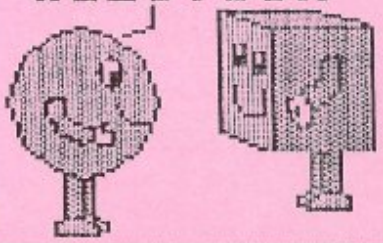
FAMOUS SAYING

3D OR NOT 3D THAT IS THE QUESTION



TV. FILM SAYING

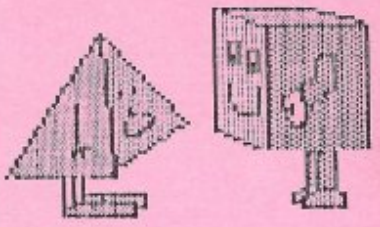
SPHERES LOOKING AT YOU KIT

3D KIT

BY HUMPH3D BOGART

I, VE JUST DONE ALONG STRETCH

MY DAD WAS A STOCK CUBE



3D CONSTRUCTION KIT USER GROUP

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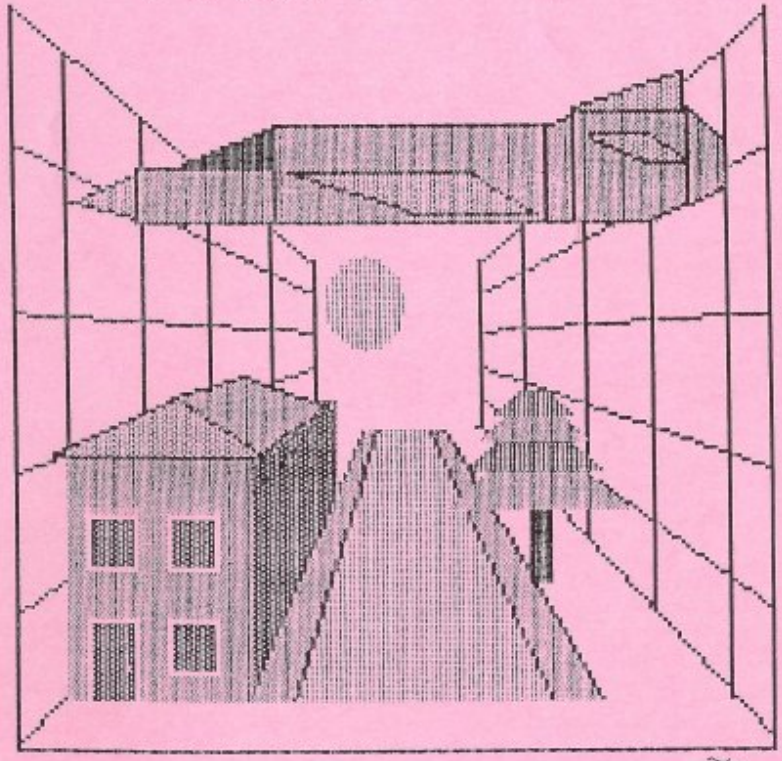


Tony Hartley.

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) left	right
Viewpoint 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: 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 - 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 - 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: Select: GENERAL - BRUSHES - CUT BRUSH - WORLDVGA - OK - move pointer to the first Globe with a box around it and click right mouse button - 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 - GENERAL - BRUSH - ANIMATIONS - CREATE - GENERAL - BRUSH - ANIMATIONS - EDIT - SELECT ABRUSH 1 - OK - select REPEAT and FORWARDS - EDIT - 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.

BEGINNER'S SECTION
USING AN AREA MORE THAN ONCE

By *Mieke Van Der Poll*
(SUITABLE FOR KIT1 AND KIT2 16/32 BIT USERS - 8 bit too!)

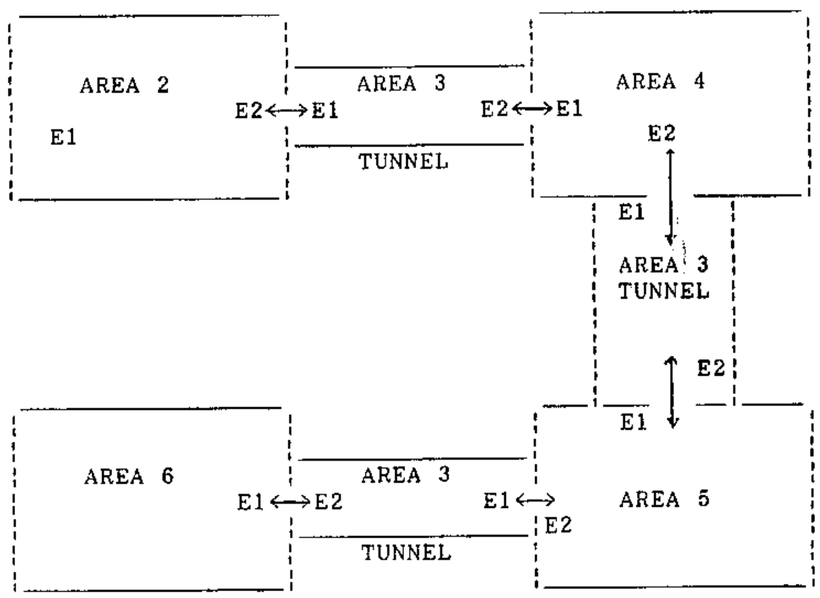
If you want to go from one area to another, for instance, through a tunnel or through the inside of a mountain, and you intend to have such an event more than once in your game, you can use that "tunnel area" for that purpose everytime. You don't have to load it it more than once, only have to design 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 to call up the video sequences and also to edit the video sequences. I wondered 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:

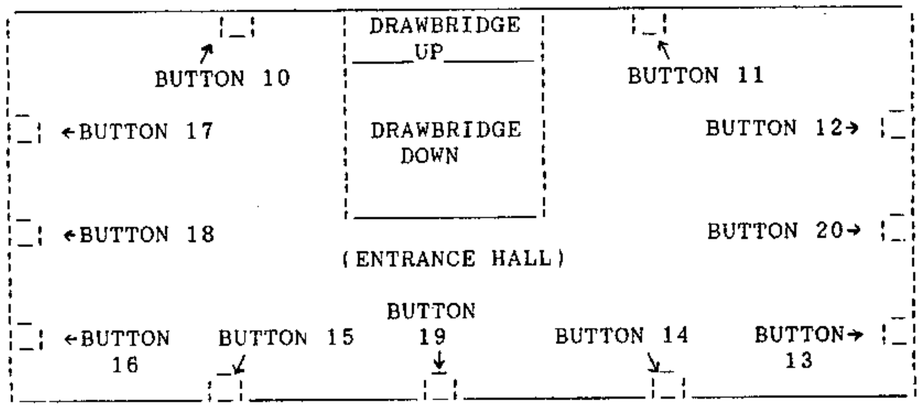
Mark Rose and *Richard Exton*

As these are specifically for the use of Kit 2 users it wouldn't be fair to Kit 1 users to take up space and print them within the newsletter 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
```

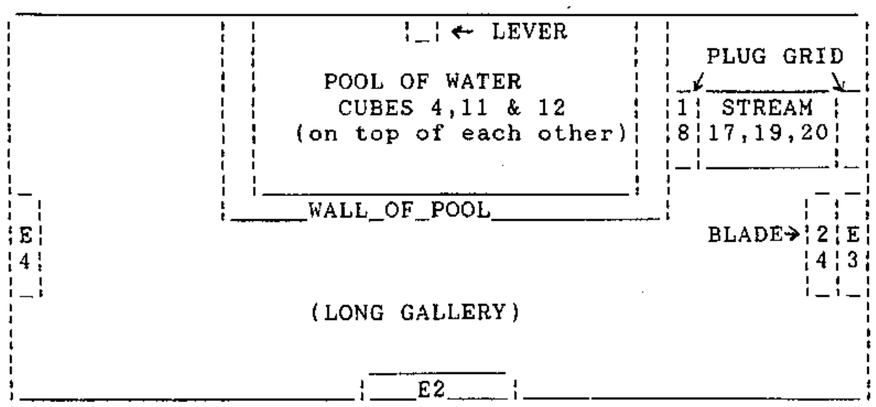
To make the drawbridge I used a flattened cube to represent the closed drawbridge and positioned it right up against and covering the entrance in the far wall. I then copied the cube, brought it forwards and upwards a little to be able to flip it until it was lying flat and then moved it until it was 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.

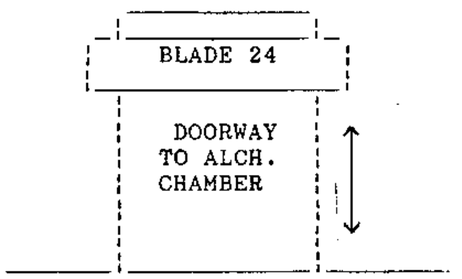
Our next puzzles/problems are going to be created in the Long Gallery (AREA 3). What we are going to achieve (hopefully) is to create a sharp blade which is swinging up and down over the doorway to the Alchemists Chamber and preventing entry. There is a lever on the wall opposite the door through which 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:



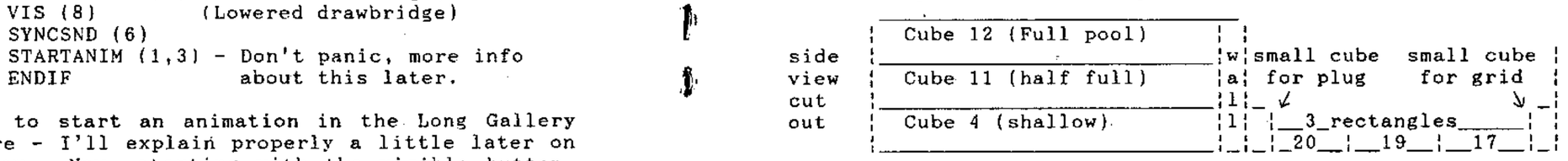
The stream of water draining out of the pool is done with three rectangles number 17, 19 and 20 (in my version).

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.

****

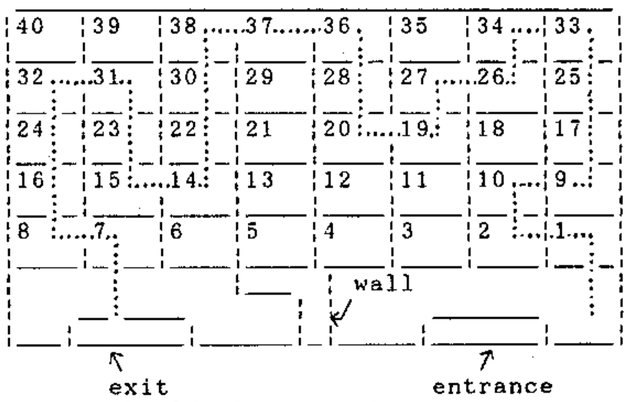
16/32 BIT ROUTINES

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
```

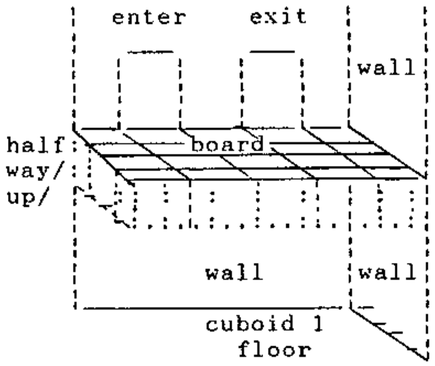
CUBE 2 CONDITION

```
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:

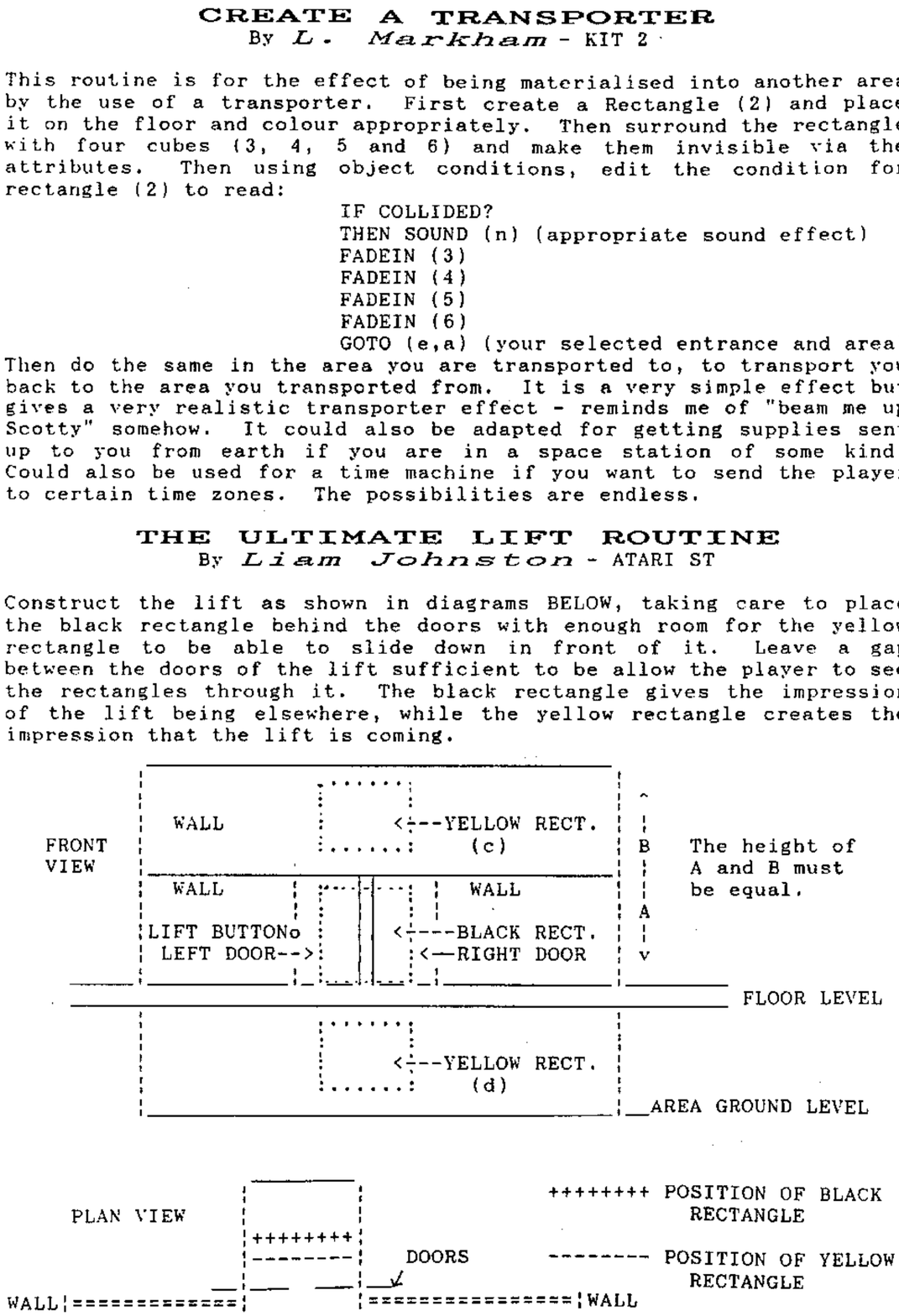
```
IF COLLIDED?
THEN SOUND (n) (appropriate sound effect)
FADEIN (3)
FADEIN (4)
FADEIN (5)
FADEIN (6)
GOTO (e,a) (your selected entrance and area)
```

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.



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
```

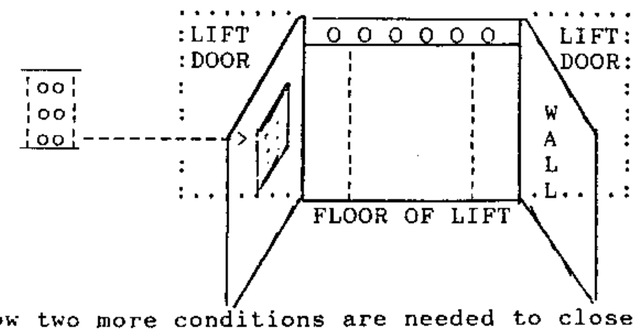
We need to specify where our lift is at the start of the game. To do this place a command SETVAR (a(start area),v(variable of area)) in your default condition. Now that we have the floor set up to allow for the impression of a lift coming and our variable are initialised, we need to modify the condition 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
```

CONTINUED OVERLEAF

```
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 should 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 explanation 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 'O' 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 flexibe, 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.

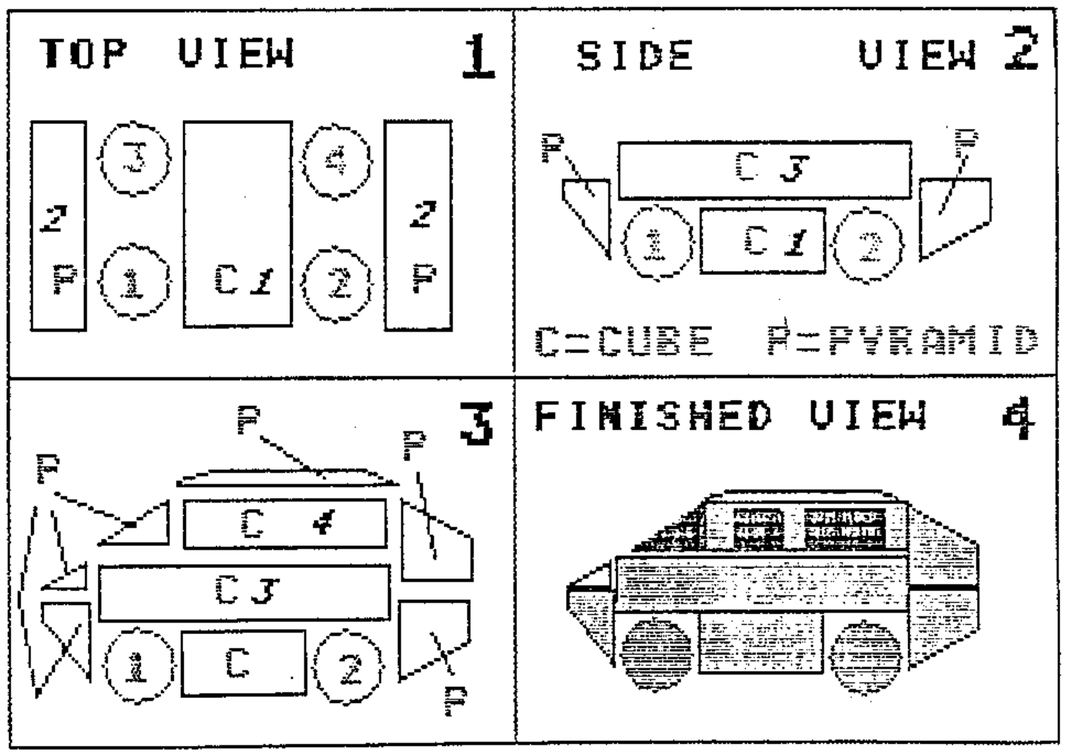
HINTS AND TIPS

CREATE A VEHICLE IN EASY STEPS

By *Tony Hartley* - ATARI STE - KIT 2

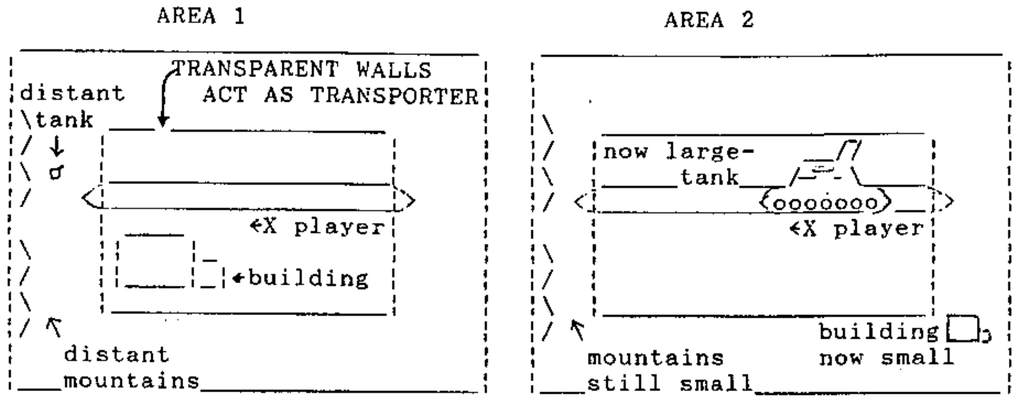
Here is a diagram to show that you can make a vehicle with wheels, made from spheres, using a clever trick so that they don't look like footballs, and more like wheels:

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 five 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. Tha 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:

Creat Initial Condition and Edit Initial Condition:

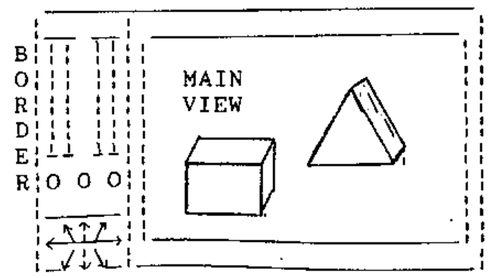
```
LOADSCREEN ("space1.lbm",0)- name of picture
DELAY (150)
CLEARSCREEN
LOADSCREEN ("space2.lbm",0)
DELAY (150)
CLEARSCREEN
LOADSCREEN ("space3.lbm",0) - about the game
DELAY (400)
CLEARSCREEN
LOADSCREEN ("space4.lbm",0) - instructions
DELAY (700)
CLEARSCREEN
BORDER (1)
SETVAR (0,V20) - disable shooting
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 .lmb 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 dub-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.