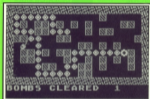


# NEW ATARI USER

The Resource for the ATARI CLASSIC and the ATARI ST

Issue 59 December/January

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*A neat little type-in game*

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*- use that extra 130XE RAM*

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**'The magazine  
for the Dedicated  
Atari User'**

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**Happy Christmas Folks!**

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## SUBMISSIONS

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The Magazine for  
the Dedicated Atari User\*

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THE CREDITS

All of the usual stuff is on page 4 but first are the people who make this issue possible.

**Lin Ellington** having computers an all day place from the Atari magazine and our headquarters before the computers for any witty comments this issue!

**Andy** - you're on an island and things checked things it all

**Frankie** - you're on an island and has a nice island and... hold on... readers were inspired... just a minute

The Regular Contributors, who provide the bulk of the Atari magazine and can probably be relied upon to come up with good and/or bad reviews, are...

- **John D. Swanson**  
**John Heryaux**  
**Thomas Howard**  
**Don Day**
- **John Swanson Jr**  
**Paul Adams**  
**Ken Friedman**  
**The Tippers**

All other contributors for this issue are full-time, self-employed, freelance writers or part-time. Please do completely the editing and the illustrations with their own money.

Many, many thanks to Andy for making a magazine for me and for his kind comments. They are most appreciated.

Just as another issue which, because of the very close, is called this issue as just two new CD's. Firstly, *Archie* which I believe I would have thought that it has been chosen as the CD for this issue.

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Editorial

**W**hat a nightmare! There is no denying that computers have made life a lot easier and made things possible that years ago we could only have been dreamed of. Without a computer it would not be possible to create this magazine but having a computer guarantees nothing!

This issue may reach you a few days late and a few of the things which should have been included are missing. Likewise there are one or two things which weren't going to be here included in this page. Why? Well, I had completed almost ninety per cent of the typesetting when the directory of the hard drive got screwed up (partially displaced by just one byte) and the end result was that I lost the entire typesetting. Two weeks work gone in around ten seconds! Day do I hate computers. Not only that but at almost the same time the laser printer died and I have not been able to proof the copy fully so there may be even more mistakes than usual. Sorry about that but don't blame me it's the equipment that is inadequate!

For those who like the juicy details all I did was to load up one of the last articles by editing and review it. Suddenly only that file appeared in the directory. Frank sets in almost immediately in these cases. I got out the word editor to see what was wrong and discovered that the directory in the particular folder had been displaced by one byte but I could not figure out how to put it right. First thing I thought of was to back up all the work I had done so far and so the entire issue was backed up into floppy before I set about trying to sort the directory. I managed to get one filename back but the details were not correct so I gave up and attempted to back up the entire drive partition to start afresh. Because this filename was not correct the back up program bombed out and it seemed the only thing to do was to delete the file. I pulled it up and dropped it in the trash can and when the drive did not stop after a few seconds I broke out in a cold sweat. There was nothing I could do but pray. The drive stopped after several seconds and in and behind everything was gone, about 2 megabytes of space, including all the directories had been wiped clean! Holding back the tears I considered myself with the thought that at least I had the current issue on floppy and so started to try and copy it back only to find that the directory on the floppy had been scrambled too. That was it two weeks solid work down the drain. Time for a hot one or two of wine and a long lie down. Day I really do hate computers.

This issue has been recreated from scratch. What made it worse was that I lost all of the last issue as well as things like request adverts and several other items, including about twenty pages! I had to start from last time, also had to be brave, it has taken lots of blood, sweat and tears to get this far!

And what about the laser? Well that is another entire story of its own, all I will say is that I can only hope that Atari will get it back to me before the next issue is due!

A NEW STYLE

You can't have failed to notice the different cover this issue but as they say you can't judge a book by its cover. Inside you will find much as before (inadequate computers, permitting and going for your help and contributions and some occasions we can keep New Atari User going for a long, long time. Of course we would have liked to have continued with a nice full colour cover but, now that we are out in the main marketplace, it is not actually necessary and it was one of the major production costs. We have had several letters in recent months suggesting we drop the colour cover in these hard times and so maybe it doesn't matter too much. What does matter is that we can continue to support the Atari as we have always done. Long term readers will remember that this is what the mag looked like in the early days so the cover has turned but the wheels keep on rolling.

OUT OF SPACE!

Nearly running out of space now so I will finish up with a couple of brief comments.

**CONTRIBUTIONS:** We need your voluntary contributions to keep the magazine interesting. Space whatever you have with your fellow Atari enthusiasts.

**SUBSCRIPTIONS:** Now our birthday so please tell all of your Atari owning friends that the future support of the Atari in this country depends on them supporting us.

Lin Ellington



# MULTI-SPRITE

**T**he Atari's hardware sprite for player/missile graphics, for partially sprites is one of the machine's best features. You can create small sprites with their own colors, rotation, horizontal position, and vertical position by using the SPRITE MOVIE program from New Atari User Issue 54 but the main drawback is that only four are available at one time, although the "missile" can be used as a fifth sprite.

The program presented here expands upon SPRITE MOVIE by adding a Display List interrupt routine which repositions the four sprites when the TV picture is half-drawn, the principal aspect of which is that you can view one four sprites in the top half of the screen and another four in the lower half. The DL also changes the rotation of the sprites, so you can have eight different rotated sprites on screen at a time, or view if you use the extended.

The program uses X and Y co-ordinates for each sprite in a similar way to SPRITE MOVIE, but here you have to be more careful when positioning them, as only one half of the screen is available for each set of four sprites. The co-ordinates range from 0-255 horizontal and 0-80 vertical for the first eight sprites, but the missiles or fifth sprite, is not split half way down the screen. The reason for this is that if you want to use one sprite for your man or spaceship or whatever, you will probably not want to limit him to only the top or the bottom half of the screen, so the vertical co-ordinates for this sprite (number 9 in the program) range from 0-176. The table below shows the memory locations to use for positioning the sprites.

SPRITE	X-reg.	Y-reg.	COLOR reg.
1	1804	1808	704
2	1806	1807	706
3	1808	1806	708
4	1800	1800	700
5	1808	1803	1878
6	1804	1805	1873
7	1806	1807	1874
8	1808	1808	1876
9	1870	1871	711

So, if you want to make your seventh sprite white and place it near the bottom left corner of the screen, you would:

POKE 1808,0:POKE 1807,0:POKE 1874,14

The top four sprites in the program are currently defined as ghosts, and the bottom four as little white men. The multi-sprite is a fun. You can of course substitute new data for your own sprite shapes for use in games or even for brightening up test screens. Design your sprites as a grid of 8 horizontally by 80 vertically pixels in the same way as you would with re-defined characters, and put the data in lines 20 to 27.

Finally, about using keyboard input while this program is running as it interferes with the DL timing and causes screen flicker. If you use this program in a game, use a joystick routine to move your main sprite. If you encounter any problems or difficulties with the program, please drop me a line at the ENCL address and I'll do my best to help, but please remember to enclose an S/M. Enjoy the program!

```

10 0 NEW
20 1 NEW 0          MULTI-SPRITE          0
30 2 NEW 0          NEW SPRITE MOVIE    0
40 3 NEW 0          -----             0
50 4 NEW 0 NEW SPRITE MOVIE - NEW SPRITE 0
60 5 NEW
70 6 FOR PICTURE TO (200,100) 0,0:MOVIE 0
80 7 RETURN 0:FOR PICTURE TO (200,100) 0:MOVIE 0
90 8 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
99 9 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
100 10 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
110 11 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
120 12 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
130 13 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
140 14 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
150 15 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
160 16 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
170 17 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
180 18 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
190 19 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
200 20 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
210 21 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
220 22 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
230 23 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
240 24 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
250 25 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
260 26 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
270 27 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
280 28 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
290 29 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
300 30 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
310 31 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
320 32 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
330 33 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
340 34 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
350 35 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
360 36 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
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470 47 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
480 48 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
490 49 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
500 50 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
510 51 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
520 52 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
530 53 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
540 54 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
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620 62 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
630 63 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
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680 68 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
690 69 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
700 70 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
710 71 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
720 72 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
730 73 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
740 74 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
750 75 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
760 76 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
770 77 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
780 78 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
790 79 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
800 80 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
810 81 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
820 82 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
830 83 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
840 84 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
850 85 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
860 86 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
870 87 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
880 88 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
890 89 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
900 90 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
910 91 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
920 92 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
930 93 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
940 94 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
950 95 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
960 96 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
970 97 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
980 98 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0
990 99 0:MOVIE 0:MOVIE 0:MOVIE 0:MOVIE 0

```

# ITE

```

00 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
010,100,100,100,100,100,100,100,100,100,0
...100
02 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
030,100,100,100,100,100,100,100,100,100,0
...100
04 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
040,100,100,100,100,100,100,100,100,100,0
...100
05 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
050,100,100,100,100,100,100,100,100,100,0
...100
06 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
060,100,100,100,100,100,100,100,100,100,0
...100
07 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
070,100,100,100,100,100,100,100,100,100,0
...100
08 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
080,100,100,100,100,100,100,100,100,100,0
...100
09 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
090,100,100,100,100,100,100,100,100,100,0
...100
10 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
100,100,100,100,100,100,100,100,100,100,0
...100
11 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
110,100,100,100,100,100,100,100,100,100,0
...100
12 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
120,100,100,100,100,100,100,100,100,100,0
...100
13 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
130,100,100,100,100,100,100,100,100,100,0
...100
14 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
140,100,100,100,100,100,100,100,100,100,0
...100
15 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
150,100,100,100,100,100,100,100,100,100,0
...100
16 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
160,100,100,100,100,100,100,100,100,100,0
...100
17 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
170,100,100,100,100,100,100,100,100,100,0
...100
18 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
180,100,100,100,100,100,100,100,100,100,0
...100
19 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
190,100,100,100,100,100,100,100,100,100,0
...100
20 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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22 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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23 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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27 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
270,100,100,100,100,100,100,100,100,100,0
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28 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
280,100,100,100,100,100,100,100,100,100,0
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29 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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30 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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31 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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32 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
320,100,100,100,100,100,100,100,100,100,0
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33 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
330,100,100,100,100,100,100,100,100,100,0
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34 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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37 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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38 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
380,100,100,100,100,100,100,100,100,100,0
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39 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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40 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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41 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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94 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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95 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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96 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
960,100,100,100,100,100,100,100,100,100,0
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97 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
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98 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
980,100,100,100,100,100,100,100,100,100,0
...100
99 00 0070 177,0,0,101,0,100,0,100,0,100,0,100
990,100,100,100,100,100,100,100,100,100,0
...100

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by Robert Stuart

## DISK BONUS JIGSAW



A neat little puzzle by Stephen Logic that will have you at your wit's end  
**PLUS TETRIS** by Richard Carter  
A neat version of the classic game

Full details of these programs are on this issue's disk which can be obtained from Page 8 or just £2.00. Send your cheque, £10 or credit card number to PAGE 8, P.O. Box 54, Stafford, ST16 1TB or telephone us on 0800 211000 for your copy.

## MAILBAG

Mailbag will be back next issue!

We are extremely pleased to announce that Alan J. Palmer, one of our readers and supporters from the very early days, has volunteered to become Mailbag Editor.

Alan has a wealth of experience with the Atari Classic and will welcome your letters and queries to start Mailbag into an interesting column where information can be shared amongst us all, but he cannot do this alone, he needs your regular letters and feedback.

Write to Mailbag NOW with any questions or comments to get the column started. Your feedback is needed right away because the very deadline for the next issue is looming!

Write to:  
**MAILBAG, Page 6, P.O. Box 54, Stafford, ST16 1TB**  
**PLEASE MARK THE TOP OF YOUR LETTER 'MAILBAG'**

## Do you own an Atari Computer? A Lynx? YCS? 8-Bit? ST/TT?

Yes. Then you need - 8:16

Produced by the Bournemouth & Poole Atari User Group (BaPAUG) in its 8th year, 8:16 covers the whole world of Atari computing. It regularly runs articles on all the machines, including cheats for Lynx games, programming tutorials for the 8-Bit and ST/TT, game reviews for the YCS and reviews of the many series of annual software titles.

Current subscription rates for 4 issues are:  
UK: £5.50 / Europe: £10.00  
Rest of the world: £10.00 (incl. £18.50 air)  
Payment in UK only, payable to The BaPAUG  
260 Poole Lane, Bournemouth, Dorset BH11 9DT

# GERMAN GOODIES

**U**K interest rates are far too low according to one German businessman - interest, that is, in the Atari software produced by his company. Following my report of Ke-Soft merchandise in issue 57 the proprietor Ronald Kraus received several enquiries from British Atarians - but hardly any orders! The reasons for this aren't entirely clear but it seems likely that most users are reticent when it comes to sending money abroad - hardly surprising after this year's historic chaos in the foreign currency markets! If you were discouraged in this way, the good news is that Micro Discount are acting as agents for Ke-Soft products in the UK and will import certain titles subject to demand (though not necessarily the entire range). Of course, in the absence of sufficient sales in Britain users it will not make economic sense for Ke-Soft to continue producing English instructions, and one of the few remaining sources of rare 5.25 software will disappear. Ke-Soft's latest releases (all with English translations) comprise a game and two utilities - one brand new and the other resulting from their recent acquisition of the rights to publish Silver Software titles.

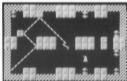
## LASERMAZE

LASERMAZE is characteristic of other Ke-Soft games, both in style and quality. It's a multi-level puzzle of the type that's exceedingly addictive and has consequently achieved great popularity in the gaming world. This time the story is that a SCORPION named Mosk is stuck in an underground maze and his only chance of escape is to destroy a quantity of dangerous mines in each of fifty corridors. His enemies will apparently warn the world but don't ask how!

Every screen contains a mixture of walls, mines and various special objects. Your task is simply to eliminate the mines by shooting a laser beam into them. The laser source cannot be moved but the beam is deflected off walls and 'reflector' boxes which Mosk can push around the screen in response to commands issued from your joystick. There's no time restriction so you are allowed to think carefully about the best position for the beam before letting slip with the laser. Ammunition is limited so you should try not to waste too many shots. If you don't hit a mine and the beam is absorbed by a non-reflective material, you run slowly the beam's path before your next attempt. Objects in mazes can be include ammunition changes, beam pivots and killer obstacles who rapidly deplete your laser's power. It soon becomes quite a challenge, but fortunately each level has a pass code for direct access to future screens.

Graphics are second only reasonable though not, as Sherry Walker would say, totally sensational! The game screens (highly in the addictions department and, with fifty puzzling levels, is likely to keep you occupied for a worthwhile period. As with other Ke-Soft games of this type the flip-side of the disk contains a screen editor so you can create as many new levels

*Paul Rixon discovers more new software from Germany. Isn't it time you took a serious look?*



as you wish. My only complaint is that Ke-Soft have (as usual) printed the instructions in red ink on bright orange paper, making them a real effort to read. This may be a clever deterrent against photocopying (and is likely to keep the local operators in business) but it's not, exactly 'user friendly'. A good game though!

## KE-COMMANDER

If you're familiar with the increasingly dominant PC machines you've probably come across disk utility programs such as Steve and Norton Commander which enable you to manipulate files and directories in a simple and efficient manner. KE-COMMANDER is Ke-Soft's implementation of similar facilities for your 5.25 Atari. It provides an alternative to Star's EXPLORER (the program that normally leads where you type DOS) from DataL and claims to be compatible with all Dos 2.0 versions. Strangely it refused to work correctly with the DOS contained on Ke-Soft's distribution disk but had no problems coping with my own copy of Dos 2.2. It also worked fine alongside Turbo Basic.

Ke-Commander is based on a split screen display, each half listing the directory contents of a pre-selected drive, initially the system is set up to read drives one and two as if you don't



have a second drive, the first thing you encounter is a rather alarming error message! However, you can easily change the default so that both partitions display drive icons, or any other drive in your system - even a ROM-disk. The TAB key toggles a cursor between the two halves and the arrow keys can be used to scroll up and down the list of directory entries. You can have the items sorted by filename, file extension, ascending file size or in the 'normal' sequence. There are viewing facilities for text files, font files and mode 0 or 10 picture files. Simply move the cursor onto the required file, press the appropriate 'view' key and, providing it's in the proper format, Ke-Commander displays the file on screen.

One of the most useful and powerful functions of Ke-Commander is its tagging facility. You can tag and untag individual files by highlighting them with the cursor and pressing the space bar, or you can enter a mask string (such as '\*.DMS') to capture groups of similar files. The tagged files can then be deleted, locked, unlocked, renamed or copied in one process. In the latter case the two directory listings correspond to the source and destination drives for the copy - if these are the same, Ke-Commander prompts you when to change disks. Other functions for file format choice in single or dual density mode, write DOS and DTP to a disk, toggle the verify facility and launch executable files.

Change list functions inside Ke-Commander is an extremely capable and time-saving utility. If you frequently struggle with the less than ergonomic interface of Atari's DOS you will be delighted with Ke-Commander's friendly design and powerful complement of functions - especially that tag facility!

## TYPESetter

I reported in a previous article that Ke-Soft were about to re-release some Nice Software applications including First Nice Word Processor, MagnaFit II and Page Designer. I was therefore extremely pleased to receive proof of this re-managing news in the form of Typesetter, Nice's desktop publishing program for your 512k Atari. The package has many features (fortunately the instructions are printed in a readable column) and a full explanation would greatly exceed the space available here, but hopefully an overview will suffice to explain the basics.

Typesetter is supplied in two versions for 64K and 128K machines - the latter is recommended to obtain maximum functionality. The program's aim is to simplify the production of a single page of text and graphics which you can subsequently dump to your printer. It compares two utilities to help you achieve this - Text Editor and Sketch Pad.

The Text Editor allows you to enter words on the page using different font styles, sizes and typing directions. The screen can only display a small portion of the page but the viewing window scrolls in four directions to reveal the entire area. Control key commands enable you to switch text styles between standard, graphic symbols and international character sets or to load in fonts from disk (several are supplied). You can set the height and width of characters, rotate them through ninety degrees and type in four directions. You can load graphics in 62-vector format and overlay text and graphics. There are many other commands and 128K users



benefit from extra such as italic, horizontal line and many other basic facilities for increased resolution.

Sketch Pad is a straightforward drawing program that lets you design graphics for inclusion on the main page, or will segments to improve (for detail). Drawing options include fill (using a variety of methods), plot using three alternate fill brush widths, draw, circle, square and colour. You can copy your page design to Sketch Pad and vice versa, or save it independently on disk. Input is by joystick on the 64K version, but for 128K machines there is a choice of joystick, Touch Tablet, or Mouse Pad modes.

When it comes to printing your perfected design Typesetter provides options to dump the image vertically using full or half page height, or horizontally. You can output to Epson or Printer compatible printers. Because you can't view the entire page without getting a hard copy Typesetter isn't exactly the friendliest program of its type but Ke-Soft will happily offer you other Nice Software utilities which are intended to make life a little easier. Page Designer displays half the page at a time so you can trim away rough layouts and then load them into Typesetter. It also comes with a utility which converts Atari Art and Scale pictures into compressed files. Meanwhile, PS Interface allows the inclusion of Postscript icons and fonts in your page layouts. Typesetter can be purchased with Page Designer and PS Interface at reduced cost. If you're 'into' DTP, note that the highly acclaimed Print Shop is also available from Ke-Soft. If you're looking for a disk drive, they can sell you one of these too!

Once again I must strongly recommend that you check out the considerable services of Ke-Soft. The possibility of future English versions of Ke-Soft games and applications is entirely dependent on your response. It really is a case of support now or regret later.

## WHERE DO I GET THEM?

Ke-Soft software can be purchased directly from Gerald Evers, Ke-Soft, Postfachnummer 24, 04837 Müritzer 4, Germany. Telephone +49 (0)30 87338. A price list is available on request. The UK distributor is Derek Perry, Micro Discs Ltd, 205 Chester Road, Stoney, West Midlands, B74 3EA, Telephone 021 352 5730. Before ordering you should write or phone for details of the items currently available.

# FIRST STEPS IN ASSEMBLY

## Part 3

**L**ast issue you were introduced to two machine commands, so to continue the mathematical theme, we'll look at multiplication and division. Since multiplication is only repeated addition and division is repeated subtraction it is possible to multiply using *ADC*, and divide using *SDC*.

Example of multiplication of two single byte numbers.

<i>NUM1=20</i>	<i>//the two numbers which</i>
<i>NUM2=121</i>	<i>are to be multiplied</i>
<i>LDI NUM0</i>	
<i>LDI #0</i>	<i>clear the answer</i>
<i>STA ANS</i>	<i>location</i>
<i>STA ANS+1</i>	
<i>TLA</i>	<i>check a carry zero</i>
<i>DSQ END</i>	
<i>LOOP LDI</i>	
<i>ANS</i>	<i>add result onto ans</i>
<i>CLC</i>	
<i>ADC NUM0</i>	
<i>STA ANS</i>	
<i>LDI ANS+1</i>	<i>if carry add into</i>
<i>ADC #0</i>	<i>high byte</i>
<i>STA ANS+1</i>	
<i>DEC</i>	
<i>BNL LOOP</i>	
<i>END RTS</i>	

This form of multiplication is fine when the number of loops is quite small. However, if the number of loops becomes a fairly large number then quite a considerable amount of time can be taken to perform the multiplications, well for the microprocessor anyway!

There are ways you can speed up the process, for instance if one or both of the numbers is a multiple of another number e.g.  $20 = 4 * 5$ . You could first multiply by 4 then multiply the answer by 5, so only 11 additions would be needed rather than 20.

## WORK IT OUT!

There are commands available in machine code which are useful if you wish to multiply or divide by factors of two, but before I go on to those you might be wondering since I've shown an example of multiplication as repeated addition, how you go about dividing two numbers? Well rather than give you the program, you can figure it out for yourself. Here are a few pointers though. To make it simple have a 16 bit number divided by an 8 bit number. Now remember the answer is a division is how many subtractions you can make of the number you are dividing by, so you make the computer subtract the 8 bit number from the 16 bit number as many times as is necessary to get it less than the number you are dividing by. The number of times you subtracted is the answer. The number remaining is the end of the remainder! Easy!

*Daniel Lea continues his series for the beginner*

## MORE NEW COMMANDS

Now that division we'll get onto the magic commands for dividing and multiplying by factors of two. These are more subtle than *ASL* and *LSR*!

**ASL** stands for Arithmetic Shift Left. What it does is shift all the bits in a binary number to the left as below its binary.

0000111 becomes 00011100  
or 10 becomes 20

The effect therefore of *ASL* is to *DOUBLE* the number.

The *MSB* is put into the carry flag eg

10000000 becomes 00000000 with 1 in the carry flag.

It acts as you can see, it automatically adds to the end of the binary digit.

*Format* can be in one of two ways:

Firstly the normal addressed format

*ASL Address*

Addressing modes which can be used are direct and X indexed direct and the command also works in the two page forms of these two.

There is also a second available format ie

*ASL A*

which performs the operation on the Accumulator. There is no form to perform this on *LSR* on the index registers.

**LSR** - Logical Shift Right

Shifts the bits Right then dividing the number by two. This instruction shifts all the bits right and 0 is put in the *MSB* (MSB bit) whilst the *LSB* (LSB bit) is transferred into the carry flag.

10001000 becomes 00001001 and 0 is put in the carry flag

The format and so on are exactly the same as with *ASL*.

## ROL and ROR

There are two more related commands which are *ROL* and *ROR*.

**ROL** Rotates the bits Left

**ROR** Rotates the bits Right



In addition to subtraction, for example, to multiply a 16-bit number by 2:

```

LDA #100      ; puts the 100 in the carry flag
ROR #1        ; Takes the carry flag into the LMS, puts
              ; 100 in carry flag
    
```

Of course we can also divide the numbers by two as follows:

```

LDA #100
ROR #1
    
```

## LOGICAL OPERATIONS

In machine code you can also manipulate numbers in ways not possible in normal float BASIC. If you have Turbo Basic you may have heard of the following. You can perform binary AND, OR or Exclusive-OR on a figure and the accumulator.

The three instructions are AND, ORA and XOR.

**AND** - The AND instruction is used for AND with accumulator. To see how this and the other logical operations work it is best to consider the binary equivalents of the numbers.

If both of the bits in the numbers are 1, AND returns a 1 result bit otherwise i.e. 0 and 1, 1 and 0, or 0 and 0 it is the result bit. The symbol for AND is an upside down 'Y', i.e.  $\wedge$ .

Bits	Result
0 0 1 1	0 0 1 1
1 0 1 1	0 0 1 1
0 1 0 1	0 0 0 1
0 1 1 0	0 1 1 0

Addressing modes available: immediate, direct, indexed direct (X and Y indexed), pre- indexed and post indexed (indirect).

Examples:

```

LDA #000      ; 00011111
AND #001      ; 11100111
              ; -----
Accumulator=1 ; 01001111
    
```

```

LDA #170      ; 10101010
AND #15       ; 00001111
              ; -----
Accumulator=0 ; 00001010
    
```

```

LDA #170      ; 10101010
AND #65       ; 01010100
              ; -----
Accumulator=0 ; 00101010
    
```

**ORA** (short for OR with Accumulator) or's the figure in the accumulator. In this operation when both binary digits are 0 then the result bit is also 0, otherwise the result bit is set to 1. The sign used for or is 'V'.

Bits	Result
0 0 1 1	0 0 1 1
1 0 1 1	1 0 1 1
0 1 0 1	0 1 0 1
0 1 1 0	0 1 1 0

Addressing modes available same as those available with AND.

Examples:

```

LDA #220      ; 10011111
ORA #220      ; 11110011
              ; -----
Accumulator=0 ; 11111111
LDA #170      ; 10101010
ORA #15       ; 00001111
              ; -----
Accumulator=1 ; 10101111

LDA #170      ; 10101010
ORA #65       ; 01010100
              ; -----
Accumulator=0 ; 11111111
    
```

**XOR** (short for Exclusive-OR with Accumulator). In this operation if the binary digits are the same (i.e. 1 and 1, or 0 and 0) then the result bit is 0. If they are different (i.e. 1 and 0, or 0 and 1) then the result bit is set to 1. The sign for XOR is a 'V' with a line through it.

Bits	Result
0 0 1 1	0 0 1 1
1 0 1 1	1 0 0 0
0 1 0 1	0 1 1 0
0 1 1 0	0 1 1 0

Examples:

```

LDA #220      ; 10011111
XOR #220      ; 11100111
              ; -----
Accumulator=0 ; 00110000

LDA #170      ; 10101010
XOR #15       ; 00001111
              ; -----
Accumulator=1 ; 10100101

LDA #170      ; 10101010
XOR #65       ; 01010100
              ; -----
Accumulator=0 ; 11111111
    
```

## USES OF THE LOGICAL OPERATIONS

These three logical instructions can be very useful to the programmer, although you may not realise the fact just yet!

**AND** can be used as a mask i.e. it can block out some bits. For example if you have the binary number 11001010 and only want the bottom four bits AND #15 will mask out the top four bits:

```

11001010
^00001111
-----
00001010
    
```

**ORA** is used to force certain bits to be set to 1. ORA #240 (11110000) will set the top four bits to 1, and leave the lower four bits unchanged.

```

00000000 OR Any binary number
^11110000
-----
1111xxxx
    
```

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## FIRST STEPS IN ASSEMBLY

continued

FOR use to toggle bits on, if a bit is 1 it will toggle to 0, or if 0 to 1. (000 + 10,000) (1) will toggle the bottom four bits and leave the top four unchanged.

1 1000100  
900000111  
-----  
1 1000001

## BIT

There is a final logical operation, BIT, it is similar to the AND instruction in almost every way. The only difference is that the accumulator value remains unchanged and only the flags are changed.

The zero flag is set to zero if the result is zero. The sign and overflow flags act differently in that these are set with respect to the memory byte rather than the result bit.

You will of course have already noticed the program. We have a lower case, upper case, inverse character, using the logical operations. There is also an improved joystick recognition. If a bit in a VEE and moves the cursor around in reaction to joystick movement. Notice how, even though it uses VEE's it is much shorter than the joystick program from last time.

What's it, keep it short, there is not much more left to invent!

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# THE TIPSTER



**R**ight I feel in a good mood! Christmas is almost upon us (again!) and the shops have their usual lovely displays of Christmas Trees and musical Gnomes! What the hell is the world coming to if we reduce the seasons of goodwill to an unadorned display of alcoholism?

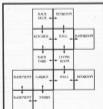
For come down off my soap box and will now start preaching (in an uncorrupted sense) the message of good Tipstering or how to get the best from the games you're got.

Lots of big 'uns this time, no kidders!

From now these offers come the solution to the new F.I.D. adventure *Flames* courtesy of J. Hough of Newcastle in South. An attempt it is ultimately in that **FLAME PUZZLE - NIGEL ISLE**.

TRAIN DE UNWILLIAM, ISMAE, NEPO STANBAC,  
 TEG YEK, TRIN/TINOR, TEO TRICHTAL, HPUON,  
 TNAE, EVOR AFON, TEG TRICEDRAL, TRISNI  
 YRETTAL, HESON, KORNAL TONOLC, TEO ERUP,  
 TERN, OG REATS, EYOM KALL, ITHREN, NEPO  
 NODRENOP, TEG KALPAGED, TRISNI ISLEP.

There you go that was worth the wait wasn't it?



mapped by J. Hough

## THE SOLUTION TO INDIAN GOLD

Bill (below) wrote a superb game called Indian Gold that appeared in this very magazine as you all very well know. From the same man now comes the solution to all those letters that I've received begging for help.

Right a'fore it starts.

Put the black screens with the base.

Put the pink screens with the gun.

Get water driver to cross marsh and pick up water bottle, jam jar and bread.

Take the jam jar to a desert screen and leave it at the edge (the screen will not appear if you enter a desert screen while holding the jam jar.)

Re-enter the desert screen and pick up the jam jar. Remove screen with jam jar.

Take water bottle to the desert and leave it there to take drinks from (i.e. pick up and drop when travelling through desert).

Make peace with the Indians by taking bread to them.

Pick up the axe to open the cabin situated just above the screen which initially contained the water driver.

Use the dynamite to remove the handhold. (Parties hand-holds come regularly as you may need to use the dynamite more than once.)

Pick up the crane and position it under the key on the tree screen.

Pick up the chair and put this above the crane.

Take the white key and open the cabin situated above the screen with the gallows.

Take the seeds to the garden with the bird on and drop them.

The bird will fly over and give you the black key.

Use the crane to cross the marsh and then use the black key to open the door of the cabin situated beyond the marsh.

Take the spade and move to the space under the screen, touching the frame.

As soon as you touch the correct space the gold coins will appear!

If you want to play again then press START.

There are a few red herrings as well as follows.

Never comes in the desert (in desert). Enter them and you could end up anywhere in the desert.

The cabin situated above the screen which contains the leg cannot be opened. You can try the window on it but if you do you will be shot!

If you take the seeds to the flower screen and then plant them in the space in the handhold one will grow. It is of no importance whatsoever!

The metal window frame can be removed using the dynamite but the path just leads into the desert so it is a waste of time. Making contact with the gallows, unstable posts in the marsh or staying too long in the desert without a drink gets you killed. You can't swim either!

# INFILTRATOR

Right, here is the full run-down of Infiltrator from the mysterious Dave W. of Birmingham.

**Folder #2** - Says B.S.I. lives to 2000, pull back.  
 \* key thru A -  
 Type: 128 Mission 1: 178 Mission 2 with 400 (later) 500 Mission 3  
 Keep Change screen clear each, hold fast too, pushing forwards.  
 Keys a = Turnaround - a Turnaround off line temporarily.

Lighting an alarm press key 1 and H and DELIGHT to (later)

ALLIED PILOTS	ENEMY PILOTS
WIFFIE	SCORNER
SUYMISH	SCUM
INDICOL	FLICE
GORNER	NATIE
GRAND	WELAND
NAPLES	WELBOW
GRUFF	DEPPY
DEPFA	SCORER

Your code names are **DEPFA** FOR (for Allied) and **SCORNER** (the Enemy)

Watch out for Infrared and Thermal, they can turn Movement and by and about you down for money.

Have HUD and R (removes enemy) - the enemy's craft must be in sight (only when in a full - and G movement) must be in your sight.

R - Banking/Combat with Chad - the fuel tank  
 H - Banking/Combat with Pharis - the fuel tank

Now for the hard part

**WARNINGS:** When you reach the destination, the orange arrow will spin wildly.

Select weapon mode

Hold destination

Full lock slowing the spin to 0

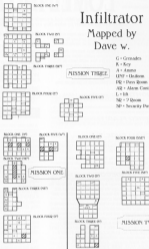
Watch the artificial horizon, you must hold the red part slightly below centre for a slow descent, the chopper will waver so you have to compensate for it if you don't get enough to hold to keep the horizon straight. If all is well the ADP with the orange arrow will turn black and hold it will be disrupted.

**GROUND ACTIVATION:** You have an inventory with sleeping gas granules, 50 papers (if they are not in an order put the gas) to sleep, Gas grenades, Mine detector, camera etc. These are selected with the cursor keys. The mine detector is activated by holding the direction in, protecting you for as long as it is held in. Explosives are to be placed one per room under a main control point or laboratory desk (push up). After the last bomb is set, you have 20 seconds to evacuate the building. Use the camera to photograph vital etc's, have paper and pens for have pin per second. Extra grenades etc. can be obtained from cabinets, desks etc. Change uniforms by standing in front of a coat rack. An electronic key can be found, should you wish to turn off the intruder alarm (only wear per mission) at the alarm control centre (again Push-up)

## Infiltrator Mapped by Dave W.

G = Grenade  
 K = Key  
 A = Alarm  
 DMF = Down  
 DP = Door Open  
 AD = Alarm Control Room  
 L = Lift  
 SD = 2 Doors  
 SD+ = Security Pass

### MISSION THREE



When you have completed your mission, reward whom, get the proofs, go back to the cockpit and by timer using the same procedures as at the start.

Well that was painless and so is the map if you follow it, properly and make good your usage.

## DODGY MR. DO!

A slightly dodgy tip here from John W. of the letter to Mr. DO. This one goes around different attacks, mis-guessing PMSIT, and any one of these combinations may happen.

- 1) The alarm turn-to-ghosts and just go sideways
- 2) The car go straight up to an apex, push up and the enemy goes straight through you, you can then shoot them
- 3) If you can go quickly to level 1 level by climbing one onto the monitor

All this is slight but sometimes it doesn't work



# LOVELY LYNX TIPS!

Near come on you Atari Classic gamers, you have had a couple of dozen towers of cracking tips and there are quite a few classic gamers who like to get an Atari fix when they are away from a 24hr socket!

If you've got a LYNX then here are the tips you have been waiting for! Mark Fenwick of Long Eaton has sent in 12 outcasts for some! Tips and tricks for this machine and wicketed at all handsets!

**APB:** On Highway 12 there's 2 pumps, park between them and they will pump twice as fast. Also for higher points obtain your quota first, then pick up money bags as they are now worth twice as much! If you complete a level then accelerate into the car park and hold down option 1 and 2 and you will skip to Day 10.

**BILL AND TED'S EXCELLENT ADVENTURE:** Try these passwords to get over time periods 0005, 0006, 0007, 0008.

**BLUE LIGHTNING:** Level codes are: 1-AAA4  
2-PLAN 3-ALFA 4-BELL 5-NAKE 6-LOCK 7-HAND 8-PLUA 9-LIFE

On level 4-BELL do not fire for 30 seconds, when you finish the stage you will receive a mega-bonus!

**CHEQUERED FLAG:** If you keep starting at the back of the pack, keep restarting and you'll work your way to the front.

**CHMP'S CHALLENGE:** Level codes are: 1-1VAAA  
2-NOOP 3-8-802P 4-0-YWTH 5-0-0004 6-0-2YH4 7-0-0000  
8-0-0VLD 9-0-0LUM 10-0-CLER 105-YM8D 110-0-8AD 115-0-00Y4  
120-FLOP 125-0-00T7 130-0-0Z7 135-LY8D 140-0-8LJK 145-0-00Y4

For some special levels write not by MARD, JHER, COXA, and BGGH. MARD is not a level but a fractal generator, just press the buttons for various effects.

**GATES OF ZENDECON:** Try using level TRIX. As soon as the level starts move diagonally down and right. You will crash through the bottom - unaimed and fly along under the level. Be sure that you just accelerate through the gaps between the roof and the structures coming up from the bottom. When you reach the exit you will be transported to a bonus screen where you are given special weapons, then you have to do battle with digital pictures of the programming team! On level 23-ZETA on the far right is an eye, shoot it twice. When its open and you're reach the big, bad Zendecon leader. You can also try these level codes: 1-BASE 2-ZYEX 3-NYEX 4-ZYEX 5-ZYEX 6-BARE 7-0-0YAT 8-RATT 9-NYET 10-PAZE  
11-TYIX 12-8TYX 13-NAMX 14-BRAX 15-0LAX 16-000X 17-0EMT  
18-BR0T 19-000X 20-8TAT 21-0012 22-0NAX AND 23-ZETA.

There are more levels that are accessible, the above is just one combination. Other levels include: ZEST, WEST, STAR, BITE, BETA, ZETA, ZETA, TRAX, ZERR, ZISSA, ZCXX, ZERR, ZARK, ZEAR, ZBYX, and ZCRT.

**HAMPAGE:** Look out for the asterisk in the red area, by carrying her around in true King Kong style there's a big bonus to be had. To select any level, when you reach the monitor selection screen press (PAUSE) and when the newspaper screen appears press (OPTION).

**ROAD BLASTERS:** On the first level drive along the edge of the road while fading down (S), as soon as you hit a tree you'll be presented with a "ghost in the machine" screen which shows a dog-pit of one of the programmers. Now press (OPTION) to select level.

**MS PACMAN:** For infinite lives press in sequence PAUSE, OPTION, B, B, A, A, OPTION. To speed up the game press OPTION, A, OPTION, (LAPPAUSE).

**STUN RUNNER:** On level 12 (the Coaster), as soon as you enter the first tunnel go right and collect the boost pad. Now quickly go to the top of the tunnel and you'll go through a hole and be transported to level 13.

**ROBOSQUASH:** If you've been splattered and can't see anything, the shadows on the wall will show where the ball is.

**PACLAND:** For 10 lives enter your name on the Hi-score table as SCORE. On level 1-2 push a few backwards and you'll be transported to level 8 and given 80,000 points.

**VIKING CHIEF:** The level codes are: 1 - 0MIGAMAM  
2 - PATRICA 3 - REDWAMP 4 - DEWASURY

**WARBIRDS:** As soon as you do press PAUSE and then B to enter the enemy plane.

One from my own archives is for **CRYSTAL MINES 2** Type in code 0000 for a treasure trove of goodies, power-ups and a huge end-of-level bonus.

906 ... 906 ... 906 ... 906 ... 906

A little code with only a few words on it but they call for help for Jason Kendall who has been playing **ULTIMA III** and has made good progress. However he is unable to pass the SILVER BRANK or to increase any characters MIND LEVEL, during the game, despite having a level 10 character.

From across the channel comes the answer to Louise Wood's plea for help with the last stage of **GHOSTBUSTERS**. What she should do to get through the manholewar starts leg is that she should position the figure in the direction of the middle of the door (where the two parts touch each other), and then, when the illustration man is just slumping up and down at one side, she should begin to run up. This should work, says 'Wigwag of Wabbeerd in The Netherlands.

A. Tomo has provided the complete solution and map for level one of **UNIVERSAL HERO** but, as everyone will know, this game is buggy and A. Tomo has volunteered to debug the game if some other 16bit programmer will help him. He has found the main loop but hasn't found the SLANT BARRIAGE spot routine yet. My suggestion to A. Tomo is to contact Masteronic and talk to them about getting the source code or get them to put you in contact with the original programmers but please write in if you want to help A. Tomo. Let's make this good game better.

That's about all for this issue but next issue I should have (subject to the Editor finding the room) the solution and maps for (Smashed by Level 3) from Simon Carter of 114 in Torridge, Cornwall that Simon, Fat Frog and the Kid, good enough? Don't stop sending in all of those great hints, maps and tips to yours truly, they are most utterly important. Bye, see you next time!!!

THE TIPSTER,  
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If you see your name in this column just drop me a line and say "My name is ... and I claim my free Tipster cassette" and simply tell us which cassette you would like (give an alternative just in case). We will ship it off to you post-free (or straight-away, if you prefer you can always give us a ring instead on the usual number.



# REVIEW

## CORISH'S COMPUTER GAMES GUIDE 3rd Edition

The Tipster makes a diversion into the world of the book critic when he reviews the worlds largest hint book, but is it the one for Atari owners?

If you want to know how to beat the infamous Frog Blaster (best of Travel), or want to get rid of all of those nasty snakes in Final Fight, then this is your bible, or if you just want to show off to your friends then this is the book to have. It's an A5 book comprising 950 pages that's right across, yet with about 4 or 5 tips on every two page spread. The back cover states that the book contains an excess of 1,200 games and 200 adventures and more than 12,000 hints, tips and jokes. That has yet to be proved as I ain't going to read them, anyone want to have a go?

The book is written by a computer store owner in Devon, New Zealand (perhaps this is the proverbial lead reader?) Paul Jakes - Ed) who was fed up of filling through the magazines for a tip or two and from that chose a legend in beginning to be funny. As an aside did you know that the tremendous, but short lived, game Harlequin came from the very same town? Long live Harvey King Tin!

OK, so who does the book benefit? Well, for starters, the book hasn't got one Atari A bit hint, tip or joke. What it has got is millions upon millions of Commodore 64 type tips (what makes me think that Mr Corish was somehow a fanatic of the C64?). Apart from that derivation the book is mostly suitable for ST owners, although it also covers the - are you ready for this? - Amiga, Amstrad CPC, Apple II, the Intellivision SE, BBC, C16, C64, C128, Gameboy, Genesis, IBM/PC clone, Lynx (remember it?), Mac, MSX, Nintendo, PC Kango, Sega, Sega Mega Drive and the Spectrum.

It features all the various types of games - platform, racing, adventures, thinking, shoot-em-ups and simulations. The book is laid out as a list of all the games in alphabetical order with a brief index at the back which acts more like a contents page than an index because they are already in alphabetical order.

The book has a nice friendly feel to it and is very easy to read. The format of the tips varies in any number of different guises that are either clear (made interesting words, descriptions of how to complete sections, type in letters) or in the case of adventures, other hints in different bits or complete and clearly solutions. You won't find any maps as they'll buy it if that is all you are after, just read the Tipster's columns every issue and that should give you all you'll ever need. If not then write in and tell me what you are missing! One thing I will say is that the adventure solutions are described in such a clarity manner that they tend to bore or mask some important instructions if



not followed exactly in the letter (and with a touch of telepathy).

A nice touch that makes the book more enjoyable is the ability to read any hints and tips that you might have into the matter for inclusion in the 4th edition (I suppose?) so that you can have your name spread all over the book with the relevant stuff.

The book was published in April '93 but I assume that it was probably completed in January '93 as the latest so don't buy it expecting to see hints on playing Poletop 2 on Formula One Grand Prix as they just ain't there. Possibly in that respect it's obscure?

The appendixes at the back of the book explain some of the more day to day aspects of entering cheat codes and cheats on all the various computers. The section referring to the ST tends to be very vague and states more the subject of entering any of the letters with a "basic package" faster than a rat up a drain pipe. Also it refers to a cartridge that allows the user to enter a section of codes and instant the game. As far as I know there is no such cartridge and that the best "basic package" to use is one of the World Bank's that compile the program themselves. A nice touch right at the back of the book is the inclusion of a readers questionnaire which they would like every reader to complete to improve the next edition. Some of the questions include "Is the text too small?" or "would you like maps and charts with the games?" Yes, yes, and thank you, Mr Corish's sake YES!!!

One final thing before passing judgement is that the best of the book features games such as Grand Prix 2000, Baby Jo, Microprose Formula One Grand Prix and P-117a Stealth Fight on. This is one case in which a book should definitely not be judged by its cover which is obviously a false representation of what is inside and it shouldn't be bought on that premise.

To wrap up, if you like computer games and own an ST and maybe one of these horrible early console things then this book could be the one for you, with the console tips being predominant along with the tons of C64 tips. If you own an ST without one of the many 8-bit computers then this might be of some use, but don't expect it to have everything that you want to it. If you own one of the Atari Classics then the only things that might interest you might be some of the adventure solutions, but really still be a few solutions and the thickest coffee mat in history is a bit steep.

Name: Corish's Computer Games Guide 3rd Edition  
Publisher: Home Computers Ltd, Paignton,  
Berkshire, England. Tel: (0734) 844338  
ISBN: 0-7457-0150-7  
Price: £14.95

# FONT AND DISPLAY DATA CREATOR

**T**his issue we have Font And Display Data Creator, which should be used in conjunction with data files produced by my last program, the Font And Display Editor. What Listing 3 does, is not only convert data files into DATA statements, but it also produces either a font, or a display sub-routine that when called prepares the display, leaving you to turn it on with a POKE 559, 34 or, if you wish to use Player Inside Graphics, POKE 559, 62. As usual, make sure you save all listings before running them.

Listings 3 and 4 are examples of sub-routines produced. Listing 3 redresses characters one to nine, whilst Listing 4 is the background display to a shoot-em-up game, predominantly written in BASIC, that is presented in a later listing. If you were put off by all the data in Listing 1, type in Listing 4 and see just what can be created.

## THE DATA CREATOR

When run you will be asked if you are using disk or cassette, then by pressing a or c, you can choose between them. Next you have to choose between font and display data and if using a disk drive a file name will be requested. As in the editor program, this should not include a drive identifier (e.g. C:\RAM.FON). Next enter the drive number between 1 and 4 (RETURN) will choose D1).

If DISPLAY was selected, you are then asked how wide your display is. This will be the number of horizontal screen cells, but if a NORMAL or vertical scrolling display (not vertical and horizontal row case), then this value should equal one. As we are on the subject of displays, now is an appropriate time to point out that the data creator can only handle displays up to a maximum size of 4800 bytes. As one display takes 800 bytes, then this maximum is equal to six screens. Using a display larger than the limit will cause a MEMORY FULL error.

Although six screens is the maximum size, this does not mean that you can't use a display with a width larger than this. For example, if using the formula, SIZE=LINE\*J\*WIDTH\*80, you need a display width of ten screens and spaced down to five screens, the total size would equal, 11\*1\*110\*40\*4800 bytes.

If you chose font data, then you will be asked to choose between a SELECTED and a WHOLE font. A SELECTED font is created for characters if you wish to define a subset of a font (e.g. 0123456789). This has the advantage of creating a smaller sub-routine, whereas the WHOLE character, creating a full 128 character font, using about 90 lines. Listing 3 is an example of a SELECTED font, whereas Listing 4 uses the WHOLE font sub-routine.

After selecting the line number for your sub-routine, you will be asked to prepare your disk/tape, then your data will be loaded.

**Steve Lakey brings you a data creator to use with the Editor in the last issue**

If you choose a SELECTED font, you will be shown a list containing all 128 characters. This is so you can tell the program what characters you wish to grab from the font just loaded. As an example, to redress characters A to Z, you would use the cursor keys to move the cursor over to character A, then you would press key 1, which would highlight character A. You would then move to character Z and press key 2, then all characters between A and Z will be highlighted. To deselect any characters repeat the process. Once all characters you wish to redress are highlighted, press (RETURN). If you don't select any characters before pressing (RETURN) then ERASE 3 will be displayed during the creation process and you will have to begin again.

After the sub-routine has been created, and if you are using a disk drive, you will be asked for a file name, again without drive identifier. Then your file will be LISTED to disk/tape. To load this file you should use the EDITOR command. After saving, you will be asked whether you wish to save another copy, and if so, another file name will be requested.

When you answer no to any more copies, you will be warned that the sub-routine will be deleted with a press of the (EE, TURN key), so if you change your mind about wanting another copy, press any other key. Once the program has been deleted, you will have the option to begin again.

Whenever you use both a font and a display sub-routine in a listing, the font sub-routine should always be called first. Although you may use a font sub-routine by itself, a display sub-routine should be set up as follows:

```

(LINE No.) POKE=100: SET=PAGE2000: BANK=700: REM Set
Up Variables
(LINE No.) GOSUB (DISPLAY SUB-ROUTINE)
(LINE No.) POKE BASE, 224: POKE 559, 34: POKE 561, 60
Font & Show Display
(LINE No.) GOTO (THIS LINE)

```

The first line, in the above example, is the important line. I hope you can make use of Listing 2.

In the next issue I will present a program attaching the development of Listing 4 into a full game.





# FONT AND DISPLAY DATA CREATOR

02 1000 T 00  
03 1000 T 00  
04 1000 T 00  
05 1000 T 00  
06 1000 T 00  
07 1000 T 00  
08 1000 T 00  
09 1000 T 00  
10 1000 T 00  
11 1000 T 00  
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15 1000 T 00  
16 1000 T 00  
17 1000 T 00  
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100 1000 T 00

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94 1000 T 00  
95 1000 T 00  
96 1000 T 00  
97 1000 T 00  
98 1000 T 00  
99 1000 T 00  
100 1000 T 00



## FONT AND DISPLAY DATA CREATOR

```
10 100 0000 *****
15 110 0000 #              #
20 120 0000 # By Stephen Lohr #
30 130 0000 #              #
40 140 0000 # LISTING 3 #
50 150 0000 # NEW TYPE (NEW) - NO 1970 #
60 160 0000 *****
70 170 0000 ***** SET UP FONT
80 180 0000 ***** PAGE NO. PAGE
90 190 0000 *****
100 200 0000 *****
110 210 0000 *****
120 220 0000 *****
130 230 0000 *****
140 240 0000 *****
150 250 0000 *****
160 260 0000 *****
170 270 0000 *****
180 280 0000 *****
190 290 0000 *****
200 300 0000 *****
210 310 0000 *****
220 320 0000 *****
230 330 0000 *****
240 340 0000 *****
250 350 0000 *****
260 360 0000 *****
270 370 0000 *****
280 380 0000 *****
290 390 0000 *****
300 400 0000 *****
310 410 0000 *****
320 420 0000 *****
330 430 0000 *****
340 440 0000 *****
350 450 0000 *****
360 460 0000 *****
370 470 0000 *****
380 480 0000 *****
390 490 0000 *****
400 500 0000 *****
```

Listing 3 - defining characters

```
51 510 0000 *****
52 520 0000 *****
53 530 0000 *****
54 540 0000 *****
55 550 0000 *****
56 560 0000 *****
57 570 0000 *****
58 580 0000 *****
59 590 0000 *****
60 600 0000 *****
61 610 0000 *****
62 620 0000 *****
63 630 0000 *****
64 640 0000 *****
65 650 0000 *****
66 660 0000 *****
67 670 0000 *****
68 680 0000 *****
69 690 0000 *****
70 700 0000 *****
71 710 0000 *****
72 720 0000 *****
73 730 0000 *****
74 740 0000 *****
75 750 0000 *****
76 760 0000 *****
77 770 0000 *****
78 780 0000 *****
79 790 0000 *****
80 800 0000 *****
81 810 0000 *****
82 820 0000 *****
83 830 0000 *****
84 840 0000 *****
85 850 0000 *****
86 860 0000 *****
87 870 0000 *****
88 880 0000 *****
89 890 0000 *****
90 900 0000 *****
91 910 0000 *****
92 920 0000 *****
93 930 0000 *****
94 940 0000 *****
95 950 0000 *****
96 960 0000 *****
97 970 0000 *****
98 980 0000 *****
99 990 0000 *****
```

## FONT AND DISPLAY DATA CREATOR

```
10 100 0000 *****
15 110 0000 #              #
20 120 0000 # By Stephen Lohr #
30 130 0000 #              #
40 140 0000 # LISTING 4 #
50 150 0000 #              #
60 160 0000 # NEW TYPE (NEW) - NO 1970 #
70 170 0000 *****
80 180 0000 ***** SET UP FONT
90 190 0000 ***** PAGE NO. PAGE
100 200 0000 *****
110 210 0000 *****
120 220 0000 *****
130 230 0000 *****
140 240 0000 *****
150 250 0000 *****
160 260 0000 *****
170 270 0000 *****
180 280 0000 *****
190 290 0000 *****
200 300 0000 *****
210 310 0000 *****
220 320 0000 *****
230 330 0000 *****
240 340 0000 *****
250 350 0000 *****
260 360 0000 *****
270 370 0000 *****
280 380 0000 *****
290 390 0000 *****
300 400 0000 *****
310 410 0000 *****
320 420 0000 *****
330 430 0000 *****
340 440 0000 *****
350 450 0000 *****
360 460 0000 *****
370 470 0000 *****
380 480 0000 *****
390 490 0000 *****
400 500 0000 *****
410 510 0000 *****
420 520 0000 *****
430 530 0000 *****
440 540 0000 *****
450 550 0000 *****
460 560 0000 *****
470 570 0000 *****
480 580 0000 *****
490 590 0000 *****
500 600 0000 *****
510 610 0000 *****
520 620 0000 *****
530 630 0000 *****
540 640 0000 *****
550 650 0000 *****
560 660 0000 *****
570 670 0000 *****
580 680 0000 *****
590 690 0000 *****
600 700 0000 *****
610 710 0000 *****
620 720 0000 *****
630 730 0000 *****
640 740 0000 *****
650 750 0000 *****
660 760 0000 *****
670 770 0000 *****
680 780 0000 *****
690 790 0000 *****
700 800 0000 *****
```

Listing 4 - the start of a game

```
10 100 0000 *****
15 110 0000 #              #
20 120 0000 # By Stephen Lohr #
30 130 0000 #              #
40 140 0000 # LISTING 5 #
50 150 0000 #              #
60 160 0000 # NEW TYPE (NEW) - NO 1970 #
70 170 0000 *****
80 180 0000 ***** SET UP FONT
90 190 0000 ***** PAGE NO. PAGE
100 200 0000 *****
110 210 0000 *****
120 220 0000 *****
130 230 0000 *****
140 240 0000 *****
150 250 0000 *****
160 260 0000 *****
170 270 0000 *****
180 280 0000 *****
190 290 0000 *****
200 300 0000 *****
210 310 0000 *****
220 320 0000 *****
230 330 0000 *****
240 340 0000 *****
250 350 0000 *****
260 360 0000 *****
270 370 0000 *****
280 380 0000 *****
290 390 0000 *****
300 400 0000 *****
310 410 0000 *****
320 420 0000 *****
330 430 0000 *****
340 440 0000 *****
350 450 0000 *****
360 460 0000 *****
370 470 0000 *****
380 480 0000 *****
390 490 0000 *****
400 500 0000 *****
410 510 0000 *****
420 520 0000 *****
430 530 0000 *****
440 540 0000 *****
450 550 0000 *****
460 560 0000 *****
470 570 0000 *****
480 580 0000 *****
490 590 0000 *****
500 600 0000 *****
510 610 0000 *****
520 620 0000 *****
530 630 0000 *****
540 640 0000 *****
550 650 0000 *****
560 660 0000 *****
570 670 0000 *****
580 680 0000 *****
590 690 0000 *****
600 700 0000 *****
610 710 0000 *****
620 720 0000 *****
630 730 0000 *****
640 740 0000 *****
650 750 0000 *****
660 760 0000 *****
670 770 0000 *****
680 780 0000 *****
690 790 0000 *****
700 800 0000 *****
```

continued





# DESERT WARFARE

Steven Wilds braves the dust of the North African desert

**O**n the tenth of June, 1940, Italy declared war on Britain. Mussolini, eager to cash in on the "victims" Axis entry offered his forces in Africa to march into Egypt and lay the foundations for a new Roman Empire. The Italian army were slow to act on their leaders wishes and even though they vastly outnumbered the British, they soon began to lose men, machines and territory. As the Italians suffered defeat after defeat, the Germans, under General Erwin Rommel, intervened. The British were suddenly exchanging blows with Nazi forces and Africa became a testing ground for the Allies. What for the Germans had started as an operation to help the Italians, changed into an offensive and then into a disaster that had to be avoided at all costs. For the British, the "Decision in the Desert" was the turning point. As Churchill said himself, "... before El Alamein we were won a battle, after El Alamein we never had a battle."

Both Allied and Axis forces realized the potential for fast and highly mobile warfare. This is reflected in the five game scenarios in *Decision in the Desert* where you will be commanding small units over vast areas of terrain. The combined system is the same throughout the entire Microprose Command Series and is once mastered is easy to use. Some may prefer a series of boxes and pieces but the game contains enough detail to keep even the most experienced war-games quiet. The manual is again of excellent quality and is essential for both copy protection and for giving you the historical information required to enjoy the game to its fullest.

I had hoped not to include a run-down of each scenario (for fear of copying the Conflict in Vietnam work) but now feel that to do so would do the game a great injustice, so here they are:

## THE SCENARIOS

**SIXTH BARRAGE: BRITISH BLITZ** - At dawn on December 16th, 1940, British forces under General O'Connor surround and assault fortified Italian positions set up after the half-hearted advance into Egypt. The British chase the Italians into Libya where they finally surrender at Beda Fatin. This scenario is simulated by opening British convoys but one variant allows you to go all the way to Tobruk! Why not try commanding the Italian convoys?

**OPERATION CRUSADE** - Rommel has not only stopped the entire collapse of the Italian army but has also forced the British back to the border. However Tobruk stays firm and Rommel is forced to halt his advance. Now on the defensive, his convoys strike out against remaining British forces but after a

month long build up, the British launch a major attack around the desert flank. A month long battle follows and the British prevail. Could you alter the course of history?

**GAZALA: ROMMEL'S FINEST HOUR** - Driven back by Operation Crusader Rommel doesn't want to launch a second offensive. The British are swept back to just fifty miles west of Tobruk where both sides dig in. Rommel prepares for an offensive whilst the British build a series of elaborate defenses. After three months of hard work, swiveling south of the British defenses and smashing into the British rear. Caught between unbroken fortifications Rommel has to wait until the Italian infantry clear a path through the minefields. A very tough one. Could you do better than the British High Command and stop Rommel at the last moment?

**FIRST ALAMEIN: END OF THE BEGINNING** - Rommel decides to strike deep into Egypt instead of building up his forces for an assault on Malta. The British take advantage of the Gazala depression and begin to build up a series of defenses that cannot be flanked. Rommel orders his men on relentlessly and they reach El Alamein shortly after the retreating British. Not wanting his fresh units to arrive, Rommel throws his men into a final assault on El Alamein. They fail and he spends a month fighting off British attacks. Finally mutual exhaustion causes a stale mate. This was the last great mobile desert battle.

**ALAN EL HALFA: BEGINNING OF THE END** - Both sides wait for intelligence but German supply lines are under constant attack. Rommel is a logistical war like unit and strikes before it is too late. Rommel's men drive deep into the British left flank but come across a lateral line of defense based on the Alan El Halfa Ridge. The British refuse to leave their defenses and the Germans have to press home attacks after attack. After three days Rommel sees its all over and orders the withdrawal. Try the variant "Rommel's Dream" and see the battle unfold the way Rommel wanted it to.

Microprose have been able to incorporate the same combat system into each of their Command Series games and yet each game remains very different from the rest. Another brilliant, well put together game from Microprose that will keep you and your Atari going for weeks. Miss this and you'll have to kick yourself!

**DECISION IN THE DESERT** is available from **The Accessory Shop - check the Accessory Shop section in this issue**



## STAR FIRE & ZAND'S LABYRINTH

Computer-based games have been patiently waiting for something new to arrive ever since the budget game manufacturers dropped Atari in favour of more profitable ventures. Now Excel have responded by porting several games from their disk range (reviewed elsewhere in this issue) onto tape.

Star Fire is basically a simplified version of the all-time classic, Star Wars. Needless to say your star is a scorching starship which gives the impression you are boldly going both where no man has

before and gone before. Alien fire-fighters periodically try to attack your ship but you can evade by firing them up in your sights and blasting them into space dust. Your laser has a tendency to overheat so you should try not to miss too often! Each fighter you destroy awards a specific quantity of points depending on its colour while a "bird" membership is a particularly valuable target. The game is played over a series of increasingly demanding levels and each one has an associated maximum score that will penalise you in either the next. The catch is that you have to achieve this goal before the fuel expires.

Just to ease your fire of age play allows, there's another game on the reverse side of the tape called Zand's Labyrinth. This one originates from Germany but isn't difficult to



understand as it's based on one of the very early game concepts. On each level you're presented with a maze and your joystick manoeuvres a snake whose aim is to gobble up various goodies positioned around the screen. As well as ensuring you obtain these before the bonus timer hits zero, you must try not to collide with your snake's tail. Whenever the snake consumes an item it's tail becomes longer so it's more difficult to avoid.

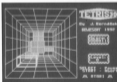
Eventually a gate opens at the base of the maze and you can slither through to the end.

The game has an option for two players to take turns, and there's a choice of various skill settings.

The graphics and musical effects in Zand's Labyrinth are extremely high quality and put to shame most commercial releases of the late 1980s. Star Fire doesn't do too badly - indeed, both are well constructed, addictive and enjoyable games that are worth adding to any arcade collection.

If you're a long suffering cosette user (you simply can't afford to miss them,

**Title:** STAR FIRE & ZAND'S LABYRINTH  
**Supplier:** Excel  
**Price:** £5  
**Format:** Cassette  
**Reviewed by:** Paul Dixon



## TETRIS 3D & CHESS

Ever have one of the reverse of standard-based games with some terrific games that have only recently surfaced in the UK. Unless you're new to the computing world, you must be familiar with Tetris - the Russian-designed game that has enjoyed great success on all popular systems. In the basic game you have to position descending blocks so that when they settle, completely solid rows are formed which disappear to create space for the subsequent layers.

TETRIS 3-D takes this idea

one step further - instead of viewing the blocks side-on you find yourself peering downwards into a deep square hole. The blocks materialise in front of you and fall away towards the distant base of the hole. As before the aim is to manoeuvre the blocks in flight so that they drop into a neatly ordered position, leaving no gaps on each layer. If you don't succeed the pile soon stacks up towards you and leaves insufficient room for the next block to fall, so the game must be aborted. Keyboard or joystick controls

can be utilised to suit personal preference. The graphics are the highest resolution available and are therefore vector-based with various shading effects to enhance the different layers. The game seems very similar to the 3D-Tetris I've seen on PC machines, but I'm pleased to say that the Atari's graphics are superior!

CHESS is a straightforward implementation of this much standard game. It includes more features than first seems apparent, and the lack of instructions means that some experimental key pressing is required to discover what they are! Some examples are edit mode - enabling you to set the board however you like - and automatic mode, which instructs the computer to play itself. You can input moves via joystick or keyboard cursor keys - both methods involve using a highlighted cursor to

point at the desired start and finish position of the piece in question. The board is displayed from a birds-eye perspective and the pieces are easy to distinguish, unlike some other simulations I could mention. Chess games are normally measured by their playing strength but the fact is that most people have to challenge the computer's processing power in order to have any chance of winning! This one has eight levels and should therefore suit a reasonable range of abilities. Don't credit to Excel for distributing some more excellent software.

Reviewed by Christopher

**Title:** TETRIS 3D & CHESS  
**Supplier:** Excel  
**Price:** £5  
**Format:** Cassette  
**Reviewed by:** Paul Dixon

# THE LAST GUARDIAN

**H**ave you ever wondered what happens in games that are supposedly due for release but then withholders when the company concerned pulls out of the market or disappears altogether? The answer is that they are usually left on the shelf, quite literally, and stay there indefinitely unless an enterprising individual decides to purchase the publishing rights. Take as an example **THE LAST GUARDIAN**, which Tyndall commissioned just before they abandoned it for mislaid and subsequently transferred into new ownership. The starting scene is that

Moss Discant have tracked down the rights, reproduced the artwork and finally brought **The Last Guardian** into public circulation.

The game is essentially a vertical scroller in a similar vein to *Thunderbolt and Miss Force*. Your mission is to fly **The Last Guardian** space fighter over an alien wasteland and annihilate an enemy ground installation and enemy craft as you run. You must fly in careful contact with these enemies or they soon diminish your shield strength. You should also be wary of solar pylons as these can't be removed and are deadly if you fly too close. It's a tad frustrating as you only have two ships in reserve and are forced to restart at the beginning if you lose them both. You must chase the wasteland five times before a mothership arrives to transport you into the next



quadrant. At the end of each run there's an interval to be control with and more waves of alien aggressors. Each time you stop one there's a good chance that a bonus object will be left in its place. Double cannons and turbo boosters are obviously worth hunting but electromagnets which attract aliens and instant death attractors are probably best avoided.

**The Last Guardian** is graphically stunning. Everything about the game - from the laser scores to the warship's fittings - has been de-

signed with an eye for detail and a highly professional finish. All appears to be clear, colorful and detailed. It's a pity that the first stage is so tricky that less experienced players may give up before they sample the treats to share on higher levels. *SpaceD'Well*, it's not bad at all and you'll even hear some digitized speech at the start of each mission.

This is a brilliant game and it's marvelous news that it's finally seen the light of day. It must surely be the highlight of 1989.

Title: **THE LAST GUARDIAN**  
Supplier: **Micro-Discant**  
Price: **\$5.95/\$4.95**  
Format: **Disk/Cartridge**  
Reviewed by **Paul Rixon**



**H**ere's another brand new game from Micro-Discant resulting from their recent acquisition of the rights to publish for new Tyndall projects. Like **The Last Guardian**, **TAGALON** failed to make it to the final production stage before Tyndall's demise. The game comes from Ivan Markovitch who, you may recall, has been responsible for excellent 8-bit titles such as *Crumble's Crisis*. As before there is musical accompaniment from Richard Murray, who certainly knows a thing or two about Polity!

**Tagalon** is an arcade where here for one or two players. Though it's especially suited to the latter. The advent here is set in the village of Tagalon with its farms, trees, wells and other typical village landmarks. Your instructions are to collect some marbles (under which's lost them!) and ultimately find a room with a magic purple food, which is located somewhere in the depths of a hazardous wasteland. As you wander through the village you'll meet lots of nasty creatures who seem to be intent on sapping your energy,

so it's best to step aside when you run. As luck would have it, there are magic spells lying on the ground and you can grab these to invoke some useful powers. Shields will briefly protect you from the battles while a bomb maker enables they won't come back. Keys are required once you enter the castle, since locked doors abound here.

The single player game is quite addictive but the game comes also in two player mode, where the screen splits into two halves giving each participant an individual view of the proceedings. It then becomes a frantic race to obtain the numerous spells and marbles before the opposition does likewise! The graphics could be clearer in places but they are generally very good, particularly after you arrive at the castle. The continuous music (rather like Jet Set Willy) may

begin to get on your nerves after a while and a silent option might have been a good idea. Not to worry - most machines have a volume control!

There are not many 'first' two player games in existence but this one is the real thing! **Tagalon** is a quality product and, above all, is enjoyable to play. At last the software brought credit for existing and with sufficient interest from 8-bit owners. Micro-Discant are all set to release many more goodies like this. It's time to share your appreciation.

Title: **TAGALON**  
Supplier: **Micro-Discant**  
Price: **\$5.95/\$4.95**  
Format: **Disk/Cartridge**  
Reviewed by **Paul Rixon**

# TAGALON

# NUMBER SORTING

**E**ver since I first bought an AT&T computer many years ago I have never seen a machine code number sort routine that can easily be used with BASIC, so I created my own.

It allows full use of numerical arrays to store the numbers to be sorted. Other numerical or string arrays related to the sort array can be used too. It takes about 0.5 seconds to sort 500 numbers upwards or downwards. The program was designed to use with AT&T BASIC and will run with any version. I have not used any other Basic, but it should work with BASiC XL or XE although the program uses many page zero locations and other BASIC's may use these memory locations themselves.

The sorting is achieved by a technique called "shell sort" where a constant *D* is set to half the total number, *N*, to be sorted. This divides the list into two parts and sorts the top item of the top half with that at the top of the bottom half. This continues down the list for *N/D* times until the top half has been sorted with the bottom half. *D* is divided in half and this divides the list into 4 halves and the same procedure is further applied. This continues until *D* is 1 and the list is completely sorted.

The Basic program of the shell sort is shown in Program 1.

## USING IN YOUR OWN PROGRAMS

The sort utility has been programmed to sit in your BASIC program without your having to keep track of where the machine code is located. This is done using a string array to store the code and a simple technique to execute it using the USA function.

The string variable can be stored using the LIST command, and be incorporated into any BASIC program using the LIST command.

The sort utility will be executed by:

```
AA[USAR]B[USL]UP[DOWN]_SKY[W]A[UN]B[ASC]X[.L]etc. etc.)
```

Program 2 creates this string. Type this in and save it before running, using SAVE "C:" or SAVE "D:\BASIC\BAY"

The program adds some lines when run and this is the sort string.

These extra lines must be saved so they can be included into any BASIC program. Do this by LIST "C:", XXXXX, XXXXX or LIST "D:\BASIC\BAY", XXXXX, XXXXX

Program 3 shows you how to use the sort utility. Type this in and save it before running. The sort string created by program 2 must now be entered for it to work. Do this by ENTER "C:" or ENTER "D:\BASIC\BAY"

## A machine code routine giving lightning speed number sorting by Andrew Martin

### HOW FAST?

Run the program and see how quickly it sorts numbers.

Change line 10 for a different number of numbers to sort.

(MUM) and change line 20 to sort UP or [DOWN] (PDOWN).

All the numbers to be sorted are stored in the numerical array *N*, any single character numerical array can be used, but don't forget to change line 250 accordingly. This is the third term in the USA function and must have the ASC function around it.

Other arrays to be sorted according to the sort array are added after the sort array and number in the USA function (see 5 onwards). The single character array must be enclosed around the ASC function and an identifier, *A*, added after it. For a numerical array *A* must be 100. For a string array *A* must be set to the length of the string per item and must be less than 100.

Shell BASIC's string arrays are very basic and don't branch to the top of case of use. A technique can be used to allow strings to be used to a pre-defined length. Program 4 uses a string array of 15 items with a string length of 30 characters per item. Sections of the string can be output using a very simple technique. Each of the substrings take up a full 30 characters, every 10 characters along the string, with gaps being taken up any spare rooms. Line 200 uses P-ABS(PI-0.9)PI to display the file item.

If the string length per item is changed to 20, then the following changes will be made to program 4.

```
30 US(20*15)=20
200 P=ABS(PI-0.9)PI
```

The string array of line 100 will have to be changed to take account of the extra spacing.

Play around with the program to see how it works and then you'll be able to put string arrays to better use in your own programs. This will allow you to fully use the numerical and string arrays in the sort utility.

Happy number crunching.

# NUMBER SORTING

```

00 1 000 *****
01 1 000 0      NUMBER SORTING      0
02 1 000 0 *****
03 1 000 0      PROGRAM 1      0
04 1 000 0 *****
05 1 000 0      THE BASIC SHELL SORT  0
06 1 000 *****
07 1 000 0
08 10 000 1,000,1,000
09 10 000 0-1 TO 999:999:999:999:0 0
10 10 000 0
11 10 000 000
12 100 000:000:000
13 100 000 0-1 TO 999:999:999:999:0 0
14 100 000 000
15 100 000 000
16 100 000 000
17 100 000 000
18 100 000 000
19 100 000 000
20 100 000 000
21 100 000 000
22 100 000 000
23 100 000 000
24 100 000 000
25 100 000 000
26 100 000 000
27 100 000 000
28 100 000 000
29 100 000 000
30 100 000 000
31 100 000 000
32 100 000 000
33 100 000 000
34 100 000 000
35 100 000 000
36 100 000 000
37 100 000 000
38 100 000 000
39 100 000 000
40 100 000 000

```

```

00 1 000 *****
01 1 000 0      NUMBER SORTING      0
02 1 000 0 *****
03 1 000 0      PROGRAM 1      0
04 1 000 0 *****
05 1 000 0      THE BASIC SHELL SORT  0
06 1 000 *****
07 1 000 0
08 10 000 1,000,1,000
09 10 000 0-1 TO 999:999:999:999:0 0
10 10 000 0
11 100 000:000:000
12 100 000 0-1 TO 999:999:999:999:0 0
13 100 000 000
14 100 000 000
15 100 000 000
16 100 000 000
17 100 000 000
18 100 000 000
19 100 000 000
20 100 000 000
21 100 000 000
22 100 000 000
23 100 000 000
24 100 000 000
25 100 000 000
26 100 000 000
27 100 000 000
28 100 000 000
29 100 000 000
30 100 000 000
31 100 000 000
32 100 000 000
33 100 000 000
34 100 000 000
35 100 000 000
36 100 000 000
37 100 000 000
38 100 000 000
39 100 000 000
40 100 000 000

```

```

00 1 000 *****
01 1 000 0      USING THE      0
02 1 000 0 *****
03 1 000 0      NUMBER 0000      0
04 1 000 0 *****
05 1 000 0      NUMBER 0001      0
06 1 000 0 *****
07 1 000 0      NO NUMBER 00000  0
08 1 000 0 *****
09 1 000 0
10 10 000 1,000,1,000
11 10 000 0-1 TO 999:999:999:999:0 0
12 10 000 0
13 100 000:000:000
14 100 000 0-1 TO 999:999:999:999:0 0
15 100 000 000
16 100 000 000
17 100 000 000
18 100 000 000
19 100 000 000
20 100 000 000
21 100 000 000
22 100 000 000
23 100 000 000
24 100 000 000
25 100 000 000
26 100 000 000
27 100 000 000
28 100 000 000
29 100 000 000
30 100 000 000
31 100 000 000
32 100 000 000
33 100 000 000
34 100 000 000
35 100 000 000
36 100 000 000
37 100 000 000
38 100 000 000
39 100 000 000
40 100 000 000

```

```

00 1 000 *****
01 1 000 0      USING THE      0
02 1 000 0 *****
03 1 000 0      NUMBER 0000      0
04 1 000 0 *****
05 1 000 0      NUMBER 0001      0
06 1 000 0 *****
07 1 000 0      NO NUMBER 00000  0
08 1 000 0 *****
09 1 000 0
10 10 000 1,000,1,000
11 10 000 0-1 TO 999:999:999:999:0 0
12 10 000 0
13 100 000:000:000
14 100 000 0-1 TO 999:999:999:999:0 0
15 100 000 000
16 100 000 000
17 100 000 000
18 100 000 000
19 100 000 000
20 100 000 000
21 100 000 000
22 100 000 000
23 100 000 000
24 100 000 000
25 100 000 000
26 100 000 000
27 100 000 000
28 100 000 000
29 100 000 000
30 100 000 000
31 100 000 000
32 100 000 000
33 100 000 000
34 100 000 000
35 100 000 000
36 100 000 000
37 100 000 000
38 100 000 000
39 100 000 000
40 100 000 000

```

# NUMBER SORTING

```

00 1 000 *****
01 2 000 0          NUMBER ZERO          *
02 3 000 1          NUMBER ONE           *
03 4 000 2          NUMBER TWO           *
04 5 000 3          NUMBER THREE         *
05 6 000 4          NUMBER FOUR          *
06 7 000 5          NUMBER FIVE          *
07 8 000 *****
08 9 000 *****
09 0 000 *****
10 1 000 *****
11 2 000 *****
12 3 000 *****
13 4 000 *****
14 5 000 *****
15 6 000 *****
16 7 000 *****
17 8 000 *****
18 9 000 *****
19 0 000 *****
20 1 000 *****
21 2 000 *****
22 3 000 *****
23 4 000 *****
24 5 000 *****
25 6 000 *****
26 7 000 *****
27 8 000 *****
28 9 000 *****
29 0 000 *****
30 1 000 *****
31 2 000 *****
32 3 000 *****
33 4 000 *****
34 5 000 *****
35 6 000 *****
36 7 000 *****
37 8 000 *****
38 9 000 *****
39 0 000 *****
40 1 000 *****
41 2 000 *****
42 3 000 *****
43 4 000 *****
44 5 000 *****
45 6 000 *****
46 7 000 *****
47 8 000 *****
48 9 000 *****
49 0 000 *****
50 1 000 *****
51 2 000 *****
52 3 000 *****
53 4 000 *****
54 5 000 *****
55 6 000 *****
56 7 000 *****
57 8 000 *****
58 9 000 *****
59 0 000 *****
60 1 000 *****
61 2 000 *****
62 3 000 *****
63 4 000 *****
64 5 000 *****
65 6 000 *****
66 7 000 *****
67 8 000 *****
68 9 000 *****
69 0 000 *****
70 1 000 *****
71 2 000 *****
72 3 000 *****
73 4 000 *****
74 5 000 *****
75 6 000 *****
76 7 000 *****
77 8 000 *****
78 9 000 *****
79 0 000 *****
80 1 000 *****
81 2 000 *****
82 3 000 *****
83 4 000 *****
84 5 000 *****
85 6 000 *****
86 7 000 *****
87 8 000 *****
88 9 000 *****
89 0 000 *****
90 1 000 *****
91 2 000 *****
92 3 000 *****
93 4 000 *****
94 5 000 *****
95 6 000 *****
96 7 000 *****
97 8 000 *****
98 9 000 *****
99 0 000 *****

```

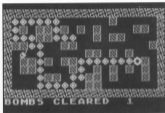
```

10 000 *****
11 000 *****
12 000 *****
13 000 *****
14 000 *****
15 000 *****
16 000 *****
17 000 *****
18 000 *****
19 000 *****
20 000 *****
21 000 *****
22 000 *****
23 000 *****
24 000 *****
25 000 *****
26 000 *****
27 000 *****
28 000 *****
29 000 *****
30 000 *****
31 000 *****
32 000 *****
33 000 *****
34 000 *****
35 000 *****
36 000 *****
37 000 *****
38 000 *****
39 000 *****
40 000 *****
41 000 *****
42 000 *****
43 000 *****
44 000 *****
45 000 *****
46 000 *****
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48 000 *****
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57 000 *****
58 000 *****
59 000 *****
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61 000 *****
62 000 *****
63 000 *****
64 000 *****
65 000 *****
66 000 *****
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68 000 *****
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70 000 *****
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74 000 *****
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76 000 *****
77 000 *****
78 000 *****
79 000 *****
80 000 *****
81 000 *****
82 000 *****
83 000 *****
84 000 *****
85 000 *****
86 000 *****
87 000 *****
88 000 *****
89 000 *****
90 000 *****
91 000 *****
92 000 *****
93 000 *****
94 000 *****
95 000 *****
96 000 *****
97 000 *****
98 000 *****
99 000 *****

```



# SNAKEY



by  
Eric  
Liddell

You have probably seen Harry around before but this time he has some new adventures for you to enjoy and, perhaps, his listing will show you how you can write similar programs of your own.

Fresh from his adventures in the mushroom garden where he proved himself admirably good at clearing up, Harry The Snake has taken a job at a local warehouse. The owner of the warehouse, Rich Richard, has many powerful enemies who keep trying to break into the warehouse which is why he has employed Harry to guard it for him at night.

One night, while Harry was slithering around the packing crates learning a snakey little tune to himself to pass the time, one of Rich Richard's enemies started to throw bombs through an open window in an attempt to sabotage the warehouse. Your job is to guide Harry around the warehouse defusing the bombs. This all sounds very easy but there is one small problem, Harry has grown quite a lot from all the mushrooms he ate while in the garden and is now very, very long. You must be very careful when slithering around the packing crates not to trap yourself in a dead end because if Harry touches his own body the game is over and Harry is sacked.

When a bomb has been successfully defused another is thrown through the window to land in a different part of the warehouse. You must continue to guide Harry around the warehouse to defuse the bombs for as long as possible. To guide Harry use a joystick in port one. The number of bombs defused is shown at the bottom of the screen underneath the game screen.

Happy guarding and watch those bombs!





# BANK SWITCHING

## part 2

In the last article I showed how to access the memory banks behind BASIC and the OS on the XL and XE computers. 128K extra bytes have access to an extra 64K RAM which gives them machine its 128K status. This opens up a whole range of options for programmers. As the BASIC and OS banks are available for use also on the 130XE, the potential for use is even greater if they are used in conjunction with the extra 64K RAM.

### THE 16K BANKS

The 128K is divided into the 8000L apart from the extra memory which retains a series of four 16K memory banks. These 16K banks are only accessible one at a time, however, which can be a major disadvantage since it means that the full 128K cannot be used at once but this need not limit the possibilities for usage. For example for a low level of difficulty quiz game, the user could load 64K of questions into the extra memory (16K per bank) and then access 16K of questions at any one time. Since only one level would be used at once there is no disadvantage in not being able to select the full memory.

See figure 1 for a diagram of the construction of the 130XE memory. The main internal memory is from locations 80000-8FFFF (0-65535) as on the 8000L. The shadow 8K block is behind 84000-84FFF and the shadow 14K block is behind 8C000-8CFFF and 8D900-8DFFF as on the 8000L. The extra 64K is in the extended memory block which occupies 80000-8FFFF. This is not to be confused with the main block which has similar numbering, the two are entirely separate. On the extended block, bank 0 occupies 80000-80FFF, 1 takes up 80800-80FFF, 2 uses 80800-80FFF and 3 resides in 8C000-8CFFF. As for the shadow blocks, access to extended banks 0-3 is controlled by memory byte 80000 (24817) in the main block.

When 80001 is set to its normal value (200) the main block is in place and no shadow or extended 8000 blocks are selected. Upon altering 80001 currently one of these 16K banks will exchange with a 16K block of memory from the main memory. In fact this block is from 84000-87FFF (16384-32767) as the main block, it is called the 'access window' for the extended RAM blocks as this is the only area through which the 16K banks are available for alteration. Thus it follows that no matter which bank is selected, it always pops up to the same access window 84000-87FFF in the main memory. The locations that the banks each occupy in the extended block are now of less importance. Note that you should SAVE any programs in memory before making any alterations to the access

**David Manlove concludes his tutorial by explaining how to use the 64K extra RAM in the 130XE Banks**

window area as this may conflict with your program.

When 80001 is changed back to its normal value the main memory pops back up to its access window with the values that it contained before 80001 was altered. Also the bank that replaced it now stores the values that were given to it, ready for the next time that the bank is accessed. This means that the banks could be used for page flipping; graphic screens could be loaded into the banks and then they would pop up the instant 80000 was changed. To illustrate this, type in, BASIC and RUN listing 1. This sets up different text screens in each bank including the main block. On pressing any key the banks are cycled through using page flipping. The text appears instantly, this would not happen if it had to be PRINTed each time thus proving the worth of this technique.

I should now explain how to call up the banks. They can be accessed in different modes - however for now we can be concerned with the simplest mode only. To call up bank X, use

```
POKE 84017,100+4*X
```

Then to call back the main block use

```
POKE 84017,200
```

Now test this by using the following when in normal mode:

```
POKE 14004,128:POKE 84017,100:POKE  
14004,200:POKE 80001,200
```

This stores a 128 in location 00004 (byte 0 of the access window) in normal mode and a 200 in byte 0 of bank 0. Now try:

```
PRINT PEEK(14004):POKE 84017,100:PRINT  
PEEK(14004)
```

A 128 comes up first and then a 200 showing that the memory contents were not reset when 80000 was altered. This is basically the method that users would employ to store code in the extended banks and then restore the full 128K.

```
00 1 MEM -----
01 2 MEM 0 PAGE 10,10000 0000 0
02 3 MEM 0 by David Matheson 0
03 4 MEM 0 -----
04 5 MEM 0 NEW STAGE DEMO - DEC 1993 0
05 6 MEM 0 -----
06 7 MEM
07 49 FOR 13320 TO 1007:MEMO W/PAGE 1,0
MEMO 1
08 50 DATA 100,100,100,100,100,100,100,100,
100,100,100
09 51 MEMO1:01:01:0000:0000:0000:0000:0000:0000
02:02:00 00,00000 00,00
10 52 MEMO1:02:00
11 53 * MEMO1:000:0000:0000:0000:0000:0000:0000
12 54 FOR 100 TO 10000:MEMO1:02:02:0000:0000
13:00:00,144*11:02:02:00:00,00:00 MEMO1:0000:
14:00:00:0000:0000:00:00:00:00
15 55 MEMO1:0000:0000:00,00:01:00:00,00:00:00:
00:00:00:00:00:00,0,0,0,0
16 100 MEMO1:0000:00:00:00:00:00:00:00:00:00
17 100 FOR 100 TO 10000:MEMO1:02:02:0000:0000:
00:00:00:00:00:00:00:00:00:00
18 100 MEMO1:0000:00:00:00:00:00:00:00:00:00
```

```
00 1 MEM -----
01 2 MEM 0 MEMO1:0000:00:00:00:00:00:00:00:00:00
02 3 MEM 0 by David Matheson 0
03 4 MEM 0 -----
04 5 MEM 0 MEMO1:0000:00:00:00:00:00:00:00:00:00
05 6 MEM 0 -----
06 7 MEM
07 49 FOR 13320 TO 1007:MEMO1:02:02:0000:0000:
00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:
MEMO1:02:02:0000:0000:0000:0000:0000:0000:0000:0000:
02:02:00 00,00000 00,00000 00,00000 00,00000 00,00000 00,00000
10 52 MEMO1:02:00
11 53 * MEMO1:000:0000:0000:0000:0000:0000:0000:0000
12 54 FOR 100 TO 10000:MEMO1:02:02:0000:0000:
00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:
MEMO1:02:02:0000:0000:0000:0000:0000:0000:0000:0000:
02:02:00 00,00000 00,00000 00,00000 00,00000 00,00000
14 100 MEMO1:0000:00:00:00:00:00:00:00:00:00
15 100 FOR 100 TO 10000:MEMO1:02:02:0000:0000:
00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:
MEMO1:02:02:0000:0000:0000:0000:0000:0000:0000:0000:
02:02:00 00,00000 00,00000 00,00000 00,00000 00,00000 00,00000
18 100 MEMO1:0000:00:00:00:00:00:00:00:00:00
```

## THE MODES OF ACCESS

The 1080E has two internal processors: the 6502 CPU and the ANTC graphics chip. The different modes of accessing the 1080 banks refer to the way in which the CPU and/or ANTC 'see' the memory from 00004 to 0207F. No other area of memory is affected. When you specify a mode of access you will always be accessing one of the banks. There are four of these modes and I shall describe each separately.

When mode 0 is selected the CPU accesses the extended bank between 04000 and 0207F. This means that when the user alters locations in the access window he is altering one of the chosen extended banks and not the main bank. Thus data such as machine code numbers could be stored in the chosen bank. Also, in mode 0, any ANTC cycles that have cause to refer to the area 04000-0207F will not now take place in the main bank but instead in the extended bank chosen. This means that display lists or graphic screens can be stored in an extended bank and referred to in the same way as having 1 done. This mode is called the General Extended ROM Mode since both ANTC and the CPU are referred to the extended bank with the main bank domain.

Mode 1 is called the Video Extended ROM Mode since, when this mode is selected, ANTC refers to the extended bank when access windows references are encountered (as per mode 0). However the difference is that the CPU sees only the main bank and any alterations to the access window while in this mode will be referred to main memory and not an extended bank. It would therefore only be suitable to store display lists and/or graphic screens in the chosen bank.

Mode 2 is called the CPU extended RAM mode because this mode involves only the CPU accessing the extended bank. This means that any CPU references to the access window are directed to the chosen bank instead of main memory. All ANTC cycles occur in the main memory and ANTC ignores the extended bank. So any user data can be stored in the chosen bank and accessed as will.

It should be remembered that all the above only applies to the block 04000-0207F and no other parts of memory are affected. For mode 3 ALL parts of memory are unaffected - this is effectively 'normal mode'. All CPU and ANTC cycles are referred to the main bank. It therefore does not matter which bank is chosen in conjunction with this mode (all mode selections

have to be made in conjunction with a bank selection), and vice versa. FX is the number of the bank chosen, and Y is the number of the mode chosen, then the user alterations will be made using:

```
POKE 04010,(FX*10+Y)
```

To illustrate the different modes, type in, SAVE and RUN listing 3. The program starts by asking the user to specify a mode - start by selecting mode 0 first. The program then switches to a split GRS screen. The idea is to show the user how the CPU and ANTC are possibly 'seeing' the access window when bank 0 and a mode are selected. The top part is graphical: it shows you what ANTC sees. The bottom part shows you what is in the access window, i.e. it shows you what the CPU sees. Try pressing a few keys. Ignoring the screen, the screen does not change. This is because the alterations are being FORGOTTEN (by the 749 command) into main memory and ANTC is accessing bank 0 so it does not 'see' the alterations. The CPU does not see the changes either since it accesses bank 0 also. Press, often, to re-run. Now try mode 1 (Video Mode) on pressing a key only the bottom part changes since ANTC is still accessing the extended bank while the CPU accesses main memory. In mode 0 CPU mode the top part changes due to ANTC accessing main memory now. Mode 0 (normal mode) allows both top and bottom parts to change since both CPU and ANTC access main memory.

I will end this article by giving a bit breakdown of location 04000:

- Bit 0 - ON for ROMRAM, 1=ROM
- Bit 1 - BASIC bit (ROMRAM, 1=RAM)
- Bits 2,3 - Bank selection bits for banks 0-3 (Bit 2 is the high bit)
- Bits 4,5 - mode selection bits for modes 0-3 (Bit 5 is the high bit)
- Bit 6 - unused on 1080E (normally 1)
- Bit 7 - will test whether bit 1=0=0 Test bit. Got test only.

I hope these articles go some way in allowing the reader to access the extra memory easily from programs. It is a pity that only a few companies have brought out 1080 software but the opportunity certainly exists.

# SCOTLAND THE BRAVE!

**I**n the absence of commercially motivated support, 5-bit users are obliged to support themselves. Some prefer to quietly compute in the privacy of their homes while others attempt to organize gatherings and share their enthusiasm with others. User groups have never been as popular in Britain as they have in certain other countries like the US for example but there are several keen individuals whose determination to persuade fellow hobbyists into participation is probably the main reason that literature on 5-bit topics is still being published. I recently received products from two dedicated Scottish Atariists who are striving to keep the 5-bit alive.

## FUTURA

Long term Atarist Stuart Murray - whose claims to fame include winning the Scottish Atari Forum championships in 1982 and the Scottish, UK and World Atari 700C championships in 1983 - was understandably dismayed by the growing number of 5-bit users selling their machines because of the lack of software and hardware support. He decided to take positive action and placed advertisements in the local press in an effort to form a hardware base of 5-bit users throughout the north of Scotland. He has succeeded in gaining the interest of over thirty Scottish users and subsequently recruited enough local members to populate regular meetings of the 'North Of Scotland Atari User Group' (NOSAUUG). Some of the club services include hardware advice, a public domain library for disk and cassette users and the sale of second hand commercial software. Stuart produces a club newsletter called Futura for regular distribution on disk, cassette and paper. Every issue contains a mixture of editorial, local articles and top-quality public domain software. I was pleased to receive copies of the first three issues - especially after I'd examined their content!

One of the highlights of Futura 1 is Speedscript, a highly usable word processing package that originally appeared in book form, so you had to spend hours and hours typing it in. It was reviewed in Page 6 issue 281. Although Speedscript originates from a Basic program it is actually written in machine code and is supplied with Futura as a binary load file. Start it up and you're instantly presented with a flashing cursor - a cue to get typing! The screen text is notably easy to read since Speedscript uses a clearer typeface than Atari's standard offering. All the essential word processing features are present - edit, delete, search/replace, word wrap, print format, etc. - and the only thing that's seriously lacking is a spell checker. If your word processing needs don't justify the expense of a commercial heavyweight such as Impact or Impact II, Speedscript is an excellent 'budget' option.

**The Atari Classic has always enjoyed strong support north of the border and that support is still going strong as Paul Rixon discovers**

Another handy program is MyCopyr - a disk copier that takes full advantage of expanded memory systems. On a few systems (not Futura) it contains five games, including the more commercially released Table Football from First Marketing plus clones of Speedway and Tridbaze. A couple of amusing demos are shipped in for good measure. Test files are abundant too with a personal report of the AMS show in Stafford, a no-nonsense Basic tutorial, a comprehensive list of UK Atari supporters and several other goodies.

Futura 2 has a manual theme. Though there's also lots to read and play on before... Atari Classic Machine to an impressive application from Poland. Once you exit the impressive demo of New Order's Blue Monday you have the opportunity to place your own bass drums, snares, claps etc. into 'tracks' displayed at the top of the screen. When you've formed a pattern, you simply choose 'play' to hear the results. You can build several patterns into longer songs or beds with the tempo, pitch and other parameters. Your compositions can be saved to disk for future use. You may be expecting a few pathetic loops and repeats but this is top quality digitized stuff. It sounds great! The Laser Demo is another one from Poland and is guaranteed to impress, but only if you can understand the Polish wording (smog?)

Sound Monitor Professional is a German application that lets you create songs and play them back in a similar manner to 'sound tracker' programs in the 16-bit world though not using digitized voices. Experimentation is required since most of the tool is German but it's not difficult to comprehend and there are great demo songs provided on the Futura disk. Blueberry on Futura 2 there is a home racing game called Triple Crown which allows eight players to participate - selecting bits, placing bets and watching the cars. The race graphics are quite amusing and will have you on the edge of your seat - especially if there's real money on the table! Other games include an addictive puzzle similar to Kor-Toll's Sogor and

another Trailblazer-style hopping expedition. In the next and motion you'll find the latest 5.00 rates and a review of the Alan Canadian Exposition held last April in Toronto.

The third issue of Futura appears to maintain the high standard introduced by its predecessors. The first side is packed with articles on subjects ranging from the history of computers to humour obtained from the US Policy Newsletter. On the strategic front International Bridge Construction is a business stimulation in which you try to gain sufficient mail, materials and customers to keep your bridge construction company going. For arcade freaks Futura offers a 2-D review of Tetris, a reasonable music game (with music!) and a thrilling adventure called Alphas. Also, Jane's Program is best described as an intriguing interactive musical 'Imagineer' (over 40 million features) - a DOS file explorer, a program for transferring Bob C. Multitask and other menu formats to DOS 3.1, and a menu system for your COM and DAS files.

As you will have gathered by now, every issue of Futura is positively brimming with goodies. Stuart tells me there's lots more planned for future editions - reviews of commercial and public domain software, an expanded VCR section and new original programs to name a few.

## EXCEL

Meanwhile another featured-based AtariX, Robert Stuart - whose Excel disk magazine has been praised in these pages before - continues to offer his support despite an increasingly disappointing response from other users. Some may be disappointed when it seems they are getting such a hot tip for a small matter but there should be no fears - there are no catches, drawbacks or side effects. It really is a good deal.

Excel is already set to release the twelfth issue of Excel before Christmas, which is quite an achievement when you consider the enormous effort that goes into its preparation. Unlike Futura, the Excel disk mag does not contain reviews or articles - just files you can only use when instructions are required for complicated applications. This policy was introduced with issue 7 as Robert wanted to pack the maximum quantity of software into each issue. Unfortunately these last four have to mention all the recent disks but I hope a short summary of the highlights should bring you enough to investigate further!

Being a game by Best Gameplay of Tiger Developments (check out the Taskan review last issue) which appears on the B' side of Excel 10. It's a clone of 'Thunder', which has appeared on many popular releases, and runs along a vertical-scroll hopping theme in a similar manner to Nintendo's Trailblazer. The playing area is a relatively small window in the top centre of your screen and your job is to ensure a constantly bouncing ball doesn't bounce on anything nasty or run into a few adversaries. Being fast does mean nice animation and is quite addictive - though also frustrating as it's too easy to require!

On the same disk you'll find ERK Artist, a drawing application with no shortage of facilities. As well as the usual facilities such as draw, line, circle, box and fill there are options to add text using systems on disk loaded fonts, set reflective modes, use magnification and even demonstrate 'rainbow' graphics techniques. You can load pictures to Icons, Microcomputer and Macintosh formats, though one only to Icons.

Excel 12 has, among many other things, two interesting applications to aid the design of arcade games - Colorful Map Editor and Colorful Screens Editor. The map-editor helps you create background graphics for scrolling games. The program uses Aristo mode 4 for high resolution, multicoloured graphics



and can load fonts from Excel's ColorFont, which appeared in the first issue. A handy demo is provided to show you how the loaded background can be incorporated into your own software. The ColorFont screen editor is similar to the map-editor except that it's aimed at producing games that use page-flipping, such as Drimacore or Blinky's Scary School. A textual instruction file is supplied containing help for both packages. Label Master breaks the line up on Excel 11. This is a computer-crafted utility for letting you produce glossy-looking, sorting and printing address labels. It's classed as shareware and the author invites you to send off a registration fee to retain for an improved version. There's just room to mention the Genesis Project Demo on Excel 09, it's a conversion of a Commodore64 program and although it doesn't do a lot you'll definitely be impressed by the graphics!

This isn't a comparative review as I believe you should not choose between Excel and Futura - you should have them both! Although there's inevitably some overlap in material both aim to include the best PC-related work disk mag has to offer and you are sure to find a great deal of interest in every issue.

## USEFUL INFO

Futura is produced by the North of Scotland Atari User Group c/o Stuart Murray, 71 Walker Road, Ferry, Aberdeen, AB11 0BC and is available to disk, cassette and printed format. The disk version can also be obtained from Page 8. Excel is produced by Robert Stuart, 21 Stranraer Way, Broadlands, Irvine, NorthAyrshire, BA1 1 0EL. Look out for his advertisements in New Atari User.

# TUTORIAL TIME

## ITS ALL QUITE LOGICAL

### INTRODUCTION

As you all know, at the very heart of your computer things are extremely simple. In fact it all boils down to zeros and ones. At this very fundamental level the microprocessor is making simple binary additions, subtractions and comparisons. These are all binary logical operations. It is not surprising, therefore, to find that there are logical operators in the higher level languages, including BASIC, and these operators are amongst the fastest and most efficient that are available.

The very simple manual that has been supplied with the 8 bit Atari such as the 800 and 800XL, gives a list of precedence of the operators, but it does not give any indication of their use, so most people only use them in ways that have parallels with the mathematics we learn at school such as:

$X=X+1$  meaning let  $X$  equal one more than its old value,  
or  
 $IF X=10 PRINT ...$  meaning oh ... if  $X$  has a value of 10  
or more

But there are cases for these operators that seem to defy ordinary mathematics. What result would you expect from the following two expressions?

```
T X (X=0)  
T Y (Y=10) (Y=80) + 100 (Y=80)
```

Just remember that TRUE has a value of -0&H and FALSE has a value of 0&H and then the meaning should be self explanatory. In the first expression (X=0) is TRUE because 0 is  $X$  is positive and FALSE because 0 is  $X$  is 0 or negative, so it results

in a value  $X$  when  $X$  is positive) and a value of zero if  $X$  is zero or negative. Similarly the result of the second expression is  $Y$  if  $Y$  is 00 or less,  $Y$  plus a "bonus" of 10 if  $Y$  is between 01 and 80, and  $Y$  plus 110 (that is +10 and +100) if  $Y$  is over 80. Another fact that seems a bit odd at first is that a number is considered to be "true" if it is not zero and "false" if it is zero. This can be made use of in expressions like the following:

```
IF X THEN YTRUE
```

This will write TRUE on your screen unless  $X$  is zero. It works with negative numbers and decimal parts of numbers which are considered to be "True" like positive integers.

### PRACTICAL USES

By now you are probably wondering what is the use of all this, so I have written two short example programmes to illustrate uses of logical statements.

The first program is a simple number guessing game. The computer selects a number in the range 1 to 100 in line 80 and prompts for a input in line 90.

Your number is accepted in line 90, and a count of the number of attempts you make is started. For clarity and simplicity I have not put any error checking on the input, so the program can be easily modified if you do not enter a suitable number in the 1-100 range. If youngsters are to play the game it must be made possible as they will seem take delight in deliberately seeing what happens if nonsensical key presses are made.

In line 90 D is put equal to the difference between your guess, Y, and the original number, 50,00.

Line 90 contains the logic statements. It is a conditional GOTO depending on the value of D. If D is zero all the branches are "false" so the GOTO is to line 100 - the correct number has been guessed. The other four conditions can be tabulated as follows:

```
-10=D=0 GOTO 140 (that is 100-100 Guess is a little low  
low  
D=10 GOTO 150 (100 + 20) Guess is much too low  
D=20 GOTO 160 (100 + 30) Guess is a little high  
D=10 GOTO 170 (100 + 40) Guess is much too high
```

Each of the subroutines gives a clue to how good the guess was. After returning from the subroutine line 90 causes a jump to 100 unless D is zero. In the latter case line 100 asks if you wish to play again and if so loops back to 80 where the next number is generated.

Line 110 ENDS the program if you select N at the "play again?" prompt.

Line 120 prompts you to have another game and loops back to line 80 for input.

```

01 1 000 *****
02 1 000 *
03 1 000 *
04 1 000 *
05 1 000 *
06 1 000 *
07 1 000 *
08 1 000 *
09 1 000 *
10 1 000 *
11 1 000 *
12 1 000 *
13 1 000 *
14 1 000 *
15 1 000 *
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17 1 000 *
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95 1 000 *
96 1 000 *
97 1 000 *
98 1 000 *
99 1 000 *
100 1 000 *

```

Listing 1 - A simple guessing game

## JOYSTICK INPUT

Joystick input in Basic is often a mass of IF... THEN... statements, but a faster and much more compact method is to use logical operators. In the short example program the joystick can be used as a crude drawing instrument. While the joystick button is pressed it draws and when the button is released it erases. Lines 10 to 50 are the draw program and lines 1000 onwards are the joystick logic.

In the main program only one or two things need explanation. COLOR and DRAW are the maximum values that the cursor can go to during the drawing (the right hand edge and bottom of the screen). These values will need to be changed to suit the graphics mode you wish to use. The COLOR 0 and COLOR 1 commands cause the cursor to flash each time the program loops.

In line 40 "IF STRIKE" means "if the trigger on joystick 1 is pressed". STRIKE0 is zero when the button is released.

The joystick logic in lines 1010 and 1020 is fairly straightforward if you look at the figure showing the values returned by STRIKE0 when joystick 1 is moved. In line 1030 X is increased by one if the joystick is to the right and the cursor is not already at the right hand edge of the screen, and decreased by one if the stick is to the left and X is not already zero (the left edge of the screen).

In line 1040 Y is increased by one if the stick is down and the cursor is not already at the bottom of the screen (YMAX), and decreased by one if the stick is up and Y is not already zero. In all other cases X and Y don't change. You will see, as you run the program, that both X and Y can change at the same time giving diagonal movement of the cursor.

You must agree that this is a neat way of getting joystick input in BASIC. It is quite fast - in fact I had to put a small delay in line 20 to get a more steady cursor track, but this will probably not be needed if the substitution is used in a more complex program with a slower main loop.

I hope you will experiment with the logical operators and find them useful in your programming.

```

01 1 000 *****
02 1 000 *
03 1 000 *
04 1 000 *
05 1 000 *
06 1 000 *
07 1 000 *
08 1 000 *
09 1 000 *
10 1 000 *
11 1 000 *
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95 1 000 *
96 1 000 *
97 1 000 *
98 1 000 *
99 1 000 *
100 1 000 *

```

Listing 2 - Joystick input simplified

## BACK ISSUES

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# SUPERSCRIPT

*Seven years after its release, can Superscript still be considered the best word processor for the Atari Classic?*

*Les Ellingham looks back and brings you up to date*

**B**ack in issue 17, published in September 1985, I reviewed a brand new word processor which I stated to be "the most important piece of software to have been produced so far by a British company". Seven years on, Superscript remains one of the very best programs produced for the Atari Classic and, having disappeared for a few years, is now available once again but at a much lower price.

Most readers will not have seen issue 17, an issue that went out of print quite quickly, so this is essentially an update of the review that appeared in that issue, as relevant today as it was then.

## XL and XE ONLY

First of all you should note that Superscript is written for the 80081 and 130XE and will not work on the old 400/800 models, a point that is, perhaps, of less importance today although worth stating. The reason is that the program takes full advantage of the XL/XE facilities and offers full international characters, including that choice 12 signs on screen. In addition it is one of the few programs that take advantage of the extra 64k on the 130XE by allowing two documents to be worked on in memory at the same time.

The first thing you need to do with Superscript is to sit down and work through the tutorial which is essential if you want to use the program to the full. It is possible to compose simple documents by just following the screen prompts but ignore the manual and you will miss out on many powerful features.

So, load up Superscript and you will be prompted to insert an

Existing Work Disk, Create a Training Disk, Create a New Work Disk or Create a Dictionary Disk. The dictionary disk is really essential, it is just copied from the back of the master disk onto a disk of your own and may as well be created at the same time as your Training disk. Select Create a Training Disk and several files which give assistance in the use of the software will be copied onto your disk. The Training Disk and the current Work Disk primarily contain a 'Default' file which is loaded each time it is set up the printer driver and certain program parameters which are completely user defined. You can set screen and text colours, margins, standard printing features, screen widths or even assign special features to any key on the keyboard and have these as standard every time you use your work disk. More of these later, for now let's go back to the tutorial.

## EASY LEARNING

You start the tutorial by loading in a letter to use as practice for the standard features of editing, and to learn how to view and print documents which is fine for beginners and will get you used to using a word processor. Experienced users could skip this but by doing so may miss out a few tips to start with by using Superscript. The tutorial then goes on to 'Cut and Paste' editing, which simply means moving blocks of text around from single words to whole paragraphs, before introducing one of the really powerful features of Superscript - the ability to do mathematical calculations on tables within the text.

Here also is introduced another fine feature. Superscript is limited to a 40 column screen and it is virtually impossible to set out any sort of table without much trial and error. Superscript allows you to define the width of the text screen to a maximum of 240 columns and will scroll across and back as you reach the screen limits. Tables could not be simpler, you just type them exactly as you want them to appear on paper.

## MATHEMATICAL FEATURES

Using the mathematical features screen is first quite complex but a sample document is included and, once mastered, the technique is simple yet powerful. Each column in a table is defined as a numerical tab at the position of the division point, which incidentally can be set on desired, and figures are entered by tabbing across and pressing RETURN at the end of





Digital Software

# Superscript

The Intelligent Word Processor for your

- Composes a single document using the desktop or windowing
- Fully integrated 32-bit software with 640K free disk space available
- Allows you to edit the editor - no complicated commands to remember
- Shows you indicators for your document's quality
- Spelling checker with 40,000 different organizational dictionaries
- Compatible with hardware in any database that contains database files

the line. Enter as many rows as you wish and finish off with a row of dashes and you are ready to calculate totals. Simply place the cursor at the end of a line, enter a few keystrokes and the line total will be entered in the first column. Calculate each line in this way and then place the cursor at the foot of the table. A few more keystrokes and every column in the table will be totalled automatically! Any figures included in brackets or with a minus sign will be subtracted and the program has facilities for division and multiplication as well. In fact all of the commands to calculate a table can be invoked in a format and can be executed with just two keystrokes. There is an example included in the manual. Just run it and watch, you'll be amazed.

## MAIL MERGE

Next comes Mail Merge which allows you to take a standard letter and 'personalise' it by automatically inserting names and addresses or other information within the standard text. An example is again provided. The procedure is somewhat lengthy but once set up is easy to use. Your letter is composed as one file and the information you wish to insert, in the example names and addresses, is composed simply as another text file. You then insert markers, which can be conditional. In your letter and start printing. This is where the 100% is used to great advantage for you can have your letter in the upper half of memory with the merge information in the lower memory thus eliminating disk access.

The use of conditional markers makes the mail merge another powerful feature. You can, for instance, set up a file, or multiple files, containing a full list of contacts or addresses with as much detail as you wish and then print letters to them according to conditions laid down in your main letter. You

could, for instance, write only to those in London or you could exclude London addresses. You could write only to female contacts or, if you keep your contact file up to date, only to people who have expressed an interest in a particular product or service. It is obviously not as powerful as a full database program but for simpler applications is more than adequate.

## EDITING

The materials finish here but the majority of the manual is unused! There is much more that you can do with Superscript. Let's take a look now at the editing features as controlled by the keyboard. At first sight any action seems unnecessarily complex requiring the SELECT key to be pressed followed by selection of the feature required and then selection from a sub-menu. In some cases a further menu is presented. If you don't mind the manual you could waste a lot of time performing almost every function but since you have executed a particular action, no matter how complex, it can be repeated by simply pressing CONTROL-B. In fact most of the commonly used editing features can be accessed by using CONTROL with an appropriate character. There are several really neat features here such as changing words between upper and lower case. CONTROL-F will change a word from upper to lower case but on first press will leave the initial letter as a capital in case it is the start of a sentence. Press again and this turns to lower case. If you prefer to use the cursor movement keys without holding CONTROL, simply change them so that cursor movement is standard and the arithmetical signs are accessed with CONTROL!

## USER DEFINED KEYS

What if you need to repeatedly use a series of commands? Easy, just assign these commands to any key on the keyboard in either upper or lower case. Press ESC followed by the key and the program will perform the action you have assigned. Almost anything can be assigned to a key from passages of text to single commands or series of commands. Your name and address, for instance, can be inserted in a document with two or three keystrokes. It can even be automatically centred or righted. Often used words can be inserted at a stroke or the cursor can be moved as desired. Several examples are given in the manual but the applications are limited only by your imagination. Suppose, for example, you often transpose two characters. Simply assign a key to reverse them, place the cursor on the first character and change them about. You can change disk drives, obtain a directory, initiate a search, exchange dates, and much more.

All this seems quite powerful, but the real beauty lies in the fact that every key stroke you define can be made permanent so that the keyboard is configured to your specifications each time you load up a work disk. If you wish you can have different configurations for different tasks and change midway through a session. You may not appreciate the power until you have used it, but what it basically means is that Superscript is not a program to which you need to adapt but a program which adapts to you. Your working version of Superscript will be exactly that, your own personalised helper!

## LAYOUT FEATURES

Before I go on to the search and replace functions and spelling checker, a brief word about the layout capabilities in regard to the printed document. All the expected facilities such as setting margins and page lengths, centering and justifying text, including headers and footers are there as well as page numbering but a few more features are included. Margins as well as page numbers can be offset alternately so that if you are producing a bound document the wider margins will always be on the verso of the pages. To produce a double-sided document you can print odd numbered pages first, turn the paper and then print the even numbered pages. Four levels of indent can be set and retained as desired allowing hanging indents, such as you see in numbered paragraphs, to be easily produced. A nice report is included on the training disk to illustrate many of these features.

## SEARCH AND REPLACE

One of the useful features of any word processor is the ability to find words quickly throughout the document and replace or amend them and SuperScript, naturally, has this feature. You may change all occurrences of a word or merely each change or simply find a particular word to position the cursor for editing. It was here that I found one of the few limitations of SuperScript as it cannot search for spaces. I often use AmWriter to check for and replace inadvertent double spaces in a document. A useful feature of the Search facility is to search forward or backward so you do not need to go to the start of the document for multiple searches.

## THE SPELLING CHECKER

So now let's assume that you have typed your document. Before you print it you will want to make sure that the spelling is correct so a few keystrokes (or assigning them to a particular key) bring the spelling checker into action. If you have two drives, insert the spelling checker into drive 2 and the program will look for it first in drive 1 and then drive 2. If it is not in either you will be prompted to insert it. The first action is to analyse your document. You will be told how many words have been read, how many sentences there are and how many paragraphs as well as the average word length. Then the spelling will be checked in alphabetical order throughout the document. The method is slow but it works well and incorrect or unrecognized words will be highlighted or action as they are marked. You may either accept the word, in which case all further occurrences will be ignored, ignore the word so that it will be flagged again if found or have the program learn the word and insert it into the dictionary for future use. Words which you use often can then be added to the dictionary automatically so that each time you use the spelling checker its vocabulary expands. If a word is incorrect you simply edit it and reinsert the check. When it is finished you can replace the original document on disk with one keyboard. One point to bear in mind is that, being a British program, it checks for English and not American spellings!

The spelling checker has other uses. You can use the disk as

a straight dictionary. If you don't know how to spell a word just look it up by typing the first few characters and you will be shown all of the words that begin with those characters. Whilst the program cannot check grammar, you can display all of the words used with their frequency so that you can see if, for example, you have used 'nice' or 'great' too many times.

## THE ORIGINAL CONCLUSION

A manuscript's mission is several times the size of this magazine so you see that it is possible only to scratch the surface in a review. The program was originally written for the Commodore but the latest version is no straight 'ship' to another computer. In fact Previous Software have produced a compatible program tailored especially for the machine. They have discovered and used more of the facilities of the XL and XE computers than many of the well established competitors in the States who have been writing Atari software for years. I will finish by repeating that for the serious user this is the most important program to appear this side of the Atlantic. It breaks the final occupation of the Atari as a serious computer, something we have known all along.

## TODAY'S CONCLUSION

I can recall being absolutely knocked out by SuperScript when it was released and I had the opportunity to test a beta version and make recommendations for the final release. SuperScript became the word processor that was used to produce *EMUL* & its 2.00m word for many years. Bringing this review, the interesting thing is just how advanced SuperScript was with almost all of the features I use today to what I consider to be the best word processor on the XT. In fact it still has one or two features that are not found in any word processor on the XT!

SuperScript has not aged in any way. It remains the finest word processor for the Atari Classic. All that has changed is the price. At its launch in 1985 it retailed at £69.00 but today you can get a copy from Desk First at Mirror (insert) for just £19.99 inclusive of postage in the UK. That has to be the bargain of the century!

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# THE ACCESSORY SHOP

## ISSUE 59

The Accessory Shop is a fundamental part of Page 6 providing support for the production of New Atari User magazine - without any from the Accessory Shop it would not be possible to produce a high quality magazine for the Atari Classic. Of course the Accessory Shop also provides you with one of the few remaining sources of software and other accessories for your machine. Remember that each time you place an order with The Accessory Shop you are ensuring the continuance of the magazine that is dedicated to the Atari Classic. Each issue before you look elsewhere!

## A BRAND NEW XL/XE ROM CARTRIDGE! EXCLUSIVE TO PAGE 6!

# HYPNOTIC LAND



Yes, believe it or not, we have tracked down a brand new ROM CARTRIDGE for the XL/XE from Lindosip in Italy who have produced this in competition with Atari Italy.

**HYPNOTIC LAND** is a version of the massive ST hit **FLAK** - a highly addictive, highly entertaining game that will challenge you to complete the first few levels and have you coming back for more - again and again!

The aim in **HYPNOTIC LAND** is to redirect mineral elements in the form of coloured balls into the corresponding coloured cup at the end of a ramp. To do this you must place arrows on the ramp to redirect a ball into an adjacent column. Remember to only put green balls into the green cup and so on. It seems easy but once you have mastered the first level, some deceptively monstrous start to appear to try and steal the balls. You can shoot them with the joystick but don't forget you also have to keep one eye on the ramp! Sometimes special shining extra-balls will appear which can go in any cup and give bonus points.

**HYPNOTIC LAND** requires skill, concentration and quick reflexes. Can you manage it? Like all the great classics a simple concept that has provided the foundation for a stunning and addictive computer game.

**HYPNOTIC LAND** is on ROM CARTRIDGE and will run on all XL/XE machines  
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When you receive your copy of New Atari User you will find an order form enclosed detailing every item available this issue - simple, complete and reliable. If we will send you another order form with your goods. If you don't have an order form, don't worry, just drop us a line - you don't have to use the order form.

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## CLASSY CASSETTES

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One of Atari's best games for the 8 bit released only a short time ago at full price was now the price of budget priced it's available with a video game in which you must defend the ring world of your roller coaster from the masses of space pirates. You also can pilot the single roller fighter to undertake the task of destroying the massive guardian that protects the fleet of pirate ships.

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If you had to name just a handful of Atari classics, Boulderdash would surely be among them. The origin of game of collecting jewels while avoiding falling boulders still has the appeal it had when first released. Quality programming, great concepts and a lovely character makes this Boulderdash will live on forever. You must have it in your collection!

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Captain Crumble was one of the characters that found a unique place in the hearts of many Atari addicts. This truly English creation will warm your hearts too as the video screen tries to reveal why the Football club have originated from the below-ground one. Can you find out where the trouble throughout of the levels of this game? Or worried it's not easy!

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Here's the list of all the other items still in stock. Many of these programs will be familiar but if you want to know more check out the past couple of issues where all of these programs have been more fully described. Some real classics and some great bargains!

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Some programs, especially some early public domain programs, aren't on the SLDK but they will fit in if you plug in the old version of Basic.

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# ECT AUTUMN

**Damon Haworth takes the long trek South to see how the trade view the future of the ST**

**F**ollowing the entertaining invasion of London with the Syde Computer people last Spring we went again to the European Computer Trade Show in September. Some business centre and some like the bit of the Marquise board only this time we were VIP's I rather hoped that this would mean entry to interesting seminars and much better teaching but no. What it did mean was free coffee and biscuits at will in a special lounge.

**T**he big news for the Atari lovers in this world was the unveiling of the Falcon accompanied by a seminar that unfortunately I missed owing to the fact it started too early for me. Nevertheless to get to, still the Atari stand was there and it had one on view, I walked all the way round the stand looking for this new beast, and all I could see was a 1040. Then I looked again and saw the logo was in random colours. This was it, the new machine! Well it was rather pleasing to designate it from any Commodore eyes this may be I stand and watched the demo program.

The program was a picture display showing several GTP type files in good resolution but there was nothing else of note here, I went to find a representative to chat to and eventually found someone. They were very friendly and I even got

coffee from them. I then discussed things Atari. Firstly I approached the Falcon vs. ST problem. The official line from Atari UK seems to be that the ST will be an entry level machine for family computing. This is reinforced by their new aggressive pricing policy and handling of the family entertainment park. The Falcon is not an upgraded ST despite sharing the same style of bus and allegedly being compatible with most ST software. The Falcon is a thirty-two bit machine with multi-tasking capabilities. It is almost capable of delivering the full PC VGA colour specification and when compared to the SMDG-600 has much more versatility and style. The machine looks very good with quite advanced specifications, which by now all will have seen in all the press releases so I shall not bore you again with the details. Unfortunately there does not seem to be a software base of great depth for it.

To my mind this is what the ST should have been but I am not sure if it is not a little late for the Atari's situation. On the other hand with my 1040 going on the table again, it would not go under should Atari wish to prove me wrong and send me one to use for a while!

**O**ther interesting titbits to come from the Atari stand were on the Lynx side, I had the opportunity to try the new NFL Football release and that was a startling good game. The colours and play designations were strong and the teams were statistically accurate. I received information on other Lynx releases imminent within the next four or five months including Eye of the Beholder. I felt that was an advertisement and have hope for a hard hold and if it is at all playable would make a Lynx well worth buying. The game is very good on a desk top machine and takes the Dungeon Master system several stages beyond the basic 3D generation we are used to. In the exhibit of Atari 'em and

split 'em from Sega and Nintendo it seems that the Lynx has the chance to come of age next year.

Other titbits from the computer world came from Microprose and Progress. Progress have unveiled Learnings 2 which promises bigger and better sprites and a slightly different gameplay. This was to be a special display on the Thursday of the exhibition and, sadly, owing to real work I could not stay so long. Microprose on the other hand did point out that they were 85 to 90 per cent certain to bring Civilization out on the ST. This is still only a maybe despite the fact that certain large magazines have stated it for a certainty.

The most worrying part of my discussions seemed to be a consensus with the software writers that ST support would sell fast soon and that the impetus to create even conversions was falling. The other somewhat perturbing thought they were sharing was that they were not rushing to support the Falcon until the sales showed it to be worthwhile. I suggested that it needed the software support to break into the market and received nothing more than sage Catch 22 rules.

**I** came away from the show feeling somewhat despondent for the future of the Atari world, although the core main market world was seen to be booming with local noise and flashing lights. One final thought from Microprose and Sierra on line was they foresee no problems with PC support for the next eight or more but both felt that Amiga support would fall sometime in the next six to twelve months.

Do not despair for hardware is becoming much hot and noisy, as the Atari representatives pointed out, with nearly three quarters of a million units and there the ST will not hold overnight. Keep the flame burning and a demand going and there there will still be ST software available.

## Flight Simulation

# OSCAR DELTA ONE ... CLEAR FOR TAKE-OFF?



**F**or those who fly flight simulators have been treated to a seemingly unending stream of air combat simulations, all very similar except for the type of aircraft they portray. A320 Airbus from German software house Thales breaks the pattern by providing a simulation of a civil airliner. That's right - no guns, missiles, or "bombs" at 100,000 ft, 100° K. For once, this program is all about taking off, flying from A to B, and landing safely with the MINIMUM of excitement. Sounds boring? Well, it all depends on your point of view.

When designing the program the author consulted Luftbusse before operator A320's, Deutsche Airbus (who help build them), and Jeppesen Germany (publishers of radio navigation charts for the world's airlines) to ensure the program is as realistic as possible. With all that heavyweight input you'd expect the program to be pretty good, wouldn't you? Well, you'd be right - up to a point.

## UNEXPECTED SURPRISES

Airbus is literally packaged, and the box includes some unexpected surprise items. As well as the instruction manual and one double-sided program disk you also get a large high quality color poster showing the flight deck of a real A320 Airbus, a set of High Altitude Enroute Charts, and a set of US-Department Landing System Approach Charts. There are genuine Jeppesen charts as used by

professional pilots - how's that for realism?

The 900 page manual is generally well produced, and has a couple of tutorial sections as well as the usual step-by-step detail. These take you through a basic training flight and another using the

radio navigation charts and radio aids - exactly what's needed to get you quickly familiarized with the simulator's main features.

However, the manual does get a little overblown in places. It's written for the Amiga (Amiga, 486) and a couple of keyboard controls are different on the XT, but you're not told this anywhere. There are for changing the projected heading on the 800-Z (not GALT-800) and «ARIMA» (not «ARIMA») keys on the Amiga (not «ARIMA») keys on the XT keyboard. Even worse, the ST version of Airbus is supplied on CD-ROM (not as described in the manual, so don't panic about being a disk about too I don't). You can't look up the Pilot Log disk letter size as instructed as there isn't one, so look up the program disk instead - this also holds the Pilot Log. An update sheet for the manual was included, but it didn't mention these points anywhere. Black mark, Brazil!

As with the flight combat simulators Airbus has a scenario - you're a new pilot and have to work your way up through the flight crew ranks. Don't worry you don't get promoted by killing people - you achieve it by NOT killing them, i.e. by flying safely! If you do you'll gain promotion from Student Pilot up through Pilot, Senior Pilot, Commander, to the exalted rank of Chief Pilot. In real life it can take 10 YEARS to reach this position, but fortunately you'll do it more rapidly in this simulation.

You progress by making a number of successful Duty Flights, on which your performance must satisfy certain prescribed criteria. You start (and at the

airport stated in your flight plan, and your touchdown on the runway must be within tight limits. Altitude, pitch, roll, heading, rate of descent, and touchdown point must all be close to optimum. Your fuel reserve must be correct too. Ideally you should land with just 2000kg remaining. This means you have to calculate your fuel requirements and manage pretty accurately where doing your flight planning.

## RANDOM WEATHER

To make life harder the program sets random weather conditions on Duty Flights, with worse conditions the higher your rank. Also, you have to be capable of flying using level autopilot functions as your rank increases, until as Chief Pilot you must be able to take off, fly, and land Airbus entirely unaided. Not easy!

Promotion is achieved by scoring at least 70% against the criteria mentioned earlier on a special Qualification Flight. Once it's made you maintain your position there by taking a Standardization Check flight for every four Duty Flights completed. The pass mark here is 60%, so you need to maintain a reasonably high standard on four attempts. Your progress is recorded on disk in the Pilot Log for use in future sessions.

On starting the program you meet the Flight Controller, who asks you whether you're on a Training or Duty flight, the latter counting towards your career progress. You then have to file your flight plan, which involves specifying your departure and destination airports, time of departure, number of passengers and weight of freight on board, and weight of fuel to be loaded. You can also choose to fly under Visual Flight Rules (VFR) or Instrument Flight Rules (IFR), or clear or cloudy weather respectively. Choosing IFR takes you to a Weather Briefing screen, where you're told for each step about base and top heights. There're no provisions for wind velocity or turbulence though, which is a pity. Then it's out to the aircraft to begin your flight.



## INTO THE COCKPIT

Your view from the cockpit is the usual one - instruments in the lower part of the screen and the outside view above them. Instrumentation looks a little strange at first, but you have to remember the Airbus has many traditional aviation features replaced by computer displays. The EF (engine) next quite the same as that shown in the manual, as a few of the best ones have been left out. However, everything you need is clearly displayed.

There's not much to see outside - just part of a test track and the runway threshold at this stage. Views through the left and right side windows (the only other viewing options) don't show much more either.

After starting the two engines, setting your radio navigation equipment for the appropriate frequencies, and lowering the flaps and slats to their takeoff positions, you taxi the short distance to the runway threshold, using mouse or joystick for control. Then after locking the course into the autopilot, you wind up the engines to full power and run down the runway.

Once off the ground you pitch up to the required climb rate, retract the landing gear, and turn on the Electronic Flight Control System. This makes sure you always stay within the Airbus's recommended lift/drag envelope by automatically controlling pitch and engine power to prevent stalling. There's also a 'Wing Speed' function, which makes the Airbus fly at a selected air speed by controlling engine power as required. When you reach clearance the outside view flickers and flashes before being locked out by the cloud, just as in real life. Nice touch.

Several detail is obviously non-existent. The land is flat, broken only by trees, lakes, and the sea, plus shaded areas used to represent towns, and the airports themselves - no roads, buildings, mountains, or anything similar appear. This makes visual navigation very difficult, so you have to rely on radio aids, which is what happens in real life anyway. You have VOR and ADF radio beacons, plus the DME and LS aids mentioned earlier at your disposal. With these you can navigate anywhere - as long as you know

how to read the Jeppesen charts provided.

## NAVIGATION CHARTS

Long range navigation is handled using the Jeppesen High Altitude Enroute charts. There are four of them, covering a large chunk of Western Europe between them. At first sight they look frightening



ly complex, as they show all the major air routes, radio beacons (almost 500 of them), and radio frequencies for the given area. You use them to work out your route from departure point to destination via the radio navigation system, which takes a fair bit of practice to do successfully.

When close to your destination you need to use the Jeppesen ILS Approach charts. These show the layout and approach patterns for every airport in the simulation, of which there are about 80. Like the Enroute charts there are essentially the real thing, so you're using the tools a real pilot uses. You can manage without these though, and leave all the hard work to the autopilot.

The Airbus has an amazing autopilot system. It can automatically fly the aircraft through a complete approach and landing pattern - without the pilot touching the controls. It uses the ILS radio-aid installed at all major airports - you just have to tune the Airbus's navigation radio to the correct ILS frequency and the Airbus will land itself!

Actually, it's not quite that simple. It's

still possible to crash when doing a fully automatic landing if you're not careful. The manual is a bit confused on the subject - I think it had something in the translation from German - but there seems to be a 'dead zone' around the airfield inside which you must not initiate the automatic landing sequence. If you start at least 8 miles out, as indicated on the Airbus's DME (Distance Measuring Equipment) radio, you should be OK.

I found my long experience flying Subtangle's Flight Simulator 2 a great help in flying Airbus, particularly having read Jonathan M Stone's book 'Flying On Instruments with Flight Simulator' (Evon Computer Books), which explains all the concepts in great detail. They apply just as much to Airbus, as if you ever handle radio navigation in FS2 you'll have no trouble here.

Airbus makes a nice change from all those flight combat simulators. However, I found it rather weak on the sound and graphics front, and I think it didn't really do much that the Lear Jet option in Flight Simulator 2 can't do. True, you get the fancy autopilot approach options and the challenge of earning promotions, but I still think FS2 takes some beating in terms of realism, control, and particularly graphics with its wonderful 3D scenery and viewing options. If you're into simulators you'll certainly find Airbus absorbing and challenging, but seasoned FS2 users may consider it doesn't offer enough unique features to warrant buying.

**A320 AIRBUS**  
**Thalion**  
**£39.95**

Reviewed by John S Davison

# THE BLITTER TRUTH

## (or how to give your ST go faster stripes)

### THE HISTORY BIT

You've probably come across the fact by now, that the ST's standard video chip isn't what you could describe as breathtakingly quick by any stretch of the imagination. Its frame up date and refresh rate show may that it insists on updating the screen in all due to the fact that Atari brought their desktop (you know the one, blue green background and new inspiring sound off the shelf from Digital Research.

This screen slight but it was written in C and so the screen updates and redraws were painfully slow at times. Noticing this problem, Atari decided to install one brand the Blitter chip (Block Line Transfer chip) to help the ailing OEM do its screen updates. What it does, in layman's terms, is takes large chunks of the screen and shifts them about as blocks instead of individual pixels as OEM normally does. This results in incredibly quick screen updates and no more of that annoying screen scrolling flicker.

### THE PURCHASING BIT

At the 3rd 101st fair at Alexander Palace I met a rather interesting fellow by the name of Bradley Koda. He runs a company called REET electronics that have been keeping all those tidily little bits for the Atari for the past 9 years. So good is he that even Atari come to him for spares! You can buy anything you could ever want for your favorite computer from ROM for the legendary PONG game to a custom patchcenter for the LY88 to a complete TE 680 in bits.

I only wanted a Blitter chip after seeing how cheap he was selling them for, \$40.00 (approx. \$25.00). For my upgrade to the blitter I needed a surface mounted (SM) socket to go into my motherboard which he said he didn't have because Atari have only just started shipping such motherboards with SM chips. It bought came back at the end of '88 and it is a Rev. D motherboard.)

There are many different types of ST motherboard, about nine at the last count, not counting 512's which has about five different types of its own. Some have PLCC connections, others with the pins coming down, and the others have SM connections with 64 small solder pads on the mother board.

After sending Brad a letter I received a nice fat letter about 8 days later with the schematics for a Mega 1 512 which he said had the same kind of circuit layout as mine but in a different order if that makes any sense. He told me that he had received a very limited supply of the SM sockets and had a 6940 STP label for me as well which I had ordered.

### THE NERVE RACKING BIT

My friend Ben always goes white when I mention that I am thinking about doing something foolish to my ST. If any of you have seen the Star Wars trilogy then you will know what damage a light wire can do to a human being - a soldering iron is not dissimilar when used inside an Atari! The process of installing the Blitter chip is an easy one but one that needs a steady hand, a will of iron, a bit of know how and a hell of a lot of patience.

Bradley Koda said that the installation would be easy if I followed the schematics and traced the two soldered short cut pads to the BLIT\_JST connector on the 69680. This all sounds ridiculously difficult but it's not because what he is talking about are tiny bits of very small 'U' shapes soldered together across their straight edges. Two minutes later and armed with a solder marker borrowed from the lab technician at school I had removed both holes of solder with the help of a soldering iron and a steady hand.

Now comes the nerve jangling bit. What I needed to do was to solder the 506 socket to the top of the mother board. Sounds simple doesn't it? Here's only 44 ultra small and incredibly fiddly legs to solder to equally impossibly small solder points. The legs are bent round under the socket and have to be soldered through cut out sections in its base. Well every thing went well and the socket was soldered down (almost a tad slow whilst and constantly checked).

Next came the insertion of the Blitter chip, carefully lined up and then pushed home with gentle shove, it didn't look right so I removed it and replaced it, only this time with a little more force. As any technician knows a good poke and a shove does wonders! The only thing left was to turn the machine on and test.

### THE RECKONING BIT

Armed with a pair of rubber gloves and welly boots I carefully turned the computer on. Well the power light came on and then the drive light. So far so good! After a few more jangling moments the fabled blue green pory popped up. Well that bit works alright! The mouse moves and then the real test, the screen update, a instant movement into the menu bar showed the Disk menu and then File, View and finally Options. At the bottom of the Options menu below Print Screen, Set Preferences and Save Desktop is the word Blitter. Clicking on this puts a tick next to it and then you're Blitter powered. Drive heads appear quicker the screen refresh is much clearer

and the screen has and drop down screen fairly sprint along. Couple this to the use of a screen accelerator and you begin to see the advantage in having a Blitter. Now that XTOS has a blitter chip extension it makes a nice powerful comparison to have on your side in the cold real world of computer programming.

Accompanying this article is a series of figures taken from Quick ST 3 showing the increases by the use of the machine with and without the Blitter and with and without Quick ST.

## THE WARNING BIT

Everything was idyllic until approximately four months later when I turned the ST on after school one day and moved into the menu to do something and nothing happened apart from the file hovering. Well as you can guess a few strongly words were said and the top case of the ST is double boom. Tapping the Blitter did nothing, more swearing did nothing. Climbing in did more good and ST in hand I traipsed off to the local computer repair centre. There they criticised my soldering and said they could not find anything wrong (probably didn't even know what they were looking at) but they will charge me over £10 for telling me what I already know. So out came the soldering iron again and off came the top, out came the Blitter and in went the soldering iron and eventually better. Thirty minutes later I had a fully working ST with Blitter chip fully operational, just shows you what can be done if you put your mind to it. What was actually wrong was that one of the contacts on the BM socket had worked loose and so the computer was hanging when data was received due to the loose contact.

A problem that has arisen twice since I've had the machine is that thin vertical black lines appear and soon go away. A helpful remark on the top of the casing about where the Blitter is remedies the problem and that is the only problem that I've had with it since putting it in.

The Blitter is only supported by versions of ROM 1.2 dated 02/04/1987 or later. Anything before this will not have the code to operate the Blitter chip in it. Also check what sort of socket you need, you never know you might have a socket just begging to be filled with a fat juicy Blitter.

## THE REFLECTION BIT

I hope that I haven't put you off the idea of a Blitter. If you still want to have a Blitter and don't feel brave enough to commit yourself to soldering your own the Atari Workshop 02708 803212 can supply and fit it for about £40 which isn't bad and they'll guarantee the work too (can't be hurt).

Any of you out there that want any more information either write to me at the address below or contact the Atari Workshop.

Michael Harrington  
8, Agnes Drive  
Wagtail Pagnell  
Berkshire  
MK16 8LX

## SPEED COMPARISONS

### 1. TOS 1.2

	BLITTER ON			BLITTER OFF		
	Low	Medium	High	Low	Medium	High
TOS TEXT	115%	108%	110%	100%	100%	100%
TOS STRING	112%	108%	109%	102%	103%	103%
TOS SCROLL	129%	130%	134%	100%	100%	100%
GEM DIALOGUE	148%	129%	132%	100%	100%	100%

### 2. TOS 1.2 with Quick ST v3.05

	BLITTER ON			BLITTER OFF		
	Low	Medium	High	Low	Medium	High
TOS TEXT	468%	384%	353%	468%	394%	353%
TOS STRING	1941%	2115%	1433%	1941%	2115%	1433%
TOS SCROLL	134%	135%	138%	132%	132%	136%
GEM DIALOGUE	180%	302%	323%	179%	282%	293%

### 3. TOS 2.06 (ROM Upgrade)

	BLITTER ON			BLITTER OFF		
	Low	Medium	High	Low	Medium	High
TOS TEXT	100%	100%	99%	87%	93%	91%
TOS STRING	100%	100%	99%	91%	95%	94%
TOS SCROLL	100%	100%	100%	79%	78%	76%
GEM DIALOGUE	100%	100%	100%	66%	76%	74%

### 4. TOS 2.06 (ROM Upgrade) with Quick ST v3.05

	BLITTER ON			BLITTER OFF		
	Low	Medium	High	Low	Medium	High
TOS TEXT	416%	363%	328%	416%	363%	328%
TOS STRING	1780%	2037%	1364%	1780%	2037%	1364%
TOS SCROLL	105%	105%	105%	103%	103%	103%
GEM DIALOGUE	123%	257%	271%	121%	237%	241%

# D/GENERATION

**Y**et another to the PC ecosystem set, this is an arcade adventure with many elements of *Impostor* like *Mission* about it. On first opening the box the buyer would be forgiven for thinking that a cheap and cheap game was waiting there. There is a thick manual ready for digesting and only the two floppies to use. The booklet does tend to be a four language affair and on each case reading time does enormous. The manual takes some time explaining how to install to a PC and not until you search the box further are you presented with the ST modes. That is the whole about multiple format packaging out of the way.

The game has a simple but intriguing plot that reads like a film from French storylines. A secret laboratory in Singapore has suffered technical failure and the *Stranger* franchise have created a super computer that is taking over the lab and will then probably begin a world domination campaign.

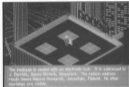
The playing view is a top down 3D one that those who know the *Ultima* games of the early eighties will be familiar with. Admittedly the graphic style has improved greatly since those days but unfortunately my feelings toward them have deteriorated. The top-down, roofless room approach has always felt somewhat unsatisfactory to me and seems to have a lack of precision in the movements of the controlled character. Having said that some

of the most popular games of this time have employed this mode so the criticism will probably disappear in a puff of blue smoke.

A joystick would seem to be the ideal way to control the game although keyboard inputs are acceptable. This control always feels slightly uncertain with some of the triggering of switches requiring quite finicky actions. Most switches are large yellow triangles which need raising over to activate. Unfortunately they give no real feedback unless the switched object is to the same room as the character from the on/off effect can be observed. This seems reasonable as a concept but the switches do not seem placed in situations which offer any clue as to their function. An example of this rather additional interface is seen on the very first screen where the trick is to disable security lasers with a switch on the other side of the room. Although I accept that the intention here is to allow the player to dodge the beams and practice timing moves, as an initial problem it is frustrating.

There is a limited conversational system with a menu of questions or responses to use when interrogating individuals. Unlike some other menu response games this one seems linear and answers seem to be more stylized and not terribly realistic to begin with. In some ways the user interface reminded me of the world style of *Steves* games. I did enjoy meeting the New Green which serves as the enabler since it finally explains where the hell thing is the *Prisoner* came from! The hero has several weapons to find and much shuffling to find.

Once a room has had its denizens of death destroyed the player needs to move his character over all doors and doors to seal them and then the surviving humans will appear, to be guided out of a safe exit. It is possible to interrogate these survivors and obtain further clues as to the whereabouts of the final structure. This is the entire game and



The bookcase is loaded with an electronic web. It is addressed to J. Dennis, Gene Smith, Singapore. The return address reads Gene Smith, Singapore, Thailand. No other numbers are visible.

## “ another adventure type game ”

although the variety in bad guys adds to the novelty of an action the play becomes repetitive and the obscure joystick moves become tedious and frustrating. I found myself going to the floppies more and more in order to maintain some control over the entire form. Somehow I just could not get into the game and did not find it gripping or, after the first couple of screens, exciting enough to wish to continue to the end.

Crucially it is impossible although not the highest value the ST can manage and it has limited series. The game must have some exciting features if only to the fact that it offers another adventure type game for the ST. It is noticeable that the Amstrad PC starter packs offer this as one of the five games with the system so there should be some playability here. Although a very polished product it does not seem to be one of my "must buy" releases of the year. If the style of game interests you and you were an Impostor Mission fan then by all means look at this.

- **GRAPHICS & SOUND** - You it face both but neither are up to the minute technology standards.
- **GAMEPLAY** - Most is better to be better, the control mechanism seems somewhat.
- **OVERALL** - Quitey game, not my first choice, however, more before buying!



Title: **D/GENERATION**  
 Publisher: **Mindscape**  
 Price: **£24.95**  
 Reviewer: **Damon Howarth**

# THE CARL LEWIS CHALLENGE

**A**s I said for games I saw previewed at the EGT Show this Spring, *A Programis sport management game* tied in with one of the best US athletes currently winning gold. The game comes with the attractive packaging normally associated with the company and the Mac's gross promise of three variants of gameplay. This game comes with the *Aerobic* screen shots on the back and I am beginning to wonder if they can bother to preview those games on the SE. Remember the old days when SE shots were supposed?

The game is a multi player game or a single player versus machine entertainment, the object of which is to select and train a national team and then enable it to win more gold medals than the others in the four event championships. The pleasant and somewhat unique angle (the whole may be played as a management game or as an arcade nightmare or as a combination of the two). The whole concept is wrapped up in the strong Programis graphics that regular players have come to expect.

Although it is possible to run in any of the three modes the full mode is probably the most satisfying and, since it involves the same actions as the solo modes, I shall run through this only. Firstly it is necessary to choose your country, achieved through a mouse controlled 'point and click' on the flag routine which

can become a little confusing at times. When up to four players have been selected the training mode starts.

A short list is shown and it is up to the manager to select those members of the team that show most promise and likelihood to improve under the training schedules to be set up. The manager has five weeks to upgrade and face the competition and care must be used not to over-train any one person. Both these mistakes result in team loss and in the case of over-training a chance of injury. The athletes need to progress in four different areas: agility, speed, power and stamina.

Obviously it is necessary to decide which events the various individuals will take part in before starting their training. Operators need totally different skills to high jumpers for instance. Happily the training schedules do not just ask you to select one of four attributes they actually demand that the style of training be decided. For example do you use inclination or inertia with your javelin thrower? Does your sprinter need acceleration training or is it better to give ballistic stretching exercises? Other questions that need answering are: how much an athlete the training mode be a one off or a regular one? How fast should it be performed and how long per session should it be?

Help is given in the form of performance graphs for each team member and comparative stats allow the manager to judge the effects of the training. This is probably the most skilled part of the game, and in fact in the management only faction completing this season puts your athletes on an automatic competitive mode using their stats only.

The competition can be arcade based and may be stand alone (in this case the team members only have average stats thus making the player work harder). Most games are restricted in the number as all the other Olympic games type software, only in this there is the option



## "less frantic wiggling"

to wiggle the mouse left and right rather than the joystick. The graphics and animation during these features are superb and look as though they have been developed from long studies of athlete styles. There seems to be less frantic wiggling in these games if only because there is more emphasis on the rhythmic use of the apparatus rather than the brute power seen in many comparable works. Each event needs qualification standards to be reached and then with entry into the final the possibility of a medal becomes realistic. The actual gameplay feels superior to many other games available at present.

Overall this game is fun although I fear it may have a limited length of appeal. Once the ultimate training schedules appear there new goals need creating. I enjoyed this game but wonder the element of true immersion in the fate of the players seemed to be missing. Perhaps the multi player version is stronger and offers a better challenge? Certainly a bit with amateur athletes but for the less enthusiastic I am not sure.

- **GAMEPLAY** - Takes some getting into and then becomes a triple delight
- **GRAPHICS AND ANIMATION** - The graphics are strong with good digitizing cards, the Joystick good and opening tracks are strong
- **OVERALL** - One for the enthusiast I'm not sure if it will have mass appeal



**Title:** THE CARL LEWIS CHALLENGE  
**Publisher:** Programis  
**Price:** \$29.95  
**Reviewer:** Damon Rowboth

# MAKING MUSIC WITH YOUR ATARI

*John S Davison's  
regular guide to  
all the ways  
of making music  
on your favourite  
computer*

**I**n the last issue we looked at the concept of General MIDI (GM), and I promised to get hold of some GM hardware to find out how it performs. Well, thanks to Joe Corbett of Yamaha, Kemble Music I managed to borrow a Yamaha TG 100 General MIDI expander module. As GM24 it's classed as a budget level instrument, but as we'll see it offers a lot for the price.

The TG 100's job is to produce a wide range of musical sounds and sound effects under MIDI control. It's useless on its own - you have to use it with other equipment capable of generating MIDI commands, such as a MIDI keyboard or sequencer software running on your computer. It's equipped with MIDI IN, OUT, and THRU sockets in connection to your SP or other MIDI equipment in very easy. To hear the sounds you also have to connect it to a separate amplifier and speakers (not built in for instance), although you can just plug headphones into it instead if required. Unusually, it also has a stereo audio DIN/2 socket (compatible with level control and peak indicators), so you can mix other sounds with the TG 100's own sounds without using a separate mixer. Even more unusual is its ability to connect directly to the serial port of an IBM PC or Apple Macintosh computer, saving users at least \$200 on the cost of a separate MIDI interface.

The TG 100's MIDI specification is excellent for the price. Its sounds include 128-GM presets, 64 other presets, memory for 64 user-programmable sounds, and 10 drum kits, some with



over 30 different percussive sounds. It's also 20-note polyphonic (plays up to 20 notes simultaneously), 16-part multi-timbral (plays up to 16 different sounds simultaneously across 16 MIDI channels) and has a built-in digital signal processor for adding reverb/echo effects. Amazingly, all this is packed into a tiny case measuring just 4.6" x 7.7" x 1.6", although the power supply is separate.

## ADVANCED WAVE MEMORY

An instrument such as this stands or falls on the quality of its sounds, and the TG 100 scores well here. Sounds are generated using Yamaha's AWE1 (Advanced Wave Memory) sound sampling technology. What you hear is basically a 'digital recording' of each sound, not something synthesized from more fundamental waveforms as with Yamaha's older FM frequency modulation technology.

If you read my 'Sample This' article in New Atari User last year you'll know that compromises are inevitable when sampling sounds, unless you're willing to spend serious money on the hardware. The TG 100 is a budget instrument so some compromises have been necessary, but the TG 100 still produces sounds of excellent subjective quality.

There are four banks of sounds, three being for GM use. Yamaha Disk Orchestra compatibility, Roland C/M compatibility, and the user-programmable internal bank. The Disk Orchestra and Roland banks allow the TG 100 to use sequences files designed for Yamaha's superb Disk Orchestra series of electric pianos, and with Roland's C/M expander units. The internal bank holds user edited versions of the preset sounds, more of which later.

The GM bank contains 128 sounds subdivided into 14 categories of 8 sounds each. The categories include Piano, Character Percussion, Organ, Chitar, Bass, Strings, Ensemble, Brass, Reed, Pipe, Synth Lead, Synth Pad, Synth Effect, Ethnic, Drumset, and Sound Effects. The individual sounds are usually contained in the category, or different members of the named family of instruments. For instance the Piano category contains various acoustic and electric pianos, harpsichord, and clavier.

I don't have the space here to comment on all the sounds, so I'll just mention some that caught my attention. The acoustic pianos are rather good, but do suffer a little from the sampling rate at short. This presumably is to economise on sample memory - one of the compromises I mentioned. The result is a good clean piano sound, but the notes decay and loop a little too quickly for my liking, producing an overall 'tidy' sound. This is fine for some types of music, but doesn't 'quack' with with big sustained chords.

There's a good selection of strings, both as solo instruments (single violin, viola, cello, and bass) and as masses (as found in the Ensemble category). The pizzicato strings sound good, but tremolo strings are disappointing, in my view anyway, as the tremolo-effect seems artificially slow.

## OOHS AND AAHS

As well as massed strings the Ensemble category also includes a couple of choir samples, singing 'Oooh' and 'Aahh' sounds. Generally these are pretty good, but do show up



another of these compressors. A given sound is sampled at a particular pitch, and when played back at that pitch it sounds fine. Ideally you'd have a separate sample for every note on a keyboard (called multisampling), but this requires enormous amounts of sample memory and hence increases the instrument's price. The compromise is to use fewer samples, and allocate each one to a SECTIOn of the keyboard, shifting the pitch of the basic sample to obtain higher or lower notes as required. Trouble is, when shifted the sample begins to lose its realism, getting worse the further it's shifted. So, you need the right number of multisamples to ensure each one sounds reasonable across its complete pitch range. Yamaha seemed to have slightly too few choir multisamples, so each sample sounds a little strained at its pitch extremes.

The synthesizers suffered similarly, but overall produced some terrific sounds. I particularly liked the baritone sax — except for some Jerry Mulligan impostures here! There's also a good penny farthing brass section sample with bags of bite, and a nice muted trumpet and French horn. I was less impressed with tubular bells and tube bells, and felt the flute, piccolo, and clarinet sounds weren't particularly realistic.

Most of the tuned percussion (xylophones, maracas, etc.) were very good, and I especially liked the timpani and tubular bells. The drumkits all sounded fine too, providing a wide range of good quality drum sounds, including lots of Latin and electronic percussion.

The guitars sounded a little weak when amplified solo, but sounded subjectively better when played along with other instruments. This was particularly true of the acoustic nylon and steel stringed guitars. Basses, on the other hand, were mostly first rate. I'm sure I could easily find a use for all eight of them. There are lots more preset sounds I could comment on, but you should be getting the picture by now — the TG 1000 has masses of different sounds available and most of them breathe the same continuous sound automatically usable.

It's possible to perform limited editing of the preset sounds via the TG1000's local panel facilities. You can copy a sound into one of the internal user memory locations and change such parameters as envelope attack and release, and reverb level. Some preset sounds are actually made up of two different sample elements and for these you can tweak the parameters of the individual elements. You can change the relative sound levels, divide one against the other, and set different panning positions. This won't change the overall local character much, but more extensive changes can be made via MIDI using patch editing software running on your ST. At present this means using one of the expensive generic editors such as C-Lab's PolyFrame, although cheaper TG 1000 dedicated editors should be available soon (PIA, perhaps).

## HOW NOT TO DO IT!

The degree of success you achieve with the TG 1000's sounds depends on how you use them. My first attempt was a total disaster. I tried to play back a complete military band arrangement for a musical project I'm currently working on, and it sounded terrible. There were just too many different sounds fighting each other, so I concluded that this ISNT the way to use the TG 1000. I started again with music for a small band, using up to about eight or ten musical parts. With careful choice of sounds and pitches the TG 1000 now sounded terrific. Subjective quality improved further when I used its panning facility to place each instrument in its own position on the stereo soundstage.

I also tried playing music files from disk (ST7200 MIDI Sample Board, Page 48 from the Page 6 PD Library), and many of these sounded great via the TG 1000. I particularly enjoyed Herbie Hancock's Midnight Session, using the Church Choir singing the main melody, accompanied by a mixture of different string ensemble voices — it produced a lovely sound, and the sort that makes the hairs on your neck stand on end! Finally, I tried it using Band-in-A-Box's own GM facilities (see review in Issue 57), and once I'd got the software correctly configured it worked superbly.

To really hear the TG 1000's full capabilities just take a listen to its built-in demo tape. This is one of the best I've ever heard — explosive, exciting music showing off all the TG 1000's best sounds. It even manages to work in a stretch of sampled applause and weather sounds! Brilliant!

I really enjoyed having the TG 1000 in my MIDI setup, and the more I used it the more I liked it. When used sensibly it produces excellent, high quality sounds that would be welcome in any MIDI system. Beginners and experienced MIDI users alike should find something in the TG 1000 to impress them, so if you're looking for a new MIDI expander make sure you audition it before deciding what to buy.

## MOZART'S DICE



You now had chance to try out the Mozart's Dice disk (ST7700 from the Page 6 PD Library) announced in the last issue. It now

takes three interesting music programs: a dress version of Hybrid Arts' G3-Score Plus music writing and printing program; Patterson, a music generation program; and the Dice Walks, the subject of this report.

The Dice Walks implements Mozart's theory that you can generate acceptable waltz music by building it up a bar at a time from musical phrases selected randomly from a pre-written list. Mozart apparently rolled dice to choose the phrases and this program simulates that. It then displays the phrases screen-by-screen (live only), optionally prints them out, and plays the whole piece. And guess what? Mozart was right. The result is a passable waltz.

The program generates two sets of eight bars, each of which is played twice resulting in a thirty-two bar waltz which sounds typically Mozartian. It uses three-part harmony written on two staves, and the output can be played on the ST's internal sound chip or, even better, via MIDI. When using MIDI you can load in a patch list for your synthesizer to make choice of sound easy. There are several supplied, including one for the Yamaha PS5 keyboard, but you can easily make your own if required. Author Chris Evershed claims that Dice Walks can generate over 250,000,000,000,000,000 different waltzes, and it would take over 500 million years to listen to them all!

Overall, Dice Walks is a great little novelty program. The disk is worth buying for this alone, with the other programs an added bonus. And at £2.95 it'll hardly dent your wallet. Call Page 6 now to order your copy.

# PD Paul Rixon's WORLD

## IT'S EDUCATIONAL!

It's a fact that many parents (and even at Christmas is the belief) that they are overly interested in their children's education. It must also be true that a fair proportion of these glowering creatures are subsequently used for little more than blasting letters into orbitaries or reconfiguring the TV into Nigel Mansell's racing car. This month's for the case though - over the years a good selection of software aimed at younger kids has been produced for the PC, especially in the Public Domain. Browsing through the Page 6 library I discovered a surprisingly wide choice of learning oriented programs.

## MAKE IT FUN!

Education should be fun and **KID'S FUN!** is a collection of educational games designed to be just that! The first few titles are intended for the very young! Kid Bingo is a compilation of eight children's games such as Tic a little trap and 'one, two, run, run the boat'. The desired game can be played by simply clicking on an associated icon. Kid Piano lets children play their own tunes using the mouse to click on a three octave keyboard, which can be made to sound like an organ or piano. Kid's ABC is an aid to practising the alphabet (primarily the QWERTY keyboard) until the user correctly enters all the letters. They are awarded with a full screen of 'rainbow, rainbow little star'. In Kid Petake the aim is to match the appearance of a computer generated Mr Potato by choosing the appropriate features (eyes, nose, hat etc.) from a list of alternatives. Just for fun you can also design your very own Mr Potato!

Last but not least definitely not least, Kid Mix up is an excellent learning game that

children (and adults!) will find quite addictive. The computer displays parts of a story using four pictures and the user has to place them into the correct sequence. Examples are a succession of various stages of construction and a pencil drawing gradually taking shape. The user interface is very friendly and the graphics have been thoughtfully created. An enhanced version of the program is available as a separate disk, appropriately named **KID MIX-UP PLUS**. The main improvement here is that you can add your own story sequences using any Degas-compatible art program. Twelve seven ready-made stories are included.



Excellent graphics in STATES & COUNTRIES

## SOME GEOGRAPHY

**STATES & COUNTRIES** from Budget Laboratories is a geographical recognition program whose main asset is the superb quality of its maps. The basic principle is very simple. The computer displays a map of a particular area and highlights a country or state which you are asked to identify by typing in the correct name. It sounds a bit easier than it actually is! After the appropriate congratulations or commiserations for each turn an information panel is optionally displayed to tell you a few facts about the area in question. There are five versions of the program covering England, Ireland, Scotland, Wales and the United States. The graphics are really excellent - as you might have expected from Budget

Labs. An unusual bonus on this disk is a clever game which, as well as teaching recognition and reading skills, could be a help with orthography training of Post Office workers (because how is the Editor sent a free copy to Sheffield sorting office, but it got lost in the post!). Your objective is to sort a column of letters into alphabetically marked pigeon holes as quickly as possible. You can choose the speed at which the mail appears and whether to sort by town or address but in either case you must watch out for registered and airmail items which have to be placed in separate compartments. If you make more than 20 mistakes, the game ends. It's good fun for children and adults alike.

## AMERICA ... AMERICA ...

On a historical note **1900's USA** is, as its title suggests, a collection of facts and figures relating to America in the early part of the twentieth century. It was written by an ex-OASIS pupil and is therefore related to the OASIS history course, though it should also appeal to anyone with a general interest in world history. The files

are supplied in compacted form and copied onto two disks, which you must format with 80 tracks/10 sectors per track. The latter utility is supplied so all you need to get going is two floppy disks and a capable disk formatter, such as DC Format. Once loaded the program options are selected from icons displayed on a work panel. There are several topics: Facts and Figures describes the states that make up the USA, population growth through the years and state information such as the area, time difference and national flag. There is a list of US presidents since 1900 and reports on the background of the First World, Second World, Korean and Vietnam Wars. Another part delves into factors such as the New Deal and the New Deal Era while a series of graphs illustrates statistics such as unemployment, share prices and success rates of the political parties. Lastly there's a quiz so you can

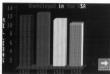


find out how much you've learned. I suspect most CCSS students will find it infinitely more exciting than reading through dreary text books!

## BETTER THAN SCHOOL

A variety of educational subjects feature on the **EDUCATION 1** compilation. At first sight **AddUp** looks like a straight game of Tetris but it's really an ingenious method of exercising your mental arithmetic. In this variation the falling blocks are regular in shape but contain three segments, each bearing a number. Your aim is to place the blocks such that three consecutive segments add up to a total of three in a horizontal, vertical or diagonal line. If you succeed the segments disappear and make room for subsequent words but a complication is that if the lines add up to fourteen instead, an irreparable **X** is formed. **Class 3 1** is a comprehensive database-run spread sheet intended to be used by teachers who want to keep track of their students' progress. The author claims to have tested it with his own classes of over two hundred students. The program lets the teacher enter details and scores for each student and then calculates the class ranking, final average and letter grade. You can obtain statistics such as the frequency, mean and standard deviation or display tables and graphs of the grade distribution. Print options are also available.

Mathematics is rarely a popular subject but **Math Quiz** was made learning just a little bit easier. It provides an unlimited number of arithmetic exercises based on addition, subtraction, multiplication and division. You must first enter a common number which will be added, subtracted, etc. by a computer-generated number in each question. You can set the range of the random number and also specify the total number of questions. The computer keeps track of your performance and assigns a grade at the end of each exercise. The configurable nature of **Math Quiz** makes it a valuable tool in gradually developing children's arithmetic skills. With **Master Quiz** you can set up your own multiple choice questions, perhaps to revise important facts and figures for a forthcoming examination. An example trivia quiz is included and it's very easy to add your own questions and save them to disk for future testing. Time limits can also be imposed on playback. In **50 Spill** the user is asked to identify a digitized picture (an



Left - Serious study with 2800's LISA

Below - Fun for the youngsters with AGD MATH-P and AGD POTATO

animal, shape or 'object') and then select letters from the alphabet to spell the word. A digitized voice pronunciation each letter as you choose. The same voice features in **Teach ABC**, for younger children. In this one the computer speaks each letter of the alphabet and the child responds by pressing the corresponding keyboard letter. This may be a help in teaching the alphabet but I hope it won't encourage children to imitate the computer's pronunciation!

## GOOD MOANING!

There's just room to overdo this **COGNEL**, a great game that will help you learn the French language. It's basically a multiple choice quiz in which you have to find the correct translation for a series of words in each language. You can choose to play in English-French mode or vice versa, and the computer will pick a selection from its database of over 2000 words. Even if you can't recall a word in French at which you may quite enjoy this exercise and will probably be surprised how quickly you pick up the language itself I must. A few moans, as they say.



## A FREE GIFT!

Finally, as it's Christmas I thought I would throw another in the ring and offer a **FREE** copy of the comprehensive package **Fun School 3** for 6.8 year olds in the first person who writes to us at Page 6 with a suggestion for a future **PC World** topic. Chances are if you write in, you'll win... Happy Christmas!

## HOW TO GET THEM

The disks featured in **PC World** can be obtained from the **PAGE 6** Shop. When entering in a specific disk please use the unique reference code for identification. A printed catalogue describing all the library disks in detail is available from **PAGE 6** at a cost of £1.95, refundable against the first disk(s) ordered. This includes a copy of the **PAGE 6** CATALOGUE which is otherwise priced at £1. The disks featured this issue are:

0714 MATHS FUN 1  
0709 MATHS  
0705 MATHS-UP P1-02

0707 MATHS & COGNEL  
0708 2800'S LISA v  
0706 1000'S LISA

Prices for standard disks are £2.95 each or £1.95 each for five or more but prices are lower for members of the **PAGE 6** Shop. Write to **PAGE 6**, P.O. Box 35, Stockton, ST16 1SD. Telephone 0796 238226 with credit card orders.

# THE STOS COLUMN

## More STOS programs from Dion Guy

**G**reetings! Another STOS Column arrives, complete with two program listings for you to edit. This issue there is another type of game and also a program which demonstrates eight alternative ways to make screens appear. There is also a modification to last issue's Wordsearch program which allows you to print out a wordsearch.

### WORDSEARCH UPDATE

Thanks to a suggestion from reader Ian Holden, I have now modified my Wordsearch program (featured in issue 20) so that it can print out a wordsearch along with the list of words to find. Just add the lines in program 1 to the existing wordsearch listing. After you have run it, and retrieved the words to find into it, select the "Play Wordsearch" option. You will then be asked if you want to print out the wordsearch. Press the left mouse button to print or the right button to bypass. Make sure your printer is loaded and on line. After the wordsearch has printed out, the program will continue as normal.

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Listing 1 - an update to last issue's Wordsearch

### PICMIX

Yes - another complete type in game from the STOS column! This time it is a very simple but enjoyable sliding puzzle type game. After typing it in and running it, select one of the load options to load either a Degas or Leonardo picture. Then select "PLAY PICMIX" to get going. The program will segment the picture into 36 pieces and then remove the top right hand corner piece. It will then mix up the remaining 35 pieces and display the result on the screen. Your task is to rearrange the pieces and recreate the 'original' picture. You do this using the joystick. Simply use the Up, Down, Left and Right controls to slide the pieces around. Once you have restored the original picture you will be told how long you took and then returned to the menu. You can now either load another picture or contact with the same one and try and beat your time. If you can rearrange a picture in under 30 seconds then you will have perfected it! At any time during the game you wish to return to the menu, just press the "Q" key.

### SCREEN APPEAR PROGRAM

This program shows you eight fancy ways of making screens appear. It originates from a disk screen called ST Prog number one I have since updated it. Once you have typed it in and run it you will see a menu. Firstly, press [SPACE] to load in a Degas screen. Then, using the mouse, select which one of the eight appear routines you want to see. You will then see the screen you loaded to either appear in a casual way. After pressing a key, you will be returned to the menu where you can choose another appear routine to have a go at. You can use any of these appear routines in your programs. The routines are clearly marked with ASCII statements in the listing, so you can easily examine them and copy them to your own programs. By the way, this program and all the appear routines work in all three resolutions.

### THE END

As well, the end of another column is sighted. Don't forget, if you have any STOS type stuff you want looking over - you know where I am. Just remember to include an S.A.E. if you want a reply, please! Until the next column - farewell!

Dion Guy  
11 Shore Crescent  
Bishops Cleeve  
Harris  
SOS 10X





# THE JAWS OF CERBERUS ELVIRA 2

**M**y first impression on seeing this particular adventure was, "WOW! what a lot of floppy!" It is all. How do I fit all this in to my game files? The answer is by inserting floppies as needed at various plot breaks.

This game seems to be an example of the game designed primarily for hard drive users. This phenomenon has become apparent in the PC world where all machines are expected to carry a minimum 40-meg of storage space so using the first part of 7 meg to install is no problem. Sadly the majority of ST machines do not have these luxuries, indeed when the price of a hard drive for the ST is way in excess of the price of a new machine it is hard to visualize any but hardened users buying one at all.

As the title suggests this is the sequel to the highly acclaimed and innovative Elvira, Mistress of the Dark. This was a fairly blood ridden horror based adventure of much complexity and deft humor sense. The follow up certainly has more of the same and it comes in an even slicker package. Unfortunately since the game was originally crafted in the US for PC users, all the graphics are exporting a higher standard than the average ST can actually manage. Therefore the somewhat recurring displays on the box are not the quality to be seen in the game. On the other hand the effects are still strong and the graphics still maintain an atmospheric glowiness about them.



**By:** THE JAWS OF CERBERUS: ELVIRA 2  
**Publisher:** Activision  
**Price:** \$29.95  
**Reviewed:** Damon Rowlett

The storyline is simple. Elvira, a mad world II film celebrity of dubious note, has lost her name to this series of games to enable her fame to spread. In this particular scenario the voluptuous vamp is held prisoner by a mysterious demon in dog form. It is your job as her somewhat inept boyfriend to struggle through the blind, gore, insults and innuendo to save the lady. Indeed after the first few glimpses of the heroine's biting, sarcastic and somewhat cynical put downs you may wonder why her eyes remain so dry!

The game gives a first person perspective and sets out with a problem of gaining entry to the studio. If possible, you just need to manipulate the objects and look at every avenue of entrance open to you. Once you have reached a new location the floppy whines and there is a wait for the new graphics to arrive. This is the one frustrating thing about the game. The floppy accesses make the whole thing a little tedious if you are wandering around looking for new locations. Sadly owing to the size of the game this is necessary and if you manage to lose yourself in the play it is actually well worth the experience.

For those of you with younger players in the house or those of an overly shocked nature I would advise caution as the effects would rate at least 15 in a cinema and there are those who find the sight of digitized decapitations and rotting flesh disturbing. I have a mature friend who claims to have nightmares based on scenes of Elvira 1 and the second version is even more graphic. We are talking the levels of Evil Dead II and Halloween here, not the soft Hammer style of Dracula.

For those of you who can cope, the soundtrack is strong and drives the atmosphere along well. There is even a degree of randomness offered by the digitized cleavage and Max West like sex gibes of the heroine. Oh yes beware for even Elvira the queen of horror is not immune to being plucked and used



**“ one of the best adventures to hit the ST this year ”**

things are not as they seem. The game plays to highly mouse oriented and even slightly things move a little too readily for the user. On the up side both combat and spell casting offer newer twists and require more dexterity, thought and good instincts.

I was most impressed by this game since I love bad taste and have had the pleasure of seeing some of the Elvira films in her horror shows. This is probably one of the best adventures to hit the ST this year although it is also one of the most floppy if you do not have the option of a hard disk. It will take some time to complete this but for the more adult among us it offers a great challenge and an awful lot of fun. Buy it if you have had an excess.

- **WHAT IS SOUND** - This was developed for advanced technology and the ST meets it it, not for the squeamish!
- **GAMEPLAY** - Fiddly without a hard drive otherwise quite friendly and exciting
- **VERDICT** - Within technological limits this is excellent. Buy it if there are no alternatives in the house

## A CHRISTMAS TALE

# CAT-ALOGUE of DISASTER

by Jet Cat

**I**t was white even in my interocular-male vision I could see that, it stuck to the windows and there did clearly and undisturbably clean the glass and turned to water at the bottom. I sat on the window sill watching these crystals on the other side occasionally trying to touch one although the see-through barrier always got in the way.

"Sir" had gone out leaving me and the little mouse at home. Quite where the provider of food had gone I don't know but she had hoisted my favorite chrysanthemum along out of the way of the food making monster they called Who-Ver. I remembered this white time from last year. They called it Christmas and everyone got into a real tizzy and that large green tree thing appeared. That was fun, I had shiny baubles on it and I could chase those. Oh sorry, I forgot to introduce myself. My name is Jet and I am the house cat at a Page 8 artist's house, and this is the story of how the terrible kitten Ekostahl (or an "sir" calls her Moppit. Kit) made an interesting discovery.

I was just curling up on top of the radiator when I heard the tell tale sound of trouble. "Moooo?" The Moppit Kit was coming. Now as kittens go she's straight out the sleek black model that I see but the squat legged furry black ball associated with the word cats. It purred louder than the electric motor. "Mrs.

Mopp" uses and gets away with all these tricks I can't - you know, mind the chicken leg from the plate, knock the parrot plant of the chest etc. Well you know what furry kittens do. The Moppit did her thing straight away! I wanted to flee and then leapt for cover as the big green and sparkly tree came falling towards me. It just missed the large moving picture box and knocked the vase of Missy flowers over. It also hit several baubles on the gadget boxes and set the picture machine off. There was a terrible people-wailing of course but I had not you sorry... in something.

Needless to say Moppit Kit scurried leaving me with several prickly green needles in my pants. I gobbled up half of the tree and salvaged the damage.



How could not be pleased that the hard drive he had been working had been on the table and now lay in a pool of water from the flowers. I know from his other thoughts and statements that this water stuff made a real mess of his electricity stuff and I murmured it was probably solved. I gobbled after the Moppit to see what she would say.

I tracked her to the computer room, where the RT stood proud with its mouse fully reared, no sparks and not colded and managed a small warning beep just as she was shaking up the table to mangle more monitors. She jumped and fell on the switch. The whole system flickered into life knowing the basement drain lines had been playing with it. It was then

that the blood of my forebears came to me. I was Jet Cat, child of the fountains of the Puddle Windows, maybe I had better not eat Mrs's proteins before he comes back. I stared at Moppit lying in her furry bag yawning at me, stood on my back paws, and waved my forepaws towards the only inanimate object in my field of vision. Race memories filled my mind and, ears twitching, pussy power showered forth into the Monitor. A flash and a pool and all at once we were not alone. It seems that I managed to pull the Father Christmas figure out of the show. A somewhat flat but round figure looked at me with a quickly bowed and said, "Well that the jiggling fil?"

Obviously I kept under the bed to protect me from burns and the Moppit purred at the thing, as in her way. The shape stretched her, yawning loudly. "What have you done little girl?" Moppit muzzled and gazed at him. I followed the gaze downwards as my ears heard the distant engine of the Boss arriving.

"No problem little cat" said the shape and waved his Santa sack around. The tree stood up, the water dried out and the hard drive landed back on the table. What's more four boxes appeared under the tree. The top one landed in the back then I waved my forepaws thinking "Bright-line" a had pan but quick for me! The shape went and the Moppit and I ran to meet them. A spider each and some lily leaves made us both feel better and I waddled up in front of the fire to wait for the Christmas Day feeding (always good loads of baubles).

On the boxes, Moppit got a monster box of Nifty chess and a collar with a bell. Mrs. Mopp found a set of tiny Ekost Who Ver bags. Boss was most excited since he had some sort of bird computer in the box, a Falcon I think he called it, and me! Well I got a large bag of Habitat cat treats with a free spell book inside. I hope your Christmas gets well and remember cars and computers do go together well.

Jet Cat lives with one of our regular reporters. Can you guess which one?



## WHERE CAN I FIND ....

The Atari 8-bit computers are, without question, the finest home computers ever designed and can still hold their own against any home computer. How powerful their 8-bit and much more to come than any 16-bit, it is a great pity that software and hardware support is dwindling. You can still find support for your machine, though, and this directory should get you on the right track. It is by no means comprehensive and we would be happy to receive details of any other companies, anywhere in the world that will support Atari.

We cannot guarantee what response you might get if you write to any of these companies, but give it a try, they need your support as much as you need theirs. Send a couple of international reply coupons in an envelope and, if you don't get a reply, the least you owe is a few cents that if you do get a response, it could open up a whole new world and add years to the useful life of your Atari. Don't forget to keep an informed if you find good support for your Atari Game.

**Software Infinity**  
942 East Waring Avenue  
State College, PA 16801  
Good PD selection. Have just begun marketing commercial games from overseas

**Canada Software**  
PO Box 334  
Vancouver, V4J 4K6  
Surveys 800 44-bit upgrade board, TracePro hardware for using IBM keyboards on the 8-bit, and other hardware

**IBM Computer/Wizards**  
2730 South Boulevard  
Santa Clara, CA 95050  
Tel. (408) 996-9900  
Wide selection of software and hardware items. Also some non-commercial games, available elsewhere

**Sagamore Software**  
1114 Argosier Dr  
Lafayette, CA 94503  
Good PD/software selection with extensive documentation

**Change In Head**  
32 Delta Vista Place  
Iowa City, Iowa 52245  
Independent programmer has produced 2 excellent commercial quality games for the 8-bit

**Dragon Software**  
205 West Street  
Mantoloking, NJ 08050  
Atari's independent, producing good educational software

**Ultimate**  
10 East 104th Street  
Blauvelt, NY 10915  
8 bit specialty software

**MARCO Software**  
18 Woody Drive  
Farmington, NY 11738  
PrintShop related software

**BI Computers**  
5014 S.W. Innovation Hills  
Way  
Valley Plaza Shopping Center  
Beaverton, Oregon 97005  
503/287-4425

**BeCom**  
PO Box 1648  
Peterborough, Ontario,  
Canada K9C2N6  
The largest PD/software selection

**CompuSoft**  
PO Box 14100  
San Luis Obispo, CA  
93403-5100  
Closest stores galore

**No Profile Software**  
600 East 23rd Street  
Kennerly, NE 68847  
Classics & Friendship graphics

**Miller Entice Software**  
218-220 Cornsack Road,  
Chesham  
Cannock, Staffordshire  
WS9 1 2DQ  
England  
Steady business in everybody and, apparently highly regarded in the USA

**Electronic Clinic**  
4115 16th Street  
Berkeley, CA 94710  
Personalized equipment

**Kahn Software**  
9 South Ct.  
Wilmington, NJ 08090  
Assorted theme disks

**Envision Software**  
1871 East 16th Street,  
Suite 620  
Brooklyn, NY 11226  
PD theme disks

**Alpha Systems**  
1812 Skyland Drive  
Woodstock, ON 46006  
Utility software & hardware

**American Technosoft**  
33288 Lawrence Point  
San Leandro, CA 94579  
814/555-5039

Large selection of commercial software at discount prices, and software replacement parts

**Best Electronics**  
2651 The Alameda, Suite 200  
San Jose, CA 95126  
408/924-8800  
Kisses as the Atari hardware store. If they don't have the part you need, nobody does

**BBE Software**  
303 West Oakland Ave.  
Suite 104  
Fremont, CA 94711  
1707/Bayview

**C&T ComputerActive**  
PO Box 803  
Clinton, MA 01820

**NEPION**  
820 North Huntington St.  
Meriden 06450

**Phoenix Atari 8-bit**  
Box 101 Lewis Road  
Northford, CT 06454

**Valeau Software**  
PO Box 980  
Massachusetts 02011-0980

**Novell Industries**  
P.O. Box 252  
Wynn, TX 75089  
Tel. (214) 442-9512

**Innovative Concepts**  
15170 Shivers Drive  
Warren, MI 48093  
248/283-0730  
Arithmetic, hardware, PD software

**CSB**  
PO Box 17000  
Rochester NY 14617  
716-428-5629  
Specialty hardware items, 8-bit repair service

**San Jose Computers**  
690 Blossom Hill Road  
San Jose, CA 95128  
408/985-5600  
New and second hand hardware and software

**Entertainment Excellence**  
3805 Princeton Place  
Metrek, NY 11906  
Discontinued 8-bit software

**East Hartford Computer**  
302 Robert Street  
East Hartford, CT 06110  
Discontinued software for all computers

**Apex Software**  
PO Box 1232  
Haverhill, MA, NY, NY  
10471-1232  
Markets a new 8-bit commercial game

**Tand Computers**  
588 Baltimore Annapolis (Old  
Severna Park, Maryland)  
21440  
(301) 544-6843

Now offers a selection of software and personal board hardware

**Stonebridge User Group**  
88 Linden Road  
Stoughton  
West Melbourne, FL 328  
England  
800/941-97075  
Large PD/software library

**Orkin International**  
11 Middle Road, P.O.  
Box, 08112 2025  
Hardware and software, including KID products.

**Miro Discount (Derek Ford)**  
2850 Chrysler Road  
Secaucus, NJ 07094  
201/353-5738  
Large selection of commercial software, also hardware and replacement parts

**Tiger Developments**  
26 Miramar Avenue  
Walton, Fl  
800  
3714 742  
Commercial 8-bit software

**Next, in a list of magazines will supporting the 8-bit Atari.**

**Current Notes**  
320 North Johnson Road  
Sawley, VA 22170  
A truly excellent Atari-oriented magazine, supporting both 8-bit and 16-bit

**Atari Interface**  
1487 16 Avenue Clinic  
Ann Arbor, MI 48106  
313/297-6828  
A magazine supporting both 8-bit and 16-bit input from Atari User Groups in the US, Canada and the UK. They also produce a monthly Atari 8-bit disk.

**New Atari User (Peter G.)**  
P.O. Box 54  
Sawley, VT 05625  
England  
0965 213026

A professionally produced magazine supporting both 8-bit and 16-bit input from PD libraries for both machines and commercial software

**ECOLA (Robert Stewart)**  
21 Strawberry Way  
Brooksville  
Tampa, Florida 34613  
800/411-1182  
Excellent disk based magazine and commercial software

This list was originally published by the 8-bit magazine **A8** in July 1987 and updated by Stonebridge User Group whose address you will find in other issues. Many thanks to them and to all other who will supporting the 8-bit. Long may it continue!

Please keep us informed if you know of any new additions.



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