR (5,V31)
PRINT (" N A M E",1)
```

(10). Create two cubes and set the conditions for the cubes as follows:

CUBE 1

```
IF SHOT?
THEN ADDVAR (100,V37)
UPDATEI (1)
ENDIF
```

CUBE 2

```
IF COLLIDED?
FOPEN ("SCORES.TMP",1)
FPUT (V37)
FCLOSE
LOADWORLD ("RUNNER.3WD")
ENDIF
```

(11). Set up a border for the game and a numeric instrument (1) and set its variable as V37 then save as GAME.3WD.

(12). Using the MAKE program make GAME.3WD into a stand alone game and do the same for GO.3WD. Now go into the -game directory and rename RUNNER.3WD GAME.3WD. Then copy GAME.3WD and the border file into the _go directory. Note: Also copy the files SCORES.3DK AND SCORES.TMP into the _go directory.

(13). Run Go press play, when the game loads, shoot cube 1 so that your score = 1500 then go collide with cube 2. You should now be back at the score table with the word NAME visible in Instrument (1), if so, enter your name and click on Enter and your name should replace the button name on the score table.

TEXTURE MAPPING - WELL, ALMOST!

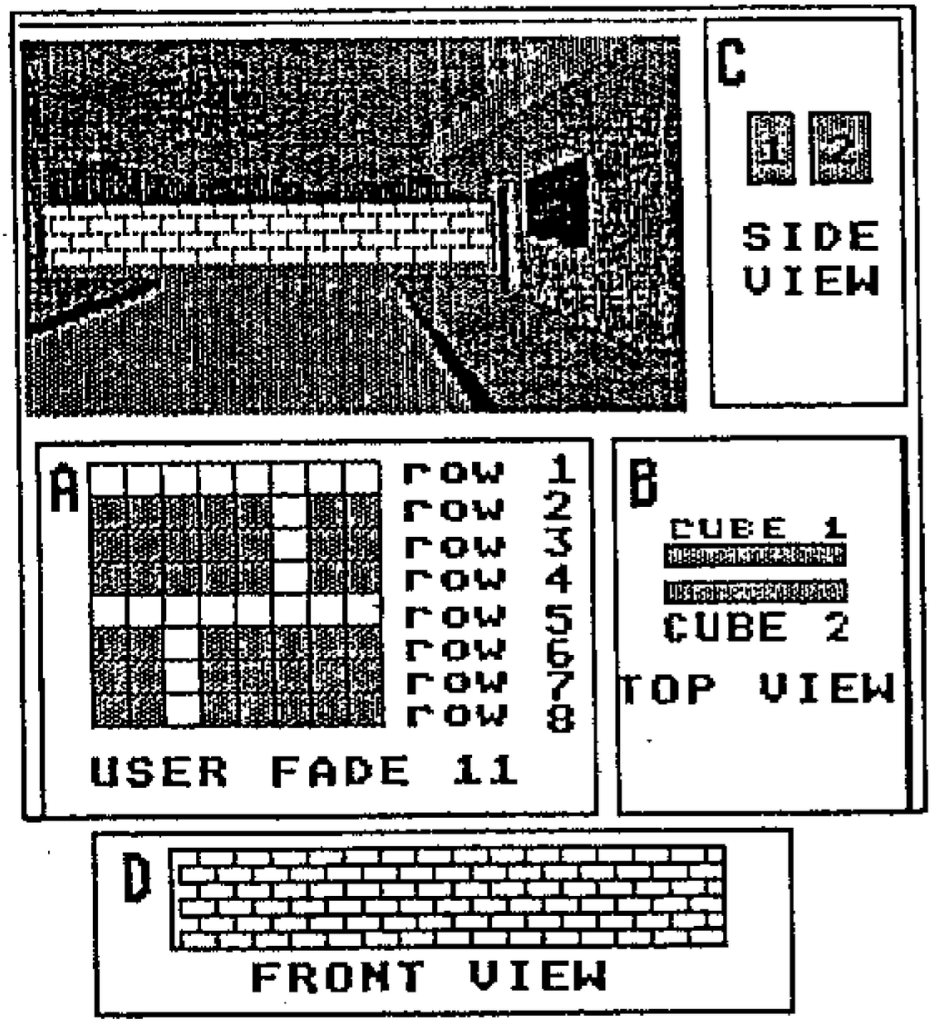
By Tony Hartley - ATARI ST - KIT 2

I have found a way to create Texture Mapping. Well, not quite but it is the next best thing to it. The idea came to me at 2 in the morning so I had to rush to the computer to try it out and it works beautifully. You too can have brickwork on your walls/house etc, or even letters on buttons such as a letter "U" on the UP button on a lift. It all comes down to the good old User Fades. There are drawbacks as if you look at the wall from an angle instead of head-on it can look a little weird and the closer you get to a wall the more bricks appear so it is a case of only using the idea in certain places where it will not look silly. I am enclosing a picture as an example. Only thing is, after shrinking it down and converting it to black and white it does lose some of its initial impact. Not to worry though, this is how it is done:

Make a wall from a cube and make a copy of the wall in front of it. FIG B & C. Colour the back wall white and the front wall red. Shrink the front wall up to the back one tightly. Go to the User Fades and make the fade pattern the same as in the picture FIG A. Set the ATTRIBUTES of the front red wall to FADE OFF and FADEVAL 11 or whatever the number user fade you just made. Create a Local Condition then edit it like this:

```
SETFADE (11,3,1)
ENDIF
```

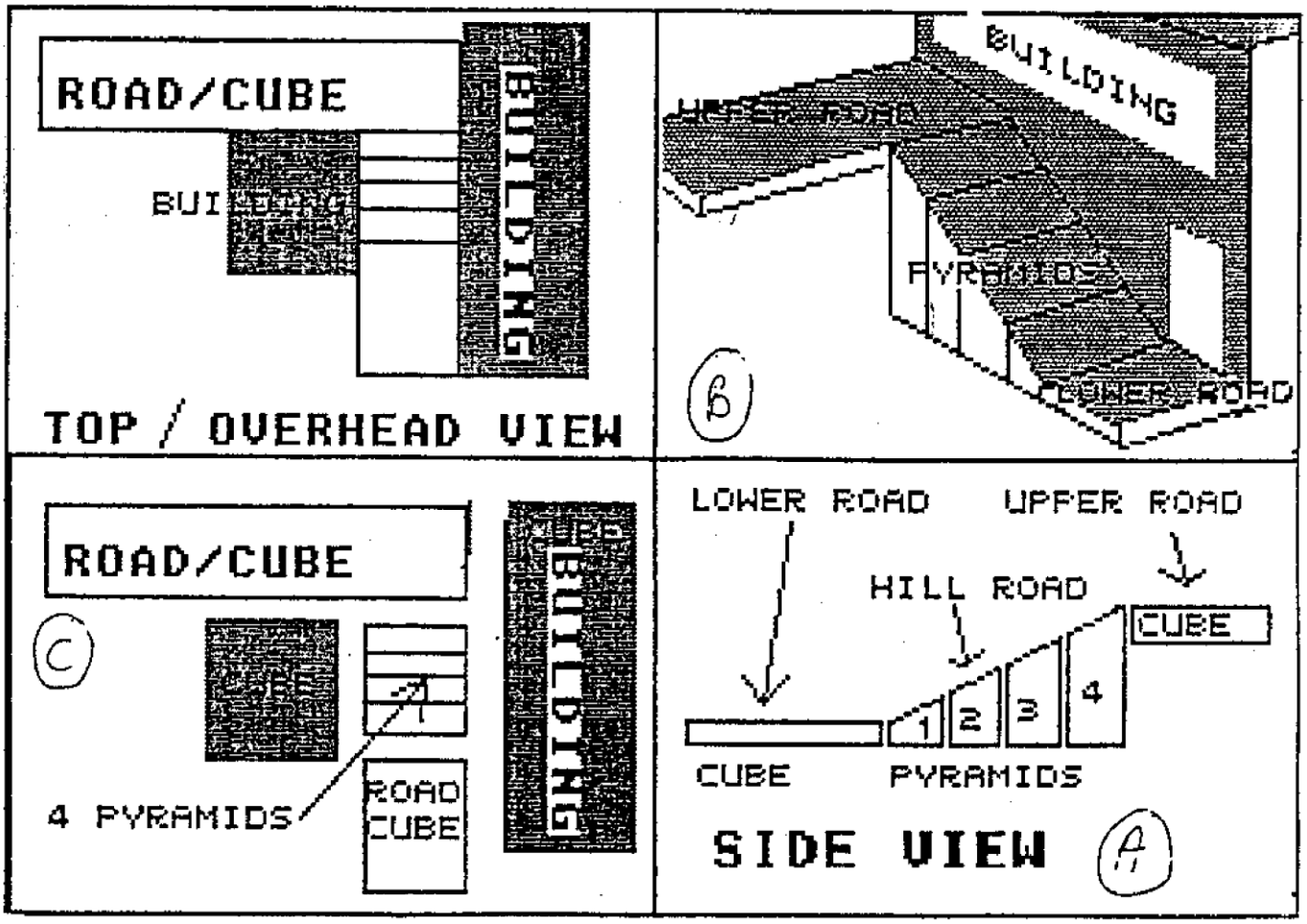
11 Being the Fade Number, 3 being the red wall object number and 1 being the area number that your wall is in. Hey presto! a brick wall and it works on anything. You could also try a user fade with a letter on to use on a lift. Just follow the same steps as above but make a little cube for a button and copy it in front.



ON THE LEVEL

By Tony Hartley - ATARI ST KIT 1 AND KIT 2

Here is a routine for everyone to try if they want. You don't have to have all your roads etc on one level. The problem when using a pyramid as a hill slope is that the computer does not let you slide down the slope itself but carries on as if you are walking on the top. If you put a highlight around the pyramid you will see what I mean. The computer won't let you go down the slope which is inside of the highlight cube surrounding the sloping pyramid. If you are trying to go up the slope and it is higher than you it is impossible. The solution is to make lots of pyramids in front of each other as in FIG A & B below. The more pyramids you use the greater the effect and the less it seems that you are travelling up and down steps. Just make sure that you put each one tight up against the next one so that you don't fall into the gaps. As always it is easier to try than to explain.



3D CONSTRUCTION KIT USER GROUP

3D Construction Kit Newsletter

Issue Number 15
October/November 1993

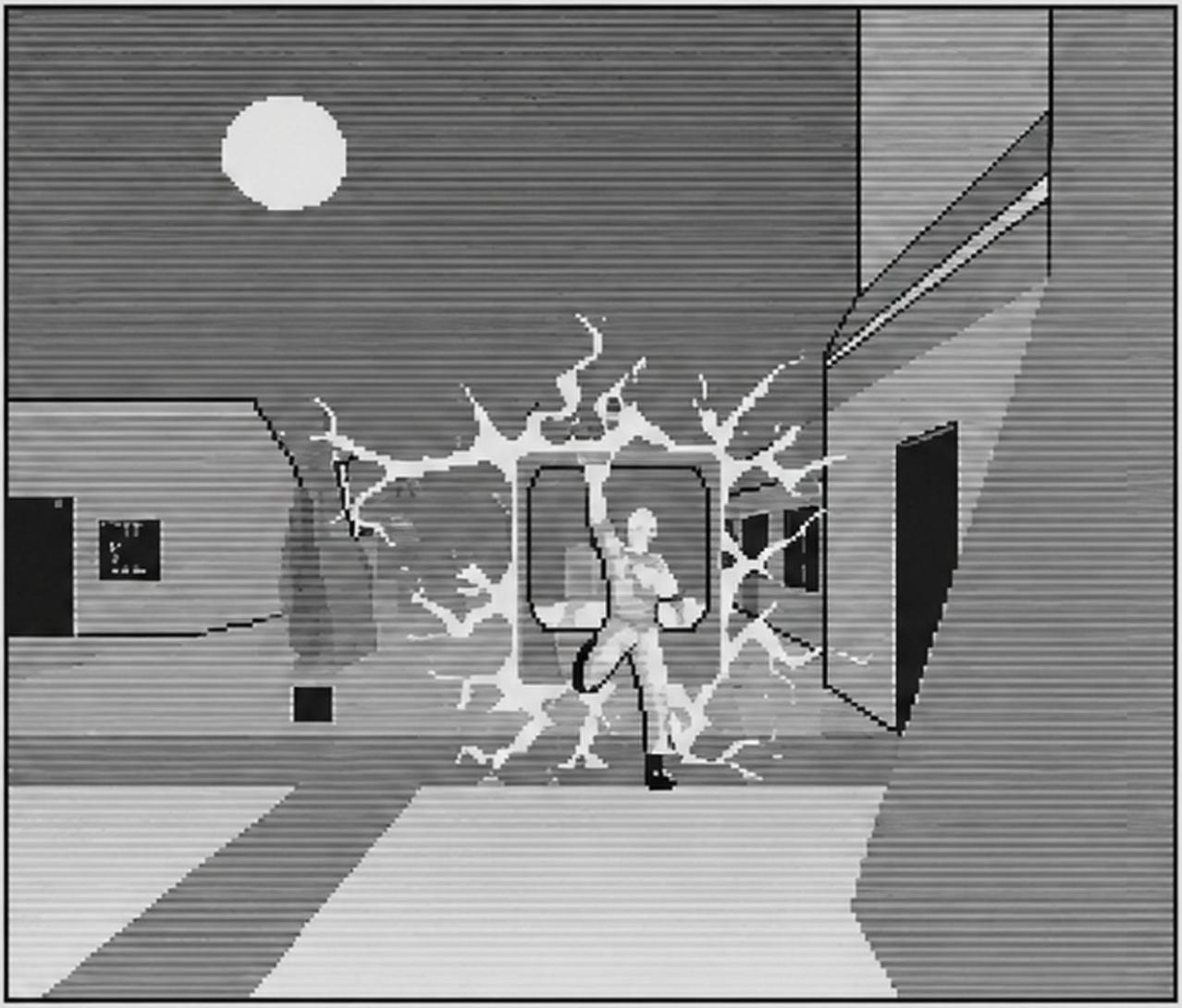
CONTENTS

EDITORIAL 359
LETTERS 359
THE USER GROUP GAME 362
LATEST ADDITIONS TO THE PD LIST 366
PUBLIC DOMAIN LIBRARY 367
THE WAIT COMMAND AND HOW TO USE IT 368
HELP FOR SINGLE DRIVE AMIGA USERS 368
INVISIBILITY FOR BEGINNERS 369
MATCHING FREESCAPE & BORDER COLOURS 370
PEN-PAL SECTION 371
8 BIT SECTION - BOAT SIMULATOR 371
TURNING ON THE LIGHT 372
SCREENDUMPS ON CPC 375
SAVE AND LOAD GAME POSITIONS 376
MULTI-DIRECTION SCROLLING LANDSCAPE 378
ALICE IN WONDERLAND? 380
HINTS AND TIPS 380
SAVING MEMORY 380
STAND ALONE GAME ON KIT 2 V2.07 381
OVERCOMING SOME PROBLEMS WITH KIT 2 381
HANDY TIP FOR KIT 2 USERS 382
PSUEDO-FLEXICUBE FOR KIT 1 USERS 382
TOP TEN TIPS 382
USEFUL TIPS FOR KIT 2 PC USERS 383
INKEY — USEFUL BATCH FILE UTILITY 383

3D CONSTRUCTION KIT USER GROUP MAGAZINE

ISSUE 15 OCTOBER-NOVEMBER 1993

STEP INTO THE VIRTUAL WORLD WITH 3D CONSTRUCTION KIT.



EDITORIAL

Welcome to issue 15 of the 3D Construction Kit User Group Newsletter.

I always seem to start the editorial by telling everyone that the last month has been rather hectic. These last couple of weeks were no exception. I said I wasn't going to mention floods again but honestly, I think there is a big finger pointing from the sky at me saying, "This one!". Would you believe that after just finishing getting back to normal after the flooding and getting a lovely new lounge my next door neighbour forgot she was filling the bath, went out and, not only did she flood her bathroom and lounge but she flooded mine too! I reckon I am going to have to change my name to Noah. Good grief, yet another new carpet within the space of a month and redecoration all over again. I reckon someone, somewhere knows just when the newsletters are due out and decides to dampen my enthusiasm. Ah well, there are lots of goodies in this issue, especially an article by Robin Ball for Kit 2 users that could just be a "Godsend" for those frustrated by the lack of a save and load facility. Watch out for it starting on page 22.

With all the hassle and rush to get the last two issues out without too much delay I forgot to tell everyone that the cover for issue 13 was designed by Tony Hartley and the cover for issue 14 designed by Bearnd Teanzer, sorry chaps, I didn't mean for you to go without due credit for all your effort and excellent work. From time to time I do make mistakes - sometimes real clangers - if you spot one please don't hesitate to let me know. One of my main faults is dyslexic fingers at the keyboard, getting letters back to front, sometimes with amusing results and if I am in a rush I sometimes forget to use the spelling checker.

I've no real news about Kit 2 version V2.09 yet which is making me rather grumpy as I had hoped to be able to tell everyone that it is ready. The programmers are still working on all versions after the excellent playtests done by Tony Hartley and Mieke Van Der Poll. Poor Mieke, not only did I inflict the Amiga playtest on her but also the PC playtest at the last minute. Everyone is beginning to get a bit frustrated with the wait, I know, but it can't be much longer now. Problem is that the program is so complex and full of so many different features that it takes quite a while to iron out all the niggly bits and pieces without affecting other parts of the program. I know the programmers are doing their best and are as anxious as everyone else to come up with a version that everyone is happy with. As soon as I know anything I will let you all know. I have a box full of stamped, self addressed jiffy bags here that members have sent me ready for the new version and I'll fill them and post them off as soon as the disks arrive. If anyone would like to add their own jiffies to the pile then please feel free to do so. Don't forget to state which format you want and, in the case of PC, which size discs for your machine.

The next issue will be the December/January issue and, hopefully, will have a bit of a festive flavour. I hope to run a competition in that issue, thanks to Tony Hartley for the idea so watch out for that. Contributions are a bit scarce at the moment so I hope that I will receive plenty in time for that issue, if you would be so kind as to help out. Right, that really is quite enough waffle from me for one issue, hope you enjoy this one. See you all again with issue 16!

Mandy

LETTERS

Dear Mandy,

I am enclosing some routines to make a scrolling landscape whilst the player is standing still. I hope it will come in useful. On another subject I have programmed a painting program that randomly generates buildings for a city skyline as a 2D painting. The program draws the buildings in detail and every picture is not the same. I programmed it to help the construction imagination of 3D Construction Kit Users. The paintings are saved as PI1 files. I use an Atari STE. If anyone would like a copy of this program then please send me a blank disk and a stamped self addressed envelope for the return.

R. Connell
ATARI ST
16 Thorn Street, Astley Bridge, Bolton, Lancs, BL1 8LA

What a generous offer. I'm sure everyone will find your program extremely useful. The demo disk of the scrolling landscape works beautifully and I'm sure the routines will be welcomed by other members.....Mandy

---

Dear Mandy,

Thanks very much for newsletters 13 and 14. It is always a pleasure to read them and this time they contain some great routines for Kit 2 to try out. But what I liked most of all was the letter from Paula Hanson in No. 14 in which she expressed the same feelings as I have about the Kit. I would like to reply to the letter of Colin Paterson in Newsletter 13 page 8. There are AMIGA 3D Kit 1 datafiles that have been successfully transferred to the PC and they are all available in the PC PD library, most of them both for 3D Kit 1 and Kit 2. Certainly for both versions are the Landscape Demo belonging to the article by J Hayes - which I found most useful - and the Flight Simulator Demo by Thomas Stufe. There are also a lot of borders and objects for both versions available. Not long ago I designed a piece of paper on which I wrote the X and Y coordinates of a 320 x 200 pixel screen. When you have a screendump of your border and want to put an animbrush somewhere on the screen or a circle or even text with the Setstring/Pstring command you can exactly calculate the place (x and y coordinates) where it should appear. I have enclosed a copy of this so you can use it yourself.

Mieke Van Der Poll – Holland
PC & Amiga

Thanks Mieke, the graph is perfect! So that everyone else can have one here is how Mieke did it: Draw a graph or use graph paper so that you have 32 squares across and 20 squares down. Reading from left to right we have the X coordinates which are marked in tens (10, 20, 30, 40 etc) so the first square reads 10 and the last square reads 320. Number your squares both top and bottom the same. The Y coordinates read from top to bottom and are marked in the same way starting with 10 and ending in 200 - do this down both the left and right hand side. There you are, you now have the perfect graph to show instantly the coordinates you need for your screen. If this is still unclear then send me a S.A.E. and I'll send you a photocopy…....Mandy

---

Dear Mandy,

It's me again, I just thought I would add a little PS to my last notes about successfully creating a complex border which looks the same in the 3D Kit as it does in the art package, due to palette differences. After my last communication I struggled for hours (the way you do!), before a little light-bulb turned on inside my frazzled mind. This might be well-known but I've found no reference to it. When you pull up the palette altering command in Kit 2 and choose SELECT you are presented with all 256 colours to mess with. What I found out what that the very bottom row are fixed and as such cannot be altered. This is probably because they are used by the Kit for its menus/icons etc., I suspect. (Along with the invisible colour which CAN be changed). My problem lay in the fact that the bottom left and right colours are both as dark as you can get, and that Deluxe paint II uses these two for its menus! So I got black on black which is a might difficult to read! What, believe this, I had to do was mark my monitor screen with a felt-tip pen where the "v" slider button appears when you pull-up Deluxe Paint palette changing window and also where the last black colour appeared on it. I loaded in my Kit screen as detailed in my last letter, making the menus disappear, pulled up the palette menu, then moved the mouse cursor to where my colour mark was and clicked, then pushed the slider, from the other mark to the other end of the scale turning it from black to white!!! How complicated! There must be an easier way! Anyway, having got my menus back I could work away on the border until it was finished. Reloading it into the Kit hasn't produced any nasty effects, colour-wise, and my 256 colour borders now look the biz. By the way, what happened to the old Kit 1's spread command in the palette screen? This made colour graduations a sinch. Perhaps there is an undocumented key-command to achieve this?

Nigel Alefounder
Atari ST

Poor Nigel, just the thought of all that hassle you had to go through makes my deoxyribonucleic acid boil. I agree, there should be an easier way. Unfortunately the spread command was sacrificed to make room for other functions in Kit 2 which is a pity but I suppose we can't have everything - unless another member knows different! Has anyone else found an undocumented command for this?..... Mandy

---

Dear Mandy,

I am going hairless with a problem I have with Kit 2 in Version V2.07. For example I create a cube and flatten it and stretch it rather like a platform and then copy it above. I raise the top platform as high into the air as I can but still find that I cannot stand on the lower platform. It's as if the top cube is forming some kind of barrier even though it is much too high to affect the climbability. It is just as if the top cube thinks it is reaching right down to the ground!

Peter Soames
PC

Yes, Peter, I have had quite a few complaints about this sort of thing happening - doorways you can't walk through etc. It doesn't happen when you have just created but sometimes only appears after you save and load in the datafile. Happily it has been confirmed that this bug has been found and corrected in the forthcoming version V2.09. I was hoping to have the new version ready so I could announce its arrival in this issue but there has been a slight hold-up with the playtest on one machine but that has now been sorted out and - fingers crossed - V2.09's arrival should be any day now ..... Mandy

---

Dear Mandy,

Can you please help me, I think I have found a bug in Kit 2. I create an object and turn on the attributes to TAN and WIR but when I saved my data and re-loaded it I found that the attributes of that object had all been turned off!

Sandra Mayo
Amiga

No Sandra, this isn't a bug. If you want the flags to keep the same value after a reset or a restart you should use the default attributes and remember to use the ALWays attribute also .....Mandy

---

Dear Mandy,

After many weeks of waiting for my newsletters (shouldn't that be booklets?), I was starting to wonder what had happened to you. Then upon reading it I learned of the problems you had after the flooding and was very impressed that you managed to get the issues out at all. I would like to say that you have done very well, still up to the same high standards. I hope you sort everything out soon. I have great pleasure in enclosing my annual subscription form and payment and look forward to another great year of reading.

J. P. Messenbird
Spectrum

Dear Mandy,

You are the first person I have had any contact with who actually suffered as a result of the flooding. I was a little bit worried when no magazines arrived for quite a while, then the company that supplied the 3D Kit, European Computer User refunded a years subscription saying that not enough takers resulted in them having to cancel production of their software review magazine. Just when I thought the last 3D Kit magazine may have arrived the two issues came and the explanation was clear.

It must have been a real effort to get things back up and running again for production of the mag, and I can't imagine what it felt like to lose files on disks etc, as well as the computers and photocopier and virtually everything else downstairs.

Concerning the paint that won't dry on the doorframe, this sounds as though the wall or floor may have at some time prior to the flood been treated for rising damp or dry-rot and the chemicals used (which are oil-based), been forced into the wood of the door frame. This would prevent the paint from drying although an original coat if already dry would not have been affected. If any treatment has been carried out then this is the likely cause.

Robert Coleman
PC

These two last letters are just a sample of the loads of letters of sympathy that I have received since you all heard about my being flooded out. Thank you all so much for your good wishes and expressions of support. Thankfully we are now back to normal now, at least in our house - we are one of the lucky ones - there are still 2,000 people homeless here and living in caravans outside their homes waiting for repair work to START! Actually, Robert was right about why the paint wouldn't dry and it is thanks to his idea that we have managed to sort it out. Our house is only three years old and has never been treated for dry rot or other things but once Robert put us on the right track we discovered that that particular doorframe (we had to have all new doorframes), was constructed of some different wood that had had this kind of treatment while in the builders yard - or somewhere. It has now been ripped out and a replacement fitted and, guess what? - the paint dried within a few hours! Thanks Robert, you are a real pal!..... Mandy

Before I close this section of the newsletter I just have to send a message to Tony Hartley who popped a little poser into a recent letter of his saying that he bet I couldn't name the seven dwarves in Snow White. I nearly gave up at one point, Tony, I had come up with six names but couldn't get the last until I told my daughter not to be bashful! Here goes: Doc, Grumpy, Sleepy, Dopey, Sneazy, Happy and Bashful. Ha! Better luck next time!..... Mandy

---

THE USER GROUP GAME

PART SEVEN

Before we go on to create further puzzles we are first going to tidy up our game with a few messages. To do this we are going to use some variables for the first time. As we are also going to use other variables later on in our programming let's start by creating GENERAL CONDITION 2 and EDITING it as follows:

```
SETVAR (0,V50) - this is going to be our "Death" variable
SETVAR (0,V60) - this is going to be our "Start" variable
```

Now go to your DEATH area (Area 9) and EDIT our area condition to read as follows:

```
IF VAR=? (1,V50)
THEN PRINT ("YOU HAVE DIED!",1)
DELAY (100)
PRINT ("                  ",1)
SETVAR (0,V50)
ENDGAME
ENDIF
```

Now we must change all our "endgame" conditions, such as the moving wall and pyramids, the pool of acid and the blade over the doorway in the other area to read:

```
IF COLLIDED? (or whatever the condition is)
THEN SETVAR (1,V50)
GOTO (1,9)
ENDIF
```

As you can see, what we have done is to make sure that everytime our player dies we set variable 50 to hold the value of 1. When we send our player to the "death" area it checks for that, prints the appropriate message, gives the player time to read it, prints a clear line over the message, resets variable 50 to hold 0 once more and sends the player to the start of the game. You can, of course, print whatever message suits your fancy, it doesn't have to be the same as mine.

Now to make the start of our game a little more professional looking we should CREATE AREA. This will be area 10 and, via the attributes, change the name to START AREA. Colour the sky and the ground of the area stark black. Now via the DEFAULTS under the General Menu we should change the start area to number 10 instead of 1. Create an Area Condition and enter the following:

```
IF VAR=? (1,60)
THEN PRINT ("WELCOME TO THE CLUBGAME",1)
PRINT ("\N CAN YOU FIND THE TREASURE",1)
PRINT ("\N AND MAKE YOUR ESCAPE?",1)
PRINT ("\N\N\N\N GOOD LUCK!",1)
DELAY (500)
PRINT ("                  ",1)
PRINT ("\N                    ",1)
PRINT ("\N\N\N\N       ",1)
SETVAR (0,V60)
GOTO (1,1)
ENDIF
```

This is basically exactly the same procedure as the previous messages. You can, of course, expand your message and word it however you like - mine is a bit basic anyway - only thing to remember is if you want to move down to another line use the \N for each line down that you want to print. Of course we can only see our messages when in TEST MODE and as the game starts off with a message it is a bit tricky getting around to seeing it. It can be done, you just have to be very quick and whiz from the RESET to the TEST button before the program really sets itself up. Or from RESET to F1 whichever you prefer.

Now all we need is a CONGRATULATIONS message when the player gets (activates) the gold ingots in the cell. Go to the Cell (area 8) and enter the following condition for the ingots object/s:

```
IF ACTIVATED?
THEN PRINT ("CONGRATULATIONS!",1)
DELAY (100)
PRINT ("                ",1)
ENDGAME
ENDIF
```

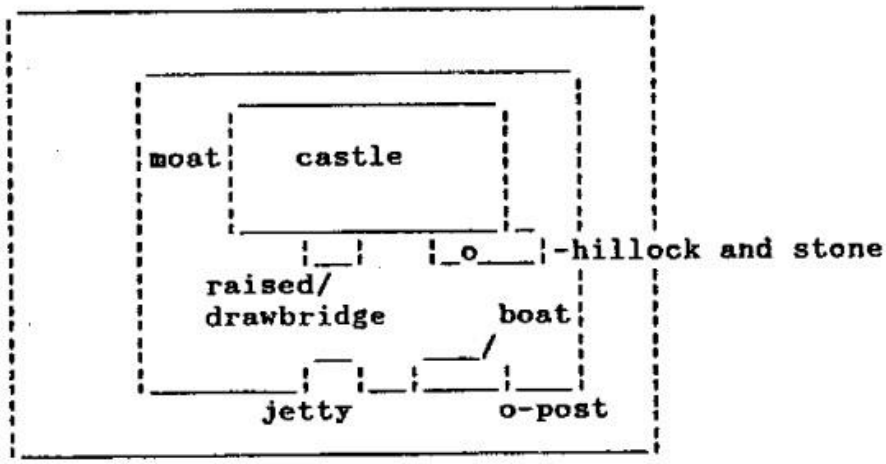
You will notice that in this case we do not send our player to the "Death" area but just print the message on screen and perform a reset back to the start - in case they want to play again. To make sure it all works properly we have to CREATE INSTRUMENT. Set this to a TEXT type instrument by clicking in the box and set the size you want by selecting the drag-box type option. This is easier for beginners as you can see what you are doing on screen.

Now that we have given our game a more professional look it is about time that we gave it a really good STARTING AREA instead of the one we already have. So create area and we have area 11. In this area we are going to create something a bit more spectacular and also make good use of some system variables.

We are going to filch the idea of the drawbridge from Incentive's Castle Master game - I'm sure they won't mind this once - but we are going to add a twist to the puzzle. This is what we aim to create. The area has a large castle in the centre, surrounded by a moat which will kill you if you enter it. There is a jetty sticking out towards a raised drawbridge. At the other side of the moat you can see a small grassy area sticking up out of the moat with a stone on top of it. Obviously you can't reach it from where you are. Nearby is a boat moored to a post. Basically the area we need to create should look something like this:

OBJECTS

Moat 008
Boat 009 Moveable
Hillock 010
Stone 011
Button 015
Doorway 001
Bridge/up 014 Vis
Bridge/dn 013 Invis
Post 016
Switch on boat 017



The puzzles we need to create are that when standing on the end of the jetty the player is just out of reach of the stone on the hillock. He can't shoot the drawbridge button because he/she doesn't have the stone to throw. He/she has to sail across the moat in the boat to retrieve the stone and then return, throw it and lower the drawbridge to enter the game proper. Right, lets get down to it:

Place a button beside the raised drawbridge of the castle, (you know how to do this as we did it in a previous area), and enter the following condition for the BUTTON - in my case it was cube (15).

```
IF SHOT?              } if you shoot the button
AND VIS? (11)         } but the stone is still there
THEN SOUND (2)        } just make a sound
ELSE IF INVIS? (11)   } but if they have got the stone
INVIS (14)            } make the raised drawbridge vanish
VIS (13)              } and replace with lowered drawbridge
SOUND (2)             } make a sound
ENDIF
ENDIF
```

The condition for the STONE:

```
IF ACTIVATED?         } if activated (taken)
THEN INVIS (11)       } make stone invisible
ENDIF
```

Condition for the entry behind drawbridge. Doorway 7:

```
IF COLLIDED?
THEN GOTO (1,1)
ENDIF
```

Condition for the Moat - to kill players attempting to swim:

```
IF COLLIDED?          } if they fall in
THEN SOUND (5)        } make splash sound
SETVAR (1,V50)        } set the death variable
GOTO (1,9)            } go to Death area
ENDIF
```

Now for the animation of our boat. What we want to achieve is that when the player enters the boat and presses the switch, not only will the boat sail across to the hillock but our player will sail across with it - and back again when they have the stone and use the switch again. To do this we make use of a system variable which controls where the player is at any given time. Now one problem with this type of animation is that it doesn't stop - well the boat will stop when it touches the hillock but the player would sail on to the end of the area so we are going to create two "buffers" to stop the animation. One is the hillock and the other is the post that the boat is moored to. It is simply done. Just enter the following condition for both the HILLOCK and the POST:

```
IF COLLIDED?
THEN STOPANIM (1)
ENDIF
```

Don't be afraid to use what I refer to as "animation stoppers" wherever you need them within your games. The programmers used them in the undersea area of the Kitgame to stop the shark animation from going too far. They used an invisible cube for this which is just as good. We use objects that are already here for ease and to save memory.

Now enter the following condition for the SWITCH on the boat:

```
IF ACTIVATED?
THEN STARTANIM (1)
ENDIF
```

Next CREATE ANIMATION and EDIT ANIMATION and enter the following:

```
INCLUDE (9)      } boat object
INCLUDE (17)     } switch object
START
LOOP (40)        } ajust for length of moat.
MOVE (0,0,20)    } move boat across moat
ADDVAR (20,V2)   } move player across moat
AGAIN            } keep going until loop ends
STOPANIM (1)
INCLUDE (9)      } boat object
INCLUDE (17)     } switch object
START
LOOP (40)        } ajust for length of moat
MOVE (0,0,-20)   } move boat back again
SUBVAR (20,V2)   } move player back again
AGAIN            } keep going until loop ends
STOPANIM (1)
RESTART
```

We use Variable 2 because that is the System Variable that holds the players Z co-ordinate position. You can of course experiment with the other viewpoint system variables - these can be found listed on page 61 of the Kit 1 manual.

If you are using Kit 2 to program the Usr Group Game then you can, of course enhance the game a lot with all the extras such as making the moat ripple using the Fade commands.

Now is the time to check that everything works properly and to add those little finishing touches to the game. Now that we have our basic structure and most of the programming done we can afford to spend a bit more memory on creating furnishings for our different areas so that it looks good.

If anyone has any ideas for enhancing the game further then please don't hesitate to get in touch and we will see what we can do. I confess that I am running out of original ideas so any help you can give would be appreciated.

LATEST ADDITIONS TO THE PD LIST

MAGICAL MAZE by Mieke Van Der Poll

FOR AMIGA (1 MEG REQUIRED) SUITABLE FOR KIT 2.

STAND ALONE OR DATAFILE. This game is nicely presented with lovely loading screens and music. Messages appear during loading to tell you what is happening and there are some nice animations during loading too.. The funfair has arrived in town and one ride has you intrigued. The magical train is ready for off and you are going to be on it. This is a maze filled with all sorts of baddies, ghouls, ghosts and things that go bump in the night. The areas, as with all mazes, are devoid of furnishings but there are loads of different - and extremely useful objects scattered about which you will definitely need! The puzzles are good too. Kit 2's extra features have been beautifully utilised - especially with the ghastly faces that guard certain doors. There is excellent use of messages throughout the game so you always know what is happening which is very user friendly as it is difficult to know exactly how you overcame a particular baddie if he just vanishes with no explanation. I was lucky (I think) because my energy bar, when depleted didn't actually kill me off (a buggette methinks!), but it did turn off the sound effects which I had been enjoying.

EXAMPLES by Juergen Hunke

UTILITY IN DATAFILE AND BORDERS FORMAT - AMIGA or ATARI ST KIT 1.

This is a disk of various objects of all kinds that you can view and select for use in your own datafiles if you wish. I particularly like the Temple, the Glider and the fish. There are also some magnificent archways and pillars which are well worth viewing. The titles of the objects are in German so you should view them to see what they are and, if you wish, re-save them with English titles for future use.

FAST-CITY by Tony Hartley

FOR ATARI ST SUITABLE FOR KIT 2 DATAFILE AND BORDER FORMAT

Oh boy are you all in for a treat! On the same lines as Fast Town, Fast City allows you to build up your very own city with ready-made objects and roads etc all stored on disk ready for you to select. They are all neatly nestled within sub-directories so they are easy to find. All the different types of road junctions you could need, all sorts of buildings - churches, hospitals, gardens, flats, mills, offices, shops etc, there is even a town hall and firestation among many others. There are features such as a football pitch and stadium and hot air balloons, phone booths, traffic lights - the list is endless. Thoughtfully provided on the disk are a selection of sound samples, borders and ready constructed areas so that you can see what suggested layouts will look like. There are read-me documents on the disk which also tell of some other exciting disks in the pipeline.

SOUND UTILITIES by Juergen Hunke

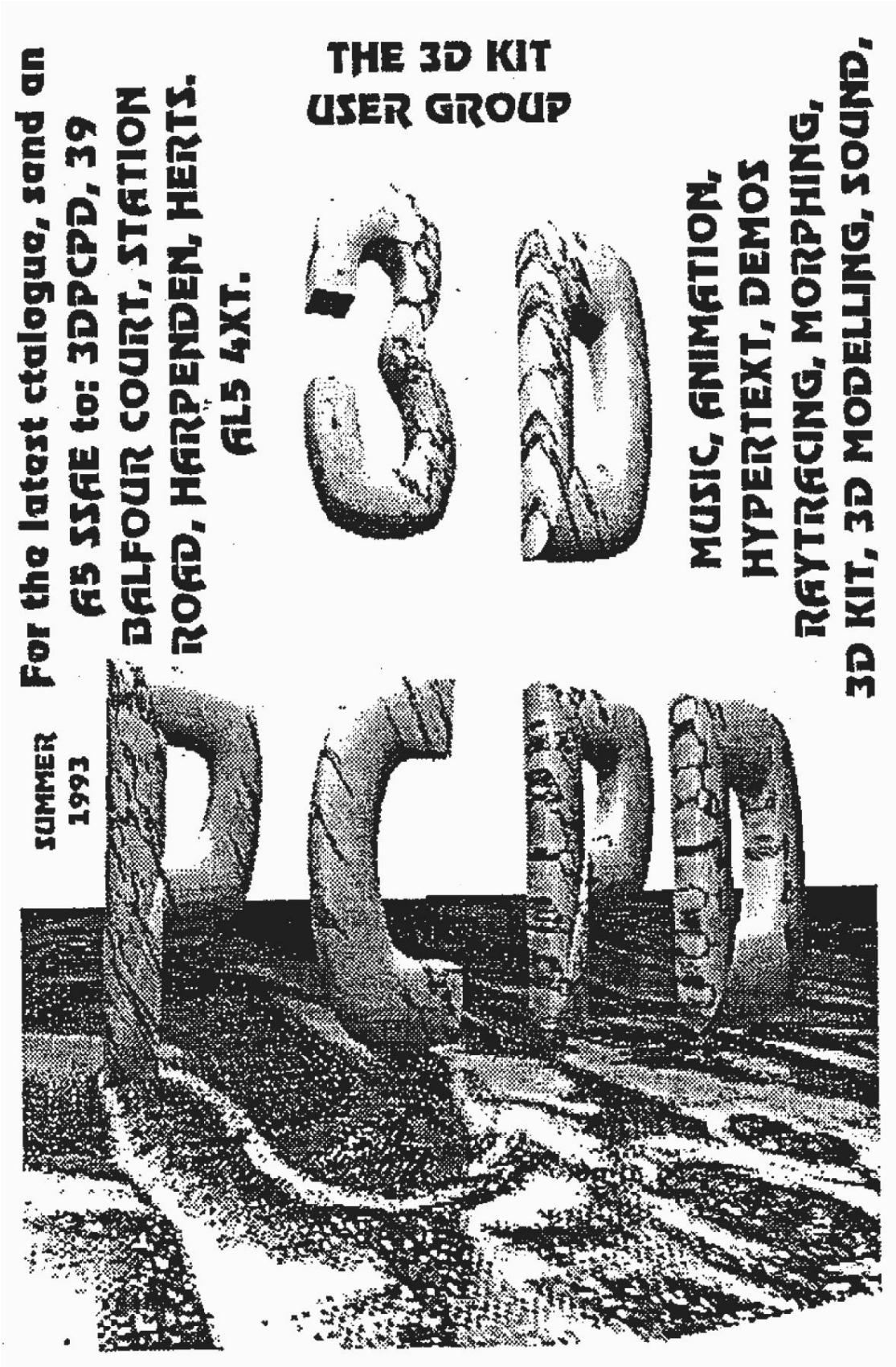
ATARI ST SUITABLE FOR BOTH KIT 1 AND KIT 2.

Two useful programs to use with your 3D Kit sample sounds. The first loads in a sample, cuts the last byte off, creates a new RAW header and re-writes it. This is extremely useful for samples with odd file lengths. The second program was written because Juergen was having trouble merging samples correctly to a sample bank from Deluxe Sound Audio Digitiser (via Null Modem) to Atari ST. It will load your samples, change zero bytes into "1" (for better sound quality) and link them to the sample bank. Full instructions are enclosed on Read-me files on the disk.

FOR FULL PD LIST WITH REVIEWS OF ALL DISKS SEE CONTENTS PAGE

PUBLIC DOMAIN LIBRARY

All public domain disks cost £1.50 each for U.K. members. Overseas members please add £1 per disk to cover extra postage and packing. For Atari ST, Amiga and Commodore PD please send cheques etc payable to Mandy Rodrigues at the usual User Group address. For public domain for the PC owners please see the add below as this is run by Mark Rose. For details of how to send for full PD lists see page 3.



THE WAIT COMMAND AND HOW TO USE IT

BEGINNER'S SECTION

by Mieke Van Der Poll - AMIGA & PC - KIT 2 & KIT 2

We recently explored the possibilities of using the DELAY command. You will find that the WAIT command is even more useful when used in combination with sound effects. Imagine you are walking in a forest, hearing birds singing or chirping. Creating this effect is possible with the above command.

You have to do three things:

1. Create a forest.
2. Make two suitable sound effects.
3. Choose a variable above 29.

Then make the following condition on the floor (cuboid 001):

```
IF COLLIDED?
THEN
SOUND (1)
FOR (V30,0,50)   } 50 is the delay value
WAIT
NEXT
SOUND (2)
ENDIF
```

You are now able to keep walking around and every now and then you hear birds singing. You can decrease or increase the delay value to try to obtain the best possible effect. Imagine walking in a jungle, surrounded by a lot of sounds...

It is possible to use more sounds in combination with DELAY or WAIT commands - the only restriction is that DELAY stops you moving around.

HELP FOR SINGLE DRIVE AMIGA USERS

By Mieke Van Der Poll - KIT 2

LOADING OBJECTS, DATAFILES ETC ON THE AMIGA WHEN YOU ONLY HAVE ONE DRIVE AND CREATING MORE MEMORY TO LOAD LARGER SOUND BANKS BY USING JUST ONE DRIVE.

There have been quite a few problems for Amiga owners of Kit 2 who wish to load clipart etc when they have only one drive. Here is what to do:

When you load in the 3DEditor and want to load a datafile from another disk you have to put your data disk in drive df0:, then choose DEVICES and DF0: again. You then have to click on your datafile to load it in. Suddenly an AmigaDos requester pops up asking you to insert Volume 3D program in any drive. You swap disks again and then you have to put your datadisk in again. Then the Editor loads your datafile but it seems you have lost the Edit screen. But this is not so. All you have to do is click with the LEFT mouse button on the AmigaDos window, hold down the mouse button and drag it a little bit down the screen; then do the same with the Workbench screen but drag that one down to the bottom of the screen. The Edit screen appears again and if you click on it it is usable again. When you have to locate the border directory or load in a sound bank this will happen again. So be sure the Workbench screen and the AmigaDos window are right under the Status Bar/Freescape controls so that you can see a bit of it and still use all the Freescape buttons. Now when the DOS message comes up to prompt you to swap disks you can do so while you are also staying in the Edit Screen and the multitasking Amiga will do its job properly and you are able to load in a sound bank file of approximately 130,000 bytes.

1 Meg Amiga owners who have two drives (or more) can, in order to load in a larger sound bank, switch off one drive (or more). But then you also have to cope with the above mentioned method and your maximum is also approximately 130,000 bytes.

INVISIBILITY FOR BEGINNERS

By Tony Hartley - ATARI STE - KIT 1 AND KIT 2

The ability to make objects invisible is just one of the great features of the 3D Kits. There are three types of invisibility all of which have their uses. The first being a facet/face of an object with a value of nine. This is similar to the colour invisible but the facet does actually have a colour, you just cannot see it. If you were to edit a USER FADE (one of the USER FADE masks in Kit 2 between ten to fifteen), then the squares that are not coloured black will be invisible. This will enable you to produce lots of special effects like a cross hatch pattern on a window or a brickwork effect on a wall or thick lines for fencing etc.

The second type of invisibility is the colour invisible. This is the first colour in the palette marked with a letter "I". This form of invisible is ideal for colouring all the sides of objects that will never be seen the invisible colour to speed up movement in your areas. The object facet coloured invisible can still be interacted and collided with, shot etc. It is extremely useful for closing gaps in walls (using a cube coloured the invisible colour), and one of the sneakiest ways is to make a dividing wall with an opening/gap in the middle of it in the centre of an area. Then block the gap up with the cube coloured invisible and then make the dividing wall TANGIBLE so that the gameplayer tries to enter the opening/gap (blocked by the coloured invisible cube), but collides. So then the gameplayer has to work out how to walk through the TANGIBLE dividing wall. Kit 1 users need not feel left out by not having the TANGIBLE attributes - all they have to do is make the dividing wall have a condition that makes them move to the other side of the wall if they collide with it. Simply give the wall the following condition:

```
IF COLLIDED?     } If you walk into the wall
GOTO (2,1)       } Move to the entrance at the other side
```

Just make a new entrance on the other side of the wall and the wall condition will transfer you to it if you touch it.

Another good use of the invisible colour is for making floor triggers. A rectangle placed on the floor and coloured invisible could be used to trigger an event or animation etc. No one would actually know it was there until they stepped on it and something happened e.g.:

<u>Condition for invisible rectangle:</u>

```
IF COLLIDED?     } If you stepped on the rectangle.
SOUND (6)        } Make a sound.
STARTANIM (1)    } Start your animation working.
```

The third type of invisibility is an object that has had its ATTRIBUTES set to INVIS. This sets all the objects facets to invisible which also makes it invisible to collisions too. This comes in handy if you pick up an object. You could make the object invisible if the game player has collected it by giving it the following condition:

```
IF ACTIVATED     } If you have taken the object.
THEN INVIS (5)   } Make object 5 invisible.
SOUND (4)        } Make a sound to verify object taken.
ENDIF            } This ends the IF statement.
```

Another use is to speed up an area with two floors in it by making all the objects on the floor that you are not on invisible. In fact you can get away with not using a lot of variables simply by checking the invisible state of an object. Invisibility of an object is a good way of triggering or checking something else e.g. If you collect a key and it is made invisible then you can open the chest. If you do not collect the key it is still visible and waiting to be found then the chest cannot be opened until the key is taken. This is used in the User Group Game quite a bit. This is how it's done:

This is the condition for the key object:

```
IF ACTIVATED?      } If you take the key.
THEN INVIS (9)     } Make the key invisible.
ENDIF
```

This is the condition for the chest:

```
IF ACTIVATED?              } If chest is touched.
AND INVIS (3)              } And key has been taken.
THEN INVIS (7)             } Make closed chest lid invisible.
VIS (8)                    } Make open chest lid visible.
ELSE                       } If you haven't taken the key.
PRINT "LOOK FOR A KEY",1   } This prints text to instrument 1.
ENDIF
```

Of course you will have to make a chest with two lids (one visible and one invisible) the visible one being in this case, object 7. You will also have to make a text instrument in this example but if that is still a little bit difficult for some beginners then simply change the PRINT line/command to SOUND (5).

So you can see that the three different forms of invisibility is very useful in lots of ways.

MATCHING FREESCAPE & BORDER COLOURS

By Mieke Van Der Poll - AMIGA KIT 2
ALSO SUITABLE FOR ATARI ST

You probably noticed the rather unusual colours of the Amiga 3D Kit 2 edit screen and the palette when loading 3D Edit. And you probably changed them into the old 3D Kit colours as given in Newsletter 11 by Peter Ward and saved that area for further use.

But did you notice that unless you use the same palette in your paint program, the colours will greatly differ from the ones of your border, when it is present in Test Mode? When you use a border of the provided ones you are certainly going to have this problem.

I found a way to solve this. It is the same solution as the one for 3D Kit 1 on the PC, which also had this problem. Only on the Amiga you use it the other way around.

Under the Area Menu there is a sub-menu entitled Area Colours. You can use this for changing the red, green and blue values of the first sixteen Freescape colours. In order to adjust them to the border colours you have to load the border into your paint/art package. I am supposing that all paint programs have a colour mixer and that is the one you have to use to see the red, green and blue colour values (numbers) of each of the sixteen border colours. Write them down.

Load 3D Edit and add the border and select the colours from the border. Change the first sixteen colours of the Freescape palette (except the first one because that is the invisible colour), through the AREA COLOURS sub menu into the values found in the paint program and save the area with the name of your border. Now when you want to create another area with the same border you only have to load that area in and the right colour palette is available.

PEN-PAL SECTION

Following one or two pleas in the letters section in recent months for members to get together by letter or telephone to share interests, whether 3D, Computers or whatever, two members have written in to get the ball rolling (so to speak), and would love to hear from other members so why not drop them a line. They are:

TONY HARTLEY
19 Kipling Close, Lockwood, Huddersfield,
Yorkshire, HD4 5HA
Tel: 0484 650891

Tony has an Atari STE and is quite an artist - judging by the fantastic screen shots he sends me. He also has a great sense of humour!

JOHN CLARKE
2 Frant Close, Penge, London, SE20 8HS
Tel: 081 659 1087

John has a PC and is extremely interested in programming and all things computer related.

---

8 BIT SECTION - BOAT SIMULATOR

By Daniel Prentis - SPECTRUM

This is a simple routine which uses Var. 122 to simulate the rocking of a boat on the sea. Make sure you are in WALK mode and type the following routine into GENERAL CONDITION 3 four times, each time with the given values for A, B and C:

```
CMPV  (A)  122
IFLT
AND
CMPV  (B)  122
IFGT
THEN
SETV  (C)  120
ENDIF
```

	1	2	3	4
A	64	128	192	255
B	0	63	127	191
C	1	0	71	0

One thing I noticed was that the IFLT command must always precede the IFGT command for the condition to work and not the other way round. To ensure that the whole thing runs smoothly and to prevent the sea becoming calm everytime you leave the tiller you must type the following condition into GENERAL CONDITION 2:

```
CMPV     255   121
IFEQ
THEN
REDRAW
ENDIF
```

This routine will keep everything in the Kit running at the same speed whether you are standing still or not. If no keys are pressed it forces a redraw.

TURNING ON THE LIGHT

Following the User Group game section on making the Solar either light or dark depending on whether you had picked up the torch or not, and how to program this, the problem caused quite a bit of excitement with 8 Bit members, especially as the way I had done it was rather long-winded! I received loads of different routines showing how this could be done. I cannot publish them all but here are two of the best to show you how you could go about tackling this problem:

THE DARKENED ROOM

By John Elliott - SPECTRUM +3

This is a way of implementing the "darkened room" in the User Group Game without having to resort to a tedious recreation of an already-designed room. If you have an Amstrad CPC or Commodore, don't use colour palette no.2 for any objects except those which you want to be visible in the dark (eg. a way out). If you have a Spectrum, the way out will be invisible. Edit the LOCAL CONDITIONS allowing movement (except to the Solar), inserting immediately before the GOTO line the commands:

```
COLOUR 0  (b)  - b, c, d, e are the colour values (see below) for
COLOUR 1  (c)    the room you are moving TO. This seems to be the
COLOUR 2  (d)    way the COLOUR command works.
COLOUR 3  (e)
```

<u>For rooms moving to the Solar, use the following:</u>

```
IFVIS    11   2
AND
IFHIT   (r)
THEN
COLOUR   0    0
COLOUR   1    0   -  dark colour set
COLOUR   2   (a)
COLOUR   3    0
GOTO    (solar)
ENDIF
IFHIT    (r)
THEN
COLOUR   0   (b)
COLOUR   1   (c)  -  light colour set
COLOUR   2   (d)
COLOUR   3   (e)
ENDIF
```

<u>The values of (a) to (e) are given in the following table:</u>

AMSTRAD CPC	COMMODORE 64	SPECTRUM
(a) 1 (b) to (e) are your normal colours for the room when it is light.	11 (or other grey)	(a) 0 (b) normal INK (c) normal PAPER (d) normal BRIGHT (e) normal FLASH

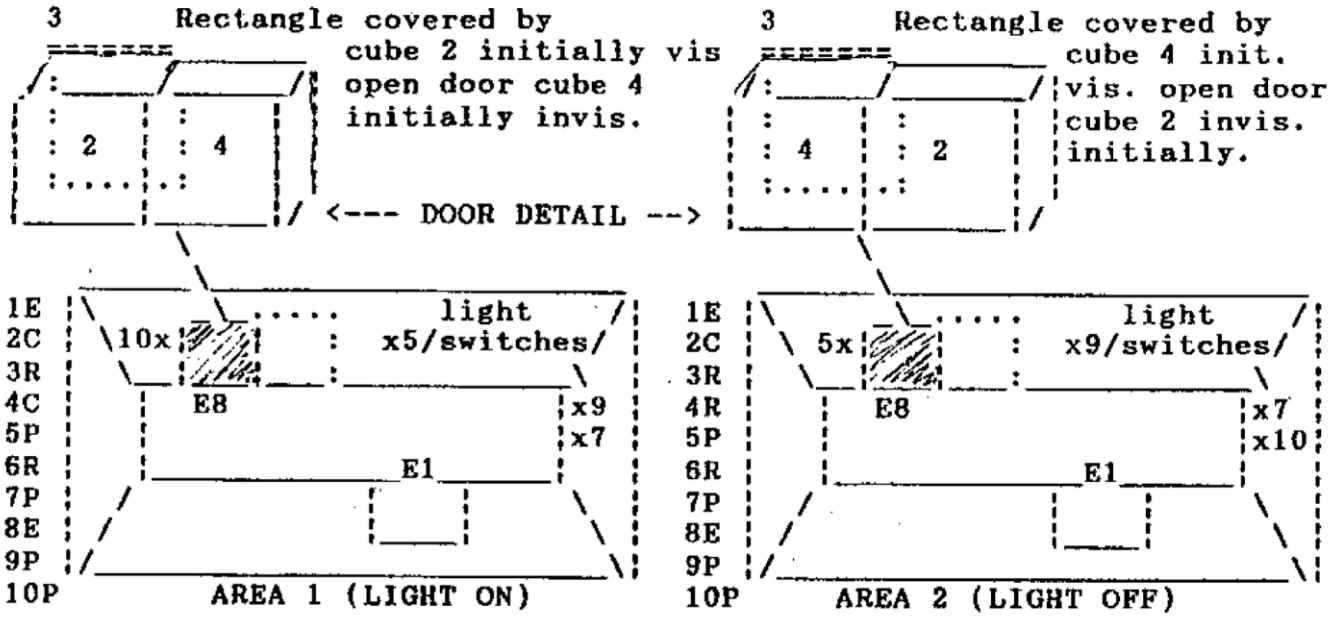
<u>ERRATA:</u> I am sorry to say that in my article in issue 11 there are some mistakes that may cause problems (some are my mistakes, some are misprints). The address of shades in a completed game is 65147, and the size of the first sensor in the proximity detector should be 1000.000.1. The parameters to a FCL command are at (1Y+1) etc, and the address at B695 is 1 for a successful IFEQ. I can also add the following information: The byte at B694 is the state of the previous IF - AND or IF - OR (0=failure 1=success). To make a sound from machine code, CALL BB42 with A=sound number.

SWITCHING ON A LIGHT

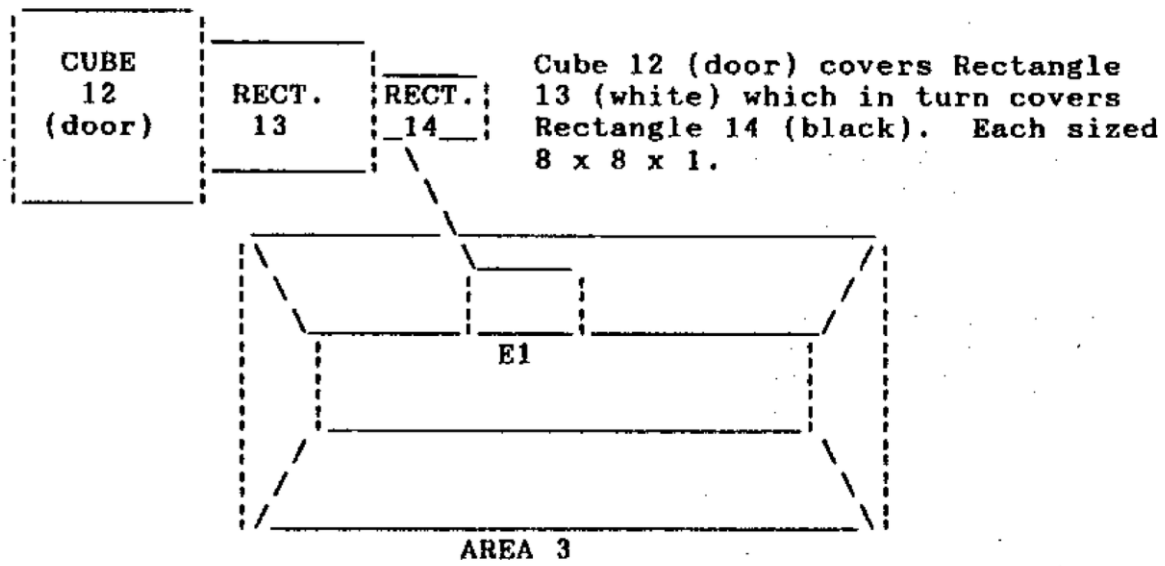
By Ted Horn - SPECTRUM

Having succeeded initially in presenting the appearance of the light switching, I realised that this was not much use if conditions changed from the light room to the dark room (i.e. open a door, switch on a light, the door must remain open and vis versa). I think the FCL conditions I have worked out should stand to work if applied to other movements other than a door.

In my scenario I start in a darkened room, a closed door is just visible, shooting at the appropriate switch (pyramid on the wall) will either put the light on or open the door. (The left switch will open the door and the right one turn on and off the light). Walking up to the open door and hitting it will allow me to pass through the door into area 3. Walking forwards to the room centre and doing a U turn, I should see either a white doorway - if I came from a lit room (room 1), or a black doorway - if the light was off (room 2). Returning through the doorway returns me through a black door to the darkened room or if the doorway is white - to the enlightened room. I hope this makes sense to you - it's working for me! Here are the diagrams of how I designed my areas:



E = entrance R = rectangle C = cube P = pyramid



A point to note: where conditions refer to objects in areas other than the one on the screen, object numbers must be unique to their own area, otherwise strange things happen. I used objects 12, 13 and 14 for the door in area 3 - numbers which did not appear in rooms 1 or 2.

LOCAL CONDITIONS

AREA 1

```
1 - IFACTIVE 009
    THEN
    GOTO     002  002
    ENDIF

2 - IFSHOT   010
    THEN
    TOGVIS   002
    TOGVIS   002  002
    TOGVIS   004
    TOGVIS   004  002
    TOGVIS   012  003
    ENDIF
```

AREA 2

```
1 - IF ACTIVE 007
    THEN
    GOTO     002  001
    ENDIF

2 - IFSHOT
    THEN
    TOGVIS   002
    TOGVIS   002  001
    TOGVIS   004
    TOGVIS   004  002
    TOGVIS   012  003
    ENDIF
```

AREA 3

```
1 - IFHIT  013
    THEN
    GOTO   008  001
    ENDIF

2 - IFHIT  014
    THEN
    GOTO   008  002
    ENDIF
```

AREA 1

```
3 - IFSHOT   005
    THEN
    GOTO     002   002
    ENDIF

4 - IFHIT    003
    THEN
    INVIS    014   003
    VIS      013   003
    GOTO     001   003
    ENDIF
```

AREA 2

```
3 - IFSHOT   009
    THEN
    GOTO     002   001
    ENDIF

4 - IFHIT    003
    THEN
    INVIS    013   003
    VIS      014   003
    GOTO     001   003
    ENDIF
```

COLOURS

	AREA 1	AREA 2	AREA 3
INK	6	1	7
PAPER	3	0	0
BRIGHT	1	0	0
BORDER	0	0	0

SCREENDUMPS ON CPC

By Yannick Gour - AMSTRAD CPC

Here is a program to enable you to save screendumps of your 3D Kit screens. It is in machine language. Here is what to do:

1. Type and save on your current 3D CK Disk the three programs: 3DCKDUMP.BAS, KIT128.DMP and KITCON.DMP.
2. RUN "3DCKDUMP" and choose the Editor: 128 KO version or 64 KO version. The programs are normally loaded and started.
3. LOAD the Datafile with the area you want to print.
4. Select this area (or not if you can access it by TESTing).
5. Select the TEST option.
6. Now you just have to choose the right point of view. You can do everything as normally. When you see exactly what you want, press the ESC key as if you wanted to return to the Editor; but here the screen becomes completely blue.
7. Insert a formatted Disk into the drive (or a tape into datacorder), then press any key: the last screen of the TEST mode is saved under the name "3DCKDUMP.SCR". Then there is a complete reset of the CPC. You can now edit this screen with any graphic utility and print it.

3DCKDUMP.BAS

```
10 MODE 1
20 PRINT "↓↓↓     3D CONSTRUCTION KIT"
30 PRINT "      + SAVE SCREEN AFTER TEST"
40 PRINT "↓↓↓   1  128K EDITOR"
50 PRINT "↓     2  64K CONDITIOIN EDITOR"
60 PRINT "↓↓↓   ENTER SELECTION (1-2)";A$
70 IF A$="1" THEN GOSUB 100:RUN"KIT128.DMP
80 IF A$="2" THEN GOSUB 100;RUN"KITCOND.DMP
90 RUN
100  FOR  1=&80 TO &E1;  READ a$:  POKE i,VAL("&"+a$):  NEXT: POKE i,
PEEK(&BD17): POKE i+1, PEEK (&BD18) AND 63: OPENOUT"X": MEMORY HIMEM-
1: CLOSEOUT: RETURN
110 DATA F3,21,38,00,36,C9,21,00,C0,11,00,40,42,4B,ED,B0,21,CE,00,0E,
20,D5,ED,B0,C9,CD,06,BB,21,FF,AB,11,40,00,0E,07,CD,CE,BC,21,C2,00,11,
00,C0,06,0C,CD,8C,BC
120 DATA 21,00,40,54,5D,43,48,3E,02,CD,98,BC,CD,8F,BC,C7,33,44,43,4B,
44,55,4D,50,2E,53,43,52,01,89,7F,ED,49,21,00,00,54,5D,01,3F,00,ED,B0,
21,99,00,0D,CD
```

KIT128.DMP

```
10 MEMORY &1FF:LOAD"!Kit128":POKE &423,&80: POKE &424,0: CLS: CALL &200
```

KIT128.DMP

```
10 MEMORY &1FF:LOAD"!Kitcond":POKE &3B0,&80: POKE &3B1,0: CLS: CALL &200
```

SAVE AND LOAD GAME POSITIONS

By Robin Ball - ATARI ST - KIT 2

The fact that there is no provision made for the saving and loading of game positions in the Kit version 2 means that it can't really be used for writing large and complex adventures. Who would want to play the game from the beginning every time? Not I and not, I suspect many other 3D adventure fanatics. So what can we do about it? Well, the only solution is to write our own routine from scratch. This is not really very easy and it does make for some very long conditions. I would recommend that you start off by writing the basic conditions to a word processor as they are far faster and offer block moving and pasting (particularly useful for hundreds of FPUT (V*) commands). Remember to save the files as plain ASCII and they can be loaded easily into the Kit.

Here is the basic theory behind the routine. What we want to do is store in a file the player's position in the 3D world, and also all of the variables used in the game. We also want to store the condition of each of the objects involved (whether they are invisible or visible. As you might expect, the saving part is the easiest. It is when you want to reload that things get complicated. Here is a basic routine for saving the player's position and also soring the condition of a couple of objects. Write it as a procedure and create a control to put over the save icon. Change the action button for that control until it says Procedure and the box next to it says 0. Change that number to whatever the number of this procedure is and it is called whenever that control is clicked on. Don't forget to leave out the REM statements as they are only there to make the routine clearer on the page. You must also save a file to your game disk called "save.pos". This can be anything, it is only there because the Kit can't create new files, only open existing ones.

```
IF FEXISTS? ("save.pos")   \   rem - Checks for the existance of the
THEN                       /         save file. This need only be a
SETVAR (V0,V50)            \         text file to start with.
SETVAR (V1,V51)             \
SETVAR (V2,V52)              \ rem - These set six unused variables
SETVAR (V3,V53)              /       to the same values as the
SETVAR (V4,V54)             /        players viewpoint. Footnote 1.
SETVAR (V5,V55)            /
FOPEN ("save.pos",1)        -  rem - Opens the save file ready
FPUT (V49)                 \         write to it
FPUT (V50)                  \
FPUT (V51)                   \ rem - Writes to the new viewpoint
FPUT (V52)                    -      Variables to the file. V49 is
FPUT (V53)                   /       a new variable holding the
FPUT (V54)                  /        current area. Footnote 2.
FPUT (V55)                 /
FPUT (V100)                \   rem - These are object flags. They're
FPUT (V101)                /         set to one if the object's taken.
FCLOSE                        -rem - Closes the file.
ELSE
PSTRING ("can't find file",0,160)  - rem - Do something else if the file
ENDIF                                      doesn't exist.
```

FOOTNOTE 1: These are needed because we can't write to the variable holding the current area number and must use the GOTO command to go to the area. This would move the player to the entrance and thus change the contents of V0-5. If you're confused, just take my word for it.

FOOTNOTE 2: Writing V9 to the file then reading it back and going to that area doesn't work. Instead we must update V49 (or whatever) whenever the player is sent to a new area. For example add SETVAR (area number, V49) to the doorway condition. It's inconvenient I know but it's the only way as far as I can tell.

I hope that that was understandable. It does work very well. The exact routine can probably be used in any game. You must however, set a variable for every important action and for every object collected. Add FPUTs for every one of those important actions. (I have only used two in my routine - V100 and V101. They are each for an object). If you have 50 objects and counters you'll have to add a FPUT for each one. This is why a copy/pasting facility becomes useful. Can you imagine typing FPUT (V30), FPUT (V31) etc. fifty times?

Before you ask, I don't think it is possible to use a For Next loop as the Kit handles them in a strange way. If you do manage it then I'd very much like to hear about it. I hope you are still with me because the next bit is harder. This is how to reload the players position. Again, create a control and make it call another procedure. Then enter this:

```
IF FEXISTS? ("save.pos")  - rem - Does the file exist?
THEN
FOPEN ("save.pos",0)      - rem - Open it ready for reading.
FGET (V49)                \
FGET (V50)                 \
FGET (V51)                  \
FGET (V52)                   \
FGET (V53)                    - rem- Restore all those variables
FGET (V54)                    /
FGET (V55)                  /
FGET (V100)                /
FGET (V101)               /
FCLOSE                    - rem - Close the file.
SOUND (2)                 - rem - Let the player know it's done.
GOTO (1,V49)              - rem - Goto the saved area.
SETVAR (V50,V0)           \
SETVAR (V51,V1)            \
SETVAR (V52,V2)             \ rem - Put back those viewpoint
SETVAR (V53,V3)             /       values.
SETVAR (V54,V4)            /
SETVAR (V55,V5)           /
PROC (2)                  - rem - Call object checking routine.
REDRAW                    - rem - Update the screen.
ELSE
SOUND (1)
PSTRING ("can't find file",0,50) - rem - Do something if the file's not
ENDIF                                    there.
```

Now the player is put back at the saved location in the saved area. Note that this routine doesn't bother to save the vehicle and height of the player etc. If they're important in your game then add them in the same way. Copy their values into spare variables, rather than trying to use them directly, this seems to work better.

After all that, all of the objects and such-like that have been taken, used or shot are still in their initial condition, ie. unshot or unpicked up. The variables attached to them have been restored however so the player will be able to open a door with a key he'd picked up before even though that key object is still in its initial location. What we need to do is make all the important objects visible or invisible depending on the condition of the variables set by picking them up etc. The following routine is a third procedure and is called by the loading one. It's possible to include it in the loading procedure directly, but this way is easier and quicker to edit and change:

```
IF VAREQ? (1,V100)   - rem - Checks if the first object has
THEN                         been shot.Could also be taken.
INVIS (2,1)          - rem - If so, make it invisible.
ELSE
VIS (2,1)            - rem - Otherwise make it visible.
ENDIF                - rem - End this bit of the condition.
IF VAREQ? (1,V101)   \
THEN                  \
INVIS (2,2)            \ rem - Do again with the second
ELSE                   /       object.
VIS (2,2)             /
ENDIF                /
```

Carry on adding IF - THEN - ELSE - ENDIFs for each object in your game. That includes all open or closed doors and anything else that might change depending on whether a variable is set or not. It will make a huge condition (which is why I suggest using a word processor), but it shouldn't slow down the game as it is a procedure and, is only called when the game position is loaded.

That's all there is to it. Just remember to set a variable for each object collected etc, and don't rely on the IF INVIS command for checking whether an object has been collected, it won't work.

Also remember to put the FGETs in the same order in the load routine as the FPUTs were in, in the save routine, not in any other order otherwise the wrong values get loaded into the wrong variable upon loading. That doesn't mean that you can't FPUT (V35) before FPUT (V34) so long as the order is the same in both the saving and loading routines.

The basics of this collection of routines should work with any 3DCK2 game and it has the added advantage that you only need save variables that are actually important. It will be a lot of hard work but at least you have the knowledge that the underlying routine works at a fundamental level.

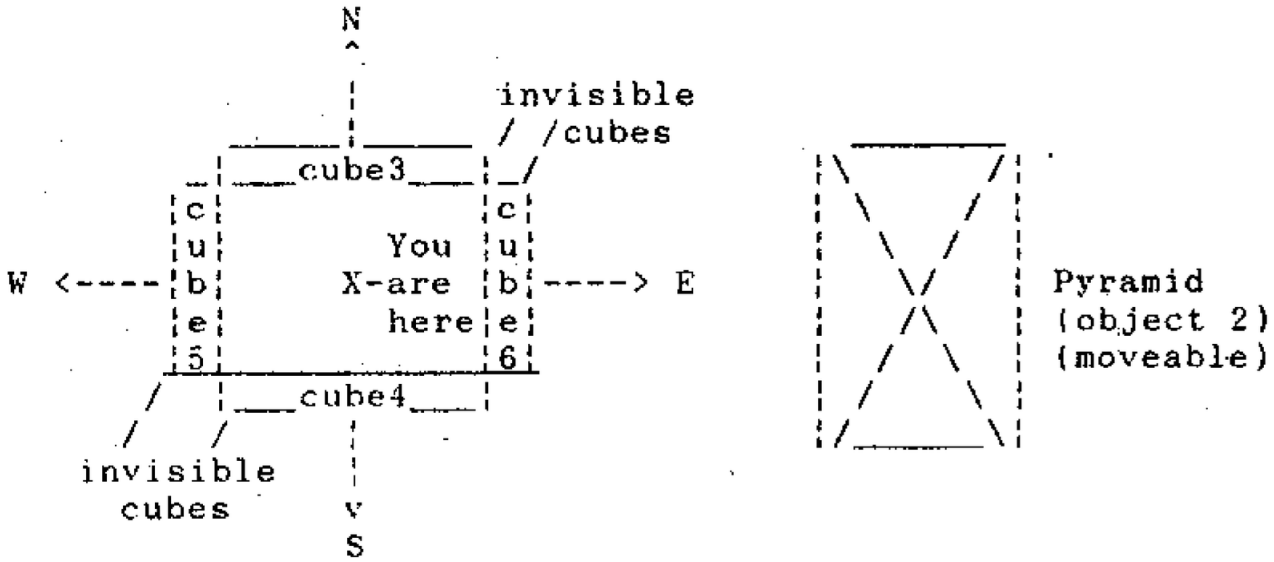
If anyone out there is chuckling at the crude way that all this is done then fine, but write in and tell everyone how it should be done, I really don't mind constructive criticism, I'm not particularly bright at all this file handling lark but this does work as far as I can tell.

MULTI-DIRECTION SCROLLING LANDSCAPE

By Ronald Connell - ATARI ST - KIT 1 & KIT 2

In most of the routines for the newsletter most of the conditions seem to make the user move around the environment. In this routine we will make the player stay still in the game whilst objects are moving past you. By staying still we make the illusion that the player is moving in a large landscape. The first thing you should do is to make sure that you are "standing" in the centre of AREA 1. This is so that you can see the horizon in all directions. What we will achieve is the effect that when you "move" in any direction the land will appear to wrap-around just like the planet earth is round. Scrolling buildings move around and turn up behind you after a while (if you don't get lost on this big ball). To make the area appear larger we will scroll all the buildings and mountains etc in any direction under your full control, by clicking up, down, left, right and the rotation arrows on the control panel. The movement is semi-automatic so once you click the arrow once or twice the vehicle will carry on moving forward until you decide to click on the reverse arrow to slow you down, stop or go into reverse. The more times you click the arrow the faster you will move. The same controls can be used with borders. What you do to do this is put some buildings in the area, then you animate them all in unison until they scroll out of the area, stop the animation and build some more buildings and do the same in any direction you like.

Until you get the idea of how this works it would be better to try with just plain objects to start with then create your buildings later. A pyramid will do. Lower the pyramid to the ground and yourself. Then select another object such as a square. Any object can be chosen just make sure that it is thin so that the scrolling objects will not collide with it. Bring the square up close to you without moving yourself from the centre of the area and stretch it so that when you collide with the square you do not go over the top. Select three more squares and place them all around yourself and colour them all INVISIBLE. The idea is that when you collide with the surrounding invisible squares it will scroll the buildings and not the floor, so do not include the floor in your animation.



Select Create Animator and Edit it as follows:

```
INCLUDE (2)
START
LOOP (0)
MOVE (V32,0,V30)
AGAIN
END
RESTART
```

Object Condition for square/cube 3:

```
IF COLLIDED?
THEN
STARTANIM (1)
SUBVAR (1,V30) - to go forward
ENDIF
```

Object Condition for square/cube 4:

```
IF COLLIDED?
THEN
STARTANIM (1)
ADDVAR (1,V30) - to go backwards
ENDIF
```

Object Condition for square/cube 5:

```
IF COLLIDED?
THEN
STARTANIM (1)
SUBVAR (1,V32) - to go left
ENDIF
```

Object Condition for square/cube 6:

```
IF COLLIDED?
THEN
STARTANIM (1)
ADDVAR (1,V32) - to go right
ENDIF
```

Face the pyramid so that you can see it move under control. The four invisible squares are used like a joystick for the scroller. To edit the landscape scroll the land in any direction whilst inside the invisible control squares, colour all the squares visible and go to the control panel and make just 1 square invisible via attributes. When you get back you are able to walk around and place more buildings on the land. Once finished, return back to your control "pod" and make the square visible via the attributes again and then colour all your squares invisible colour once more. Important - do not scroll the floor!

Basically what you should do to create an effective landscape, is to create an object, say a pyramid to represent a mountain and place it as far away from you as possible. When the "mountain" has moved halfway towards you, make sure you have other objects appearing in the background as far away as possible and start to scroll towards you. The impression is that you are in a vast landscape that you never can get to the end of.

ALICE IN WONDERLAND?

A ROUTINE TO USE AN UNDOCUMENTED COMMAND IN KIT 2

By Tony Hartley - ATARI STE - KIT 2

Make an INVISIBLE rectangle on the floor (colouring it invisible!), for use as a trigger and give it this object condition:

```
SETSCALE (16)
```

Copy this rectangle again behind the first one four more times and give the second rectangle the same condition but with SETSCALE (12), the third SETSCALE (8) etc getting the scale shorter as you walk along. The area scale should be set initially as 18 to start with. The effect is that you are "shrinking" as you walk along as in Alice In Wonderland. Could make an excellent puzzle effect for tunnels or whatever.

HINTS AND TIPS

KEEPING THE PLAYER IN A CROUCH
By David Lacey - COMMODORE 64

If you don't want your player to rise above a crouch in an area of scale 1 this may be useful. Mode 0 has a Y-height of 160 in an area of scale 1 (i.e. Var 115=0). Create the local condition:

```
CMPV    1   115
IFEQ
THEN
MODE    0
REDRAW
END
```

Now the player cannot rise in that area. Remember though, that when moving to another area to always put "mode 1" command. For example:

```
IFHIT   1    - Doorway
THEN
GOTO    1   2
MODE    1
ENDIF
```

SAVING MEMORY

By David Lacey - COMMODORE 64

In the Kitgame all the conditions and procedures have an ENDIF statement at the very end, just before the final END, if there is an IF statement in the condition. These are completely unnecessary as ENDIFs only need to be used if you are putting some extra commands after an IF, that are separate from the IF. However, ENDIFs only use 1 byte so this is for when you are REALLY desperate to get those extra few bytes. Creating conditions and procedures also uses up something like 3 to 3 bytes, so try and include as much as possible in just one condition. For example use 1 Local Condition for all your doorways. This also makes it easier to find conditions for editing since the fewer you have the easier to find. One major memory guzzler is printing messages. I did not realise how much memory a message could take up until I started looking for ways to save memory. A message uses 1 byte per character! So just one message could use up to 32 bytes. This might not seem a lot but it is the length of the average size condition or procedure and using a lot of messages soon eats away at that valuable space.

The dots (previously referred to as dashes, 'till I realised they weren't), displayed in a newly created message don't take up any memory, but spaces do, so at the end of your message, don't put spaces, just leave the dots as they are not printed anyway and they act like spaces. Creating an area uses about 30 bytes so if you have an area only being half used - say you have a roof cutting off the top half of your area - then use the top half instead of creating a new area and use the roof as the floor. This will slow things down if there are lots of objects in both parts of the area. This could be remedied by a procedure with a few TOGVIS commands which is called when entering different parts of the area to make unseen things invisible. However don't use too many TOGVIS commands as this will use up as much memory as creating a new area.

STAND ALONE GAME ON KIT 2 V2.07

By Freddy Moereman - AMIGA - Kit 2

It is possible to create a stand alone game with version V2.07. For this example I will call my game MYGAME. I used my Hard Drive for this. Make a directory <STANDALONE> or whatever name you want and put the following files in that directory:

```
MYGAME.3SM  (Samples)
MYGAME.3WD  (Datafile)
MYGAME.IFF  (Border)
```

Note that all the files have the same firstname MYGAME. Run 3DMAKE. Follow the on-screen prompts. 3DMAKE will make a directory _MYGAME (or the name of your choice), and put the files in that directory. Put in all the above files (MYGAME.3SM, MYGAME.3WD, MYGAME.IFF) add also a file MYGAME in that directory and bingo, it works a treat.

OVERCOMING SOME PROBLEMS WITH KIT 2

By Jonathan Hagan - PC

There have been some problems mentioned about displaying brushes in the View Window. With lots of experimentation I discovered that when you plot a brush in the View Window it does appear but instantly gets overwritten by the 3D graphics. Therefore to keep it there you need to write a routine plotting the brush inside a loop. When displayed it will flicker but then so do the animbrushes.

I had a problem with the sound editor. I use a Soundblaster board which has a joystick port and when accessing the editor the cursor arrow drifts to the left of the screen and sticks. I first tried to disconnect the joystick with no effect. Finally the solution was to keep the joystick plugged in and adjust the horizontal trim control to the left until the cursor stopped. Then the mouse seemed to work find. A simple solution for anyone else having the same trouble.

HANDY TIP FOR KIT 2 USERS

By Liam Johnston - ATARI ST

Instead of going into the SELECT OBJECT mode each and every time you want to edit an object in a group etc, slect this way once and then simply by pressing the left mouse button over the next object to be edited (in the Freescape window), you can speed up multi-object editing. This method of point and click also works for colouring objects.

NB. This works a treat. Just make sure that the cross-hair cursor isn't over any particular object on the Amiga version as you may wonder why you are always editing the same object. Just move your viewpoint a little if it happens and point and click once more - Mandy

---

PSUEDO-FLEXICUBE FOR KIT 1 USERS

By Liam Johnston - ATARI ST

A psuedo-flexicube can be created enabling users to create wooden beams, legs or another object that are really effective. First create a pyramid and edit its attributes by changing its sizes to 30,30,30 respectively. Then edit its points to bring it into a "solid" shape and you should now have a diagonal cube. This can be stretched or shrunk to suit your size, but be careful as it isn't a true flexicube and may take some experimenting at first.

TOP TEN TIPS

By Tony Hartley - ATARI STE - KIT 1 AND KIT 2

1. Have formatted disks ready for saving your work on.
2. Save your work at regular intervals.
3. Make regular back-up copies of your work.
4. Test your work regularly to find and cure problems.
5. Write down on paper what all your variables are for.
6. Save your text files/conditions for use in other programs.
7. When saving groups don't forget to omit the ground cube.
8. Give invisible objects a name - it's easier to locate them.
9. If you have a good tip then let us all know about it.
10. Got a problem? Then use the User Group to get an answer. The phone numbers and help addresses are in the back of the newsletters and are especially to help you.

(Anyone else got any top ten tips to send in?)

USEFUL TIPS FOR KIT 2 PC USERS

By Martin Panton - PC

The Naksla serial mouse comes with Deluxe Paint II and is compatible with the 3D Sound program supplied with Kit 2. It costs around £40 but does solve two problems in one go.

After playing around with my Autoexec file I noticed that it took longer for 3DK2 to load, the problem turned out to be where in memory I loaded the mouse so if you are having trouble with slow loading then try loading the mouse after or before other files.

INKEY — USEFUL BATCH FILE UTILITY

By John Clarke - PC

Here is a useful batch file utility to specify the valid keys that the user could press to help with debugging. (eg. INKEY abcdef). The user can press a key and if it is a valid key the program will return an effor code to Dos that can be detected by the use of IF ERRORLEVEL... command. Eg. if the user pressed A the error code would be 1 and so on. When you write a batch file with this command it is best to place GOTO START at the bottom of your IF ERRORLEVEL... commands. It is also a good idea to place an extra IF ERRORLEVEL... command at the top of the list to ensure that if the user presses an invalid key they will be returned to the main menu.

```
@echo off
:start
cls
echo PRESS A
echo PRESS B

inkey ab
if errorlevel 3 goto start
if errorlevel 2 goto b
if errorlevel 1 goto a
goto start

:b
echo YOU PRESSED B
goto end

:a
echo YOU PRESSED A
goto end

:end
```

3D CONSTRUCTION KIT USER GROUP MAGAZINE

ISSUE 15 OCTOBER/NOVEMBER 1993

STEP INTO THE VIRTUAL WORLD WITH 3D CONSTRUCTION KIT.

3D Construction Kit Newsletter

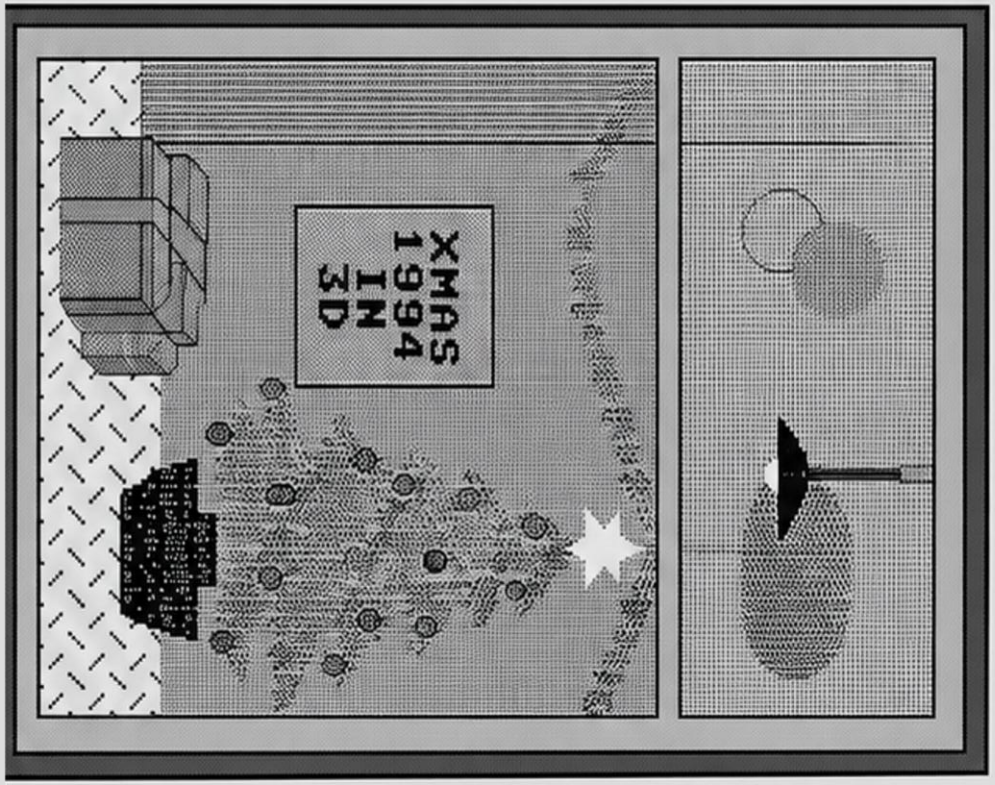
Issue Number 16
December/January 1993/1994

CONTENTS

EDITORIAL 387
LETTERS 387
DATA & OBJECT COMPATIBILITY 391
THE USER GROUP GAME 392
HINTS AND TIPS 394
TIME-SAVING 394
NEWS ! 395
GRAND CHRISTMAS COMPETITION 395
PUBLIC DOMAIN LIBRARY 397
8 BIT ROUTINES 398
SAVING MEMORY 399
AIRCRAFT HEAD UP DISPLAY ROUTINE 401
COUNTDOWN SEQUENCE 403
STANDARD GAME OF DRAUGHTS 404

JOYEAU NOEL BON NADEL GLEDELIG JUL
PRETTIGE KERSTDAGEN EN EEN VOORSPOEDIG NIEUWJAAR
BOAS FESTAS FELIZ NATAL BUON NATALE GOD JUL
FROHE WEIHNACHTEN UND EIN GUTES NEUES JAHR

CONSTRUCTION KITS NEWSLETTER



ISSUE 16
DEC 93/JAN 94

GELLUKKIE KERSTEEST NØDLIG LLAWEN JOYEAU NOEL
HOYAR JOULUE FELICES FIESTAS FROHLICHE WEINACHTON
HERRY CHEISTMAS AND A HAPPY NEW YEAR EOU

EDITORIAL

Welcome to issue 16 of the 3D Construction Kit User Group Newsletter.

Everything is great! Not a drop of water in sight! We are all back to normal and raring to go. The festive season is almost upon us, children are dropping hints on what they would "just adore to get" and I have started to deck the halls with Christmas holly - albeit the plastic variety. The tree is up - not to stay I hasten to add - it looks extremely precariously balanced to me and I've warned everyone that it is going to topple over. They don't believe me but I know, it wobbled last Friday. I wonder why it is that as soon as December arrives the kids start nagging to get all the Christmas decorations up and race round like mad things trying to decorate everything in sight? I even had to unload a load of tinsel and plastic angels from the computer monitor to be able to write this! Funny that nobody thought to hang a bunch of mistletoe over my chair though - wonder if they are trying to tell me something. We've got three weeks to go and things are already hectic. I've had to rescue the poor dog and untangle the tinsel from around his neck and the Christmas tree balls which have been tied to his tail twice already. At the moment he is lying under my chair quivering and trying to make himself as small as possible - not an easy feat with a dog that size. I've not checked the budgie or the hamster yet and am dreading what I might find. Strange thing is that as soon as January 6th arrives and it is time to un-decorate and pack away the family are nowhere in sight!

To help celebrate the festive season there is a Grand Christmas Competition to be found in this issue. Thanks to Domark for kindly donating some of the prizes. I hope that everyone will enter the competition and I wish everyone the very best of luck. Check out the centre pages for what to do and how to enter.

I've some up to date news about the progress on version V2.09 of Kit 2 which you'll find on page 16 and there is some excellent news in this issue about how the work on conversion of datafiles between different computers is progressing. Tony Hartley set me yet another poser this issue - he asked me to name all Father Christmas' reindeer. Ok Tony, this time I'll admit defeat - I've completely forgotten the poem "'Twas the night before Christmas" and all I can remember is PRANCER, DANCER, DONNA and BLITZEN and of course RUDOLPH. There is a free issue to anyone who can come up with the full list for me.

Well I had better stop waffling on as I've still got quite a bit of the Newsletter to do and I want it to arrive before Christmas if at all possible. I'm trying to catch the last posting date for overseas post but they don't give us much time. I also want to put out a plea for contributions for the newsletters. I haven't had much at all apart from those from the regular contributors and the February/March issue could do with a bit of padding out so if you have anything that you would like to send in for that and future issues then please feel free to do so. As an added incentive (no pun intended) there is a free issue for the best article sent in for each issue.

Right, all that remains is for me to send my warmest wishes to you all both home and abroad for the festive season. I sincerely hope that you all have a very Merry Christmas and a prosperous, happy and peaceful New Year! See you all again next issue.

Mandy

LETTERS

Dear Mandy,

I would like to reply to the letter from Nigel Alefounder in Newsletter 14 about the Freescape colour palette grabbed as a picture in order to obtain the same colours in the border as in the Freescape system. In 3D Kit 1 this is the only way to obtain exactly the same first sixteen colours of the Freescape palette. As only the first sixteen colours are necessary to have the same border colours. I would advise to try and load the grabbed palette in a different colour mode into your paint package, for instance: same screen size - VGA - 16 colours. In this way you will not have the annoying black on black menus and you can save your screen as a picture and afterwards load it in again in 256 colour mode to be able to use more colours. In 3D Kit 1 this does not affect you changing the other colours in the Freescape colour palette. You can do that freely as long as you do not change the first sixteen colours because that also affects your border.

At this moment it occurs to me that when you do change the first sixteen colours of the Freescape palette you can also manage to colour your border in a way that you would like. Only to obtain the same colours as in your paint program will be difficult because the palettes differ a lot, and not only that but the red, green and blue value numbers are not even the same. You have to have a paint program such as Deluxe Paint II Enhanced to even be able to obtain the red, green and blue colour value numbers of the grabbed picture and these numbers differ a lot from the Freescape palette numbers. In the previous PC version of Deluxe Paint these value numbers were not available.

As far as 3D Kit 2 PC is concerned: As from version V2.07 the Freescape palette is automatically adjusted to the colours of your border. You can try it out by adding a border of the provided ones, set the view window and then try to colour the floor. You will see in the colour palette that the first five or six colours will differ from the original palette. You do not have a choice anymore. Whether you choose colours from Freescape or from Border, the palette is adjusted to the colours of the Border. It is also not possible anymore to change the Freescape colour palette because when you add your border to the defaults the first time you press ESC in the test window to let the border appear the colours are adapted to the present border. I believe that this is the best solution because you can paint your border in all the colours you like and then use the same ones in the Freescape system. When you have created and saved a datafile in this way and when you load it in the next day, at first the colours will have the original Freescape palette, but when you press ESC in the test window your border appears and your colours are adapted and will be exactly as you used them the day before. I hope you understand what I am trying to say because I find it extremely difficult to explain it properly on paper.

Mieke Van Der Poll - Kit 1 and Kit 2 PC and AMIGA
De Lint 148, 4761 XS Zevenbergen, Holland

Thanks for the information Mieke. By the way, I know that the other members will want to join me in sending you sincere congratulations on your recent 25th wedding anniversary! Have lots of fun during your celebratory weekend.....Mandy

---

Dear Mandy,

Can you send another subscription form as a friend want to join the User Group. Do you know anything about batch files? I am trying to write a security program but can't make it so I can enter a passcode. I've written it so you can use a passdisk instead but it is a lot of bother, especially if you can't find the disk! I seem to have a problem with the post. I sent Mark Rose a letter around March and am not sure if he received it. Please could you ask Mark to check if he did because I stupidly sent my only copy of a demo game to him. Finally, do you know where I can get hold of a new mouse for my Amstrad PC 1640 as mine has died?!

Colin Chow
156 Linden Gdns, Enfield, Middx EN1 4EA

I am sure that other members will come to your aid, Colin, with help for the listings you need for your batch files. As for the mouse, well as they no longer produce a 1640 it might be a little difficult, I would suggest that you contact your local Dixons store or Tandy and ask them if they can help supply one. Dixons I know now have a separate parts department that deals with enquiries like yours. It might be a good idea to ring Amstrad to see if they still have a stock of that mouse or they might be able to suggest an alternative for you. If all that fails then your best bet would be to try and purchase a second hand one. There may be a member out there who has a spare that they might like to sell you, if their machine died and they still have one. If any other member has a suggestion about this then please write to Colin - I have printed his address in full…….Mandy

---

Dear Mandy,

I have been using the 3D Construction Kit 2 since it was released and have been very impressed with the advances made from Kit 1. I am currently using version V2.03 of the Kit but I have found a minor problem during the 3DMAKE process to create a stand-alone world. I have created a world and included a border as it says in the manual and it works find during the TEST facility in the Kit but after running 3DMAKE and compiling this world to a floppy disk the border refuses to appear in the completed stand-alone world. The curious part of my tale is that if I compile the aforementioned world and border to my hard-drive the border DOES appear. But... if I then copy this fully working copy to a floppy disk the border, once again, fails to appear. Also, if the world has been compiled to a floppy disk and I then copy this to my hard-drive the border will appear when run from the latter but not the former. Confusing, isn't it? I have checked my floppy disk for any bad sectors/blocks, viruses etc. and have found absolutely no problem with it. Can you please help me?

Steve Frampton
AMIGA

In earlier version there were quite a few problems. With version V2.07 and onwards the problem has been rectified. What is happening is that the hard disk is storing the directory of the borders in the datafile and when you transfer this to floppy and try and load it, it tries to access the hard disk to find the border. When you use MAKE directly to a floppy this shouldn't happen. The best thing you can do is to send me your disks for exchange to version V2.07 - or V2.09 as I will receive this very shortly and, hopefully you should have no further trouble.....Mandy

---

Dear Mandy,

I have a request for help and I hope you will publish this in any form you feel editorially appropriate in the hope that if you do not have a complete solution yourself another reader may be able to help. Whilst I appreciate the advances made in version two, I am afraid I have spent all my spare time, without success, trying to find a solution to the problem of not being able to clear text from an instrument in the same way as we were able to in version one. Although nobody seems to have mentioned it, the original KITGAME, when recompiled with version two displays at least three areas of incompatibility. The text problems I mentioned previously, (which I understand from the programmers), is associated with the new colour arrangement but to which I was not given a workable solution, the timer not working as previously and the boxes/puzzle room door routine, i.e. the fact that the boxes are no longer destroyed so if you move out of sensor range they reappear and when shot the door does not appear.

John Latty
AMIGA

The reason we cannot clear the text from an instrument in Kit 2 as we could with Kit 1 is that the background colour for the text in the Kitgame was colour zero which in Kit 2 is invisible. This was done intentionally for Kit 2 to allow greater flexibility when using text. To be able to clear the text in Kit 2 in the same way as we did with Kit 1 we should select a different background colour for the text - anything except colour zero. Drawing a box with the Freescape Command Language will also allow you to clear your text successfully. As you will see from the information in the DATA and OBJECT COMPATIBILITY item, this issue there is, indeed a problem with transferring datafiles from Kit 1 to Kit 2 when routines are complicated and use Sensors. I don't yet know how to overcome this but I am working on it and will report back. At the moment it seems that "Sensor routines" will have to be re-written to overcome the problem once the datafile is transferred to Kit 2. Perhaps other members have already found a solution to this problem and, if so, will write in and let us know what their solution is.....Mandy

---

Dear Mandy,

I am new to the 3D Kit and I would like help please. I would like to know how to place text in your games, time and energy bars, the end time of a game. Sound also seems to be a problem. I have an Amiga 600 with two drives and 2mb of memory. I am using Kit 2 and any advice would be appreciated. I have enclosed a S.A.E. for the clubgame information. One problem I have while I am making a game is that I place an object, say a fireplace and when it touches the ground it disappears and is nowhere to be found. Also when I lay down a roof it suddenly shrinks to a thin bar. Have any other members had this problem? Can anyone please explain to me how to load a picture (title) from deluxe paint 3 into a game. I use workbench 2.0.

Alastair Miller
AMIGA

Now that you have all the past routines of the Clubgame you will see that most of your queries have been covered as the routines show how to put text in your games. You are also just in time for answers to how to program time and energy bars and how to include a border in your game as for the next few issues Mieke Van Der Poll is taking over the clubgame articles to show us how to finish off the game with a border, time and energy bars and all sorts of other goodies. If you still need information on loading screens etc. after that then please let me know as all the information you need was covered in various back issues of the newsletter.....Mandy

---

Dear Mandy,

Many thanks for the 3D Construction Kit 2 program that you sent me. Having a copy at last that works is great. The program is excellent with plenty of scope for experimenting. I find that the 3D principles at first require completely different thinking but I am getting used to it. I enclose my registration card plus membership of the User Group. Do you think it would help me to get to grips with the program by reading any back issues of the newsletter (routines, tips etc.)? Also which refinements are the programmers making to version V2.09? Good luck with the User Group, I hope it is going well.

Steve Harding

At the risk of sounding as if I want to make "loadsa money" out of you, Steve, I would say that all the back issues would be extremely useful for a new member as they contain a great wealth of routines, tips, information etc. that you would find invaluable. One of the most useful things you can do is to send for the User Group Game routines which will help you to program a game from start to finish and should really get you into the swing of things by showing all the basic things you need to know. The programmers are not changing the program with the next version that they are working on. They are trying to iron out a few problems that still exist in the present version. I have heard that some more goodies might be coming our way in the future but it is top secret at the moment so I cannot say anything yet! Keep watching this space!.....Mandy

---

Dear Mandy,

Thanks for the two back issues you sent me. This means that I have every issue of the Newsletter now so far. Having received another of your little notes, I wondered lonely as a cloud! Ooops! sorry, wrong script - I wondered if you had any A4 size 3D Kit letterheads in your possession. I then thought that if you haven't I would design and send you one. Hope that you like it. All you have to do is sign it and photocopy it and it will come in handy if you need to send a longer note or scribble a drawing for someone. I haven't sent it as a replacement for your great little notes merely as a compliment for larger letter etc. I have also sent you some screen shots of my latest disk called ULTIMATE DETAIL. This disk - not finished yet - shows just what kind of potential the Kit has for making detailed objects and will put to shame anyone who thinks you only have a LEGO building block type of program. I know that a printer doesn't do justice to the screen shots but you can see what I mean.

Tony Hartley
ATARI ST

Many thanks for the letterhead - it is much appreciated. The screen shots are fantastic. I just wish that I could print some of them here in the newsletter so everyone could share them but photocopying just ruins the effect and all the different colours get blurred into each other. If anyone wonders just what can be done, in detail, with the Kit then you should take a look at any of the disks Tony has done. You would be absolutely amazed.....Mandy

---

DATA & OBJECT COMPATIBILITY

Nigel Alefounder, Mieke Van Der Poll and Tony Hartley have been investigating the compatibility of datafiles, borders, objects etc between different computers to see what can be achieved. Here is the latest information they have sent me. I am quite excited because it looks really promising indeed and soon we may be able to have the games in the PD library across ALL formats. Read on:

Mieke Van Der Poll writes: "Thanks again for sending me the disks BUILDINGS (Amiga) and FAST TOWN (Atari ST). I managed to load FAST TOWN easily into the PC and I had the same experience with the colours and the maze as Nigel Alefounder. I transferred BUILDINGS from the Amiga to the PC successfully. I use a program on the Amiga called CROSS-DOS with which you can transfer PC files to the Amiga and Amiga files to the PC. So naturally, when I copied, FAST TOWN (Atari ST) to a PC format disk I tried to transfer it to the Amiga and it worked! The datafile loads easily into 3D Kit 1 on the Amiga. All the original colours are there and the six NEO borders can be used at once. This came as a surprise to me because although I am able to transfer 3D Kit 1 PC files, they simply will not load into 3D Kit 1 on the Amiga. It probably has something to do with the colour palette and the way the information is saved on the Atari and the Amiga which differs from the PC. Although not immediately, 3D Kit 2 does recognise objects from 3D Kit 1, only it takes a lot of time before you have the right data format. You first have to load them one by one into 3D Kit 1, then save then one by one as a datafile with the extension .3WD. On the PC the datafiles are saved with the extension .KIT automatically, so you even have to rename them with .3WD, deleting the .NAM and .PAL files.

Then in 3D Kit 2 you have to go through the same procedure: Load in each datafile and save it as an object again, afterwards deleting all the datafiles. I did so with all the objects of FAST TOWN for the Amiga, but for the PC I would advise members to order the Atari Disks themselves and follow the advice of Nigel Alefounder in his letter in Newsletter 13. I enclose herewith two disks for the Amiga PD library, one for 3D Kit 1 and one for 3D Kit 2 of FAST TOWN, so now it is available for three 16 bit versions.

Tony Hartley writes: "Here are the final results of the PC to Atari ST to PC 3D data transferal using Kit 1 and Kit 2. The good news is that Kit 1 data transfers between the two computers ok, providing there are no fancy routines involves such as using sensors. Kit 1 PC data will also work on the Atari ST Kit 1 and Kit 2 providing the relevant file extensions are changed to suit. Animations and conditions also work from PC Kit 1 to Atari ST. The bad news is that Kit 2 data will not transfer either way. Colours alter between the computers during the transfer stage and objects and areas will not transfer. Other news is that Borders can be exchanged using screen grabbers or conversion software programs. Make sure that folders, directories are not used to place data in. Don't for goodness sake use a virus checker or any other boot up program on a disk when using for Atari ST to PC transfer.

It was very kind of Nigel to keep swapping disks with me. The disks must have travelled back and forth countless times but it was worth all the effort and here are the results.

ANYONE ELSE GOT ANY THOUGHTS OR IDEAS TO ADD TO THIS?

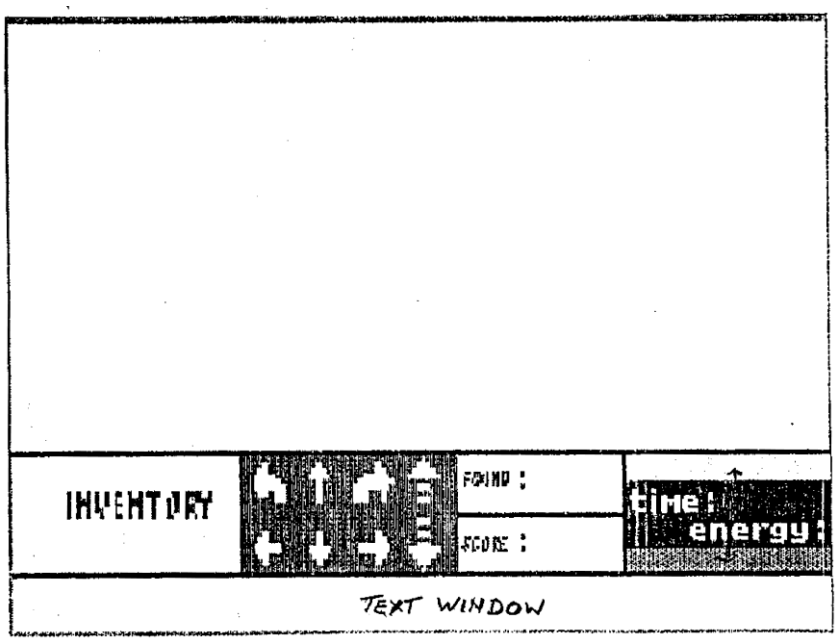
THE USER GROUP GAME

PART EIGHT:

This issue - by Mieke Van Der Poll

We are now going to add a border to our game, add time and energy bars, inventory routines and all sorts of goodies before we make it into a stand alone game.

Firstly we should design a simple border with your favourite paint program. Something like this will do:



As you can see, only the instruments necessary for a simple game are designed, but this border will give us plenty of possibilities to create our instruments to use and add the necessary variables to it. After that we can also make the relevant General Conditions.

We will not discuss the colours of the Freescape and Paint program packages in the different 3D Kit versions here because in this article the most important thing is to see the effects of our programming.

First we are going to choose some variables. Remembering that we have already used variable 50 and variable 60, we will pick our new variables from number 30. The variables will be as follows:

```
For the TIME BAR     V30
For the ENERGY BAR   V31
For the FOUND BAR    V32
For the SCORE BAR    V33
```

You probably notices the Inventory section in the Border. The meaning of this is that when we press a mouse button on this part of the Border, we should be able to see a message appear in the TEXT WINDOW - "Inventory follows" : "You are carrying:" (either nothing or one or more objects). In order to achieve this we need two system variables which are used in connection with the X and Y coordinates on screen when the mouse button was last pressed. Furthermore we need three variables to make the necessary GENERAL CONDITIONS to create the correct message in the text window. Inventory follows: You carry nothing, or you carry one, or you carry more objects.

```
The two system variables are V17 and V18
For inventory screen/text: V34, V35 and V36
```

Of course we need to have some objects to pick up so that we really have a message to give on screen. So far we only have a few objects within the game - you can add more later on to make it more interesting. We will give each of our objects a variable too:

```
THE KEY     - V37
THE TORCH   - V38
THE CRYSTAL - V39
```

At the beginning of the game we can set all those variables to zero in the first General Condition or, if using Kit 2, the Initial Condition, just as we did in the last issue for our Loading and Death variables. When we reset the environment this means that every variable will indeed be set to zero again.

Now we have to create the relevant Instruments for the Bars in our border. I will do a step-by-step guide for Kit 1 users but for Kit 2 users this is almost exactly the same. Where necessary I will give the alternative for Kit 2.

Load the 3D Kit program (3D Editor) and under the FILE MENU - LOAD BORDER (Kit 2: LOCATE and ADD BORDER). Under the GENERAL MENU - SET VIEW WINDOW and then click on CREATE INSTRUMENT. Before editing Instrument 1 it might be useful to look at the colour palette and choose some colours as foreground and background colours for the different instruments. I will give you some colour numbers but if you want other colours feel free to choose.

Click on EDIT INSTRUMENT, click twice on INSTRUMENT 1 and an edit window will appear. Click on TYPE until it reads HORIZONTAL then click on the SET BOX. You will see your border now. (in Kit 2 you will have to call your border by clicking on the coordinates square). Click on the top left of the timer bar with the left mouse button and while holding it down drag a square around the bar. Let go of the left mouse button and move the square a bit until you think it has the right size. Then click on the left mouse button again.

Back in the instrument edit window again you will see that the correct variable number is already there, so we do not have to change it. The figure 1000 in the Right/Top means that you can add 1000 points to the variable 30 before you run out of time. This being a suitable number at the moment we will leave it that way. We have to choose a foreground and background colour now. Click on the FG COLOUR box, fill in the number 065, press ENTER/RETURN. Click in the BG COLOUR box, fill in the number 073 and press ENTER/RETURN. Click in the View Box to see if everything is to your liking and if so, click on OK in the Edit Window and Instrument 1 is ready.

In this way we are going to create five instruments in total. If you want them to see in the way they are going to be in a stand alone game then you can make the first General Condition (or Kit 2 - Initial Condition) like this:

```
UPDATEI (1)
UPDATEI (2)
UPDATEI (3)
UPDATEI (4)
UPDATEI (5)
```

When you have all five instruments ready and go into TEST mode you will see your instruments updated (but not ready to work yet). In Kit 2 you have to fill the border number (1) into the defaults and press ESC in TEST mode to see them.

Create Instrument: Edit Instrument 2. This also is a horizontal instrument. Set it as described above. Fill in variable number 31 and choose FG and BG colours 129 and 138 respectively. If everything is alright then click on OK.

Create Instrument: Edit Instrument 3. This is a numerical instrument - so click in type-box until Numerical appears there. This is connected to the Found bar so set it to the word FOUND and try to make it the right size for two zeros to fit in. You can always check this if you have made General Condition 1 as above. Change the variable number into number 32. Change the number in the Right/Top into 10 as we have only three objects at this stage. Type in the FG and BG colours as 240 and 101. Press ENTER/RETURN and click on OK.

Create Instrument: Edit Instrument 4. This one is also numerical. Set it in the same way as instrument 3 only try to make it the size to contain four zeros. Change the variable into number 33, leave the number 1000 in the Right/Top box and choose FG and BG colours 240 and 101 again.

Create Instrument: Edit Instrument 5. Click on Type box until TEXT WINDOW appears. Fill in the number 000 in the variable box because we do not need a variable for this one. Leave the number 1000 in the Right/Top box and choose 240 and 101 as the FG and BG colours again. Set the instrument in the lowest bar of the border and use the full width of the bar. Click on View to see if it is correct, then click on OK.

Next issue we will continue with the Inventory Screen and the different General Conditions.....

HINTS AND TIPS

LESS DISK SWAPPING

By Mieke Van Der Poll - AMIGA KIT 2

When you have only one drive - this also helps with two drives - then you will have to swap disks now and again. If you prepare a blank formatted disk, create all the directories you need and copy the relevant files on to them, then with two drives you don't have to swap disks at all and with only one drive you only have to swap 1 disk. So create the following directories:

- AREAS
- DATA
- BORDERS
- OBJECTS
- SOUNDBANKS
- **TEXT and the text directory can be sub-divided:**
  - ANIMS
  - BRUSHANIMCOND
  - INITIALCOND
  - GENERALCOND
  - LOCALCOND
  - OBJECTCOND
  - PROCEDURES

If you use a border from the provided ones, copy it into the borders directory. If you have made a sound module, copy it into the soundbanks directory. If you want to save an object you created, save it into the objects directory, etc.

The reason I write all this is that I experienced problems when I didn't have the correct disk in the drive and I kept getting messages like "Please replace volume Sounds in df1:". Then when I replaced the disk, the 3D Edit program had vanished. I could drag the Workbench screen down and then the 3D Edit screen reappeared, but when I needed to swap disks in order to load a border, the same message appeared and I lost the screen again.

When I made a disk as described above I found that all my disk swapping worries were finally over.

TIME-SAVING

By Tony Hartley - ATARI ST KIT 1 AND KIT 2

If you have made a town with lots of doors leading into lots of different rooms, instead of making an area for each room, you could save time by splitting an area into four rooms using dividing walls. Then it makes it easier to copy objects, doors, furniture etc from one room to another.

The four rooms could them be accessed from different areas and do not necessarily have to lead into each other. I have used this very successfully in my game and it saved loads of time and effort.

NEWS !

News just in from the programmers at Incentive is that work on the final version of Kit 2 is progressing well and that version V2.09 (or whatever version it will be) will definitely be ready by the end of this month. I am told I can expect the disks by mid-December for final checking. So, all being well, I hope to be able to duplicate them and post them out just after Christmas, depending on there being no dramatic discoveries by Mieke or Tony in their final checks. The Amiga and PC versions are almost completed and the Atari ST version, which is giving a few extra problems, should follow shortly after.

Mr Ian Andrew, the programmers and myself would like all the playtesters to know how much their efforts and hard work are appreciated. Also thanks to everyone who wrote in to help point out where the problems were so that all the niggly bits could be sorted out. All the comments and suggestions were much appreciated. Thanks a lot folks - you have been great! Thanks also to everyone for being so patient. No program is entirely perfect and one as complicated as Kit 2 can be especially difficult to get just right as there is so much in it.

GRAND CHRISTMAS COMPETITION

The festive season is here again, bells ringing, joy and goodwill to all men (and women) and to celebrate we thought it was time to run a competition to celebrate! I say "we" because the idea was from Tony Hartley who suggested that it would be a good idea - not only that but he kindly set to work to produce the competition puzzle in time for this issue.

It couldn't be easier to enter - all you have to do is to complete the wordsearch on the opposite page and you will discover that one of the words is missing from the grid. Just write in and tell me what the missing word is. All correct entries will be put "in the hat" and a winning name will be drawn out.

The winner will have the option to select from the following prizes:

NEW 3D FLIGHT SIMULATOR CREATION PACKAGE (PC)

3D KIT 2 PACKAGE (AMIGA)

3D KIT 2 PACKAGE (ATARI ST)

3D KIT 2 PACKAGE (PC)

(Kindly donated by Domark Ltd)

A YEARS FREE SUBSCRIPTION TO THE USER GROUP

UP TO 12 BACK ISSUES OF THE USER GROUP NEWSLETTERS

UP TO 10 SELECTIONS FROM THE PD LIBRARY

Please send your entries to Mandy at the usual address and please state what prize you would like should you be the winner. Closing date for entries is 1st February 1994.

Right all you have to do now is get into the competition spirit and away you go! If there is sufficient interest in this competition - the response to the last one was a bit apathetic - then maybe we will have a regular competition. It might give Tony a chance to enter and win something - poor soul he is banned from entering this as it was his creation. So folks it's over to you.....

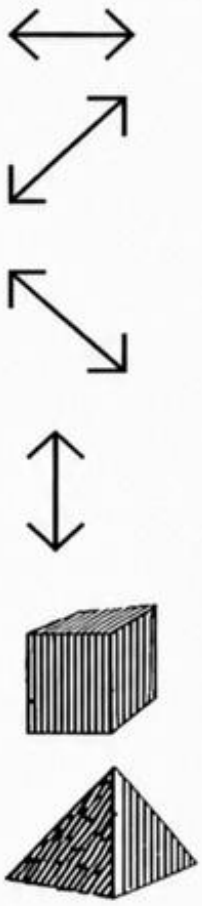
THE 3D CHRISTMAS COMPETITION

THE WORDS IN THE LIST ARE ALL EXCEPT ONE TO BE FOUND IN THE GRID - CIRCLE THEM IN THE GRID THEN TICK - THE ONE MISSING AND SEND IN THE FINISHED ANSWER TO MANDY AT THE USUAL ADDRESS.

AREA
ART
ATTRIBUTES
BORDER
CLIP
CONDITION
CONSTRUCTION
CUBE
DATA
DISK
FREESCAPE
KIT
LINE
OBLONG
PYRAMID
REALITY
SOUND
SPHERE
VIRTUAL
WINDOW

C	L	I	P	K	A	R	E	C	S	O	N
P	O	K	V	I	R	T	U	A	L	O	O
E	D	S	W	T	E	P	T	T	I	H	I
H	D	I	R	E	A	L	I	T	Y	F	T
T	N	D	M	E	L	V	C	R	S	R	I
O	U	C	D	A	H	U	E	I	L	E	D
B	O	R	D	E	R	E	N	B	E	E	N
L	S	E	T	T	L	Y	O	U	U	S	O
O	D	R	S	T	I	P	P	T	V	C	C
N	A	N	R	E	N	F	F	E	D	A	L
G	O	T	E	R	E	H	P	S	F	P	R
C	E	W	O	D	N	I	W	O	T	E	E

MADE BY TONY



THE WORD NOT IN THE GRID IS _____

PUBLIC DOMAIN LIBRARY

LATEST ADDITIONS TO THE LIST

WAR OF THE WORLDS

For Atari ST 1meg - Written with 3D Kit 2
DATAFILE FORMAT - BUT PLAYS LIKE A STAND-ALONE

Having seen and enthused over Tony Hartley's other PD offerings - Fast Town and Fast City, I was quite excited at the prospect of taking a look at Tony's first full game. I certainly was not disappointed! Anyone who remembers the classic film WAR OF THE WORLDS will find themselves transported instantly into that very same situation. The Martian ships are there complete with authentic sound effects and you can be forgiven for thinking that you are taking part in that film!

Martians have invaded the earth and you are the only person who can stop them. It isn't easy either! You have to find five laser parts to enable you to shoot the transmitter which is set up on Mars and is controlling the whole caboodle, hijack a martian spaceship and learn how to fly it to Mars. If that wasn't tough enough you have to locate the transmitter on Mars and destroy it. Following that adventure you have to get back to earth to a hero's welcome.

Tony has included full instructions on the disk and you must read them fully so you know exactly what to do. There are some great loading screens to keep you interested until the game proper loads. Then the fun begins! You have five lives and, believe me, you need them all. There are blasted alien ships all over the place and they shoot you on sight. Luckily Tony has provided an Alien Detector within the border so you know when they are lurking around. Thankfully you are safe within a building when you start the game and there are safe havens scattered about the place for you to get yourself into for breathing space - providing you are quick enough.

This is a BIG game with tons of locations to explore - and that is just on earth as I haven't yet managed to get the spaceship to visit anywhere else. I keep running out of lives but I am getting much better at playing this with each session. This game has you coming back for more and more and more....

The sound effects are mind-blowing. There are the authentic sounds from the film of the aliens shooting you, your own laser makes a terrific blast of sound when you shoot anything. There are sirens going off when you don't keep to the pathways and the program even SPEAKS to you! I nearly fell off my chair when a voice thundered "Warning!" at me when I tried to do something dangerous.

Most of the features of Kit 2 can be found here. The water in the canal looks real, objects fade and appear smoothly. Vehicles and buildings look extremely realistic, animations abound. This game has everything.

There is a really tense atmosphere during play. Not least because of the Martian ships popping up when you least expect them. I HATE those Martians, I really do. After your first playing session you find yourself really determined to defeat those blasted creatures and their ships. Whew! I'm really getting carried away here! I am not kidding - this game is really good. The best thing that I can suggest is that you get hold of this and see for yourself exactly what I mean. You definitely won't be disappointed. This little gem will keep you occupied for weeks!

FAST CITY RAIL AND SEA

FOR ATARI ST - WRITTEN WITH KIT 2
DATAFILE FORMAT

Tony Hartley also included this disk for review although it isn't available from the PD Library but direct from Tony Himself. The reason for that is that he wants to personalise each disk for everyone who buys it. Anyone who has seen Fast Town or Fast City will know that it is packed full of all sorts of objects - this time to enable you to build your own rail and sea network. There are ready made Areas, Boats, Buildings, Cars, features, Railway Stations and, of course, trains. I personally think the trains are great. If you ever wondered exactly what level of detail could be achieved with 3D Kit then this disk will show you!

Available from Tony Hartley at £2.50. The address is 19 Kipling Close, Lockwood, Huddersfield, Yorks, HD4 5HA.

RANDOM BOXES - CITY SKYLINE

FOR ATARI ST - PAINT UTILITY
NOT PD BUT COMPLETELY FREE!

Written by Ronald Connell, this is a program which generates buildings for a large city skyline overlaid on a painted background. It saves your paintings as a PI1 file and you can load your own paintings into the program and have buildings painted over that too if you wish. The program is menu driven and there are full instructions on how to use it on the disk. I found it quite fascinating to watch the way that the buildings were generated - the whole effect was very effective. You can stop the generation at any time when you are satisfied with the skyline created - not to do so and to let it run on rather spoils the overall effect. There are plenty of ready-made skylines on the disk too so if you are feeling lazy you can view them to see just what can be achieved.

Ronald doesn't want to charge for this program and would have distributed it himself if only his computer hadn't decided to die on him so I am going to distribute it for him. All you need to do is to send me a blank disk and the return postage and I will send this to you with pleasure.

FAST TOWN

FOR THE AMIGA - KIT 1
ALSO AVAILABLE FOR AMIGA - KIT 2
DATAFILE FORMAT

Written by Tony Hartley and converted to the Amiga by Mieke Van Der Poll. At last, now all Amiga owners can see what Atari ST members and myself were raving about, when this program first appeared. This program allows you to create your own Town as it is packed full of buildings, vehicles, roads, lamps, signs, benches, trees - goodness, the list is endless. All you have to do is to load each selected object in and place it where you want and in no time at all you have designed your own town. There is even a ready made town for you to load in and explore at your leisure.

All PD disks cost just £1.50 each (or £2.50 for overseas members). Available from the usual User Group address. PC public domain disks are available from Mark Rose - see the contents page for the address. For a full list of PD titles available - with full descriptions, send a stamped addressed envelope - A5 size (same size as the newsletter).

---

8 BIT ROUTINES
CALLMC INFORMATION FOR C64 USERS

By Steven Flanagan - COMMODORE 64

First of all I would like to thank John Elliott for pointing out that the command CALLMC only works once a game has been compiled. I had previously given up with the command because it doesn't work in the condition editor.

The following information is for C64 owners who know 6510 machine language and own a machine code monitor cartridge such as the Action Replay.

The start of variables address for the Kit is at $4404 (17412 decimal). For example, variable 0 is contained at address $4404, variable 1 at $4405, variable 2 at $4406 etc. You can write your own machine code routines that manipulate variables in ways that are not possible using the FCL.

There is a large chunk of memory available that is not used by a compiled game. It is the memory where the eight editor sprites were stored in the editors. The available memory is from $C400 to $C5BF and also $C640 to $C67F. A total of 512 bytes, plenty of room to write your own machine routines.

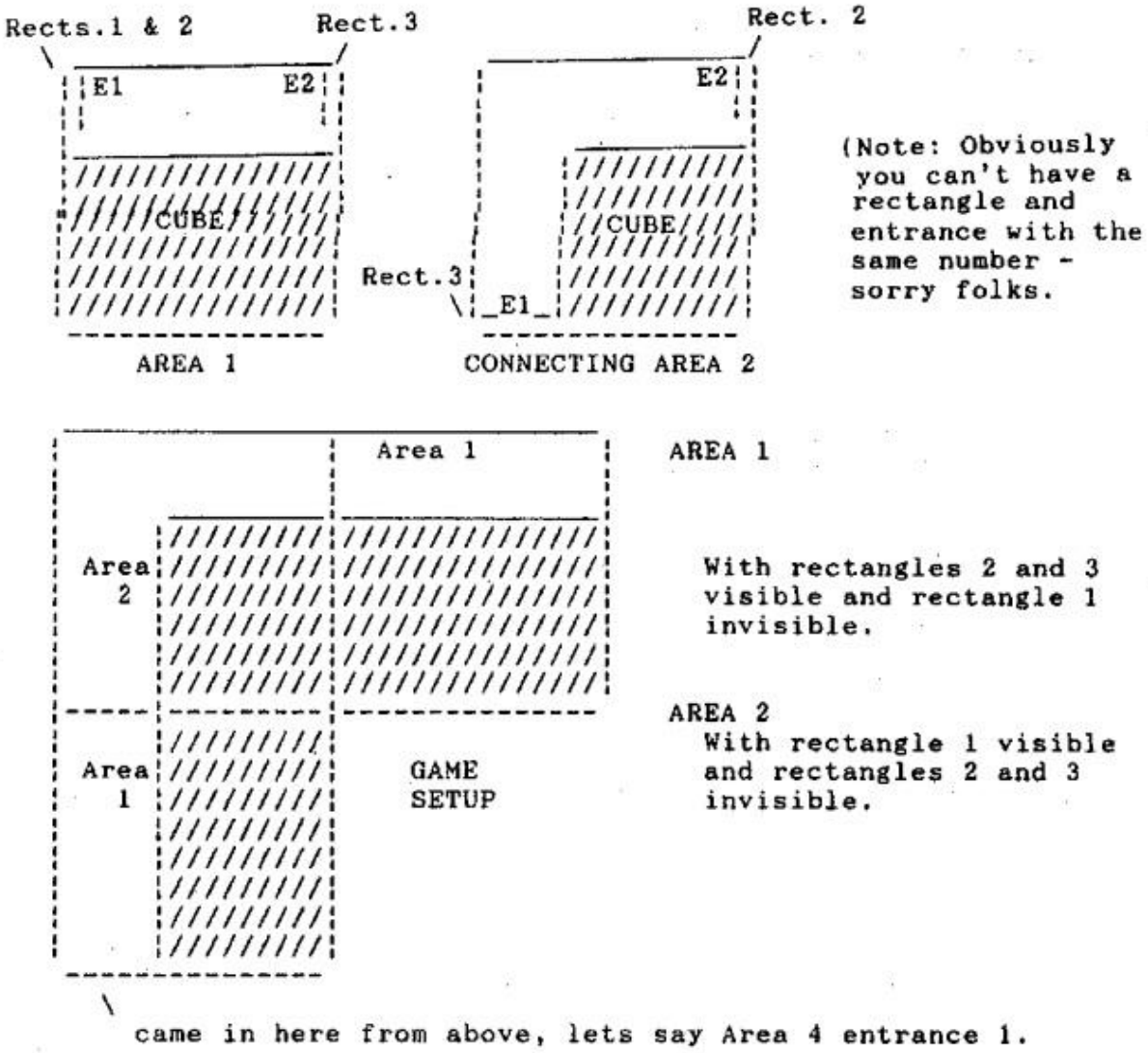
This memory is also in the VIC-11 video bank so you can use the memory to hold sprites. The possible sprite blocks are $C400 to $C43F, $C440 to $C47F, $C480 to $C4BF, $C4C0 to $C4FF, $C500 to $C53F, $C540 to $C57F, $C580 to $C5BF and $C640 to $C67F.

You can use the sprites rather like the brushes in Kit 2. For example, if your game had seven objects to be collected, you can use a sprite editor to draw these objects as sprites and place them in the compiled game from $C400 onwards. You can then write a machine code program at $C640 to check the game variables to see if the player has collected any objects and if she/he has, it turns the relevant sprite on. So when the player picks up say, a torch, a picture of a torch sprite appears, like an inventory. There is no limit to what can be done.

SAVING MEMORY

By David Lacey - COMMODORE 64

If you have two areas which are very similar with only a few objects different, you can just use one area and a few TOGVIS commands. As an example I will outline an area. I did this in one of my games and it works well. To all intents and purposes the player will think that he is using different areas each time when in actual fact he is moving back and forth along the same area. If there are no objects within the area there is no problem at all but with careful use of the togvis commands you will find that object problems can be easily sorted out.



AREA 1: LOCAL CONDITION 1

```
IFHIT     3
THEN
SETV      1     1
GOTO      1     2
ENDIF
IFHIT     1
THEN
SETV      0     1
GOTO      2     2
ENDIF
IFHIT     2
THEN
SETV      0     1
GOTO      1     4
END
```

AREA 1: LOCAL CONDITION 2

```
CMPV      0     1  - in area 1
IFEQ
THEN
CALL      1
ELSE
CMPV      1     1  - in area 3
IFEQ
THEN
CALL      2
SETV      255   1
```

PROCEDURE 1		PROCEDURE 2	
INVIS	1	VIS	1
VIS	3	INVIS	3
VIS	2	INVIS	2

AREA 2: LOCAL CONDITION 1

```
IFHIT     2
THEN
SETV      1     1
GOTO      1     1
ENDIF
IFHIT     3
THEN
SETV      0     0
GOTO      2     1
END
```

This will work fine, but when you enter area 1 or area 3 the wrong objects will be visible for a second until they become invisible via the togvis commands that you should enter.

So local condition 2 in area 1 should really be a General Condition with the area number included after TOGVIS statements in the two procedures. This will make the objects change visibility while in the walkway - area 2. Of course this means this condition will be checked every move in every area. So it really is a compromise between speed and looks which needs to be decided upon.

Here is a small tip that might be helpful - especially for beginner's:

There is no command IFINVIS to do something on the basis of an object being invisible. This can be a real pain. However, this can be easily overcome by typing:

```
IFVIS  (object number)
THEN
END
ELSE
  .....commands
  .....commands
ENDIF
```

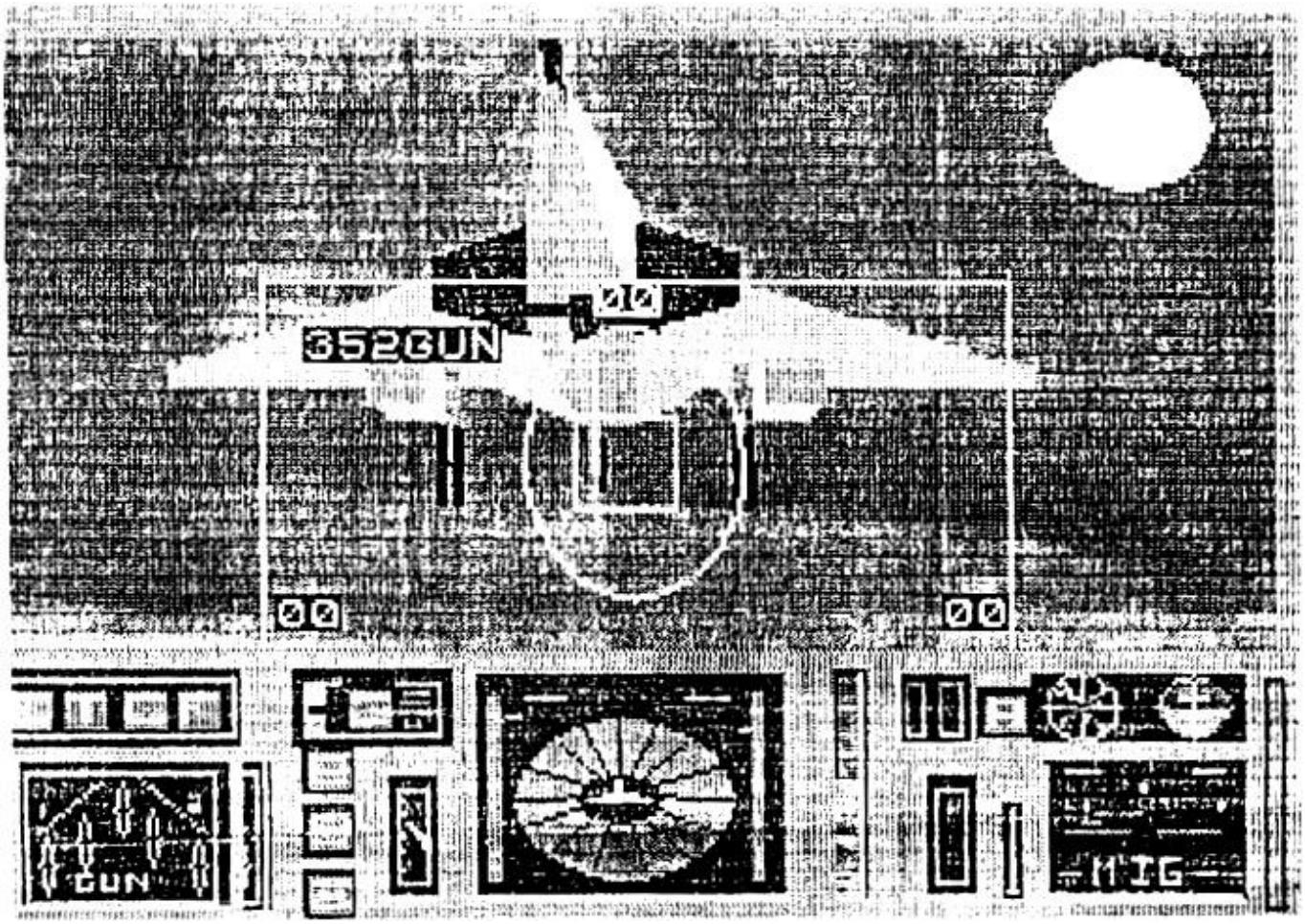
16/32 BIT ROUTINES

AIRCRAFT HEAD UP DISPLAY ROUTINE

By Tony Hartley - KIT 2 ATARI ST

(For Kit 2 but could be adapted for Kit 1)

I have just been re-reading issue 14 of the Newsletter and I noticed that Mike Anders from the good ol' U.S.A. was asking how to get a Head Up display, (HUD for short), used on aircraft to give information onto the cockpit screen, on his 3D Viewscreen/Border. It seemed like a good challenge so here is the answer. All you have to do is to make four instruments, one circle and two frames for a great result like this:



First create a GENERAL CONDITION and EDIT CONDITION thus:

```
FRAME (70,60,249,199,4)
FRAME (149,89,169,109,4)
CIRCLE (159,99,30,4)
UPDATEI (1)
UPDATEI (2)
UPDATEI (3)
UPDATEI (4)
```

Next create 3 Numerical Instruments and 1 Text Instrument. Edit the Instruments as follows:

INSTRUMENT 1

```
NUMBER 1 NAME ALTITUDE
XPOS 73    YPOS 128
XSIZE 16   YSIZE 16
VAR (set to whatever you want)
VAL 1   0
VAL 2   1000
TYPE NUMERICAL
```

INSTRUMENT 2

```
NUMBER 2 NAME AIRSPEED
XPOS 233   YPOS 128
XSIZE 16   YSIZE 16
VAR (set to whatever you want)
VAL 1   0
VAL 2   1000
TYPE NUMERICAL
```

INSTRUMENT 3

```
NUMBER 3 NAME HEADING
XPOS 150   YPOS 60
XSIZE 16   YSIZE 16
VAR (set to whatever you want)
VAL 1   0
VAL 2   1000
TYPE NUMERICAL
```

INSTRUMENT 4

```
NUMBER 4 NAME WEAPONS
XPOS 80    YPOS 70
XSIZE 143  YSIZE 13
VAR (set to whatever you want)
VAL 1   0
VAL 2   1000
COL 1   5   COL 2   7
TYPE TEXT WINDOW
```

Then set the View Window like so:

```
XPOS 1    WIDTH 318
YPOS 0    HEIGHT 136
```

Next design a suitable aircraft control panel Border to fill the bottom part of the screen that is not covered by the view window. Once it is drawn, use the LOCATE BORDER then ADD BORDER to get it into your 3D world. Then you should end up with a decent looking aircraft cockpit with head up display. One of the frames goes all the way to the bottom of the screen but you can alter it to any height position on screen that you wish.

Instrument four is used for displaying the type of weapon selected to fire with on screen and the other Instruments are for altitude, aircraft heading and air speed. This article is mainly to show how to make a very easy head up display. The programming of weapons etc. can be found on page 21 of Newsletter issue 10 (back issues available from Mandy), as explained by Thomas Stuffe. The other Instruments can be used with Variables to show height position etc. More frames and lines can be added on screen to get an even more technical looking head up display if you wish. If you don't know how to program the Instruments with Variables then you can leave the display as it is and it still looks great, otherwise for the technically minded, there is massive scope to get the HUD working properly. As I have just come up with this idea I will play around with it and see what I can add to it later. Happy programming.

COUNTDOWN SEQUENCE

By Tony Hartley - KIT 2 & KIT 1 ATARI ST

(This routine was written with Kit 2 but with only one small change in the routine itself and a bit of design to compensate, it can be used exactly the same for Kit 1. See * below for how to adapt for Kit 1.)

This is an OBJECT CONDITION routine that is used on a button on a control panel to start a countdown sequence working - as used in my game "War Of The Worlds". This could be used in a game where a player has started a rocket ignition/launch sequence. All the text is displayed to Text Instrument number one that is made up of two lines (one above the other), each line is fourteen spaces/characters long. Sound 7 is a suitable siren/warning sample and sample 8 is a rocket/engine sample. It is important to get the blank spaces exact in this listing so that the numbers in the countdown sequence move from right to left as they decrease in value.

<u>Create an OBJECT CONDITION and EDIT OBJECT CONDITION as follows:</u>

```
IF ACTIVATED?                                    - If button pressed
SOUND (7)                                        - Play sample 7
PRINT ("     IGNITION    \N      STARTED   ",1) - Print to Instr. 1
DELAY (150)                                      - Gives chance to read
SOUND (7)                                        - Play sample again
PRINT ("    COUNTDOWN    \N      COMMENCES ",1)
DELAY (150)
SOUND (8)
PRINT ("            5     \N               ",1)
DELAY (50)
PRINT ("          4       ",1)  - The number 4 is on the 10th space
DELAY (50)
PRINT ("        3         ",1)  - The number 3 is on the 8th space
DELAY (50)
PRINT ("      2           ",1)  - The number 2 is on the 6th space
SOUND (8)
DELAY (50)
PRINT ("    1             ",1)  - The number 1 is on the 4th space
DELAY (50)
PRINT ("  ZERO  ",1)
DELAY (70
PRINT ("      WE HAVE     \N   SEPARATION",1)
SOUND (8)
DELAY (100)
SEQUENCE (1)                      - Start Video Sequence of takeoff
ENDIF
```

* This routine is exactly the same for Kit 1 apart from the SEQUENCE command which plays a video sequence of the rocket/craft taking off. Kit 1 users can create a good effect by replacing the SEQUENCE command with a GOTO command and STARTANIM command to take the player to another area where you have already programmed an animation showing the craft taking off - rather like the end of the Kitgame.

STANDARD GAME OF DRAUGHTS

By Ronald Connell - KIT 2 & KIT 1 ATARI ST

(Written on Kit 2 but could be adapted for Kit 1.)

To make a game of Draughts or, as the Americans call it Checkers you should start off with a cube. Reduce the cube's height size in the Y axis until it looks like a flat square. Make a copy of this cube on the left side and colour this second cube (which is object 3), white on top. Create and Edit an object condition for object two and enter the following:

```
IF SHOT?
AND VAREQ? (10,V30)
THEN
MAKESOLID (10)
VIS (10)
ENDIF
IF VAREQ? (20,30)
THEN
MAKESOLID (11)
VIS (11)
ENDIF
IF VAREQ? (30,V30)
THEN
MAKEWIRE (11)
VIS (11)
ENDIF
IF VAREQ? (40,V30)
THEN
MAKEWIRE (10)
VIS (10)
ENDIF
```

After you have done this, create a Pyramid and reduce its size until it looks like a piece you can use for playing draughts. Place this Pyramid which is Object 4 on top of Object 2 square and enter this condition for Object 4:

```
IF SHOT?
AND SOLID? (4)
THEN
SETVAR (0,V30)
ADDVAR (10,V30)
INVIS (4)
ELSE
SETVAR (0,V30)
ADDVAR (40,V30)
INVIS (4)
ENDIF
```

Make a copy of Object 4, which would also automatically copy the conditions too, above Object 4. Shoot object 4 and bring Object 5 down and place it on top of Cube 2. Change the height of Object 5 to 4 or 5 units high to represent the "crowner". Create a group and place all the objects from 2 to 5 into Group 6. Go to the Object Menu and copy Group 6 three times, left, right, left until it is eight squares wide. This would have automatically copied the code in the objects you want with the source code in. Delete all the groups except Group 6 to make it one group, and place the rest of the objects in the area in Group 6. Make a copy of Group 6 above. When Group 7 appears spin it around until Group 7 is facing the opposite way to Group 6. Copy Group 6, Group 7, Group 6, Group 7 at the front only until you have a full draughts board of 8 squares long by 8 squares wide. The source code will have already been copied into all objects and the board to save time.

At this stage save your progress to disc and then carry on. The next stage is to change all the numbers in all the objects so that the numbers represent the object you want to disappear on that square. Change all the object numbers in the draughts board to represent the objects you want to appear on each square. To do this you would have to identify all the pieces starting with small pieces first from the bottom of the board to the top and then the "crowners" from top to bottom.

Make them all disappear and then identify all the black squares that have the source code in and draw a numbered map. Once you have done all this, to start us off and test it, you would need to initialize the board. This means we will make a command which will. make all the pieces disappear leaving only the twentyfour pieces you want to appear at the start of a game. Twelve wireframe pieces on your side and twelve solid pieces on the opposite side.

Enter the following OBJECT CONDITION for the floor - Object 1:

```
IF SHOT?
THEN
MAKEWIRE (19)
MAKEWIRE (20)
   "
   "
   "
INVIS (5)
INVIS (6)
INVIS (7)
   "
   "
```

EXAMPLE NUMBERS ONLY!

Carry on until you have 12 wireframe pieces.

Carry on until you have the rest of the pieces all invisible except 12 pieces.

The condition is a long one and care should be taken.

WHILE PLAYING

When your small pieces reach the end, on the opposite side of the board, during play you want "crowners" to appear instantly. To do this you should set the command so that only the crowners will appear on those four ;end board squares - four wire frame pieces on your opposition side and four solid crowners on your own side. The crowners on your side will be used as a step up to start off crowners for the opposition. To do this you must set up four start off crowners. The solid crowners on your side will have the same value as the small solid pieces and would be summoned to appear when you move a small solid piece onto that square. Another four solid crowners should be placed on those four same squares which have the same value as the rest of the crowners on the board and will always appear when you move the crowners around the board and onto those squares. Do exactly the same thing for the wireframe crowners on the opposite side of the board for your own wire frame crowners.

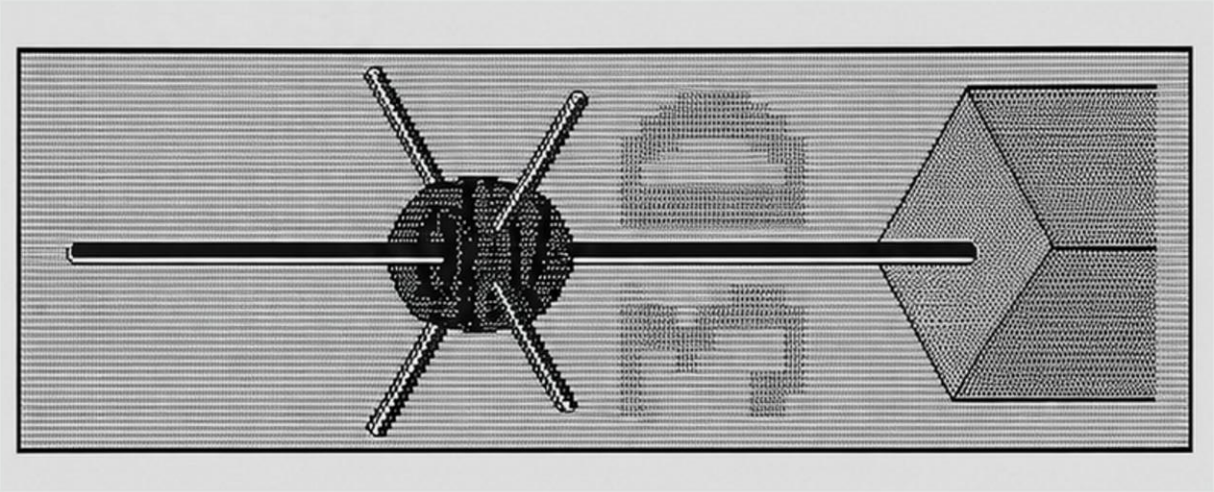
So what you have is start up crowners, four on your side and four on the other side. Then you have the general crowners, four on your side and four on the other and then the rest of the general crowners. twentyfour of them on the rest of the board. In all there are seventytwo pieces used in the program and the majority are invisible. All seventytwo pieces are on the board before initialisation. With this game you can even edit the board by putting pieces anywhere to recall positions in a game you would like to repeat. After you have finished building a board you must delete all the groups before identifying all the objects so that they will work.

Ronald has sent a demonstration disk of his draughts program for the Public Domain Library. Full details are included with the rest of the latest editions received for the Library.....Mandy

CONTRIBUTIONS ARE NEEDED FOR THE NEXT ISSUE PLEASE

3D CONSTRUCTION KIT
USER GROUP

GELLUKKIE KERSTFEEST NBDOLIG LLAWEN JOYEAU NOEL
HOYAR JOULUE FELICES FIESTAS FROHILICHE WEINRCHTON
Y CHRISTMAS AND A HAPPY NEN YEAR BON NADEL
ILEG JOL GOTT OG FARSRELT NOMANEI AR
AU NOEL BON NADEL GLEDELIG JUL
TIGE KERSTDAGEN EN EEN VOORSPOEDIG NIEQR
FBSTAS FELI3 WATAL BUON NATALE GOD JU
E KEIHNRCHTEN UND EIN GUTES NEUES JAHS



JOYEAU NOEL BON NADEL GLEDELIG JUL
PRETTIGE KERSTDAGEN EN EEN VOORSPOEDIG NIEUWJARR
BOAS FESTAS FELIZ NATAL BUON NATALE GOD JUL
FROHE WEIHNACHTEN UND EIN GUTES NEUES JAHR
KIE KERSTFEEST NADDLIG LLWYEN NEWYDD
JOULUR FELICES FIESTAS FROHILICHE WEINRC
CHRISTMAS AND A HAPPY NEW YEAR BON NA
EG JUL GOTT OG FARSRELT KOMANOI AR

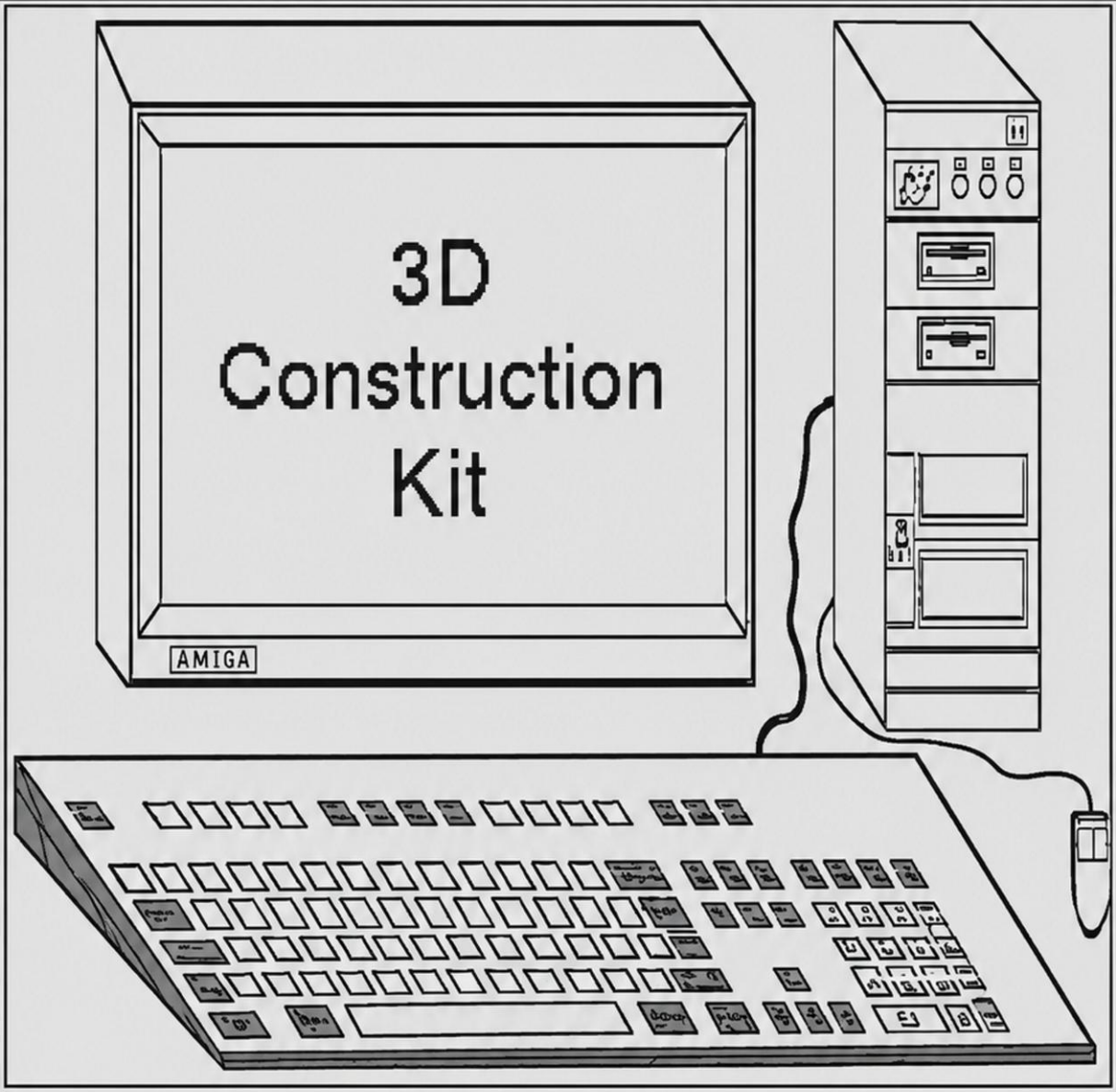
3D Construction Kit Newsletter

Issue Number 17
February/March 1994

CONTENTS

EDITORIAL 409
LETTERS 409
THE USER GROUP GAME 413
THE USER GROUP GAME IDEAS 417
GRAND CHRISTMAS COMPETITION RESULTS 418
3D KIT QUIZ 418
HINTS AND TIPS 419
LATEST ADDITIONS TO THE PD LIST 419
USER GROUP PUBLIC DOMAIN LIBRARY 420
FRUSTRATING FLEXIS 422
LOADING SCREENS FOR THE PC 425

3D CONTRUCTION KIT
USER GROUP
NEWS LETTER
Issue 17 February-March 1994



EDITORIAL

Welcome to issue 17 of the 3D Construction Kit User Group Newsletter.

I have still not recieved the latest version of Kit 2 which I promised would be with you in January which is extremely frustrating. I know that the Amiga and PC version has already been playtested by Mieke Van Der Poll - bless her - so I am sure that it shouldn't be too long now. The Atari ST version hasn't been sent for playtest and I assume that they are working to complete the first two versions first. They did say that the Atari version would be a little later. My phone has been red hot and my ears have been burning recently. I wish I could do something to hurry things up a bit but I can only wait, like you, as patiently as I can. I am sorry to have to ask for your patience once again but I assure you that I will be posting them out to those who have requested them just as soon as I do receive them.

After all this time I am happy to report that I am now working furiously on my own 3D Kit game. There just never seemed to be time to do it before but I am determined to complete it just as soon as I can. I am using Kit 1 at the moment but when Kit 2 is finally ready I intend to transfer the datafile over to that and enhance it considerably. I think that seeing some of the recent PD games that you have done has spurred me into action. They are really good and the ideas and features they contain are remarkable. I will have to work extremely hard to keep up to the standard that has been set. Tony Hartley has just sent me his ULTIMATE DETAIL disk and the objects he has created have to be seen to be believed they are so realistic!

Apart from working on my game - interspersed with sessions on SIM CITY - trying to get to the status of Megamatropolis, I did take some time off when I awoke one morning recently to find the town under a few inches of snow. Great opportunity for some snowball fights with the children and the dog. The dog was more fun as he doesn't throw any back at me. Can't understand what has happened to my aim - I used to be good at snowball fights when I was younger. The same thing seems to have happened as with my dexterity on a joystick. Why, I wonder, is it that young teens can belt along, hopping from one platform to another, shooting everything in sight on these games and when it is my turn I belly flop into the water and die or walk straight into the first baddie I come across. Folks, I am getting past it. Mind you, when it comes to a strategy or adventure games I can still knock spots off them!

I recently decided to blitz the computer room and everything is so neat and tidy I keep thinking I have walked into the wrong room. Only trouble is that I can't seem to find anything I want now. It seemed to be so easy when everything was buried under a pile of papers, magazines and disks but now everything is neatly filed away I have lost practically everything I need!

Ah well, I'll get used to the new arrangement soon. I see the bottom of the page rapidly approaching so I think I had better stop waffling on like this and let you get on with reading the rest of the newsletter. I hope you enjoy it and find it interesting and informative.

Bye for now!
Mandy

LETTERS

Dear Mandy,

After being almost reduced to tears, I finally worked out what was wrong and brightened up considerably! I am, of course, talking about trying to make a cube chasing after me while I move around inside a world. Although you know all about this no-one else will so I'll explain. In issue 3 on page 21, Brian Woodley explains how to make an object chase after you, BUT the explanation is for 3D Kit 1, and although this isn't stated, in those days there was no Kit 2. In issue 7, page 23, Mandy explains the same routine, in detail, to Christopher Batchlor. Anyway, in issue 3 there is a fatal spelling mistake, the variable V40 is written just as 40. This mistake, however, is not made in issue 7. So, once that was sorted out, and everything was set up to work fine, I pressed reset, and low and behold what happens? Nothing. Unless of course you count the fact that the computer flung me to one edge of cuboid 1 and stuck me there so that I could only move left, right and up. The cube did follow though, but only on the X axis. It kept itself on the opposite side of the area. (Was it something I said?).

So a phone call to Mandy later, and I'd worked out the problem. Maybe. The so called Area Condition, which on Kit 2 doesn't exist is actually a Local Condition, so with that fixed what more could go wrong? The SETVAR commands (as best as I can remember), are supposed to be in General Condition 1 for Kit 1 but on Kit 2 this is not the case. The General Conditions are checked every time the screen is updated. This means that by telling the computer where the cube starts after every screen update and setting the variables that move the cube to these coordinates, there is bound to be a problem and of course there was! What needs to happen is that the computer is only told the co-ordinates at the time of reset so, to anyone who knows anything about 3D Kit 2, the obvious answer is to put these SETVAR commands into the Initial Conditions, and hey presto, one rampaging cube. The reason that I have explained this problem of putting 3D Kit 1 routines into 3D Kit 2, in detail, is so that anyone else having this problem or one like it can see exactly how it is fixed and I hope this will help somebody, somewhere. Thanks for the help, Mandy.

Alastair Pack - Old Colwyn
PC Kit 2

Thanks for thinking of your fellow users who might be struggling with this kind of problem, Alastair. Yes, in Kit 1 the General Condition 1 is equivalent to Initial Conditions in Kit 2. As you say, when the earlier Newsletters were published Kit 2 didn't yet exist and so no explanation was forthcoming for Kit 2 users.....Mandy

---

Dear Mandy,

I am really looking forward to the upgrade and the possibility of using more of my PC's available memory than the present version can, not to mention the bug fixes! While I have fingers to keyboard, maybe you could point me in the right direction with a problem I recently encountered. It was only the other day that I used the 3DMAKE utility for the first time as I wanted to send my world to a third party for them to view. Now I've only scratched the surface of the FCL and so the problem I came across might be in my use of it. I'd developed an environment with associated border and controls which started off with a video swirling around on a viewpath giving a tour of the first area.. Once you had settled back to earth again the controls were in your hands. I remember reading in the User Group magazine how to place controls on the border. The problem for me, and others it seemed, was making the border visible to enable this. The trick was to press the "ESC" key after choosing the border to pop it up. Simple, though sometimes there seems to be a rather long wait! Anyway I implemented the "video" by setting up an Initial Condition which used the SEQUENCE (1) command to make it run. My problem came after creating the stand-alone disk. As soon as the world loaded it began to run the "video". All was fine except that the border wasn't visible. Once the sequence had run you could press "ESC" and sure enough the border popped up, as did a re-run of the video. How do I set things up so that the border loads straight away and I don't have to press "ESC" or watch the tour twice? Is this just me making a fundamental flaw in my understanding of the concept?

Nigel Alefounder
PC Kit 2

I was nearly tearing my hair out in frustration trying to solve this problem for you, Nigel. I finally gave up and went to talk to "the man who knows" - Paul Gregory at Incentive. "Yes," he said, "You do have to press ESC - for the moment that is." That remark leads me to believe that the final version may be programmed to overcome that problem. "However," he continued, "One way around the problem is the use of a variable that is not reset and there is such a one. On page 77 or the manual (11.3) you will see that variable 255 is not reset because it is used in conjunction with the LOADWORLD command. If you don't want the video sequence to run more than once you should use that variable in your FCL command to be something like this:

```
COMMAND........
COMMAND........ - (whatever the previous commands are)
IF VAR=? (V255,0)
THEN SEQUENCE (1)
SETVAR (1,V255)
ENDIF
```

That way the program will firstly check if the video sequence has already been played before acting and if it has then it will not be played. Hope this helps.....Mandy

---

Dear Mandy,

I would like to know if you have a conversion guide to convert 3D Kit to the Sam Coupe computer. I converted DRILLER some time ago but can't use the save/load game in progress? Even better, would you as a group, convince Incentive to bring out a Sam Coupe specific program so "Sam" users can then create their own program? If you have never heard of the Sam Coupe it is alive and well and is shipped from Swansea and I'll gladly give you help, names and addresses etc if you can help me.

Brian Harriman Durham
Spectrum/Sam Coupe

Dear Mandy,

I own a Spectrum version of 3D Kit and have various Spectrum computers and I also have a Plus D Interface with disk and I use a snapshot utility to transfer games to disk - I assure you I DON'T use this to infringe copyright but to speed up loading and saving. I would like to know if it is possible to convert 3DCK to work with disk drives, I know it has a disk option but this is for the +3. To be given this option in my program would be very helpful to me as I use my Plus D most of the time. I also own a Sam Coupe and would like to know if 3DCK is available for the SAM but not run under emulation?

***C.G.Urwin* Spennymoor, Co Durham**
Spectrum/Sam Coupe

I am afraid that there is nothing that can be done to help with the disk problem as the only disk version was for the +3 and even that is no longer available. Unfortunately, neither Incentive or Domark have any plans to produce any other 8 bit versions of 3D Kit and so Sam Coupe users will have to stick to emulation. The Sam Coupe computer is a great machine and, in my opinion, was produced just too late to make the impact on the market that it would have had, had it come out before the Atari ST and Amiga took such a huge chunk out of the market. It was sadly ignored by the software companies and programmers and it is a pity that shortly after production it forced owners to struggle to keep it alive and well with dedicated groups of enthusiasts. I'm sorry that I cannot help with your problems.....Mandy

---

Dear Mandy,

We are all hoping that you haven't been flooded out again with all the terrible weather we see on the news! I'm writing for my son Tom, who is the actual user of the 3D Kit, he is trying to contact a Society in England called ANIME UK LTD. It has to do with Japanese "Manga" films; mostly computer generated. I wondered if, with all your contacts in the computer world you might know of anyone who knows the society and where we could contact them? I think that they are based in Birmingham. I am hoping that you can help and sorry to bother you and I know you are up to your eyes in the magazine, but I don't know who else to ask! Our part of Holland is SO behind the times - there is no chance of anyone here having a clue. Thanks.

Sue Rixom
Dr. A. Kuyperstraat 20, 7556-DX Hengelo (O), Holland

I tried directory enquiries for the Birmingham and surrounding area for the name of the company so that I could ring them for details for you but apparently they are not listed anywhere in that or West Midlands area. I have not heard of them myself so I am printing your letter here, with your full address, just in case any other member has heard of them and can help you out.....Mandy

Dear Mandy,

Firstly I would like to wish you and fellow members a Happy New Year. And a drier one than '93! That you kept a level head (so it seems!) throughout all your problems and still managed to produce a newsletter, is a testimony to a true professional, Secondly, thanks to Mieke Van Der Poll for going to the trouble of offering help with my palette problems, via the newsletter. Until the latest version of the Kit arrives I'm still using version V2.03 so the enhancements to the colour facilities are, tantalizingly, just around the corner! I do use Deluxe Paint II (the un-enhanced!!) so it's colour options are slightly more primitive, but as it is a great little program which has no compatibility problems with 3D Kit - and what's more came free with my mouse! - I'm happy to stick with it until the enhanced version comes along similarly bundled.

As it is the start of the year I'd like to waffle on a bit about the last 3D Kit Year over here on the borders. It started, I seem to remember, with a less than complimentary review of the Kit in PC Format. The writer made a fundamental mistake by comparing it with dissimilar packages of vastly differing prices, in an attempt to provide an overview of what 3D Software was generally available. These were all PC based and varied from approximately £2,500 down to the "humble" Kit at £50. I could go on for ages berating them for their lack of vision and comprehension about the Kit's philosophy, but it would only serve to increase my stress levels! The "reason to be" of the Kit, to my mind, is that it offers 3D environment building, albeit at a relatively low resolution, with real-time walk-through. This last, none of the reviewed packages could offer. Sure the high-end program is the most sophisticated all-round 3D package going but it still works on the "render-a-frame-and-save-then-join-together-and-make-a-movie" method. The computer needed to run it efficiently is an awesome beast.

With the Kit Dimension have broken new ground in the home computer field. We have the only program in it's class. No one else has produced a real competitor. Before people grumble too much about the product and the "bugs" we've all come across while working away in front of our screens, it might be wise to ask what else you are going to get to do the same job? I have heard of another program at about $400 but it doesn't have a programming language. For PC users there is, of course Dimensions wonderful SUPERSCAPE which offers broadly the same facilities as the Kits - and then some! However it is expensive too and a commitment is needed to acquire the necessary funds - unless you happen to have a lot to spare.

Later in the year I made use of Mark Rose's excellent PC public domain library. Not only does he have oodles of interesting 3D Kit files but also plenty of other graphics related stuff. You won't find a PD library in any of the magazines which offers the value for money Mark does! Use him before he decides that no-one is interested and packs-up! We also corresponded about other 3D computer topics and if you have a PC this is the chap to ask if you want to find the answer!

Tony Hartley contacted me after I mentioned using an Atari datafile of his (FASTTOWN) on my PC. We beavered away experimenting with the notion of using 3D Kit datafiles on different machines to the ones they were created on. The post was busy for many weeks and you've probably read the results.

Then as November loomed (or is that gloomed?!) I had the same problem as Steve Frampton had with the Kit's 3D Make utility, as he mentioned in the Dec/Jan newsletter. In my case the border was on my hard-disk and I didn't notice the stand-alone disk was reading it in from there when I tested it. I subsequently sent a demonstration out to an archaeological unit I've been talking to about a reconstruction I was working on, only to realise that the nifty border I had designed, along with all the control icons, wasn't loaded - ooops! I managed to fool the programme into locating the border on the destination disk and all worked fine. I hastily sent an upgrade...

All in all then an eventful year and good fun! The prospect you've hinted at - that there may be more 3D Kit developments to come, has set me speculating what these maybe, but as they're "top-secret" I don't expect you'll let slip yet! So roll-on 94!

Nigel Alefounder
PC Kit 1 and Kit 2

MORE LETTERS NEXT ISSUE

The latest version of Kit 2 has been mentioned a few times in the letters so I had better give you a progress report. There has been a bit of a delay - do I sound like a cracked record? - and, despite promises that it would be out in early January - 'twas not to be. However, I know that Mieke has done a thorough playtest and returned the disks for Amiga and PC to the programmers and I am now expecting them any day now. I'll do what I promised and fill up the mound of jiffy bags you have all sent me and post the final version as soon as I get my eager hands on it. I'm making no promised as to the date though as I seem to cast a jinx on things when I do!.....Mandy

---

THE USER GROUP GAME

This issue by Mieke Van Der Poll

PART NINE:

HOW TO CREATE AND USE A BORDER IN A STAND ALONE 3DKIT GAME

Using the Instruments/Inventory variables in General Conditions

Last issue we designed the border and defined the instruments used in it. We even made a beginning with General Condition No 1 (3D Kit 2: Initial Condition). Let us take a closer look at this General Condition: Under General click on Edit Condition and click twice on Condition 1. We already typed the UPDATEI (Instrument number) commands in it and by doing so the variables tied to them are automatically set to zero. So we do not have to type in a separate SETVAR command.

For the Inventory Routine we do not have to set the different variables to zero either because this will be done in the three General conditions we are going to use for this routine. As those conditions handle the objects found also, their variables do not have to be set to zero either.

So for our purpose we do not have to add anything more to the General Condition 1 (Initial Condition). Click on the cross icon (lowest left in the text window) to leave the Condition. Whenever you want to check a General Condition just call it under the General Menu to edit it and by pressing the arrows down and up on your keyboard or click on the relevant icons in the left of the text window you can scroll through the text and perhaps change something. When you do not change anything you can click on the cross icon down left but when you do change something you have to confirm this by clicking on the tick icon upper left or press Shift and Enter/Return. (In 3D Kit 2 you edit the relevant condition and just click on cancel when you didn't change anything or on OK when you did).

We are now going to make a General Condition for the Timer-bar:

KIT 1

Create Gen.Cond.2
Edit Gen. Cond.2
Type in the following:

```
IF TIMER?
THEN ADDVAR (1,V30)
ENDIF
IF VAR=? (V30,1000)
THEN
PRINT ("YOU RAN OUT OF TIME",5)
SOUND (16) (antibonus snd PC)
DELAY (150)
PRINT ("                    ",5)
ENDGAME
ENDIF
```

KIT 2

Create Gen. Cond. 1
Edit Gen. Cond. 1
Type in the following:

```
IF TIMER?
THEN ADDVAR (1,V30)
ENDIF
IF VAREQ? (V30,1000)
THEN
PRINT ("YOU RAN OUT OF TIME",5)
SOUND (16) (antibonus snd PC)
DELAY (150)
PRINT ("                    ",5)
ENDGAME
ENDIF
```

We can make almost the same condition for the Energy bar:

KIT 1

Create Gen. Cond. 3
Edit Gen. Cond. 3
Type in the following:

```
IF VAR>? (V31,1000)
THEN
PRINT("YOU RAN OUT OF ENERGY",5)
SOUND (16)
DELAY (150)
PRINT("                    ",5)
ENDGAME
ENDIF
```

KIT 2

Create Gen. Cond. 2
Edit Gen. Cond. 2
Type in the following:

```
IF VARGT? (V31,1000)
THEN
PRINT ("YOU RAN OUT OF ENERGY",5)
SOUND (16)
DELAY (150)
PRINT ("                    ",5)
ENDGAME
ENDIF
```

The loss of our energy is connected to, for instance, objects we collide with, how many times we are shot or other events that create the loss of energy. So this will also depend on OBJECT CONDITIONS.

The Score and Found-bar are connected to objects we can pick up and, in larger games to more puzzles or missions to solve which will increase the score for instance. We do not have to make General Conditions for these two, but later on we make Object Conditions and add numbers to the Found-bar and Score variables.

The Inventory Box in the border, however, needs three General Conditions. The first one is connected to the X and Y coordinates of the inventory box and the left or right mousebutton pressed in that area of the border.

In our border the Inventory Coordinates are:

```
X= 10 to 95 (upper left to upper right part)
Y= 130 to 165 (upper and lower part)
```

With this condition we also use the System Variables V17 and V18, whereas V17 = X coordinate mouse button(s) pressed and V18 = Y coordinate mouse button(s) pressed.

KIT 1

Create Gen. Cond. 4
Edit Gen. Cond. 4
Type in the following:

```
IF VAR>? (V18,130)
AND VAR<? (V17,95)
THEN
IF VAR<? (V18,165)
AND VAR>? (V17,10)
THEN SETVAR (0,V17)
SETVAR (0,V18)
SOUND (17) (chink snd PC)
IF VAR=? (V36,0)
THEN SETVAR (1,V36)
SOUND (17)
ENDIF
ENDIF
ENDIF
```

KIT 2

Create Gen. Cond. 3.
Edit Gen. Cond. 3
Type in the following:

```
IF VARGT? (V18,130)
AND VARLT? (V17,95)
THEN
IF VARLT? (V18,165)
AND VARGT? (V17,10)
THEN SETVAR (0,V17)
SETVAR (0,V18)
SOUND (17) (chink snd PC)
IF VAREQ? (V36,0)
THEN SETVAR (1,V36)
SOUND (17)
ENDIF
ENDIF
ENDIF
```

There are three IFs so we have three ENDIFs. The variable V36 is connected to the mousebutton(s) click.

KIT 1

Create Gen. Cond. 5
Edit Gen. Cond. 5
Type in the following:

```
IF VAR=? (V36,1)
                        if the mouse button has been clicked
THEN SETVAR (2,V36)
                                          then confirm this and
SETVAR (0,V34)
                variable connected to number of objects found
SETVAR (0,V35)
                                 connected to the object variable
PRINT ("INVENTORY FOLLOWS...",5)
DELAY (150)
PRINT ("                    ",5)
ENDIF
```

Create Gen. Cond. 6
Edit Gen. Cond. 6
Type in the following:

```
IF VAR=? (V36,2)
            if click confirmed and inventory follows: Printed
THEN ADDVAR (1,V34)
                                                then add 1 object
IF VAR=? (V34,1)
                                             if object 1 is there
THEN IF VAR=? (V37,1)
                                             if object 1 is taken
THEN ADDVAR (1,V35)
                          add object 1 to this variable and...
PRINT ("YOU CARRY:- A KEY   ",5)
DELAY (150)
PRINT ("                    ",5)
END
ENDIF
ENDIF
ENDIF
IF VAR=? (V34,2)
                                          if object 2 is there...
THEN IF VAR=? (V38,1)
                                       then if object 2 is taken...
THEN ADDVAR (1,V35)
                           then add object 2 to this variable
PRINT ("YOU CARRY:- A TORCH ",5)
DELAY (150)
PRINT ("                    ",5)
END
ENDIF
ENDIF
IF VAR=? (V34,3)
THEN IF VAR=? (V39,1)
THEN ADDVAR (1,V35)
PRINT ("YOU CARRY:-A CRYSTAL",5)
DELAY (150)
PRINT ("                            ",5)
END
ENDIF
ENDIF
IF VAR=? (V34,4)
THEN SETVAR (0,V36)
SETVAR (0,V34)
IF VAR=? (V35,0)
THEN
PRINT ("YOU CARRY:-NOTHING ",5)
DELAY (150)
PRINT ("                            ",5)
SETVAR (0,V35)
ENDIF
ENDIF
ENDIF
```

KIT 2

Create Gen. Cond. 4
Edit Gen. Cond. 4
Type in the following:

```
IF VAREQ? (V36,1)

THEN SETVAR (2,V36)

SETVAR (0,V34)

SETVAR (0,V35)

PRINT ("INVENTORY FOLLOWS...",5)
DELAY (150)
PRINT ("                    ",5)
ENDIF
```

Create Gen. Cond. 5
Edit Gen. Cond. 5
Type in the following:

```
IF VAREQ? (V36,2)

THEN ADDVAR (1,V34)

IF VAREQ? (V34,1)

THEN IF VAREQ? (V37,1)

THEN ADDVAR (1,V35)

PRINT ("YOU CARRY:- A KEY   ",5)
DELAY (150)
PRINT ("                    ",5)
END
ENDIF
ENDIF
ENDIF
IF VAREQ? (V34,2)

THEN IF VAREQ? (V38,1)

THEN ADDVAR (1,V35)

PRINT ("YOU CARRY:- A TORCH ",5)
DELAY (150)
PRINT ("                    ",5)
END
ENDIF
ENDIF
IF VAREQ? (V34,3)
THEN IF VAREQ? (V39,1)
THEN ADDVAR (1,V35)
PRINT ("YOU CARRY:-A CRYSTAL",5)
DELAY (150)
PRINT ("                    ",5)
END
ENDIF
ENDIF
IF VAREQ? (V34,4)
THEN SETVAR (0,V36)
SETVAR (0,V34)
IF VAREQ? (V35,0)
THEN
PRINT ("YOU CARRY:-NOTHING ",5)
DELAY (150)
PRINT ("                    ",5)
SETVAR (0,V35)
ENDIF
ENDIF
ENDIF
```

The last ENDIF is connected with the beginning lines of the condition.

The last condition statement in the above General Condition does check if any objects are taken at all and, if not, it will print the relevant message on screen and the relevant variables are set to zero. This statement must always be placed at the END of the General Condition.

If you have more than three objects to pick up in your game, say for instance six objects, you first have to add the other three into this condition. This means that three more numbers are added to the Variable 34 before you arrive at the last condition statement. So the last statement then begins with:

```
IF VAR=? (V34,7)          IF VAREQ? (V34,7)
            instead of (V34,4)
```

So the more objects you have the higher the number of V34 will be in the last condition statement.

Create some objects in Area 1 and try to give them an object condition to pick them up. Set the relevant variable to 1 if the object has been picked up. Click in the Inventory box to see if the right message comes up. As you remember we used three object variables: V37, V38, V39.

```
For instance:  IF ACTIVATED?
               THEN
               PRINT ("YOU PICK UP A KEY...",5)
               SOUND (13)
               DELAY (150)
               PRINT ("                  ",5)
               INVIS (2)
               SETVAR (1,V37)
               ADDVAR (1,V32) add 1 to found variable V32
               ADDVAR (100,V33) add 100 to score var. V33
               ENDIF
```

You will see the number 1 in the found-instrument and the number 100 in the score-instrument. When you click on the Inventory-box the message should read:

Inventory follows:- You carry: a key

Try a condition on an object to add numbers to the energy variable. Take for instance object 3:

```
IF SHOT?
THEN ADDVAR (100,V31)
ENDIF
```

Shoot it 11 times and check if your General Condition to this variable works alright.

if all is well, you should see your time-bar moving as time goes by... When it reaches the number 1000 the relevant message pops up and the game is reset.

You now have a basic construction to help you create a game of your own.

Up until now we are, when in Test Mode, only capable of moving around using the keyboard. For instance Key 0 moves us forwards and key K moves us backwards. See the manual for other movement keys. We still have to define the movement icons for our mouse. We will do this next time, but perhaps you can, with the aid of your manual, define them yourself already. Next time we are going to try and make the User Group Game respond to all this programming and then make the Game into a Stand Alone one!

TO BE CONTINUED NEXT ISSUE.....

THE USER GROUP GAME IDEAS
FOR THOSE FINISHING TOUCHES

By Tony Hartley

As you can see we are almost at the end of our programming. Another issue and we will be just about finished with our game. The game will look a lot better with a few finishing touches added. It is your game and your choice and I am not telling you what to do but merely giving you a few ideas.

COLOUR

The game will look a lot better with some suitable colours for each of the areas.

GENERAL POINTS OF COLOUR

Think about where the light source is coming from in each of your areas. All the faces of objects facing the light source should be a lighter shade than those faces that are not. Also add a lighter shade of colour around windows and the floor where the light hits. Try a little lighter colour on the floor at the bottom of doors to give the impression of light shining underneath the door. Just put a rectangle on the floor in front of the door and use a lighter colour than the floor colour on it. The dark Alchemists Chamber would be ideal for this!

THE DUNGEON - AREA 6

Because it is a dungeon it does not mean that it has to be all black and grey. You could use shades of dark purples (yes, purple) and dark blues to give a very realistic effect of a darkly lit area. Near the top of the stairs you can use lighter shades of blue around the trapdoor exit (that leads back into the Great Hall - Area 2), to simulate a bit of light shining through into the Dungeon. You could also make the steps get darker in colour as they get nearer to the floor of the dungeon and further away from the light.

THE START AREA - AREA 11

This area has a lot of water in it and a good colour for the water would be a very light grey/blue which gives a more realistic effect than the normal dark blue that people often use *(how on earth did you know that I did that. Tony? - Ed)*. The castle would look good in a very dark, nearly black shade of red to give it that eerie look. The surrounding grassland would suit a grey green shade and not a bright yellow green that is also often used *(I am cringing here, Tony - Ed)*. The idea is to create a sinister looking place not a brightly coloured area.

THE ALCHEMISTS CHAMBER - AREA 4

This is a good place to go a bit mad with the use of colour. As it is a place of ;many books and potions, chemistry and sorcery objects you can add lots of bright coloured bottles, flasks etc.

THE LONG GALLERY - AREA 3

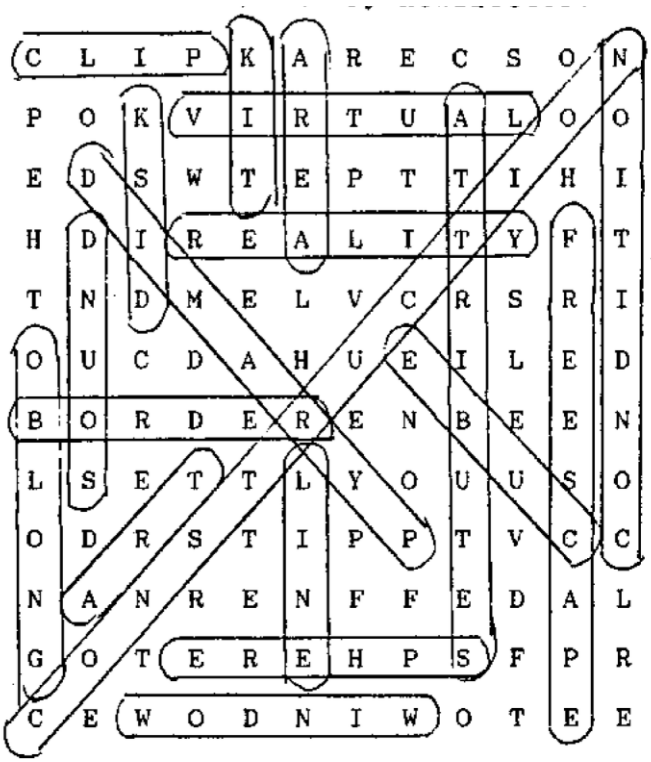
This is a good place to put some bright red and gold shields on the walls and perhaps some silver coloured armour/weapons such as swords, knights, maces etc, around this room. You could also add some evil looking pictures on the walls of the gallery.

These are just a few ideas for the use of colours and here are some ideas for extra puzzles that you can incorporate into your game to make it uniquely your own.

You could have some spikes appear from the ceiling or the floor in one room. You could also have a large round rock (use a sphere in Kit 2 or a few pyramids slotted together in Kit 1) appear from out of a wall and chase you if you do something wrong as in the Indiana Jones film. How about a giant hole appearing in the floor when you step on a certain tile or rug. Another idea for a puzzle is to make the walls or ceiling move inwards to shrink the room that you are in or you could try the chessboard puzzle on the floor from page 19 in issue 12 of the newsletter. Back issues available from Mandy. You could also have a jewel in one cage and a monster in another next to each other and make the player have to pull the right lever to open the cage containing the jewel and not the monster. How about a swinging pendulum across a doorway? I hope these ideas give you the incentive to try and have a go at some puzzles in your game. Good luck!

GRAND CHRISTMAS COMPETITION RESULTS

Here is the correct solution to the Christmas competition featured in the December/January newsletter:



HIDDEN WORDS:

Area	Cube	
Art	Data	Pyramid
Attributes	Disk	Reality
Border	Freescape	Sound
Clip	Kit	Sphere
Condition	Line	Virtual
Construction	Oblong	Window

The missing word from the grid is

DATA

All correct entries were put in the hat and the lucky winning name drawn out was:

ALASTAIR PACK of Old Colwyn!

Congratulations Alastair, your prize of the Flight Sim Toolkit is on its way to you! Well done!

When Alastair sent in his competition entry he said that, as he felt sorry for Tony Hartley not being able to enter the competition, he would enclose a little quiz for everyone to take part. See how well you can do. The answers set out below but are written backwards.

3D KIT QUIZ

By Alastair Pack - PC

QUESTIONS

1. You are all used to using 3 dimensions in the Kit, but do you know what the fourth dimension is?
2. Does this next FCL command exist in 3D Kit for 16/32 bit machines?

```
SETHEIGHT (P1)
```

3. How many different fades are there in Kit 2?

ANSWERS

1. Gnidrocca ot eht SREBMAHC HSILGNE YRANOITCID eht htrof noisnemid si emit.
2. Sey, ti seod. Hguohtla ton ni eht D3 TIK LAUNAM ti seod tsixe, yrt ti tuo!
3. Neetxis. Sereht eht slavedaf orez ot enin dna eht resu sedaf net ot neetfif - gnikam a latot fo neetxis ni lla.

HINTS AND TIPS

By Les Winstanley - PC KIT 2

Being a relatively new subscriber to the User Group I'm not sure that that I have found hasn't been written about before, but here goes. I have found that it is possible for one object to be placed inside another's cube space by simply setting one of your object coordinates manually from the object attributes menu.

Here are a few useful tricks. Say you want to create a lot of similar but slightly different rooms (a hotel or block of flats for example). Using this technique all you have to do is design one room, fill the room with furniture (say a bed, table and chairs, armchair and wardrobe). Next copy all your furniture and make the original invisible. Now redesign the layout of your room by placing the copied objects in slightly different positions. Do this a few times, perhaps even redesigning your furniture. The only thing you have to do is to do a bit of programming to TOGVIS the furniture you require for your "different" rooms.

LATEST ADDITIONS TO THE PD LIST

ENDURANCE

Written by Ozzie O'Mara for the Atari ST. This is a stand alone game written with 3D Kit 1.

The year is 2500 AD and the peace of the Galactic Federation hangs by a very fine thread. During these turbulent days unorthodox methods for promotion have been adopted. Commander Iff, your unit superior officer and whom, by chance, is also the sector overseer (I might just add he has not been the same since that atomix incidence! A stalwart to the new regime "make the grade or die".

The new hyper-space route is cutting a sway through the sector. Planets, moons and small suns are being demolished. Station 36, an old orbitor has been de-commissioned for this task. Its atomix core, once detonated, will set off a small nebular explosion (it beats the swinging ball). Your task is not a small one. You have to find and disarm the Harpey detonator, deactivate the missiles on the surface of the planet, find the power crystal which is the shuttle power source and escape the sector via the shuttle.

So the scene is set for a most enjoyable science fiction adventure. The game has been beautifully designed and the objects are extremely realistic and believeable. The border, especially, is extremely well designed. There is a set of icons at the top of the screen which allow you to examine, pick up, use, put in your rucksack, etc whilst the lower part of the border is made up of the usual movement icons, a text window, save and load buttons and your timer and energy bars.

Be warned, this is not an easy game. Don't expect to get very far in just one sitting. Actually, just getting out of the first location is a mammouth task in itself. This game is addictive and if you decide to get this one then be prepared to spend a great deal of your time glued to the keyboard and almost tearing your hair out in frustration!

USER GROUP PUBLIC DOMAIN LIBRARY

DARKNESS CALLS by James H Yusuf - AMIGA KIT 1

Stand alone game written with 3D Kit 1. Sci-fi game with eerie sound effects and excellent atmosphere.

MOUNTAIN ADVENTURE by Mieke Van Der Poll - AMIGA KIT 1 (1 meg)

Either stand alone or datafile format. Please state which. Game written with 3D Kit 1. Adventure within a mountain maze. So much to do it will keep you very busy for ages!

PLANET OF THE DALEKS by Steve Hilder - AMIGA KIT 1

Datafile and border format. Written with 3D Kit 1. This is a game for all Doctor Who fans. Those dastardly daleks are everywhere.

ATLANTIS by Mieke Van Der Poll - AMIGA KIT (1 meg required)

Either stand alone or datafile format. Please state which. Game written with 3D Kit 1. Eerie and enjoyable underwater adventure. Excellent music and sound effects.

MAGICAL MAZE by Mieke Van Der Poll - AMIGA KIT 2

Stand alone or datafile format. Please state which. Beautifully structured maze adventure which utilizes most of the Kit 2 facilities beautifully.

FAST TOWN by Tony Hartley - AMIGA KIT 1

Converted to Amiga by Mieke Van Der Poll. Hundreds of objects, beautifully drawn to enable you to create your own realistic town. This is in datafile and border format with ready made towns too.

FAST TOWN by Tony Hartley - AMIGA KIT 2

Converted by Mieke Van Der Poll. Hundreds of objects beautifully drawn to enable you to create your own realistic town. Datafile and border format - ready to add your own Kit 2 special effects.

E.F.T.P.O.T.C.M. by Andrew Herbert - AMIGA KIT 1 & KIT 2

Stand alone game included called ESCAPE FROM THE PLANET OF THE CARDBOARD MONSTERS. More interesting is the whole suite of utilities on the disk to help you create stand alone games. Added bonus here is a virus checker and killer to deal with the dreaded SADDAM virus.

MESSAGE DEMO ROUTINES by J Hayes - AMIGA KIT 1

Datafile and border format. Routines showing how to scroll descriptive messages. Also includes small demo game.

LANDSCAPE DEMONSTRATION DISK by J Hayes - AMIGA KIT 1

Datafile and border format. Routines showing how to program an impressive "neverending" landscape.

TUNES AND SCREENS by Dominique Watson - AMIGA KIT 1 & KIT 2

Octamed player and thirteen or so original music pieces for you to use in your games or intro sequences. Also plenty of sci-fi type loading screens for you to use.

UTILITIES DISK by Stephen Moore - AMIGA KIT 1 & KIT 2

A useful suite of programs which will enable you to create loading screens etc for your stand alone games. Useful utility for reading different machine formats on your machine too.

FLIGHT SIMULATOR DEMO by Thomas Stufe - AMIGA KIT 1

Datafile format showing how you can program a flight simulator type program with 3D Kit.

BUILDINGS by Allan Hearn - AMIGA KIT 1

Datafile format showing various buildings ranging from Stone Henge to Salisbury Cathedral.

SOUND SAMPLES by Mieke Van Der Poll - AMIGA KIT 1

Contains the new MakeSampleBnk program together with no less than 26 different sound samples ready compiled into the file "various.bnk".

INVENTORY ROUTINE by J Hayes - AMIGA KIT 1

Datafile format. This suite of routines show you how to organise the players inventory and print what they are currently carrying.

EXAMPLES by Juergen Hunke - AMIGA KIT 1

Datafile and border format. Lots of different and interesting objects for you to use in your datafiles if you wish.

BORDERS by A J Bevan - AMIGA KIT 1 & KIT 2

Selection of borders for you to use if you feel that your artistic talents are not up to scratch.

WAR OF THE WORLDS by Tony Hartley - ATARI ST KIT 2

Datafile and border but works like a stand alone game. Contains so many features, wonderful sound effects, eerie atmosphere. Excellent game should keep you busy for weeks. One of the best I've seen so far.

ENDURANCE by Ozzie O'Mara - ATARI ST KIT 1

Stand alone game. Extremely well designed. Will keep you busy for a very long time. I thoroughly enjoyed it. It is addictive and frustrating too.

INFILTRATION by Robin Ball - ATARI ST KIT 1

Excellent shareware stand alone game. Has that certain something that just keeps you going back for more.

SPEILRAUM by Peter Ward - ATARI ST KIT 1

Stand alone game. First of a trilogy of 3D Kit games by Peter. I got lost in a bewildering maze of passages the first time I played. Most enjoyable.

KAKRIVS by Peter Ward - ATARI ST KIT 1

Stand alone game. Second in the trilogy, I enjoyed this one better than the first. Take your Tardis and explore. You won't regret it.

HYSULA by Peter Ward - ATARI ST KIT 1

Stand alone game. Third in the trilogy. If you enjoyed the other two games then go on and give yourself a treat.

THE MAZE by David Sambrook - ATARI ST KIT 1

Stand alone format. This is the most addictive and infuriating maze type game that you will ever come across! I was enthralled for ages.

WEST ONE by Frank Carr - ATARI ST KIT 1

Stand alone game. Take on the role of Harris Tweed, secret agent extraodinaire. Great border, sound effects and nice loading sequence. Beautifully designed game.

FAST TOWN by Tony Hartley - ATARI ST KIT 1

For details see Fast Town Amiga Version.

FAST CITY by Tony Hartley - ATARI ST KIT 2

Datafile and border format. Hundreds of beautifully designed buildings and objects to help you instantly design your own city. Should be seen to be believed! A real favourite.

RANDOM BOXES CITY SKYLINE by Ronald Conell - ATARI ST KIT 1 & KIT 2

A paint package that allows you to generate a random city skyline. Menu driven and full instructions on the disk.

SOUND UTILITIES by Juergen Hunke - ATARI ST KIT 1 & KIT 2

Two excellent programs to use with your sound samples. Full instructions enclosed on the disk.

EXAMPLES by Juergen Hunke - ATARI ST KIT 1

For details see Examples Amiga version.

BORDERS by Robin Ball - ATARI ST KIT 1 & KIT 2

Excellent suite of borders for people who would like a ready made border for their games.

LIGHTING EFFECTS by Robin Ball - ATARI ST KIT 1

Datafiles showing just what can be done with careful planning to create lighting effects in your games.

All disks cost £1.50 each (overseas readers please add £1) and are available from Mandy Rodrigues at the usual user group address.

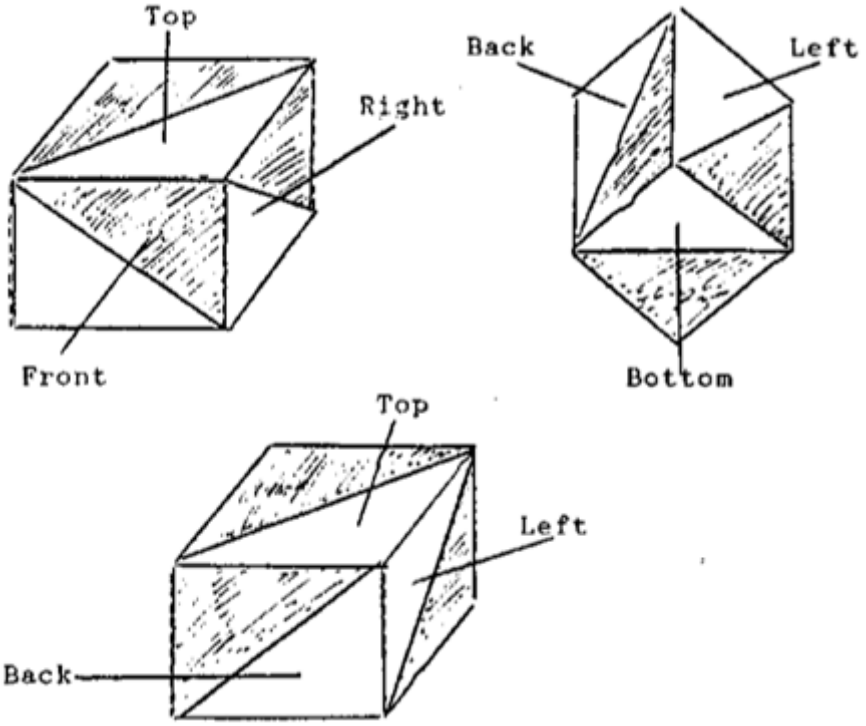
If you are interested in PC public domain then see the contents page of this issue for the address of Mark Rose who handles PC PD for us.

FRUSTRATING FLEXIS

By Alastair Pack - PC KIT 2

Many people, including Mandy, have quite a lot of difficulty in finding a use for the flexicube object and, in fact, once they have started stretching and turning it about, can't even manage to get it back into its original shape once more. Here are a few pointers on how flexicubes can be handled.

The flexicube looks like this from each side. The left and right are decided from the position it was in when first created:

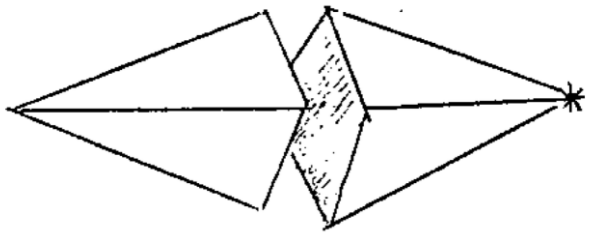


When you edit the flexicube you can move the point to any of eight different corners. Before you move it, move yourself around to where the point's corner is because the commonest problem, I find, is moving the point, which is operating on the other side of the cube which means I can't see exactly what is happening to the cube, but the small flashing white square, which shows what point is moving, shines through the flexicube.

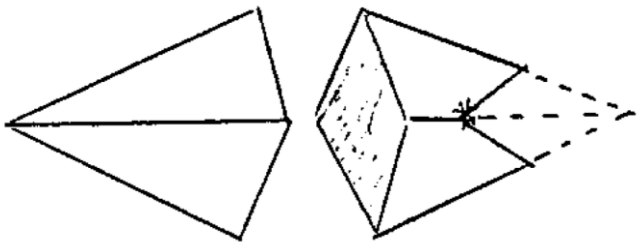
So I'm moving the point around, seeing the white square move, without seeing what is happening to the shape of the cube on the other side. That is why it is much better to move around until you are at the same side of the cube as the point and white square.

The point which is at the corner of the cube can move in any direction as long as it stays within its boundaries. This is where it gets a tiny bit harder.

The flexicube, as the shape of a cube, has to be imagined as two pyramids stuck together. The pyramid with the point is now the one that can be changed. The other pyramid on the opposite side of the cube cannot be changed at this time.

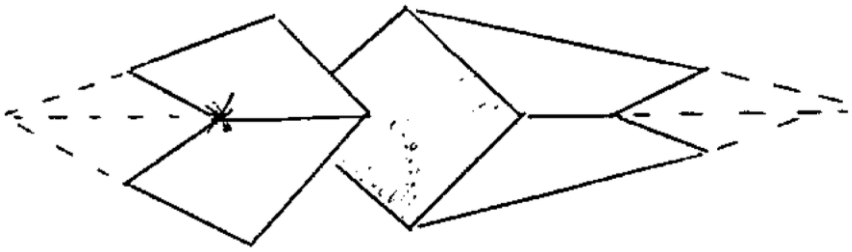


The point (the point is denoted by the asterisk), can be moved inwards only at this stage for it cannot exceed the boundaries of the common cube shape (the bounding cube) but it can move within them.



Here the point is moved into its pyramid, the cube shaped boundaries are shown as dotted lines. Remember that the two pyramids when put back together form a cube - you are imagining it as if it has been sliced down the centre, from opposite points.

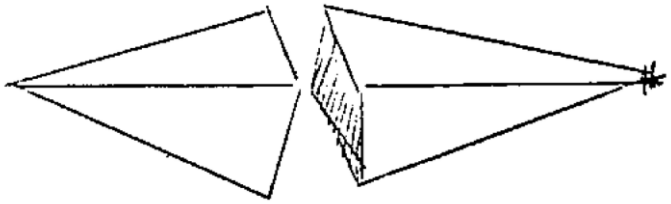
Now it gets a bit more complicated. If the pyramid tipped by the point in use has been deformed and the point of this side of the cube now points inwards, then you move the point along to another different corner of the flexicube. It could look like this:



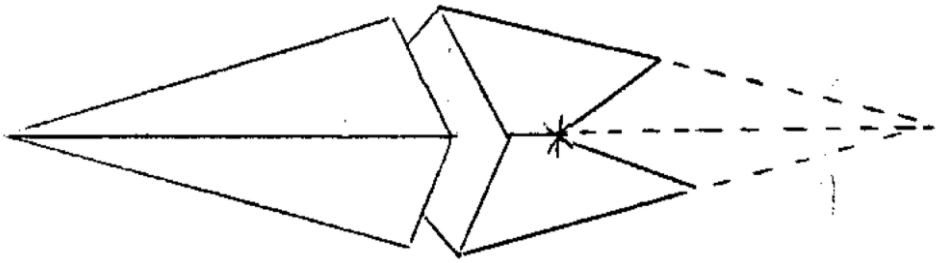
This looks like two opposite corners have collapsed inwards, surprisingly, two opposite corners HAVE collapsed inwards!

It may be worth pointing out, (excuse the pun), that each side of the flexicube is coloured in two different shades and the line between the colours is where the "hinges" are and although each triangle of colour can stretch or shrink as it were, it only folds around these colour divisions and the natural edges, but back to the main point...

If one point has been collapsed and then you move the point and collapse that corner, it could be easy to see, if you have two pyramids seen from above:

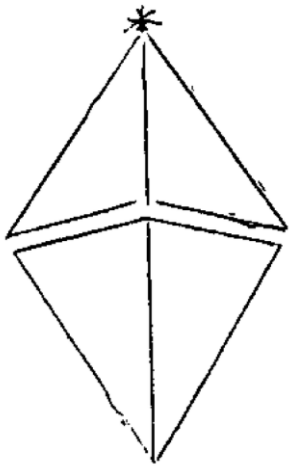


and one collapses:

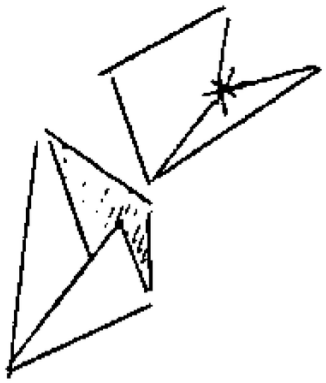


that this is easy to correct and change back to the original cube shape but if the point moves so that the pyramids are split like this:

then the collapse is also split



and now if you take the point and collapse it like this:



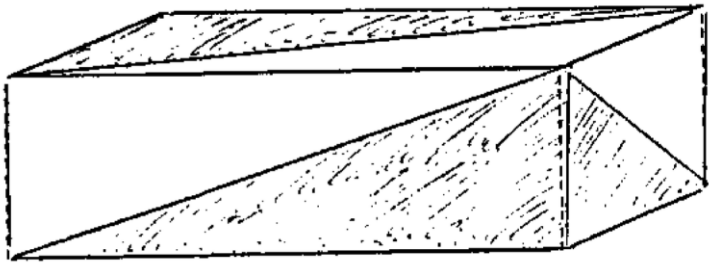
It is now much more complicated, However, what you see here is a 2D plan view. In 3D where the bottom points could be moved in as well the collapse could come from any direction. The flexicube can really start to change shape until it is almost impossible to tell which corner and which side is which.

If for instance, two corners are put together to make a point, lots of colour-joint-hinges have to really do some stretching and this makes them longer than normal sides and it may look like the flexicube has broken its boundaries as a cube.

And now we ask the question, what can the effort and time put into changing flexicubes really do for us?

Well one of the ways it can be used is to form a crown shape - rather like in the demo game that was put on the cover tape of Amiga Format. It did look rather fetching but I still don't know what it was supposed to be.

You could create a wall and colour each side in two different colours and call it modern art like this:



You could colour all the sides blue and cyan and shrink the flexicube, and deform it until it looks like a crystal.

Do the same but colour it pale yellow and put it in a brown bowl labelled in white saying "Mashed Potato".

The edited flexicube is very versatile when it comes to creating futuristic looking buildings. Yacht sails and things of that sort. Apart from that, I don't really know!

Hope this has been of some use to someone in discovering the hidden secrets, stored only in the darkest pits of Domarks Dungeons of the dreaded flexicube.

LOADING SCREENS FOR THE PC

By John Clarke

I have found a way that will allow PC user to have front end menu systems on their games that will allow the user to either play the game or read the instructions first.

Before we start we will have to write a new command. This command will allow the user to press a key and the ASCII code of that key will be returned to DOS as a error code.

To write this new command you will need to have your copy of DEBUG.COM handy (this is supplied with all versions of DOS). The program that will be used in this article was published in the August edition of PC Direct. I would have written a version of it myself but there is really no point in re-inventing the wheel.

Load up a text editor that can store text as ASCII files and then type this in:

```
a
mov ah,01
int 21
mov ah,4c
int 21
(This line must be blank!)
ngetccode.com
r
rcx
0008
w
q
```

When you have done this save the file as GETCCODE.DEB and then quit your text editor. Then you have to type DEBUG < GETCCODE.DEB and the new command will be created. If you look on your disk now you will find a file called GETCCODE.COM.

Now type GETCCODE and press a letter on your keyboard. As you can see this program will display the letter the user has pressed which is fine if you want it to do this. If you don't want it to display the letter that the user has pressed you will have to change a part of the program. You will have to change the line that says mov ah,01 to mov ah,07.

Now that we have our new command we can start to write the menu batch file. So load up the text editor and type in the following listing. Please note that when you need spaces after a ECHO command you will have to hold down the ALT key and type 2 5 5 and then release the ALT key. You will have to do this for every space that you need or DOS will give you an error message.

```
@ECHO OFF
: START
cls
echo.
echo.
echo                                        A GAME
echo.
echo                                      CREATED BY :
echo.
echo                                     A PROGRAMMER
echo.
echo.
echo                           WRITTEN USING THE 3D CONSTRUCTION KIT
echo.
echo                                  BY DOMARK\INCENTIVE
echo.
echo.
echo                                        PRESS :
echo.
echo.
echo                                  A) FOR INSTRUCTIONS
echo                                  B) TO LOAD THE GAME
echo                                  Q) TO QUIT
echo.

getccode
if errorlevel 114 GOTO START
if errorlevel 113 GOTO END
if errorlevel 98 GOTO LOAD-GAME
if errorlevel 97 GOTO INSTRUCTIONS
if errorlevel 81 GOTO END
if errorlevel 66 GOTO LOAD-GAME
if errorlevel 65 GOTO INSTRUCTIONS
GOTO START

: INSTRUCTIONS
type instructions.hlp ¦ more
echo                             PRESS ANY KEY TO CONTINUE!
PAUSE > NULL
GOTO START

: LOAD-GAME
runner

: END
cd\
cls
```

Store this file as game.bat and place in in the directory that was created when you compiled your game (EG C:_GAME). Now write some user instructions using your text editor and save them as INSTRUCTIONS.HLP.

Firstly the batch file will display your menu. Then it will use the GETCCODE command. As I said before this new command will allow the user to press a key and the ASCII code of that key will be returned to DOS as a error code. Error code can be detected by the usage of the ERRORLEVEL command. If you look at the section of commands that say IF ERRORLEVEL ... you will see that there are 2 places where it says GOTO START. The reason why I have done this is to ensure that if the user selected a option that is not available it will return the user to the menu. You will also notice that the error codes are in descending order. When you use a IF ERRORLEVEL.... command you have to place the codes in descending order or they will never be processed.

The ASCII codes for letters A TO Z are 65 to 90

The ASCII codes for letters a to z are 97 to 122

The first errorlevel command must say GOTO START and it must also have the highest error code. Because the ASCII code for the letter q is 113 the error code for the first IF ERRORLEVEL ... command must be 114. You can now enter all of your other IF ERRORLEVEL ... commands. The GOTO START at the bottom is there to ensure that is the error code does not exist the user is placed back at the main menu.

If you look at the ERRORLEVEL commands it tells the computer which set of commands for each error code. So if the user presses A the computer will display the instruction file, allow the user to press a key to continue and then return to the main menu.

If the user selects B it will run the game and If the user selects Q it will stop running.

When writing these batch file if you want a piece of text to appear in the center of a line subtract the length of the text from 80 and divide the result by 2. Round this result up to a whole number if you need too. This will give you the number of spaces that you will need to put after the ECHO command.

Build your own Virtual Reality

3D CONSTRUCTION KIT MANUAL

AMIGA, ATARI ST & IBM PC

3D

CONSTRUCTION
KIT USERS GROUP

3D Construction Kit Newsletter

Issue Number 18
April/May 1994

CONTENTS

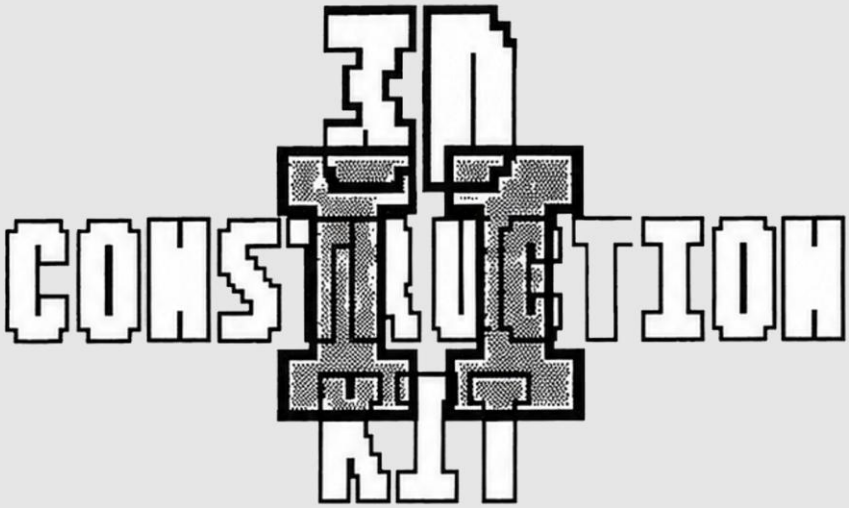
HELPLINES 431
EDITORIAL 432
LETTERS 433
THE USER GROUP GAME 436
REAL PROGRAMMERS! 441
USER GROUP PUBLIC DOMAIN LIBRARY 443
A VIEW FROM THE BRIDGE 446
2 WAY CONVEYOR BELT 447
ANIMATING THE PLAYER 448
16/32 BIT ROUTINES 449
FROM LITTLE ACORNS... 450
PERSONAL COLUMN 450
HINTS AND TIPS 451
GETTING THE MOST OUT OF BORDERS 451
MEMBERS HOTLINES 453
PLAYTESTERS 453
HALL OF FAME 453

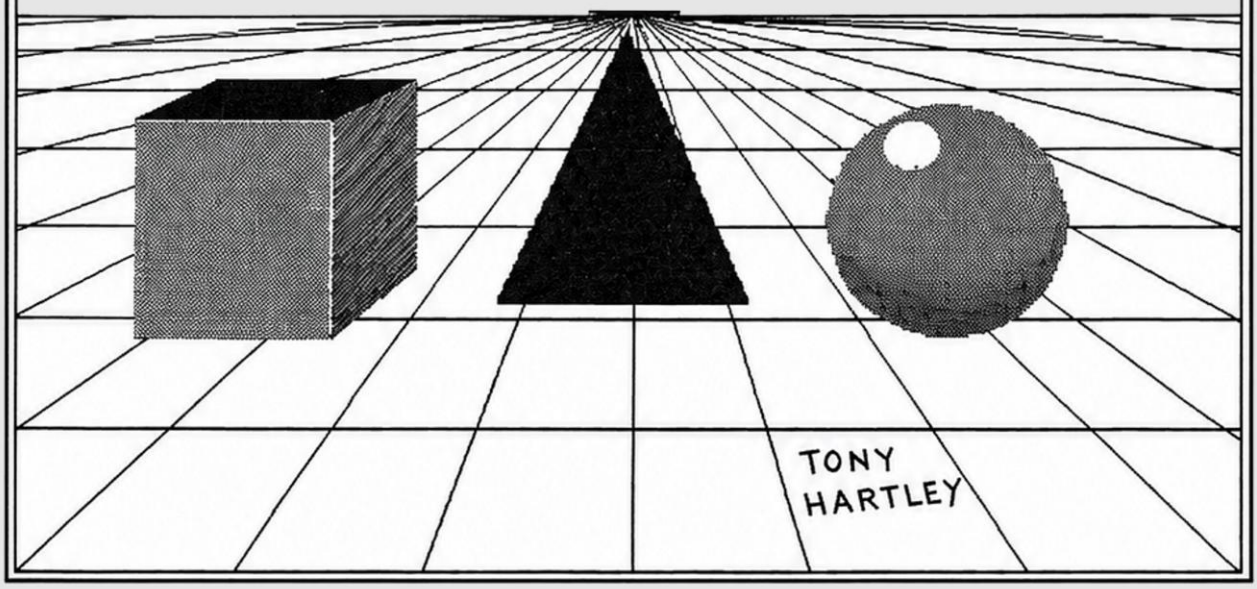
3D CONTRUCTION KIT

USER GROUP

NEWS LETTER

Issue 18 April - May 1994





CONTENTS

EDITORIAL.....PAGE 432
LETTERS.....PAGE 433
THE USER GROUP GAME.....PAGE 436
A REAL PROGRAMMER.....PAGE 441
PD LIBRARY LIST.....PAGE 443
PEN PAL APPEAL.....PAGE 446
BEGINNER'S SECTION.....PAGE 447
16/32 BIT ROUTINES.....PAGE 449
HINTS AND TIPS.....PAGE 451
TELEPHONE HELPLINES and HALL OF FAME.....PAGE 453

COPYRIGHT: on anything which does not carry the writer's name belongs to the User Group. Copyright on all other items lies with the writer. Members whose work is published in the newsletter continue to hold copyright on it.

CORRESPONDENCE: All correspondence addressed to the User Group will be assumed to be for publication unless otherwise stated. If you want a personal reply to a letter then please enclose a S.A.E. or replies will be published in the pages of the newsletter space permitting.

CONTRIBUTIONS: are always welcome from members. Hints, tips, routines or anything else that you think would be of interest to other members are most welcome. It is your club so we want to hear from you.

BACK ISSUES: If you have missed any issues they are all still available at a cost each of £2 (UK), £2,50 (Europe), £3 (R.O.W).

HELPLINES

POSTAL HELP

If you wish to write in for help then please feel free to do so but please don't forget to enclose a stamped, self-addressed envelope or International Reply Paid Coupon if writing from abroad.

TELEPHONE HELPLINE 0492 877305

If you need to telephone for help then I will try to be available during the hours between 2pm and 7pm each weekday. I will be delighted to hear from you. As this helpline is available only to members of the User Group, please have your Registration Number handy and give your name when you call.

Mandy Rodrigues
The 3D Construction Kit User Group
67 Lloyd Street, Llandudno, Gwynedd, LL30 2YP

The 3D Construction Kit User Club is an independently run club but is under license from Incentive Software.

USEFUL 3D BITS AND BOBS OF INTEREST TO MEMBERS - AND FREE OF CHARGE

INDEX TO KIT2 MANUAL: Most useful when programming and trying to find that elusive FCL command. Also includes some commands not listed in the manual or addendum. Please enclose LARGE (A5 size) stamped S.A.E.

INDEX TO SUPPLIED CLIPART by JOHN HAYWARD: Standard S.A.E. please.

SOLUTION TO KITGAME: Please state 8 or 16 bit. Standard S.A.E.

THE CLUBGAME: All the routines listed to date so new members can join in programming our game. Please enclose LARGE (A5 size) stamped S.A.E.

TRANSLATING ROUTINES: List of differences between 8 and 16/32 bit FCL commands so members can utilise ALL routines. (Standard stamped S.A.E)

LIST OF USER GROUP PD TITLES: Latest PD list of Amiga, Atari ST and C64 items sent in by members (if not in current newsletter). Standard size Stamped S.A.E. please.

LIST OF 3D PC PD: Latest PD list for PC's For this item only please send S.A.E to Mark Rose, 39 Balfour Court, Station Rd, Harpenden, Herts, AL5 4XT. Please enclose large stamped S.A.E. or if writing from abroad please enclose two reply paid coupons. All other items please write to normal address above.

EDITORIAL

Welcome to issue 18 of the 3D Construction Kit User Group Newsletter.

Surprised to find another issue in the envelope this time? Not half as surprised as I was myself. What happened was that I actually had the February/March issue ready for posting well on time but decided to wait a while before posting it just in case I had any further news about the latest version of Kit 2 to put in it. While I was hanging about I thought I would get on with some articles etc for the April/May issue and before I knew it I had finished it too! One way, I thought, to offer an apology for issue 17 being late out would be to send issue 18 a bit earlier than expected - a whole two months earlier but what the heck. It just means that I won't be rushing about like a mad thing trying to get it ready during Easter and early spring and you will have more to read! I really have to thank the contributors for the "miracle" though. If it wasn't for the fact that they kindly sent in enough material for two issues instead of one I wouldn't have been able to do it so my sincere thanks to everyone who helped, I really appreciated it.

There have been one or two ominous rumblings recently from new members who cannot understand why their pull down menu's are all in German! Oooops, I think something has gone wrong somewhere along the line again. My apologies to William, I was only joking when I called you Wilheim when you phoned, I'm glad you saw the funny side of things and didn't think I was being insensitive - it was just my wacky sense of humour coming to the fore. Didn't have any of this trouble with Kit 1 as there was just one version and you could select your own preferred language at the startup stage. If anyone has come across this problem then please do return your disks to Domark for replacement as they will be happy to swap them for you. Anyone who sends them to me will get a swap too but I have run out of my supply of disks so it might be quicker to send direct until I can get another batch. I was hoping to wait before asking for another lot though as I would really prefer to have the latest version rather than another batch of V2.07.

I mentioned my sense of humour, well, when I received the article "A Real Programmer" from John Clarke recently I nearly laughed my socks off! I have published it in this issue and I hope you enjoy it just as much as I did. Wonder if the programmers at Incentive will laugh just as much as I did - hope so anyway. Uni' students have a great penchant for humour and John is no exception. Speaking of students, do you know that being a computer freak can have lots of benefits for your family? My husband is doing his HND in micro electronics and my daughter after getting her HND in the same subject has now gone on to University to get her BEng.

My son, Bobby, seems to be heading in the same direction too - so tell that to your family when they grumble about you spending so much time at the keyboard in future. That's what I point out to my family when they nag me about the time I spend on the computer. Mind you, I do get a bit carried away sometimes and it is only when I hear three thuds and find them lying in a heap outside the kitchen door that I realise that I had better leave off and feed them! One word of advice though - if more than one person uses a computer in your household, don't for goodness sake wire them up to the same socket. I have trained my family to switch off when they have finished work and it is frustrating in the extreme to have three or four pages of text for the newsletter typed up when "click" everything goes blank. They might have finished but I havn't!

Mandy

LETTERS

Dear Mandy,

Please do you have any information on the 3D Flight Simulator Creation Package that you could send me? Such as how much it costs and where I can get it and what it can do? I already have Corncob from Mark Rose which is a good flight sim program.

Dave Boley - Wivenhoe, Essex
PC

The package I mentioned previously is actually called FLIGHT SIM TOOLKIT and is produced by Domark Ltd and is a very exciting package. It is from the creators of AV-8B Harrier Assault and is the first-ever comprehensive flight modelling software package. It is available for the PC only and Windows is required. The minimum requirement is 386 SX. Full VGA is required and it supports SVGA graphics for very high fidelity outside world graphics on machines with the appropriate display adaptors. The FST tools exploit the task-switching and powerful graphical user interface benefits of Windows to the full. All the tools in FST are Microsoft Windows applications and are run from a master FST Project Manager under Windows so that, for example, users can switch from Terrain design to Shape editing simply by a click of the mouse. Also other Windows applications can be used within FST for image editing and sound effect sampling. Real terrain data from the American Geological survey has been used to generate the ground providing a totally accurate rendering of the world you fly in. It features a highly sophisticated parameterised aerodynamic force model which accurately calculates the linear and rotational forces acting on the aircraft. You can specify the power, type and positioning of the engines and control and wide range of variables which combine to parameterise the model. The result is a simulator which is capable of accurately modelling everything from a Cessna to an F16. Together with the disks the package contains a comprehensive and easy to use manual - OK so I did have a bit of trouble understanding it but my son had his aircraft designed and his terrain created and was flying happily and shooting down enemy aircraft by the end of one afternoon! Which means that I must be thick! For lazy people like me the package includes a comprehensive 3D Clip art catalogue which enable you to load in hundreds of ready made bits and pieces including Aircraft categorised as Historical, Military, and Civil. To enhance your terrain you also have a wide choice of Ships - Civil, Historical, Military. Buildings - Civil, Military, Historical. Vehicles - Historical, Civil, Military. Support vehicles, and Miscellaneous including man with a jetpack, robot, paraseat, helicopter rotor blades, eject seats and parachutes etc. Not only that but you also have the chance to win a Private Pilots Licence package including 40 hours flying lessons, tests, etc by Swallow Aviation Ltd. I am not sure how much the package costs - Domark kindly sent me one for myself along with the one for the competition last issue. It should be in the shops now but if not then contact Domark for details of how to get it. I would really recommend this as it is one of a kind - rather like 3D Kit is one of a kind.....Mandy

Dear Mandy,

Having gone through the back issues I thought I would answer some of the questions that appeared. Someone, a long time ago, asked if there was a way of getting out of a stand-alone game without re-booting. The answer is to press SHIFT+ESC and it works in the 3D Editor too. Also someone said not to write in the border as you can't get rid of the writing! Well, simply write on a place of the border, which has a black background. Once you've written your message write over it, in the same place, with the same words, written in black. For example:

```
TEXTCOL (5.0)
PSTRING ("BONUS POINT",30,85)
DELAY (whatever you want)
TEXTCOL (240,0) - 240 is black on my version
PSTRING ("BONUS POINT",30,85)
```

To find out what number applies to what colour, make a cube, then do what you would normally do to colour it. Choose a colour and on the right you should see what number it is. This is for Kit 2 by the way. Actually I have a problem of my own, if I make a portcullis, and an animator to make it slide upwards when a key is put in the lock it works but if I then reset the portcullis is already up where I last left it. If the key bit is done again, the portcullis does the animation and slides further up. The reset doesn't put it back in its original place.

To do with loading screens, any art file can be made into an executable stand alone picture with GWS (Graphics Work Shop) and a simple batch file could easily make the picture come up as a loading screen to a main 3D stand alone. Such as:

```
@echo off
cls
INTRO
MYWORLD
```

The picture will stay there until a key is pressed. If you want to add options then try and buy a back issue of PC Format that has on the cover disk a file GETKEY.COM. I think it is PD and can be used in a batch file like this:

```
@echo off
cls
echo (V) View intro screens
echo (S) Skip intro screens
echo (Q) Quit to DOS
getkey VSQ
cls
if errorlevel 3 goto end (always start with the last key)
if errorlevel 2 goto skipped
if errorlevel 1 view
:view
INTRO 1
INTRO 2 (etc)
:skipped
MYWORLD (start the game)
:end
```

The other day my 3D Kit developed what it called a fatal error. I did what all good problem finders do and erased the whole thing and reloaded it but to my horror my original disks had some kind of error on the install program and I hadn't any backups - foolish I know. So if anyone else has done this here is how to install 3D Kit to the PC manually. You need to know what directories there are but that part of the install always works anyway. The problem is unzipping the files. For instance the borders are in a file called BORDERS.RNC and to unpack them you need to use the user friendly PPEX.EXE which is on the disks too. It took me ages to work out how to use it and in the end it turns out the same as the LHA compressor used on some PC mags cover-disks. All you need to do is type PPEX E BORDERS.RNC and it extracts them. In issue 10 Mr Nash wanted someone to tell him how to incorporate sound VOC files into the Kit. Sorry, I don't know but I do want to know too so please if anyone knows how please write in. I think I might be able to do it if there is a way of running an EXE file, which has nothing to do with the Kit and has a command line parameter after it, from an object condition in the Kit. Anyone know how? Lastly, and this idea is a bit adventurous, is there any way of giving an object artificial intelligence?

I mean for instance making a cube follow as done in other issues but also making it dodge walls and take short cuts, fly over obstacles etc. Maybe one day someone will work out an answer, but for now I'll just keep trying to work it out for myself. If I succeed then I'll write in and let you know, honestly. Okay, to those of you who haven't committed suicide by now, I'll stop. I hope I've helped someone and I hope someone can help me too with my tangible problems.

Alastair Pack - Old Colwyn
PC Kit 2

Dear Mandy,

I have a question. If 8 bit computers no longer have a future and there was only 1 version of the 3D Kit for 8 bits and there won't be any other ones produced for it, couldn't it be possible to have from the programmers, Domark or Incentive, the complete description of a compiled game (entry points and arguments of functions, addresses of data, of variables, of sprites, free places in the memory etc (with explanations about the data structure)? This means the structure of a datafile and structure code for all types of objects. It would be helpful to develop some useful features such as to copy an area from a datafile to another area (better than creating two areas the same when that occurs during development of a game or we need that area to include in another datafile, to call for instance with CALLMC! At least for CPC (as a CPC owner). It is necessary to know the structure of the disk: where/how is the datafile saved. Do you think that all this information could be supplied by the programmers? I also think that changing the SCC from Spectrum, C64 and CPC to SCC meaning Super Crazy Computers would be a good idea!

Yannick Gour
Amstrad CPC

It is customary policy for software houses and programmers to make a point of not divulging any of the type of information that you asked for, Yannick. I am sorry to disappoint you but even if a product is no longer being produced the information is strictly kept "in house". I am afraid there is nothing I can do to help you on this one....Mandy

---

Dear Mandy,

I wonder if you can help me please? I have just purchased the 3D Kit and the manual config file refers to a setup program but there is no setup program on my disks. Also I have no idea how to play a video viewpath using FCL as I have been unable to find this in the manual.

Peter Hanson
Atari STE 1040

Don't worry about it, Peter, the setup program is for PC users as the PC version has to be installed on Hard Disk to run whilst other computers load 3D Kit from floppy disks. The command to use the Video sequences is, sadly, missing from the manual - together with quite a few others! These can be obtained from me - see bottom of the contents page for details. Video sequences are stored in memory as they are created and automatically given a number as they are stored from 1 upwards. To use a sequence you should use something like:

```
IF ACTIVATED?
THEN SEQUENCE (1)
ENDIF
```

After displaying the video sequence the program should return to the same spot as before the display. By the way, the video sequences are saved along with your datafile when you do save during creation. They are not lost and are loaded into memory together with the file...Mandy

THE USER GROUP GAME

This issue by Mieke Van Der Poll
(Part 3 of my article about border/clubgame)

THE USER GROUP GAME. Part 10.

Last issue we completed the General Conditions for our border instruments. Now we are going to set our moving controls.

3DKit 1.

Click under General on Controls and you will be presented with all the movement possibilities. Click with left mousebutton on Move Forward, let go of left button and click with the right one. That brings you to the border screen. Now position the pointer in the upper left corner of the forward arrow, click on the left mousebutton and drag it in a square over the arrow, let go of the left button and move the square until it covers the whole arrow. Then click on left button again and you can select which mousebuttons you want to define. Click with left mousebutton on either and you will be back in the movement control text. We have chosen either because it gives the player the choice to "walk (left button) or to "run" (right button) through the environment. On a slower computer "running" is sometimes limited to "walking", so that's why. You can of course change this if you want to.

In the way described above we can set the movement backwards, left, right, up, down, rotate left and rotate right. Only there is one strange contradiction in Kit 1 (at least on the PC): when you define the movement left and try it out in Test Mode, it seems you are going right. So if you have the same feeling, then define the right arrow to go left and the left one to go right. All the "x"-signs will change in a tick sign. When you have defined the necessary keys, click on the upper left tick icon to confirm and leave the controls. You can always change the controls as described above. When you click on the upper left tick icon, your last change(s) will be confirmed.

3DKit2.

Click on General, then on Controls and you will be presented with an edit controls window. First you can define which buttons you want to use. Click on left only until either appears. Use the default functions, i.e. control nr. 1: move forwards, control nr 2: move backwards, etc. Click on set and you will see a little yellow square in the upper left part of the screen. By clicking in the lowest right part and holding the left mousebutton down you can enlarge the square (box). By clicking elsewhere in the box and holding down the left mousebutton you can move it across the screen. But first call the border by clicking in the coordinates square. Then move the yellow box over the arrow forwards and enlarge it until it is over the whole arrow. Click on right mousebutton and you are back in the edit controls window. Click on next to go to control nr. 2 and define this one and your other movement keys as described above. Here the left and right arrow will move you in the correct direction.

We are now going to adapt the Clubgame to the Border.

First, under General, click on Defaults. Fill in the number 10 under Startarea. Fill in the number 001 under Initial Condition.

Edit General Condition nr. 1: (3DK2:Initial Condition). Right beneath updatei (5) type:

```
updatei (6)
setvar (0,v50)
setvar (1,v60)
```

click on the tick icon to confirm.

Startarea (Area 10)

3DKit1.

We are going to create a separate text Instrument for the message in our Startarea.

Under General, click on Create Instrument, then click on Edit Instrument. This will be Instrument 6.

```
Under Type:     click in the box until Text Window appears
Under X-pos.:   click on the number and fill in: 056 +Enter
Under Length:   click on the number and fill in: 215 +Enter
Under Y-pos.:   click on the number and fill in: 029 +Enter
Under Height:   click on the number and fill in: 079 +Enter
```

Click on View Box and you will see the surroundings of your Text Instrument in the middle of the View Window. Click on the left mousebutton again.

```
Under variable: fill in the nr. 000 + Enter
Under FGcolour: fill in the nr. 133 + Enter
Under BGcolour: fill in the nr. 240 + Enter
```

Then click on ok. Then goto Area 10 and edit (change) Area Condition 1 as follows:

```
if var=? (v60,1)
then
Print ("\N Welcome to the Clubgame....",6)
Print ("\N\N Can you find the treasure",6)
Print ("\N\N\N and make your Escape?  ",6)
Print ("\N\N\N\N      Good Luck!      ",6)
delay (500)
Print ("\N                           ",6)
Print ("\N\N                         ",6)
Print ("\N\N\N                       ",6)
Print ("\N\N\N\N                     ",6)
setvar (0,v60)
goto (1,11)
endif
```

You will see your introduction text approx. in the middle of your View Window and after a little while you are transported to the first play Area (this being Area 11).

3DKit2.

You can also use the above method but in Kit 2 we have another choice: we can create a title screen in our paint program and use the Loadscreen command. The extension of the picture should be: PC: .lbm or .pcx; Amiga: .iff or Neo or Degas.

To overcome problems with colours I would advise to use the same colour palette that you used for the border.

You have to change your Initial Condition as follows:

```
Loadscreen ("title.ext",0)
delay (500)
clearscreen
updatei (1)
updatei (2)
updatei (3)
updatei (4)
updatei (5)
setvar (0,v50)
goto (1,11)
border (1)
```

So far our Introscreen.

The next thing we have to do is pick two more variables for two more objects i.e.:

```
for the stone  V40
for the ingots V41
```

This also means that we have to adapt General Condition nr. 6 (3DK2:gen.cond.5) in the way I explained in last issue. We have two more objects to add, so V34 increases 2 numbers and the last statement begins with if var=? (v34,6) etc.

If we want the objects to be visible in the various instru-ments in our border when they have been picked up, we have to change the different object conditions. We will start with the

stone in area 11:

```
if activated?
then sound (12)
print ("You pick up a stone.......",5)
delay (150)
print ("                          ",5)
invis (11)       - make stone invisible
syncsnd (13)     - bonus1 snd PC
setvar (1,v40)   - stone has been taken
addvar (1,v32)   - add 1 object to found instrument
addvar (100,v33) - add 100 points to score instrument
endif
```

If you want to check if everything works correctly then pick up the stone in the Test Mode with the border present. When you have taken the stone, click on Inventory to see if the correct message appears.

The condition for the button can also be changed using the stone variable:

```
if shot?
then if var=? (v40,1) - if stone has been picked up
then invis (14)
vis (13)
sound (2)
setvar (2,v40)        - stone has been thrown
subvar (1,v32)        - stone is not in possession anymore
addvar (100,v33)      - add 100 points to score instrument
else                  - if stone has not been picked up
sound (16)            - anti-bonus snd PC
endif
endif
```

The next change is made in the Great Hall (area2).

Edit the condition for the closed trapdoor as follows:

```
if activated?
then if var=? (v37,1) - if key is taken
then invis (8)        - make closed trapdoor invisible
vis (9)               - make open trapdoor visible
syncsnd (12)          - activate snd PC
else                  - if the key is not taken
sound (16)
endif
endif
```

In this Hall we also placed a torch against the wall.

Change the pickup condition as follows:

```
if activated?
then sound (12)
print ("You pick up a torch....................",5)
delay (150)
print ("                                        ",5)
invis (16)     = group nr. Torch: 13,14,15
syncsnd (14)   -bonus2 snd PC
setvar (1,v38)
addvar (1,v32)
addvar (100,v33)
endif
```

In the Alchemists Chamber (area 4),

change the condition for the door behind the bookcase as follows:

```
if collided?
then if var=? (v38,1) - if torch is taken
then goto (2,5)
else goto (2,7)       - if torch is not taken
endif
endif
```

In the Solar (area5),

change the condition for the key as follows:

```
if activated?
then sound (12)
print ("you pick up a key.....................",5)
delay (150)
print ("                                       ",5)
invis (6)      = key object or group
syncsnd (13)
setvar (1,v37)
addvar (1,v32)
addvar (150,v33)
endif
```

In the Dungeon (area 6),

change the condition for the crystal as follows:

```
if activated?
then sound (12)
print ("you pick up a crystal...............",5)
delay (150)
print ("                                      ",5)
invis (15)      - make crystal invisible
syncsnd (15)    - bonus3 snd PC
setvar (1,v39)
addvar (1,v32)
addvar (150,v33)
endif
```

Change the condition for the plynth as follows:

```
if activated?
then if vis? (15)      - if crystal is visible
then sound (1)         - beep snd PC
else                   - but
if invis? (15)         - if it isn't there
then vis (15)          - then make crystal appear
sound (1)
setvar (0,v39)         - crystal has been put back
subvar (1,v32)         - crystal is not in possession anymore
subvar (150,v33)       - no points have been scored
endif
endif
```

In the Cell area (8),

change the plynth condition as follows:

```
if activated?   - I put both options in because of the animation
or shot?          You have to be very quick to activate the plynth
then if var=? (v39,0)
then sound (16)
else
if var=? (v39,1)
then vis (23)    - let crystal appear
sound (15)
stopanim (1)
setvar (0,v30)
subvar (1,v32)
addvar (250,v33)
endif
endif
endif
```

The condition for the gold ingots can be adapted as follows:

Make the condition for both ingots.

```
if activated?
then sound (12)
print ("you pick up some gold!!........",5)
delay (150)
print ("                                ",5)
invis (24)      - ingot 1 disappears
invis (25)      - ingot 2 disappears
syncsnd (13)
setvar (1,v41)
addvar (2,v32)
addvar (200,v33)
setvar (2,v50)  - and this is for the endmessage
endif
```

To give an endsequence to our game we can end with a message, just as we began with one and we can place the message in the same area where the startmessage appears. Therefore we will use variable V50. It is also possible to use variable V60 for this. We have set it to 2, because the nr. 1 has already been used.

In order to be transported to area 10 we are going to adapt the condition for the door in the cell area a bit:

```
if collided?
then goto (3,6)
if var=? (v41,1) - if the ingots are taken
then goto (1,10) - transport the player to area 10
endif
endif
```

And in the Startarea 10 you can create Area Condition (3DK2: Local Condition) nr. 2 and edit it as follows:

```
if var=? (v50,2)
then sound (13)
print ("\N       Congratulations! ",6)
print ("\N\N  You found the treasure!",6)
print ("\N\N\N    T H E   E N D ",6)
delay (500)
print ("\N ",6)
print ("\N\N ",6)
print (" \N\N\N ",6)
setvar (0,v50)
endgame
endif
```

When all the abovementioned changes have been made and you have duly saved everything, we can now go into Test Mode to test the game as if it was already standalone. This means that all the possibilities have to be tested, so you have to play the game a couple of times. The best thing to do is leave it for a couple of days and then, refreshed, start testing it.

If everything is to your liking, then you can use the MAKE command.

For the PC: just follow the instructions in your Manual.

For the Amiga: consult your Manual and page 19 of Newsletter 10.

We haven't used the Energy bar in the game yet.

Do you have any ideas?.... then please send them in at the usual address.

Mieke van der Poll

REAL PROGRAMMERS!

By John Clarke

When I was looking in one of my University bulletin boards I discovered this. I thought I would send it in because I found it quite amusing.

- Real programmers distain structured programming.
  Structured programming is for compulsive neurotics who were prematurely toilet trained.
  They wear neckties and carefully line up sharp pencils on an otherwise clear desk.

- Real programmers don't believe in schedules.
  Planners make schedules. Managers firm up schedules.
  Frightened coders strive to meet schedules.
  Real programmers ignore schedules.

- Real programmers don't bring brown-bag lunches.
  If the vending machine sells it, they eat it.
  If the vending machine doesn't sell it, they don't eat it. Vending machines don't sell quiche.

- Real programmers don't comment their code.
  If it was hard to write it should be hard to understand.

- Real programmers don't document.
  Documentation is for simps who can't read the listings or object deck.

- Real programmers don't draw flowcharts.
  Cavemen drew flowcharts and look how much good it did them.

- Real programmers don't eat quiche.
  In fact, real programmers don't know how to spell quiche.
  They eat twinkles and szechuan food.

- Real programmers don't play tennis or any other sport that requires you to change clothes.
  Mountain climbing is OK, and real programmers wear their mountain climbing boots to work in case a mountain should suddenly spring up in the middle of the machine room.

- Real programmers don't write applications programs.
  They program right down to the bare metal.
  Application programming is for feebs who can't do systems programming.

- Real programmers don't write in APL, unless the whole program can be written on one line.

- Real programmers don't write in BASIC.
  Actually, no programmers write in BASIC, after the age of 12.

- Real programmers don't write in COBOL.
  COBOL is for wimpy applications programmers.

- Real programmers don't write in FORTRAN.
  FORTRAN is for pipe-stress freaks and crystallography weenies.

- Real programmers don't write in LISP.
  Only faggot programs contain more parenthesis than actual code.

- Real programmers don't write in PASCAL, or BLISS or ADA, or any of those pinko computer science languages.
  Strong typing is for people with weak memories.

- Real programmers don't write in PL/1.
  PL/1 is for programmers who can't decide whether to write in COBOL or FORTRAN.

- Real programmers don't write in "C".
  There has to be something wrong with a language who's next generation gets a low grade than its prior.

- Real programmers write in the machines native binary code, ASM macros are for those who can't divide HEX numbers in their head.

- Real programmers don't write specs - users should consider themselves lucky to get any programs at all and take what they get.

- Real programmers like vending machine popcorn.
  Coders pop it in the microwave oven, Real programmers use the heat from the CPU. They can tell which jobs are running from the rate of the popping.

- Real programmers never work from 9 to 5.
  If any real programmers are around at 9am it is because they were up all night.

- Real programmers scorn floating point arithmetic.
  The decimal point was invented for pansy bed wetters who are unable to think big.

- Real programmers' programs never work right the first time.
  But if you throw them on the machine they can be patched into working in "only a few" 30 hour debugging sessions.

.....Cheers,

PROGRAMMER DEFINED: Programmer n.

1. One who claims or appears to be engaged in the perpetration of programs.
2. The systems analyst's diplomatic attache at the alien court of the CPU.
3. One engaged in a practical, nonsystematic study of the halting problem.
4. "A harmless drudge." - Lord Bowden, 1953.

That ought to clear things up……

USER GROUP PUBLIC DOMAIN LIBRARY

DARKNESS CALLS by James H Yusuf - AMIGA KIT 1

Stand alone game written with 3D Kit 1. Sci-fi game with eerie sound effects and excellent atmosphere.

MOUNTAIN ADVENTURE by Mieke Van Der Poll - AMIGA KIT 1 (1 meg)

Either stand alone or datafile format. Please state which. Game written with 3D Kit 1. Adventure within a mountain maze. So much to do it will keep you very busy for ages!

PLANET OF THE DALEKS by Steve Hilder - AMIGA KIT 1

Datafile and border format. Written with 3D Kit 1. This is a game for all Doctor Who fans. Those dastardly daleks are everywhere.

ATLANTIS by Mieke Van Der Poll - AMIGA (1 meg required)

Either stand alone or datafile format. Please state which. Game written with 3D Kit 1. Eerie and enjoyable underwater adventure. Excellent music and sound effects.

MAGICAL MAZE by Mieke Van Der Poll - AMIGA KIT 2

Stand alone or datafile format. Please state which. Beautifully structured maze adventure which utilizes most of the Kit 2 facilities beautifully.

FAST TOWN by Tony Hartley - AMIGA KIT 1

Converted to Amiga by Mieke Van Der Poll. Hundreds of objects, beautifully drawn to enable you to create your own realistic town. This is in datafile and border format with ready made towns too.

FAST TOWN by Tony Hartley - AMIGA KIT 2

Converted by Mieke Van Der Poll. Hundreds of objects beautifully drawn to enable you to create your own realistic town. Datafile and border format - ready to add your own Kit 2 special effects.

E.F.T.P.O.T.C.M. by Andrew Herbert - AMIGA KIT 1 & KIT 2

Stand alone game included called ESCAPE FROM THE PLANET OF THE CARDBOARD MONSTERS. More interesting is the whole suite of utilities on the disk to help you create stand alone games. Added bonus here is a virus checker and killer to deal with the dreaded SADDAM virus.

MESSAGE DEMO ROUTINES by J Hayes - AMIGA KIT 1

Datafile and border format. Routines showing how to scroll descriptive messages. Also includes small demo game.

LANDSCAPE DEMONSTRATION DISK by J Hayes - AMIGA KIT 1

Datafile and border format. Routines showing how to program an impressive "neverending" landscape.

TUNES AND SCREENS by Dominique Watson - AMIGA KIT 1 & KIT 2

Octamed player and thirteen or so original music pieces for you to use in your games or intro sequences. Also plenty of sci-fi type loading screens for you to use.

UTILITIES DISK by Stephen Moore - AMIGA KIT 1 & KIT 2

A useful suite of programs which will enable you to create loading screens etc for your stand alone games. Useful utility for reading different machine formats on your machine too.

FLIGHT SIMULATOR DEMO by Thomas Stufe - AMIGA KIT 1

Datafile format showing how you can program a flight simulator type program with 3D Kit.

BUILDINGS by Allan Hearn - AMIGA KIT 1

Datafile format showing various buildings ranging from Stone Henge to Salisbury Cathedral.

SOUND SAMPLES by Mieke Van Der Poll - AMIGA KIT 1

Contains the new MakeSampleBnk program together with no less than 26 different sound samples ready compiled into the file "various.bnk".

INVENTORY ROUTINE by J Hayes - AMIGA KIT 1

Datafile format. This suite of routines show you how to organise the players inventory and print what they are currently carrying.

EXAMPLES by Juergen Hunke - AMIGA KIT 1

Datafile and border format. Lots of different and interesting objects for you to use in your datafiles if you wish.

BORDERS by A J Bevan - AMIGA KIT 1 & KIT 2

Selection of borders for you to use if you feel that your artistic talents are not up to scratch.

WAR OF THE WORLDS by Tony Hartley - ATARI ST KIT 2

Datafile and border but works like a stand alone game. Contains so many features, wonderful sound effects, eerie atmosphere. Excellent game should keep you busy for weeks. One of the best I've seen so far.

ENDURANCE by Ozzie O'Mara - ATARI ST KIT 1

Stand alone game. Extremely well designed. Will keep you busy for a very long time. I thoroughly enjoyed it. It is addictive and frustrating too.

INFILTRATION by Robin Ball - ATARI ST KIT 1

Excellent shareware stand alone game. Has that certain something that just keeps you going back for more.

SPEILRAUM by Peter Ward - ATARI ST KIT 1

Stand alone game. First of a trilogy of 3D Kit games by Peter. I got lost in a bewildering maze of passages the first time I played. Most enjoyable.

KAKRIVS by Peter Ward - ATARI ST KIT 1

Stand alone game. Second in the trilogy, I enjoyed this one better than the first. Take your Tardis and explore. You won't regret it.

HYSULA by Peter Ward - ATARI ST KIT 1

Stand alone game. Third in the trilogy. If you enjoyed the other two games then go on and give yourself a treat.

THE MAZE by David Sambrook - ATARI ST KIT 1

Stand alone format. This is the most addictive and infuriating maze type game that you will ever come across! I was enthralled for ages.

WEST ONE by Frank Carr - ATARI ST KIT 1

Stand alone game. Take on the role of Harris Tweed, secret agent extraodinaire. Great border, sound effects and nice loading sequence. Beautifully designed game.

FAST TOWN by Tony Hartley - ATARI ST KIT 1

For details see Fast Town Amiga Version.

FAST CITY by Tony Hartley - ATARI ST KIT 2

Datafile and border format. Hundreds of beautifully designed buildings and objects to help you instantly design your own city. Should be seen to be believed! A real favourite.

RANDOM BOXES CITY SKYLINE by Ronald Conell - ATARI ST KIT 1 & KIT 2

A paint package that allows you to generate a random city skyline. Menu driven and full instructions on the disk.

SOUND UTILITIES by Juergen Hunke - ATARI ST KIT 1 & KIT 2

Two excellent programs to use with your sound samples. Full instructions enclosed on the disk.

EXAMPLES by Juergen Hunke - ATARI ST KIT 1

For details see Examples Amiga version.

BORDERS by Robin Ball - ATARI ST KIT 1 & KIT 2

Excellent suite of borders for people who would like a ready made border for their games.

LIGHTING EFFECTS by Robin Ball - ATARI ST KIT 1

Datafiles showing just what can be done with careful planning to create lighting effects in your games.

All disks cost £1.50 each (overseas readers please add £1) and are available from Mandy Rodrigues at the usual user group address.

If you are interested in PC public domain then see the contents page of this issue for the address of Mark Rose who handles PC PD for us.

A VIEW FROM THE BRIDGE

by John Clarke

Before I sat down to write this I decided to clear my work area and I discovered that I had a desk buried underneath all of my rubbish. So the myth is true!

When my letter about pen pals was published in the August\September edition of the newsletter Mandy received a lot of letters saying that it was a good idea. However, to my knowledge, none of these letters said that the writer wanted his\her details to be placed in the pen pals section of the newsletter.

I was a bit disappointed in the fact that only 2 people (and that includes me) had their details in the pen pals section. The idea behind this was that members of the group could communicate with each other.

I have included a form on the end of this that you can cut out and send to Mandy if you want your details to be included in this section! Hopefully the next pen pals section will be bigger than the last one.

For those of you who have access to e-mail you can contact me at my e-mail address which is :

JC1ATY1@GREENWICH.AC.UK

Apparently our e-mail addresses might be changing but nobody seems to know when this will occur. I will inform you all of my new e-mail address when it changes.

==========<CUT HERE>==========

P E N P A L L S S E C T I O N

MEMBERSHIP NUMBER : _____

NAME : _____

ADDRESS : _____

_____

_____

HOBBIES : _____

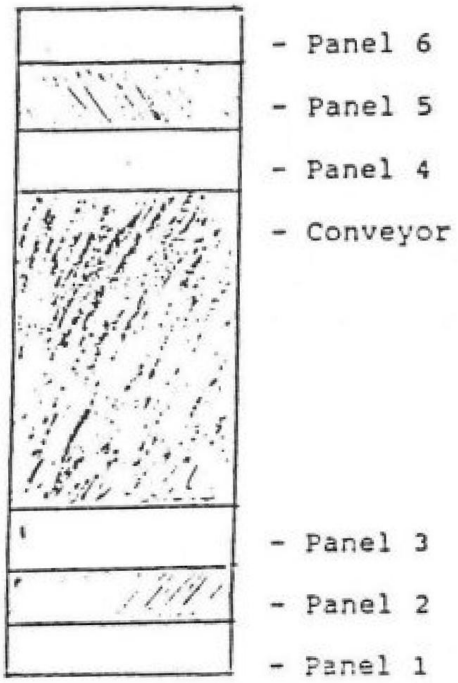
_____

2 WAY CONVEYOR BELT

(BEGINNERS SECTION)

by Alastair Pack - KIT 2 - PC.

Here is a way of making a conveyor belt that works in two directions. First of all make three small panels, which are flattened cubes, stretched on the ground. Now make a long conveyor belt in the same way. At the opposite end of the conveyor belt make three more small panels. It should look something like this :



Now this is done, I think its time to explain to you what you're doing. The way this works is that you walk on one end of the conveyor belt, and it takes you to the other.

After being taken to one end of the conveyor walk off the end and turn around and walk back, and you'll find yourself being taken back to the other side.

The way this is done is to attach conditions to the panels, and in these conditions, have some variables which decide which way you're going.

The variable that is going to be used is Variable 50.

If you want to know how to animate the player moving along the conveyor, then you'll need to read 'ANIMATING THE PLAYER' by R. Spreadborough in issue 4 page 25.

<u>These are the conditions :</u>

```
PANEL 1 :
    If collided?
    then setvar(0,V50)
    endif

PANEL 2 :
    If collided?
    then setvar(1,V50)
    endif

PANEL 3 :
    If collided?
    and if vareq? (1,V50)
    then "animate player"
    endif

PANEL 4 :
    If collided?
    and if vareq? (2,V50)
    then "animate player"
    endif

PANEL 5 :
    If collided?
    then setvar (2,V50)
    endif

PANEL 5 :
    If collided?
    then setvar(0,V50)
    endif
```

The reason this works is; if the player walks on one end of the conveyor then V50 is set to 0, next panel and its set to 1 then on the next panel (panel 3) it asks itself if V50 = 1, and if it does then start animation. You're now at the end of the conveyor and panel 4 asks if V50 = 2, it doesn't so nothing happens. Next panel sets V50 to 2 and the next (panel 6) sets V50 back to 0.

Now turn around and walk back. Panel 6 sets V50 to 0 then panel 5 makes it equal 2, then panel 4 asks if V50 = 2 which it now does, it sends you to the other end of the conveyor. You then step on panel 3 which asks if itself if V50 = 1 which it doesn't so nothing happens. Panel 2 sets V50 to 1 then the last (or first) panel 1 sets V50 back to 0. EASY !

You may notice that the panels 1 and 6 aren't REALLY needed, but if whoever is playing your stand-alone game decides to walk on in the middle of the belt and then walks to the end, just after using the belt properly, and V50 isn't set to 0 then he/she could find themselves being moved around all over the place

It is a good idea to set the panels to an invisible state. So the player doesn't see how it works straight away, and a rail or barrier to stop him going off the edge is useful too.

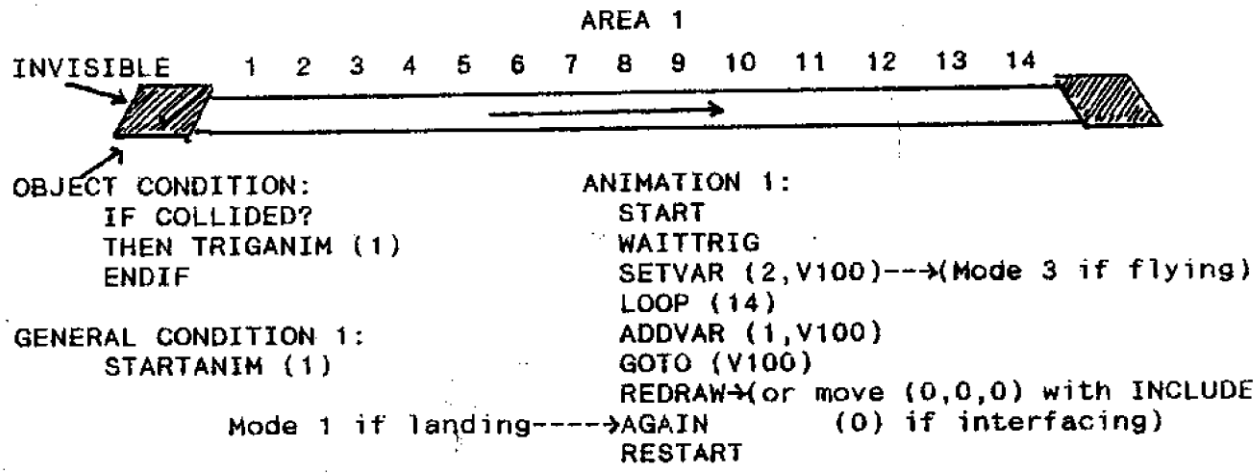
If you don't have a copy of the "Animate Player" routine then you'd better order the issue from Mandy. But if (like me) your skint, then here's a clue to help you invent it yourself : Entrances and Animations with GOTO in them.

Hope someone finds this routine useful, or it helps someone understand variables better, because its not much use for anything else. Bye!!!

ANIMATING THE PLAYER

By R. Spreadborough ATARI ST

Here is a way of animating the players position within an area. It has a great number of advantages over the INCLUDE (o) method, and the SETVAR (X,Y,Z) method. It works rather like a film camera in your area that you can maneuver and click one shot after the other. If you wish to animate a journey on a conveyor belt you would use the following:



Now go and stand on the trigger pad and create an entrance from the menu. Take a few steps forward and create another. Repeat as many times as you wish making the animation smoother or faster, and just change the loop value. If REDRAW is used the player becomes locked into the animation and cannot use movement controls. However, if you use a MOVE command to move any object nowhere (MOVE (0,0,0)) then the controls are read each frame so it is possible to have some interaction during transit. If you wish to fly then board your craft and use Mode (3) to disable gravity. Make your craft invisible and create a take off sequence. It is possible, by selecting CAM 1-5 and Mode 2 or 3 to set yourself miles outside an area and fly in a circle around and land. Don't forget to set Mode 1 (walk) when you land!

HAPPY LANDINGS!

16/32 BIT ROUTINES

POETRY IN MOTION
By David Willmore - ATARI ST

Here is a small routine to make a cube appear out of the floor and back in again. First of all this routine can be done using false floors passing up through them, but to give it the professional look you should do it like this. First create a group by clicking on the group icon. Now create a cube and lower it to the floor. Copy this cube so it appears above the first one. Now INVIS the first cube and lower the second one down to the floor. Click on edit and shrink it down by 10. Now copy the cube so that a third one appears above. INVIS the second cube and lower the third cube down to the floor. Click on edit and shrink this down by 10. Copy the third cube so the fourth cube appears above. INVIS the third cube and lower the fourth cube to the floor. Click on edit and shrink down by 10. Repeat this process until the last cube looks like a rectangle on the floor. When finished make the last cube invisible and the first one you created visible (which should be No 3 if you started with nothing in your area except the floor). Now select OBJECT CONDITIONS and enter the following on the cube that you created first (No3) and enter the following:

```
IF SHOT?
THEN STARTANIM (1)
ENDIF
```

Now create an animation and edit it as follows:

```
START
INVIS (3)
VIS (4)
END
INVIS (4)
VIS (5)
END
INVIS (5)
VIS (6)
END
INVIS (6)
VIS (7)
END
INVIS (7)
VIS (8)
END
INVIS (8)
VIS (9)
END
INVIS (9)
VIS (10)
END
INVIS (10)
VIS (11)
END
INVIS (11)
VIS (12)
END
INVIS (12)
VIS (13)
END
INVIS (13)
END
INVIS (13)
VIS (14)
END
INVIS (14)
VIS (15)
END
INVIS (15)
VIS (16)
END
DELAY (50)
INVIS (16)
VIS (15)
END
INVIS (5)
VIS (14)
END
INVIS (14)
VIS (13)
END
INVIS (13)
VIS (12)
END
INVIS (12)
VIS (11)
END
INVIS (11)
VIS (10)
END
INVIS (10)
VIS (9)
END
INVIS (9)
VIS (8)
END
INVIS (8)
VIS (7)
END
INVIS (7)
VIS (6)
END
INVIS (6)
VIS (5)
END
INVIS (5)
VIS (4)
END
INVIS (4)
VIS (3)
END
INVIS (3)
END
DELAY (20)
RESTART
```

When you have finished typing save all your data to disc before trying it out, otherwise it is quite possible it could crash if you haven't done things right. Hopefully you have. Now, after all that, shoot the cube. It should be going up and down perfectly - poetry in motion - the professional look!

FROM LITTLE ACORNS...

By David Willmore - ATARI ST KIT 2

In the television series Dr Who, he walked inside a police telephone box and when inside it looked like Wembly stadium. Well here is how to create this effect for yourself in your games.

To make things a bit simpler click on group and make a square using six cubes flattened and stretched to make four walls, a floor and a ceiling - just like the exploding cube but much larger. When you have done this shrink one of the side cubes so it is half the size of the others. This is so you can move in and out of your cube that you have created.

Next walk inside and turn round so that you are facing outwards. Now create an entrance by the normal methods. When you have done this move towards the opening but don't move out of the cube. Now create another cube and edit it so it fits the doorway so effectively you have shut yourself inside.

All being well you should be inside a cube with one side of it containing two walls. Now make the cube that you have just shut yourself in with INVISIBLE by using the colour invisible method - not the attribute method. When you have done this click on OBJECT CONDITIONS and select the cube you have just made invisible and enter the following:

```
IF COLLIDED?
THEN
INVIS (2) - this is group 2 (your cube)
ENDIF
```

Now here comes the tricky bit. Turn around and put your back to the opening in the cube and back out of it slowly until the whole cube vanishes. As soon as it vanishes stop moving.

Now let us create a Tardis. First create a group, the Tardis is going to be very basic so create a cube and stretch it up so it looks something like a telephone box. The old red ones. Be sure not to move when doing this operation. Now move the tardis towards you until it hits you in the face. Now go to the attributes and make the object invisible.

The way to do this is once the attributes screen is up click on INVIS then click on defaults then fadeval. Then click on INVIS. If you just try to click on INVIS the attribute defaults it will not highlight so do it the way I have described. When you have done this click on Object Condition and select the group number for the Tardis and enter:

```
IF COLLIDED?
THEN INVIS (10) tardis group
VIS (2) group 2 our cube
ENDIF
```

Now reset the screen and goto entrance 2. All being well you should be inside the cube facing out. Now walk out of the doorway sideways and if you positioned the tardis just right you should see the side of it appear when you step out.

PERSONAL COLUMN

To Mandy...

The newsletter is very handy
With hints and tips edited by Mandy,
Routines and letters are all inside,
Plus a user group game which I have tried!

.... From Tony Hartley

To Mieke Van Der Poll... I would like to give you a very big "Thank You" for all your efforts in converting Fast Town for the Amiga and PC. I would be delighted if you can do the same for War of the Worlds. Thanks very much.....From Tony Hartley

HINTS AND TIPS

By Tony Hartley - ATARI ST

Make sure that all the loading screens have the same colour as your Borders to prevent colour corruption of your borders when loading screens have been presented.

Make all of your objects which are facing the light source e.g. lamp, sun etc, lighter in colour than those not facing it to give a more realistic effect.

Don't try to copy objects which are touching the edge walls of your areas as strange things sometimes happen. Move them in a bit nearer to the centre a little and then copy them.

For ease of reference name your objects in all your areas that have a condition, or are used as doors etc. This will make entering conditions and debugging them a lot easier.

To make things easier place your borders in a folder called Borders and loading screens in the route directory - NOT in a folder - on your disk.

Don't forget to make good use of sound effects in your games. They can add a lot of realism. If you have an animation of a dripping tap then why not have the accompanying sound effect also. By using the SYNCSND command within your animations you can time the sound effects perfectly. Doors opening and closing with a loud thudding sound are also excellent ways of creating atmosphere. If you are in a spooky castle then why not have a horrible creaking sound when a door closes or opens.

In Kit 1 you cannot copy an area unless you do it by hand. This means that you should make sure that all the objects, walls etc of your area are formed into a group and saved as one object. Then you create another area and load in your saved object - there you have an identical area - most useful for creating mazes or for hotel bedrooms etc. The colours can then be edited and furnishings changed around if you wish. Do make sure though, that you do NOT include the GROUND when you are saving your area objects as a group - when you try to re-load in your "object" into the new area you will get an error message as there will already be a "ground cube" and you are asking the system to place one object on top of an existing one.

Make sure that when you are programming your games you keep a seperate written list of which variables you are using and what each variable is for. It might seem quite straightforward but some people do tend to forget. Then, of course, when they are trying to discover why something will not work they have no reference to the variables they have used and it makes life extremely difficult.

The Global area in Kit 1 isn't entirely to everyone's satisfaction and there isn't a global area in Kit 2. So the first thing that you should do is to create your very own global area. In this you can have your walls, floor and ceiling all created to a size to suit you and you can even include doors, doorways, windows and whatever else you would like. It doesn't mean that you have to have all your doors and windows at once in your new area. Just save out what you want as an object from your globals and load them into your new area or make a complete copy. It does take a bit of time to get everything just as you want it to be but it is extremely time saving later on.

GETTING THE MOST OUT OF BORDERS

By Tony Hartley - ATARI ST

The first thing to remember about the Atari ST version is that it uses a split screen effect whereby the Freescape view window colour palette is different to the border palette. The easy way to get around this is to design borders that only fill the bottom half of the screen and use a top strip of border with the view window filling the space between. Just take into account that colours to the left and right of the view window usually change.

If you are using two borders in an area then make sure that border 2's controls and instruments are drawn in EXACTLY the same place as border 1's are. The easy way to do this is when you have drawn border 1 on your art package simply copy it again for border 2 then edit the copied one to how you want it but leave the controls instruments where they are. The view window size can be altered between the different borders by using the VIEWWINDOW (P1,P2,P3,P4) command on the object or whatever that changes the border. P1 etc refers to the window coordinates.

To simplify things it is best to make the loading screens and end screens in your 3D worlds with the same colour palette as the borders to stop colour corruption.

Don't forget that you can have text windows in your borders as well as in the view window.

Borders should never be overpowering and garishly coloured so that they detract from your game. They can be as simple as you wish or you could try to add a timer, a brushanimation and an inventory window etc for better effect.

MEMBERS HOTLINES

The following User Group members have kindly offered their help as telephone helpliners. You may also write to them for postal help if you prefer but please do not forget to enclose a stamped, self addressed envelope for their reply. No SAE - No help.

GEORGE DIXON (AMSTRAD CPC)

7pm to 10pm weekdays and any reasonable time during weekends.

STEVEN FLANAGAN (AMIGA & COMMODORE 64 KIT 1 & 2)

ANDREW HERBERT (AMIGA)

BRIAN WOODLEY (ATARI ST)

(WILL ALSO PLAYTEST)

MARCO GRUBERT (PC)

STUART SHELTON (SPECTRUM)

TONY HARTLEY (ATARI STE KIT 1 & 2)

PLAYTESTERS

If you need someone to test your games/environments for bugs etc, the following members have kindly offered their services:

JOHN BIDMEAD (ARCHIMEDES A3000)

ROBERT BACK (AMIGA)

SIMON BUTT (AMIGA)

MICK JOLLEY (ATARI ST KIT 2)

MARK ROSE (PC KIT 1 AND KIT 2)

ROBIN BALL (ATARI ST KIT 1 AND KIT 2)

ALASTAIR PACK KIT 2 PC

DANIEL FOSTER (PC)

STEPHEN MOORE (AMIGA)

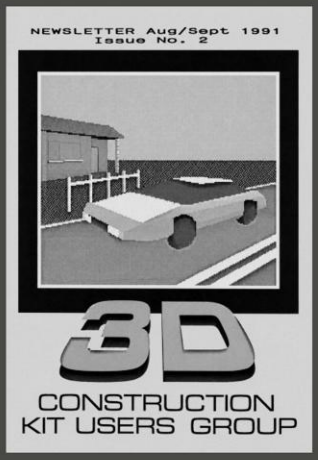
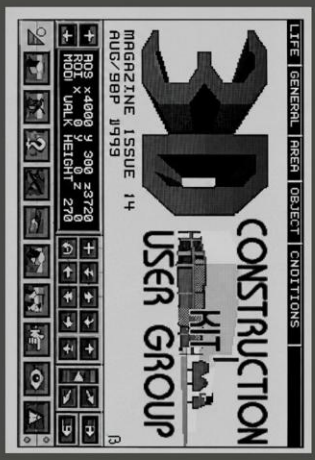
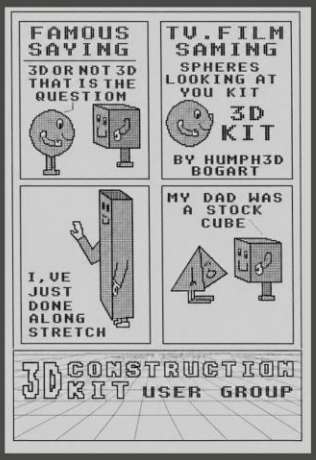
GIORGIO OLIVERI (PC)

HALL OF FAME

My sincere thanks to the following members who kindly took the time and trouble to send in contributions for the newsletters:

TONY HARTLEY, LES WINSTANLEY, MIEKE VAN DER POLL, NIGEL ALEFOUNDER, JOHN CLARKE, ALASTAIR PACK and DAVID WILLMORE.

Addresses removed intentionally.

www.3dconstructionkit.co.uk

3D CONSTRUCTION KIT USERS GROUP