

# PAGE 6

ISSUE 7  
75¢

INSIDE.....

**3** GREAT GAMES

SAVAGE POND REVIEW



seasons GREETINGS



ATARI USERS MAGAZINE... AN ATARI USERS MAGAZINE...  
... GAMES... ATARI... NEWS... ATARI... PROGRAMS

WIN... WIN... WIN... WIN... WIN...  
**£200**  
OF ENGLISH SOFTWARE



# PAGE 6

An ATARI™ Users Magazine

CONTENTS	ISSUE 7	JANUARY/FEBRUARY	1984
EDITORIAL .....			4
NEWS .....			5
TURN OF THE YEAR .....	Les Elingham		6
SLOTS .....	Ken Woodward		8
SEASON'S GREETINGS .....	Les Elingham		12
SAVAGE POND REVIEW .....	Les Elingham		14
GRUBS .....	Sydney Brown		16
GOING FOR A DRIVE .....	Harvey Kong Tin		18
GREAT NEW YEAR COMPETITION .....			19
BUGS .....	Les Elingham		20
ATARI BASIC SOURCE BOOK .....	Colin Boswell		23
YOUR OWN BULLETIN BOARD .....	Matthew Jones		24
SOFTWARE REVIEWS .....			26
FIRST STEPS .....	Mark Hutchinson		30
TYPO TABLES .....			32
LARGEPRINT .....	Colin Fritton		33
BUG CLUB CALL .....			34

SEE PAGE 10 FOR LISTING CONVENTIONS

**Editor:** Les Elingham  
**Office:** 18, Underwood Close,  
Parkside, Stafford  
**Editorial/Advertising:** 0785 41153  
**Printed by** Birbeck & Sons Ltd.  
**Published by** ABACUS

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 we cannot, unfortunately, pay for articles published. We hope you will gain satisfaction from seeing your work published and in turn we hope you will learn from articles submitted by other readers.

While we take whatever steps we can to ensure the accuracy of articles and programs submitted and the content of advertisement, PAGE 6 cannot be held responsible for any errors or claims made by advertisers.

Subscriptions to PAGE 6 are available from:

PAGE 6, 18 Underwood Close,  
Parkside, Stafford, England

Subscriptions cover 6 issues  
(1 year)

U.K. .... £ 5.00  
Europe—Airmail .... £ 8.75  
U.S.A.—Surface .... £ 8.75  
U.S.A.—Airmail .... £15.00  
Elsewhere—Surface ... £ 8.75  
Elsewhere—Airmail ... £15.00

Single copies (U.K. only) £1.00  
inc. p. & a.

Cheques payable to PAGE 6.  
PAGE 6 is published bi-monthly.

ATARI™ is a registered trademark of Atari Inc. All references should be so noted.

Please mention PAGE 6 when replying to Advertisers.



## News and New Products

## Christmas Comes . . .

What to get for Christmas? Well, here are a few software items that are available in America NOW (mid-November) and may have reached these shores by the time you read this. Phone your local, or not so local, retailer for more details (mention PAGE 6 please). First, another blockbuster from Chris Crawford, **EXCALBUR** from APX is set in Arthurian England and requires you to play the role of Arthur in his quest to become King of all England. I have a full review of this from the U.S. and it sounds magnificent. I remember over a year ago chatting to someone who had been over to Atari and they were ecstatic about this one, having seen only the titles! If any reader who can play *Eastern Front* gets hold of **EXCALBUR**, please, please review it for us. Next is **ACTION!**, a new original language for the Atari which comes as a 24K bank-switched cartridge. It is a structured language similar to C and runs 100 to 200 times faster than Basic. **QUASIMODO** is from Synapse and is a Donkey Kong type game but much more elaborate with 'incredible graphics and sound'. Also from Synapse watch out for **ENCOUNTER** which was written here in England and is a **SUPERB** arcade game reminiscent of *Battlezone*. This one should be in every arcade-freak's Christmas stocking. Atari's **POLE POSITION** is just **GREAT** and should **SURELY** be out by now, if not someone at Atari wants his head examined. This is the type of top-level game that only the Atari was designed for which brings us neatly to . . .

Several of the original design team, including an ex-Atari president have formed a new Company called **MINDSET** which will be producing a new 68000 home computer with three custom graphics chips. This new machine is supposed to be several steps ahead of present home computers. The 68000 is a 16/32 bit chip. Do you know what this means, folks? It means that Warner Bros. and Atari have got some hard work ahead of them next year, that is of course if Warner Bros. still own Atari, but then that's another story . . . !

(U.S. news items courtesy of Mike Dunn of A.C.E. Newsletter, Oregon)



## Atari 400-800

Suggested retail prices . . . . . Suggested prices

Atari 400 (1983)	17.95	Atari 800 (1983)	29.95
Atari 400 (1984)	19.95	Atari 800 (1984)	29.95
Atari 400 (1985)	19.95	Atari 800 (1985)	29.95
Atari 400 (1986)	19.95	Atari 800 (1986)	29.95
Atari 400 (1987)	19.95	Atari 800 (1987)	29.95
Atari 400 (1988)	19.95	Atari 800 (1988)	29.95
Atari 400 (1989)	19.95	Atari 800 (1989)	29.95
Atari 400 (1990)	19.95	Atari 800 (1990)	29.95
Atari 400 (1991)	19.95	Atari 800 (1991)	29.95
Atari 400 (1992)	19.95	Atari 800 (1992)	29.95
Atari 400 (1993)	19.95	Atari 800 (1993)	29.95
Atari 400 (1994)	19.95	Atari 800 (1994)	29.95
Atari 400 (1995)	19.95	Atari 800 (1995)	29.95
Atari 400 (1996)	19.95	Atari 800 (1996)	29.95
Atari 400 (1997)	19.95	Atari 800 (1997)	29.95
Atari 400 (1998)	19.95	Atari 800 (1998)	29.95
Atari 400 (1999)	19.95	Atari 800 (1999)	29.95
Atari 400 (2000)	19.95	Atari 800 (2000)	29.95
Atari 400 (2001)	19.95	Atari 800 (2001)	29.95
Atari 400 (2002)	19.95	Atari 800 (2002)	29.95
Atari 400 (2003)	19.95	Atari 800 (2003)	29.95
Atari 400 (2004)	19.95	Atari 800 (2004)	29.95
Atari 400 (2005)	19.95	Atari 800 (2005)	29.95
Atari 400 (2006)	19.95	Atari 800 (2006)	29.95
Atari 400 (2007)	19.95	Atari 800 (2007)	29.95
Atari 400 (2008)	19.95	Atari 800 (2008)	29.95
Atari 400 (2009)	19.95	Atari 800 (2009)	29.95
Atari 400 (2010)	19.95	Atari 800 (2010)	29.95

Plus shipping, now \$299 400-800 instructions for use  
Please use \$10.00 per year order

## WCS Chart Toppers . . . . . at low prices

Donkey Kong	Atari 400/800	19.95 each
Donkey Kong	Atari 400/800	19.95 each
Wizard of Wor	Atari 400/800	19.95 each
Wizard of Wor	Atari 400/800	19.95 each

Collection \$149 inc post La Stock \$1.95  
Send S.A.L. for full list

(Pancom, 6 Trinity Drive, Gideahead, S. Humble,  
Tel: 04725 44716 Fax: 04725 44717, Sat 10am-11pm)

## Your friendly Professional Printer -

# 100 YEARS

## 1883-1983

**Birbeck and Sons Ltd.**  
26-28 Fleet Street · Birmingham B3 1JY  
021-236-4602

## Opinion

# Turn of the Year

In order to look forward we must first look back to see how Atari computers and third party support fared in the U.K. in 1983. The picture is unfortunately not particularly good as Atari themselves made a number of marketing mistakes and the level of third party support failed to increase significantly.

The biggest mistake of the year was Atari's announcement of their new range of machines long before they became available. Much of the range is still not available and may not be until well into 1984. Most dealers reported a significant drop in sales of the 800 when the new machines were announced as people held back waiting to buy a new machine. They waited, and waited, and many stopped waiting and went out and bought a Commodore 64 instead. Commodore increased their profits whilst Atari increased their losses. This type of marketing seems very strange for an American Company - the land that invented fast food. Today's society is an instant society where we are conditioned to expect everything NOW. In the States if you don't get your hamburger or pizza within a couple of minutes of entering the shop, you walk out and spend your money across the road. It is no different at any level except that the minutes become weeks but in the end if you don't get served you go somewhere else. During the three months to November, Atari lost a considerable number of sales in the U.K. simply because they could not supply what everyone knew was coming, and they kept the price of the 800 at too high a level. Not too high for what is undoubtedly the best home computer on the market, but too high for a machine that would be 'out of date' in a couple of months. That's another aspect of today's society - nothing is worth buying unless it is 'new'.

The other major area where Atari have gone wrong is in the pricing structure of their software, where they continue to defend their policy of very high prices. Mr Eric Salamon, Atari's U.K. marketing manager was recently quoted, when defending the prices for Atari's conversions to other machines, as saying 'These games are the best-selling games worldwide and at the end of the day you are paying for artistic input'. Wrong. Mr Salamon, absolutely wrong. Nobody cares about 'artistic input', computer games have

Les Ellingham

reached a stage where it is taken for granted. Sell, but true. Computer games are not works of art but are ephemeral consumer products that hold their interest only until something new comes along and the average owner would rather buy two or three 'new' items than one 'work of art'. Over the last year, the software market has changed and people are no longer willing to pay out large sums of money for single items, and if you don't believe it ask yourself why all the original stockists of Atari related software are now selling off huge amounts of stock at severely discounted prices.

On the third party side development has been very slow with only a couple of names springing readily to mind. Only English Software and Channel B Software have produced any significant amounts of software and Channel B's are mainly conversions from other machines. One of the reasons for this lack of development is that Atari came as an 'instant' machine. All of the software was already available from America and had reached such a standard that most owners believed they could not compete. With a newly introduced machine such as the Dragon, no software existed with the result that ordinary owners - like you and me - chanced their arm and put out software they had written. Some of them flourished to form a home grown software industry. As part of the research for this article, I looked at the advertisements in YOUR COMPUTER and COMPUTER & VIDEO GAMES and found a total of 26 independent companies offering Dragon software and only 8 selling software for the Atari.

There are only a few small companies willing to have a go at producing Atari software such as Softow Software of Leicester and C.S. Software in Cheshire and they should be congratulated and supported for sticking to Atari in a very strange market that in general does not support home-grown Atari software. Companies such as these deserve your support for even if their products are not up to the top U.S. standard - and I am making no adverse comment on their software - they deserve all the support they can get. It takes time and encouragement to produce the best software. Encouragement comes from selling products and that is where you can help to develop a strong U.K. market with Atari software

available at very reasonable prices.

## NEXT YEAR...

So what of 1984. Firstly, I can only hope and pray that some of these wonderful new products we all know about appear very, very quickly. The longer they are delayed, the more people will turn away from Atari. Secondly, I believe that Atari will see the light and reduce the price of their software quite drastically. American software will continue to be available but only from specialist outlets, you will have to buy Mail Order or make a special trip. A very small number of new companies will be offering U.K. produced software for the Atari whilst English Software Co. will dominate the market and will grow into a company equivalent to the big U.S. producers. Calisto Software, who seem to have had a very quiet year after the initial explosion of interest in Atari, will bounce back with several new titles but will also be

manufacturing for other machines and are unlikely to concentrate on Atari.

The biggest influence in 1984 though, will be YOU. You will decide whether or not you want to pay high prices or support home produced software from some of the smaller as well as the bigger U.K. producers. The way you spend your money will determine exactly who survives and grows in 1984.

Finally, one bright and rising star to look out for in 1984 is STARCADE who have already produced two excellent and unique games that can match anything put out across the water. I urge you to look at their products in 1984, for if they gain the support needed to continue to produce games of such high quality and originality, they will be the undoubted stars of 1984 and, along with English Software Co., will make you glad you bought the finest home computer ever produced. ■

High Quality - Low Cost

**SOFTFLOW** software

101 Leicester Road Northwich  
Cheshire



ATARI 400,800 BOX

STOP Playing START Thinking

At last, something for the serious side of your Atari

### FAMILY FUN



ATARI 400/800  
SOFTWARE

#### DEADODOLOGY

Are you a thinking person?  
You don't need a gun to kill the  
Zombies!

- Suitable for all ages
- 16 Levels
- An hour's play time

£6-50

©1983 Softflow

### TARITEACH



ATARI 400/800  
SOFTWARE

#### TARITEACH

CONVERSATIONAL  
ENGLISH SPEAKING  
& READING

It doesn't get any more  
realistic than this. You will improve your  
knowledge of basic grammar,  
1 or 2 letter words.

- 1 or 2 letter words
- 1 or 2 letter words

£6-50

©1983 Softflow

### SOFTSWOT



ATARI 400/800  
SOFTWARE

#### SOFTSWOT

CONVERSATIONAL  
ENGLISH SPEAKING  
& READING

- 1 or 2 letter words
- 1 or 2 letter words
- 1 or 2 letter words
- 1 or 2 letter words

Extended computer game with more  
words than any other  
£8-50

©1983 Softflow



ATARI 400/800  
SOFTWARE

#### A LETTER WORD

Use your powers of deduction to  
discover the hidden word.

- 1 or 2 letter words
- 1 or 2 letter words

£6-50

©1983 Softflow



ATARI 400/800  
SOFTWARE

#### TARITEACH

CONVERSATIONAL  
ENGLISH SPEAKING  
& READING

It doesn't get any more  
realistic than this. You will improve your  
knowledge of basic grammar,  
1 or 2 letter words.

- 1 or 2 letter words
- 1 or 2 letter words

£6-50

©1983 Softflow



ATARI 400/800  
SOFTWARE

#### SOFTSWOT

CONVERSATIONAL  
ENGLISH SPEAKING  
& READING

- 1 or 2 letter words
- 1 or 2 letter words
- 1 or 2 letter words

£8-50

©1983 Softflow

## Games

## Slots

Ken Woodward, Abertillery

Las Vegas comes to your home! Now you can gamble away to your heart's content without risking a penny, you don't even have to buy the program!

Slots needs very little description to play. Just type it in and RUN it. You will be asked to wait a moment before the title display comes up and there will then be a short delay before the one-arm-bandit appears. From there on, just enter your bet. There is a nudge feature that appears at random and you simply press the A, B or C keys according to which reel you wish to nudge, or W to collect. All necessary prompts are on the screen.

If you prefer to use the joystick to enter your bets, then delete lines 310, 330 and 1050 to 1140 and add the following

```
1648 DET=18:REM GET BET
1678 S=STICK(8)
1688 BET=BET+(S=140)-(S=130):IF BET<0 T
HEN BET=0
1698 IF BET>29 THEN BET=29
1699 POSITION 2,0:W *%J%BET
1168 IF BET>CASH THEN FOR %GOTO 208
1185 IF STR$(%G)=8 THEN RETURN
1138 GOTO 1878
```

As all the best gamblers say before they take your money - best of luck, pal!

```
18 80H #####
11  REM #           SLOTS           #
12  REM #           #
13  REM #           BY KEN WOODWARD #
14  REM #           #
15  REM #####
78  01H BLANK(28):BLANK="
"
88  SOUND 1338
98  POKE 784,232:POKE 785,332:POKE 786,
15:POKE 787,15
308  OPEN #1,4,8,"K"
118  CASH=188:WIN=0:BET=0
128  SOUND 1528
138  POKE 53774,64:POKE 16,44:REM BRK
148  POKE 784,232:POKE 785,332:POKE 786,
15:POKE 788,8:POKE 789,172:POKE 718,1
16:POKE 711,338:POKE 712,242
158  POSITION 2,0:W *%J%L%K         betd
11"
168  REM
178  POSITION 2,1:W *%J%5 7 8"
```

```
188  POSITION 2,4:W *%J%BLN"
198  POSITION 2,7:W *%J%BL"
308  POSITION 14,4:W *%J%COIN"
318  POSITION 14,5:W *%J%GASH
328  POSITION 9,15:W *%J%T%I%L%J%&%Z
=33bet"
338  POSITION 9,16:W *%J%T%I%L%Z 3888
=33bet"
348  POSITION 9,17:W *%J%ALL 2 3888
=33bet"
358  POSITION 2,5:W *%J%WIN
368  POSITION 9,17:W *%J%JACKPOT 9 9 9
= 358"
378  POSITION 1,18:W *%J%bet min 08 max
39
388  FOR P=1 TO 3:SOUND 8,58,18,8:POSIT
ION 2,12:W *%J%" *FOR H=1
TO 5:NEXT H
398  SOUND 8,198,18,8:POSITION 2,12:W *
8:" enter your bet *FOR H=1 TO 5:NEX
T H:NEXT P:SOUND 8,8,8,8
388  SOUND 1648:REM GET BET
318  POSITION 2,12:W *%J%" PRESS START
"
328  GASH=CASH-DET:POSITION 14,5:W *%J%
ASH:" "
338  IF PEEK(53279)<56 THEN 338
348  POSITION 2,5:W *%J%" *%POSITION 2
,12:W *%J%" good luck *%SOUND 2848
358  REM DETERMINE RANDOM A B AND C
368  H=INT(188888<80)
378  B=INT(188888<81):IF INT(188888<80)=
1 THEN B=8
388  C=INT(188888<80):IF B=C THEN IF IN
T(188888<81)=1 THEN C=8
398  REM ROLL
408  FOR H=1 TO 58
418  SOUND 8,8+12,18,18
428  FOR H=1 TO 2:NEXT H
438  SOUND 8,8,8,8
448  B=INT(188888<80):P=INT(188888<81):
B=INT(188888<81)
458  POSITION 2,5:W *%J%:POSITION 9,1:W
*%J%:POSITION 11,1:W *%J%G
468  NEXT B
478  POSITION 2,1:W *%J%
488  FOR H=1 TO 38
498  SOUND 8,8+48,18,18
508  FOR H=1 TO 2:NEXT H
518  SOUND 8,8,8,8
528  B=INT(188888<80):P=INT(188888<80):
B=INT(188888<81)
538  POSITION 9,1:W *%J%:POSITION 11,1:
7 *%J%G
```



```

548 NEXT R
550 POSITION 7,1:7 #d;B
552 FOR N=1 TO 20
570 SOUND #,8,40,10,10
580 FOR M=1 TO 2:NEXT M
590 SOUND #,8,8,8
600 C=INT(100*RN/100)+P=INT(100*RN/100)+
Q=INT(100*RN/100)
610 POSITION 11,1:7 #d;B
620 NEXT R
630 POSITION 11,1:7 #d;C
640 SOUND #,8,8,8
650 X=INT(100*RN/100)+1:IF X<5 THEN GOS
UB 470
660 GOTO 630
670 REM HUDDE
680 POSITION 0,12:7 #d;"TYPE a b c ESC
HOME"
690 POSITION 0,13:7 #d;"TYPE w ESC
HOME"
700 FOR Z=1 TO X
710 POSITION 7,4:7 #d;"TYPE:"POSITION
7,5:7 #d;X+1-Z
720 SET #,0
730 IF Q=5 THEN W=INT(100*RN/100)
740 IF Q=6 THEN S=INT(100*RN/100)
750 IF Q=7 THEN C=INT(100*RN/100)
760 IF Q=8 THEN 790
770 IF Q<5 OR Q>8 THEN GOTO 720
780 POSITION 7,1:7 #d;R=POSITION 7,1:7
#d;B:POSITION 11,1:7 #d;C:NEXT Z
790 POSITION 7,4:7 #d;" "POSITION
7,5:7 #d;" "
800 POSITION 0,12:7 #d;BLANK
810 POSITION 0,13:7 #d;BLANK
820 RETURN
830 REM TEST FOR WIN
840 REM
850 IF A=9 AND B=9 AND C=9 THEN WIN=25
S:CASH=CASH+WIN:GOTO 1230
860 IF B=4 AND C=4 THEN WIN=30:SET=CASH
=CASH+WIN:GOTO 940
870 IF B=4 THEN WIN=20:SET=CASH=CASH+WIN
H:GOTO 940
880 IF A=9 THEN WIN=SET:CASH=CASH+WIN:
GOTO 940
890 REM LOSE
900 POSITION 2,12:7 #d;" you lose"
910 POSITION 7,18:7 #d;"sorry"FOR N=0
TO 200:SOUND #,8,10,10:NEXT H:POSITION
7,18:7 #d;" "SOUND #,8,8,8
920 POSITION 14,5:7 #d;CASH;" "
930 POSITION 2,5:7 #d;" "
940 IF CASH<10 THEN GOTO 1150:REM MUST
950 GOTO 200
960 REM WIN
970 POSITION 3,12:7 #d;" you win"
"
980 POSITION 2,5:7 #d;WIN;" "
990 FOR H=1 TO 12:FOR P=7 TO 0:POSITIO
N H,P,1:7 #d;"0000"POSITION H,P,1:7 #d;"
"NEXT P:NEXT H
1000 FOR M=200 TO 0 STEP -1:SOUND #,8,
10,0
1010 NEXT H:SOUND #,8,8,8
1020 POSITION 3,12:7 #d;BLANK
1030 POSITION 14,5:7 #d;CASH;" "
1040 IF CASH>? THEN GOTO 1170:REM NO
H TOO MUCH
1050 GOTO 200
1060 POSITION 2,0:7 #d;" "REM GET BE
T
1070 SET #,0:Q=0+40:IF Q<1 OR Q>2 THE
H POP :GOTO 200
1080 IF Q=1 THEN POSITION 2,0:7 #d;Q:Q
=0
1090 IF Q=2 THEN POSITION 2,0:7 #d;Q:Q
=20
1100 SET #,0:1:Q=0+01+40
1110 IF Q<0 OR Q>2 THEN POP :GOTO 200
0
1120 POSITION 3,0:7 #d;Q:1:SET=Q+01
1130 IF SET<CASH THEN POP :GOTO 200
1140 RETURN
1150 REM NO CASH LEFT
1160 POSITION 2,12:7 #d;"sorry so cred
it":GOTO 1170
1170 REM NO TOO MUCH
1180 POSITION 2,12:7 #d;"10 out of ca
sh"
1190 CASH=10:WIN=0:SET=0:FOR M=1 TO 1
000:NEXT H:POSITION 2,12:7 #d;"PRESS 2
TAST "POSITION 14,5:7 #d;" "
1200 POSITION 2,5:7 #d;" "
1210 IF PEEK(10279)<C+4 THEN 1210
1220 GOTO 210
1230 REM JACKPOT
1240 FOR EXP=4 TO 10 STEP 2
1250 FOR F=200 TO 50 STEP -1
1260 SOUND #,F,10,EXP
1270 POKE 704,F:POKE 705,F:POKE 704,F-
0:POKE 710,F-12:POKE 712,F-10
1280 NEXT F:NEXT EXP
1290 SOUND #,8,8,8
1300 POSITION 3,12:7 #d;" "
1310 POSITION 14,5:7 #d;CASH;" "
1320 GOTO 140

```

continued on page 17

# C.S. SOFTWARE

41, Redcross Lane, Bradbury, Stockport, Cheshire. Telephone 061-494-9183.

\*\*\*LOOK\*\*\*

AT LAST GOOD QUALITY SOFTWARE AT REASONABLE PRICES.

**THE SEARCH** A Full colour real time graphic adventure. Over 100 screens to explore doing battle or making friends in your quest for the ring. Full save/retrieve game feature.

1&K. TAPE now only £9.95+32K. DISK £11.95

**COMPUTER COMMANDS** A game where your survival depends as much on strategy as fast reflexes. Defend your central computer from the invading alien hordes. Full colour and sound effects.

1&K. TAPE now only £9.95+32K. DISK £11.95

**SHOOT 'EM UP** A Fast paced arcade type space game. Move after wave of nasty little aliens are out to get you. Can you destroy each wave and re-energise your ship to continue the fight?

1&K. TAPE only £7.95

Send cheque or P.O. payable to C.S. Software stating tape or disk. All prices include p&p and VAT.

Dealers please enquire  
for our competitive trade prices

## ATARI 400/800 CENTRONICS PARALLEL PRINTER INTERFACE

Similar to the Atari 850 interface but without the 4 serial ports. Plugs into serial I/O socket. Requires no additional software. Includes all cables plus extension I/O socket. £74.95 inc. VAT and postage. Send S.A.S. for more information.

Dealer enquiries welcome

BLACKTHORN ELECTRONICS  
Ardleigh Road, Dedham, Colchester, Essex  
Tel. Colchester 323120

## 600XL OWNERS

If you have traded in your 400 for a 600XL and know your old machine fairly well, start PEEKing and POKing around in the 600. There are several refinements built in such as fine scrolling (really!) in text modes, fast cursor control and keyboard disable all achieved with a single POKE! Any information you can discover will be published as we wish to do a full article on the differences to enable existing owners to decide whether to 'upgrade'.

## Listing Conventions

As far as possible, the listings will be 38 characters wide to allow you to match up to the screen, but where control characters are explained in a line this will not be possible.

Three types of characters are difficult to reproduce in a listing—Inverse, Control and Inverse Control.

**INVERSE**—all characters to be typed in inverse are underlined.

**CONTROL**—characters which require the CTRL key to be pressed are shown in square brackets [ ]. Press CTRL and the key shown in the bracket. Characters which require the ESC key to be pressed first will show ESC CTRL, followed by a word or words to describe the key to be pressed. You may have to refer to your Basic Reference Manual if you do not understand some of the keys.

**INVERSE CONTROL**—characters will be shown in pointed brackets < >. Follow the instructions for control characters but press the Atari key first.

The listings should be typed as accurately as possible and **MUST** be typed exactly if TYPO is used to check them.



## Graphics and Music



## Season's Greetings



Why not send your own Christmas greeting to family and friends using your Atari? With this greetings program you can type in your own messages and play them back accompanied by some seasonal music. Why not type a message for the kids on Christmas day and leave the program running for them to 'press a key' when they open their presents? Assuming of course you can get up before them!

Just type in your message at the prompt. AS is dimensioned to hold 2000 characters but you can change this if you want. If you hear the end of line buzzer when typing in your message just hit return and continue on the next line. If you finish the line at the end of a word you must start the next line with a space. Don't worry about your input being in lower case, it is supposed to be that way. When you have finished your message press return twice.

That's all there is to it. Now all someone has to do is to 'press a key' for their greeting. If you press any key while the program is running, the music will change. Have yourself a merry little Christmas.

```

1 REM *****
2 REM $ HERRY CHRISTMAS FOLKS $
3 REM $ put together by $
4 REM $ LES ELLIENHAM
5 REM $ from some music composed $
6 REM $ by TOM HUDSON and $
7 REM $ a banner from PHIL GRIFFIN $
8 REM *****
9 DIM M$(1281,"@@@2888")$=""
"
25 OPEN #1,4,8,"K":TUNE=1
30 SOUND $$$
35 GRAPHICS 18:SETCOLOR 8,12,8:#$
40 POKE 712,$#POKE 718,14:POKE 798,14
45 POSITION 5,4:?" $@"PRESS A KEY":GOT
 $1,KEY:POSITION 5,4:?" $@"
"
55 SCREEN=PEEK(100)+256*PEEK(101):FOR I=
1 TO 100:POKE SCREEN+INT(I*80/256),I
4:NEXT I
48 POSITION 2,3:?" $@"*****
"
45 POSITION 2,4:?" $@" $
"
78 POSITION 2,5:?" $@"*****
"
100 POKE 744,255:TUNE=3-TUNE

```

```

118 IF TUNE=1 THEN REP=3:DELAY=8:CAROL
 =238:RESTORE CAROL
128 IF TUNE=2 THEN REP=2:DELAY=7:CAROL
 =348:RESTORE CAROL
140 FOR I=1 TO REP
158 READ A,B,C,D:IF D=-1 THEN RESTORE
 CAROL:NEXT I:FOR DE=1 TO 580:NEXT DE:I
 870 I=0
168 H#=#I:IF HOLEN(H#)=13 THEN H#I
178 POSITION 2,4:?" $@"$H#M"$I$
175 POKE 768,A
188 SOUND 1,A,18,18: SOUND 2,B,18,7: SOUND
 3,C,18,5
198 IF PEEK(764)<255 THEN SOUND 1,B,8
 ,8: SOUND 2,B,8,8: SOUND 3,B,8,8:GOTO 18
 8
208 FOR DE=1 TO 8:DELAY:NEXT DE: SOUND
 1,B,8,8
218 GOTO 158
228 REM TUNE 1
238 DATA 48,144,182,15,68,8,243,5,72,1
 82,8,18,81,193,8,18,91,217,8,18,81,193
 ,8,18,72,182,8,18,91,144,8,18
248 DATA 81,193,243,5,72,193,243,5,68,
 142,8,5,81,162,8,5,72,182,8,15,81,136,
 8,5,91,144,8,18,98,142,243,18
258 DATA 91,144,182,28,8,8,8,1
268 DATA 48,144,182,15,68,8,243,5,72,1
 82,8,18,81,193,8,18,91,217,8,18,81,193
 ,8,18,72,182,8,18,91,144,8,18
278 DATA 81,193,243,5,72,193,243,5,68,
 142,8,5,81,162,8,5,72,182,8,15,81,136,
 8,5,91,144,8,18,98,142,243,18
288 DATA 91,144,182,28,8,8,8,1
298 DATA 81,193,8,15,72,243,8,5,68,142
 ,8,18,81,193,8,18,72,182,8,15,68,243,8
 ,5,68,144,8,18,81,193,8,18
308 DATA 72,182,8,5,64,182,8,5,68,193,
 8,18,53,72,182,8,47,72,182,8,45,72,217
 ,18
318 DATA 47,81,162,18,53,91,162,18,68,
 98,243,28,8,8,8,1
328 DATA 48,144,182,15,68,8,243,5,72,1
 82,8,18,81,193,8,18,91,217,8,18,81,193
 ,8,18,72,182,8,18,91,144,8,18
338 DATA 53,91,136,5,68,91,144,15,68,81,
 136,5,72,91,121,18,81,98,243,18
348 DATA 91,144,182,28,8,8,8,1,8,8,8,-
 1
358 REM TUNE 2
368 DATA 121,144,182,18,72,144,182,18,
 81,8,243,18,91,8,243,18,121,136,182,38
 ,8,8,8,1,121,193,8,5,121,193,8,5

```



## Review

## Starcade's

## SAVAGE POND

16K

## 1 PLAYER

*Savage Pond* leaves the reviewer caught between two extremes. On the one hand the review should flow easily because the game is such a joy but on the other it is difficult because you cannot make comparisons with other games. *Savage Pond* is unique.

It is becoming increasingly rare to find a totally original game among the growing wealth of Atari software but Gwyll Jones of Starcade has come up with a real winner. This is as far removed as you can get from the world of aliens, guns and violence yet it maintains all of the excitement and edge of the seat involvement of the classic arcade games. The game is set in the real world, the world of Nature that you or I could see in the countryside every day if we were alert and sensitive enough. In every stream and pond across the country there is a battle for life as fierce and as demanding as any defence of the earth from alien invasion. Whilst we sit comfortably at home battling off imaginary monsters, tiny creatures fight real battles against real enemies in the most savage of environments - Nature itself.

*Savage Pond* allows you to control the destiny of a tiny tadpole in a village pond and see him through his journey to adulthood to become a handsome frog. You must breed as many frogs as possible to build a healthy colony. This may not seem so exciting as battling off invading aliens but believe me, the suspense and excitement of achieving your goal is just as strong as in any other arcade style game.

The sense of excitement is first awakened by simply reading the instruction manual which you should do before commencing play. The playing instructions are given in narrative form and the booklet finishes off with detailed descriptions of all the characters you will encounter. These are serious and accurate descriptions of pond life, including latin names, and are a novel and interesting touch. *Savage Pond* is after all about the real world.

In your pond are lots of amoeba waiting to be ingested whilst on the floor of the pond are deadly hydro with poisonous tentacles. Overhead a dragon fly flits lazily by and lays an egg which sinks slowly to the bottom. Juicy worms fall into the

water from time to time and you must eat these to journey along the evolutionary trail. On the bed of the pond are three eggs of frog spawn from which hatch your tadpoles to commence their grim battle through life. As well as eating worms and amoeba, you must stop the dragonfly eggs from reaching the floor of the pond where they will hatch out into dragonfly nymphs. Nymphs eat tadpoles and there is very little chance of escape. Once you have managed to eat five of those juicy worms, a beetle larva appears and if you can eat it quickly, you progress along the evolutionary trail and further hazards will be introduced to the pond. These include deadly freshwater jellyfish, water fleas, a water spider and Mother Nature's deadliest enemy - Man - who uses the quiet pond to dump deadly radioactive waste.

The game ends when three tadpoles have died but if you manage to breed a frog, an extra egg will be laid when your last tadpole dies. A female frog will bounce onto the screen to mate with your proud frog on his little island and a new egg will be laid. Watch out for the cheeky wink of Mr Frog as he embraces his lady friend. At higher levels you can control the frog as well as the tadpoles to kill off the dragonfly and fight off vicious bees.

On screen there is plenty of colour and movement. Amoeba pulsate, jellyfish bob up and down and the dragonfly buzzes overhead. Worms wriggle to the bottom and your tadpole swishes his tail through the water without respite. The movement of the tadpole is quite amazing and unlike any player movement I have seen on any other game. It is a very accurate representation of darting and listing underwater movement.

*Savage Pond* is a real joy. A totally unique concept, well thought out and superbly programmed. Whilst a far cry from the usual arcade action it retains all of the excitement. It is an ideal family game and children and adults alike will marvel at the graphics and storyline. Not much more I can say except that you will not find such an original and compelling game anywhere else. Buy it and sit back proudly knowing that one of the most original games ever written for the Atari was written here in Britain by a young programmer who must surely have a bright future.



## Games

# Grubs

## Sydney Brown, Australia

The Grubs are trying to escape the safety of the subway to multiply and take over the earth. Only ten Grubs are needed to start a community, so you must destroy them before ten of them escape and they start a full breeding colony. As they are deadly to touch, the only way to kill them is to first trap them by digging a hole for them to fall in. Whilst temporarily stunned you must hit them with your shovel but be quick for they soon recover. Use joystick 1 to control your man and the fire button to dig a hole or kill a trapped Grub. The higher up the screen you can trap and kill them, the more points you will score but watch out for those who get past you.

Many of you will have seen other versions of this program particularly one about some untamed fruit in an English magazine! Don't let that stop you typing it in. In his original write up for A.C.E. Newsletter, author Sydney Brown had the following to say.

"I hope you have more fun playing this game than I had programming it. The debugging process was extremely frustrating and time consuming. To be honest, I feel the quality and speed of this game surpasses many of the programs commercially available."

He is absolutely right, it is a superb program. Get typing.

```

8 REM *****
1 REM # GRUBS
2 REM # BY SYDNEY BROWN
3 REM # ORIGINALLY PUBLISHED IN
4 REM # ACE NEWSLETTER
5 REM # 3442, VINE MAPLE DR. EUGENE
6 REM # OREGON, U.S.A.
7 REM *****
11 ? "DESC, CLEAR!" REM C:119,D:131,H:1
13 ,V:131,B:110,B:119:POKE 739,16:POKE
797,14:POKE 752,1
12 POKE 186,PEEK(186)-3
39 GRAPHICS 17:POKE 712,16:POKE 799,39
:POKE 799,349:POKE 718,189:? #4;
G B U D S "AWPEEK(186)255
21 ? #4;? #4;? #4;"GRUB ON TOP LEVEL 2
# 2ND LEVEL 3 3RD LEVEL
3#
4# 4TH LEVEL 5?
22 ? #4;" 5TH LEVEL 1 #
TH LEVEL # 7TH LEVEL 2"? #4;
? #4;" HISSING A TRAPPED"
```

```

23 ? #4;" GRUB LIVES # POINTS":? #4;?
#4;" you have 4 lives."
166 FOR B=8 TO 511
181 IF B<423 THEN READ D:POKE A+B,B:NE
XT B:GOTO 387
186 POKE A+B,PEEK(37344+B):NEXT B
387 POSITION 4,28:? #4;"PRESS <fire>"P
ORE 53279,#
389 IF PEEK(53279)<D4 THEN 387
118 ? #4;"DESC,CLEAR!"POKE 739,179:PO
KE 799,44:POKE 799,222:POKE 711,142:PO
KE 754,PEEK(186):POKE 712,#
199 POSITION 8,8:? #4;"GOING dead#
333"
194 GOSUB 999:GOSUB 718
195 H=9:V=22:D=32:COLOR 249:PLOT H,V:W
=#:P=#:S=#:B=#:D=#:I=#?
199 N=1:GOSUB 929:W=2:GOSUB 929:GOSUB
2889:GOSUB 1,255,B,4
288 ST=ST(10)<B:IF ST=14 AND V=1 THEN
488
282 IF ST=13 AND V<33 THEN 418
284 IF ST=11 AND B=8 THEN 428
284 IF ST=7 AND H<19 THEN 438
218 LOCATE H,V+1,2:IF B=32 THEN GOSUB
448
228 IF ST(10)=# THEN GOSUB 478
238 N=H+1:IF N>2 THEN N=1
231 GOSUB 468
298 LOCATE H,V,2:IF B=32 THEN COLOR 24
9:PLOT H,V
299 GOTO 388
388 LOCATE H,V+1,2:COLOR 32:PLOT H,V:1
F 2:119D=118 THEN 382
381 V=#:1:COLOR 249:PLOT H,V:GOTO 284
488 LOCATE H,V-1,2:IF B=222 OR (D=32 A
ND C=222) THEN COLOR C:PLOT H,V:W=#-1:
COLOR 249:PLOT H,V:D=#
482 LOCATE H,V-1,2:IF B=222 OR (D=32 A
ND C=222) THEN COLOR C:PLOT H,V:W=#-1:
COLOR 249:PLOT H,V:D=#2
484 LOCATE H,V-1,2:IF B=222 OR (D=32 A
ND C=222) THEN COLOR C:PLOT H,V:W=#-1:
COLOR 249:PLOT H,V:D=#3
488 IF D=118 OR D=119 THEN 458
489 GOTO 238
418 LOCATE H,V+1,2:IF B=222 THEN COLOR
C:PLOT H,V:W=#+1:COLOR 249:PLOT H,V:D
=#2
412 LOCATE H,V+1,2:IF B=222 THEN COLOR
C:PLOT H,V:W=#+1:COLOR 249:PLOT H,V:D
=#2
414 LOCATE H,V+1,2:IF B=222 THEN COLOR
C:PLOT H,V:W=#+1:COLOR 249:PLOT H,V:D
=#2
```



```

418 IF Z=118 OR Z=119 THEN 458
419 GOTO 218
428 LOCATE H-1,U,Z:IF Z=32 OR Z=222 TH
EN COLOR C:PLOT H,U=H+1:COLOR 248:PL
OT H,U:G=2
428 IF Z=118 OR Z=119 THEN 458
429 GOTO 218
438 LOCATE H-1,U,Z:IF Z=32 OR Z=222 TH
EN COLOR C:PLOT H,U=H+1:COLOR 258:PL
OT H,U:G=2
438 IF Z=118 OR Z=119 THEN 458
439 GOTO 218
448 COLOR C:PLOT H,U:LOCATE H,U+3,Z:IF
Z<>32 THEN 458
442 W=U+3:COLOR 248:PLOT H,U:G=32:RETU
RN
458 H=H+1:POKE 712,14:FOR H=188 TO 8 S
TEP -5: SOUND 8,H,8,18:NEXT H:POKE 712,
8
451 FOR H=8 TO 188 STEP 5: SOUND 8,H,8,
18:NEXT H: SOUND 8,8,8,8
454 IF H=4 THEN 468
455 COLOR 32:PLOT H=15,8:COLOR C:PLOT
H,U:G=32:H=H+1:COLOR 358:PLOT H,U
455 GOTO 288
468 POSITION 5,8:? $G:"hg $G":POKE
52279,$G: SOUND 1,8,8,$G:8:28:8
468 IF PEK(52279)<3: THEN 468
468 POKE 77,8:POSITION 5,8:? $G:"
189C,CLEAR":GOTO 198
478 IF K1 OR K0 OR V0: THEN RETURN

471 LOCATE H,U,Z:IF Z=247 THEN RETURN
475 FOR H=8 TO 149 STEP 26: SOUND 8,14,
8,INT(4/18):NEXT H: SOUND 8,8,8,8
478 IF Z=258 THEN 498
479 IF Z=248 THEN 488
488 LOCATE H-1,U+2,Y:LOCATE H-1,U+1,Z:
IF Z=32 THEN COLOR 85:PLOT H-1,U+1:RET
URN
481 IF Z=85 THEN COLOR 32:PLOT H-1,U+1
:RETURN
482 IF (Z=118 OR Z=119) AND Y=32 THEN
COLOR 85:PLOT H-1,U+1:GOTO 588
483 RETURN
498 LOCATE H-1,U+2,Y:LOCATE H-1,U+1,Z:
IF Z=32 THEN COLOR 85:PLOT H-1,U+1:RET
URN
491 IF Z=85 THEN COLOR 32:PLOT H-1,U+1
:RETURN
492 IF (Z=118 OR Z=119) AND Y=32 THEN
COLOR 85:PLOT H-1,U+1:GOTO 588
493 RETURN
588 FOR W=1 TO 2:LOCATE H10,U10,Z:IF
Z>85 THEN NEXT W
592 FOR H=255 TO 188 STEP -18: SOUND 8
,U8,H,14:NEXT H:K=K+1
593 POSITION 14,8:? $G:K:G
594 H=H:GOTO 938
598 SOUND 8,8,8,8:8:8:8:8:IF W=1 THEN 8
:G=8+28
597 IF W=4 THEN 8:G=8+15
598 IF W=7 THEN 8:G=8+18
599 IF W=10 THEN 8:G=8+15
608 IF W=13 THEN 8:G=8+1
517 POSITION 5,8:? $G:" "G:POKE 77,8
528 POSITION 5,8:? $G:G:" "G:IF 8:G=8
THEN POSITION 5,8:? $G:" "G
528 RETURN
688 LOCATE H10,U10+1,Z:IF Z=32 OR Z>
228 THEN 618
681 IF (Z=118 OR Z=119) AND (U10+1)>
32:INT((U10-1)/31) THEN RETURN
682 LOCATE H10+D10,U10,Z:COLOR C:PL
OT H10,U10:C10=0:H10=H10+D10
683 IF (Z=118 OR Z=119) AND H=1 THEN C
10=C10
684 IF (Z=118 OR Z=119) AND H=2 THEN C
10=C10
685 IF 8:G=1 THEN COLOR 138:IF H10=C
1 THEN D10=1
686 IF 8:G=1 THEN COLOR 117:IF H10=C1
0 THEN D10=-1
687 PLOT H10,U10:IF U10=22 AND (H10
>=9 OR H10=19) THEN 688
688 IF Z>258 THEN C10=C:GOTO 458
689 RETURN
618 IF Z=32 THEN 628
612 COLOR C:PL OT H10,U10:U10=U10+H
1+1:C10=C:COLOR 118:PLOT H10,U10
618 IF Z>258 THEN C:G=8:GOTO 458
619 RETURN
628 B10=B:8:1+1: SOUND 8,14,8,8:8:IF 8
:8:1 THEN 625
622 COLOR C:PL OT H10,U10:U10=U10+
H1+1:IF B10=0 THEN COLOR 119:GOTO 624
623 COLOR 118
624 PLOT H10,U10:RETURN
625 IF (8:8<14 AND K(11) OR (8:8=88
AND K(18) THEN RETURN
626 COLOR 85:PLOT H10,U10:U10=U10+
1:IF 8:8=1 THEN COLOR 159:GOTO 458
627 COLOR 118
628 PLOT H10,U10:B10=8:8:8:5:POSIT
ION 5,8:? $G:G:" "G:IF 8:G=8 THEN POS
ITION 5,8:? $G:" "G
629 SOUND 8,8,8,8:RETURN
648 COLOR 32:PLOT H10,U10:(8:8:8:1:8
8:8:1 TO 15: SOUND 8,INT(48/8:8:8:18
,18):NEXT H: SOUND 8,8,8,8:GOTO 938

```

continued on page 33

## Feature

# Going for a Drive

Harvey Kong Tin, New Zealand

I bought my Atari 800 48K computer last December, and since then I have sampled as many of the cartridges and cassette games that I could get my hands on - of course I have also lusted in as many ATARI BASIC program listings that I could find. Recently I took the plunge and decided to upgrade to a disk drive. This article is about my impressions on changing from cassette to disk, and whether it turned out to be worthwhile.

The obvious advantage of a Disk Drive is the speed and reliability of loading and saving any program and because of the random access of Disk Files, you can immediately call out the file you want. The disk drive by itself is rather limited - it's the useful programs that you can run on it that make it worthwhile. The DOS (Disk Operating System) is very good but you have to go out from BASIC and into DOS to use any of its menu commands. To use DOS more efficiently I like using a Wedge program (from November's *Computer!*) to access the more useful menu commands, while still in BASIC.

Using an AUTORUN.SYS is a very good convenience (it is a routine which will load and run a selected program, when you switch on the computer - the Wedge is done in this manner), you could have the disk directory printed out to the screen or better still I've used it for a demonstration disk which runs through an information & instruction screen before going onto the main descriptive menu.

The disk drive makes it easier for you to get into the mood of entering in program listings - interruptions (friends calling in) are no bother, and you can save parts of programs every half hour or so (to avoid the problems of keyboard lock-up, if it occurs) - it's done instantly with a disk drive. You will also be keen to experiment with and modify programs, because all of your programming utilities will be on top of the one disk.

On the disk, you only have 626 sectors with which to store your programs. I find that I am always running out of disks and have gone into the pros and cons of using the other side, i.e. I cut out a notch and flip the disk over, the disks have not been designed to be used like this - but I assume that it is

reasonably safe to use this side. I would like to hear from others about the pros and cons of using the other side.

A whole new world other than games opens up. A good example to start on is Atari's Home Filing Manager, this well set-out Database program is the ideal thing I've been looking for to list the range of programs I have, and have room enough to include a reasonable description of the program. Tinytext can go on a disk run by an Autorun System, the text files are saved to the same disk. Other languages are now very tempting to use - Microsoft BASIC attracts me, because I have been taught some Burroughs BASIC while on a course. I have a sampler program of Video 80 (that puts 80 characters across a normal screen) from *Compute!*, and can't wait to see a word-processing program that utilises this unique feature.

The biggest headache in going from tape to disk is in trying to upload the commercial game tapes you have onto disk. There are utilities available which can only do certain types of programs, but the better games out are designed not to be transferred from tape to disk.

The disk-based games are not that much more outstanding than those available on tape. The disk games that I have so far seen have not been the sort that I would have rushed out to buy a disk drive for. I have so far played: *The Wizard & the Princess*, *Repton*, *A.E. Threshold*, *SAGA*, *Adventureland*, *Zork I*, *Starcross*, *Seafox*, *Bandits*, *Ulysses & the Golden Fleece*, *The Cosmic Balance*, *Wayout*, *Snooper Troops I*, *Space Eggs* and *The Nightmares*. Some of the games have been good though. Perhaps the newer games will prove me wrong. The *Permal Construction Set*, *The Arcade Machine*, *Archon & others*. I'm hoping that they will.

Of course, there is nothing wrong with staying on a cassette based computer system, you can always find plenty to do while a tape is loading; read the instructions, write a letter to Page 8, or wash the dishes. You will still get to play the great games just out: *The Blue Max*, *Dimension X*, *Donkey Kong* and *Pole Position*. But the disk drive does open up a much wider world into Atari Computing. Now where's the cash for that FX-80 printer? ■

# A GREAT COMPETITION

## WIN £200 OF ENGLISH SOFTWARE

1984 will see much more home produced software for your Atari and leading the way will be **ENGLISH SOFTWARE CO.** who have offered £200 worth of their latest titles to readers of PAGE 6.

**ENGLISH SOFTWARE** cassettes will be only £9.95 in the coming year and among the many fabulous titles to be released look out for **JET BOOT JACK**, **HYPERBLAST**, **BOMBASTIC** and **BATTY BUILDERS**. English software at its very best.

As well as buying their games, English Software would like you to write them. If you can write good machine language games get in touch with Phil Morris at English Software, BOX 43, Manchester M90.

And so to the competition. Hidden in the two squares below are 20 words, either English Software titles or general words to do with computing and your Atari. Find as many words as you can, list them on a plain sheet of paper with your name and address and send them in to PAGE 6. There will be prizes set aside for readers who are under 12 and they need only complete one square. Even if you can't get them all, send in your entry but be sure to put your age.

### ENGLISH SOFTWARE

EBEBAUERUNHERNOC  
EGGHEEF I REFLECTG  
ENYAROTCARDZKGOB  
LQVJ I XHCKTT I HCSH  
AJUNICEBXSR I SEHR  
HTA I ONQUATZ ONHBB  
KAW/OOHL SNNROUJ  
ORPFFNERROT QAXPP  
YACHOR I SMGZ I YGGS  
PHJKDAPAGWANC I PD  
JRUP L I I GVEGEPFC I I  
SGYAFDQNGBLTZR I G  
PHTSFODDLZTUZNYG

### ATARI WORLD

JZUKBBCGKXAZUPV8  
AASJUALRUUCOCHOR  
KJSDHPS SHTHGZR I  
ROMCANSU I KAFDFBD  
BKXORHE ZRC I TRBAR  
YJXUDI TERANTFOG  
NUTYDJTV I HRS I KDM  
FEPRRUE BUTPCGNS  
RSHOPS I DUJPEPPTH  
UCGMPAGWKRHGBOR  
KSDCAFQARKT'SOMLZ  
PCPHDKCEXGKXNNEC  
I DI SKP JNAFEEJUKO

There will be 20 lucky winners so you have a good chance of winning. In the event of more than 20 correct entries the winners will be drawn at random. The competition is open to all. Best of luck - get searching.

Closing date is 14th January 1984. All entries must be received by this date.

## COMING NEXT ISSUE

Player Missile Graphics - a start

A look inside your 800

PLUS . . . all the usual features

## READERS POLL

Results of the Readers Poll will be announced in issue 8 and your votes do count. If you have not voted please do so now, you have up to 14th January 1984.

*INPUT* has been held over due to lack of space but will be back next issue. Your letters are still welcome.

## Games Programming

# BUGS

Les Ellingham

. . . the program

Bugs is a simple game which I hope will show that some good games can be written for your Atari even if you do not understand some of the more advanced programming techniques. No player-missile graphics, no VBI routines, all of the action is achieved by POKEs to the screen. By level 9 the action gets quite fast.

You play the part of a ladybird who has to harvest a whole host of aphids by collecting them into one of four 'nests' on each side of the screen. Dotted around the place are several mushroom looking things which, if you touch them, will hatch out into more aphids. These are poisonous to a degree and will sap your strength but strength can be made up by pushing the aphids right into the nests and killing them. There are some aphids which are deadly (the orange ones) and touching these will mean instant death. These will multiply if you are not quick enough in collecting the green aphids. If your strength falls to zero, you die and you must have a certain strength ratio to progress to the next level.

In order to achieve the maximum speed possible in Basic, the main game loop has been kept short and all routines which may be needed during the course of play are at the beginning of the program. Routines which are used only once or infrequently are put at the end of the program.

Line 10 sends the program immediately to the installation and title.

Line 20 is a simple delay loop with the variable DL set at different points in the program. By putting this loop at the beginning of the program more accurate timing can be achieved.

Lines 30 - 50 maintain the score. The variable SC keeps track of the points scored by killing aphids less points deducted for hatching them out. CSC is the maximum score at any one point during the game and SCORE is only updated if the points gained exceed the maximum so far. Thus hatching an aphid puts you back a number of points and you must kill more to get to a stage where you can increase your score. STR is a measure of your strength and if this falls to 0 the program jumps to the death routine. Line 50 stops the 'attract' mode.

Lines 60 - 150 are the main subroutine to

determine if the aphids you are collecting collide with anything. The variables M1 and M2 hold the next location to which the aphid will be pushed. If that location is a 'mushroom' then the routine jumps to line 150 which hatches out the mushroom and decreases your score. If the aphid is going to collide with anything else (line 70) then we must determine if it is possible for the aphid to move aside. This is determined in lines 95 - 110 which search an array for all possible locations of escape. If none can be found, the program exits the loop to line 115 which kills the aphid by poking the ladybird into the aphid's position. The score is increased in line 120 and this line also resets the timer and checks to see if all the bugs have been killed. If there is room for the aphid to escape then line 105 jumps out of the loop and returns to line 75 which places the aphid at the next available blank position.

Lines 200 - 255 are the main game loop. Line 200 reads the joystick and if it is not being used, moves your ladybird to a new position chosen randomly from the array MPOS. This line also contains a delay routine according to the level of the game. Line 210 determines the position you are trying to move to if the joystick is active and the following lines determine if something is in that position. Table 1 will show you which characters you might bump into and you can then see where the program branches. Line 240 contains a delay loop to set the action at a speed commensurate with current level and line 245 moves your ladybird to the next position.

Lines 500 - 580 determine bonuses and take you to the next level when all the bugs have been killed. Note that line 500 will skip the bonus and next level if you have failed to improve your score in a particular level. These lines are fairly simple and merely give you 5 bonus points for each remaining mushroom and then increase the level (LV).

Lines 600 - 665 are the death routine reached either by hitting the killer bug (line 230) or by losing all your strength (line 45). Line 600 simply pokes your position with all of the characters available accompanied by some sound before going on to give an end of game message.

Lines 800 - 820 are the sounds used when an aphid is killed. Note that the routine is used in different ways by jumping to the beginning (line 530) or entering part way through (line 115). By

## ... the game

entering a subroutine at different points, one routine can serve several purposes.

Lines 900 - 930 add a new orange bug if a certain time has elapsed without killing an aphid (line 235). It simply peeks the screen to find a blank position and then pokes in the character representing the orange bug. If you want more killer bugs to appear reduce the figure 3 in line 235.

Lines 1000 - 1100 are the titles and options and are quite straightforward. Note again the sound subroutine being used at different points.

Lines 1200 - 1280 initialise things. The array ST holds the amount by which various positions of the joystick will move your character. By reading this array in line 210 much greater speed can be achieved than by using IF...THEN statements. MPOS holds the 8 possible positions of movement from a given point. Line 1250 lowers RANTOP to make way for the redefined character set.

Character	Code	Use
#	3	Mushroom
@	4	Aphid
%	5	Border
	7	Killer Bug

Table 1 - Refer to Page 66 of the Atari BASIC REFERENCE MANUAL

Lines 1500 - 1750 draw the surrounding border and poke in all the characters of the display. The various numbers in the loops and in the data statements are offsets from the top left position of the screen. Lines 1630 - 1660 poke in the mushrooms and lines 1700 - 1730 poke in the bugs provided that nothing already occupies the space. If it does then a blank space is found.

Lines 2000 - 2050 alter the display list to give two lines of Graphics 1 followed by 21 lines of Antic mode 4 (Graphics 12) and one line of Graphics 1. Note that the screen is switched off in line 2005 to cut out unresponsive displays.

Lines 2500 - 2595 change the character set. The routine in line 2520 to move the character set comes from Stan Ockers and is a very fast way to move a 1K block of memory from one point to another. Four characters are redefined to give the various coloured players. There is no room here to explain how characters are made up in Antic mode 4 but if you want to do it simply and see the results immediately, get hold of the program Magic Windows.

```

0 REM *****
1 REM # BUGS 0
2 REM # BY 0
3 REM # LES ELLINGHAM 0
4 REM # WRITTEN FOR PAGE 4 0
5 REM # FIRST PUBLISHED JOINTLY BY 0
6 REM # PAGE 4 - ENGLAND 0
7 REM # AND 0
8 REM # ACE NEWSLETTER - U.S.A. 0
9 REM *****
10 GOTO 1000
11 REM ## DELAY SUBROUTINE ##
12 FOR D=1 TO DL:NEXT D:RETURN
13 REM ## UP-DATE SCORE ETC ##
14 IF SC:SC THEN CS=C:SCOR=C:SC=C:SC
15 STR=INT(CS/3):IF STR=C THEN STR=
16 POSITION 24,8:?"STB ";INT(STR);"
17 ";POSITION 29,8:?"SCORE ";SCORE;
18 IF STR=C THEN POF :GOTO 400
19 POKE 77,8:RETURN
20 REM ## CHECK FOR COLLISIONS ETC ##
21 H=C2:H2=C2-2
22 IF PEEK(H+H2)=3 THEN 150
23 IF PEEK(H+H2)=4 OR PEEK(H+H2)=5 OR
24 PEEK(H+H2)=7 THEN 75
25 POKE H,8:POKE H+2,4
26 SOUND 1,16,8,4:SOUND 1,8,8,8:RETURN
27
28 FOR I=8 TO 7:HD=HPOS(I)
29 IF PEEK(H+HD)=8 THEN POF :GOTO 75
30 NEXT I
31 POKE 2,8:POKE H,4:GOSUB 815
32 BUGS=BUGS-1:SC=SC+18:SCORE=SCORE+2
33 CS=C:SC=C:POKE 26,8:POKE 17,8:IF BUGS
34 =8 THEN POF :GOTO 500
35 H=8:PO=8:GOSUB 30
36 RETURN
37 POKE H+2,4:BUGS=BUGS+1:TS=TS+3:CS
38 =C-(LUN+4)-TS+4:GOSUB 30:GOTO 40
39 REM ## MAIN GAME ROUTINE ##
40 B=8:TI=0:IF B=15 THEN 22=C+MPOS(
41 INT(MB(C)/80)+FOR D=1 TO 72-LUN:NEXT
42 D:GOTO 215
43 22=C+ST(I)
44 IF PEEK(22)=8 THEN 200
45 IF PEEK(22)=3 THEN GOSUB 150
46 IF PEEK(22)=4 THEN GOSUB 50
47 IF PEEK(22)=7 THEN GOTO 400
48 IF PEEK(17)=3 THEN GOSUB 900
49 FOR D=1 TO 45-LUN:NEXT D
50 POKE 2,8:2=C+MPOS 2,4
51 SOUND 8,12,16,4:SOUND 8,8,8,8
52 GOTO 200
53 REM ## LEVELS AND BONUSES ##
54 IF SC:SC THEN 500

```



## THE ATARI BASIC SOURCE BOOK

Compute! Publications

Reviewed by Colin Boswell

This book is an excellent reference/tutorial for anyone interested in the inner workings of Atari BASIC. It was written by Kathleen O'Brien and Paul Laughlin, who wrote almost all of the source code, and Bill Wilkinson who may be familiar to you for his articles in COMPUTE! magazine. Included is a complete description of how Atari BASIC stores, retrieves and executes programs, how to access BASIC directly (accessing BASIC from BASIC?) and a completely disassembled and well commented listing of the source code for BASIC and the built in maths ROM. As if that were not enough there is also a section on some of the bugs in BASIC, why they occur and even how they could be fixed! It carefully explains nearly every step of the interpreter from when it coldstarts to when it reaches END in a BASIC program. It also explains how BASIC stores numbers, strings and arrays, how it arranges memory, even how it converts a line that you type in into a form that the machine can understand.

Often books of this nature are spoilt because the authors automatically assume the reader has the same level of understanding of the subject as they have or, even worse, do not seem to know what they are talking about. This is certainly not the case here, this was obviously written by someone who knows their subject inside out which is not after all surprising if you consider their backgrounds. Although much of what the book contains is of a technical nature and is therefore pitched at the reader with a reasonably good knowledge of BASIC and at least some knowledge of machine language, it is well written and easily read.

In terms of its usefulness, well I think this is a case of an answer looking for a question! At one level, several of the routines may well be useful for your machine code or advanced BASIC programming and at a much higher level you may well want to create your own language using the routines in Basic as a starting point.

Either way, this is an excellent book for the intermediate to advanced user, not only as a guide to the inner workings of BASIC, but also to how language interpreters work in general. It is not a book for the beginner but if you feel like delving deeper into your Atari then this book is extremely good value for money. ■



A  
MINER  
284P'er,  
CHIPLIFTER  
OR SIX  
CARTRIDGE FOR  
CHRISTMAS FROM  
EFFICIENT CHIPS IN  
CHIPPENHAM FOR ONLY  
£24.95 INCLUDING POSTAGE  
AND PACKING. PHONE (0249)

057744  
FOR  
DETAILS OR  
SEE OUR  
PAGE 4  
ADVERT

BUY A CARTRIDGE IN A FIR TREE.



## Contact

### SOUTH CHESHIRE ATARI USERS GROUP

A recently formed group that is looking for new members. They meet on the first Thursday of each month at THE EARL OF CREWE, NANTWICH ROAD, CREWE, at 7.30 p.m. Why not go along or phone Alan Davies on 0270 629989 for more information.

### RADIO AMATEURS

DEREK SLATER of BURTON-ON-TRENT would like to hear from anyone in the U.K. (or the World!) particularly if they have any RTTY and/or CW programs/ideas etc. Also any users locally who are not necessarily interested in radio. Write to him at 71, Wyggeston Street, Burton-on-Trent DE14 0SD or phone 0283 63108.

### LISTING SERVICE

Would you like your programs listed? It helps with debugging and may encourage you to send them to the commercial magazines who often ask for printed listings. MICHAEL JACKSON is interested in offering a service of this sort. Write to him at 53, Brewster Gardens, London W10 6AG or phone 01 980 0902. ■

## Telecommunications

# Your own Bulletin Board

Telecommunications are the way of the future and the last issue of PAGE 6 pointed the way with an article by Jonathon Sanders, Sysop of TBBS. I intend to continue that theme with a description of what is involved in operating and remotely using a bulletin board.

Firstly though I will explain how I became familiar with modems and programming the 850 interface. It started when I first saw that Maplin Electronic Supplies were producing their own Modem. We decided that modems were a thing of the future and ordered some for the shop. In preparation for their arrival, I read up on telecommunications and discovered that I would need a terminal program. The only Atari compatible terminal program I knew of was JTERM published in *Computal* magazine and so I typed it in.

Some weeks later, the first of the modem kits arrived and I spent the rest of the day - and night - building it. The main problem I came across was a case for it, I had not ordered one as I did not know the size required. The only case available that fitted was a fishing tackle box from Woodworthal. Maplin can now however supply a case. After building the modem, I scoured the magazines for numbers of bulletin boards to ring and soon the wires were singing with the tones of my modem.

From this point I was a regular user of TBBS, a bulletin board in London, with little happening of interest apart from having to make a small modification to the modem as Maplin suggested. It was at this point that John Newgas, Sysop of TBBS went on holiday rendering TBBS inoperable. What was I to do? I had nowhere to call. Scouring the numbers again, I chanced upon CBBS North East. This was the only one I could get through to regularly so this became my haunt. Some time after, ANTIC reviewed TELETALK a smart terminal package. 'I want one!' I shouted and so ordered it for stock. From that moment on I have used TELETALK for all telecommunications because of its far superior facilities.

Now we come to the point where I started to get interested in the programming of the things. CBBS NE has a download section and TELETALK has controlled download facilities (i.e. it can ask for

block repeats if there is a glitch on the line), so I wanted to be able to do this sort of download. On investigation, TELETALK has 256 byte blocks, CBBS 128 byte blocks. Failed! This impasse made me look into that impenetrable 850 manual and after the seventh successive read, my interest in bulletin boards made me decide that I wouldn't bother to write a terminal program, I would write a bulletin board! So ECABBS, the Efficient Chips Atari Bulletin Board System was conceived and the trek began.

The equipment needed to run a bulletin board is almost identical to that needed to access one. The equipment consists of a 40K Atari computer with BASIC, Atari 850 RS232 interface, T.V. (at least one disk drive, a printer (preferable but not essential) and a modem. Really the only different feature is a ring detect and answering mechanism in the modem. Your modem may already have one but if not it can easily be added with a few components. The other requirement of the modem is that it can operate in ANSWER mode as all-calls will be using ORIGINATE. The Board can be run with one disk but obviously the more you have, the larger the amount of information that the Board can hold.

The average Board is very easy to use as far as the Sysop is concerned. The hours of use are up to him and all he has to do is to boot the system at the appropriate time. The Software will load and run automatically and the Sysop need not do anything else. He will have the option of setting the time so that the log will give the time that the calls were received. The log is a record of the options the remote caller chose and enables the Sysop to analyse the use of the various facilities. This log may be stored on disk, on a printer, both or not at all. Another record the Board may keep is the 'Userlog'. When people sign on to the board, they are usually asked for their name and the Userlog is a store of all these names. It is more of interest than of use. These two files are called the SYSTEM files and are not accessible to the caller. The software has three types of file, the SYSTEM, MESSAGE and SOFTWARE files. Included in the System files are the program itself, any support programs and menus. Messages are stored in various ways on various systems. They may be saved in large



## Matthew Jones, SYSOP, ECABBS

unreadable files which saves directory space or in individual files, which are easily modified with a word processor. The last type of file is the Software which is available for the caller to download.

There is really only one task for the Sysop to do, although it is quite a job, and that is to keep the board up to date and interesting. Old messages have to be removed, new software found, and queries have to be answered.

Calling a board is just a matter of dialling the number and when you hear the tone, connecting your modem and putting the phone down. If a voice answers, DON'T HANG UP, the person answering will tell you when the board will be back on. He is probably using the computer himself as there is no need for it to be dedicated to the BBS. When you are 'locked on' to the host computer, the procedure is fairly simple. If a board is run on an Atari, the very first thing you will be asked is 'Are you an Atari?' or 'Do you need line feeds?'. Atari's do not need line feeds so answer appropriately. You will then be sent a 'Welcome' message which will probably give the latest news. Next you will be asked to log on by giving your name and location before being given the main menu. This may be a short option list from which you can call up a full version or a full menu from which you can elect to have shorter versions sent in future.

Bulletin boards are there for you to explore, so try everything and leave some messages for others,

even if you don't know them. BB's are interactive, if you just read and don't write, you can't get the most from the board. At certain times you may find that the screen is scrolling faster than you can read and it is therefore usually possible to pause the board's output by pressing P or CTRL-S. Any key or CTRL-Q will start it up again and E or CTRL-C will terminate the file.

Most systems have a 'Page Sysop' facility. Paging will cause an audible signal to be given by the host computer to let the Sysop know that you wish to contact him directly as opposed to leaving a message. If the Sysop is around he will break in to 'chat', an option he can select at any time. In Chat mode, the start of which will be indicated by a 'Sysop-on-line' message, anything you or the Sysop types will be sent to the other person. I think that you will find Sysops to be friendly creatures, so don't worry if you find you have just got back benefited from a night on the town, and whilst trying out your kit in a stupor, the dreaded 'Sysop breaking in to chat' message comes up. Even at three in the morning! He has probably just come in as well! It has happened, I was the caller!

When you have finished on the board, don't just hang up, because besides being impolite, it might confuse the BB. Select to Log Off and you will then be asked if you wish to make any comments or suggestions. Make these if you wish and you will get a thanks for calling message and the system will close.

The last thing I should mention is the two types of timeout. If you do not respond to a prompt within a minute or two, a message will be sent asking if you are still there. If you are, press a key to let the system know, otherwise it will assume you are not interested and will hang up. Also, most systems have some sort of time limit on its use, on ECABBS this is an hour, and it is designed to stop hogging and let more people use it. You will not be 'timed out' in the middle of a download, so you need not worry about getting only half a file.

Have fun. If you have any queries about modems etc. write to me or give me a ring on 0249 667744 during the day or leave a message on the board (same number) after 6pm. ■

### ATARI 400/800 CENTRIC TYPE INTERFACES

- Works with UPRINT, LIST 's and has an COPY routine
- Works with 90% of software (Cassette & Disk) JUST COPY
- Fully compatible with VIDUAL, 8000 40340, similar to ATARI 800 but with only one Serial Port JUST COPY

Includes I.A.T. and FREE Delivery

MOJO RESEARCH Ltd., FREEPOST

Industrial Unit 4, Brighton Lodge Drive, TEL: 0304  
14788828, West Letchford, LE15 3DP 3:00P

## THE SOFTWARE REVIEWS

### STEEPLEJACK

16K CASS.

ENGLISH SOFTWARE CO.

#### 1 PLAYER

Another vertical scrolling game but with a very different and strange scenario. You have to guide Steeple Jack to the top of the chimney up several ladders which are broken in many places forcing you to jump to an adjacent ladder. Up and up he goes until . . . I know not what as I couldn't get that far, Jack is represented by an animated face with hat and sunglasses and he is bounced across the ladders by the joystick. A ghost flits across the screen but the really weird bit is when elephants (?) start falling down the ladders! I started playing the game without reading the instructions and suddenly thought I saw an elephant! The explanation is that it is all part of a dream sequence.

The game is certainly different though it could do with a little more variety. As you progress the ladders get shorter and shorter and are more awkwardly placed making it quite a challenge. One novel feature is the score which records the number of metres you have climbed. I wonder what is at the top of the that chimney?

Les Ellingham

### SHOOT 'EM UP

16K CASS.

C.S. SOFTWARE

#### 1 PLAYER

When I first saw this, I thought that C.S. Software had made a mistake with such a title but after playing it I feel that the title is just right — straightforward and honest. That is just what the game is, a straightforward, honest, shoot-them-invaders game but it has enough variation and style to make it well worth buying. It is certainly much better value than Atari's Space Invaders.

All types of weird and wonderful aliens depend on you in the familiar waves and you must blast them up, but it is not always straightforward. Sometimes they come down in pairs, one behind the other and it is difficult to know if you have got them both until the

second one appears. Occasionally you will hit them only a glancing blow and they will spin away to descend on you once again. Your craft is fully manoeuvrable within the bottom quarter of the screen and you can let the aliens go off the bottom of the screen but you will lose points. You lose one unit of fuel for each shot fired and must last out for five or so waves until a large ship crosses the top of the screen. This must be hit dead centre for you to refuel and as the levels increase, you get fewer and fewer chances to hit it.

The aliens are set against a black background and starfield and the game uses arifacts to obtain the colours. If you have been put off in the past with American style arifacts, don't worry about this one, there is lots of colour — at least on my set. The author seems to have got the most from arifacts on the PAL system by developing from scratch in Britain.

This one joins the small but growing Hall of Fame for Cheap Atari Software and is excellent value at £7.95. It has good graphics, excellent sound and will refresh any jaded alien zapper. This is exactly the sort of game that should have been available a long time ago for the Atari. An ideal present that Mums and Dads can afford and even one that the youngsters could get with their pocket money.

Les Ellingham

### NIGHT MISSION

32K DISK

SUB LOGIC

32K CASS.

#### 1/4 PLAYERS

For all you pinball fans, this game is just what you have been waiting for. You may have seen RASTER BLASTER or even DAVID'S MIDNIGHT MAGIC but NIGHT MISSION is better than both and what is more it is also available on cassette.

The one feature which makes this game unique is that you can set your own game parameters via a menu which spans two screens. You can, for instance, change the flipper power, bumper power, ball speed, spinner friction and sound as well as many

## Reviewed by Les Ellingham Steve Gould and Dave Beech

other features. The table you create can be saved for use at a later date but the game comes with 10 built in tables from Easy to Cosmic!!

The graphics are created using the infamous Artifacts which can only be enjoyed to the full on an American Atari with a colour monitor. The sound is, as far as I am aware, totally unique. As many of you may know, not only can the Atari produce some very complex sound through the TV speaker, it is also capable of creating sounds through the small on-board speaker. You may have noticed this on Bug Attack or Bug Off, Night Mission uses this speaker for all of its sound output and you will be pleasantly surprised at the sounds it can produce.

One novel touch is that you have to deposit 'coins' in a 'slot' to create credits with which to play. All the usual features of a full size pinball table are included - 'SPECIAL' lanes, targets to light up, free ball gate/features, 'shoot again' facility, spinners, bumpers, match number at game over etc. The game is very enjoyable to play and a must to own as it surpasses the features of its two brothers. Whether it will hold its own against Bill Budge's Pinball Construction Kit remains to be seen.

Steve Gould

**HAZARD RUN** 32K CASS.  
**ARTWORX** 32K DISK  
 1 PLAYER

Do you have fun watching them good ol' boys Bo and Luke or even cousins Coy and Vance? Ever wished you could be at the wheel of the General Lee and sit back and watch Sheriff Roscoe PPP... Coltrane go crashing into the creek you just jumped? Get yourself a little old copy of Hazard Run my friends, and you can join in the fun.

Hazard Run is an exciting car chase game where you take control of a supercharged car (doors welded!) and drive like mad through the woods and dirt roads to escape the Sheriff. There are five different runs for you to try, from Chicken Run when you are just getting

the feel of the car up to Hell's canyon and a Random Run for when you get to know the scenery too well. Steer clear of the trees and rocks and look out for the chickens too, some of them can run you off the road. You can just clip some obstacles and get her up on two wheels but be sure to steer in the right direction or she'll flip right over. The big fun though is jumping a creek but you'll have to get your foot on the floor and watch you don't come down too fast on the other side - hit those brakes.

The screen shows all the action in bird's eye view and at first sight the detail is a little disappointing but the game is fun to play and that's what counts. Once you have mastered the control, which is all by joystick, it becomes quite exhilarating to gather real speed and screech and weave between those trees. When you jump a creek the screen switches to a side-on view and you can see whether you are going to make the jump. If you are too slow watch out for the big splash. The game has quite good sound effects and whilst the graphics are not spectacular, they are good. Above all there is a sense of excitement and fun.

If you can get all the way through Hell's Canyon, Uncle Jesse would be proud of you!  
 Les Ellingham

**WARLOCK** 32K CASS.  
**CALISTO SOFTWARE** 48K DISK

I just managed to get a very quick look at a pre-release copy of this one, which should be in the shops by now. If you like Airstrike/Scramble type games and thought Sea Dragon was good, then this is right up your street. It looks better than any of them. The cassette version loads with one cavern but contains a further three on the tape which you can only load by completing each one in turn. All four are automatically loaded on the disk version. There will be a full review in the next issue but meanwhile, if you are one of those Atari owners who think that anything under £20 is not worth buying, more fool you for missing out on this one. It's £14.95.

Les Ellingham

# MYSTERIOUS ADVENTURES

NOW ONLY  
**£9.95**

NOW FOR 16K ATARI



- 100% ULTRA FAST MACHINE CODE
- SAVE GAME FEATURE
- OPTIONAL COLOUR ZONE DISPLAY

## From CHANNEL 8 SOFTWARE

THE GOLDEN BATON  
ARROW OF DEATH Pt 1  
ARROW OF DEATH Pt 2  
ESCAPE FROM PULSAR 7  
FEASIBILITY EXPERIMENT  
THE TIME MACHINE  
CIRCUS

**From Channel 8  
Software Limited  
51 Fishergate,  
Preston, PR1 5BH.**  
Trade enquiries welcome

For Channel 8 Software Limited, 51 Fishergate, Preston, Lancashire, PR1 5BH. **£9.95 each**  
Please supply me with the following 16K Atari Games:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_  
Address \_\_\_\_\_

I enclose £ \_\_\_\_\_  
Orders should be made payable to Channel 8 Software Limited.  Debit  Credit Card  Access  Mastercard  
If you wish to pay by Direct Debit please contact our sales office.

\_\_\_\_\_

## THE GOLDEN BATON

16K CASS.

### CHANNEL 8 SOFTWARE

#### 1 PLAYER

If you have been through the Scott Adams adventures and are still addicted, take a look at the Channel 8 Software adventures. Bryan Hayward, the author, is England's answer to Scott Adams. The layout of the screen on these 16K machine code adventures is exactly the same as the Adventure International series.

Golden Baton is the first of the series and the object is to retrieve the Golden Baton which was stolen from the Kingdom. On your travels you will meet such things as huge slugs, a savage wolf, an ugly lizard-man and various other nefarious creatures and objects. Needless to say, all of the 'organic' obstacles can be dealt with, in one way or another!

The cleverness of the plot in all the adventures in this series is as good as any in the Scott Adams series.

These adventures were originally at the same price as the more famous series but have now been reduced to £9.95 and represent good value for money. All are a nice supplement to any adventurer's collection.

All of the adventures have full 'save game' facilities and an optional facility to change the colour of the screen.

Steve Gould

## JUMPMAN

48K CASS.

### EPYX

#### 1/4 PLAYERS

Every now and again along comes a game that really stands out from the rest. See Dragon, Miner 2049er, Astro Chase, Pharaoh's Curse and now . . . JUMPMAN.

On past form, Epyx is not one of the most exciting of software houses. You either love or hate their graphics animated adventures and their last arcade releases were very mediocre if not downright pathetic. Author Randy Glover has, however, changed all that.

Although JUMPMAN contains elements already used in other games it is the way it is put together and presented that makes it an excellent piece of software. Basically a Donkey Kong/Miner 2049er type of game, it uses simpler graphics but more than makes up for this by having no less than 30 screens for Jumpman to fight, dodge, shoot, climb, fall and puzzle his way through. There are 8 screens in the beginner's level, 10 in the intermediate and 12 in the advanced level.

An attractive feature if you don't want to (or can't) work up through each screen in turn, is the Randomiser option. This chooses a screen at random, the only problem being that the same screen can come up twice in a row.

Very nicely done is the way each screen scrolls down into place to the tune of some well-known barrel-organ music. Also very effective is the demolition of the current screen when you lose your last Jumpman. On completion of a level, you are rewarded with a firework display and a view of Jumpman's skyscraper headquarters with all the lights on. Before this, however, you must collect bombs that have been planted throughout the building whilst avoiding the many dangers.

As with Miner, it will take some time before the last screen is reached and completed. Some screens require hard to eye co-ordination, others involve solving puzzles. All are different. This is what gives this game that rare quality amongst computer games—lasting appeal!

Dave Beech

## RENEW

If your subscription is due you will find a reminder enclosed. Please renew promptly - it helps us to plan and prepare the next issue on time.

## SUBSCRIBE

Subscribers get regular special offers - why miss out?

## Beginners

# First Steps

Mark Hutchinson, Belfast

There was very little time between issue 6 and the copy date for this issue to receive your questions so here are a few points which readers have raised earlier, I hope that you send in many more questions for the next column.

**Q. What is the difference between an upgrade and a 48K rampack?** An upgrade is just a general increase in memory whereas a rampack is a memory module connected externally to the computer. To increase the memory of a 400 is quite easy providing you take care when soldering two wires. The new memory comes as a small board that you replace the original with on the main board, also called the motherboard.

**Q. As I do not have a recorder how long is it safe to leave the computer on for? Overnight?** Normally anything electronic is life-tested over extremes of temperature and humidity. Modern components are extremely reliable and give long service, but just how long I cannot say. I would consider the expense of a 410 recorder to be more economical in the long run rather than risk leaving the computer on 24 hours a day.

**Q. What is the right hand cartridge slot for on the 800?** Atari have not disclosed what they originally designed the right hand slot for. You can use a programming aid called Monkey Wrench in this slot and in America you can obtain a disassembler/EPROM burner which will copy anything in the left slot. This does however infringe copyright. Note that the new XL range has only one cartridge slot.

**Q. Is it possible to connect headphones to the computer?** It is for easier to connect headphones to the TV set and in fact many modern sets are wired for this. If you wish to explore the workings of the machine then get a copy of the Technical Reference Notes which gives circuit diagrams.

**Q. How do you work out a number to put in a USR statement?** USR is one of the most powerful commands available to you in BASIC. It is a machine language call that

comes in many forms and usually it is better if you know some assembly codes to use it fully. One form is  $X=USR(SL)$  where  $X$  is a variable or function worked out from the commands placed into memory at location  $SL$ . Another is  $X=USR(S1,S2,N)$  where  $S1$  is the data you shift from string location 1 to string location 2 and  $N$  is the number of bytes moved. This is useful to perform high speed changing of PMG or character redefinition. You will normally see USR used with READ . . . DATA and numbers being POKEd into page 6 (1536-1791). These numbers are the decimal equivalents of the assembly codes or memory locations. This is worth a PAGE 6 tutorial and I am sure that someone out there is willing to write such an article to help us out? As a little example of USR, try  $X=USR@1536$  and SYSTEM RESET.

**Q. Is it possible to control an external relay with the I/O socket?** If you have the technical expertise then, yes it is possible. The serial I/O port on the right hand side of the machine switches the 410 recorder on and off, provides a +ve 4V data and even allows a +ve outlet against its own ground for peripherals. Here is a diagram of the SIO pins but note that a lot



- |              |              |               |
|--------------|--------------|---------------|
| 1. CLOCK I/P | 5. DATA I/P  | 9. PROCEED    |
| 2. CLOCK O/P | 6. GROUND    | 10. +VTRIASY  |
| 3. DATA I/P  | 7. COMMAND   | 11. AUDIO I/P |
| 4. GROUND    | 8. MOTOR CTL | 12. +12V      |
|              |              | 13. INTERRUPT |

more may be available using the controller ports as they can be directly read from potentiometers. Once again I recommend the Technical Reference Notes as this is a large area to cover. A good memory map will help or even an article in PAGE 67 (There will be an article covering this in Issue 8.—Ed.)

Some of the questions this month have been a bit technical but do not let that put you off sending in any questions however simple. Don't forget to let me know if you do not want your name published.

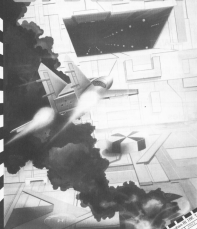
Write to Mark at BAUG Software, P.O. Box 123, Belfast, N. Ireland BT10 8DB.

- 100% MACHINE CODE ● 4 GRAPHICALLY DIFFERENT CAVERNS
  - CASSETTE VERSION LOADS IN NEW CAVERNS AS THE GAME PROCEEDS
- 48K DISC AND 32K CASSETTE £14.95

"Brilliant" Steve Gould, Page 6 reviewer

The best piece of software to come out of the UK for the MSX! Mike Reynolds-Jones, The Atari Center

# WARLOK



**alisto**  
Software

DEALER &  
DISTRIBUTOR  
Enquiries Welcome

178, JOHN BRIGHT STREET, BIRMINGHAM B1 1BE  
Telephone: 082-643 5100

Exclusive distributor of SCOTT BOARD PRODUCTS



I would like to purchase this software for my business. Please quote the appropriate business rate.

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_  
 Postcode: \_\_\_\_\_  
 Telephone: \_\_\_\_\_

## WANTED PROGRAMS, ARTICLES REVIEWS

That program you have written may be of interest to someone else. Don't hide it away, send it in to PAGE 6 for others to share.

What about those things you have now learned? Why not try to help other users understand? Write an article—on any Atari related subject.

Got a favourite game? Review it. Let others know how good (or bad) it is.

## REWARD

10% satisfaction of seeing your article, program or review in the U.K.'s best Atari magazine...

PLUS

£50 of software to the winner of our annual Readers' Poll. Other awards for runners-up.

## ☆☆☆☆☆☆☆☆ PROTECT YOUR EQUIPMENT KEEP TRACK OF YOUR PROGRAMS

**DUST COVERS**—Natural PVC with a brown trim. Protecting the life of your equipment—dust is the computer's greatest enemy. Made to measure for Atari equipment.

Atari 400: £2.95, Atari 800: £2.95, Cassette 410: £1.95—state if old or new model. Disk Drive: £2.95, 822 Printer: £2.95. Also for all other printers. Please enquire.

**CASSETTE INLAY CARDS**—Specially designed for maximum information on all your programs. Pack of 25: 80p, plus 20p p. & p.

**DISK INSERTS**—No more messy labels. These inserts allow you to keep full records of your disk contents. Just number the disks and put the program details on the insert. Pack of 25: 80p, plus 20p p. & p.

Order from:  
ABACUS, 18, UNDERWOOD CLOSE,  
PARKSIDE, STAFFORD. TEL: 0785 41153

## Typo Tables

### SLOTS - PAGE 8

Variable checkin = 38295

Line no range	Code	Length
18 - 128	82	433
136 - 208	88	349
248 - 258	F8	542
328 - 438	8E	538
448 - 558	8A	521
568 - 678	84	483
688 - 798	7E	545
798 - 908	87	421
918 - 1008	84	541
1018 - 1128	82	585
1138 - 1248	80	447
1258 - 1325	7E	424
1348 - 1478	88	384
1488 - 1588	84	425
1618 - 1725	84	495
1738 - 1848	82	444
1858 - 1968	80	525
1978 - 2078	7E	523
2088 - 2178	8E	71

### GRUES - PAGE 14

Variable checkin = 38758

Line no range	Code	Length
8 - 28	8C	595
31 - 187	72	588
188 - 284	8E	527
284 - 482	F8	538
484 - 428	8C	587
428 - 484	X7	538
485 - 479	84	585
477 - 588	88	542
583 - 488	80	527
488 - 428	8E	517
422 - 428	0A	575
428 - 718	88	542
711 - 724	04	548
725 - 2884	84	548
2887 - 2827	38	424

### GREETINGS - PAGE 12

Variable checkin = 32284

Line no range	Code	Length
1 - 25	82	424
48 - 128	87	522
148 - 228	87	488
248 - 388	7E	525
388 - 388	8E	587

## FULL DETAILS OF TYPO APPEAR IN ISSUE 5

### BUGS - PAGE 24

Variable checkin = 37282

Line no range	Code	Length
8 - 17	88	421
28 - 75	88	412
88 - 288	F8	583
218 - 388	87	359
528 - 548	FE	587
575 - 645	0A	525
658 - 875	A2	521
888 - 1025	82	584
1048 - 1218	J0	487
1275 - 1375	84	468
1398 - 1428	88	511
1428 - 1748	88	483
1778 - 2285	87	348
2315 - 2595	84	484

378 - 448	84	524
458 - 588	87	512
598 - 648	80	448



## GRUBS . . . continued from page 17

```

445 POSITION 10,23:7 #d;PR:;IF FR:Y TH
DN 448
449 RETURN
998 FOR N=2 TO 28 STEP 3:POSITION 0,N:
? #d;"XXXXXXXXXXXXXXXXXXXX"NEXT N
999 POSITION 0,23:7 #d;"11111111111111
freeB1":
999 RETURN
918 FOR N=2 TO 28 STEP 3:O=INT(RND(0)+
0+1):POSITION X,N:7 #d;"":POSITION X,
N+1:7 #d;"":POSITION X,N+2:7 #d;"":
918 NEXT N
919 FOR N=2 TO 28 STEP 3:O=INT(RND(0)+
0+1):POSITION X,N:7 #d;"":POSITION X,
N+1:7 #d;"":POSITION X,N+2:7 #d;"":
919 NEXT N
919 RETURN
928 R=INT(RND(0)+0+0):DN R GOTO 921,92
2,923,924
921 V(H)=1:GOTO 925
922 V(N)=4:GOTO 925
923 V(N)=7:GOTO 925
924 V(N)=10:GOTO 925
925 IF N=1 THEN H(1)=R:C(1)=32:O(1)=0:
O(1)=1
926 IF N=2 THEN H(2)=19:C(2)=32:O(2)=0:
O(2)=1
929 RETURN
1888 DATA 171,191,0,253,253,0,239,239,
00,112,168,01,113,115,137,63
1810 DATA 10,14,21,142,139,286,254,124
,48,48,14,248,14,112,214,0
1820 DATA 26,26,124,80,80,28,22,48,12,
32,0,15,0,14,27,14
1830 DATA 0,0,0,255,0,0,0,0,0,0,0,25
5,0,0,0
1840 DATA 255,255,255,255,255,255,255,
255,129,255,129,129,129,255,129,129,0,
0,0,255,255,0,0,0
1850 DATA 99,99,99,114,77,77,77,99,99,
77
1180 DATA 68,53,47,45,68,35,31,29
1280 DATA 29,31,35,46,45,47,33,46,64,7
2,01,71,96,98,121,120,144,142,182,193
,317,243
2000 RESTORE 1180:FOR TU=1 TO 8:READ N
0:SOUND 0,240,16,0:FOR N=1 TO 28:NEXT N
:NEXT TU
2007 SOUND 0,0,0,0:RETURN
2010 RESTORE 1280:FOR TU=1 TO 11:READ
ND:SOUND 0,ND,16,0:POKE 712,ND:FOR N=1
TO 25:NEXT N
2011 READ ND:SOUND 0,ND,16,0:POKE 712,
ND:FOR N=1 TO 12:NEXT N:NEXT TU:SOUND
0,0,0,0
2012 FOR N=1 TO 84:NEXT N:FOR N=1 TO 3
0:SOUND 0,240,16,0:FOR N=1 TO 18:NEXT
ND:SOUND 0,0,0,0
2013 NEXT N
2019 POKE 712,0:SOUND 0,0,0,0:RETURN ■

```

## Utility

# Largeprint

Colin Friston, Surrey

Live up your printer with this banner utility which allows you to print large fancy headings. Although it is written for the 40 column 802 printer it should be easy to adapt it to any other printer.

```

0 DIM #XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1 DIM # L A R G E P R I N T #
2 DIM # #
3 DIM # C O L I N F R I S T O N #
4 DIM #XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5 DIM
10 DIM #N(200),#M(7),#B(5),#T(10)#GRAPH
100 #:#POKE 82,0
20 ? :? "INPUT YOUR WORD ":#INPUT #:#?
:CT=1
30 FOR T=1 TO 320:#M(T)=#:#NEXT T
40 FOR LOOP=1 TO LEN(#):T#=#+1:LOOP,LO
OP:#N=(ASC(T#)-32)*80+57344
50 FOR Y=ND TO ND+7:CT=CT+1
60 #=#" "
70 #=#PEEK(YD)+#N#
80 #N=255:#IF ND=0 THEN #M(1,1)=T#:#GOT
0 100
90 #N=#255
100 #N=#120:#IF ND=0 THEN #M(2,2)=T#:#G
TO 120
110 #N=#120
120 #N=#64:#IF ND=0 THEN #M(3,3)=T#:#GOT
0 140
130 #N=#64
140 #N=#32:#IF ND=0 THEN #M(4,4)=T#:#GOT
0 160
150 #N=#32
160 #N=#15:#IF ND=0 THEN #M(5,5)=T#:#GOT
0 180
170 #N=#14
180 #N=#0:#IF ND=0 THEN #M(6,6)=T#:#GOTO
200
190 #N=#0
200 #N=#4:#IF ND=0 THEN #M(7,7)=T#:#GOTO
220
210 #N=#4
220 #N=#2:#IF ND=0 THEN #M(8,8)=T#:#GOTO
240
230 #N=#2
240 IF N=1 THEN #M(9,9)=T#
250 N1=CT+40+LOOP#0-7
260 N2=CT+60+LOOP#0
270 #M(N1),#N2=#N#
280 NEXT TO:CT=-1:NEXT LOOP
290 PRINT #M:LPRINT #M
300 GOTO 20

```

This page is put aside each issue for the exclusive use of Birmingham User Group

## Bug Club Call

This is the time of year to wish all members the compliments of the season but as we are a Computer Users Group, why write it down? Just type in the following program.

```

10 REM *****
11 REM # CHRISTMAS CARD #
12 REM # BY #
13 REM # MIKE ASTON #
14 REM *****
100 DIM M(37),D(4)
110 M="HAPPY CHRISTMAS TO ALL OUR MEM
BERS "
200 GRAPHICS 10
210 FOR C=0 TO 4
220 POKe 700+C,12816+C*2*7
230 NEXT C
300 POKe 550,42:POKe 53277,2:POKe 623,
PEEK(4230)+1
310 FOR X=0 TO 3:POKe 53240+X,64+C*32:
POKe 53256+X,3:POKe 794+X,54:NEXT X
320 B=PEEK(742)-4:POKe 54279,B:0-B*256
330 FOR I=0 TO 1023:POKe B+I,0:NEXT I:
B=B*256
400 Y=0
410 FOR C=4 TO 9
420 COLOR C:FOR Y=0 TO Y+2
430 PLOT 0,Y:DRAWNED 79,Y
440 NEXT Y:NEXT C
450 IF Y<175 THEN 410
500 CS=PEEK(754):G254
520 A=ASC("B")-32:P=CS+400
530 FOR J=0 TO 7:POKe B-32+J,PEEK(P+J)
:NEXT J
540 A=ASC("B")-32:P=CS+400
550 FOR J=0 TO 7:POKe B+252+J,PEEK(P+J)
:I:NEXT J
560 A=ASC("U")-32:P=CS+400
570 FOR J=0 TO 7:A=PEEK(P+J):H=INT(H/
16):A=C4-16*H+16:POKe B+74+J,H:POKe
B+224+J,A:NEXT J
610 FOR S=1 TO 34:0-A*P*5,S*30
620 FOR D=1 TO 4:0-A*SC(104+17)-32:P=CS+
400
630 FOR J=0 TO 7:POKe B+1280+(1-1)+J,PE
EK(P+J):NEXT J
640 X=PEEK(760):FOR F=0 TO 3:POKe 760+
F,PEEK(780+F+1):NEXT F:POKe 712,X
650 NEXT I:NEXT S
660 GOTO 410

```

The program has been written by the Club Secretary, Mike Aston, for you, the members, but we desperately need two-way communication. So, when you have a spare moment over the Christmas

holidays, we would like you to send the Club a message for the New Year in the form of a program. You can use the above program as a base or write one of your own. When you have done it, send a tape to Mike Aston at 42, Short Street, Wednesbury, W. Mids. As an added incentive, there will be a worthwhile prize awarded to the best program. Help kick off the New Year in the right way. Write a program.

### QUESTIONNAIRES

Every member had a questionnaire from Steve Gould with the last magazine. If you have still got it please fill it in, even if you are not interested in the games meetings proposed. Your answers will shape the future of the Club. Don't wait till next year, post the form to Steve NOW.

### NEXT YEAR'S MEETINGS

Quite a few changes are being proposed for next year but as this is being written before the AGM and before the new Committee has been elected it is not possible to give details of next year. If you are not absolutely sure when the meetings are, please phone one of the existing Committee members to save a wasted journey. The phone numbers are in Issue 3.

### STOP PRESS...STOP PRESS...

The following committee was elected at the AGM on 24th November 1980

Chairman:	John Mills
Vice Chairman:	Mike Reynolds-Jones
Secretary:	Mike Aston
Treasurer:	Wages Jones
Committee:	Julian Bailey Keith Bason Steve Gold Lawrence Miller Mick Gales Giles Howell

Meetings will be held monthly in future with Special Interest Groups holding meetings between the main monthly meetings. Contact a committee member for details.



1. Program Recorder



2. 61K Memory Module



3. Touch Tablet



4. Track Ball Controller



5. Super Joystick



6. Colour Printer



7. Disk Drive



8. 80 Column Dot Matrix Printer



9. Letter Quality Printer

These peripherals will be available soon:  
1. **ATARI 800K** - Postcard-size system for low cost storage and retrieval capability. Data transmission 480 baud. Storage capability 180K bytes on a 90-minute cassette. Track configuration 4 track, 2 channels (digital and analog). Auto record/playback/pause control.

2. **ATARI 64K Memory Module** gives the 800K 128K memory (48K RAM).

3. **ATARI Touch Tablet** enables you to point pictures and draw diagrams, with the touch of a stylus.

4. **ATARI Track Ball** Controller enables

cursor movement in any direction, adds to the pleasure of Atari games.

5. **ATARI Super Joystick**. Gives you a greater competitive edge over your games.

6. **ATARI 800K Colour Printer** (patent). Four colour graphic print capability: 60 columns, 80 characters per second. A, B and 90 characters per inch.

7. **ATARI 800K Dual Density Disk Drive**. 5 1/4-inch disks holding 147K normally accessible bytes provides both expansion and flexibility for your 800K system with 100K B.

8. **ATARI 800K Letter Quality Printer** for word processing delivers in professional type.

If you'd like to know more about the ATARI 800K, write to Atari International (U.K.) Inc., P.O. Box 400 Blackhorse Road, London N20 9JH and we'll send you all the details.

**The new Atari XL home computer system.**

ATARI and design Reg. U.S. Pat. & TM. Office. © 1982 Atari Inc. Atari, the ATARI logo, computer and XL are trademarks of Atari Inc.

9. **ATARI 800K** - 80 Column Dot Matrix Printer prints 5, 6 or 10 characters per inch, 80 characters per second. Ideal for program listings, financial reports, etc.

10. **ATARI 800K** - Letter Quality Printer for word processing delivers in professional type.

If you'd like to know more about the ATARI 800K, write to Atari International (U.K.) Inc., P.O. Box 400 Blackhorse Road, London N20 9JH and we'll send you all the details.



**FOR ALL INFORMATION ON  
NEW ATARI PRODUCTS  
CALL-WRITE OR PHONE**

**Home  
Entertainment**



**ATARI CENTERS**

**NOW OPEN**

**MIDLANDS** 212-213, Brook Street, Birmingham, B1 1AA  
TELEPHONE: 021-643-9100

**MAIL ORDER ENQUIRES**

**Tel: 021-643 9100**

**VCS only Tel: 021-643 9968**

**NORTH WEST** Inc. The All Computer Book Shop,  
13, Miller Arcade, Preston, Lancs, PR1 2DA,  
TELEPHONE: Preston 562007

© 1982 Atari Inc. All rights reserved. Atari, the ATARI logo, computer and XL are trademarks of Atari Inc.

# ALLRIAN

DATA SERVICES

## important notice !!

IF YOU KNOW THE BEST SOFTWARE FOR THE ATARI IS AMERICAN, THEN YOU'LL ALSO KNOW THAT WE ARE THE FIRST AND BEST MANUFACTURER OF AMERICAN SOFTWARE IN THE UNITED KINGDOM. ALLRIAN PRODUCES THE ENTIRE RANGE OF ARTWORK SOFTWARE IN THE U.K. FOR YOU. TAKE A LOOK AT WHAT WE'RE DOING.

MONKEY MATHS 14.95

HAZARD RUN 21.50

DRAWPIC 24.50

P.M. EDITOR 24.50

GWENDOLYN

GRAPHIC ADVENTURE  
ON TWO FULL DISKS.

NEEDS 40K  
20.95

### FIRST GAME SERIES

WE ARE PROUD TO INTRODUCE THE FIRST GAME SERIES OF SOFTWARE. A BUDGET LINE OF PROGRAMS THAT ALL RUN IN 16K, CASSETTE BASED & COST JUST £7.50 EACH.

INTRUDER ALERT  
RINGS OF THE EMPIRE  
SPACE TRAP  
GIANT SLALOM  
CRAZITACK

ALL PRICES  
INCLUDE VAT.

P & P ARE FREE.

\* ALL RUN IN 16K.

1000a Uxbridge Road, Hayes, Middlesex. UB4 0RL, U.K.