

PAGE 8

INSIDE

Sands of Egypt

Bomb Escape

1020 Printer
Handler

Music Maker

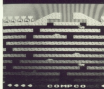
Reviews

Carols CHRISTMAS CAROLS

JINGLE BELLS



Bull Ants



Camelot



ATARI in 1985 - see page 8

Lamasoft

ORIGINAL SOFTWARE DESIGN

49 MOUNT PLEASANT, TADLEY, HANTS RG28 9EM.



SEND S.A.E. FOR FREE NEWS LETTER: "THE NATURE OF THE BEAST".



WARRIOR



WARRIOR



DEALERS may order direct from CBI Telexline 01 800 2150 quoting account number, UKA code number and quantities. Orders delivered within 48 hours.

PAGE 6

Editor & Publisher
Les Ellingham

Printed by
Stafford Reproduction Ltd.

Typesetting
Budget Typesetting Ltd.
from copy set on an Atari
800 and transmitted by
modem.

Editorial & Advertising
0785 41153

Correspondence
PAGE 6 Magazine
P.O. Box 54
Stafford
ST16 1DR

PAGE 6 is published
bi-monthly

ATARI® is a registered
trade mark of ATARI INC.
All references should be
so noted.

Page 6 is a users magazine and relies
entirely on readers' support in submitting
articles and programs. The aim is to
explore Atari computing through the
exchange of information and knowledge
and whilst we cannot, unfortunately, pay
for articles published, we hope that you
will gain satisfaction from seeing your
work published and in turn we hope
that you will learn from articles submitted
by other readers.

Whilst we take whatever steps we can
to ensure the accuracy of articles and
programs and the contents of adver-
tisements PAGE 6 cannot be held
responsible for any errors or claims
made by advertisers.

ISSUE 13

January/February 1985

Listing Conventions 5

ARTICLES

Turn of the Year Les Ellingham 8

LISTINGS

Carols A.J. Costello 11
Flight of the Swan Christopher Jephcott 14
Bomb Escape Ron Smith 20
Camelet Allan Knapp 24
Bull Ants Sydney Brown 34
Music Maker Colin Faller 47

UTILITIES

L: a 1020 Printer Handler David & Mary Lynch 22
Rescue Mission boot tape maker Geoffrey Thompson 50

PROGRAMMING

PMG in machine code Anthony Hughes 32

REVIEWS

Victagraph Flat Window Les Ellingham 31
Music Maestro Please Phil Brown 36
The Software Reviews 40

REGULAR COLUMNS

ADVENTURE Garry Francis 18
Editorial 4
Readers Letters 6
Contact 38
Typo Tables 50

BACK ISSUES 45

GOTO DIRECTORY 49

Subscription rates - annual (6 issues)

UK £ 7.00 Outside Europe - Surface £10.50
Europe £10.50 Outside Europe - Airmail £16.00

Single copies and back issues at one-sixth of above rates.

Please make cheques payable to PAGE 6.

Please mention PAGE 6 when replying to advertisers.

WOOTTON COMPUTERS

116, Edleston Road, Crews, CW2 7HD
Tel: 0270 214118

	Normal	Our price
5000L 16k computer	99.99	95.99
5000L 64k computer	149.99	139.99
1010 program recorder	34.99	32.99
1000 disk drive & DOS-3	159.99	157.99
500 Interface	99.99	93.99
1000 printer/plotter	99.99	93.99
1000 letter quality printer	249.99	233.99
5000L 64k Memory module	99.99	93.99
Light Pen and software	59.99	57.99
Touch Tablet and Stylus	99.99	95.99

Great Entertainment

Accessories: Keyboard - Cerevis of Muz - Cerevis - Chess - Galaxia - Jungle Hunt - Green Snake - Missile Command - Phoenix - Poop - Sky - Space Invaders - Star Raiders - Super Destroyer - Tanks
... all at £7.45

Desktop: Sky Day - Desktop King - Desktop King II - Joust - No Par man - Pile Pileman - Robinson ... all at £23.95

and MORE

	20.95	30.95	39.95	44.95	44.95	44.95
Assembly Editor						
Logic and Assembly						
Matrix Assembler						
Microsoft Basic 2						
AsatWriter						
Home Printing Manager						
Translator						
Visuals						

Send us a.c. for details of other titles

Upgrade your 500 to 64k - 16k memory boards £20 each

Disks from £16.99 for 10, CD2 cassette - £5 for ten

All subject to availability. Prices include VAT. Post & packing extra - ring for price.

POOLSWINNER

THE ULTIMATE POOL PREDICTION PROGRAM

- **MAKES PREDICTIONS** - Predicts the most probable final position in a league competition. Available: 1000 members plus 10000 - the ultimate network - internationally available.
 - **PREDICTS** - In your SCOREBOARD, BY WHAT ORDER you will finish.
 - **DISCOVERS** - WHICH players are finished partners - and which are better than others.
 - **ALPHABETIC** - Alphabetical list of names in every league - allows you to check who you want to play for. The program provides the order in which to play - or not.
 - **WORKS ON ALL SYSTEMS** - All English and Scottish members - and the program. Available in the software catalogue on the screen. Over 1000000 in print for the individual user.
 - **FREE DEMONSTRATION** - 1000 members and 1000000 are available to you - with more available to you - in the next edition.
- Price includes postage and packaging. £10.00 (including VAT) for the software. £10.00 (including VAT) for the software. £10.00 (including VAT) for the software. £10.00 (including VAT) for the software.

PRICE £10.00 (all inclusive)



FORGEMAN 84'S

... and more...
... and more...
... and more...



COURSEWINNER vs
... and more...
... and more...
... and more...

PRICE £10.00 (all inclusive)

AVAILABLE SEPARATELY FROM:



price £1.00

price £1.00

price £1.00

10 CONVENTION LANE, CREWES, CHESHIRE, WY 6 4JH 7500

Welcome to another issue of PAGE 6 which hopefully will reach you before Christmas. As usual this issue has a slant towards games to keep you merry and occupied around Christmas and the New Year. Music is also associated with Christmas and you will find a music theme in this issue with comments on Policy Maker and Advanced Music System II as well as Carols for you to type in. If you prefer to make your own music then Music Maker will let you use your keyboard as a piano or organ.

Unfortunately those of you with only 16k memory will not be able to play Flight of the Swans, our other competition winner or Camelot but I have included other listings which will run in 16k. Although it is easy for me to say, as I don't have to pay for it, I would strongly recommend anyone with 16k to upgrade their machine to 48k, for it really does open up a whole new world. Quite apart from the more more commercial programs that will become available to you, programs from PAGE 6 such as RESCUE MISSION and CAMELOT, which cost you nothing, will make it well worth while. While it is possible to write good programs in 16k, many of the programs which have been submitted to us do require at least 32k in the programs have used so many of the facilities of the Atari that something would have to be sacrificed to fit into 16k. If you did not get an upgrade for Christmas try and persuade someone to buy you one, or save up yourself. You won't regret it.

As last things seem to have started moving from Atari and you should be well aware of Atari advertising by the time you read this. We all wish Atari every success over Christmas and for 1985 and, if the optimism of the people at Atari is anything to go by, Atari will be back at the top quite soon.

Finally, as we reach the end of another year, I would like to thank everyone who has sent in programs, articles or letters and pieces for publication. Every contribution, whether published or not, is much appreciated. We are still a small circulation magazine and rely entirely on your enthusiasm and love of your Atari in providing other owners with a good reason to stick with and enjoy their Atari computers. If you have not been able to make any contribution yourself, you have an opportunity now to show your appreciation of the efforts of others by voting in the annual Readers Poll. Please turn to the centre pages for further information.

May I wish all of you the very best for 1985. Stick with Atari and keep reading PAGE 6!

Leo Ellingham

Editor

Readers Letters

Dear PAGE 6,

I wrote with interest your reply to Mr Spencer's request for review of copy programs in issue 10. While I understand your position, I feel you should reconsider. While you are undoubtedly correct in assuming that certain individuals will misuse a copy utility, and that some will do so grossly as in the example you quoted, it is also true that there are legitimate and worthwhile uses for such software. By assuming the worst of your subscribers, you tar both the guilty and the innocent with the same brush. In a country where the accused is assumed to be innocent until proven guilty, this seems to me to be rather unfair and not a little revealing.

Having recently upgraded to disk, I find myself with over 30 games, all original and paid for, which are virtually redundant due to excessive loading times and the unreliability of the Atari tape disks. I would clearly like to transfer some or all of these to disk - to have to buy them a second time would really hurt! - and as far as I am aware I would be within my legal rights to do so.

While most software companies refuse to provide back-up copies of their products at a reasonable price, and while floppy disks and tapes continue to be such vulnerable forms of storage, I would suggest that there is a strong case favouring the availability of copy programs to even the average user. I am interested in the Atari version of VisiCalc, despite the very high price, but I am reluctant to purchase it with the knowledge that a speck of dust in the wrong place could leave me over £100 out of pocket.

Finally I would like to point out that by reviewing copy utilities you would not be condoning their misuse neither would you be increasing their availability. You would, however, be rendering your subscribers the valuable service of steering them clear of programs which offer bad value for money. I will probably acquire copy programs for the reasons that I have

stated, with or without your advice. With your advice I will have more chance to obtain the program that will suit my needs best. I believe that many of your readers will be in the same position and that we could benefit from your advice.

Alan Sharples,
Gurteira

"A copy is certainly not an argument. Alan, whose main points I entirely agree with, I see no problem in a responsible person purchasing a copy utility for the purpose of transferring already purchased cartridges to disk or backing up expensive software in case of damage. If a copying utility existed that did that and nothing more, I would not hesitate to renege and recommend it. The problem is of course that copying utilities can't be controlled in that way and the number of purchasers that have NEVER copied something that they don't own is fairly small. The trouble is the temptation of it all. Once somebody has copied something, surely it can't do any harm to make just one more copy?"

The scale of copying on the Atari in this country is enormous, probably more than on any other computer. There are software libraries where you can hire programs on disk or cassette that are only legally available on ROM. You can hire expensive programs without manuals (in case they get tatty) on brand name disks (in case the original gets damaged). If you know the right people, you can get a copy of any program available (or the Atari) including programs not yet officially released. If you like you can have half a dozen on one disk.

By reviewing copy utilities I give publicity to those producing them. Several of these people also produce cartridge back-up utilities. There is no possible justification for locking up a cartridge; you may just as well go out and get an electronics rip-off merchant to back up your computer! The unfortunate fact is that many people producing back-up utilities

do so in the full knowledge and expectation that they will be used for pirating software. Why should they care? They are making their money anyway.

So what is the harm of a few copies floating around? Does it really affect you? Yes, it does. Take a walk to your nearest computer dealer and look round for some of the "1000's" of programs available for the Atari. Chances are you won't find any. There are countless retailers who no longer sell imported Atari software simply because it did not sell. It did not sell because too many people found it too easy to get a pirated copy. There are software producers in this country that started off on the Atari and initially used disks because copies of their games were so easily available. Those who survived switched over to the Commodore and found that they could sell TEN times as much. They are not people making obscene profits, but needing to make some profit just to live. I could go on but the evidence is there, in retail shops around the country and in the magazine advertisements, or rather the lack of them.

There are probably more causes and honest readers amongst the PAGE 6 subscribers than for any other magazine but there are also those who either don't care or who could easily succumb to the temptation given the information. If I review copying utilities, the producers will prosper and some readers at least will be tempted down the pirate path directly as the result of the review. The Atari world is pretty fragile at the moment and I don't want to take the responsibility for inflating any more wounds. I have seen too much damage done to honest retailers, many of whom were (and are?) dedicated Atari fans.

I fully respect those of you who want copying utilities for entirely proper purposes and mean no offence by the stated that PAGE 6 takes. I don't know the answer, I can only see the problems.

Turn of the Year

This time last year I wrote an article entitled Turn of the Year which took a look back at the year just ending. The year which is now drawing to a close has not been a particularly good one for Atari and their followers so this time let's cast an eye forward.

Over the past couple of months there have been many rumours about what Atari will be doing next year, much of it pure speculation, so to try and give you a factual report of what you will see from Atari in 1985, I spoke to Jon Dean, Computer Products Manager in the U.K. Marketing Division. Sounding positive and enthusiastic about the future he told me "It is Atari's intention to provide the very latest technology at very competitive prices". Some of you may feel that that is just good sales talk so read on to find out what Atari will be doing in 1985.

To start with let's take a look at what Atari are doing now. Most importantly they are advertising and spending £2 - 3 million up to Christmas, to make people aware of Atari. They readily admit that they may not come out on top over Christmas but part of the campaign is to make people aware once again of the Atari name so that the new products to be introduced in 1985 will get off to a flying start. During 1985 they will be spending considerably in excess of the present advertising budget to bring new products to the home and business markets and are likely with their new 16-bit machine, to create a new and exciting 'middle' market that will blur the lines between home and business use.

The Company will operate on three levels in future. They will continue to support the XL series and will introduce refinements to the range. I put to Jon Dean the recent report of a 129k 800XL, but he was unable to confirm or deny this claim as he spoke as no details or specifications had been provided to Atari in the U.K. New products will be introduced and Atari is actively encouraging third party software producers as well as planning some titles of their own. Although toward the 'lower-end' market, the XLA will not be thought of as an 'entertainment only' machine. The entertainment side will not be overlooked but there will shortly be a range of General Business applications and a range of Educational software which will, subject only to memory restrictions, be compatible with the XL and the 400/800 computers. Some of these titles will be Atari's own but most will be produced by third parties with the full support of Atari.

Of immediate interest to disk drive owners is the imminent release by Atari of a disk based Adventure set in "slimy down-town New Jersey". Titled THE PAYOFF it is a text adventure intended to keep you busy for weeks or months.

Continued support of the present range will be what many of you are looking for but the really exciting developments will be in the 'middle' market where for the first time Atari will really close the gap between the serious

homeuser and the small business. To be introduced at the CES show in the States in January and expected here in April/May will be a new 16-bit machine very similar to the Apple Macintosh but in colour. It will be driven by TOS - the Terminal Operating System - and be supported with a disk drive, probably 3½ inch, and a monitor. The price for this machine? Around £400. The latest technology at very competitive prices. The machine will be fully supported with peripherals such as memory expansions allowing storage in Megabytes.

What about software? Atari are supporting development of software from some of the major U.K. producers currently working in the 16-bit field to provide general business programs as well as specific business applications. There will also be entertainment software and educational software including programs currently being developed at University level.

Sadly, but understandably, this machine will not be compatible with any of the present Atari machines but at the proposed price there is a strong case for the serious user to either trade in their present system or run two systems! For the first time truly 'serious' applications will be available to the ordinary home user but if you only used the 16-bit machine for top-class entertainment at first the enormous potential for wider use will be there. Don't forget many of us paid almost this much for a 400 and considerably more for an 800. Imagine Star Raiders in 16-bit! Imagine also switching straight over to a Megabyte database!

Can there be more? At the top end Atari is expected to introduce in late summer a 32-bit machine to take the larger business market by storm. Look for the best 32-bit machine around at the moment. Would you buy it at one-fifth of the price? That is what Atari are hoping to make possible in 1985.

Those are the three sides of the new Atari. A company which now recognizes that the U.K. and European markets are distinct from the U.S. XL machines will be assembled in Ireland from December and full manufacture of all machines for the European market is expected there around Spring. No more product shortages because the U.S. has to come first.

Jon Dean said I was spot on with the Editorial a couple of issues ago when I said "Atari is dead. Long live Atari". The Company that we all despised over during the past couple of years is gone. In its place is a vibrant new Atari that will continue to support existing products and bring to the world the very best competing technology that we have come to expect from the name Atari.

by Les Ellingham

ATARI ZOOMSOFT SOFTWARE SPECIALIST



MR. COOL - Be ready for a fine addition that will be going around soon. "Mr. Cool-man." This challenging new game will have you dodging meteors and springs in their sleep. A fast-moving, smoothly animating game that will keep you busy for hours.



GILT WELL - An addicting fun arcade game that will guide its way to your heart. Dive underground to find oil deposits while avoiding the nasty creatures that can destroy your oil pump. Multiple screens and changing levels of difficulty.



The PROTECT

The PROTECT allows you to write to both sides of any disk. Write protect without LABELS. No more cutting of notches that cause disk errors. Just plug in. No soldering, takes only a few minutes to install.

Price \$29.95

DISK COLLECTOR

DISK COLLECTOR is a complete disk cataloging system. 13 options to choose from. Stores over 800 filenames. No more going to DOS to see what's on each disk. Run files, LOAD files. A must for all programmers.

Price \$9.95

BASIC COMMANDER

Single keystrokes allow you to LIST, SAVE, ENTER, LOAD or RUN files. You never need to type DOS again. View the entire disk directory. RENAME, LOCK, UNLOCK, even FORMAT disks from BASIC. Automatic line numbering, block delete, re-numbering. Also 3 keys for you to program.

Price \$24.95

GAMES

ADVENTURE INTERNATIONAL	
The HULK	cart 8.75
The HULK	disk 13.25
UNDERGROUND	
DRCL	disk 24.95
LOCE RUNNER	disk 24.95
SPARE CHANGE	disk 24.95
GALUSTO	
WARLOCK	cart 13.25
WARLOCK	disk 13.25
CHANNEL 3	
GOLDEN BAYON	cart 8.95
COOM	
SUNKY	cart 8.95
SUNKY	disk 12.95
AZTEC CHALLENGE	cart 8.95
DATAMOST	
MR. ROBOT	disk 21.95
DATASOFT	
BRUCE LEE	cart 12.95
BRUCE LEE	disk 12.95
DALLAS QUEST	disk 12.95
FIRST STAR	
BOULDER DASH	cart 20.95
BOULDER DASH	disk 20.95
BRISTLES	cart 20.95
BRISTLES	disk 20.95
FUP FLOP	cart 20.95
FUP FLOP	disk 20.95
RUNSOFT	
FLAK	disk 14.95
SMOKE	cart 10.95
SMOKE	disk 13.95

GAMES

GAMESTAR	
STAR LEAGUE B/D	disk 23.95
INFOCOM	
ZORK 1	disk 24.95
ZORK 2	disk 24.95
ZORK 3	disk 27.95
LIMASOFT	
GRIDRUNNER	cart 7.50
MICROPROSE	
SPITFIRE ACE	cart 8.95
SPITFIRE ACE	disk 11.95
SOLO FLIGHT	cart 12.95
SOLO FLIGHT	disk 12.95

UTILITIES

D/SYSTEMS ACTION	cart 66.95
MAC/BDOS(A-)	disk 57.95
BASIC XL	cart 66.95
MSB	
BASIC DEBUGGER	disk 25.95
BASIC COMMANDER	disk 25.00
MAIL LIST	disk 24.95
TRONIX	
S.A.M.	disk 41.95
P.S. ANIMATOR	disk 26.95
TELETARI	disk 27.95
PENGUIN	
GRAPHICS MAG.	disk 44.35

ALL THE LATEST AMERICAN TITLES NOW IN STOCK. 100'S OF TITLES TO CHOOSE FROM WRITE OR TELEPHONE FOR A FREE CATALOGUE NOW NO OBLIGATION. IF YOU HAVE TROUBLE FINDING A TITLE THEN DON'T HESITATE TO CALL US. WE KNOW THE ATARI BEST.

See
our
ad
on
page 13

ATARI is a Trademark of Atari (S.K.)
Send To: ZOOMSOFT, 66 Northwinds Blvd., London NW1 1AR, U.K.

NAME _____
 ADDRESS _____
 CITY _____
 COUNTRY _____
 POSTCODE _____
 PHONE _____
 FAX _____
 I enclose Cheque / P.O. for £ _____
 Name _____
 Address _____

Demo

The Moving Triangle!

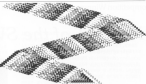
```

0 REM *****
1 REM *** BY LUKE HOLLINGBERY ***
2 REM ***   1982 143   ***
3 REM *****
10 GRAPHICS 11
15 H=1:V=1
20 C=1:T=0:R=0
25 COLOR 0
30 PLOT R*10,V*BRANT R*20,V*2:BRANT
  N,V*2:BRANT R*20,V
40 IF R=27 THEN R=-1
50 IF R=0 THEN R=1
60 IF V=161 THEN V=-1
70 IF V=0 THEN V=1
80 R=H*V*V*V
90 IF C=0 THEN C=1:GOTO 20
100 GOTO 25
9999 GOTO 9999

```

...G.T.I.A

by Luke Hollingbery



```

0 REM *****
1 REM *** BY LUKE HOLLINGBERY ***
2 REM ***   1982 143   ***
3 REM *****
10 GRAPHICS 7
20 R=1:V=1:G=1:R=1:V=1
30 COLOR 0
40 PLOT R,25-V:BRANT R*25,V*5:BRANT
  0 25-R,2*V:BRANT 25,20-V
50 PLOT R,20*V:BRANT 25-R,25-V:BRANT
  0 R*25,20-V:BRANT 25,20*V
600 V*V-R*20:R=C*20
600 IF C=14 THEN C=1
610 IF R=-25 THEN R=-1:G=0:R=0
620 IF R=25 THEN R=1:G=0:R=0
630 IF V=20 THEN V=-1:G=0:R=0
640 IF V=0 THEN V=1:G=0:R=0
650 GOTO 20
700 GOTO 10

```

ATARI 400/800/XL

**SECONDHAND
SOFTWARE
AT**

DAFT

PRICES

Send s.a.s. to
Mike Jarvis, 19 Portree Drive, Rise Park,
Nottingham or ring 0602 274369

ZOOMSOFT

	U.K.	USA
ADVENTURE OF SUPERHEROES CASTLE	9.95	17.95
ATARIKID SPACE	9.95	16.95
ATARIKID	9.95	16.95
ATARIKID 2	9.95	16.95
ATARIKID 3	9.95	16.95
ATARIKID 4	9.95	16.95
ATARIKID 5	9.95	16.95
ATARIKID 6	9.95	16.95
ATARIKID 7	9.95	16.95
ATARIKID 8	9.95	16.95
ATARIKID 9	9.95	16.95
ATARIKID 10	9.95	16.95
ATARIKID 11	9.95	16.95
ATARIKID 12	9.95	16.95
ATARIKID 13	9.95	16.95
ATARIKID 14	9.95	16.95
ATARIKID 15	9.95	16.95
ATARIKID 16	9.95	16.95
ATARIKID 17	9.95	16.95
ATARIKID 18	9.95	16.95
ATARIKID 19	9.95	16.95
ATARIKID 20	9.95	16.95
ATARIKID 21	9.95	16.95
ATARIKID 22	9.95	16.95
ATARIKID 23	9.95	16.95
ATARIKID 24	9.95	16.95
ATARIKID 25	9.95	16.95
ATARIKID 26	9.95	16.95
ATARIKID 27	9.95	16.95
ATARIKID 28	9.95	16.95
ATARIKID 29	9.95	16.95
ATARIKID 30	9.95	16.95
ATARIKID 31	9.95	16.95
ATARIKID 32	9.95	16.95
ATARIKID 33	9.95	16.95
ATARIKID 34	9.95	16.95
ATARIKID 35	9.95	16.95
ATARIKID 36	9.95	16.95
ATARIKID 37	9.95	16.95
ATARIKID 38	9.95	16.95
ATARIKID 39	9.95	16.95
ATARIKID 40	9.95	16.95
ATARIKID 41	9.95	16.95
ATARIKID 42	9.95	16.95
ATARIKID 43	9.95	16.95
ATARIKID 44	9.95	16.95
ATARIKID 45	9.95	16.95
ATARIKID 46	9.95	16.95
ATARIKID 47	9.95	16.95
ATARIKID 48	9.95	16.95
ATARIKID 49	9.95	16.95
ATARIKID 50	9.95	16.95

Plus 100's more titles available. Send s.a.s. for FREE catalogue. Send cheque/P.O. to

ZOOMSOFT, 46 Haverthorpe Mews, London
NW1 6DH. Tel. 01 723 9562

Foreign orders please add £1.25 for post

FLIGHT of the SWAN

Flight of the Swan is the other winner of our scrolling competition (chosen because of its original theme. Like Rescue Mission, this game requires 32K.

THE GAME

The game follows the flight of a migrating swan from a small tank, over hills and through covers avoiding telegraph poles and clouds etc. and final splashdown on a distant lake.

The swan has three lives and to survive must eat four objects including a glucose tablet, a bigger, a worm and a can of beans! These objects are all coloured pink. Once all four, or a combination of any four, are eaten, the objects turn yellow and in this condition will increase the swan's metabolic rate to such an extent that he dies. Once the four objects have been eaten, the swan has sufficient energy to make it through the covers. Throughout the game, avoid anything that is not pink until finally the lake is in view where you may safely land.

The swan is controlled by the joystick moving up, down, diagonally or forwards. He cannot move backwards. There are two difficulty levels with level 2 being very difficult. Once three lives are lost, System Reset will re-run the game.

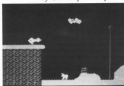
The first game after loading will take about 15 seconds to initialise but after this the game will restart immediately.

```

0 REM *****
1 REM *      FLIGHT OF THE SWAN      *
2 REM *      BY                        *
3 REM *      CAPTAIN JAGGER           *
4 REM *      *****                *
5 REM *      PAGE 6 PROLOGUE - ENGLAND *
6 REM *****
7 REM
8 GRAPHICS 0:POSITION 17,0:17 "*****
*****"
9 "....."
10 "....."
11 "....."
12 "....."
13 "....."
14 "....."
15 "....."
16 "....."
17 "....."
18 "....."
19 "....."
20 "....."
21 "....."
22 "....."
23 "....."
24 "....."
25 "....."
26 "....."
27 "....."
28 "....."
29 "....."
30 "....."
31 "....."
32 "....."
33 "....."
34 "....."
35 "....."
36 "....."
37 "....."
38 "....."
39 "....."
40 "....."
41 "....."
42 "....."
43 "....."
44 "....."
45 "....."
46 "....."
47 "....."
48 "....."
49 "....."
50 "....."
51 "....."
52 "....."
53 "....."
54 "....."
55 "....."
56 "....."
57 "....."
58 "....."
59 "....."
60 "....."
61 "....."
62 "....."
63 "....."
64 "....."
65 "....."
66 "....."
67 "....."
68 "....."
69 "....."
70 "....."
71 "....."
72 "....."
73 "....."
74 "....."
75 "....."
76 "....."
77 "....."
78 "....."
79 "....."
80 "....."
81 "....."
82 "....."
83 "....."
84 "....."
85 "....."
86 "....."
87 "....."
88 "....."
89 "....."
90 "....."
91 "....."
92 "....."
93 "....."
94 "....."
95 "....."
96 "....."
97 "....."
98 "....."
99 "....."
100 "....."

```

by Christopher Jephcott



TYPING IT IN

The game should be typed and saved in two parts as shown. Cassette users should **CSAVE** the first listing and then leave the tape in place in the cassette. Next type in the second listing and **CSAVE** it immediately after the first. Wind back the tape and **CLOAD**. When **RUN** is typed the first program will automatically load in the second. Type **RUN** and away you go.

Disk users should first change line 30 of the first listing to read **RUN "D:SWAN.BAS"** and save the program as "D:SWAN". Type in and **SAVE** the second listing with the filename "D:SWAN.BAS" and then type **RUN "D:SWAN"**. The game should load and play.

```

1,127,48,4,0,04,328,243,165,127,57,16
125 0070 0,0,1,75,119,200,204,48,12,24
0,148,204,155,127,62,0
126 0070 0,0,0,24,72,238,205,0,63,120,
252,2,200,171,171,204,204,204,171,171,
204,171,171,204
140 0070 0,0,0,05,105,205,105,105,205,0,
0,0,1,2,2,1,1,0,0,0,224,240,240,240,22
4
150 0070 0,22,01,200,02,14,0,2,120,113
,03,04,159,204,119,20,0,0,2,10,19,127,
205,127,2,7,249,248,204,204,204,204
160 0070 2,7,02,03,127,127,205,205,120
,124,240,202,204,204,205,205,205,205,2
00,200,200,200,200,200
170 0070 124,124,76,04,76,04,76,124,2,
12,11,0,2,70,107,10,0,0,0,06,125,222,1
20,06,0,0,11,03,124,1,127,125
180 0070 0,0,02,124,200,0,244,240,24,0
0,247,02,247,02,02,02,200,120,00,24,0,
0,0,0
190 0000 02,02,02,02,02,02,02,02,2,4,2
1,200,14,1,0,0,127,127,202,200,200,170
,172,04

```


FLIGHT of the SWAN continued

1200 DATA 0,7,24,24,5,66,24,24,7,7,24,
24,0,20,24,24,7,25,104,104,5,25,104,10
4,10,107,102,102,10,107,102,102
1205 DATA 10,107,102,102,10,107,102,10
2,5,10,104,104,9,10,104,104,7,10,104,1
04,7,10,104,104
1210 DATA 0,7,20,104,104,7,00,104,104,0,
00,00,00,5,00,00,00,4,70,00,00,2,000,0
0,00,4,71,00,00,5,07,00,00,0,00,00,00
1215 DATA 7,71,00,00,0,00,00,00,9,71,0
0,00,10,00,00,00,9,70,00,00,0,00,00,00
7,00,00,00,7,00,00,00,7,07,00,00
1220 DATA 0,00,00,00,9,100,00,00,0,70,
00,00,7,00,00,00,0,00,00,00,0,102,00,0
0,0,70,00,00,4,00,00,00,3,70,00,00
1225 DATA 0,102,00,00,0,00,00,00,4,71,
00,00,9,07,00,00,0,71,00,00,0,117,00,0
0,0,110,00,00,0,110,00,00,0,00,00,00
1230 DATA 4,00,00,00,1,70,00,00,2,112,
00,00,2,00,00,00,4,00,00,00,5,07,00,00
0,00,00,00,7,71,00,00,0,07,00,00
1235 DATA 9,00,00,00,00,00,07,00,00,10,11
7,00,00,10,110,00,00,9,70,00,00,0,00,0
0,00,7,70,00,00,0,112,00,00,7,71,00,00
1240 DATA 0,10,00,00,0,70,00,00,7,00,0
0,00,0,00,00,00,5,111,00,00,0,110,00,0
0,4,102,00,00,5,00,00,00,4,70,00,00
1245 DATA 0,00,00,00,0,102,00,00,2,71,
00,00,4,07,00,00,2,00,00,00,9,117,00,0
0,0,110,00,00,0,07,00,00,0,71,00,00
1250 DATA 7,07,00,00,0,00,00,00,9,71,0
0,00,10,100,00,00,9,70,00,00,0,00,00,0
0,7,00,00,00,0,00,00,00,0,07,00,00
1255 DATA 7,10,104,104,7,10,104,104,7,
10,104,104,7,10,104,104,7,10,104,104,7
10,104,104
1260 DATA 9,143,102,102,9,143,102,102,
9,143,102,102,9,143,102,102,9,143,102,
102
1265 DATA 9,143,102,102,9,143,102,102,
9,143,102,102,9,143,102,102,9,143,102,
102
1270 DATA 9,143,102,102,9,143,102,102,
9,143,102,102,9,143,102,102,9,143,102,
102
1275 DATA 9,143,102,102,9,143,102,102,
9,143,102,102,9,143,102,102,9,143,102,
102
1280 DATA 9,143,102,102,9,143,102,102,
9,143,102,102,9,143,102,102,9,143,102,
102
1285 DATA 0,143,102,102,0,143,102,102,
0,143,102,102,0,143,102,102,0,143,102,
102
1290 DATA 0,143,102,102,0,143,102,102,
0,143,102,102,0,143,102,102,0,143,102,
102

102

1295 DATA 0,143,102,102,0,143,102,102,
0,143,102,102,0,143,102,102,0,143,102,
102

1300 DATA 0,143,102,102,0,143,102,102,
0,143,102,102,0,143,102,102,0,143,102,
102

1305 DATA 0,120,1,122,2,127,0,124,4,12
7,0,127,4,120,3,127,3,127,4,122,0,131,
4,127,3,120,2,120,2,127,3,120,2,100

1310 DATA 1,120,1,127,1,122,0,120,0,11
9,0,117,0,127,1,122,2,124,3,117,1,120,
1,120,0,124,1,120,0,120,0,120,0,122

1315 DATA 1,127,2,122,3,127,3,120,3,12
3,4,122,0,127,0,127,0,120,4,120,3,127,
2,120,0,120,1,127,1,90,1,90,1,121,1,90

1320 DATA 1,120,0,100,0,104,1,120,0,12
0,0,90,0,90,0,121,1,127,2,104,2,100,2,
127,3,127,4,117,2,120,2,122,2,127

1325 DATA 0,124,2,120,2,120,1,122,0,12
0
1330 DATA 12,1,127,12,1,120,24,1,02,27
3,120,10,0,127,47,3,100,00,1,107,100,
0,02,101,1,02,102,2,02,102,3,02

1335 DATA 100,4,02,100,0,02,00,1,127,0
1,1,120,200,2,127

1340 GETTIME 1000:00:0

1345 FOR I=1070 TO 10271000 0:POKE I,
0:INKEY I:IF @=0:GOTO 13500

1350 DATA 104,107,0,122,002,141,4,122,
100,07,002,0,107,7,70,70

1355 DATA 200,100,200,100,101,141,4,11
2,10,11,107,7,122,200

1360 DATA 141,4,122,100,4,0,173,4,0,20
1,124,200,0,107,0,102

1365 DATA 0,107,4,0,202,102,122,100,20
200,140,70,90,200

1370 Y=40:0=00:0P=0

1380 GOTO 1000:GOTO 0:GOTO 1000:GOTO 1000
1390 IF 0:2 THEN 0:0+0P:0:0:0+0P:0:0:0:0
+0P:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0

1400 IF 0:04 THEN Y:Y+0P:0:0:0:0:0:0:0:0

1410 IF 0:03 THEN Y:Y+0P:0:0:0:0:0:0:0:0

1420 IF 0:02 THEN Y:Y+0P:0:0:0+0P:0:0:0:0:0
P:0:0:0+0P:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0

1430 IF 0:01 THEN Y:Y+0P:0:0:0:0:0:0:0:0

1440 IF 0:00 THEN Y:Y+0P:0:0:0+0P:0:0:0+0
P:0:0:0+0P:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0
0:0

1450 POKE 0:1000,0:POKE 0:1000,0:1:POKE 0
1:1000,0

1460 IF 1:000 AND 0:0:0 ON Y:00 AND 0:0=4
THEN GOTO 7000

1470 IF 0:0:0 THEN GOTO 5000

7000 POKE 0:1270,0

5000 GOTO 2000

1000 IF 0:1 THEN FOR Z=0 TO 400:INKEY Z


```

10000 SIZ70.0
1010 RESTORE 1010(P00 L1) TO 0:IM000 0
1020 PLAYERS(L1)=CHR(000):NEXT L
1030 DATA 0,0,0,0,0,0,0,0,0,7,120,24,0,0
,0,0,0,0,0,0,24,00,240,240,24,0,0,0
,0,0,0,0,0
1040 DATA 24,00,127,177,120,00,10,12,0
,0,0,0,0,0,24,00,102,217,00,120,244,0
,0,0,0,0,0
1050 G=000(P00)
1060 PO=INT(16/1024)*1024
1070 IF P00 THEN PO=PO+1024
1080 G=PO-G
1090 P000 00277,P0/200
1100 P025+012:P025+040:P025+P00:P025+0
70
1110 FOR Z=0 TO 3:P000 01250*Z,0:NEXT Z
1120 P000 700,00:P000 700,10:P000 700
,10:P000 707,10
1130 P000 009,40:P000 01277,3:P000 023
,23
1140 M=0:01+00:02+00:03+100:P000 0224
0,0:P000 02247,01:P000 02250,02
1150 Y=40:IM000=0
1170 P000P00Y,P0Y+120=PLAYERS(IMAGE,I
M000+120)
1180 Y=40:IM000=10
1170 P000P1Y,P1Y+120=PLAYERS(IMAGE,I
M000+120)
1180 Y=40:IM000=10
1210 P000P00Y,P0Y+120=PLAYERS(IMAGE,I
M000+120)
1220 RETURN
1400 IM000=L1:P000P00Y,P0Y+120=PLAYERS
(IMAGE,IM000+120):IM000=L0
1410 P000P1Y,P1Y+120=PLAYERS(IMAGE,I
M000+120):IM000=L2
1420 P000P00Y,P0Y+120=PLAYERS(IMAGE,I
M000+120):RETURN
5000 IF SP=2 THEN 5020
5010 IF C000 THEN 0P00P01:G0500 5000:0
ETURN
5015 0=1:P000 Z=0 TO 7:02=02+1:00000 0
,0,4,10
5016 P000P00Y,P0Y+120=PLAYERS(IMAGE,I
M000+120):P000 01250,02:NEXT Z:FOR Z=0
TO 15:Y=Y+4:00000 0,Y,10,10
5017 G0500 0000:NEXT Z:P000(L1)=CHR(000):
P000(0040)=CHR(001):P000(03)=P000 50000 0,0
,0,0
5018 CLEAR010:0000100:0:0:0:0:0:0:0:0
5100 0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0
5015 L1=L0:0:0:IF L1=0 THEN G0500 5000
5020 G050 1000
5030 IF 0P04 THEN SP=0:P000 711,220
5031 IF 0P1 THEN SP=0
5035 FOR Z=00 TO 00 STEP -1:00000 0,Z,
10,10:NEXT Z
5200 FOR Z=100 TO 100:00000 0,Z,10,10:
NEXT Z:00000 0,0,0,0
5210 RETURN
7000 GRAPHICS 10:FOR Z=0 TO 3:P000 510
40*Z,20:NEXT Z:P000 710,140:P000 707,1
7000 POSITION 10,217 "THE FLIGHT OF"0
P0000 10,217 "THE 0000"
7010 POSITION 10,0:7 "00000000000000000000"
POSITION 20,117 "PLAS00000000"POSITION
0 20,117 "0000000000000000"
7040 POSITION 10,17:7 "00000000"
7045 POSITION 12,12:7 "00010"100
7050 POSITION 20,22:7 "0000000000"
7060 RESTORE 7000:P000 707,10
7100 FOR Z=0 TO 10:00000 0
7200 FOR 1=10 TO 0 STEP -1
7300 00000 0,0,10,1:P000 710,0
7320 NEXT 1
7330 NEXT Z
7340 FOR 1=10 TO 0 STEP -1
7350 00000 0,00,10,1:00000 1,121,10,1:
00000 2,21,10,1:00000 0,01,10,1:P000 7
10,1
7360 NEXT 1
7370 DATA 7370
7000 DATA 121,70,72,00,00,00,00,00,121
,100,121
7510 DATA 100,70,00,121,240,00
0000 GRAPHICS 17
0010 P000 700,10:P000 707,200:P000 700
,00:P000 711,220:P000 712,120
0020 POSITION 0,217 00:"THE FLIGHT OF"
POSITION 0,217 00:"THE 0000"
0030 POSITION 0,0:7 00:"0"0:POSITION 0
,10:7 00:"00000000000000000000"
0040 POSITION 0,12:7 00:"1220 10277"
0070 IF 0P00P00=10 THEN SP=0,0:0:0:0
ETURN
0080 IF 0P00P040=31 THEN SP=3:RETURN
0075 G010 0070
0090 FOR Z=0 TO 3:P000 02240*Z,0:NEXT Z
7000 GRAPHICS 17:POSITION 0,5:7 00:"00
00 000"POSITION 0,0:7 00:"000000"IF
0:ITION 5,11:7 00:"00010"100
7015 POSITION 0,13:7 00:"0000000000"
"
7020 G010 7020
00000 000

```

SUBSCRIBE!
DON'T RELAX DO IT!

ADVENTURE

5. SANDS OF EGYPT

Sands of Egypt was reviewed by Alexander Kelly in Issue 10, so I won't say too much about it here. I'll assume that you've read the review or you're already familiar with the game.

However, I can't help commenting on the impressive graphics. *Sands of Egypt* has a very attractive split screen display on a narrow playfield. The top half shows a colorful, high resolution picture in ANTIC mode 14, while the bottom is devoted to text. Player-mouse graphics fill the gaps at each side of the display (in the form of Egyptian hieroglyphics) and also provides the compass that shows the possible exits. As though all this isn't enough, most of the screens are animated! Clouds float across the sky, the desert scrolls when you move about, the canal blinks and chases its end, the water flows through the canal and the whole room shakes when you return the sceptre. The secret chamber is particularly impressive and you'll probably have a good laugh when you ride the camel. And the most amazing thing of all is that it runs in only 128k!

General Hints: The aim of the game is very clearly spelled out in the instructions, so make sure you read them before you begin. I don't think *Sands of Egypt* was meant to be easy, for you begin the game empty-handed in the middle of a maze! You can find yourself wandering around hopelessly lost for ages before you even find anything. This really puts beginners off (although beginners shouldn't be wandering the *Sands of Egypt* in the first place), so here are a few general hints.

When you begin the game, keep heading north until you reach the top of a cliff, head west until you find an object, then head north. From this point, you're on your own, but at least you've got an object to help you find your way around. Don't waste too much time drawing a map at this stage as you begin to get thirsty after 30 moves. After 45 moves, you begin to get very thirsty. After 60 moves, you start dying of thirst and after 75 moves, you're dead. The moral here should be obvious. Find water!

Once you've quenched your thirst (and it's not as easy as it sounds), you may like to collect all the objects you can lay your hands on, then return to the desert area and map them out. Once everything is mapped, you'll feel more secure when moving around and you can concentrate on solving the puzzles. The puzzles themselves are all fairly logical, but finding the right words to use is sometimes a bit trying. The only other hint I'll give at this point is to make sure you examine every object and say HELP in every location.

If you type SCORE at any point during the game, you can see how many moves you've taken. When you eventually finish the game, you'll be told how many moves you took to complete it. The author claims to have



by Garry Francis, Australia

done it in 101 moves, but I reckon he's leaving us out! My best is 111 moves and I can't see anywhere that it can be improved. If anyone out there can beat my score, I'll like to see your solution.

Incidentally, there are a number of one letter commands apart from N, S, E, W, U and D which you can use to save typing. These are H for Help, I for Inventory, L for Look, Q for Quit, P for Put (or drop) and T for Take (or get).

The Curse of Ra: Unfortunately, *Sands of Egypt* is not without its flaws. There is one invisible bug in the program which had me stamped for months. It doesn't surface until after you've found your way into the secret chamber very late in the game. If you've made it that far and you couldn't get the ladder back through the crack, then *hello you!* You've found the bug! (Perhaps this is the Curse of Ra?)

When David Will Henderson encountered it, he wrote to the CONTACT column in Issue 8 for help. I responded to David's plea in the *Beginner's Letters* of Issue 10. At the time, I said that the bug occurred randomly and for no apparent reason. This is not true. After further testing, I now believe I know why the bug occurs and how to overcome it. So if you are interested, read on...

In order to make *Adventures* a little more difficult (and realistic), there is usually a limit on the number of items you can carry about. *Sands of Egypt* is no exception and limits you to six items. The Adventure programmer normally handles this by allocating a specific location in memory to keep track of the number of items in the player's possession. If the program is written in BASIC, then he may use a variable instead. In any case, for the sake of convenience, let's refer to this location (or variable) as COUNT.

When the program begins, COUNT is initialised to the number of items in the player's possession. In *Sands of Egypt*, you begin empty-handed, so COUNT is zero. Every time you try to pick up an item, the GET routine tests COUNT. If COUNT is at its maximum, then you're told that you've carried too much and you can't pick the object up. On the other hand, if COUNT is less than its maximum, then the object is added to your inventory and COUNT is incremented. When you want to drop an object, the DROP routine puts the object in the current room and COUNT is decremented.

So far, so good.

Unfortunately, *Sands of Egypt* has one special case for the DROP routine which (I suspect) hasn't been handled properly. If you have satisfied all the necessary conditions when you try to DROP SCEPTRE in the water chamber,

the program asks "Where?". If you respond correctly, the script is dropped, but because this is a special case and not part of the general DROP routine, COUNT is not decremented. THIS IS THE BUG! COUNT should be decremented to reflect the new number of items. This means that you may now have (say) two items in your possession, but COUNT will think you've got three! Keep this in mind for a moment. Apart from keeping a tally of your inventory, COUNT is also useful for testing the validity of other actions. For example, you are not allowed to climb the palm tree-carrying more than one item. If you say CLIMB TREE, the CLIMB routine will first ensure that COUNT is less than or equal to one. If COUNT is greater than one, you will be told that your load is too heavy to climb the tree. Similarly, you can't enter the crack to and from the secret chamber while carrying more than two items. Therefore, if you are carrying the torch and ladder (as you must) when you try to leave the secret chamber, but COUNT thinks you've got three items (due to the bug), then you cannot possibly take the ladder out of the secret chamber.

Fortunately, there is a way of defeating the bug. Apart from dropping individual items, Sands of Egypt also allows you to drop everything by saying DROP ALL. If you do this after putting the script in its proper place, then everything is dropped and COUNT is set to zero. You can now GET and DROP items in the normal manner and COUNT will again reflect the correct number of items in your inventory. It is now possible to take the ladder from the secret chamber and ultimately complete the game.

Coded Hints: If any of our more observant readers thought the hints for Original Adventure and Zork II were in a funny order, it was because Les got them all mixed up when pasting up the magazine. In order to avoid that happening in future, the hints are now numbered, but otherwise follow the same format as usual.

Incidentally, the word next to number 77 in the Zork I hints somehow went astray. It should have been a period (or full stop or dot or whatever you want to call it). The poor thing was so small, that it probably fell off the page! (Actually it was pointed out on the negative by the typesetter who thought it was merely a nasty bluish! Ed.)



- | | |
|--|--|
| 1) Can't get past the snake? | 12) Missing a light source? |
| 20 11 6 14 48 37 57 14 | 4 26 56 52 20 19 |
| 2) Can't get the snake off? | 13) Can't light the torch? |
| 31 37 25 | 4 26 13 20 17 52 20 29 |
| 3) Can't find a container? | 14) Still can't light the torch? |
| 18 1 33 20 14 | 29 |
| 4) Can't find any water? | 15) Can't move the boat upstream? |
| 18 15 21 43 21 47 21 1 33 | 45 12 |
| 20 32 52 20 29 | 16) Boat floats away when you enter the archway? |
| 5) Can't get to the pyramid? | 38 5 49 |
| 7 20 41 | 17) Missing a rope? |
| 6) Camel won't cooperate? | 55 10 22 13 20 17 52 20 29 36 |
| 7 20 34 53 | 18) Can't find the secret chamber? |
| 7) Can't get the palm fronds? | 44 20 23 |
| 7 20 24 | 19) Can't get the ladder out of the secret chamber? |
| 8) Camel still won't cooperate? | 44 9 8 7 50 |
| 16 30 45 5 36 | 20) Can't get out of the underground canal? |
| 9) Can't get the script? | 16 30 55 20 42 36 |
| 4 26 30 50 51 20 14 | 21) Think you've done everything, but the game's not over? |
| 10) Haven't found the underground canal? | 18 27 37 41 3 |
| 4 26 2 20 35 | |
| 11) Still haven't found the underground canal? | |
| 43 40 8 24 | |

1 EAST	11 ONLY	21	31 FRED	41 CAMEL	51 FOUND
2 BY	12 SHOVEL	22 HAPPENED	32 TOP	42 LADDER	52 OF
3 BEDE	13 AT	23 HERCULEANUS	33 FROM	43 WEST	53 TREE
4 SAY	14 SNAKE	24 SCRIPTS	34 PALM	44 FEED	54 PYRAMID
5 IT	15 DOWN	25 CONTAINER	35 POOL	45 EXAMINE	55 REMEMBER
6 GOOD	16 END	26 HELP	36 7	46 DROP	56 NORTH
7 TRY	17 NAME	27 FOG	37 A	47 SOUTH	57 DEAD
8 AND	18 GO	28 SUNLIGHT	38 TE	48 IS	
9 ALL	19 START	29 CLIFF	39 SHAKE	49 UP	
10 WHAT	20 THE	30 YOU	40 COVER	50 AGAIN	

Bomb Escape

by Ron Smith

The object is to escape from a building to a safe black square before a time bomb explodes.

The Building - an outline of a building is given in blue with some of the doors only one pixel wide. Extra rooms, corridors and, sometimes, doors are seen at and above levels three and five. The blue walls must not be touched at any level.

The Timer - is ticking away at the bottom of the screen. It is reset if the black square is reached or if the bomb explodes. If a life is lost then the timer continues from the same position. It is not reset to zero. On each new level the timer's base is shortened and is not lengthened again during the game.

The Player - leaves a red trail which must not be touched. The joystick directly controls the speed of the timer - as long as the player is moving, the timer is slowed down to a necessity to keep moving at level 5 and above.

Lives - the game starts with three lives and a life is lost if a red or blue square is touched or if the bomb explodes. If a life is lost from one level it also lost and the game continues at this same level but with less time available.

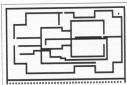
General - an average score of 50,000 is easily possible reaching level 6, however progression beyond this point is difficult and requires expert joystick control.

```

1 REM *****
2 REM **      BOMB ESCAPE      **
3 REM **      BY              **
4 REM **      R.F. SMITH, 1984   **
5 REM **      -----          **
6 REM ** PAGE 6 MAGAZINE - ENGLAND **
7 REM *****
8 GOTO 1000
9 COUNT=0:XL=0:Y1=47:TIME=1000:LEVEL=
: LIVES=3
10 GOTO 50
40 COUNT=XL:Y1=0:TIME=TIME-100:IF TIME<
400 THEN TIME=400
50 GRAPHICS 31:P00E 712,30:P00E 700,23
0:P00E 707,0:P00E 710,40
60 RESTORE
70 XL=INT (1000-400+242*(Y2-20)/(1000-400)+
0:Y2=INT (1000-400+773*(Y2-20)/(1000-400)+
0:Y2+13
100 COLOR 1:PLOT 0,47:DRAWN0 0,0:BRANT
0 77,0:BRANT0 77,47:PLOT 0,40:DRAWN0 7
7,40
110 PLOT 0,17:FOR EN1 TO 21:READ 0,0:0
0:NT0 0,0:INERT 0
120 DATA 0,11,13,11,13,4,45,4,45,7,57,
7,57,3,71,3,73,7,77,7,77,20,71,25,71,4
1,37,41,37,37,45,37,45,41,13,41,13,35
130 DATA 0,35,0,34
140 PLOT 05,24:FOR EN1 TO 10:READ 0,0:

```

The timer is controlled by the variables COUNT and TIME. COUNT is increased on line 400 and each time it passes the value of TIME, the program plots another pixel on the timer. TIME is set to 1000 at the start of the game and reduces on line 40 by steps of 100 to a minimum of 400. If either of these variables are altered, then the timer would be lengthened or shortened. DRAWN0 plots two doors at random and is set on line 300.



```

DRAWN0 0,0:INERT 0:COUNT 400
150 DATA 05,24,41,31,45,21,42,24,37,24
,37,20,33,26,23,13,37,13,37,20,40,15,4
3,17,42,7,45,7,45,17
160 COLOR 1:FOR EN1 TO 7:READ 0,0,0,0:
PLOT 0,0:BRANT0 0,0:INERT 0:RETURN
170 DATA 7,19,22,17,25,4,25,11,40,17,0
2,17,40,17,70,17,0,24,23,24,23,20,23,2
4,23,20,17,20
180 COLOR 1:FOR EN1 TO 7:READ 0,0,0,0:
PLOT 0,0:BRANT0 0,0:INERT 0
190 DATA 10,20,23,25,45,17,51,17,51,17
,53,53,45,17,40,17,40,11,75,11,37,20,2
7,33,45,11,42,7
200 FOR EN1 TO 9:READ 0,0:PLOT 0,0:INERT
0:RETURN
210 DATA 77,15,02,4,42,0,40,4,40,5,45,
7,40,0,40,7,40,10
220 GOTO:END:END:IF (COUNT) THEN COLOR
0:PLOT 00,4:PLOT 05,10:RETURN
230 COLOR 3:PLOT 0,47:DRAWN0 XL,Y1:INERT
0:0
400 IF LEVEL>2 THEN GOTO0 100:GOTO0 20
0
410 IF LEVEL>4 THEN GOTO0 100:GOTO0 30
0
420 IF LIVES<2 THEN GOTO0 300
430 COLOR 2:PLOT XL,Y2:COLOR 3:PLOT XL
,Y2

```

```

440 FORK 77,0:GOTOX0000
450 IF X<10 THEN GOTO 600
460 X=X+1:G0 00 000 00 0077-0000 00
510 00 0011
470 Y=Y+1:G0 00 000 00 0110-000 00
520 00 0000
480 X=X+Y*Y
490 COLOR LOCATE X,Y,Z
500 IF X<1 00 X<1 THEN GOTO 700
510 IF X<2 THEN GOTO 700
520 PLOT X,Y
600 COUNT=COUNT+LEVEL:GOTO:IF COUNT<
700 THEN GOTO 650
610 SOUND 0,100,10,0:G0ND 1,200,10,0:
G0ND 0,0,0,0:G0ND 1,0,0,0:G0ND 000
620 COLOR PLOT X1,Y1:G0ND 0,100,10,
14:G1:G1P2
630 IF X<27 THEN G0ND 000
670 COUNT=0:G0ND 0,0,0,0:RETURN
700 FOR P=100 TO 20 STEP -2:FOR 700,1
G:FOR 700,P:G0ND 0,P,0,10:FOR 710,4
G:ND P:G0ND 0,0,0,0:G0ND 000
710 G0ND 0,0,0,0:G0ND 1,0,0,0:G0TO 5
0
800 FOR P=100 TO 100:FOR 710,10:FOR 7
12,P:G0ND 0,P,0,10:FOR 710,12:ND P
1:G0ND 0,0,0,0:G0ND 000
810 COUNT=0:X1=0:GOTO 50
840 LEVEL=LEVEL-1:IF LEVEL=0 THEN GOTO
1100
850 LEVEL=LEVEL-1:IF LEVEL=0 THEN LEVEL
=1
860 RETURN
900 GRAPHICS 10:FOR 712,11:LEVEL=LEVEL
14:G0ND+LEVEL:G0ND:G0ND:G0ND
910 POSITION 0,2:7 00:"LEVEL "LEVEL:P
OSITION 0,4:7 00:"SCORE "1:0
920 FOR C=1 TO 5:FOR P=100 TO 00 STEP
-2:G0ND 0,P,10,10:G0ND 1,P*0,10,00:
ND P:ND 00
930 G0ND 0,0,0,0:G0ND 1,0,0,0:G0TO 4
0
1000 GRAPHICS 10:FOR 712,11:FOR 700,
40:FOR 700,10
1010 POSITION 0,2:7 00:"G0ND 1000:
POSITION 12,4:7 00:"P:G0ND 1000:FOR 7
100 0,4:7 00:"Y"
1020 G0ND 1000:POSITION 12,2:7 00:"0"
1030 1000:POSITION 4,4:7 00:"E":G0ND
0 1000:POSITION 14,4:7 00:"E"
1040 G0ND 1000:POSITION 10,2:7 00:"0"
1050 1000:POSITION 0,4:7 00:"C":G0ND
0 1000:POSITION 0,2:7 00:"0"
1060 G0ND 1000:POSITION 10,4:7 00:"0"

```

```

1050ND 1000
1080 DIM A$(15):A0="00 R.P. SMITH:"FOR
X<1 TO 15:POSITION 0,2:7 00:A$(X,0)
1090ND 1000:ND X
1100 FOR M=1 TO 100:ND M:POSITION 1,
7:7 00:" "
1110 FOR M=1 TO 100:ND M:POSITION 4,
7:7 00:"press start"
1120 FOR C=1 TO 15 STEP -10:FOR 707
,C:ND:IF PEEK(32770)=0 THEN SOUND 0,0,
0,0:GOTO 10
1130 G0ND 0,C/2*10,10,10:FOR M=1 TO
50:ND M:ND C:GOTO 1070
1140 G0ND 0,100,2,10:FOR M=1 TO 50:ND
M:G0ND 0,0,0,0:FOR M=1 TO 50:ND
M:RETURN
1150 GRAPHICS 10:FOR 712,11:FOR 705,
10:FOR 700,14:FOR 710,14:FOR 711,14
:G0ND 0,0,0,0:G0ND 1,0,0,0
1160 IF X<20 THEN X=C
1170 POSITION 0,0:7 00:"G0ND:POSITION
7,2:7 00:"E:G0ND:POSITION 3,7:7 00:"
ND: "1:0
1180 POSITION 0,0:7 00:"G0ND: "1:0
1190 FOR M=1 TO 100:ND M:POSITION 4,
4:7 00:"press start"
1200 FOR C=1 TO 15 STEP -10:FOR 711
,C:ND:FOR 710,C:G:FOR 707,C+10:FOR 7
00,C:0
1210 IF PEEK(32770)=0 THEN 1100
1220 G0ND 0,C/2*10,10,10:G0ND 1,C/2,
10,10:FOR M=1 TO 50:ND M:ND C:GOTO
1100
1230 G0ND 0,0,0,0:G0ND 1,0,0,0:G0ND:
G0ND 10

```

DO YOU RUN A USER GROUP?

Atari will in future be producing a quarterly newsletter for User Groups keeping them up to date with the latest developments. To make sure your group gets this newsletter write NOW to Jon Dren at ATARI CORP. (UK) Limited, Atari House, Railway Terrace, Slough, Berks, SL2 5BZ and let him have details of your group.

Printer Utility

L: a 1020 handler device

by David and Mary Lynch

We bought an AT&T 1020 printer earlier this year. Since then the price has fallen considerably! We have used the printer a great deal, mainly for programming but we have written one or two graphics programs ourselves.

A printer makes writing large programs feasible on a home computer, no more scribbling down odd lines of code on scraps of paper. You can debug your programs as they ought to be debugged. Get a listing, notice an archaic, read and think.

In general, we are satisfied with the printer. In general that is, it gives clear, readable text, easier on the eyes than that produced on many mainframes, flexible graphics and is fast enough for the applications we wanted. A business user would probably find speed a drawback though. There is however one problem with the printer - the documentation is terrible. It is so bad that even a casual perusal reveals its inadequacies. We have therefore spent some time trying to find out how far you can stretch the printer, with some success, and this article records some of our findings.

Since, as far as we know, there are no programs on sale which use the 1020 printer, one of the first ways in which you can use your printer is to list your own programs.

Early on it struck us how inappropriate is the size of text for program listings, it is too large. Our bookshelves began to look like Norman libraries with scrolls of code many feet long. To get to the subroutine you wanted in a long program meant unravelling many feet of paper. How much nicer if the text could be printed in the smallest character size available, 80 characters per line. Ideal for assembler listings and a great improvement for BASIC ones.

We set about trying to do this. Our first attempt, successful but cumbersome, was to write the listing file to disc and then use a program to read in the file and write it to the printer, preceded by ESC-CNTL-S, the magic formula for getting small letters on the printer. This involved reading and writing large files - slow. We tried various other tasks, including ESC-CNTL-S as a comment in the program and using a vertical blank interrupt to write ESC-CNTL-S, until we finally came up with a workable solution.

The problem is that when confronted with a command LIST "P" to print a listing the Operating System first closes then re-opens the printer, thus setting default values and defeating any choices you may have been up to. The solution was to define a new input handler "L" whose only function is to print in small letters. We steal most of the code provided by the Operating System for the printer, "P", but substitute our own code for the OPEN routine. When we set up "L", we open the printer then print ESC-CNTL-S (Note that because "P" and "L" share code and buffers, it is dangerous to have them OPEN at the same time - not that I can see any reason for doing so.)

There are a couple of additional tricks. How about being able to forget about setting up "L" each time we turn on the computer? We can do this by making the program into a "D:AUTORUN.SYS" file which is executed automatically by DOS on power-up. (This of course works only if you have a disk drive). In addition, we do not want our facility ruined by pressing SYSTEM RESET and we can stop this by placing the address of the set-up routine in HUNAD:\$SEED:\$SE1, which is executed when SYSTEM RESET is pressed.

For those with assembler editors, a listing of the code is included. Save the object code as "D:AUTORUN.SYS". The print out is of the assembler listing rather than the source so that the BASIC program may be more understandable.

The program occupies the end of page 6 - \$640 to \$6FF. If you don't mind SYSTEM RESET destroying "L", \$6DC to \$6FF is all that needs preserving.

The BASIC program does the same thing. The first two numbers in line 1070 are a header for the file. The following four numbers are the addresses of the start and end of the routine in decimal. There follows the machine code down to line 1200. Line 1210 inserts the address of the routine in place so that SYSTEM RESET will restore "L".

Type in the program as listed. SAVE it as "L.BAS" and then RUN the program with a disk in the drive containing DOS. Turn off the computer and turn it on again. If all has gone well you should now have set up "L". Try LOAD "L.BAS" then LIST "L" and you should get a listing of the program in letters 80 characters to a line.

LPRINT does not appear to work very well with the 1020. While you can print normal size (80 characters per line), the special facilities, such as changing print size, do not work. I suspect that this is because when BASIC inserts an LPRINT statement, it closes and opens the printer, so destroying control commands that you have set it previously.

The solution is to amend programs containing LPRINT as follows:

a. Precede the last LPRINT statement executed in the program by: CLOSE #7; OPEN #7,B,O,"P"

b. Replace all LPRINTs by PRINT #7;

I have amended the TINYTEXT program to enable it to use the 1020 printer. In my version, lines 700, 725, 727, 830, 870, 885 and 930 require changing in the way that I have explained. I hope that this updated version of TINYTEXT can be made available to readers of PAGE 6. I hope to publish a revised and updated version of TINYTEXT early next year. If any other readers have modified or improved the program I would appreciate a copy. Ed.

CAMELOT

Go forth, brave knight, to rescue your damsel held captive high in the towers of a mighty castle. The way is not easy but persevere and battle through and the maiden's freedom shall be yours.

Camelot is a five screen game requiring 32k in which you control the knight as he runs around the castle attempting to reach the maiden. He can climb up and down ladders and jump from walls but needs to be precise in his movement. On each level he must find and collect a key in order to open the door at the bottom right and so progress to the next screen. Obstacles include falling fireballs, acids and barely visible bats, water and huge yellow spider monsters. Contact with any of these will prove fatal.

Each screen is straightforward though progressively more difficult but on the final screen you must first collect the sword in order to cross the water. There is a time limit for each screen and the score is based on the amount of time left at the end of each completed screen.

The way is difficult but it can be done. Go forth, brave knight!

```

10 REM *****
11 REM =*****
12 REM =*****
13 REM =*****
14 REM =*****
15 REM =*****
16 REM *****
100 REM
200 GOTO 1400
110 REM 400,800,1200,1600,2000,2400
210 REM 1400
120 REM =*****
*****
125 REM PRRRRT(1000),P0(114),P1(117),P2
51041,P15(112)M0VC=0001P000000:P00 001
TO 100:READ N:P0000V(0)=000000:PRINT
R
130 REM READ 10000 DATA
135 FOR N=1 TO 20:READ N:P0(0)=000000
:PRINT R
140 FOR N=1 TO 14:READ N:P0(0)=000000
:PRINT R
145 FOR N=1 TO 56:READ N:P0(0)=000000
:PRINT R
150 FOR N=1 TO 11:READ N:P0(0)=000000
:PRINT R
155 P000=CINT(CRND(145)*33/40)+P000
5475,P0000
160 P00=P000000250
165 P00=0001P00:REM PH DATA ADDRESS
170 N0T=0001P15
175 N0T=0001P15
180 N00=0001P15

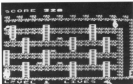
```

by Allan Knopp

```

100 P000 500,40:P000 51377,11000 PH 00
0
170 P000 704,120:P000 705,110:P000 706
,201:P000 707,54:P000 706,04:P000 710,
0:P000 711,122
175 P000 812,1
180 N=CINT(04100000+P000 51377,0
200 G000 1200
210 N0 50 00500 520,400,550,000,1045
215 P00000 0,00:0 N0:"*****" "1001"
**P00000 0,00:0 N0:"*****" "011" "01
000 0000,1
220 N=0
225 N=40:Y=54
230 N0=150:Y0=04:N0=140:Y0=40
235 N0=100:Y0=00
240 Y=52000100
245 P00000=0:P00000 0,0:0 N0:"*****"
"010M:" "01:P 010M=0 0000 100

```



```

250 N=0:Y=0 AND N(200000)=0:11 AND N0
40100:00000=400/40:0Y=00=200/4:IF 0Y=00
THEN 0Y=00:IF Y(54) THEN Y=54
255 IF P00000(00000)0 THEN G000 500
260 LOCATE 00,0Y+1,C:LOCATE 00,0Y+2,0
265 IF C=000 THEN 00500 470
270 IF C=004 THEN Y=Y+05:13 AND Y(10000)
=0:14 AND Y(10)00
275 IF C=047 THEN N=C:10000 00:PLOT 00
,0Y+1P00 001 TO 4:50000 2,10,10,15:P0
0 N=1 TO 0:PRINT N:50000 2,0,0,0:PRINT
0
280 REM *****
*****
285 IF C=040 00 C=100 AND N=1 THEN 50=
50*1:500=500+T000:1,1+2:00000 1000:0000
110
290 IF 0002 THEN Y=Y+0
295 IF C=000 00 00100 THEN 00500 1200:
0010 540
300 IF 0=150 THEN Y=Y+0

```


CAMELOT continued



```

845 POSITION 0,10:7 BK;"@ @ @ @ @
@@"
850 POSITION 0,17:7 BK;"@ @@@@@@@@@
@@"
855 POSITION 0,20:7 BK;" @@@@@@@@@@
@@"
860 POSITION 0,21:7 BK;" @ @
@@"
865 POSITION 0,22:7 BK;"@@@@@@@@@@@@
@@@@@"
870 COLOR 100:PLOT 17,2:ORW@D 17,17:P
OSITION 17,20:7 BK;"@:POSITION 17,21:
7 BK;"@
875 RETURN
880 FOR X=0 TO 22:COLOR 22:PLOT 0,0:OR
AWD 17,X:NEXT X
885 TIME#10000
890 POSITION 0,2:7 BK;"@ @ @ @ @
@@"
895 POSITION 0,3:7 BK;"@ @ @ @ @
@@"
900 POSITION 0,4:7 BK;"@@@@ @ @
@@@@@"
905 POSITION 0,5:7 BK;"@ @ @
@@"
910 POSITION 0,6:7 BK;"@@@@@@@@ @@@@
@@@"
915 POSITION 0,7:7 BK;"@@@@ @ @ @
@@@"
920 POSITION 0,8:7 BK;"@@@@ @
@@@"
925 POSITION 0,9:7 BK;"@@@@ @
@@@"
930 POSITION 0,10:7 BK;"@@@@
@@@"
935 POSITION 0,11:7 BK;"@@@@) ) )
) @@"
940 POSITION 0,12:7 BK;"@@@@@@@@@@@@
@@@@@"
945 POSITION 0,13:7 BK;"@@@@@@@@@@@@
@@@@@"
950 POSITION 0,14:7 BK;"@@@@
@ @ @@"
955 POSITION 0,15:7 BK;"@@@@@@@@@@@@
@ @@"

```

```

960 POSITION 0,16:7 BK;"@@@@
@@@@@"
965 POSITION 0,17:7 BK;"@@@@@@@@@@@@
@@@@@"
970 POSITION 0,18:7 BK;"@@@@
@@@@@"
975 POSITION 0,19:7 BK;"@@@@@@@@@@@@
@ @@@@@@"
980 POSITION 0,20:7 BK;" @@@@@@@@@@@@
@ @@"
985 POSITION 0,21:7 BK;" @@@@@@@@@@@@
@ @@"
990 POSITION 0,22:7 BK;"@@@@@@@@@@@@@@
@@@@@"
995 RETURN
000 FOR X=0 TO 22:COLOR 22:PLOT 0,0:OR
AWD 17,X:NEXT X
005 TIME#10000
010 POSITION 0,2:7 BK;" @ @ @ @ @
@@"
015 POSITION 0,3:7 BK;" @@@@@@@@@@@@
@@"
020 POSITION 0,4:7 BK;" @@@@@@@
@@@@@"
025 POSITION 0,5:7 BK;" @ @@@@@@
@@@@@"

```



```

030 POSITION 0,6:7 BK;"@@@@ @ @
@@@@@"
035 POSITION 0,7:7 BK;"@@@@ @ @ @
@@@@@"
040 POSITION 0,8:7 BK;"@@@@ @@@@@
@@@@@"
045 POSITION 0,9:7 BK;"@@@@@@@@ @@@
@@"
050 POSITION 0,10:7 BK;"@@@@ @@@
@@"
055 POSITION 0,11:7 BK;"@@@@ @@@@@@
@@@@@"
060 POSITION 0,12:7 BK;"@@@@ @@@@@@
@@@@@"
065 POSITION 0,13:7 BK;"@@@@ @@@@
@@@@@"
070 POSITION 0,14:7 BK;"@@@@@@@@ @@@
@@@@@"

```


CAMELOT continued

```

1100 PLOT 12,0:BRANDS 12,0:COLOR 12:PL
OT 0,21:BRANDS 17,21:POSITION 0,3:7 00:
"XXXXXXXX"
1105 COLOR 35:PLAY 0,4:COLOR 30:PLAY 0
,5
1110 COLOR 103:PLAY 0,5:PLAY 10,0
1115 COLOR 30:PLAY 0,10:BRANDS 0,14:PL
OT 7,3:BRANDS 7,14:PLAY 10,10:BRANDS 1
0,14
1120 POSITION 10,13:7 00:"P":POSITION
10,14:7 00:"Q"
1125 FOR X=0 TO 120 STEP -1:GOTO 1130
NEXT X:GOTO 1135
1130 GOTO 1,0,0,0
1135 FOR X=0 TO 120 STEP -1:GOTO 1140
NEXT X:GOTO 1135
1140 FOR X=0 TO 120:GOTO 1150:NEXT X
1145 IF Y=64 THEN FOR Y=7 TO 64 STEP -
1:GOTO 1150:INCR Y:GOTO 1145
1150 FOR Y=7 TO 64:GOTO 1160:INCR Y
1155 FOR Z=0 TO 100:FOR T=70,2:GOTO 1
,2,14,14:INCR T
1160 FOR Z=100 TO 0 STEP -1:GOTO 1,2,
14,14:INCR T
1165 GO=1:FOR P=FOR 704,130:GOTO 455
1170 G=5:G=5:G=5,0,P=0,P=0,0,Y,100:G=10
00
1175 IF SC=1 THEN POSITION 0,5:7 00:"C"
"
1180 IF SC=2 THEN POSITION 14,14:7 00:
"C"
1185 IF SC=3 THEN POSITION 7,0:7 00:"C"
"
1190 IF SC=4 THEN POSITION 0,21:7 00:"
C"
1195 RETURN
1200 FOR Z=0 TO 12:COLOR 12:PLAY 0,2:10
BRANDS 15,2:INCR Z:RETURN
1205 POSITION 0,2:7 00:" B
"
1210 POSITION 0,3:7 00:" 040 0 0 0
040 "
1215 POSITION 0,4:7 00:" 0000000000000000
0000"
1220 POSITION 0,5:7 00:" 00 00 0 0
0 00"
1225 POSITION 0,6:7 00:" 0 0 0 0 0
0"
1230 POSITION 0,7:7 00:" 0 M 0 0 0
0 0"
1235 POSITION 0,8:7 00:" 0 0 0 0 0
0 0"
1240 POSITION 0,9:7 00:" 0000 0 000 0
0000"
1245 POSITION 0,10:7 00:" 00000000000000
00000"
1250 POSITION 0,11:7 00:" 00000000000000
00000"

```

SCREENDUMP

These Memoriams were drawn by Roy Lynch from Liverpool using Micropainter. Roy has been drawing on his Atari for nearly two years and has sent in a whole disk of pictures. He is 17 years of age and studying at school for his 'O' levels. He owns an Atari 800 with disk drive and cassette.



LONDON '00



Have YOU drawn any pictures using your Atari? If they are in Micropainter format or use the Atari Touch Tablet please send them in for inclusion in future SCREENDUMP.



Magical Electronic Services ATARI 810 DISK DRIVE

AUTOTECT MODIFICATION

CONSISTS OF A SMALL CIRCUIT BOARD AND A SMALL BOX. IT IS EASILY FITTED AND DOES NOT REQUIRE SOLDERING. WHEN FITTED IT FEATURES THE FOLLOWING

1. WRITE TO SIDE B OF A DISK WITHOUT CUTTING NOTCHES.
2. PROVIDES WRITE PROTECT WITHOUT PROTECT LABELS.
3. QUIETENS DRIVE DOWN.
4. FEATURES FLASHING RED/CONSTANT GREEN PROTECT/UNPROTECT INDICATOR.

SUPPLIED COMPLETE WITH EASY TO FOLLOW FITTING DETAILS

£17 inclusive of p&p.

SPEECH SYNTHESISER

THIS UNIT CONSISTS OF A BOX WHICH PLUGS INTO THE JOYSTICK PORTS. IT HAS THE FOLLOWING FEATURES.

1. BUILT IN SPEAKER
2. ALLOPHONE SYNTHESIS. THIS MEANS THAT IT HAS AN UNLIMITED VOCABULARY.
3. DOES NOT BLANK SCREEN.

THE UNIT IS SUPPLIED COMPLETE WITH A WORD CONSTRUCTION PROGRAM AND SOME DEMOS. A COMPREHENSIVE MANUAL IS ALSO SUPPLIED.

PLEASE STATE WHETHER 400/800 OR XL. ALSO DISC OR TAPE.

£33 inclusive.

Send large s.a.e. for details of the above and other items.

Magical Electronic Services, 14 Durham Close,
Little Lever, Bolton BL3 1XA

NOW!

MORE THAN EVER IT'S CHANNEL 8 SOFTWARE FOR THE FAMOUS

Mysterious Adventures

NOW
DOWN TO

£6.95

For AMARI,

500, DORSETSHIRE,
ORADON,
SHEFFIELD,
& SPILL FURN.

To Channel 8 Software,
51, Fishergate, Preston, Lancashire, PR1 3 8BH.

Please send me the following Mysterious Adventures

- | | | |
|--|--|--------------------------|
| <input type="checkbox"/> THE GOLDEN BAYON | <input type="checkbox"/> PERSEUS & MEGARA (A) | <input type="checkbox"/> |
| <input type="checkbox"/> THE TIME MACHINE | <input type="checkbox"/> ESCAPE FROM PILLAGE ? | <input type="checkbox"/> |
| <input type="checkbox"/> GIGAS | <input type="checkbox"/> FEASIBILITY EXHIBMENT | <input type="checkbox"/> |
| <input type="checkbox"/> ARROW OF DEATH PART 1 | <input type="checkbox"/> MIGHTY INDIANS | <input type="checkbox"/> |
| <input type="checkbox"/> ARROW OF DEATH PART 2 | <input type="checkbox"/> WARRIORS | <input type="checkbox"/> |
| <input type="checkbox"/> THE WEIRD OF AYSER | <input type="checkbox"/> | <input type="checkbox"/> |

YES! NO!

Send, Please, P.S. enclosed or Accompany Card.

Forward To:

NAME:

ADDRESS:



CHANNEL 8 SOFTWARE
51 Fishergate, Preston,
Lancs PR1 3BH.
Tel: 03772 52057



Selected titles available from larger branches of
Greens at Debenhams, Linn's, Spectrum dealers and
most computer shops everywhere, in case of difficulty send P.O. or Cheque direct.

To start play on a WHITE WOLF ADVENTURE is to take a step out of the world of reality and into the world of dreams. Your Computer is now joined and welcome to continue where things happen in simple commands in plain English - you can type "to enter Cemetery Church 4" and it will show what happens on the 32-Master Plot.

Victagraph Plot Window

Reviewed by Les Ellingham

Back in issue 2 we reviewed the Victagraph Plot Window, a design aid for creating graphics on your Atari computer. The Victagraph has now been revised to include a comprehensive manual with a large section devoted to the 1020 printer/plotter and in view of the popularity of this printer I thought it was about time we had another look at the Victagraph.

The Plot Window itself remains unchanged. To re-cap, it consists of four sheets of plastic measuring 17" x 12". One is a white base sheet, two are see-through sheets with scales of 320 horizontally by 200 vertically and the final sheet is a clear mask with sights at each corner which enable you to plot and read off points. Quite complex designs can be copied as the accompanying illustration shows. The scales are ideally suited to Graphics 8 although other modes can be used with either a smaller doubling or by scaling down. Good quality materials are used throughout and the Victagraph remains an inexpensive way to get quality graphics on the screen.

The new addition is a 46 page A4 size manual which will appeal especially to owners of the 1020 printer/plotter. Although concerned with the use of the Victagraph, the manual is an excellent introduction to graphics in general using many illustrative programs and most of the later half relates directly to the 1020. Most of the design of the manual, including the cover, illustrations, headings and listings have been done with the 1020, showing just how versatile the machine is. The main text is typed with a good quality typewriter but this does not detract from the content of the manual.

All different sorts of graphics design are covered including comprehensive detail on the use of the little documented XIO FILL. Graphics modes 0 to 11 are fully explained with the colours available, resolutions etc. and demo programs are included for each. Other chapters cover the drawing of circles, grids and different kinds of fill. The section dealing specifically with the 1020 covers text and graphics modes and explains cartesian and



An inexpensive aid to designing graphics

relative co-ordinate systems to enable full use to be made of the printer. There follows a set of programs to enable easy placing of text, enhanced text, circle text (very impressive) and rotated text in the graphics mode of the printer. It also includes three design aid programs making it possible to mix text and graphics as desired.

If you are at all interested in graphics design on your computer, the Victagraph will provide an inexpensive aid to creating complex designs. If you have a 1020 printer/plotter, it may be worth the price just for the manual for there is precious little in Atari's own manual to enable you to use the printer to the full.

The Victagraph Plot Window retails at £11.75 and can be obtained by your local dealer from Hi-Tech Distribution Ltd. Further enquiries may be made directly to the manufacturers, Victagraphics, 7, Speckley Drive, Rugby, Staffs. Tel. 08994 78210.



Sketch by David Eaton using the Victagraph Plot Window.

```

# REM *****
1 REM #   SIMPLE SYNOPSIS#
2 REM #   BY LES ELLINGHAM #
3 REM *****
4 REM PRESS ANY KEYS - TRY CODE
7 REM PRESS START OR SELECT TO ALTER
   PITCH OR HOLD OPTION
10 PEEK 52762,100:POKE 52761,100
20 PEEK 52775,100
30 PEEK 52768,1
40 IF PEEK52770=0 THEN PEEK 52768,0
40 IF PEEK52771=0 THEN PEEK 52768,1
50 IF PEEK(764)=100 THEN 40
60 PEEK 52768,PEEK(764)
70 FOR I=10 TO 4 STEP -1:POKE 52761,10
  @TIMERT 1
80 IF PEEK52770=1 THEN 60
100 PEEK 764,100:GOTO 40

```


BULL ANTS

by Sydney Brown

Bull Ants is basically a two-player game although it can be played by one person.

You and your friend are ants and you have lived happily in your nest for a long time but now the construction workers have moved into the neighborhood and are using explosives to dig trenches for foundations of a new shopping centre. Another problem are the bull ants which have moved into your nest because their home was destroyed in the first phase of construction.

Use joystick 1 & 2 to control the red and green ants. You must move your five eggs from the bottom of the nest to safety at the top of the screen. On the way up you must watch out for cave-ins and the bull ants.

If you are hit by a cave-in, you will be sent to the top of the screen. If you are stung by a bull ant, you will be paralyzed and will have to wait for the next explosion to shock you out of it. In either case, if you were carrying an egg, you will lose it and it will be represented by a black egg appearing at the top of the screen on your side.

The winner is the one who gets the most eggs to the top safely. If both players get the same number, the winner will be the first to get them there.

```

0 REM *****
1 REM *          BULL ANTS          *
2 REM *          BY SYDNEY BROWN   *
3 REM *          -----          *
4 REM *          First published in *
5 REM *          ACE NEWSLETTER,   *
6 REM *          1983, WINE HAPLE DRIVE *
7 REM *          ESCENE, OREGON, U.S.A. *
8 REM *****
9 REM
10 T "M"SPC1G0500 0000
11 00=STICK0401:POKE 53270,0:AL=01+SP:
12 IF 01+10 THEN 00=10
13 01 IF 01+10 THEN 00=
14 02 POKE 53250,01:IF 51=04 AND 0100 TH
15 EN LOCATE 01,02-1,2:IF 2=02 THEN COLOR
16 32:PLOT 02,01:01=01+1:GOTO 003
17 03 IF 51=13 AND 01+2 THEN LOCATE 01,
18 01+2:IF 2=02 THEN COLOR 32:PLOT 01,0
19 01+0+1:GOTO 003
20 04 IF 51=08 AND 02+0 THEN LOCATE 01-1
21 ,01,2:IF 2=02 THEN COLOR 32:PLOT 01,01
22 01+0-1:GOTO 003
23 05 IF 51=7 AND 02+1 THEN LOCATE 01+0
24 ,01,2:IF 2=02 THEN COLOR 32:PLOT 01,01
25 01+0+1:GOTO 003
26 06 COLOR 347:PLOT 01,01:IF 01=0 OR 01
27 =02 THEN GOTO 000
28 07 51=51ICK05:02=02+SP:IF 02+10 THEN
29 02=000
30 11 IF 003=1 THEN 215
31 02 POKE 53250,02:IF 51=04 AND 0100 TH
32 EN LOCATE 02,02-1,2:IF 2=02 THEN COLOR
33 32:PLOT 02,02 215
34 03 IF 51=13 AND 02+0 THEN LOCATE 02-1
35 ,02,2:IF 2=02 THEN COLOR 32:PLOT 02,02
36 02+0-1:GOTO 215
37 04 IF 51=7 AND 02+1 THEN LOCATE 02+0
38 ,02,2:IF 2=02 THEN COLOR 32:PLOT 02,02
39 02+0+1:GOTO 215
40 05 COLOR 347:PLOT 02,02:IF 02=0 OR 02
41 =02 THEN GOTO 000
42 06 51=51ICK05:02=02+SP:IF 02+10 THEN
43 02=000
44 07 01=00+SP:IF 01+10 THEN 01=100
45 02=02-SP:IF 02+10 THEN 02=000
46 08 POKE 53250,01:POKE 53251,02
47 09 IF 000=0:32504:0 OR 000=0:32505:0
48 0 THEN GOTO 000
49 10 IF 01=0 AND 02=0 THEN 000
50 11 IF 000=0:32750:0 THEN 015
51 12 IF 000=0:32750:0 THEN 005
52 13 IF 000=0:32750:0 THEN 005
53 14 000=0:32750:0:32750:0:32750:0:32750:0
54 15 000=0:32750:0:32750:0:32750:0:32750:0
55 16 000=0:32750:0:32750:0:32750:0:32750:0
56 17 000=0:32750:0:32750:0:32750:0:32750:0
57 18 000=0:32750:0:32750:0:32750:0:32750:0
58 19 000=0:32750:0:32750:0:32750:0:32750:0
59 20 000=0:32750:0:32750:0:32750:0:32750:0
60 21 000=0:32750:0:32750:0:32750:0:32750:0
61 22 000=0:32750:0:32750:0:32750:0:32750:0
62 23 000=0:32750:0:32750:0:32750:0:32750:0
63 24 000=0:32750:0:32750:0:32750:0:32750:0
64 25 000=0:32750:0:32750:0:32750:0:32750:0
65 26 000=0:32750:0:32750:0:32750:0:32750:0
66 27 000=0:32750:0:32750:0:32750:0:32750:0
67 28 000=0:32750:0:32750:0:32750:0:32750:0
68 29 000=0:32750:0:32750:0:32750:0:32750:0
69 30 000=0:32750:0:32750:0:32750:0:32750:0
70 31 000=0:32750:0:32750:0:32750:0:32750:0
71 32 000=0:32750:0:32750:0:32750:0:32750:0
72 33 000=0:32750:0:32750:0:32750:0:32750:0
73 34 000=0:32750:0:32750:0:32750:0:32750:0
74 35 000=0:32750:0:32750:0:32750:0:32750:0
75 36 000=0:32750:0:32750:0:32750:0:32750:0
76 37 000=0:32750:0:32750:0:32750:0:32750:0
77 38 000=0:32750:0:32750:0:32750:0:32750:0
78 39 000=0:32750:0:32750:0:32750:0:32750:0
79 40 000=0:32750:0:32750:0:32750:0:32750:0
80 41 000=0:32750:0:32750:0:32750:0:32750:0
81 42 000=0:32750:0:32750:0:32750:0:32750:0
82 43 000=0:32750:0:32750:0:32750:0:32750:0
83 44 000=0:32750:0:32750:0:32750:0:32750:0
84 45 000=0:32750:0:32750:0:32750:0:32750:0
85 46 000=0:32750:0:32750:0:32750:0:32750:0
86 47 000=0:32750:0:32750:0:32750:0:32750:0
87 48 000=0:32750:0:32750:0:32750:0:32750:0
88 49 000=0:32750:0:32750:0:32750:0:32750:0
89 50 000=0:32750:0:32750:0:32750:0:32750:0
90 51 000=0:32750:0:32750:0:32750:0:32750:0
91 52 000=0:32750:0:32750:0:32750:0:32750:0
92 53 000=0:32750:0:32750:0:32750:0:32750:0
93 54 000=0:32750:0:32750:0:32750:0:32750:0
94 55 000=0:32750:0:32750:0:32750:0:32750:0
95 56 000=0:32750:0:32750:0:32750:0:32750:0
96 57 000=0:32750:0:32750:0:32750:0:32750:0
97 58 000=0:32750:0:32750:0:32750:0:32750:0
98 59 000=0:32750:0:32750:0:32750:0:32750:0
99 60 000=0:32750:0:32750:0:32750:0:32750:0

```


Music Maestro Please

Playing music on a computer is no substitute for learning or playing an instrument but computer music can be fun and, if you find the right program, can be educational. I will take a look here at two of the lesser known music programs for the Atari. **POKEY PLAYER** is more suited to the user who just wants to add some music to his programs without learning too much about music while **ADVANCED MUSIC SYSTEM II** will also cater for the more serious music enthusiast.

POKEY PLAYER: The program is named after the IC in Atari computers which generates sound and enables the user to program the computer to play music using three 'voices'. The documentation is quite comprehensive, and certainly adequate insofar as using the facilities of the program are concerned. One needs to know some basics about written music to be able to program a computer to play it, however 'user-friendly' the program is, and the documentation with **POKEY PLAYER** attempts to introduce music to a beginner in the subject. It does a fair job with respect to the program. From a purely musical point of view however, it is full of mistakes and misleading suggestions at least with regard to accepted musical education in England. I don't know if there is a different system in the U.S.A but I would doubt it. So, if you are new to music, take **POKEY PLAYER's** documentation as a rough guide only to music theory.

The disk contains a full directory of data, mostly demonstration tunes, but also an Editor, Compiler, Merge program and a Player. Three of these are BASIC programs, the Compiler is a binary file. There is also another program for advanced users.

Booting up the disk with BASIC installed loads and runs the Player, listing all the tunes available and asking for one's choice. There is a wide selection of styles, classical or modern, which show off the capabilities of the program and the computer. Some of the lively tunes and the baroque style of Bach and Handel come across very well, but the slower melodies tend to emphasise the raw square wave sound used by the computer.

Now, what about typing in some music? One enters the Editor program. This is a very clever program, using a custom display list, reddefined characters and Player Music Graphics. The perfect choice of colours and graphic detail give this a totally professional feel and the use of the joystick to enter notes is convenient and very easy to learn. Having the notes displayed on bass or treble staves, on a graphic keyboard and by name is very helpful to ensure that the correct note goes in. I found it quick to enter notes straight off of sheet music but there is a problem in checking the entry as there is no facility to listen to the notes just entered. One hears the pitches as they are stored but not in succession or time. The joystick is used again to select a parameter - rests, pitches, note values or ties and from side to side to raise or lower

the value of a note. Pressing the joystick button enters a note. The keyboard is also used to delete/insert, load/save, label and move measures and set tempo and sound quality.

I found the error checking and editing of entered tunes a major drawback with the program. One has to enter three voices before the program can play a tune, even if it means entering nothing but rests (An easy way around this is to save the first tune as .V1, duplicate this voice using DOS and rename the additional two files using .V2 and .V3. Ed) If the tune is playing too slowly for example, one has to reload the Editor program, then reload each of the three voices in turn, adjust the tempo on each and then save all three again. Next reload the Compiler (from DOS) and compile the three voices into one, then load the Player to hear the tune again. If it is still not right...well you need patience! The editing of incorrect notes/tempos is as involved as to be an unacceptable time consumer for me and I suspect will be an aggravation to other users.

To end on a positive note, the music files are very compact, shown by a full disk directory but not a full disk, so if an application requires compact music files then one will have to perfect the art of entering music note by note without mistakes! There are 50 tunes on the disk so even if you do find entering your own tunes difficult there is plenty to listen to!

Editor's note: One of the biggest advantages of **POKEY PLAYER** (and covered in the manual) is that the tunes can be edited very easily to your own BASIC programs and played while the program is busy doing other things. In a later issue I hope to present a program that will allow you to take any of the tunes from the disk and edit them to your own programs to be played while your program is running.

ADVANCED MUSIC SYSTEM II: The documentation begins "It is oriented towards those familiar with music notation and basic musical terms". There is no instruction on how to read music but there are plenty of books available for the beginner in music. I think it is much better to get a book specifically to learn music theory and then tackle music programming. If you are interested enough to want to use your Atari as a player, you will probably have a desire to learn about the theory of music or will have a basic knowledge from school.

Although this is an advanced music system, the instructions are very clear in showing one how to use the program, giving plenty of examples. The system handles 4 voices over 5 1/2 octaves and is so efficient that it can play as fast as 2100 notes a second! Envelope control gives 3 levels of note decay, one can change the speed using a joystick while the music is playing, recording sync is provided for multi-tracking and the editor is fantastic! The system supports key signatures, time signature (up to 32/32), whole notes through to 64th notes (semibreve to

..... two music programs reviewed by Phil Brown

hemidemisemiquaver) and odd note durations such as double dotted notes, triplets, septuplets and beyond. The editor performs 'musical syntax' checks on note-entry and, importantly, on whole measure (bar) entry. As soon as you have entered any notes you can press F10 to hear what they sound like, at whatever speed you choose. A very helpful feature when the notes are fresh in mind.

The program is autoboot disk, also available on cassette, written in machine language with several demo pieces, all well known classical pieces, each showing off a different capability, from Flight of the Bumblebee through Bach's Toccata & Fugue in D Minor to a Chopin Piano piece. As each piece of music is played there is a 5% octave keyboard on the screen and one can see all the notes moving highlighted by a different colour for each voice - very impressive.

After booting the disk, the user is presented with a menu of functions available, including DOS functions. The most important is the Editor. Choice of this presents another screen where music can be typed in and edited. All entry is via the keyboard and it took me a while to get used to this, especially the American terms for notes such as halfnote, quarternote, eighthnote meaning, respectively, a minims, crotchets and quavers. It would probably help to draw a diagram of all notes with their English and American equivalents if you felt at all unsure. Also, since the octave of the pitch has to be specified by a number (1 - 6), it would help to draw up a diagram showing bass and treble clefs and the places where the octaves change number. There is a prompt at the bottom of the screen to remind one of the note entry format which is NOTE / OCTAVE / DURATION / ENVELOPE / VOLUME.

These parameters all remain constant except the NOTE, so if the music has several notes of the same length, you only have to type the note letter (A - G). Facilities are there to repeat notes and phrases and delete notes or whole bars. I found it slow going at first, thinking of note names and values, then typing each one in, but after 2 or 3 sessions I became quicker and the last piece I typed in (one of Bach's Gavottes for 2 voices) took only two hours from start to finish - and that was on my 400 using my two finger typing technique!

It is very good practice using this program to enter music because it makes one follow correct musical convention. For example, you are not allowed on to the next bar until the present one is full. Anyone studying for music theory exams will appreciate the possibilities, such as entering ornaments, which AMS II handles a treat. If you would like to hear a quintuplet of quavers played against 4 quavers, AMS II can do it. My fingers boggle at the screen watching Chopin's music being played.

Whatever program one uses to play music on the Atari, the end result will depend on how well the programmer understands the composition of music. Altering the dynamics of each voice and the envelope of each note will make a big difference to the final sound and an efficient editor is vital to allow one to experiment with different ideas. With AMS II it is so easy to alter the tempo with a joystick and so get the right feel of the piece. This can be done for any number of bars and any combination of voices.

SOME FINAL THOUGHTS As with all computer programs it is sometimes asked "What is the point of it?" or "What use is it?". Apart from any amusement value, is there any point in playing music on a computer when one can buy pre-recorded music?

I have already mentioned the educational value of AMS II and this could be very important to some individuals. The actual sound isn't very good and the Atari does not have perfect pitch. The Atari can only generate raw square waves with these programs and this tends to be a bit harsh and uninteresting, even through a good hi-fi system, although to be fair, the varying envelopes and dynamics available do help. I recently patched the output of the Atari through my electronic organ, adding reverb, rotating loudspeaker, wah-wah etc. and the results were encouraging. There are interesting possibilities here. The ultimate would be to interface the Atari with the keyboard contacts so it could play the organ. This is done with other computers (e.g. the MDR interface) so it must be possible with the Atari.

One can use music programs to generate parts of access to play along with. This is a good discipline as Atari keeps perfect time and I can recommend this as a practical use.

One can type in difficult passages to hear how they should sound. Music purists may not approve but I find it very helpful especially with some parts of Bach's music.

As a church organist I can look forward to the future with some trepidation and see my replacement being an Atari with a disk full of hymns, a disk of wedding music and a disk of funeral music with the Minister having a joystick in the lectern to increase the speed on cold days!

FOREY PLAYER is available from PAGE 6 price £5.95 and requires a 48k disk system.

ADVANCED MUSIC SYSTEM II is available from LOTSABYTES, 15-445 Venture Blvd, Suite 000, Serrano Oaks, CA 91412, U.S.A. price \$14.95 plus 15% shipping.

High Quality - Low Cost

SORLOW software102 Leicester Road, Northborough,
Leicestershire, Leic. LE12 0JG, U.K.**SPECIAL OFFER!****20% OFF**ALL ORDERS
RECEIVED BY
31 January 1985

1 SOFTWARE £8-50
 Revision/learning aids based on the 10 Level syllabus.
 Extended computer base with visual soundtrack.
MATHS 1 GEOMETRY
ENGLISH

2 TRAVELAID £8-50
GEOGRAPHY 1 Great Britain and Ireland towns and cities
GEOGRAPHY 2 United States of America learn the States
GEOGRAPHY 3 Europe countries and capitals
GEOGRAPHY 4 Asia countries and capitals

MEMORY MAKER features the famous person from the story.

3 DOODLEBUG £8-50
 Drawing fun for all ages! *Keyboard required*

4 4 LETTER WORD £8-50
 discover the hidden words. *There's over 800 of them!*

There's a lot to learn!

All prices are exclusive of postage and packaging for Postage BANC carriage.
 Free post and packing. Trade enquiries welcome.

**ATARI 400, 800
800XL & 800XL**

CONTACT

WANTED: ANALOG issues 1 - 7, 10 & 16. **ANTIC** Vol 3 issues 1 - 4. Best prices paid or I have copies of **ANTIC** V.2, 6, 7 & 11) and **ANALOG** 18 to swap. Also I will buy any faulty Atari equipment (not VCS or controllers). Finally I would like to meet any other users in the Watford area. Please contact Chris Bena, 10, Garton Drive, Watford, Herts, WD2 6LB. Tel. Garton 672235.

WELLINGTON USERS GROUP: Anyone in the Wellington, Somerset area please contact Martin Rogers, 3, Wharf Cottages, Wellington, Somerset, TA21 0AJ.

PROGRAM TYPING: I just don't have the time to type all the programs I would like and wish to contact other users with the view of swapping magazine programs. Please contact John Marshall, 70, Marston Cres., Clifton Estate, Nottingham, NG11 9DU.

MACHINE LANGUAGE: Can anyone advise me how to **PILOT** and **DRABED** in **Graphics 10** using machine language? Michael Courtney, 64, First Avenue, Gillingham, Kent, ME7 2UG.

GHOST TOWN: How can I find the Silver Cup? To my shame I have been stuck on this for 9 months! Can anyone help? I have completed **Adventureland**, **Strange Odyssey** and **Golden Baton** and would be pleased to help others on these. Tom Gairford, 15, Vernon Court, Park Road, Crouch End, London, N8. Tel 01 340 0329.

SUPERSOFT

THE CREATOR a powerful utility which will design up to 99 images in one load, which can then be downloaded and saved in your own BASIC programs.

TDK Tape £10
 Memorex Disk £15

THE HELPER Stuck on an Adventure? Frustrated with all the witches, dragons, wizards and magic spells against you? No wonder you need **HELP** and **THE HELPER** gives it to you. **THE HELPER** will let the program to screen and allow you to search for clues. In fact it is an extra adventure all by itself.

TDK cassette £10

PINBALL WIZARD Four separate pinball games on a double sided Memorex disk **ONLY £15**

ALL POST FREE - MAIL ORDER ONLY
DESPATCH WITHIN 24 HOURS

SUPERSOFT, 15, Woodbrooke Road, Birmingham, B30 1UE

MORE ARTICLES PLEASE!

The number of articles we have available for future issues is now quite small, so how about having a go and writing an article for other Atari users to enjoy. Articles on any aspect of Atari computing are welcome. If there is an area of programming that interests you why not write an article about it?

We try not to repeat previously published articles but if you can find a new variation or enhancement to an earlier article or program we would be pleased to hear from you. If you can come up with something that we have not covered, even better!

Don't forget programs either. In fact anything that interests you is bound to be of interest to other readers. Don't forget also that you may be the winner of next year's Readers Poll.

SUPER ATARI EXTRAS SALE



400/800 LIGHT PEN AND GAME

FULL
INSTRUCTIONS FOR
USE AND SAMPLE
PROGRAMS INCLUDED

£12

5 LIGHT PEN GAMES

ON SEPARATE
CASSETTES
FULL COLOUR
AND SOUND

(worth it just for cassettes)

£2.50

ZAP-PROOF JOYSTICK

ALMOST UNBREAKABLE



2 FIRE BUTTONS
SUITS ALL
MODELS

£7.95

AUTO FIRE ADAPTOR

SUITS ALL ATARI JOYSTICKS (inc. ours)



PLUGS
BETWEEN
JOYSTICK
& MACHINE

£4.75

10 NEW C12 TAPES

IN
LIBRARY
BOXES

£5.50

10 "BLANK" TAPES

THESE ARE NEW TAPES
INCORRECTLY RECORDED
BY OUR DUPLICATOR.
PERFECT AS NEW BLANKS IF
ERASED OR RECORDED
OVER

£2

DUSTCOVERS

FIRE RETARDING/ANTI STATIC

ATARI 400 **£2.50**

ATARI 800 **£2.50**

ATARI 600 **£2.50**

EPSON PRINTER **£5.00**

+ MANY OTHERS (send for list)

DISKETTES QUALITY BRAND

Box of 10

£22

LISTING PAPER PACKS

(state size required)

2000 sheets **£12 + £6** Carriage

1000 sheets **£7 + £3.50** p. & p.

500 sheets **£4 + £2.00** p. & p.

250 sheets **£2 + £1.90** p. & p.

TV EXTENSION LEAD

2 METRES
CO-AX MALE-
FEMALE

£1

All prices include VAT

Add P. & P. £1.90

Free over £25 EXCEPT PAPER

All major cards accepted.

Cheques to:

STACK COMPUTER SERVICES LIMITED

295-298 DERBY ROAD, BOOTLE

MERSEYSIDE L20 8LN.

Telephone: 051-933 9511

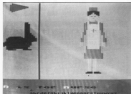
Telex: 627026 (Stack G)

Software Reviews... The Software Reviews... The Software

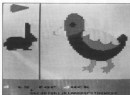
ALPHABET 48k disk/cassette written by M. White

Alphabet is a pre-reading program for the average four to five-year old very similar to Atari's *My First Alphabet* but written in this country and therefore without any problems of 'Americanism'. The program was originally accepted by Atari to be released in a line of home produced educational software but following the takeover, Atari decided not to publish it and it is now sold direct by the author.

The program presents a series of pictures for the child with a caption such as 'a is for apple' and the letters of the alphabet underneath for the child to identify the correct letter with which the word begins or ends. Generally the program is very good. There are one or two not so good points but none of these later. Firstly let's look at the good points.



The manual is excellent. It has been written in conjunction with a primary school teacher and, apart from explaining the program in detail, it contains a guide for you as a parent on how to use the program in conjunction with your child to get the most benefit. It makes it clear that learning with a computer requires active participation from both child and parent and proper encouragement whether the answers given are right or wrong. The program itself contains a picture for each letter of the alphabet with a corresponding word and a series of options for choosing a letter in that word. The order suggested by the authors is: first letter of the word highlighted, last letter highlighted, other letter highlighted (at random), first letter normal (yet distinguished from the rest of the word), last letter normal, other letter normal, first letter missing, last letter missing. Following this progression it becomes more and more difficult for the child but he/she should be able to tackle



each level having learnt the last. Further options allow the pictures to be presented alphabetically or at random. Prior to playing, the game can be put in an autism mode to enable the child to get used to the program.

When a picture is shown, the caption beneath will state, for example, 'j is for jam' and the child must use the joystick to move an arrow above the letters of the alphabet to choose the letter 'j'. If he is correct the background of the screen flashes and a rabbit on the left hand side will be redrawn closer to a carrot. Each correct answer will move the rabbit nearer until he reaches the carrot when a nursery rhyme will be played. If the letter chosen is wrong, the program will give the correct answer and move the pointer to the correct letter.

The actual teaching side of the program has been well thought out and the pictures are very colourful. Graphics 10 has been used for extra colours but this does tend to make many of the pictures somewhat blocky. What of the other niggles? The sound could, and should, be a lot better. As each picture is drawn it is accompanied by a monotonous single rising or falling tone that approximates, at least to adults, other two or three times. The rabbit is redrawn each time, slowly, whereas player missile graphics could have been used to add more interest and better movement. Getting out of a picture if the wrong one is chosen is by holding the option key but it is far too slow to react. Finally the packaging is pretty basic to say the least. While there is no need to go to Atari extremes of selling more boxes than programs, I feel that better presentation would add greatly to peoples acceptance of the program.

The educational value for the child cannot be faulted and it is on this that the program should finally be judged. Personally I prefer *My First Alphabet* but *Alphabet* is half the price and it is written in England. It is also available on cassette while *My First Alphabet* is only on disk.

Reviewed by Les Ellingham



SOFTWARE EXPRESS



31 STONEYHURST ROAD, EDINGTON, BIRMINGHAM
TELEPHONE: (021) 384 5000

Dear Atari User

If you think that SOFTWARE EXPRESS is just another mail order company then you are WRONG!!!!

We have gathered together our own Atari 'A-TEAM' of experts, from within the computer industry, to provide you, the user, with the most comprehensive service available in the U.S.

Our product knowledge and world-wide contacts enable us to obtain any Atari products. Our boast is simple:

"IF ITS AVAILABLE ANYWHERE IN THE WORLD WE WILL GET IT".

And that's NOT just software, but hardware, printers, cables, modems, magnetic media, basically anything you care to name.

You may also take out subscriptions to specialist magazines, we also supply individual copies (subject to availability)

We haven't forgotten books either- there are many to choose from and we will be more than pleased to advise.

Problems? We don't believe in them, we have an efficient technical back-up team able to assist you with any hardware or software queries.

Mix all these ingredients together and you have a recipe for the most comprehensive service available for the gourmet Atari consumer.

Now put us to the test...

Yours sincerely

*Mike Jones
SOFTWARE EXPRESS*

P.S. After office hours Telephone (021) 773 2849

P.P.S. We also operate a separate Commodore Service.

Reviews... The Software Reviews... The Software Reviews...

DONKEY KONG JR Atari 16k ROM 1/2 players

This is the second part in what might be termed 'The exploits of Mario'. In case you did not know, the story began with Mario the Mad Carpenter rescuing his girlfriend, or trying to, from an even more mad gorilla called Kong.

In the second part of this delightful tale, Mario completely flips his lid, kicks out his girlfriend and imprisons Kong in a cage. Fortunately for Kong, his little lad, Kong Junior, finds out what mischief Mario has done and sets out to the rescue. Mario, having experienced Kong's defence system creates one of his own. Thus the scene is set for our intrepid hero Kong Junior.

Mario's defences are very 'age-oriented' with lots of ropes to climb and delicious fruit including, inevitably, bananas to go. There are four different screens in all and they require practice to complete.

The first screen requires Kong Junior to climb ropes and jump chimney pots while avoiding Mario's deadly pets, the Snappers! Looking rather like oversized crocodile clips, these come in two varieties, purple and blue. Purple Snappers move up and down the ropes whilst the blue ones slide down the ropes very quickly and drop off the end. Both types can be destroyed by dropping fruit on them. Kong is chained up in his cage at the top of the screen and when Junior finally reaches him,

Mario pulls the cage out of reach off the screen.

The second screen is totally different. Now Kong Junior has to push several keys up their ropes to the scaffolding at the top. He is hindered by the Snappers and a squadron of geese who flap across the screen at different heights trying to dislodge him. When all the keys have been grabbed here there is a delightful animated scene of Kong Jr. rescuing his dad and Kong kicking Mario who goes spinning into the sky.

All this fun is, however, short-lived for in screen three Kong is imprisoned again and Kong Junior has to climb ropes and ladders, travel across moving platforms and jump on a trampoline all while avoiding the geese who now drop eggs on him!

It is beyond my power (and sanity!) to reach the fourth screen which apparently is the most difficult of all. As in Donkey Kong the screens are split spaced run in the order 1,2,1,3,2,4 and the game has one or two player options, choice of difficulty level and a freeze option.

Donkey Kong Junior is the best of the series with good graphics - colourful, detailed and original - and with good sound. The game is highly addictive and the expression on Kong Junior's face when he gets killed just has to be seen!

THE CREATOR Supersoft 48k disk/cassette

The CREATOR is a player-mouse graphics design aid and is very similar to Channel 5's The Constructor. In fact it is so similar it could be a prototype.

A grid is presented on screen 22 bytes high by 8 wide on which points can be plotted with the joystick to form an image which the program then stores as a player. Several editing features are included but some are missing such as the ability to scroll the entire image left or right or up and down. Up to 99 images can be drawn and then put together in an animation sequence. When you are satisfied, these can be saved to cassette or disk on either a file or a program in BASIC.

This type of program is intended to take the hard work

out of designing players for inclusion in your own programs and it does help but I have always felt (and this applies to The Constructor also) that if you are sufficiently advanced to incorporate player-mouse graphics in your own programs, you should have no problem in either designing your own players or writing a simple utility to do it for you. Most programs of this nature just end up being fun to play with in their own right.

AME 15 for the disk version and E10 for the cassette this is very overpriced (as is The Constructor) and with ANALOG having just published a Player/Mouse Animator/Editor, I feel that the life of The Creator is limited.

THE HELPER Supersoft 16k cassette

The HELPER is an aid to Adventure players available from Supersoft on cassette at £10. It enables you to load a cassette based machine code adventure into memory and then examine the listing for clues. It has a colourful introduction and a pleasant screen design but basically does no more than the listing on page 28 of issue 10 of PAGE 6.

I am sorry to be so negative about TWO products from

the same company but I really feel that SuperSoft ought to think again. This would make an excellent magazine listing but as a commercial program it is just not worth £10. With the programs published by ANALOG and ANTRC becoming more and more sophisticated and the price of Atari ROM cartridges at £9.95, any programmer writing in BASIC needs to think long and hard about the commercial value of his program.

Reviewed by Craig Fuller and Les Ellingham

BACK ISSUES

Issue 1 - Includes Lotus 1-2-3 - Arcade Action - Merlin's Magic Square - Memory Mapped Screens - Basic Training - Graham Apple - Software Reviews - Disk Sam - First Steps

Issue 5 - Includes Tupper - Memory Mapped Screens - Sprites - Arcade Action - Mouse (MS/M) - Vertical FIM movement - Software Reviews - First Steps - Colour Selection - Line Codes

All the above issues now in short supply!



Issue 7

News
Screening Graphics
Scotch
Looking for a Drive
RISC
Aston Martin Superstock
Time Out Bulletin Board
First Steps
Landscape



Issue 8

Withdraw
Issue 11
Screen Research
Player Mosaic Graphics
Graphics 6 Test
Using MSX FILE
The Hardware Patch
Review: Ray Mode
Make Your MS World



Issue 9

George Horik
Astonish: Rich in the Mail
Star Scrolling
Understanding Strings
Player Mosaic Graphics 2
Text Drive
Mudbox
Adventures
...and lots more!



Issue 10 - Adventure Special

Advertisement
Screen Adverts Interview
Aston Adventures
When MS Has Teeth
House of Events
Diagrams
Splashes
Screen Color
...plus the usual features



Issue 11

Grid
Landscape
Wings
Colourflow
Player Mosaic Graphics
When is END
Screen Research
Version 2
...plus the regular columns

Issue 12 also available

Issues 1 2 3 & 6 SOLD OUT

Issues 4 - 8 £1.00 inc. postage

Issue 9 onwards £1.20 inc. postage

Overseas readers please see page 3

DUST COVERS

Don't risk a breakdown of your precious equipment through dust and dirt or spill coffee! Protect all of your equipment with a custom made dust cover. Natural PVC with a brown trim - easily folded away when your equipment is in use. Easily fitted with all peripherals, joysticks etc. in place.

400/800/600XL/800XL	£2.95
410 Old Style Cassette*	£1.95
410 New Style Cassette	£1.95
1010 Cassette	£1.95
810/1050 Disk Drive	£2.95
1020/1027 Printers	£3.95

*old style does not have a pause button.

Also for all popular printers (normally £1.95 for small/medium size and £4.95 for large printers).

DISK/CASSETTE CARDS

Keep track of your programs easily and tidily.

Disk insert cards.
Pack of 25.

Cassette inlay cards.
Pack of 25.

£1.00 each pack inc. postage.



THE PAGE 6 LIBRARY

Available to subscribers only, the PAGE 6 LIBRARY is a fine collection of Public Domain programs from around the world. Hundreds of user-written programs (including machine-code) at very little cost. Available on disk only. Send a stamped addressed if you have not had current details.

ORDER ALL ITEMS ON THIS PAGE FROM
PAGE 6 MAGAZINE
P.O. BOX 54,
STAFFORD
ST16 1DR

Please make cheques payable to PAGE 6.

SUNARO

SOFTWARE

4800L 64k COMPUTER	£165
1650 DISK DRIVE	£195
1610 RECORDER	£ 34
1620 COLOUR PRINTER	£ 95
1627 LETTER QUALITY PRINTER	£245

case disk

The Hulk	32k	8.75	48k	15.75
Solo Flight	48k	13.25	48k	13.25
Warlock	32k	13.25	48k	13.25
Beaver Lear	32k	13.25	48k	13.25
Dallas Quest	N/A	48k	13.25	
Sybiline Ace		8.75	11.50	
Nato Commander		8.75	11.50	
Beach-Head		8.75	11.50	
Any English		8.75	8.75	
Software (9.95)				

Send s.a.o.
for lists.

Send cheque/P.O. to

SUNARO SOFTWARE(P63)
P.O. BOX 78, MACCLESFIELD, CHESHIRE,
SK10 3PF

W.E.E. ADD-ONS for ATARI

CASSETTE INTERFACE - use with standard recorder instead of 1001/1000 Remote Control pack and Audio EP. State whether 5 pin DIN or mini pack (page 61) £19.95

GAME RAMPACK - simple program for EXTRA-Disk or 10k software 164052A. 10k £28

SPEECH SYNTHESIZER - telephone based, infinite vocabulary uses £ 250 parts. Complete with Demo software and manual. £38.95

PRINTERS - drives CENTRONICS Argus printers with 4 TurboLine files / 70 pins cartridge commands. Uses 1 & 2 input. Complete without and without cassette software. £39.95

Please see DAT and page 6

Large RAM for details

W.E.E. ELECTRONICS, 19, South Street, Lancaster, LANCY
Tel 05244 776011 Quote PAGE 6

Don't forget to complete the
Readers Poll and survey in this
issue

Please return it by 31st January
1985

CAMELOT continued from page 28

1488 DATA 192, 96, 168, 124, 56, 128, 176, 65
1495 DATA 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 177, 96, 168, 124, 56, 176, 176, 65

1478 DATA 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 177, 96, 168, 124, 56, 128, 176, 65

1475 RETURN
1508 DATA 0, 16, 16, 16, 56, 76, 158, 190, 254
, 124, 56

1505 REM 00000000000000000000

1510 GETWORD 1000

1515 REMTOP+PEEK(1064)+GETOP+HEXOF-4

1520 POKE 106,GETOP+GRAPHICS+16+ORND
+PEEK(176)+256

1525 ORAND+GETOP+100+PEEK 706,GETOP

1530 FOR M=0 TO 1623:POKE GRAPHICS,PEEK
ORAND+HEX M

1535 FOR K=1 TO 13:READ WSORASC000

1540 IF #13 THEN WSOR#4

1545 OF #C76 THEN OF #C11 THEN WSOR-13

1550 FOR I=0 TO 7:READ S+K+I+0+S+I+0+
S+256+GETOP+PEEK 0,4+HEX I+HEX M

1555 DATA 1

1560 DATA 71, 204, 193, 257, 93, 76, 94, 0

1565 DATA 0

1570 DATA 205, 275, 175, 175, 255, 175, 175,
175

1575 DATA 2

1580 DATA 34, 66, 66, 126, 126, 126, 255, 255

1585 DATA 0

1590 DATA 255, 217, 165, 127, 217, 255, 128,
128

1595 DATA 0

1600 DATA 127, 177, 197, 257, 76, 76, 66, 24

1605 DATA Y

1610 DATA 255, 175, 127, 127, 127, 127, 175,
231

1615 DATA 0

1620 DATA 175, 175, 127, 127, 127, 127,
255

1625 DATA M

1630 DATA 34, 36, 34, 36, 32, 34, 168, 64

1635 DATA J

1640 DATA 202, 24, 126, 167, 36, 76, 127, 127

1645 DATA 0

1650 DATA 255, 241, 76, 76, 255, 231, 76, 124

1655 DATA M

1660 DATA 248, 222, 213, 213, 147, 145, 157,
227

1665 DATA 0

1670 DATA 128, 128, 128, 128, 128, 128, 128,
128

1675 DATA 0

1680 DATA 144, 88, 32, 160, 72, 4, 0, 1

1685 RETURN

□

GOTO DIRECTORY

A.S. Woolton & Sons,
116, Edleston Road,
Crewe,
CW2 7HD
Tel: 0270 214118

Nothing but Atari
Authorised Service Centre
with fast turnaround
of all repairs. The usual
range plus printers, joystick
inputs, extension leads
at very good prices.
Try us for repairs or
purchases.

**Channel One Computer
Systems Ltd,**
174, High Street,
Hornchurch,
Essex
Tel: Hornchurch (04024)
75613

We have a large range of
software plus hardware,
printers etc. A good
selection of American
software including the
more unusual such as
Compilers, Editors,
Assemblers etc. All for
Atari.

**Home Entertainment
Atari Center,**
213-213 Broad Street,
Birmingham,
B15 1AT
Tel: 021 643 9100

Your dedicated Atari
retailer for the best in the
wonderful world of Atari.
Mail Order Software
Courier service - phone
021 643 9100 or write
FREEPOST. Atari
authorised Independent
Service Centre.

Norman Audio Ltd,
51, Fishergate,
Preston,
Lancs.
Tel: 0772 50067

Authorised Atari Service
Centre Dealers in Atari
products since 1979.
Competitive prices and
fast after-sales back up.
Personal service or Mail
Order.

**Home Entertainment
Atari Center,**
In-Store Shop,
Lower Ground Floor,
Owen Owen Store,
Mandal Centre,
Wolverhampton
Tel: Wolverhampton
(0902) 711650

Your in-store Atari Center
specialising in Atari
related products and
including an Atari Service
pick up point.

Jennings Stores,
208, Hertford Road,
(N. Green Street),
Enfield,
Middle,
Tel: 01 804 1767

Very large range of
English and American
software available as well
as the very latest in hard-
ware.

Microbyte,
71, Sevens Road,
Leicard,
Walsley,
Mansfield, L46 4DW
Tel: 061 630 6933

Test of high prices, poor
service and hidden
charges from other Mail
Order retailers? Try us for
the latest titles and U.S.
mag. Mail or call anytime
up to 7pm.

Rafford Hi-Fi Ltd,
53, Gloucester Road,
Bristol,
Avon
Tel: 0272 428247

We stock and export a
comprehensive range of
products for Atari. Huge
range of software from
educational to small
business (plus games of
course) Word processing
packages, Printers.
All for the best
computer!

Fox's Computer Centre,
38/39 Upper Parliament
Street,
Nottingham
Tel: 0602 414050 or
411556

We have the widest range
of U.S. and U.K. hardware,
software, books, magazines
and accessories in the area.
Lower products, best prices.
Send a.s.c. for latest 'sole
list' lists.

Trianis,
144, Station Road,
Harrow,
Middle HA1 2RH
Tel: 01 861 0036

Software, peripherals,
books and magazines. A
comprehensive range for
Atari. Try our late night
shopping Open 10am to
8 p.m. Monday to Satur-
day. Give us a call or pay
us a visit.

York Computer Centre
7, Storegate Arcade,
York
Tel: 0904 641862

Top American and
English software - over
1000 titles! Hardware,
books, magazines,
accessories. If you need
anything for your Atari,
try Yorkshire's widest
and most comprehensive
range of products for your
machine.

SOFTWARE PRODUCERS

PROMOTE YOUR PRODUCTS
AROUND THE WORLD

Atari are compiling a worldwide database of every
piece of software available for Atari machines in order
to promote distribution at home and abroad. Your
software may be included on this database at no cost if
you send product specifications to Jon Dean at ATARI
CONS: (UK) Ltd., Atari House, Railway Terrace,
Slough, Berks. SL2 5BJ.

Any retailers, distributors and the like may have
access to the database for customer enquiries but at
present it will not be available to the general public so
unless you are in the trade make your enquiries
through your local retailer.

Retailers who are interested in an entry in this feature
are invited to contact the Editor on 0785 41153.

TYP0 TABLES

MUSIC MAKER

Variable checksum = 37392

Line no range	Code	Length
0 - 20	0F	520
21 - 40	0A	523
41 - 60	0E	526
61 - 80	0C	529
81 - 100	0D	532
101 - 120	0B	535
121 - 140	08	538
141 - 160	09	541
161 - 180	07	544
181 - 200	04	547
201 - 220	06	550
221 - 240	05	553
241 - 260	03	556
261 - 280	02	559
281 - 300	01	562
301 - 320	00	565
321 - 340	00	568
341 - 360	00	571

BOB0 ESCAPE

Variable checksum = 40346

Line no range	Code	Length
1 - 20	0F	518
21 - 40	0C	515
41 - 60	0D	511
61 - 80	0A	508
81 - 100	0E	505
101 - 120	0B	502
121 - 140	08	499
141 - 160	09	496
161 - 180	07	493
181 - 200	04	490
201 - 220	06	487
221 - 240	05	484
241 - 260	03	481
261 - 280	02	478
281 - 300	01	475

BULL WITS

Variable checksum = 88111

Line no range	Code	Length
0 - 200	0F	438
201 - 310	0B	540
311 - 360	0F	520
361 - 380	0E	513
381 - 395	0F	507
396 - 400	00	500
401 - 415	00	493
416 - 430	00	487
431 - 445	00	480
446 - 460	00	474
461 - 475	00	468
476 - 490	00	462
491 - 505	00	456
506 - 520	00	450
521 - 535	00	444
536 - 550	00	438
551 - 565	00	432
566 - 580	00	426
581 - 595	00	420
596 - 610	00	414

PLAYER ANIMATOR

Variable checksum = 11507

Line no range	Code	Length
0 - 50	00	458
51 - 100	0L	478
101 - 200	0L	511
201 - 300	0C	512
301 - 400	0D	507
401 - 500	0E	502

FLIGHT OF THE SWAN 1 CAROLOT

Variable checksum = 10941

Line no range	Code	Length
0 - 20	00	547
21 - 30	01	538
31 - 40	02	545
41 - 50	03	542
51 - 60	04	549
61 - 70	05	546

Variable checksum = 102911

Line no range	Code	Length
0 - 120	00	385
121 - 180	00	444
181 - 240	00	503
241 - 300	00	562
301 - 360	00	621
361 - 420	00	680
421 - 480	00	739
481 - 540	00	798
541 - 600	00	857
601 - 660	00	916
661 - 720	00	975
721 - 780	00	1034
781 - 840	00	1093
841 - 900	00	1152
901 - 960	00	1211
961 - 1020	00	1270
1021 - 1080	00	1329
1081 - 1140	00	1388
1141 - 1200	00	1447
1201 - 1260	00	1506
1261 - 1320	00	1565
1321 - 1380	00	1624
1381 - 1440	00	1683
1441 - 1500	00	1742
1501 - 1560	00	1801
1561 - 1620	00	1860
1621 - 1680	00	1919
1681 - 1740	00	1978
1741 - 1800	00	2037
1801 - 1860	00	2096
1861 - 1920	00	2155
1921 - 1980	00	2214
1981 - 2040	00	2273
2041 - 2100	00	2332
2101 - 2160	00	2391
2161 - 2220	00	2450
2221 - 2280	00	2509
2281 - 2340	00	2568
2341 - 2400	00	2627
2401 - 2460	00	2686
2461 - 2520	00	2745
2521 - 2580	00	2804
2581 - 2640	00	2863
2641 - 2700	00	2922
2701 - 2760	00	2981
2761 - 2820	00	3040
2821 - 2880	00	3099
2881 - 2940	00	3158
2941 - 3000	00	3217
3001 - 3060	00	3276
3061 - 3120	00	3335
3121 - 3180	00	3394
3181 - 3240	00	3453
3241 - 3300	00	3512
3301 - 3360	00	3571
3361 - 3420	00	3630
3421 - 3480	00	3689
3481 - 3540	00	3748
3541 - 3600	00	3807
3601 - 3660	00	3866
3661 - 3720	00	3925
3721 - 3780	00	3984
3781 - 3840	00	4043
3841 - 3900	00	4102
3901 - 3960	00	4161
3961 - 4020	00	4220
4021 - 4080	00	4279
4081 - 4140	00	4338
4141 - 4200	00	4397
4201 - 4260	00	4456
4261 - 4320	00	4515
4321 - 4380	00	4574
4381 - 4440	00	4633
4441 - 4500	00	4692
4501 - 4560	00	4751
4561 - 4620	00	4810
4621 - 4680	00	4869
4681 - 4740	00	4928
4741 - 4800	00	4987
4801 - 4860	00	5046
4861 - 4920	00	5105
4921 - 4980	00	5164
4981 - 5040	00	5223
5041 - 5100	00	5282
5101 - 5160	00	5341
5161 - 5220	00	5400
5221 - 5280	00	5459
5281 - 5340	00	5518
5341 - 5400	00	5577
5401 - 5460	00	5636
5461 - 5520	00	5695
5521 - 5580	00	5754
5581 - 5640	00	5813
5641 - 5700	00	5872
5701 - 5760	00	5931
5761 - 5820	00	5990
5821 - 5880	00	6049
5881 - 5940	00	6108
5941 - 6000	00	6167
6001 - 6060	00	6226
6061 - 6120	00	6285
6121 - 6180	00	6344
6181 - 6240	00	6403
6241 - 6300	00	6462
6301 - 6360	00	6521
6361 - 6420	00	6580
6421 - 6480	00	6639
6481 - 6540	00	6698
6541 - 6600	00	6757
6601 - 6660	00	6816
6661 - 6720	00	6875
6721 - 6780	00	6934
6781 - 6840	00	6993
6841 - 6900	00	7052
6901 - 6960	00	7111
6961 - 7020	00	7170
7021 - 7080	00	7229
7081 - 7140	00	7288
7141 - 7200	00	7347
7201 - 7260	00	7406
7261 - 7320	00	7465
7321 - 7380	00	7524
7381 - 7440	00	7583
7441 - 7500	00	7642
7501 - 7560	00	7701
7561 - 7620	00	7760
7621 - 7680	00	7819
7681 - 7740	00	7878
7741 - 7800	00	7937
7801 - 7860	00	7996
7861 - 7920	00	8055
7921 - 7980	00	8114
7981 - 8040	00	8173
8041 - 8100	00	8232
8101 - 8160	00	8291
8161 - 8220	00	8350
8221 - 8280	00	8409
8281 - 8340	00	8468
8341 - 8400	00	8527
8401 - 8460	00	8586
8461 - 8520	00	8645
8521 - 8580	00	8704
8581 - 8640	00	8763
8641 - 8700	00	8822
8701 - 8760	00	8881
8761 - 8820	00	8940
8821 - 8880	00	9000
8881 - 8940	00	9059
8941 - 9000	00	9118
9001 - 9060	00	9177
9061 - 9120	00	9236
9121 - 9180	00	9295
9181 - 9240	00	9354
9241 - 9300	00	9413
9301 - 9360	00	9472
9361 - 9420	00	9531
9421 - 9480	00	9590
9481 - 9540	00	9649
9541 - 9600	00	9708
9601 - 9660	00	9767
9661 - 9720	00	9826
9721 - 9780	00	9885
9781 - 9840	00	9944
9841 - 9900	00	10003
9901 - 9960	00	10062
9961 - 10020	00	10121
10021 - 10080	00	10180
10081 - 10140	00	10239
10141 - 10200	00	10298
10201 - 10260	00	10357
10261 - 10320	00	10416
10321 - 10380	00	10475
10381 - 10440	00	10534
10441 - 10500	00	10593
10501 - 10560	00	10652
10561 - 10620	00	10711
10621 - 10680	00	10770
10681 - 10740	00	10829
10741 - 10800	00	10888
10801 - 10860	00	10947
10861 - 10920	00	11006
10921 - 10980	00	11065
10981 - 11040	00	11124
11041 - 11100	00	11183
11101 - 11160	00	11242
11161 - 11220	00	11301
11221 - 11280	00	11360
11281 - 11340	00	11419
11341 - 11400	00	11478
11401 - 11460	00	11537
11461 - 11520	00	11596
11521 - 11580	00	11655
11581 - 11640	00	11714
11641 - 11700	00	11773
11701 - 11760	00	11832
11761 - 11820	00	11891
11821 - 11880	00	11950
11881 - 11940	00	12009
11941 - 12000	00	12068
12001 - 12060	00	12127
12061 - 12120	00	12186
12121 - 12180	00	12245
12181 - 12240	00	12304
12241 - 12300	00	12363
12301 - 12360	00	12422
12361 - 12420	00	12481
12421 - 12480	00	12540
12481 - 12540	00	12599
12541 - 12600	00	12658
12601 - 12660	00	12717
12661 - 12720	00	12776
12721 - 12780	00	12835
12781 - 12840	00	12894
12841 - 12900	00	12953
12901 - 12960	00	13012
12961 - 13020	00	13071
13021 - 13080	00	13130
13081 - 13140	00	13189
13141 - 13200	00	13248
13201 - 13260	00	13307
13261 - 13320	00	13366
13321 - 13380	00	13425
13381 - 13440	00	13484
13441 - 13500	00	13543
13501 - 13560	00	13602
13561 - 13620	00	13661
13621 - 13680	00	13720
13681 - 13740	00	13779
13741 - 13800	00	13838
13801 - 13860	00	13897
13861 - 13920	00	13956
13921 - 13980	00	14015
13981 - 14040	00	14074
14041 - 14100	00	14133
14101 - 14160	00	14192
14161 - 14220	00	14251
14221 - 14280	00	14310
14281 - 14340	00	14369
14341 - 14400	00	14428
14401 - 14460	00	14487
14461 - 14520	00	14546
14521 - 14580	00	14605
14581 - 14640	00	14664
14641 - 14700	00	14723
14701 - 14760	00	14782
14761 - 14820	00	14841
14821 - 14880	00	14900
14881 - 14940	00	14959
14941 - 15000	00	

Which way?..

THIS WAY—Just pop into your local computer store—and there, if you can spot it behind the washing machines and hi-fi's next to the paperbacks or even by the telephones, is just what you're looking for: providing you want this week's top ten games for the Spectrum, or Simons Basic or even a few top titles for Atari.

There's a sales assistant who might pay you some attention and, depending on their preference, will advise you on the superb graphics of the Spectrum, the Beeb's massive memory capabilities, the ease of programming a Commodore or how well the Cric will match your decor. And there's £10 off this box over here!

You do need to be an enthusiast to put up with it!



OR THIS WAY

Certainly in the West Midlands, there's another way. Your Home Entertainment Atari Center in Broad Street, Birmingham. You'll be well-served by knowledgeable Atari enthusiasts, backed by the widest range of Atari associated products that only a solus-retailer can supply. Hardware, peripherals, software, books and magazines—special imports—all for Atari—and we're an Atari authorised independent Service Centre too.

In the North-West, there's an Atari Center in Miller Arcade, Preston. And now in Wolverhampton, an "in-store" Atari Center at the Owen Owen store (lower ground floor) in the Mander Centre.

If you're not in these areas, we can offer you an efficient Mail Order service that's only a phone call away. Backed with the same expertise, the same dedication to Atari—the same wish to serve you.

We can't sell you a washing machine, but then no-one can do everything well. That's why we specialise.

**CHECK ATARI
PRICES NOW!**

Home
Entertainment



ATARI® CENTERS

MIDLANDS 212-213, Broad Street, Birmingham, B15 1AR.
TELEPHONE: 021-643-9100

MAIL ORDER: Tel 021-643 9100 or
FREEPOST to the Birmingham Center

NOW OPEN IN WOLVERHAMPTON
ATARI Center at Owen Owen, Mander Centre,
Wolverhampton, (0902) 719550

Home Entertainment Ltd. is an independent dealer in Atari and associated products. ©1987 is a registered trade mark of Atari, Inc.

