

# Sinclair programs



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GENERAL DOOM  
STAMPEDE  
and many more**

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and  
ZX-81**

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# Contents

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## 7 LETTERS

### BEGINNERS' SECTION ZX-81

15 CLOCK  
RIVER RESCUE

16 HOPBIT

17 CAVEMAN  
SNIPER FIRE

### SPECTRUM

16 PHASE

### ZX-81

12 EXAM ROOM

33 RAT INVASION

★ ★ ★ ★ ★  
★ 34 PROGRAM OF ★ ★ ★ ★ ★  
★ THE MONTH ★ ★ ★ ★ ★  
★ ABANDONED HOUSE ★ ★ ★ ★ ★

39 FORT KNOX

47 STAMPEDE  
SKY DIVER

52 GENERAL DOOM

54 DAMSELS IN  
DISTRESS

62 WINDFALL

63 IT'S SNOWING  
AGAIN  
SAVE FREDDIE

### SPECTRUM

8 SHEEP DOG

13 STAR

19 COCONUTS

24 BUILDER

27 FLITE

29 TREE EATERS

37 MAZEMAN

44 ENIGMA

45 MISSILE

50 CHOPPER SQUAD

56 LEAVE ONE

60 ARITHMETIC  
EXPRESS

61 BMX

Instructions for graphics characters are printed in lower-case letters in our listings. They are enclosed by brackets and separated by colons to distinguish them and the brackets and colons should not be entered.

Inverse characters are represented by the letter "i" and graphics characters by "g". Thus an inverse W would be represented by "iw", a graphics W by "gw", and an inverse graphics W by "igw".

Spaces are represented by "sp" and inverse spaces by "isp". Whenever any character is to be used more than once, the number of times it is to be used is shown before it, together with a multiplication sign. Thus "6\*isp" means six inverse spaces and "(g4:4\*i4:g3)" would be entered as a graphic four, followed by an inverse four repeated four times, followed by a graphics three.

Where whole words are to be written in inverse letters they appear in the listings as lower-case letters. Letters to be entered in graphics mode on the Spectrum are underlined.

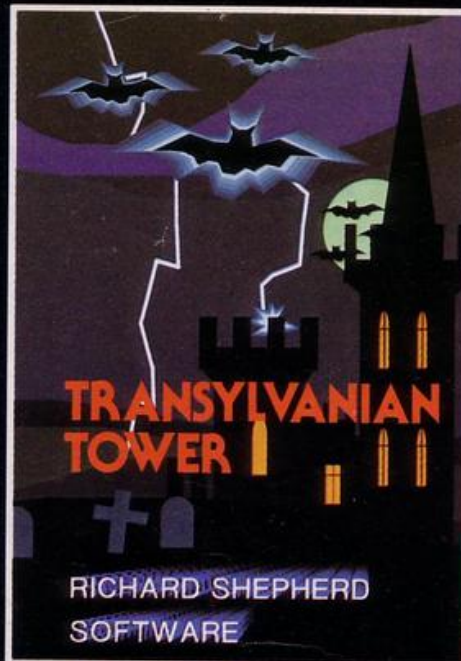
Inverse characters may be entered on the ZX-81 by changing to graphics mode and then typing the appropriate characters and on the Spectrum by changing to inverse video and typing the appropriate letters. Graphics characters may be entered on the ZX-81 by changing to graphics mode and then pressing symbol shift while the appropriate characters are entered. On the Spectrum graphics characters may be obtained by changing to graphics mode and then pressing the appropriate character. User-defined graphics will appear as normal letters until the program has been RUN.

# "ADVENTURES IN

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AND ALL LEADING

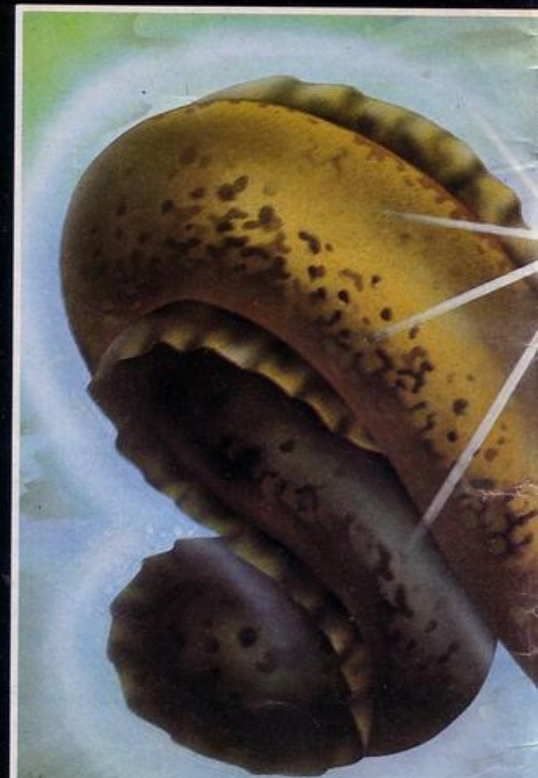
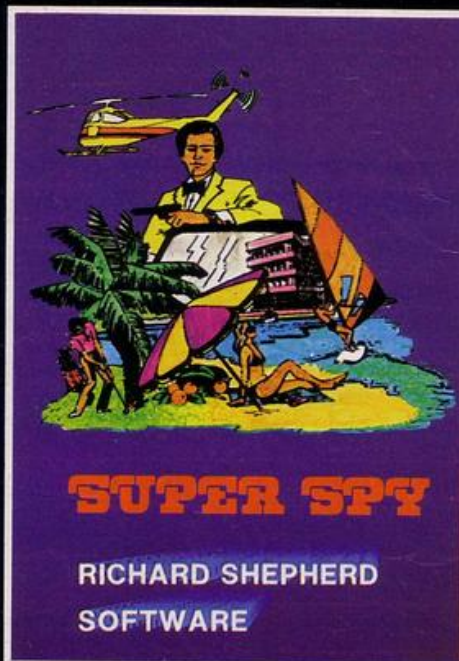
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the swooping vampire bats  
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the Tower? Full save routine  
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ure by lethal crabs and menacing ele-  
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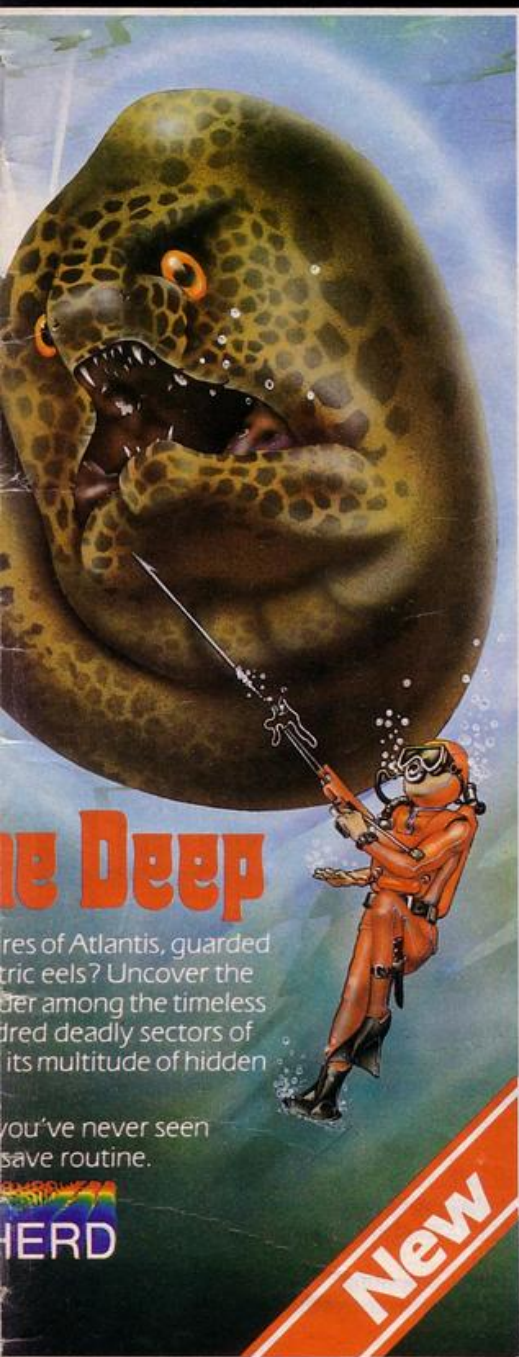
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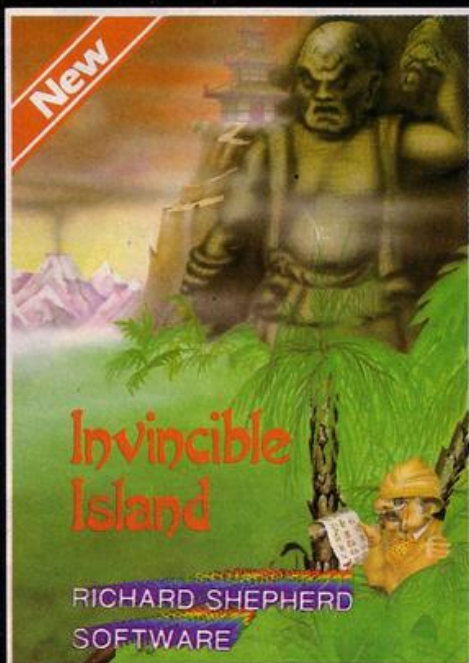
TH, JOHN MENZIES, BOOTS\*  
COMPUTER STORES



res of Atlantis, guarded  
tric eels? Uncover the  
der among the timeless  
dred deadly sectors of  
its multitude of hidden

you've never seen  
save routine.

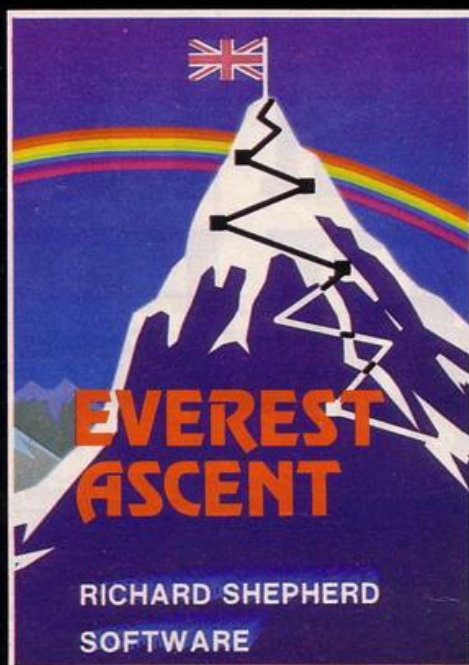
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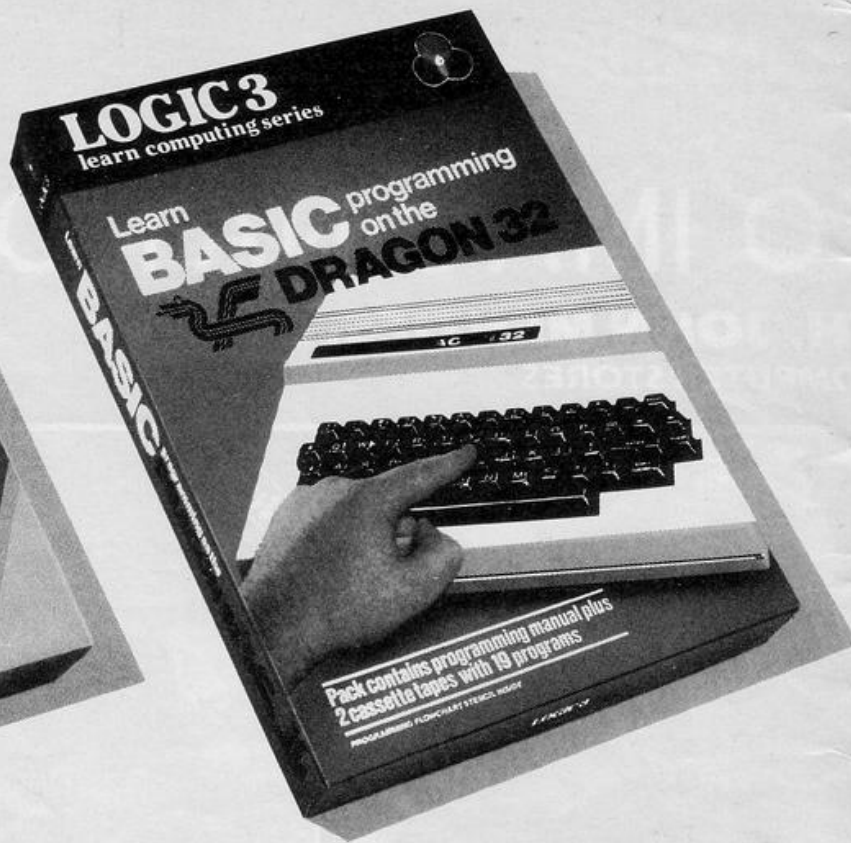
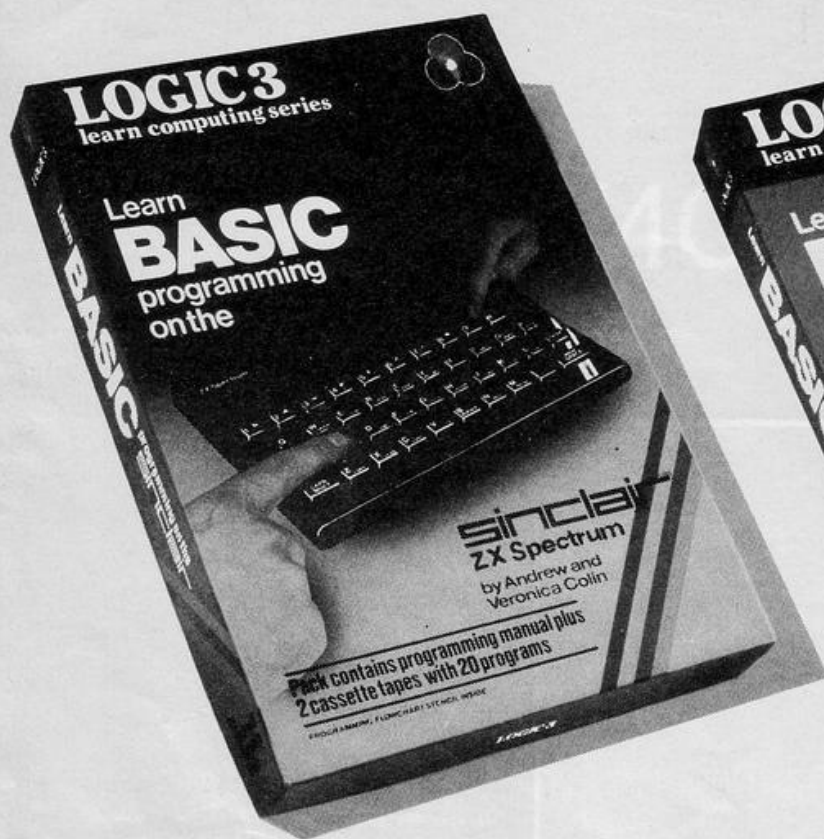
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— THE KEY TO THE WORLD OF TOMORROW. —

# LETTERS

ON BEHALF of all your readers, thank you for publishing a wonderful magazine. In my second breath I implore you to publish fortnightly. That would satisfy everyone and would prevent the agony of waiting. Of course I am speaking feelingly as I am more than 70 years old. This is my only pastime and it takes me about two weeks to try all the programs. There have been several times a program has not run, but a letter to you soon solves any problems.

I was interested in the letter from Allisoun Fern; I did not know there were different models of the Spectrum. There is nothing in the manual which states the model or how to identify from other models, so your reply was of great interest; the IN statements are now committed to my memory bank. I bought my Spectrum in June. Is there anything about this model on which you could enlighten me?

I have all the time in the world to enter any program so I know everything I enter is exactly as printed. For instance, two programs — Slalom and Quasimodo — in the November issue failed to run; are they not reading the data? Could that have anything to do with the model, or do you think some part of the computer is faulty?

I know you must be up to your necks in letters. Could you set up a telephone answering service, since the questions would be mainly about errors? A set of ready-made answers could be ready.

There must be many programs you have published which newcomers do not know about. Could you reprint them? When you come to the financial part, your magazine proves the cheapest and, as far as programs go,

they surpass all the opposition. I would not mind if you raised the price so long as you increased the number of programs and added some interesting features.

Why not increase the number of readers' letters? Many computer thumpers would be over the moon to see theirs printed. As I have seen in your letters page, items and information other readers have to offer are extensive.

That would lead to us learning the computer to become more capable and, in time, repay you by sending programs we have composed. What a happy world if this could happen.

**C Fowler,  
Sheffield.**

## Record Breaker?

I AM writing about a program in the July issue of *Sinclair Programs*, Alphabet Time. On my first attempt on the program I got 120 units. I would like to know if anyone else has written to say they have beaten my record.

**Andrew Lamb, aged 11,  
Edgbaston, Birmingham.**

## Werewolf's Lair Changes

IN THE OCTOBER edition in the game Werewolf Lair a few mistakes were made. The peeks which make sure that you or the monster do not go through the walls of the maze are set up for the wrong graphics. To solve this you can either change all the graphic Hs in the maze plot to graphic As or change the 8 in lines 370, 570 and 630 to 136. With the second method you must also change the

graphic As in lines 90 and 290 to graphics Hs.

I found this a very enjoyable game and have managed to achieve a high score of 753.

**Tom Liptrot,  
Burscough,  
Lancashire.**

## ZX-81-to-Spectrum Conversion

I AM a newcomer to computers and I own a Spectrum 48K machine. I find your magazine very helpful but I have one problem which you could solve for me.

In the ZX-81 listings there are certain commands which are foreign to me — i.e., FAST, SLOW, g.w., g.a. Could you supply me with a list of Spectrum commands to replace them in the listings so I can make full use of your magazine? Perhaps the listing could be printed in the magazine for the benefit of other Spectrum owners.

**M Gibson,  
Stoke-on-Trent.**

## Letter not Figure

IN PRINTING my letter in the October issue of *Sinclair Programs* you made a small mistake which made nonsense of the letter. The last part should read: Line 135 IF n=10 and y=16 THEN PRINT AT 13,17; “\*”:PAUSE 7\*(4-l)+10; PRINT AT 13,17; “ ”

**A Ferguson,  
Middlesbrough.**

## Mark Three Defender

YOU RECENTLY sent me a reply to my letter concerning a fault in the Defender program published in the July issue of *Sinclair Programs*.

You said in your letter that a number of your readers had experienced the same fault i.e., failure of ‘Cap Shift’ and ‘Z’ keys to move the spacecraft up and down.

I have delved into this fault and have come up with a solution to the problem. If line 2020 of the program is amended as shown, all will be well.

My amended program now works perfectly.

I hope that this information will be of use to you and your readers and that it will be published in *Sinclair Programs* in due course.

**C A Bailey,  
Ely,  
Cambs.**

*Readers with Model 3 Spectrums who have experienced problems with the DEFENDER program may find this amendment useful.*

```
2020 LET OP=OP: LET N=0: LET A=2
54+255*(255-2*n): LET L=13: IF
T: OP=2+1*(1-10)*AND:OP<15: 2*1
=150 AND OP>7: IF A=3 AND INK
Y=15: THEN OVER 1: PRINT AT OP,
4: INK 5: "XXXXXXXXXXXXX"
1111: PRINT AT OP,57:USR 65057
: INK 6: "LLLLLLLLLLLLLLLLLLLL
LLLL": OVER 3: THWEESE 1: PLOT 5
2,170-OP+6: DRAW 223,0: INVERSE
8: IF OP=20 THEN GO TO 2300
```

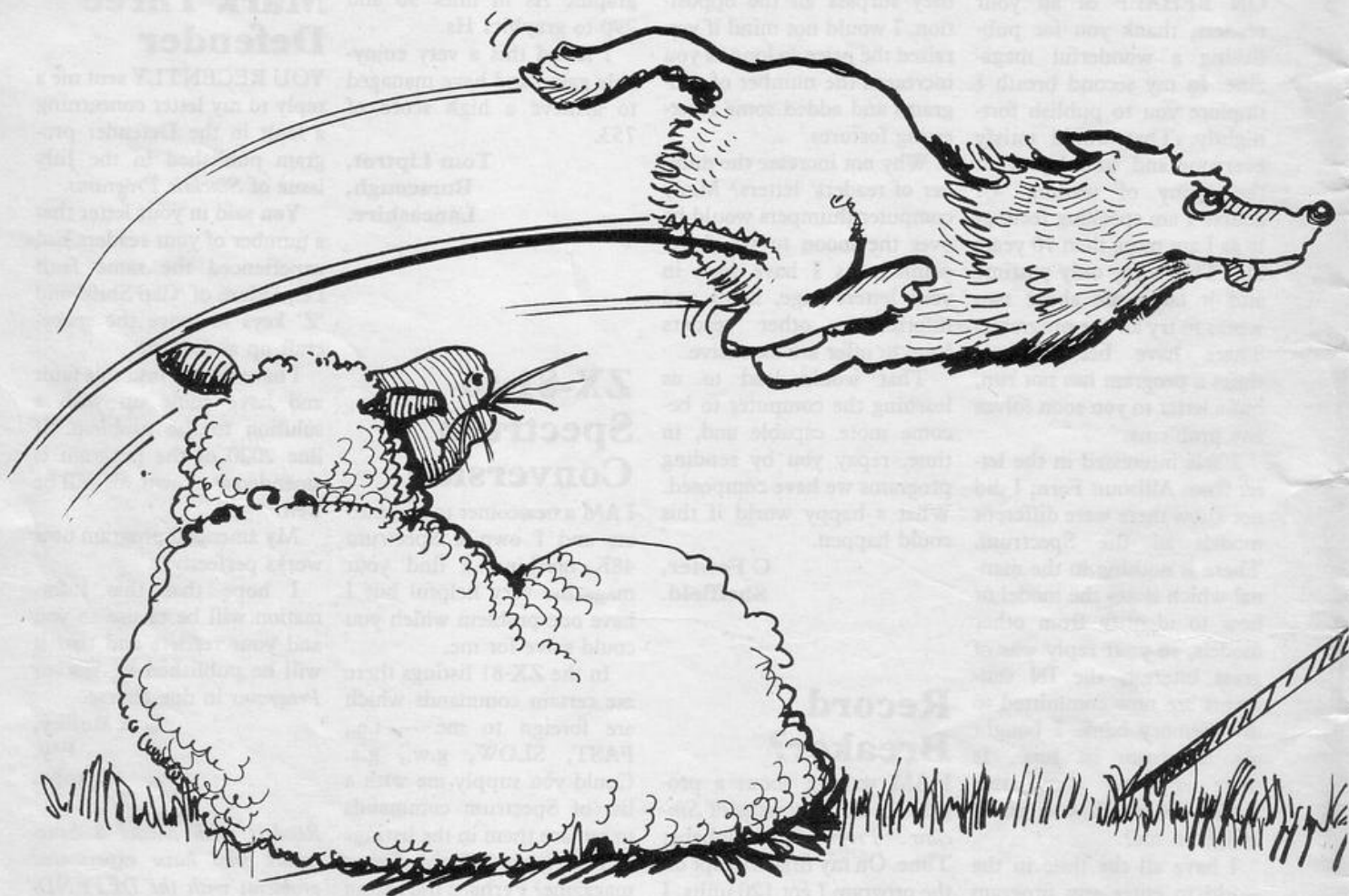
## More Graphics Programs

THANK YOU for your programs like Contour, Mirror Patterns and other good graphics wonders in November *Sinclair Programs*.

I hope you will try to have one or more each month, as they can be only a few lines but be very good.

**Bjorn Jonnor,  
Reykjavik,  
Iceland.**

# SHEEP DOG



```

10 REM "SHEEP DOG"
20 DIM a(4): DIM b(4): DIM c(4)
30 FOR n=1 TO 4: LET a(n)=INT (RND*31)+1: LET c(n)=0: LET b(n)=INT (RND*20)+1: NEXT n
40 LET x=10: LET y=10
50 LET t=0
60 LET a$="( 1)"
70 LET b$="( 0)"
80 INPUT "DO WANT PASTURE OR DESERT P/D"; s$: IF s$="P" THEN PAPER 4
90 IF s$="D" THEN PAPER 6
95 IF s$="" THEN PAPER 6
97 BORDER 1: CLS
100 FOR n=0 TO 7: READ q: POKE USR "P"+n,q: NEXT n: DATA BIN 0, BIN 10000000, BIN 10000100, BIN 11000111, BIN 01111111, BIN 01111100, BIN 01000100, BIN 01000100
110 FOR n=0 TO 7: READ q: POKE USR "o"+n,q: NEXT n: DATA BIN 0, BIN 0, BIN 00000100, BIN 01111111, BIN 01111110, BIN 01000100, BIN 01000100
120 FOR n=0 TO 7: READ q: POKE USR "i"+n,q: NEXT n: DATA BIN 0, BIN 00000001, BIN 00100001, BIN 11

```

```

100011, BIN 11111110, BIN 00111110, BIN 00100010, BIN 00100010
130 FOR n=0 TO 7: READ q: POKE USR "u"+n,q: NEXT n: DATA BIN 0, BIN 0, BIN 01000000, BIN 11111110, BIN 01111110, BIN 00100010, BIN 00100010, BIN 00100010
140 FOR n=0 TO 7: READ q: POKE USR "T"+n,q: NEXT n: DATA BIN 0, BIN 00000000, BIN 00000100, BIN 11000111, BIN 11111111, BIN 11111100, BIN 01000100, BIN 01000100
150 PLOT 103,88: DRAW 32,0: DRAW 0,8: DRAW -32,0: DRAW 0,-8: PRINT AT 10,15: " ": PLOT 120,80: DRAW 0,8: PLOT 120,80: DRAW 0,8
190 PRINT INK 0; AT 0,0: "(32*15 p)"; INK 6; PAPER 0; AT 0,24: "DOG S=(ppp)"
200 FOR n=1 TO 4
220 PRINT AT x,y: " "
230 IF INKEY$="7" AND x>1 THEN LET a$="( 1)": LET x=x-1: BEEP .001,35: BEEP .003,55
240 IF INKEY$="6" AND x<21 THEN LET a$="( 1)": LET x=x+1: BEEP .001,25: BEEP .003,45
250 IF INKEY$="8" AND y<31 THEN LET a$="( p)": LET y=y+1: BEEP

```

```

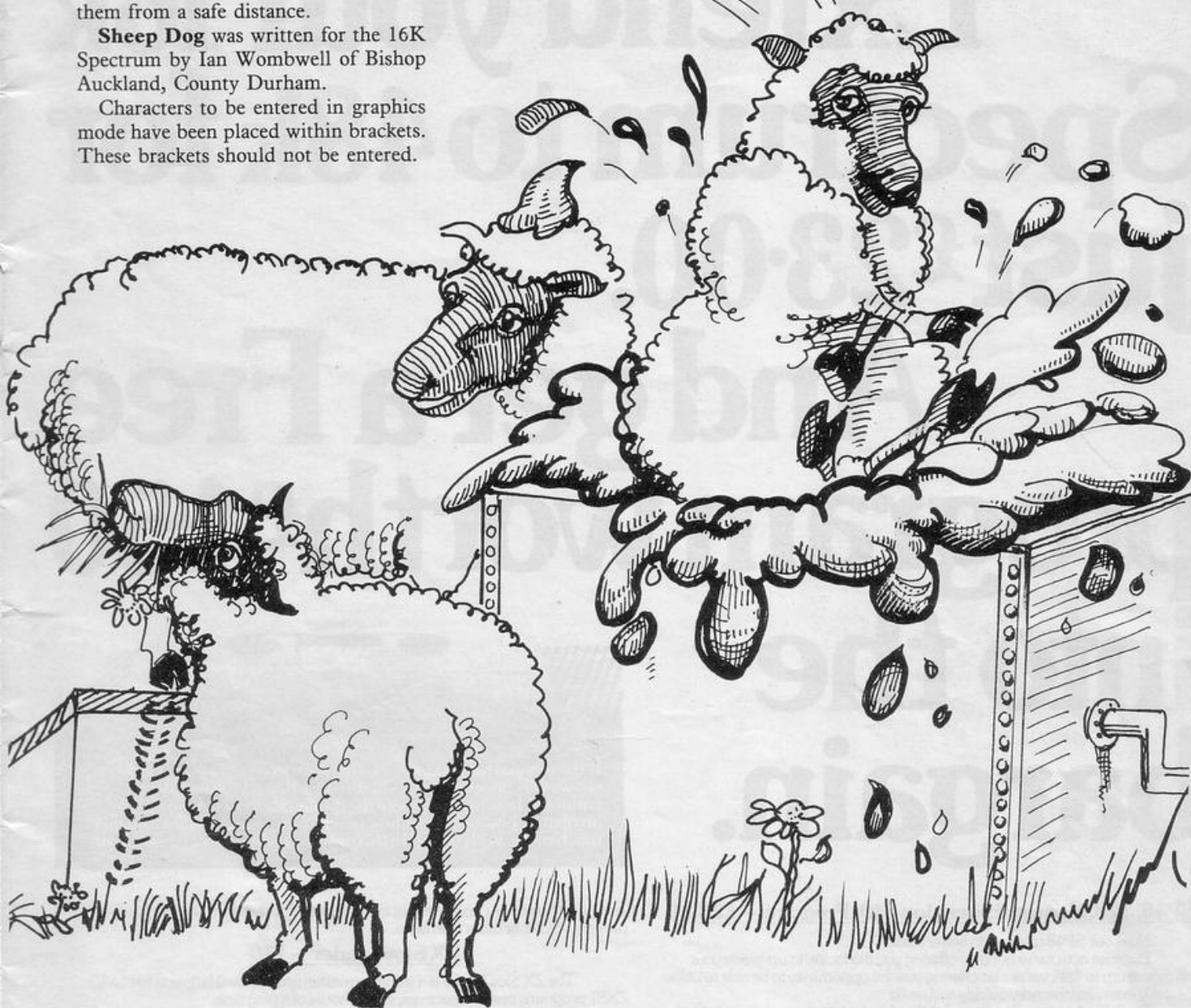
.001,15: BEEP .003,35
260 IF INKEY$="5" AND y>0 THEN LET a$="( 1)": LET y=y-1: BEEP .001,5: BEEP .003,25
263 PRINT INK 1; AT x,y: a$
265 IF c(n)=1 AND n<4 THEN NEXT n
267 IF c(n)=1 AND n=4 THEN GO TO 710
270 PRINT AT b(n),a(n): " "
280 IF a(n)>y AND a(n)<21 THEN LET a(n)=a(n)+1: LET b$="( o)": GO TO 350
290 IF b(n)>x AND b(n)<21 THEN LET b(n)=b(n)+1: LET b$="( o)": GO TO 350
300 IF b(n)<x AND b(n)>1 THEN LET b(n)=b(n)-1: LET b$="( u)": GO TO 350
310 IF a(n)<y AND a(n)>0 THEN LET a(n)=a(n)-1: LET b$="( u)": GO TO 350
320 IF a(n)=0 THEN LET a(n)=a(n)+1
330 IF a(n)=31 THEN LET a(n)=a(n)-1
340 IF b(n)=21 THEN LET b(n)=b(n)-1
345 IF b(n)=1 THEN LET b(n)=b(n)

```

**H**ERD YOUR wandering sheep into the sheep dip, controlling your sheep dog with the cursor keys. Do not run into them but bark at them from a safe distance.

**Sheep Dog** was written for the 16K Spectrum by Ian Wombwell of Bishop Auckland, County Durham.

Characters to be entered in graphics mode have been placed within brackets. These brackets should not be entered.



```
n)+1
350 PRINT INK 0;AT b(n),a(n);b
$
360 IF a(n)=15 AND b(n)=11 THEN
LET c(n)=1: LET a(n)=n+12: LET
b(n)=10: PRINT AT 11,15;" ": PR
INT AT b(n),a(n);"o"; BEEP .0
1,10: BEEP .005,60: BEEP .03,20
380 IF x=b(1) AND y=a(1) OR x=b
(2) AND y=a(2) OR x=b(3) AND y=a
(3) OR a(4)=y AND b(4)=x THEN L
ET l=l-1: PRINT AT 0,29+l);"isp"
": LET x=10: LET y=10: BEEP .1,-
30: BEEP .05,0: BEEP .3,-10: IF
l<=0 THEN GO TO 900
700 NEXT n
710 PLOT 103,80: DRAW 32,0: DRA
W 0,0: DRAW -32,0: DRAW 0,-8: PR
INT AT 10,15;" ": PLOT 120,80: D
RAW 0,8: PLOT 120,80: DRAW 0,8
720 FOR m=1 TO 4: IF c(m)=1 THE
N PRINT PAPER 0: INK 7;AT 0,12
;"SHEEP=";AT 0,17+m);"o"; PRIN
T AT b(m),a(m);"o"
740 IF c(1)=1 AND c(2)=1 AND c(
3)=1 AND c(4)=1 THEN GO TO 1000
741 NEXT m
```

```
745 LET t=t+1: PRINT PAPER 0:
INK 5;AT 0,3;"TIME=";t
750 GO TO 200
800 GO TO 200
900 PRINT AT 10,10;"you're dead"
910 PRINT FLASH 1: PAPER 2: IN
K 5;AT 11,3;"Keep away from the
sheep": PAUSE 70: PRINT INVERSE
1: INK 1;AT 12,8;"PRESS ANY KEY
": IF INKEY$="" THEN GO TO 910
920 RUN
1000 PRINT FLASH 1: PAPER 0: IN
K 5;AT 0,3;"TIME=";t
1010 PRINT AT 10,10;"Game Over":
PAPER 1: INK 6;AT 11,7;"YOU CAN
E "INT (t/30);" PLACE"
1020 IF INT (t/25)<=3 THEN LET
b$="!!!EXCELLENT!!! 100%": GO TO
1100
1030 IF INT (t/25)<=4 THEN LET
b$="GREAT!! 80%": GO TO 1100
1040 IF INT (t/25)<=5 THEN LET
b$="GOOD! 70%": GO TO 1100
1050 IF INT (t/25)<=6 THEN LET
b$="AVERAGE 60%": GO TO 1100
1060 IF INT (t/25)<=7 THEN LET
b$="FAIR 45%": GO TO 1100
```

```
1070 IF INT (t/25)<=8 THEN LET
b$="SLOW! 30%": GO TO 1100
1080 IF INT (t/25)<=10 THEN LET
b$="NOT AT ALL GOOD 20%": GO TO
1100
1090 IF INT (t/25)>10 THEN LET
b$="A LOAD OF !!! 10%": GO TO 1
100
2000 PRINT INK 7: PAPER 2;"YOU
ARE "b$;
2010 FOR n=1 TO 21: PAUSE 5: PRI
NT AT 10,15;"< p>";AT 18,13;"< p
>";AT 18,17;"< p>": BEEP .001,10
: BEEP .01,20: PAUSE 5: PRINT AT
10,15;"< t>";AT 18,13;"< t>";AT
18,17;"< t>": BEEP .001,0: NEXT
n
2100 INPUT "Another go Y/N";b$:
IF b$="y" THEN RUN
2111 LET a=0: LET b=50: LET c=-1
2200 BEEP a/10000,b: LET a=a+1:
BORDER INT (RND*7): IF a=20 THEN
LET a=10: LET b=b+1
2210 IF b=60 THEN LET b=0
2220 GO TO 2200
```



Is the manual past chapter 24 a mystery to you? 'Beyond Horizons' shows 48K Spectrum users how to PEEK and POKE systems variables, how to manipulate the display file, how to control the attributes, how to find out how much spare memory is left and much, much more. With the SP48 this program is free. On its own, £4.50.

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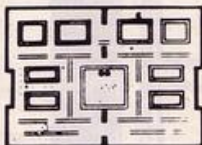
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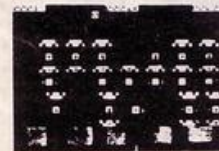
Bomb and shoot your way through the fortified caves.



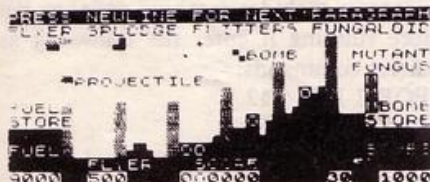
**GUNFIGHT** (machine code)



**INVADERS** (machine code)



**FUNGALOID**  
THE FUNGALOID IS GROWING AND WHEN THEY REACH THE SKY THEY PRODUCE DEADLY SPORES. YOU CONTROL A FLYER AND YOUR MISSION IS TO DESTROY THE FUNGALOID BY PLACING ANTI-FUNGUS BOMBS ON THEM.



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Fleets of swooping and diving alien craft to fight off.

**SNAKEBITE** (machine code)

Eat the snake before it eats you. Variable speed. (very fast at top speed).

**LIFE** (machine code)

A ZX81 version of the well known game.

**3D TIC-TAC-TOE** (Basic)

Played on a  $4 \times 4 \times 4$  board, this is a game for the brain. It is very hard to beat the computer at it.

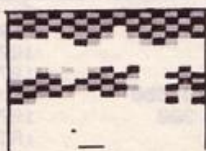
7 of the 8 games are in machine code, because this is much faster than Basic. (Some of these games were previously available from J. Steadman).

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**SPACE RESCUE** (machine code)  
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What Micro? Games Supplement, Nov '83

7 of the 8 games are in machine code because it is much faster than Basic.



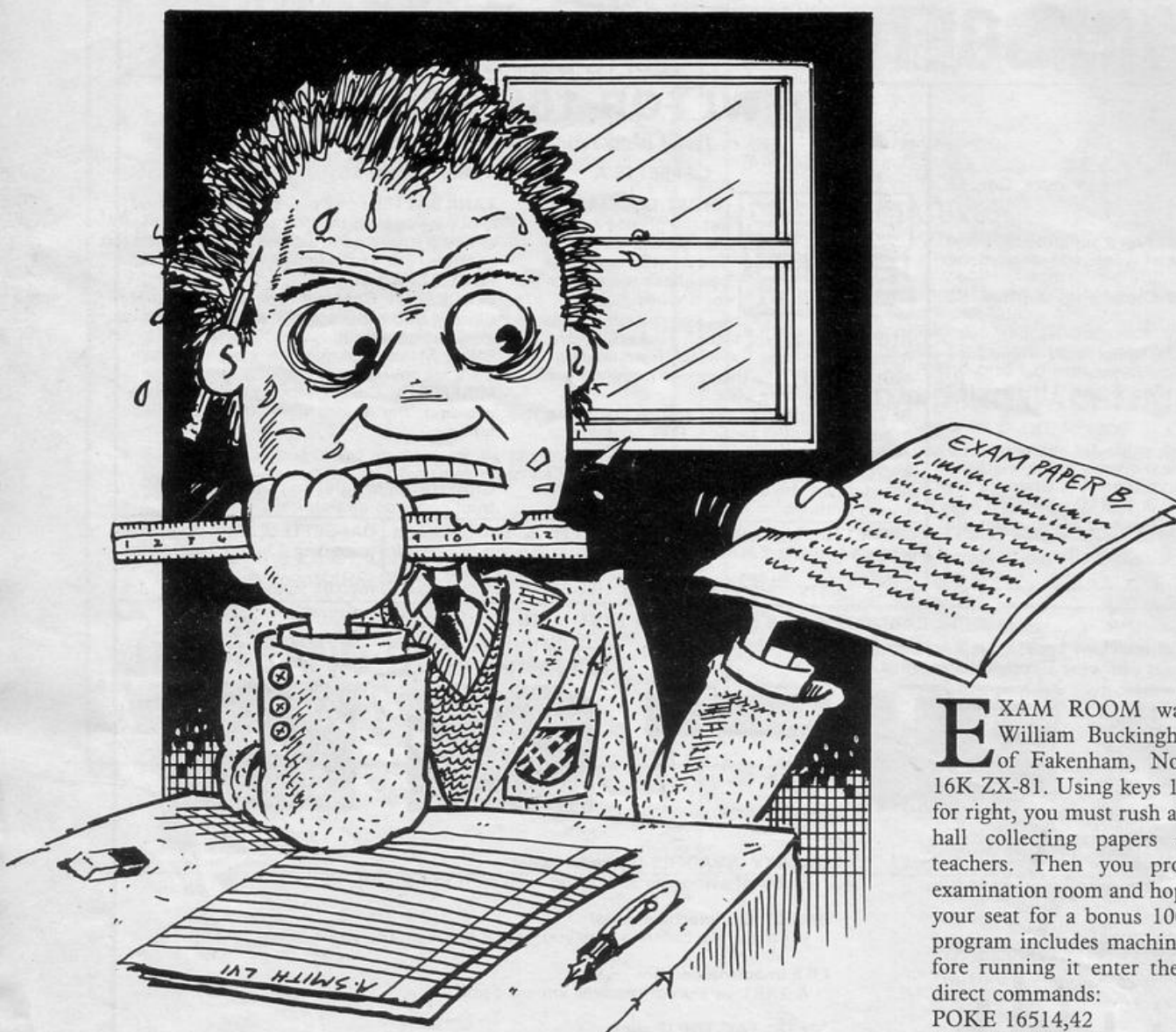
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**E**XAM ROOM was written by William Buckingham, aged 12, of Fakenham, Norfolk for the 16K ZX-81. Using keys 1 for left and 0 for right, you must rush about the main hall collecting papers and avoiding teachers. Then you progress to the examination room and hope to return to your seat for a bonus 100 points. The program includes machine code, so before running it enter the following as direct commands:

POKE 16514,42  
POKE 16515,14  
POKE 16516,64  
POKE 16517,78  
POKE 16518,6  
POKE 16519,0  
POKE 16520,201  
POKE 16510,0

# EXAM ROOM

```

1 REM 1234567
2 CLS
10 LET S=0
20 LET X=19
25 LET Y=30
30 LET T=-1
31 FAST
35 PRINT AT 0,0;"(isp:exam room)"
40 FOR F=1 TO 19
45 PRINT AT F,0;"(isp:30*isp:is
P)"
50 NEXT F
55~PRINT AT 20,0;"(32*isp)"
56 GOSUB 1000
61 PRINT AT X,Y;"0";AT X-1,Y;"
";AT X-2,Y;" ";AT X-3,Y;" "
62 FOR F=1 TO 50
63 NEXT F
70 PRINT AT X,Y;" "
80 LET X=X+T
100 LET Y=Y+(INKEY="0")-(INKEY
100~LET Y=Y+(INKEY="0")-(INKEY
="1")
101 IF X=1 AND Y=1 THEN GOTO 20
00
110 PRINT AT X,Y;
120 LET L=USR 16514
130 IF L>=128 THEN GOTO 500
140 IF L=23 THEN GOTO 300
150 PRINT "0"
180 GOTO 70
300 LET S=S+1
310 LET T=-T
340 GOTO 70
500 PRINT AT X,Y;CHR# L
505 PRINT AT 18,5;"ANOTHER GAME
? (Y/N)"
510 PRINT AT 21,0;"YOUR SCORE:
";S
515 INPUT A$
520 IF A$="Y" THEN RUN
530 GOTO 500
1020 FOR F=1 TO 110
1030~PRINT AT INT (RND*18)+1,INT
(RND*30)+1;"*"
1040 NEXT F
1050 FOR F=1 TO 20
1060 PRINT AT INT (RND*18)+1,INT
(RND*30)+1;"(1)"
1070 NEXT F
1075 PRINT AT 10,0;"(7*isp:1";isp
";isp)"
1076 PRINT AT 1,1;"(9h) "
;AT 2,1;" "
1080 FOR F=1 TO 9
1090 PRINT AT F,10;" (isp)"
1095 NEXT F
1096 PRINT AT 9,8;" ";AT 11,8;"
"
1100 SLOW
1105 RETURN
2000 FOR F=1 TO 20
2010 PRINT AT 1,1;"(10)";AT 1,1;
"(9h)"
2020 NEXT F
2030 LET S=S+100
2040 PRINT AT 21,0;"BONUS 100.YO
UR SCORE: ";S
2045 PAUSE 4E4
2050 CLS
2060 GOTO 20
9999 SAVE "EXAm"
9999 RUN

```



# STAR

**L**OST in unknown space you meet rubbish which must be avoided at all costs, stars which you must not touch, a black hole the sides of which you must not touch, coloured fuel dumps which you must try to hit, and red booby-trapped fuel dumps which you must also avoid. Steer left with 5 and right with 8.

**Star** was written for the 16K Spectrum by P Loach of Hadleigh, Suffolk.

```

10 GO SUB 9000
20 FOR f=1 TO 20
30 FOR g=1 TO 22: GO SUB scrol
1: NEXT g: GO SUB 1000+1000*INT
(RND*4): NEXT f
40 INK 1: PAPER 5: FLASH 1: CL
S: FOR f=1 TO 50: BEEP .05,f: B
ORDER f/7: NEXT f: PRINT #0;"
YOU SAVED EARTH": BEEP 1,10
50 PRINT AT 1,5: FLASH 1:"Anot
her game?"": FLASH 0:" You s
cored "s'" & reached adventure
":f
60 IF INKEY#="y" OR INKEY#="Y"
THEN RUN
70 IF INKEY#="n" OR INKEY#="N"
THEN GO TO 9999
80 GO TO 60
500 POKE 23692,20: PRINT AT 21,
0:" RETURN
600 BEEP .01,0: LET x=x+(INKEY#
="0" AND x<30)-(INKEY#="5" AND x
): RETURN
650 IF SCREEN#(1,x)>"" THEN R
ETURN
660 GO TO 710
700 IF ATTR(1,x)<0 THEN RETUR
N
710 INK 6: PAPER 2: FLASH 1: CL
S

```

```

720 FOR g=1 TO 30: BEEP .05,g:
BORDER g/7: CLS: NEXT g: GO TO
50
1000 LET P=15
1010 FOR g=1 TO 100: GO SUB scro
ll: PRINT AT 0,x: INK 6:"s"
1020 PRINT AT 21,0: PAPER RND*5+
1:"
";AT 21,P: PAPER 0:" "": G
O SUB move: GO SUB hit: LET s=s+
1: LET P=ABS(P+INT(RND*3))-1-(P
=25)): NEXT g: RETURN
2000 INK 3: FOR g=1 TO 100: LET
s=s+1: IF RND>RND THEN PLOT 0*I
NT(RND*27),7: DRAW 39,0
2010 GO SUB scroll: PRINT AT 0,x
: INK 6:"s": GO SUB move: GO SUB
hit1: NEXT g: RETURN
3000 INK 7: FOR g=1 TO 100: LET
s=s+1: GO SUB scroll: PRINT TAB
RND*31: BRIGHT 1:"*":AT 0,x: INK
6:"s":AT 21,x: BRIGHT 1:"*" AND
RND>.3: GO SUB hit: GO SUB move
: NEXT g: RETURN
4000 INK 0: CLS: FOR g=1 TO 100
: LET a=ATTR(1,x): LET i=INT(R
ND*5+1): GO SUB scroll: PRINT TA
B RND*31: INK i: FLASH 1=2:"":A
T 0,x: INK 6:"s": IF a>127 THEN

```

```

GO TO 710
4010 LET s=s+2*a: BEEP a/20,0: G
O SUB move: NEXT g: RETURN
9000 FLASH 0: BRIGHT 0: BORDER 0
: PAPER 0: INK 2: CLS
9010 LET hit1=650: LET x=15: LET
scroll=500: LET move=600: LET h
it=700: LET s=0
9020 PRINT INK 6:TAB 9:"SPACE V
OYAGE"" You are lost in unknow
n space"" During your voyage yo
u will "" meet some space rubbi
sh"" You must avoid this at all
cost"" Also you may meet a blac
k hole"" & inside you must not t
ouch the"" sides. Also you must a
void all"" stars. Finally you gai
n fuel by"" crashing into the co
loured fuel"" dumps (■) but bewa
re, the red "" dumps are booby tr
apped"
9030 PAUSE 1: PAUSE 0: RESTORE 9
030: FOR f=0 TO 7: READ g: POKE
USR "s"+f,VAL("BIN "+STR# g): N
EXT f: RETURN: DATA 1111111,10
0100,111100,1100011,1111110,1111
1111,9,1111110
9999 BORDER 7: PAPER 7: INK 0: F
LASH 0

```

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[illegible]

Date \_\_\_\_\_

SP1

```

1 LET H=0
5 PRINT AT 20,0;"(32*15P)"
10 LET S=0
20 LET D=10
25 LET K=0
40 LET B=2
50 LET A=INT (RND*26)+3
55 PRINT AT 0,0;S
56 PRINT AT 0,30;H
60 PRINT AT 19,0;" (92+96+91)"
"
70 LET D=D+(INKEY#="8" AND D<2
8)-<INKEY#="5" AND D>1)
80 PRINT AT B,A;"*"
85 PRINT AT B-1,A;" "
90 LET B=B+1
92 IF A=D+2 AND B=19 THEN GOTO
110
95 IF B=21 THEN GOTO 150
100 GOTO 60
110 LET S=S+1
120 PRINT AT 18,D+2;" "
130 GOTO 40
150 LET K=K+1
160 IF K=3 THEN GOTO 180
170 GOTO 40
180 CLS
181 PRINT "YOU HAVE FAILED TO S
AVE ALL THE PEOPLE"
182 PRINT
185 LET H=S
190 PRINT "YOU SAVED ";S;" LIVE
S"
200 PRINT
210 PRINT "ANOTHER GO?"
220 INPUT F#
222 IF F#="N" THEN STOP
225 CLS
230 GOTO 5
240 SAVE "RESCUE"
250 CLS
260 PRINT "ANY KEY TO START"
270 PAUSE 4E4
275 CLS
280 RUN

```



# RIVER RESCUE

USE KEYS 5 and 8 to move the boat at the bottom of the screen to catch the people falling from the sky. When three people have drowned your score is given.

River Rescue was written by Julian North of Pontefract, West Yorkshire.



# CLOCK



TONY ABRAHAMS of Camberley, Surrey wrote **Clock** for the ZX-81 16K. The program gives you a clock accurate to approximately 30 seconds an hour. That accuracy is contained in the variable "L" which equals about 50; you can adjust it to suit your machine.

Abrahams says his program disproves any accusations of Basic on a ZX-81 being too slow to support an accurate timepiece. The program uses the system variable FRAMES and may vary between individual machines. FRAMES takes 3,000 revolutions to the minute, therefore  $3,000/50 = \text{one second}$ . The clock may jump variables according to variable "L".

```

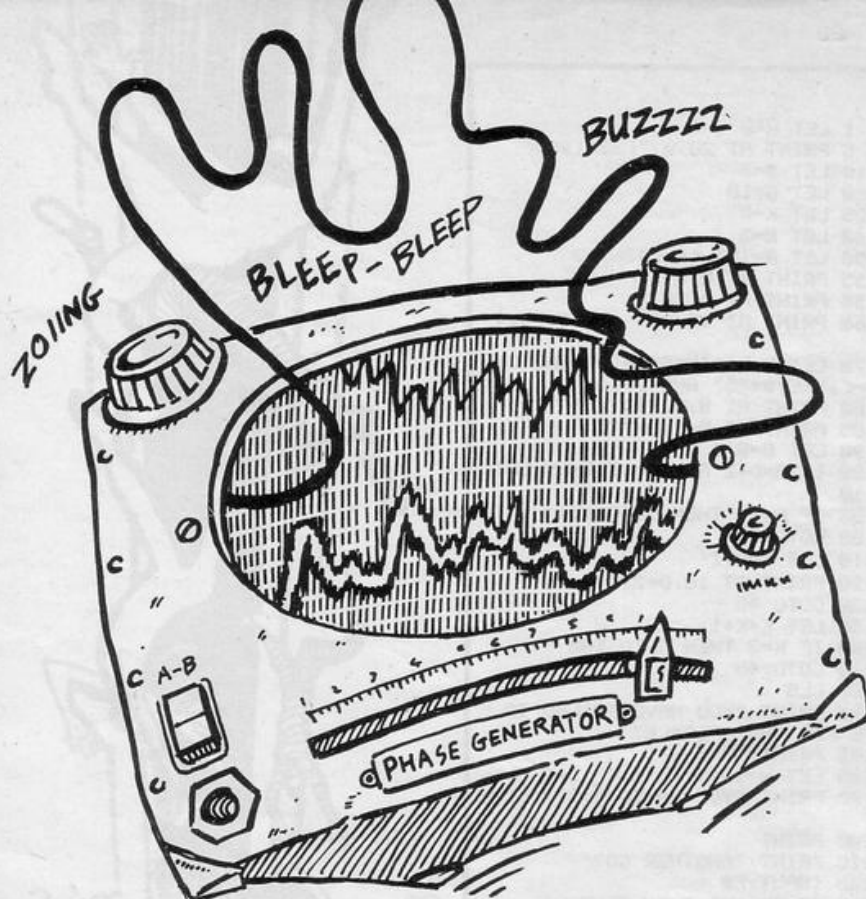
10 PAUSE 0
11 LET L=49.277
20 PRINT "INPUT THE TIME IN FO
RM "HH MM" WHERE H=HOUR(1 TO
12) AND M= MINUTE(0 TO 60)"
21 INPUT A#
23 LET H=VAL A#(1 TO 3)
30 LET M=VAL A#(4 TO )
35 PRINT "PRESS KEY TO START C
LOCK AT "H;"M";"00"
36 LET A#=INKEY#
37 IF A#="" THEN GOTO 36
45 CLS
46 PRINT AT 9,9;"(10*15P)";TAB
9;"(10*15P)";TAB 9;"(10*15P)"
50 PAUSE 0
61 LET A=(PEEK 16436+256*PEEK
16437)
71 LET S=INT (ABS ((PEEK 16436
+256*PEEK 16437)-A)/L)
81 IF S>60 THEN GOTO 111
91~PRINT AT 10,10;H;"M";" "
S
101 GOTO 71
111 LET M=M+1
121 CLS
131 IF M=60 THEN LET H=H+1
141 IF H>12 THEN LET H=1
151 IF M=60 THEN LET M=0
171 LET A=(PEEK 16436+256*PEEK
16437)
175 PRINT AT 9,9;"(10*15P)";TAB
9;"(10*15P)";TAB 9;"(10*15P)"
181 GOTO 71
191 SAVE "TIME"
201 RUN
202 REM approx 1 bytes

```

```

1 PRINT AT 10,5;"Phase lead a
nd lag"
2 PAUSE 100
3 CLS
4 PRINT AT 5,0;"This Programm
e will help you to understand A
.C. theory and the study of wave
s. It plots graphs of sinusoidal
functions for various phase
angles"
5 PAUSE 300
8 CLS
10 INPUT "If y=aSIN (wt+&) typ
e angle & in multiples of PI r
adians eg 0,.5,1,-.5 etc an
d ENTER";a
11 IF a=0 THEN PRINT "SIN (wt
+&),&=";a: GO TO 15
14 PRINT "SIN (wt+&),&=";a;"PI
"
15 FOR n=0 TO 255
20 PLOT n,80+50*SIN (n/128*PI+
a*PI)
30 NEXT n
40 INPUT "type c1 to clear scr
een or any letter to continue";
a$
50 IF a$="c1" THEN GO TO 7
60 IF a$<>"c1" THEN GO TO 10

```



**P**HASE is a useful program for anyone studying physics, as it demonstrates the idea of phase lead and lag. It plots graphs of sinusoidal functions for various phase angles. It was written by G W Davies of Ammanford, Dyfed for the 16K Spectrum.

# PHASE

BEGINNER



```

1 LET S=PI-PI
2 LET A=CODE "(9a)"
10 LET A$="(2*1sP:2*1sP:2*1sP:2
*1sP:2*1sP:2*1sP)"
15 LET B$="(3*9a:hoppit:3*9a)"
16 PRINT AT 9,0;"SCORE:";S
20 LET B=CODE "(9t)"
30 PRINT AT 0,0;B$;AT 4,0;B$;A
T 8,0;B$
40 PRINT AT 2,0;A$
50 PRINT AT A,B;
60 LET P=VAL "PEEK (PEEK 16398
+256*PEEK 16399)"
70 LET C$=A$< TO 2)
80 LET A$=A$<3 TO )
90 LET A$=A$+C$
100 PRINT AT A,B;"(1 )";AT A,B;
" );AT 6,0;A$
101 LET A=A-<2 AND INKEY$="B")-
< INKEY$="S")
103 IF A=0 THEN GOTO 1000
110 IF P<>0 THEN GOTO 30
120 GOTO 120
1000 LET S=VAL "S+1"
1010 GOTO 2

```

**U**SE KEYS "5" for left and "8" for right to move on to the floating logs and lily pads as you make your way across the river. Use key "7" to jump. Press the break key to return after the game is over.

**Hoppit** for the 16K ZX-81 was written by Mark McLeod of Aylesbury, Bucks.

# CAVEMAN

**C**AVEMAN is for the 1K ZX-81 by A Chetwode of Ramsbury, Wilts. You are a caveman hunting in the woods for supper. You throw stones at birds passing overhead with key "P". Twenty-five birds fly overhead at different angles and your score is shown.

```

1 LET S=0
2 LET A=0
3 RAND
4 FOR A=1 TO 25
5 CLS
6 LET H=18
7 LET F=2*(INT (RND*8))
8 FOR B=0 TO 20
9 PRINT AT F,B;" "
10 PRINT AT 16,14;" "
11 PRINT AT 19,15;" "
12 PRINT AT 20,14;" "
13 IF H<F THEN LET H=18
14 IF INKEY$="P" OR H<18 THEN
15 PRINT AT H,16;" "
16 IF B=15 AND H=F THEN GOTO 1
17 IF B=14 AND H=F THEN GOTO 1
18 IF INKEY$="P" OR H<18 THEN
19 GOSUB 1000
20 PRINT AT F,B;" "
21 NEXT B
22 NEXT A
23 PRINT AT 20,16,5
24 PRINT AT H,16;" "
25 LET H=H-2
26 RETURN
27 PRINT AT H-1,B;" "
28 PRINT AT H,B;" "
29 PRINT AT H+1,B;" "
30 PRINT AT H,B;" "
31 PRINT AT H+1,B;" "
32 PRINT AT H-1,B;" "
33 PRINT AT H-2,B;" "
34 PRINT AT H+2,B;" "
35 PAUSE 50
36 LET S=S+1
37 NEXT A
38 PRINT AT 20,16,5

```



**T**HE OBJECT of **Sniper-Fire** is to destroy the target on your right as many times as possible. You select your range, then control your aim with "A"=UP, "Z"=DOWN and "NEWLINE"=FIRE.

It was written by James Knowles of Aldershot, Hampshire for 16K ZX-81.

```

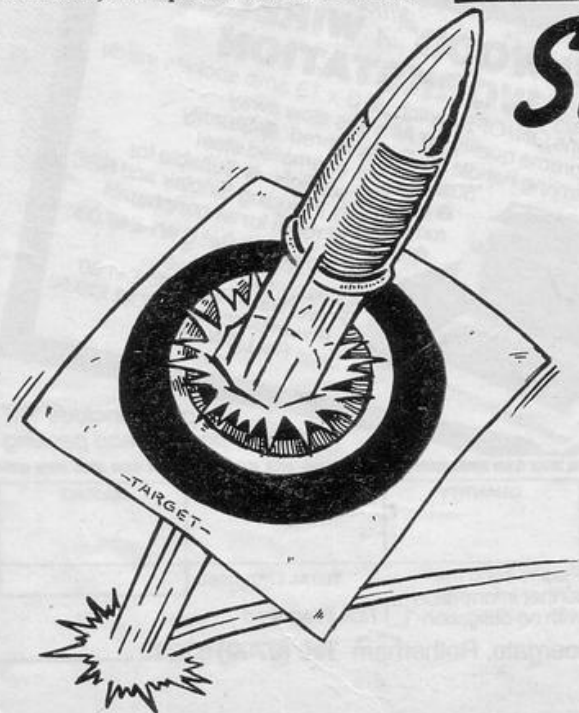
10 LET M=0
20 PRINT AT 0,0;"WHAT RANGE 5-30"
30 INPUT E
40 IF E>=31 OR E<=4 THEN GOTO 20
45 CLS
50 LET A=10
60 LET B=24
70 LET C=0

```

```

80 LET D=0
90 PRINT AT 5,21;"MISSES..."
100 PRINT AT 7,21;"HITS..."
110 PRINT AT 3,21;"RANGE..."
120 PRINT AT 10,21;"HIGH..."
M
130 PLOT 0,A
140 PLOT E,B
150 UNPLOT 0,A
160 UNPLOT E,B
170 IF INKEY$=CHR$ 118 THEN GOT
0 220
180 LET F=INT (RND*2)
190 IF F=0 THEN LET B=B+1
200 IF F=1 THEN LET B=B-1
210 LET A=A+(INKEY$="A")-(INKEY$="Z")
215 GOTO 130
220 FOR N=1 TO 5
225 PLOT E,B
230 PLOT N,A
240 UNPLOT N,A
250 IF N=E AND A=B THEN GOTO 280
260 IF N=E AND A<>B THEN GOTO 340
270 NEXT N
280 FOR N=1 TO 5
290 PRINT AT 0,0;"hit"
300 PRINT AT 0,0;" "
310 NEXT N
320 LET D=D+1
330 GOTO 90
340 FOR N=1 TO 5
350 PRINT AT 0,0;"miss"
360 PRINT AT 0,0;" "
370 NEXT N
380 LET C=C+1
390 IF C=4 THEN GOTO 410
400 GOTO 90
410 IF D>M THEN LET M=D
420 CLS
430 GOTO 20

```



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TOTAL ENCLOSED

```

300 RETURN
400 PRINT "                INSTRUCTIONS
"
410 PRINT "                COCONUT CL
IMBER"
420 PRINT "                BY N
IGEL HURST"
430 PRINT "                YOU HAVE TO COLLEC
T COCONUTS BYBOUNCING UP AND DOW
N ON THE                STEPIING STONES.YOU
GET A NEW SET OF COCONUTS WHEN Y
OU CLEARED"
440 PRINT "THE SCREEN.THE STONE
S DISAPPEAR                AS YOU BOUNCE ON THE
M ,BUT YOU                GET NEW STONES EVERY
SO OFTEN                DEPENDING ON YOUR SK
ILLL."
450 RETURN
900 PRINT AT 10,10; FLASH 1; BR
IGHT 1;"YOU DROWNED"

```



Written for the 16K Spectrum by  
Nigel Hurst of Upper Hartfield, East  
Sussex.

# A NEW WORLD OF ADVENTURE

## BLACK CRYSTAL



### BLACK CRYSTAL A THIRD CONTINENT SERIES ADVENTURE

The Classic, six program adventure game for the 48K Spectrum and 16K ZX81 computers. No software collection is complete without it. "Black Crystal" an excellent graphics adventure and a well thought out package." *Sinclair User*, April '83 "Black Crystal has impressed me by its sheer quantity and generally high quality of presentation. I am afraid I have become an addict." *Home Computing Weekly*, April '83 **Spectrum 48K** 180K of program in six parts only £7.50 **ZX81 16K** over 100K of program in seven parts only £7.50 **WHY PAY MORE FOR LESS OF AN ADVENTURE?**

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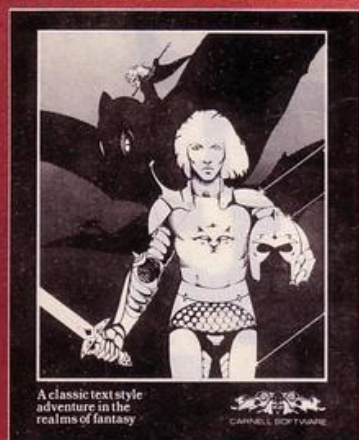


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*Popular Computing Weekly*, June 1983.

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### THE DEVIL RIDES IN

I uttered the last incantations as the clock struck thirteen. All fell silent except for a faint rustling in the corner. From out of the shadows they came, all Hell's fury against me but I was not defenseless until the Angel of Death, astride a winged horse, joined the battle. Avoiding his bolts of hell fire, I took careful aim. My chances were slim, but my luck held.

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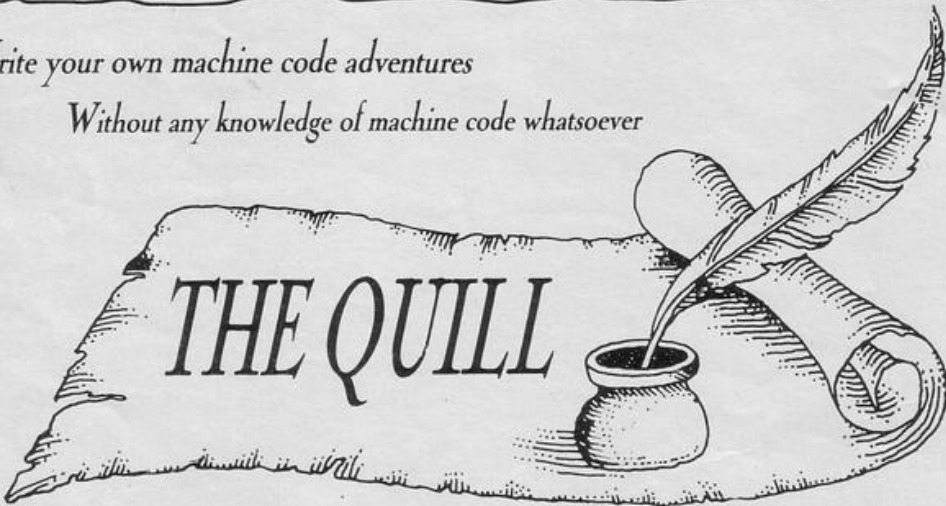
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**SPECIFICATIONS:** 48K Spectrum, 100% Machine Code, arcade action ★ Ultrasmooth hi-res graphic animation ★ Kempston Joystick compatible ★ Unique multimode intelligence routines; omnidirectional firing ★ Hi-score, on-screen display.

Design by  
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USE THE CURSOR keys to climb the ladders, slide down the mine shafts and avoid the monsters, the escaped pit trucks, the rotting planks, and the mysterious moving wall. Collect the gold and the picks and then proceed to the bottom right-hand corner to move to the next level.

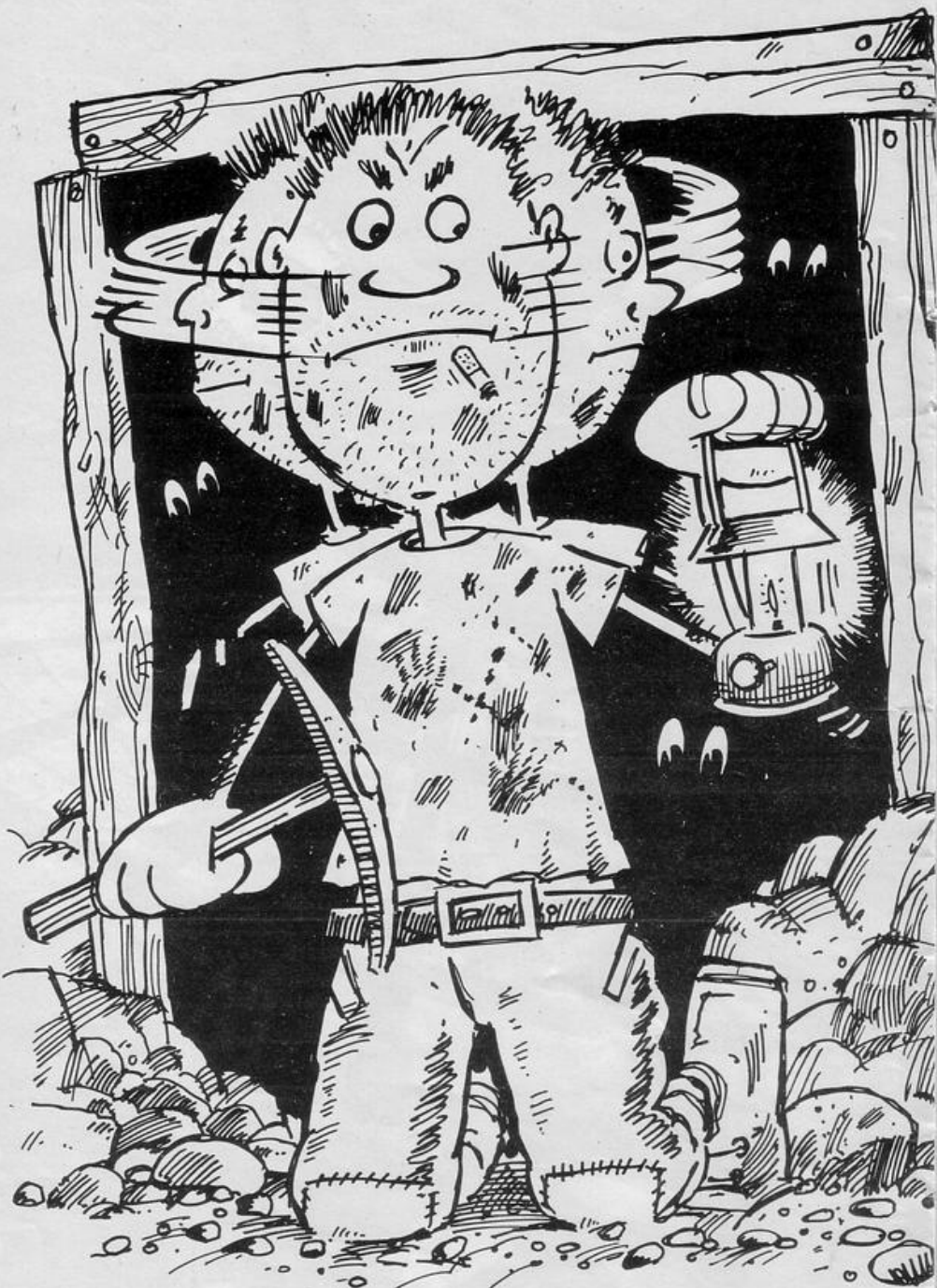
To enter, type-in the first program, RUN it, then type CLEAR. Type 'SAVE' "Builder" LINE 1, VERIFY it and then type NEW. Enter the second program, save it with SAVE "Builder" line 9999 and VERIFY it. **Builder** can then be LOADED as one program.

Written for the 16K Spectrum by Ian McNair of Kingston-upon-Thames, Surrey.

```

1 BORDER 1: PAPER 1: INK 7: C
LEAR: PRINT AT 10,9: FLASH 1: "P
LEASE WAIT"
10 DATA "A",187,187,0,238,238,
0,119,119
15 DATA "B",56,60,25,126,152,6
0,36,36
20 DATA "C",20,164,170,116,80,
92,124,56
25 DATA "E",0,112,28,48,120,12
4,60,24
30 DATA "F",0,255,171,213,255,
0,0,0
35 DATA "G",0,0,0,255,255,255,
126,60
40 DATA "H",66,126,66,66,66,12
6,66,66
45 DATA "I",76,88,120,120,88,7
6,64,64
50 DATA "L",126,62,14,6,6,14,6
2,126
55 DATA "U",30,6,2,0,0,2,6,30
100 FOR F=1 TO 10: RESTORE S+5*
F: READ F#: FOR N=0 TO 7: READ A
: POKE USR F#+N,A: NEXT N: NEXT
F
110 BORDER 0: PAPER 0: INK 7: C
LEAR
120 LOAD ""
9998 REM FOR MAIN PROGRAM TYPE .
CLEAR: SAVE "BUILDER" LINE 99
99
9999 CLEAR: SAVE "BUILDER" LINE
1

```



# BUILDER

```

1 PAPER 0: BORDER 0: INK 3: C
LS: DIM z(6): DIM z$(6,10): FOR
f=1 TO 6: LET z(7-f)=100+100*f:
LET z$(f)="SPECTRUM": NEXT f
10 DIM o(2): DIM p(2): LET o(1
)=13: LET p(1)=5: LET o(2)=8: LE
T p(2)=27: CLS: LET she=1: LET
s=0: FOR m=3 TO 1 STEP -1: CLS:
OVER 0: PRINT AT 5,5: "MEN:";m
;"": AT 6,5: "SCORE:";s: "":
AT 7,5: "SHEETS:";she: "": AT 1
0,4: "PRESS ANY KEY TO PLAY "
20 IF INKEY$("<") THEN GO TO 2
0

```

```

30 IF INKEY$="" THEN GO TO 30
100 BORDER 0: INK 7: OVER 0: CL
S: PRINT *;TAB 9;"By Ian McN
air": BORDER 1: RESTORE 9990: RE
AD a: FOR f=1 TO a: READ b,c,g:
PRINT AT b,c;: FOR h=1 TO g: PR
INT INK 2;"a";: NEXT h: NEXT f
101 INK 6: RESTORE 9992: READ a

```

```

FOR f=1 TO a: READ b,c,g: FOR
h=1 TO g: PRINT AT b,c;"h": LET
b=b+1: NEXT h: NEXT f
102 INK 5: RESTORE 9994: READ a
FOR f=1 TO a: READ b,c: PRINT
AT b,c;"e": NEXT f
103 INK 2: RESTORE 9996: READ a
FOR f=1 TO a: READ b,c: PRINT
AT b,c;"a": NEXT f
104 INK 4: RESTORE 9998: READ a
FOR f=1 TO a: READ b,c: PRINT
AT b,c;"i": NEXT f
109 FOR o=1 TO 2: PRINT AT o(o)
,p(o): OVER 1: INK 8;"c": NEXT o

```

```

FOR f=3 TO 18: PRINT AT f,1;"I
": NEXT f: FOR f=8 TO 17: PRINT
AT f,26;"I": NEXT f
110 INK 2: PLOT 0,0: DRAW 255,0
DRAW 0,175: DRAW -255,0: DRAW
0,-175: LET bon=0: LET sta=4: LE
T axe=0: LET x=1: LET dr=0: LET
y=29: INK 5: PRINT AT x,y;"b": AT
21,14: INK 4;"MEN:";m: "SCORE:"
;s
199 FOR f=19 TO 21: PRINT AT f,
30: INK 6;"h": NEXT f

```

```

200 FOR v=40 TO 0 STEP -2: PRIN
T AT 0,2: OVER 0;"TIME:";INT v:
"FOR f=14 TO 20: PRINT AT 19,
f: OVER 1: BRIGHT 1: INK 6;"g": A
T 16,-12+f;"g"

```

```

201 OVER 1: GO SUB 300: PRINT A
T 6,23;"BONUS:";bon: AT 7,23;"PIC
KS:";axe: IF INKEY$="0" THEN IF
ATTR(x,y)=5 THEN LET bon=bon+
10: PRINT OVER 1: AT x,y: INK 6:
"e"

```

```

202 IF INKEY$="0" THEN IF ATTR
(x,y)=4 THEN LET axe=axe+1: PR
INT OVER 1: INK 6: AT x,y;"i"

```

```

205 IF x=19 AND y=f OR x=16 AND
y=-12+f THEN GO TO 9690
252 GO SUB 9500: PRINT AT 16,-1
2+f: OVER 1: INK 6;"g": AT 19,f)"
g"

```

```

260 NEXT f: LET v=v-2: PRINT AT
0,2: OVER 0;"TIME:";INT v: "
FOR f=20 TO 14 STEP -1: PRINT AT
19,f: OVER 1: INK 7: BRIGHT 1:"
g": AT 16,-12+f;"g"

```

```

265 IF x=19 AND y=f OR x=16 AND
y=-12+f THEN GO TO 9690
289 OVER 1: GO SUB 300: PRINT A
T 6,23;"BONUS:";bon: AT 7,23;"PIC
KS:";axe: IF INKEY$="0" AND ATTR
(x,y)=5 THEN LET bon=bon+10: P
RINT OVER 1: AT x,y: INK 7;"e"

```

```

290 IF INKEY$="0" AND ATTR(x,y
)=4 THEN LET axe=axe+1: PRINT
OVER 1: AT x,y: INK 7;"i"
299 PRINT AT 19,f: OVER 1: INK
6;"g": AT 16,-12+f;"g": GO SUB 95
00: NEXT f: NEXT v: GO TO 9690

```

```

300 PRINT AT x,y: BRIGHT 8: PAP
ER 8: INK 8;"b": LET x=x+(1 AND
ATTR(x+1,y)=7): IF INKEY$="" TH
EN GO TO 310

```

```

301 LET x=x+(INKEY$="6" AND ATT
R(x+1,y)=6)-(INKEY$="7" AND ATT
R(x-1,y)=6): LET y=y+(INKEY$="8
" AND ATTR(x,y+1)<>2)-(INKEY$="
5" AND ATTR(x,y-1)<>2)

```

```

310 IF ATTR(x,y)<4 THEN GO TO
9690
311 IF (x=15 AND y=13) OR (x=15
AND y=18) THEN LET x=x+1

```

```

312 PRINT OVER 1: AT x,y: INK 8
; PAPER 8: BRIGHT 8;"b": OVER 0:
IF INKEY$="8" THEN IF x=19 THE
N IF y=29 THEN GO TO 9800

```

```

313 IF x=19 AND y=28 AND axe>0
THEN IF INKEY$="0" THEN LET ax
e=axe-1: GO SUB 9750
320 GO SUB 500: RETURN

```

```

500 FOR o=1 TO 2: LET di=RDND: P
RINT AT o(o),p(o): OVER 1: INK 8
; BRIGHT 0;"c": LET o(o)=o(o)+(d
i).7 AND ATTR(o(o)+1,p(o))=6)-(
di).45 AND ATTR(o(o)-1,p(o))=6)

```

```

501 LET p(o)=p(o)+(di).65 AND y
>p(o) AND ATTR(o(o),p(o)+1)<>2)
-(di).5 AND p(o)>y AND ATTR(o(o
),p(o)-1)<>2): IF ATTR(o(o)+1,
p(o))=7 THEN LET o(o)=o(o)+1

```

```

550 PRINT AT o(o),p(o): OVER 1:
INK 8;"c": IF o(o)=x AND y=p(o)
THEN GO TO 9690
570 NEXT o: RETURN

```

```

9500 IF RDND>.5 THEN RETURN
9505 OVER 0: LET rd=INT(RDND*2)+
1: IF rd=2 THEN PRINT AT 9,25:
INK 3: BRIGHT 1;"f": AT 11,25;"f"

```

```

; AT 8,7;"f": AT 10,25: INK 7: BRI
GHT 0;"": AT 15,13;"": AT 14,13:
INK 3: BRIGHT 1;"f": AT 16,20;"f"

```

```

; AT 6,7;"f": AT 6,5: BRIGHT 0: I
NK 7;"": AT 7,15;"": AT 8,10;"":
; AT 20,7;"": AT 20,11: INK 2;"a"

```

```

9510 IF rd=1 THEN PRINT AT 9,25
; INK 7;"": AT 11,25;"": AT 8,7:
"": BRIGHT 1: INK 3: AT 10,25;"f"

```

```

; AT 15,13;"f": BRIGHT 0: INK 7:
AT 14,13;"": AT 16,20;"": AT 6,7
;"": INK 3: BRIGHT 1: AT 6,5;"f"

```

```

; AT 7,15;"f": AT 8,10;"f": INK 7:
BRIGHT 0: AT 20,11;"": AT 20,7:

```

```

INK 2;"a"
9530 OVER 1: RETURN
9600 CLS: FOR f=1 TO 6: PRINT A
T 0+f*2,2:f;"..": z(f);"By.."z$(
(f): NEXT f: FOR f=1 TO 6: IF s<
z(f) THEN NEXT F

```

```

9601 IF F>6 THEN LET F=6
9602 IF S>Z(F) THEN GO TO 9640
9603 NEXT F
9604 FOR f=0 TO 400: NEXT f: GO
TO 9700

```

```

9640 LET FF=F
9641 IF S=Z(FF) THEN GO TO 9604
9650 PRINT AT FF*2,4: OVER 1: FL
ASH 1;"": INPU
T "NAME ....": z$(FF): IF LEN z$(
FF)>10 THEN GO TO 9650

```

```

9651 BEEP .5,0: LET z(FF)=s: GO
TO 9604
9690 PRINT AT x,y: FLASH 1: PAPE
R 2: INK 6;"b": FOR f=0 TO 100:
BEEP .05,50-f: NEXT f: BEEP .05,
-50: NEXT m

```

```

9700 OVER 0: PRINT AT 15,9: FLAS
H 1;"GAME OVER": FOR f=0 TO 40
9700 OVER 0: PRINT AT 15,9: FLAS
H 1;"GAME OVER": FOR f=0 TO 40

```

```

0: NEXT f: PRINT AT 17,6: "PRES
S
-": AT 19,6: "P...PLAY."; AT 2
0,6: "A...ABUNDON."; AT 21,6: "S
...SCORE TABLE": PAUSE 0: PAUSE
0: IF INKEY$="a" OR INKEY$="s" T
HEN GO TO 9600

```

```

9701 PAUSE 0: LET a$=INKEY$: IF
a$="p" OR a$="P" THEN GO TO 10
9702 IF a$="a" OR a$="A" THEN R
ANDOMIZE USR 0
9703 IF a$="s" OR a$="S" THEN G
O TO 9600

```

```

9710 GO TO 9701
9750 IF sta=4 THEN PRINT AT 19,
29;"I"
9753 IF sta=3 THEN PRINT AT 19,
29;"u"

```

```

9754 IF sta=2 THEN PRINT AT 19,
29;"-"
9755 IF sta=1 THEN PRINT AT 19,
29;" "

```

```

9756 LET sta=sta-1: RETURN
9800 OVER 0: FOR f=6 TO 15: PRIN
T AT f,6:"": NEXT
f: OVER 1: FOR f=7 TO 0 STEP -1:

```

```

4: BORDER f: BEEP .15,f: PRINT A
T 10,7:" WELL DONE "; AT 13,7:
" BONUS:";bon: NEXT f: LET s=s+
bon*2: OVER 0: PRINT AT 7,8: FLA
SH 1:" SCORE :";s: FOR f=-50 TO

```

```

50: BEEP .05,f: NEXT f: LET she=
she+1
9810 DATA 1,0,0,1,0,1: RESTORE 9
815: FOR f=1 TO 3: BEEP .2,1: PR
INT OVER 1: AT x,y: INK 8;"b": R
EAD n,m: LET y=y+n: LET x=x+m: P
RINT OVER 1: INK 8: AT x,y;"b":

```

```

BEEP .3,f: NEXT f
9820 GO TO 20
9990 DATA 20,7,16,5,11,4,8,10,5,
5,13,0,13,12,27,5,11,14,12,13,19

```

```

,7,15,19,3,16,22,9,19,0,13,18,18
,14,17,0,19,15,0,17,20,14,50,4,2
2,10,9,20,12,4,0,18,2,26,6,6,1,1

```

```

3,8,1,13
9991 REM
9992 DATA 19,19,23,2,16,16,4,18,
3,3,18,13,3,14,19,4,16,8,3,15,6,

```

```

2,13,29,3,11,27,5,12,22,4,9,8,4,
10,12,3,5,14,6,3,6,3,7,2,6,3,21,

```

```

6,3,18,4,8,30,4,1,25,3
9993 REM
9994 DATA 12,3,20,20,2,20,6,20,9

```

```

,20,12,7,3,9,6,10,10,8,28,10,21,
10,23,14,7
9995 REM
9996 DATA 4,3,23,16,18,19,29,19,

```

```

31
9997 REM
9998 DATA 4,3,2,7,6,12,19,13,28

```

```

9999 BORDER 0: PAPER 0: INK 5: C
LS: FOR f=0 TO 40: BEEP .009,f:
BEEP .009,f+5: NEXT f: RUN

```

```


```

```


```

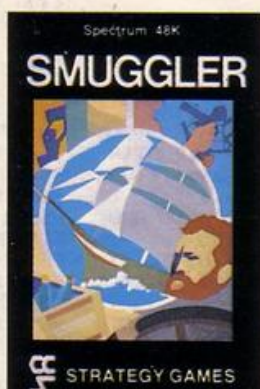
```


```

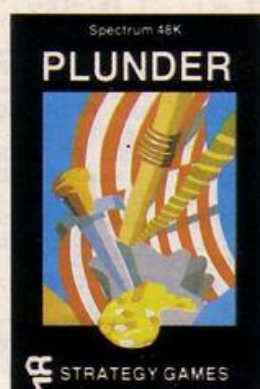
# PLANE SAILING



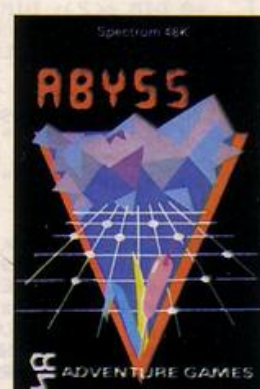
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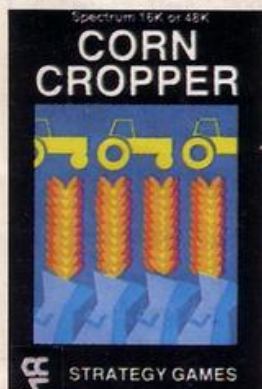
**SMUGGLER** As master of a 19th century vessel you plough between England and the continent visiting ports to buy and sell your cargo, but beware the customs men, pirates and gale force winds can all run you aground. Runs on Spectrum 48K — £6.



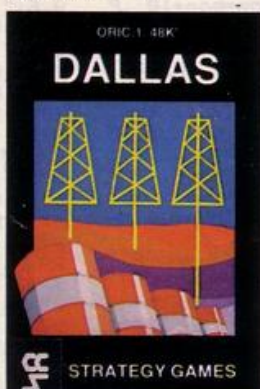
**PLUNDER** Can you singe the King of Spain's beard. Engage the Spanish ships on the high seas survive their broadsides and plunder the gold destined for the Armada and you might get your Knighthood before Francis Drake. Runs on Spectrum 48K — £6.



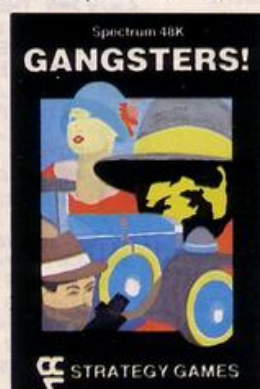
**ABYSS** Can you journey across the long-forgotten Abyss and outwit the evil monsters that lurk in the shadows awaiting the foolhardy and careless adventurer. There are many bridges and many monsters. Will you be the one to make the Abyss safe to cross again. Runs on Spectrum 48K — £5.



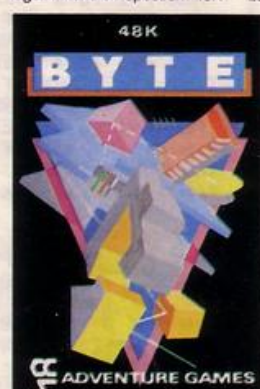
**CORN CROPPER** Limited cash and droughts are two of the problems facing the farmer. Planting fertilizing and harvesting must all be done economically if you are to reap the rewards offered in corn cropper. Runs on ZX81 16K — £5 and Spectrum 16K/48K — £6.



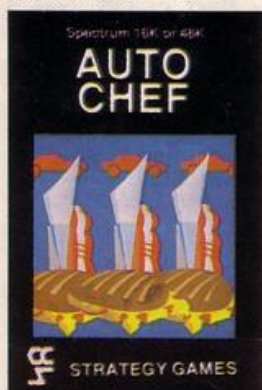
**DALLAS** Can you amass enough petro dollars to take over the Euing empire. Cut throat business and an eye for the main chance may get you there but you'll need nerves of steel to become the oil king of Dallas. Runs on ZX81 16K — £5 and Spectrum 16K/48K — £6.



**GANGSTER** Are you cold hearted and callous enough to warrant the title of Don. You need to be if you are to rise to the top of the pile. A quick trigger finger and an even quicker brain are needed to control the mobs and their rackets. Runs on Spectrum 48K — £6.



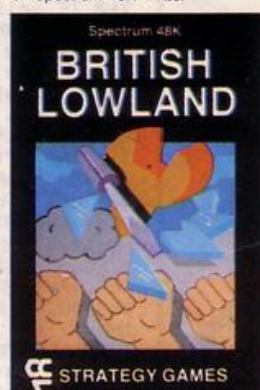
**BYTE** Complete the ten circuits you need to build your computer system then return home. Easy. Byte has sent its electronic monsters to harry you through this three dimensional maze of circuitry, if any of them catch you . . . Runs on Spectrum 48K — £5.



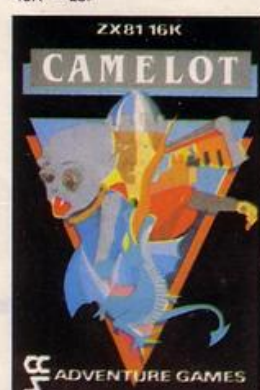
**AUTO CHEF** You have a million in capital and need to increase this to £25 million in the shortest time possible. Inflation, strikes, sluggish markets are only some of the hazards to overcome. Runs on ZX81 16K — £5 and Spectrum 16K/48K — £6.



**PRINT SHOP** In print shop are scheduling, staffing, purchasing and quoting within this time limit will test your business acumen to the full and weekly balance sheets will prove the quality of your decision making. Runs on ZX81 16K — £5 and Spectrum 16K/48K — £6.



**BRITISH LOWLAND** You are given a racing start for your small sports car company but you have an overdraft to repay and a workforce to be kept happy. Steer your way to success with careful management and industrial relations. Runs on Spectrum 48K — £6.



**CAMELOT** As the banished Arthur Pendragon you must find seven treasures without falling prey to the Brigands, Dragons and Evil Magicians that stand in your way and make a triumphant return to Camelot to be crowned King. Runs on ZX81 16K — £5 and Spectrum 48K — £5.

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# FLITE

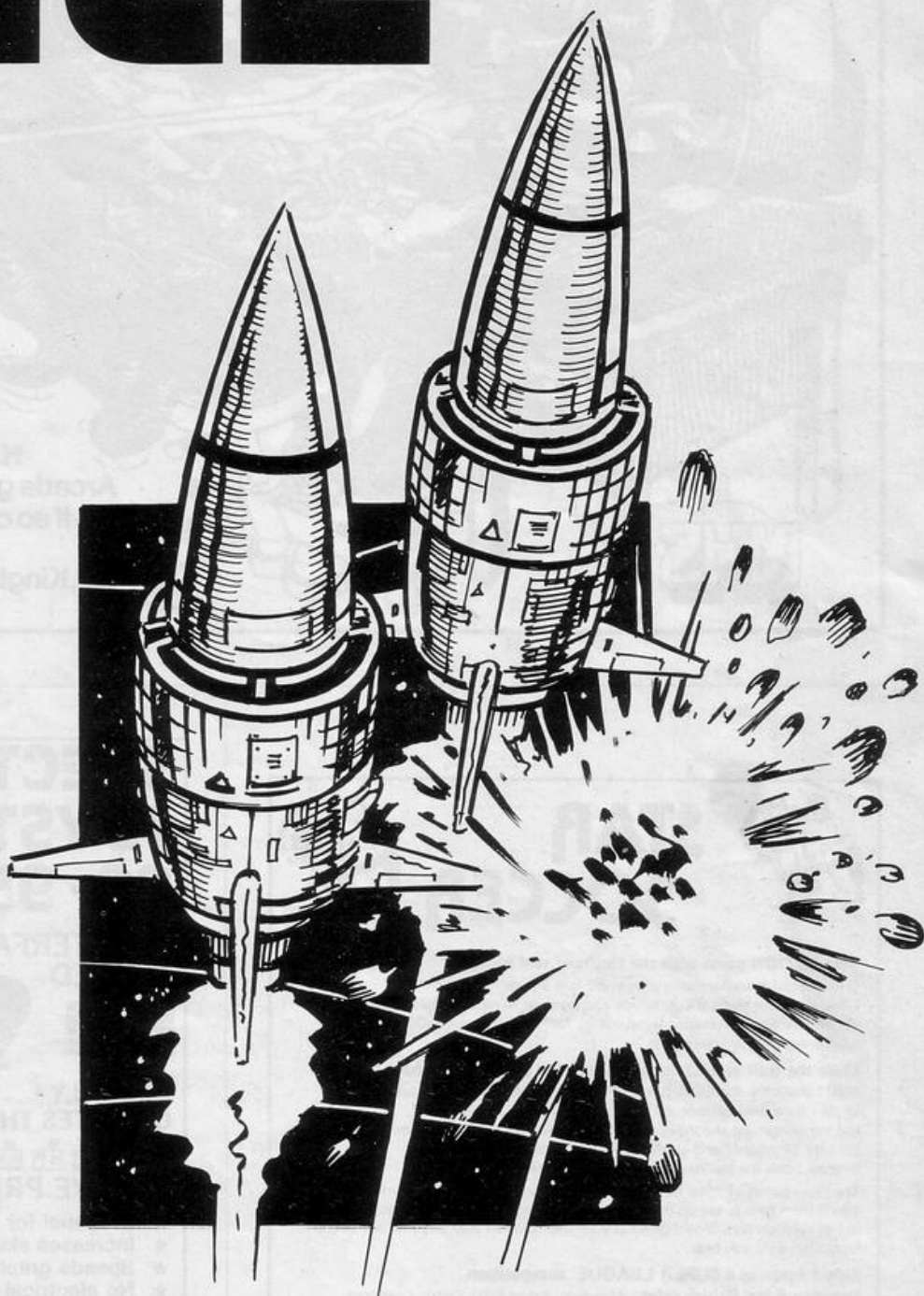
**F**LITE is an addictive dodge 'em game. You must avoid the deadly heat-seeking missiles heading for you and at the same time you must try and hit an enemy target.

Flite was written by Peter Davies of Streatham, London for the 16K Spectrum.

```

10 FOR n=0 TO 15: READ a: PUKE
USR "a"+n,a: NEXT n
20 DATA 0,62,85,127,85,127,85,
62,0,62,127,127,127,127,62
25 BORDER 1: PAPER 6: CLS
30 PRINT INK 9: "DODGE
ER""""Dodge the "; INK 5: "(ga)
"; INK 9: "'s and the "; INK 4: "^
"; INK 0: "'s""""Hit the "; INK
2: "(gh)"; INK 0: "'s to score Poi
nts""""Control Keys UP.....
..~1~""""DOWN.
.....~z~
40 LET hs=0: LET mx=INT (RND*2
0)+6: LET my=20
44 PRINT AT 21,0: INK 0: " PRE
SS ANY KEY TO START": PAUSE 1e3
45 CLS: LET s=0: LET l=3
50 FOR n=1 TO 100
55 LET x=1+INT (RND*31): LET y
=1+INT (RND*20)
60 IF SCREEN# (y,x)="" THEN G
O TO 55
70 PRINT AT y,x: INK 2: "(ga)":
NEXT n
80 FOR n=1 TO 20
85 LET x=1+INT (RND*31): LET y
=1+INT (RND*20)
90 IF SCREEN# (y,x)="" THEN G
O TO 85
100 PRINT AT y,x: INK 5: "(ga)":
NEXT n
110 PRINT AT 21,0: "SCORE "; s: AT
21,12: "LIVES >>>": AT 21,23: "HI
";hs
115 PRINT AT 21,18+1: " "
120 LET x=0: LET y=0
130 IF SCREEN# (y,x)="" THEN G
O TO 200
150 PRINT AT y,x: ">"
155 GO SUB 400
160 IF INKEY#="z" THEN LET y=y
+(y<20): LET z=1: GO TO 190
170 IF INKEY#="1" THEN LET y=y
-(y>0): LET z=0: GO TO 190
180 LET x=x+1: IF x=32 THEN LE
T x=1: PRINT AT y,31: " ": GO TO
130
185 LET z=2
190 PRINT AT y+(z=0)-(z=1),x-(z
=2): " ": GO TO 130
200 IF ATTR (y,x)=40 THEN GO T
O 150
205 IF ATTR (y,x)<>50 THEN GO
TO 210
206 LET s=s+10: IF s/1000=INT (
s/1000) THEN GO TO 300
207 PRINT AT 21,6: s: BEEP .01,2
0: GO TO 150
210 PRINT FLASH 1: AT y,x: "(ga)
": FLASH 0: PRINT AT 21,17+1: " "
: LET l=l-1: IF l=0 THEN GO TO

```



```

240
220 BEEP .01,0: GO TO 120
240 IF hs<s THEN LET hs=s
250 PRINT AT 21,26:hs
260 PRINT AT 11,8: FLASH 1: INK
3: "Another Go ? (y/n)"
270 IF INKEY#="y" THEN GO TO 4
5
275 IF INKEY#="n" THEN STOP
280 GO TO 270
300 RESTORE 320: FOR n=1 TO 16:
READ a: BEEP .1,a: NEXT n
310 CLS: GO TO 50
320 DATA 0,12,2,10,3,8,4,7,7,4,

```

```

8,3,10,2,12,0
400 IF my<20 THEN PRINT AT my+
1,mx: " "
401 IF SCREEN# (my,mx)=">" THEN
GO TO 210
405 IF SCREEN# (my,mx)="" THEN
LET mx=RND*20+6: BEEP .01,40: L
ET my=20: RETURN
410 PRINT AT my,mx: INK 4: "^":
LET my=my-1
420 IF my=0 THEN PRINT AT my+1
,mx: " ": LET mx=RND*20+6: LET my
=20: RETURN
430 RETURN

```

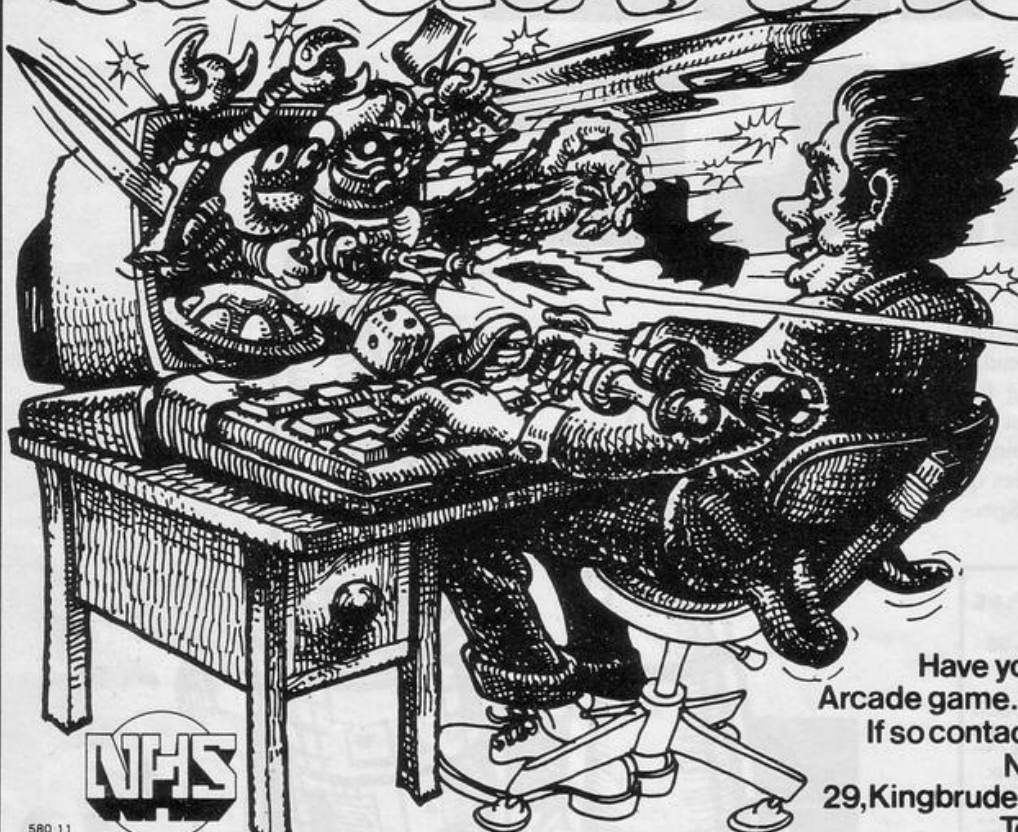
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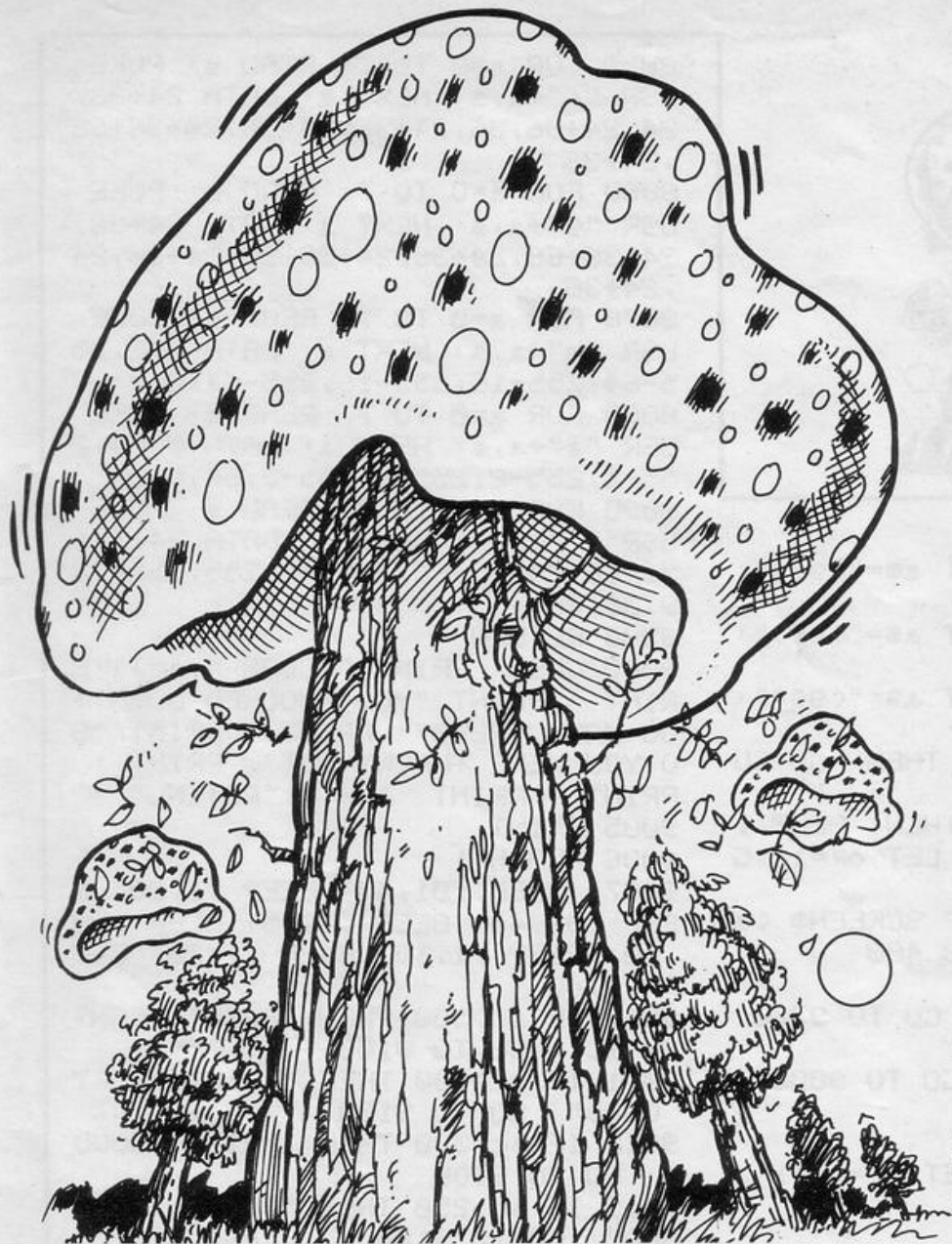
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# TREE EATERS

**T**REE EATERS for the 16K Spectrum was written by A Beardmore of Stoke-on-Trent, Staffs. Stop the Martians eating our forests for the vital resources they lack on their planet.

```

1 BORDER 0: PAPER 0: INK 6: C
LS
2 PRINT "YOU(9a) MUST KILL TH
E MARTIAN TREE EATERS "; INK
2;"9p"; INK 6;" AT ALL COSTS"; P
RINT "BUT DON'T KNOCK DOWN THE T
REES"; PRINT : PRINT "O=UP. K=DO
WN. S=RIGHT. A=LEFT. "; PRINT :
PRINT "BUT CAREFUL YOU HAVE NO B
RAKE"
3 PRINT AT 21,0;"PRESS ANY KE
Y TO START GAME"
15 GO SUB 8000: PAUSE 0
16 FOR a=0 TO 21: INK 2
17 PRINT AT a,0;"
      ": NEXT a
20 PRINT AT 1,1: INK 6;"(30*9a
)" AT 21,1;"(30*9b)"
21 INK 6
25 FOR a=2 TO 20: PRINT AT a,0
;"(9c)" AT a,31;"(9d)": NEXT a
29 LET a=0
30 PRINT AT INT (RND*19)+2,INT
(RND*30)+1: INK 4;"(9e)": LET a

```

```

=a+1: IF a<80 THEN GO TO 30
40 PRINT AT 9,14;"(9a)" AT 9,1
6;"(9a)" AT 12,14;"(3*9b)"
50 FOR a=10 TO 11: PRINT AT a,
13;"(9c)" AT a,17;"(9d)": NEXT a
PRINT AT 8,14: INK 2;" "
55 PRINT AT 0,1;"SCORE:=0
TREES KILLED:=0 "
60 LET x=0
65 LET sc=0: LET tr=0
70 LET a$="(99)"
80 LET op=0: LET a=11: LET s=1
5
85 LET a=INT (RND*19)+2: LET w
=INT (RND*30)+1
86 PRINT AT a,w: INK INT (RND*
30)+1;"(9p)"
100 PRINT AT a,s;a$
120 IF INKEY$="a" THEN LET x=1
130 IF INKEY$="s" THEN LET x=2
140 IF INKEY$="o" THEN LET x=3
150 IF INKEY$="k" THEN LET x=4
155 PRINT AT a,s: INK 2;" "
170 IF x=1 THEN LET a$="(9h)":

```



```

LET s=s-1
171 IF x=2 THEN LET a$="(9i)":
LET s=s+1
172 IF x=3 THEN LET a$="(9f)":
LET a=a-1
173 IF x=4 THEN LET a$="(99)":
LET a=a+1
175 IF ATTR(a,s)=6 THEN GO SUB 410: LET op=1
176 IF a=9 AND s=w THEN BEEP .05,40: LET sc=sc+10: LET op=1: GO SUB 500: GO TO 85
177 IF op=0 THEN IF SCREEN$(a,s)<>" " THEN GO SUB 400
178 LET op=0
180 IF sc>500 THEN GO TO 9700
200 PRINT AT a,s;a$
210 IF tr>15 THEN GO TO 9000
250 LET op=0
300 GO TO 100
405 BEEP .09,-20: LET tr=tr+1: GO SUB 500
406 RETURN
410 IF x=1 THEN LET s=s+1
411 IF x=2 THEN LET s=s-1
412 IF x=3 THEN LET a=a+1
413 IF x=4 THEN LET a=a-1
420 PRINT AT a,s;a$: RETURN
500 PRINT AT 0,8;sc;AT 0,28;tr
510 RETURN
8000 FOR a=0 TO 7: READ s: POKE USR "a"+a,s: NEXT a: DATA 0,0,0,0,24+36,128+64+3,255,255
8010 FOR a=0 TO 7: READ s: POKE USR "b"+a,s: NEXT a: DATA 255,255,128+64+3,24+36,0,0,0,0
8020 FOR a=0 TO 7: READ s: POKE USR "c"+a,s: NEXT a: DATA 7,7,11,11,11,11,7,7
8030 FOR a=0 TO 7: READ s: POKE USR "d"+a,s: NEXT a: DATA 128+64+32,128+64+32,128+64+16,128+64+16,128+64+16,128+64+16,128+64+32,128+64+32
8040 FOR a=0 TO 7: READ s: POKE USR "e"+a,s: NEXT a: DATA 24,24+36+2,24+36+66,255-129,24+36,24,24,24

```

```

8050 FOR a=0 TO 7: READ s: POKE USR "f"+a,s: NEXT a: DATA 24+36,24,24+36,36,24+36,24+36,24+36+66,24+36
8060 FOR a=0 TO 7: READ s: POKE USR "g"+a,s: NEXT a: DATA 24+36,24+36+66,24+36,24+36,36,24+36,24,24+36
8070 FOR a=0 TO 7: READ s: POKE USR "h"+a,s: NEXT a: DATA 0,2,255-64,255-16,255-16,255-64,2,0
8080 FOR a=0 TO 7: READ s: POKE USR "i"+a,s: NEXT a: DATA 0,64,255-2,255-8,255-8,255-2,64,0
8090 FOR a=0 TO 7: READ s: POKE USR "p"+a,s: NEXT a: DATA 24,24+36+66,24+36+66,255-36,255,255-129,36,36
8500 RETURN
9000 CLS: PRINT "SCORE ";sc: PRINT: PRINT "YOU KNOCKED DOWN TOO MANY TREES": PRINT: PRINT "SO YOU WERE THROWN OUT": PRINT: PRINT: PRINT INK 7;"RATING"
9005 PRINT
9006 FLASH 1
9007 BEEP .01,40: BEEP .1,20: BEEP .02,40: BEEP .1,15: BEEP .03,40: BEEP .1,10: BEEP .1,20: BEEP .1,40
9010 IF sc>500 THEN PRINT "FANTASTIC": GO TO 9100
9011 IF sc>400 THEN PRINT "VERY GOOD": GO TO 9100
9012 IF sc>300 THEN PRINT "GOOD": GO TO 9100
9013 IF sc>250 THEN PRINT "NOT BAD": GO TO 9100
9014 IF sc>200 THEN PRINT "BAD": GO TO 9100
9015 IF sc>150 THEN PRINT "VERY BAD": GO TO 9100
9016 IF sc>100 THEN PRINT "OLD GRANNY": GO TO 9100
9017 IF sc>=0 THEN PRINT "FORGET IT": GO TO 9100
9100 GO TO 9500
9500 FLASH 0: PRINT AT 21,0;"AND THER GO(Y/N)"
9600 IF INKEY$="" THEN GO TO 9500
9610 IF INKEY$="y" THEN RESTORE: GO TO 1
9620 IF INKEY$="n" THEN GO TO 999
9630 GO TO 9500
9700 CLS: BEEP .05,40: BEEP .05,30: BEEP .05,50: BEEP .1,30: BEEP .1,40: BEEP .1,20: PRINT "YOU HAVE KILLED ALL THE MARTIAN TREE EATERS..WELL DONE..": BEEP .01,30: BEEP .01,30: BEEP .01,30: GO TO 9500

```

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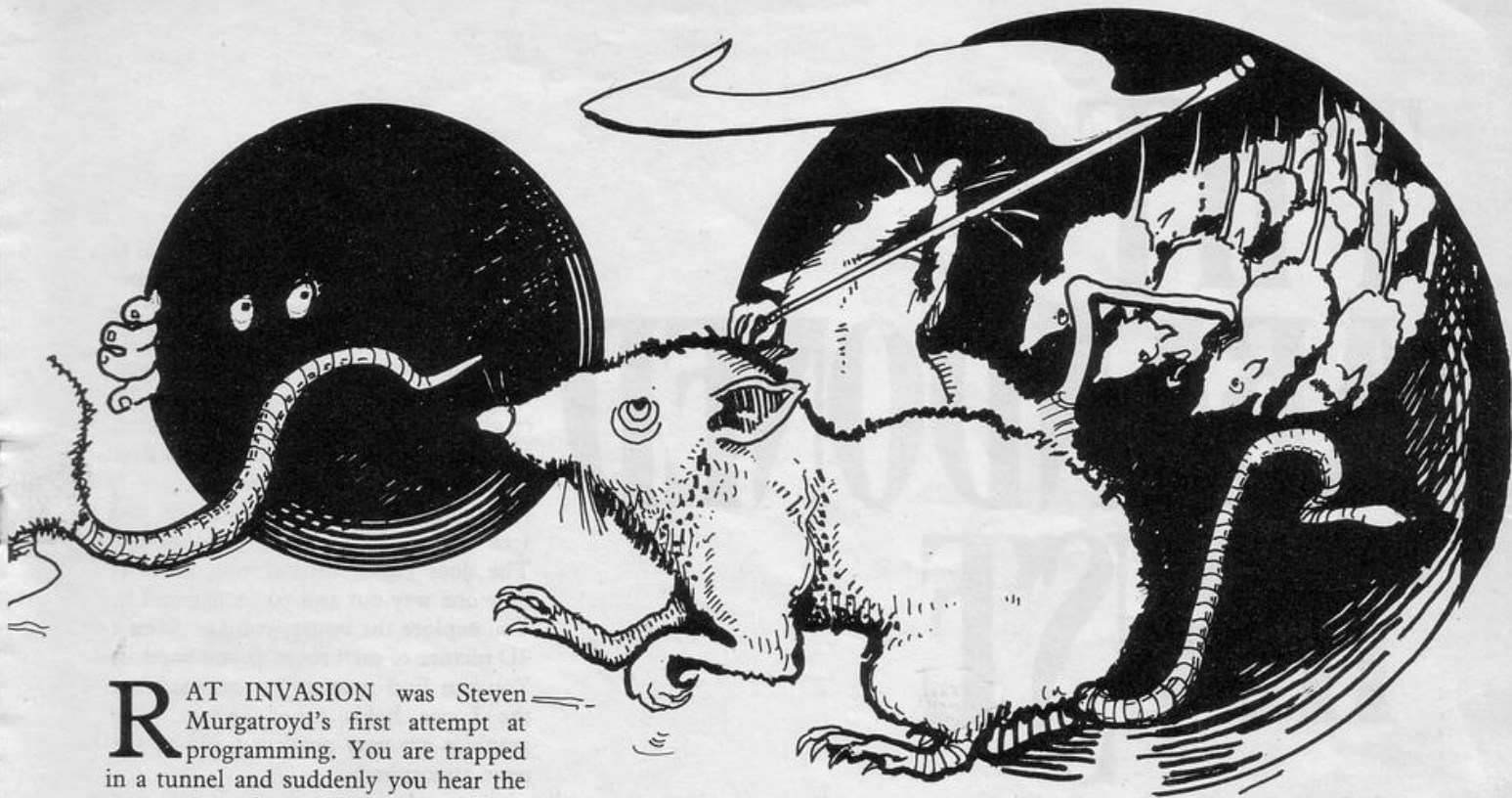
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**R**AT INVASION was Steven Murgatroyd's first attempt at programming. You are trapped in a tunnel and suddenly you hear the scampering of rats. The rats scroll up the screen and your job is to dodge them for as long as possible. Murgatroyd of Wanton, Oxon wrote **Rat Invasion** for the 16K ZX-81. Underlined letters are to be entered in graphic mode.

# RAT INVASION

```

10 PRINT AT 0,0;"RAT INVASION"
11 PRINT AT 1,0;"(12*97)"
12 PRINT AT 4,0;" YOU ARE TRAP
PED IN A DARK CAVE AND YOU HEAR
THE FOOTSTEPS OF SMALL ANIMALS
... rats. YOU HAVE NO WEAPONS YO
U MUST TRY TO GET BY WITHOUT BE
ING KILLED."
14 PRINT AT 14,0;"USE KEYS '.,,
'5 LEFT',, '8 RIGHT"
15 PRINT AT 20,0;"ANY KEY.....
....."
16 PAUSE 9999
18 CLS
50 LET E=15
60 FOR F=1 TO 100000
70 PRINT AT 15,RND*30;"(3*isp)"
"
80 SCROLL
100 PRINT AT 15,0;"(9w'30*96'94
)"
110 PRINT AT 16,0;"(31*isp)"
120 PRINT AT 17,0;"(12*isp'rat
invasion'8*isp)"
130 PRINT AT 18,0;"ffffff
ffffff"
140 PRINT AT 19,0;"(14*isp'i=
...i=14*isp)"
150 PRINT AT 20,0;"(14*isp'92:
91'14*isp)"
160 PRINT AT 21,0;"(14*isp'97:
97'14*isp)"
210 PRINT AT 12,E)
220 IF PEEK (PEEK 16398+256*PEE
K 16399)=128 THEN GOTO 500
230 PRINT "V"
240 PRINT AT 12,E;" "
250 IF INKEY#="5" THEN LET E=E-
1
260 IF INKEY#="8" THEN LET E=E+
1
270 NEXT F
500 PRINT AT 16,12;"score.",F
510 PAUSE 999
520 CLS
530 PRINT AT 11,2;"PRESS ANY KE
Y TO TRY AGAIN"
565 PAUSE 4E4
566 GOTO 18
570 SAVE "RAT INVASION"
580 RUN

```

# THE ABANDONED HOUSE

THE ABANDONED HOUSE is a 16K ZX-81 adventure game and is this month's program of the month. The author is Stephen Murgatroyd, aged 14, of Wantage, Oxon who has been programming since he received his ZX-81 in July. He is keen on adventure games and this is his first attempt at this type of game.

Caught in a fierce electric storm, you seek shelter in an abandoned house. The door closes behind you, there is only one way out and you must find it. You explore the house, you are given a 3D picture of each room as you enter it. You can find treasure or weapons but the house holds other secrets. The graphics are very good and add to the eerie atmosphere.

```

1 REM "ESCAPE"
2 FOR F=1 TO 22
3 PRINT "
4 NEXT F
5 PRINT AT 10,8;"
6 PRINT AT 11,7;"
7 PRINT AT 12,6;"
8 PRINT AT 13,7;"
9 PRINT AT 14,7;"
10 PRINT AT 15,7;"
11 PRINT AT 16,7;"
12 PRINT AT 17,7;"
13 PRINT AT 18,7;"
14 PRINT AT 19,7;"
15 PAUSE 100
16 PRINT AT 0,30;"
17 PRINT AT 1,29;"
18 PRINT AT 2,28;"
19 PRINT AT 3,27;"
20 PRINT AT 4,26;"
21 PRINT AT 5,25;"
22 PRINT AT 6,24;"
23 PRINT AT 7,23;"
24 PRINT AT 8,22;"
25 PAUSE 15
26 CLS
27 FAST
28 FOR F=1 TO 22
29 PRINT "
30 PRINT "
31 NEXT F
32 PRINT AT 6,6;"STEPHEN MURGA
TROYD"
33 PRINT AT 8,9;"PRESENTS"
34 PRINT AT 12,3;"

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35 PAUSE 200
40 CLS
50 SLOW
55 PRINT AT 0,5;"ESCAPE"
56 PRINT AT 1,5;"
60 PRINT AT 2,0;" YOU ARE TRAP
PED IN AN ENORMOUS STORM,AND YOU
R CAR HAS BROKEN DOWN.YOU WALK
ALONG A ROAD LOOK-ING FOR A HOU
SE."
65 PRINT AT 6,0;" FINALLY YOU
FIND ONE AND KNOCK ON THE DOOR..
....."
80 PRINT AT 18,0;"PRESS ANY KE
Y"
85 IF INKEY$="" THEN GOTO 85
86 CLS
90 PRINT AT 0,0;"THE DOOR OPEN
S YOU ENTER THERE IS NO T
URNING BACK....."
91 PRINT AT 4,0;"THERE IS MAGI
C GOLD IN THE HOUSEWHICH WILL HE
LP YOU ESCAPE."
92 PRINT AT 7,0;"FIND THE WEAP
ONS FOR THEY WILL HELP YOU SURV
IVE."
95 PRINT AT 10,0;"THE HOUSE IS
FILLED WITH MANY HORRORS.YOU
MUST TRY TO ESCAPE"
96 PRINT AT 14,0;" THE GOLD AN
D WEAPONS ARE WORTH SOME MONEY S
O LOOK AFTER THEM."
100 PRINT AT 18,0;"PRESS ANY KE
Y TO BEGIN"
105 IF INKEY$="" THEN GOTO 105
109 CLS
300 LET S=100
310 LET G=0
320 LET W=0
500 CLS
505 SCROLL
506 SCROLL
510 LET A$="A LIBRARY."
520 LET B$="A HALL."
530 LET C$="A LOUNGE."

```



```

531 LET D$="A KITCHEN."
532 LET E$="A CELLER."
533 LET G$="A KITCHEN."
534 LET H$="A BEDROOM."
540 LET A=INT (RND*7)+1
550 IF A=1 THEN LET F$=B$
560 IF A=2 THEN LET F$=A$
570 IF A=3 THEN LET F$=C$
580 IF A=4 THEN LET F$=D$
582 IF A=5 THEN LET F$=E$
584 IF A=6 THEN LET F$=G$
586 IF A=7 THEN LET F$=H$
595 GOSUB 659
600 SCROLL
602 SCROLL
610 IF F$=A$ THEN GOSUB 700
620 IF F$=B$ THEN GOSUB 800
630 IF F$=C$ THEN GOSUB 900
631 IF F$=D$ THEN GOSUB 800
632 IF F$=E$ THEN GOSUB 700
634 IF F$=G$ THEN GOSUB 900
636 IF F$=H$ THEN GOSUB 700
640 SCROLL
650 SCROLL
659 FAST
660 CLS
661 PRINT AT 5,5;"
662 PRINT AT 19,5;"
663 FOR Z=0 TO 4
664 PRINT AT Z,Z;"
665 NEXT Z
666 LET X=0
667 FOR Z=29 TO 25 STEP -1
668 PRINT AT X,Z;"
669 LET X=X+1
670 NEXT Z
671 LET X=4
672 FOR Z=20 TO 21
673 PRINT AT Z,X;"
674 LET X=X-1
675 NEXT Z
676 LET X=25
677 FOR Z=20 TO 21
678 PRINT AT Z,X;"
679 LET X=X+1
680 NEXT Z
681 FOR Z=6 TO 18

```

```

682 PRINT AT Z,5;" ";AT Z,24;"
683 NEXT Z
684 PRINT AT 20,8;"YOU ARE FACI
NG ";AT 21,8;F$
685 SLOW
686 PAUSE 100
690 RETURN
700 PRINT "(1) EXPLORE (2) LOOK
FOR TRAPS"
710 INPUT U
720 IF U=1 THEN GOSUB 1000
730 IF U=2 THEN GOSUB 1100
735 SCROLL
736 SCROLL
740 GOTO 510
800 PRINT "(1) EXPLORE (2) LEAV
E"
810 INPUT E
820 IF E=1 THEN GOSUB 1000
830 IF E=2 THEN GOSUB 1300
833 SCROLL
836 SCROLL
840 GOTO 510
900 PRINT "(1) EXPLORE (2) REST
(3) LEAVE"
910 INPUT O
920 IF O=1 THEN GOSUB 1000
930 IF O=2 THEN GOSUB 1400
940 IF O=3 THEN GOSUB 1300
943 SCROLL
946 SCROLL
950 GOTO 510
1000 SCROLL
1005 SCROLL
1010 LET A=INT (RND*4)+1
1020 IF A=1 THEN GOSUB 1500
1030 IF A=2 THEN GOSUB 1600
1040 IF A=3 THEN GOSUB 1700
1041 IF A=4 THEN GOSUB 1320
1042 SCROLL
1043 SCROLL
1050 RETURN
1100 SCROLL
1101 LET A=INT (RND*2)+1
1103 IF A=1 THEN PRINT "THERE AR
E NO TRAPS HERE."
1104 IF A=2 THEN GOSUB 1107
1105 PAUSE 80
1106 RETURN

```

[illegible][illegible]

# MAZEMAN

**L**OST IN a large maze, your only hope is to find the exit which is somewhere on the top left of the maze. All you can see in the darkness are the glowing sides of the passage. Move using the cursor keys.

**Mazeman** was written for the 16K Spectrum by P Loach of Hadleigh, Suffolk.

```

9  10 GO SUB 9000
20 LET x=INT (RND*1+1): LET y=
INT (RND*1+1): IF m$(y,x)="(isp)"
" OR x<1/2 THEN GO TO 20
30 LET e=INT (RND*(w-2)+2): IF
m$(e,2)="(isp)" THEN GO TO 30
35 LET m$(e,1)=" "
40 IF x=1 AND m$(y,x)=" " THEN
GO TO 8e3
50 GO SUB 7000
60 BEEP .1,RND*20: LET i$=INKE
Y$: IF i$<"5" OR i$>"8" THEN GO
TO 60
70 LET a=(i$="8")-(i$="5"): LE
T b=(i$="6")-(i$="7"): IF m$(y+b
,x+a)=" " THEN LET x=x+a: LET y
=y+b: GO TO 40
80 PRINT #0: FLASH 1: INK 2: P
APER 6: "YOU WALKED INTO A WALL":
FOR F=1 TO 200: OUT 254,F: OUT
254,255: NEXT F: INPUT "": OUT 2
54,0: GO TO 60
7000 CLS: LET a=y-le: IF a<1 TH
EN LET a=1
7010 LET b=y+le: IF b>w THEN LE
T b=w
7020 LET c=x-le: IF c<1 THEN LE
T c=1
7030 LET d=x+le: IF d>l THEN LE
T d=l
7040 FOR e=a TO b: PRINT m$(e,c
TO d): NEXT e: PRINT AT y-a,x-c:
FLASH 1: " ": RETURN
8000 FOR F=1 TO 50: PAPER RND*7:
OUT 254,RND*7: OUT 254,255: CLS
: NEXT F: BORDER 7: PAPER 7: IN
K 0: CLS
8010 PRINT AT 9,6: FLASH 1: "YOU
FOUND THE EXIT": PRINT #0: "ANOTH
ER GO ? "
8020 IF INKEY$="Y" OR INKEY$="y"
THEN RUN
8030 IF INKEY$="N" OR INKEY$="n"
THEN GO TO 9999
8040 GO TO 8020
8999 REM MAZE & INSTRUCTIONS
9000 PAPER 5: INK 0: BORDER 5: C
LS: RESTORE 9e3: READ l,w
9010 PRINT TAB 7;"MAZEMAN"" " Yo
u are lost in a large maze."" Y
our only hope of escape is to fi
nd the exit,which is hidden so
me where in the left hand""corne
r.All you can see in the dark
passages is the glowing corne
rs of the tunnel.""To move,use
the cursor keys."
9020 DIM m$(w,1): FOR f=1 TO w:
READ m$(f): NEXT f: INK 6: PAPER
0
9030 INPUT "Enter level 1-9 (< 1
s easiest)":le: IF le<1 OR le>9
OR le>INT le THEN GO TO 9030
9040 LET le=le+1: BORDER 0: CLS
: RETURN: DATA 32,24,"(32*isp)"

```

```

9050 DATA "(isp:7*isp:isp:6*isp:10
*isp:2*isp:5*isp)"
9060 DATA "(isp:5*isp:isp:isp:isp:
isp:isp:isp:2*isp:3*isp:9*isp:2*
isp:2*isp:isp)"
9070 DATA "(isp:5*isp:isp:3*isp:1s
p:isp:3*isp:5*isp:6*isp:2*isp:2
*isp:isp)"
9080 DATA "(isp:isp:13*isp:2*isp:4
*isp:10*isp:isp)"
9090 DATA "(isp:isp:isp:17*isp:isp
:6*isp:isp:3*isp:isp)"
9100 DATA "(isp:isp:isp:2*isp:3*isp
p:isp:10*isp:isp:isp:6*isp:5*isp)"
9110 DATA "(3*isp:2*isp:isp:6*isp:
2*isp:13*isp:isp:3*isp:isp)"
9120 DATA "(isp:isp:isp:2*isp:3*isp
p:isp:2*isp:isp:2*isp:3*isp:2*isp:is
p:isp:10*isp:isp)"
9130 DATA "(isp:isp:isp:2*isp:1*isp:
3*isp:isp:7*isp:2*isp:4*isp:1*isp:5*is
p:3*isp)"
9140 DATA "(isp:isp:isp:6*isp:1*isp:
sp:4*isp:2*isp:5*isp:2*isp:2*isp:4
*isp:isp:isp:isp)"
9150 DATA "(isp:isp:8*isp:isp:isp:
2*isp:isp:2*isp:4*isp:2*isp:2*isp:4
*isp:isp:isp:isp)"
9160 DATA "(isp:13*isp:isp:14*isp:
isp:isp:isp)"
9170 DATA "(12*isp:2*isp:16*isp:is
p:isp)"
9180 DATA "(isp:10*isp:isp:2*isp:5
*isp:12*isp:isp)"
9190 DATA "(isp:isp:8*isp:isp:isp:
12*isp:3*isp:4*isp:isp)"
9200 DATA "(isp:3*isp:3*isp:2*isp:
isp:isp:isp:2*isp:isp:3*isp:7*isp:is
p:isp:4*isp:isp)"
9210 DATA "(isp:8*isp:3*isp:2*isp:
isp:isp:isp:isp:isp:5*isp:isp:isp:is
p:4*isp:isp)"
9220 DATA "(isp:isp:6*isp:isp:isp:
4*isp:isp:isp:isp:isp:12*isp:isp)"
9230 DATA "(isp:8*isp:isp:4*isp:is
p:3*isp:isp:isp:8*isp:3*isp:isp)"
9240 DATA "(4*isp:isp:5*isp:21*isp
:isp)"
9250 DATA "(isp:2*isp:isp:8*isp:6*
isp:4*isp:7*isp:2*isp:isp)"
9260 DATA "(isp:8*isp:6*isp:7*isp:
2*isp:7*isp:isp)"
9270 DATA "(32*isp)"

```



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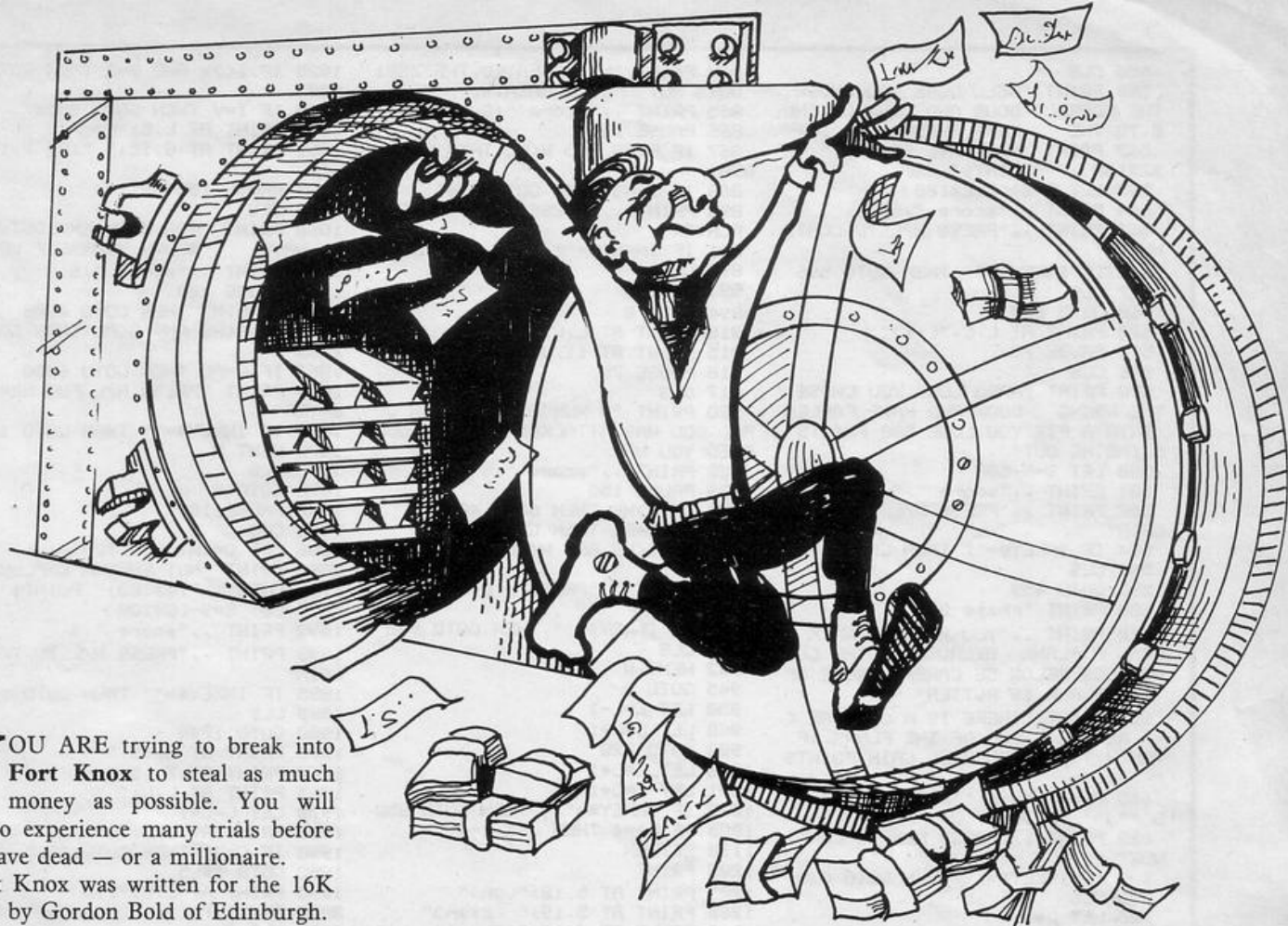
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**Y**OU ARE trying to break into Fort Knox to steal as much money as possible. You will have to experience many trials before you leave dead — or a millionaire.

Fort Knox was written for the 16K ZX-81 by Gordon Bold of Edinburgh.

# FORT KNOX

```

2 LET AG=0
3 LET HS=0
4 LET N$=""
5 GOSUB 5000
6 PRINT "HOW MANY PLAYERS?"
7 INPUT PL
8 LET S=0
9 FOR W=1 TO PL
10 PRINT "Player ";W
11 LET S=0
12 PAUSE 75
13 CLS
14 PRINT "fort knox 11"
15 PRINT AT 0,14;"high score="
;HS
17 PRINT AT 1,14;"name:-";N$
18 PRINT AT 2,14;"age:-";AG
22 PRINT AT 5,7;"INSTRUCTIONS?
(Y/N)"
23 INPUT I$
24 IF I$="N" THEN GOTO 100
25 IF I$="Y" THEN GOTO 30
30 PRINT AT 5,7;"instructions
"
33 PRINT "YOU ARE TRYING TO
BREAK INTO A SPECIAL BANK WHICH
CONTAINS OVER£100,000,000.YOU W
ILL HAVE TO "
34 PRINT "OVERCOME MANY DANGER
S ON YOUR WAY TO THE VAULT.DUR
ING THE GAMEYOU GAIN AND LOSE PO
INTS."
35 PRINT "YOU ARE REPRESENTED
BY AN ""O""
40 PRINT "IF YOU COMPLETE A TA
SK SUCCESSFULLY YOU WIL
L CHANGE TO AN (<10>),IF NOT YOU
WILL CHANGE TO AN (<1*>)."
80 PRINT "PRESS N/L TO CONTI
NUE"
90 IF INKEY$="" THEN GOTO 90
100 CLS
109 LET A=INT (RND*3)+1
110 PRINT "phase11"

120 PRINT "THERE ARE 3 PASSAGES
WHICH LEAD TO THE VAULT.1 OF TH
E PASSAGES HAS AN ALARM"
140 PRINT "TYPE IN WHICH PASSAG
E (1 TO 3)"
150 INPUT C
170 PRINT
180 PRINT AT 7,0;"(0*99:1sP:1sP:
1sP:2*99:1sP:1sP:1sP:2*99:1sP:1sP:
1sP:11*99)"
182 FOR F=1 TO 7
184 PRINT "(0*9h:1sP:1sP:1sP:2*9
h:1sP:1sP:1sP:2*9h:1sP:1sP:1sP:11*
9h)"
185 NEXT F
186 PRINT AT 15,0;"(0*9f:1sP:1sP:
1sP:2*9f:1sP:1sP:1sP:2*9f:1sP:1sP:
1sP:11*9f)"
190 IF C=1 THEN LET Y=9
200 IF C=2 THEN LET Y=14
210 IF C=3 THEN LET Y=19
220 LET X=6
230 PRINT AT X,Y;" "
240 LET X=X+1
250 IF X=15 THEN GOTO 300
255 IF X=10 AND C=A THEN GOTO 3
50
260 PRINT AT X,Y;"O"
270 GOTO 230
300 PRINT AT X,Y;"(<10>)"
302 PAUSE 75
305 CLS
306 LET Q=INT (RND*30)+10
308 PRINT "YOU HAVE ELUDED THE
ALARM AND "
310 PRINT "HAVE GAINED ";Q*100
;" POINTS"
330 GOTO 400
350 PRINT AT X,Y;"(<1*>)"
352 PAUSE 75
354 CLS
355 PRINT "YOU HAVE BEEN ARREST
ED BY A"
360 PRINT "POLICEMAN.YOU LOSE 5
00 POINTS AFTER BRIBING HIM"
365 LET S=S-500
368 PRINT "score ";S
370 PRINT "PRESS N/L TO TRY A
GAIN"
380 IF INKEY$="" THEN GOTO 380
390 GOTO 105
400 LET S=S+(Q*100)
405 PRINT "score ";S
410 PRINT "PRESS N/L TO CONTI
NUE"
420 IF INKEY$="" THEN GOTO 420
430 CLS
440 PRINT "phase 2"
450 LET Z=INT (RND*6)+1
455 PRINT "YOU HAVE FOUND A K
EY AND MUST PUT IT INTO 1 OF T
HE DOORS (<1d>). USE THE CURSOR
KEYS TO MOVE AROUND"
456 PRINT "PRESS N/L TO CONTI
NUE"
457 IF INKEY$="" THEN GOTO 457
458 CLS
459 LET L=6
460 LET C=4
461 LET X=INT (RND*5)
462 LET Y=INT (RND*5)
464 PRINT AT X,Y;"(<1d>)"
470 LET A=INT (RND*5)
472 LET B=INT (RND*5)
474 PRINT AT A,B;"(<1d>)"
475 PRINT AT L,C;" "
477 LET L=L+(INKEY$="6")-(INKEY
$="7")
478 LET C=C+(INKEY$="8")-(INKEY
$="5")
480 IF L=X AND C=Y THEN GOTO 55
0
485 IF L=A AND C=B THEN GOTO 57
0
490 PRINT AT L,C;"O"
500 GOTO 475
550 PRINT AT L,C;"(<10>)"
555 PAUSE 75

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556 CLS
560 PRINT "WELL DONE YOU CHOSE
THE CORRECT DOOR AND CAN CONTINU
E TO THE NEXT PHASE"
562 PRINT "YOU HAVE SCORED "<Z
*Z*100>," POINTS"
563 LET S=S+(Z*2*100)
564 PRINT "score ";S
565 PRINT "PRESS N/L TO CONTI
NUE"
566 IF INKEY$="" THEN GOTO 566
567 CLS
568 GOTO 600
570 PRINT AT L,C;"(1*)"
575 PAUSE 75
576 CLS
578 PRINT "HARD LUCK YOU CHOSE
THE WRONG DOOR AND HAVE FALLEN
INTO A PIT YOU LOSE 500 POINTS
CLIMBING OUT"
580 LET S=S-500
581 PRINT "score ";S
582 PRINT "PRESS N/L TO TRY A
GAIN"
584 IF INKEY$="" THEN GOTO 584
586 CLS
590 GOTO 459
600 PRINT "Phase 3"
610 PRINT "YOU HAVE TO WALK A
LONG A PLANK BECAUSE OF THE GU
RD DOGS BELOW BE CAREFUL,SOME OF
THE PLANK IS ROTTEN"
612 PRINT "THERE IS A CROWBAR (<
+>) AT THE END OF THE PLANK,IF
YOU HIT IT YOU WILL GAIN POINTS"
615 PRINT "USE ""W"" TO WALK AN
D ""J"" TO JUMP"
620 PRINT "PRESS N/L TO CONTI
NUE"
630 IF INKEY$="" THEN GOTO 630
640 CLS
700 LET L=4
705 LET C=0
710 PRINT AT 5,0;"(97:2*SP:2*97
:SP:97:SP:2*97:4*SP:97:2*SP:2*97
)"
712 PRINT AT 12,0;"(19*9a)"
715 PRINT AT 4,17;"+"
720 PRINT AT L,C;" "
730 IF INKEY$="W" THEN LET C=C+
1
735 IF L=4 AND C=1 OR L=4 AND C
=2 OR L=4 AND C=5 OR L=4 AND C=7
OR L=4 AND C=10 OR L=4 AND C=11
OR L=4 AND C=12 OR L=4 AND C=13
OR L=4 AND C=15 OR L=4 AND C=16
THEN GOSUB 900
737 IF INKEY$="J" AND L=L+1 AND
C=C+1 THEN GOTO 850
740 IF INKEY$="J" THEN GOSUB 95
0
745 IF INKEY$<>"J" AND L<4 THEN
GOSUB 1000
747 IF INKEY$="J" AND L=L+1 AND
C=C+1 THEN GOTO 850
750 PRINT AT L,C;"0"
760 IF L=4 AND C=18 THEN GOTO 1
200
765 IF C>19 THEN GOTO 802
766 IF C>18 AND L<4 THEN GOTO
802
770 IF C=19 AND L=4 THEN GOTO 1
500
775 LET Z=INT (RND*20)+1
780 IF L=4 AND C=17 THEN LET S=
S+(Z*20)
800 GOTO 720
802 PRINT AT L,C;"(1*)"
803 PAUSE 100
804 CLS
805 PRINT "YOU HAVE JUMPED OUT
OF THE BANK"
810 PRINT "YOU LOSE 1000 POINTS"
812 LET S=S-1000
814 PRINT "score ";S
815 PRINT "PRESS N/L TO TRY A
GAIN"
820 IF INKEY$="" THEN GOTO 820
825 CLS
830 GOTO 700
850 PRINT AT L,C;"(1*)"
855 PAUSE 75
860 CLS
862 PRINT "YOU CHEATED.THE ZX81
DOES NOT LIKE CHEATS."
865 PRINT "score ";S
866 PAUSE 120
867 IF S<HS AND W<PL THEN GOTO
890
868 IF S>HS THEN GOTO 4005
890 PRINT "PRESS N/L FOR NEXT
PLAYER"
891 IF INKEY$="" THEN GOTO 891
892 CLS
893 NEXT W
894 GOTO 8
910 PRINT AT L,C;" "
915 PRINT AT 11,C;"(1*)"
916 PAUSE 75
917 CLS
920 PRINT "A HUNGRY ALSATIAN GU
ARD DOG HAS ATTACKED YOU AND GUB
BLED YOU UP"
922 PRINT "score ";S
923 PAUSE 150
925 IF S>HS THEN GOTO 4005
926 IF W=PL THEN GOTO 6000
930 IF S<HS AND W<PL THEN GOTO
934
934 PRINT "PRESS N/L FOR NEXT
PLAYER"
935 IF INKEY$="" THEN GOTO 935
940 CLS
942 NEXT W
945 GOTO 8
950 LET L=L-1
960 LET C=C+1
980 GOTO 720
1000 LET L=L+1
1001 LET C=C+1
1002 IF INKEY$="J" THEN GOTO 850
1005 IF L=4 THEN LET L=4
1130 RETURN
1200 PRINT
1205 PRINT AT 5,18;"(9h)"
1206 PRINT AT 5,19;"(8*9h)"
1210 PRINT AT 6,18;"(9h) (8*9h)"
1220 PRINT AT 7,18;"(9h) (8*9h)"
1230 PRINT AT 8,18;"(9h) (8*9h)"
1240 PRINT AT 9,18;"(9h) (8*9h)"
1250 PRINT AT 10,18;"(9f)"
1260 PRINT AT 11,18;"(9f)"
1270 PRINT AT 12,18;"(10*9f)"
1280 GOTO 720
1500 PRINT AT 4,19;" "
1505 LET L=11
1506 LET C=19
1510 PRINT AT L,C;" "
1511 LET C=C+1
1512 IF C=27 THEN GOTO 1515
1513 PRINT AT L,C;"0"
1514 GOTO 1507
1515 PRINT AT L,C;"(10)"
1520 PAUSE 150
1530 CLS
1535 LET X=INT (RND*100)+1
1540 PRINT "WELL DONE, YOU HAVE G
AINED "<X*100>," POINTS FOR FIND
ING THE CORRIDOR"
1550 LET S=S+(X*100)
1560 PRINT "score ";S
1600 PRINT "PRESS N/L TO CONTI
NUE"
1610 IF INKEY$="" THEN GOTO 1610
1620 CLS
1700 PRINT "Phase 4"
1720 PRINT "THERE IS A STEEL D
OOR IN THE CORRIDOR, YOU MUST
INPUT THE AMOUNT OF EXPLOSIV
ES TO BE USED"
1725 PRINT "(1 OR 2) TONS."
1730 PRINT "PRESS N/L TO CONTI
NUE"
1735 IF INKEY$="" THEN GOTO 1735
1740 CLS
1745 PRINT AT 5,0;"(32*9h)"
1750 PRINT AT 8,0;"(32*9h)"
1755 LET L=7
1756 LET C=14
1760 PRINT AT L,C;"0"
1770 PRINT AT 6,15;"(1SP)"
1780 PRINT AT 7,15;"(1SP)"
1800 LET V=INT (RND*2)+1
1810 INPUT I
1820 IF I<>V AND V=1 THEN GOTO 1
850
1825 IF I<>V AND V=2 THEN GOTO 1
880
1840 IF I=V THEN GOTO 1950
1850 PRINT AT L,C;"(1*)"
1851 PRINT AT 6,15;" " AT 7,15;" "
1855 PAUSE 100
1858 CLS
1860 PRINT "TOO MUCH EXPLOSIVE.Y
OU HAVE BLOWN YOURSELF UP"
1862 PRINT "score ";S
1863 PAUSE 120
1865 IF S>HS THEN GOTO 4005
1866 IF S<HS AND W<PL THEN GOTO
1869
1867 IF W=PL THEN GOTO 6000
1869 PRINT "PRESS N/L FOR NEXT P
LAYER"
1870 IF INKEY$="" THEN GOTO 1870
1872 NEXT W
1875 CLS
1878 GOTO 8
1880 PAUSE 100
1885 CLS
1886 LET Q=INT (RND*20)+1
1888 PRINT "NOT ENOUGH EXPLOSIVE
, YOU LOSE "<Q*100>," POINTS"
1889 LET S=S-(Q*100)
1890 PRINT "score ";S
1893 PRINT "PRESS N/L TO TRY A
GAIN"
1895 IF INKEY$="" THEN GOTO 1895
1898 CLS
1900 GOTO 1740
1950 PRINT AT 6,15;" "
1960 PRINT AT 7,15;" "
1965 PRINT AT L,C;" "
1970 LET C=C+1
1980 PRINT AT L,C;"0"
1990 IF C=31 THEN GOTO 1995
1992 GOTO 1965
1995 PRINT AT L,C;"(10)"
2000 PAUSE 75
2005 CLS
2010 PRINT "WELL DONE, YOU HAVE G
OT THROUGH THE STEEL DOOR AND H
AVE GAINED 2000 POINTS"
2015 LET S=S+2000
2020 PRINT "score ";S
2030 PRINT "PRESS N/L TO CONTI
NUE"
2040 IF INKEY$="" THEN GOTO 2040
2050 CLS
2100 PRINT "Phase 5"
2110 PRINT "YOU ARE IN A LARGE
ROOM AND THE FLOOR WILL BECOME
ELECTRIFIED"
2120 PRINT "AFTER 100 SECONDS, Y
OU MUST FIND THE HIDDEN SWITCH B
EFORE"
2130 PRINT "YOUR TIME RUNS OUT"
2132 PRINT "IF YOU TURN IT OFF 1
N TIME A CORRIDOR IS PRINTED"
2133 PRINT "IF YOUR TIME RUNS OU
T THE SWITCH IS PRINTED"
2135 PRINT "USE THE CURSOR KEYS
TO MOVE AROUND"
2140 PRINT "PRESS N/L TO CONTI
NUE"
2150 IF INKEY$="" THEN GOTO 2150
2160 CLS
2175 LET T=100
2194 LET L=7
2196 LET C=0
2200 PRINT AT 5,0;"(7*9h:10*SP:9
h)"
2210 PRINT AT 8,0;"(7*9h:10*SP:9
h)"
2220 PRINT AT 4,6;"(9h:10*SP:9h)"
2230 PRINT AT 3,6;"(9h:10*SP:9h)"
2235 PRINT AT 6,6;"(11*SP:9h)"
2240 PRINT AT 2,6;"(9h:10*SP:9h)"
2245 PRINT AT 7,6;"(11*SP:9h)"
2250 PRINT AT 1,6;"(9h:10*SP:9h)"
2260 PRINT AT 0,6;"(12*9h)"
2270 PRINT AT 9,6;"(9h:10*SP:9h)"
2280 PRINT AT 10,6;"(9h:10*SP:9h
)"
2290 PRINT AT 11,6;"(9h:10*SP:9h
)"

```



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Author:  
Mike Muscoff.



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Designer: John Hollis  
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Steve Hickman.

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Authors: Mark &  
Richard Moore.



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Spectrum 48K.  
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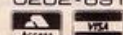
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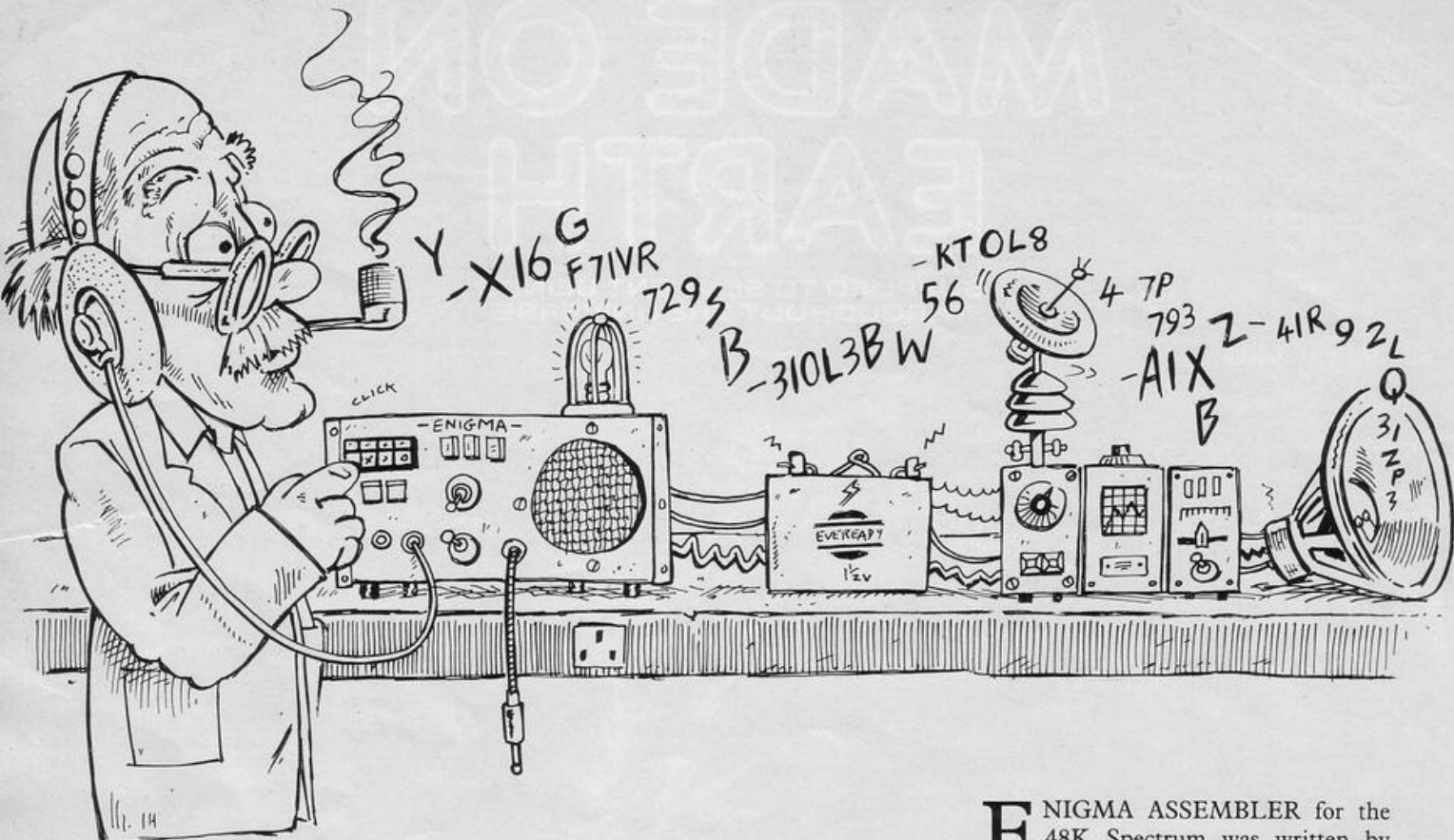
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# ENIGMA ASSEMBLER

**E** NIGMA ASSEMBLER for the 48K Spectrum was written by Max Berle of Geel, Belgium. It will convert assembly language code, such as LD A, ZZ, into machine code, a list of numbers which can be understood by the computer. Assembly language is easier to understand from the users' point of view.

```

1 DIM a(252): DIM a$(252,12)
2 INK 0: PAPER 7: BORDER 7: C
LS: PRINT AT 11,0: FLASH 1:
  Please wait a moment
50 GO SUB 8000
110 CLS
120 PRINT TAB 10;"Options":TAB
10;"-----"
130 PRINT: PRINT: PRINT: PRI
NT
131 BRIGHT 1
140 PRINT TAB 2;"1.....Write":
TAB 2;"2.....Look":TAB 2;"3....
..Run":TAB 0
145 PRINT AT 15,2: INK 3: PLUT
7,43: DRAW 0,17: DRAW 190,0: DR
AW 0,-17: DRAW -190,0
147 INK 0
150 PRINT #0: FLASH 1:"Please s
elect"
160 PAUSE 0: IF INKEY#<"1" OR I
NKEY#>"3" THEN GO TO 160
165 BRIGHT 0
170 GO TO (2000 AND INKEY#="1")
+(4000 AND INKEY#="2")+5000 AND
INKEY#="3")
2000 REM      Write
2010 CLS: INPUT "Start address:
":st
2015 PRINT AT 0,0:"Address: ":st
: PRINT: PRINT: PRINT: PRINT
2020 INPUT "Code: ":y$
2022 IF y$="stop" THEN GO TO 10
0
2025 IF LEN y$>12 THEN GO TO 2

```

```

050
2030 FOR f=1 TO 252: IF y$=a$(f)
THEN GO TO 2100
2040 NEXT f
2050 PRINT INVERSE 1,0: FLASH
1:"Wrong input": PAUSE 100: PRIN
T 0:
  GO TO 2020
2100 PRINT TAB 3,y$
2120 POKE st,a$(f)
2121 FOR f=1 TO LEN y$
2122 IF y$(f TO f)="N" THEN GO
TO 2125
2123 NEXT f
2124 GO TO 2130
2125 INPUT "NN: ":s
2126 IF s>255 THEN GO TO 2125
2127 LET st=st+1: POKE st,s: PRI
NT TAB 0;"N=": INVERSE 1:s
2130 LET st=st+1: GO TO 2020
4005 LET w=0
4010 CLS: INPUT "Start address:
":rt
4015 PRINT AT 0,0: INVERSE 1:"Ad
resse: ":rt:0: INVERSE 1:
  'M' menu
4020 PRINT: PRINT: PRINT: PRI
NT
4021 FOR f=1 TO 252: IF PEEK (rt
)=a$(f) THEN GO SUB 4500
4022 NEXT f
4023 IF w=1 THEN LET rt=rt+1: P
RINT TAB 0;"N=": INVERSE 1:PEEK
(rt): LET w=0
4035 IF INKEY#="m" THEN GO TO 1

```

```

00
4040 LET rt=rt+1: GO TO 4021
4500 PRINT TAB 3,a$(f)
4510 FOR e=1 TO LEN a$(f)
4520 IF a$(f,e TO e)="N" THEN L
ET w=1: RETURN
4530 NEXT e: RETURN
5010 CLS
5020 INPUT "Start address: ":d
5030 CLS: PRINT USR d: PRINT F
LASH 1,0:"Press any key"
5050 PAUSE 0: GO TO 100
8000 RESTORE
8010 FOR f=1 TO 252
8020 READ a$(f),a$(f)
8030 NEXT f
9010 DATA "nop",0,"ld bc,NN",1,"
ld (bc),a",2,"inc bc",3,"inc b",
4,"dec b",5,"ld b,N",6,"rlca",7,
"ex af,af",8,"add hl,bc",9,"ld
a,(bc)",10,"dec bc",11,"inc c",1
2,"dec c",13,"ld c,N",14,"rrca",
15,"djnz DIS",16,"ld de,NN",17,
"ld (de),a",18,"inc de",19,"inc
d",20,"dec d",21,"ld d,N",22,"rl
a",23,"jr DIS",24,"add hl,de",25
,"ld a,(de)",26,"dec de",27,"inc
e",28,"dec e",29,"ld e,N",30,"r
ra",31,"jr nz,DIS",32,"ld hl,NN",
33,"ld (NN),hl",34,"inc hl",35,
"inc h",36,"dec h",37
9020 DATA "ld h,N",38,"daa",39,"
jr z,DIS",40,"add hl,hl",41,"ld
hl,(NN)",42,"dec hl",43,"inc l",
44,"dec l",45,"ld l,N",46,"cpl",

```

```

47,"jr nc,DIS",48,"ld sp,NN",49,
"ld (NN),a",50,"inc sp",51,"inc
(hl)",52,"dec (hl)",53,"ld (hl),
N",54,"scf",55,"jr c,DIS",56,"ad
d hl,sp",57,"ld a,(NN)",58,"dec
sp",59,"inc a",60,"dec a",61,"ld
a,N",62,"ccf",63,"ld b,b",64,"l
d b,c",65,"ld b,d",66,"ld b,e",6
7,"ld b,h",68,"ld b,l",69,"ld b,
(hl)",70,"ld b,a",71,"ld c,b",72
,"ld c,c",73,"ld c,d",74,"ld c,e
",75,"ld c,h",76,"ld c,l",77,"ld
c,(hl)",78,"ld c,a",79,"ld d,b"
,80,"ld d,c",81
9030 DATA "ld d,d",82,"ld d,e",8
3,"ld d,h",84,"ld d,l",85,"ld d,
(hl)",86,"ld d,a",87,"ld e,b",88
,"ld e,c",89,"ld e,d",90,"ld e,e
",91,"ld e,h",92,"ld e,l",93,"ld
e,(hl)",94,"ld e,a",95,"ld h,b"
,96,"ld h,c",97,"ld h,d",98,"ld
h,e",99,"ld h,h",100,"ld h,l",10
1,"ld h,(hl)",102,"ld h,a",103,"
ld l,b",104,"ld l,c",105,"ld l,d
",106,"ld l,e",107,"ld l,h",108,
"ld l,l",109,"ld l,(hl)",110,"ld
l,a",111,"ld (hl),b",112,"ld (h
l),c",113,"ld (hl),d",114,"ld (h
l),e",115,"ld (hl),h",116,"ld (h
l),l",117,"halt",118,"ld (hl),a"
,119,"ld a,b",120,"ld a,c",121,"
ld a,d",122,"ld a,e",123,"ld a,h
",124,"ld a,l",125
9040 DATA "ld a,(hl)",126,"ld a,
a",127,"add a,b",128,"add a,c",1
29,"add a,d",130,"add a,e",131,"
add a,h",132,"add a,l",133,"add
a,(hl)",134,"add a,a",135,"adc a
,b",136,"adc a,c",137,"adc a,d",
138,"adc a,e",139,"adc a,h",140,
"adc a,l",141,"adc a,(hl)",142,"
adc a,a",143,"sub b",144,"sub c"
,145,"sub d",146,"sub e",147,"su
b h",148,"sub l",149,"sub (hl)",
150,"sub a",151,"sbc a,b",152,"s
bc a,c",153,"sbc a,d",154,"sbc a

```

```

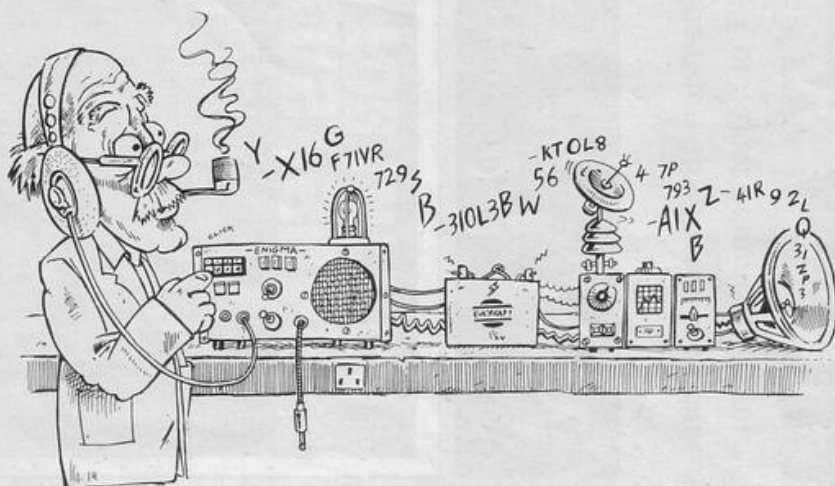
,e",155,"sbc a,h",156,"sbc a,l",
157,"sbc a,(hl)",158,"sbc a,a",1
59,"and b",160,"and c",161,"and
d",162,"and e",163,"and h",164,"
and l",165,"and (hl)",166,"and a
",167,"xor b",168,"xor c",169
9050 DATA "xor d",170,"xor e",17
1,"xor h",172,"xor l",173,"xor (
hl)",174,"xor a",175,"or b",176,
"or c",177,"or d",178,"or e",179
,"or h",180,"or l",181,"or (hl)"
,182,"or a",183,"cp b",184,"cp c
",185,"cp d",186,"cp e",187,"cp
h",188,"cp l",189,"cp (hl)",190,
"cp a",191,"ret nz",192,"pop bc"
,193,"jp nz,NN",194,"jp NN",195,
"call nz,NN",196,"push bc",197,"
add a,N",198,"rst 0",199,"ret z"
,200,"ret",201,"jp z,NN",202,"ca
ll z,NN",204,"call NN",205,"adc
a,N",206,"rst 8",207,"ret nc",20

```

```

8,"pop de",209,"jp nc,NN",210,"o
ut (N),a",211,"call nc,NN",212,"
push de",213
9060 DATA "sub N",214,"rst 16",2
15,"ret c",216,"exx",217,"jp c,N
N",218,"in a,(N)",219,"call c,NN
",220,"sbc a,N",222,"rst 24",223
,"ret po",224,"pop hl",225,"jp p
o,NN",226,"ex (sp),hl",227,"call
po,NN",228,"push hl",229,"and N
",230,"rst 32",231,"ret pe",232,
"jp (hl)",233,"jp pe,NN",234,"ex
de,hl",235,"call pe,NN",236,"xo
r N",238,"rst 40",239,"ret p",24
0,"pop af",241,"jp p,NN",242,"di
",243,"call p,NN",244,"push af",
245,"or N",246,"rst 48",247,"ret
m",248,"ld sp,hl",249,"jp m,NN"
,250,"ei",251,"call m,NN",252,"c
p N",254,"rst 56",255
9999 RETURN

```



```

1 FOR A=0 TO 7: READ B: POKE
USR "(9a)+A,B: NEXT A
2 FOR A=0 TO 7: READ B: POKE
USR "(9b)+A,B: NEXT A
3 FOR A=0 TO 7: READ B: POKE
USR "(9c)+A,B: NEXT A
4 LET sc=0: LET v=0
5 LET v=21: LET x=15: LET s=2
0: LET r=15
10 LET a=INT (RND*32): LET b=2
20 PRINT AT b,a: INK 2: "(9a)"
30 PRINT AT v,x: INK 4: "(9b)"
35 PRINT AT s+1,r-1: " PRI
NT AT s,r: "(9c)"
36 BEEP .01,s: LET s=s-1
38 PRINT AT 0,6: "SCORE " ;sc
39 PRINT AT 0,21: "MISSILES " ;v
40 LET c=INKEY$
50 IF c="5" THEN LET r=r-1
62 IF c="8" THEN LET r=r+1
70 IF s=1 THEN GO TO 150
80 IF r=a AND s=b THEN GO TO
160
90 IF sc=20 THEN GO TO 1000
95 IF v=25 THEN GO TO 2000
110 GO TO 20
150 CLS: LET v=v+1: GO TO 5
160 PRINT AT 0,0: INK 1: FLASH
1: "BANG!"
163 FOR a=30 TO 33: BEEP .05,a:
NEXT a
170 LET sc=sc+1
180 GO TO 10
1000 CLS: PRINT "YOU MADE IT WI
TH " ;25-v: " MISSILES LEFT"
1005 FOR j=1 TO 32: BEEP .05,j
1020 NEXT j
1030 GO TO 1005
2000 CLS
2001 PRINT "YOU HAVE JUST USED U
P ALL YOUR MISSILES BUT THERE A
RE STILL SOME INVADERS LEFT"
2010 BEEP .5,0: BEEP .5,-2: BEEP

```

**MISSILE**



```

.5,-4
2020 GO TO 2010
3000 DATA 20,62,42,62,127,99,65,
65
3010 DATA 24,24,24,60,60,126,255
,255
3020 DATA 24,60,126,24,24,126,12
6,24

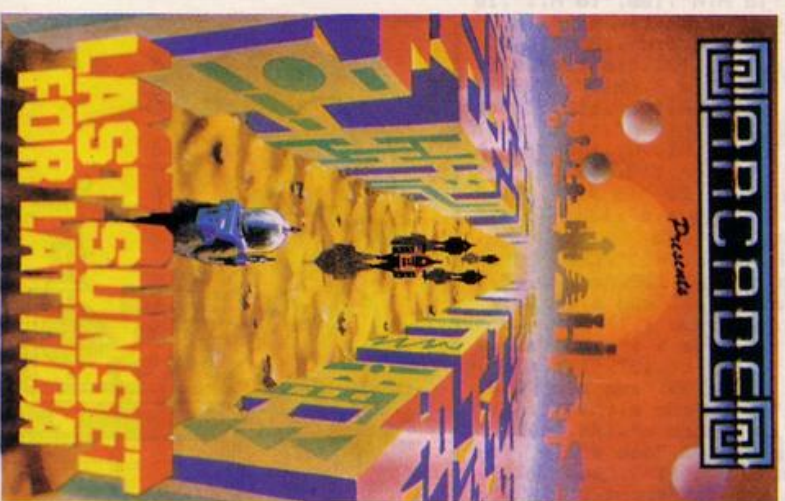
```

**M**ISSILE for the 16K Spectrum was written by Tim Rose of Amisfield, Dumfries. Guide your missile with keys 5 and 8 towards the intruder. You have 25 missiles and 20 intruders to shoot.

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**GRID RUN** is a high resolution fast machine code game using the full capabilities of the Spectrum. It is a fast moving, exciting, action-packed game, with a wide range of sound effects and a full, multi-coloured, high resolution picture. The game is played on a 1000 point grid, and the player's car can move in any direction. The game is played on a 1000 point grid, and the player's car can move in any direction. The game is played on a 1000 point grid, and the player's car can move in any direction.



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**RAIDER OF THE CURSED MINE** (Original). Greed drove you down into the old diamond mine, where determination and luck is the only way out again. Uts! Help you, so do lamps, and diamonds can't worth a fortune but beware of the evils that lurk deep in the mine. Troils who throw boulders at you, spiders who eat you, ghosts who show no mercy and bats who steal things, add to this a time bonus and you have an exciting Arcade quality game. Reach level 32 and escape to the big outside world. REF: RAID

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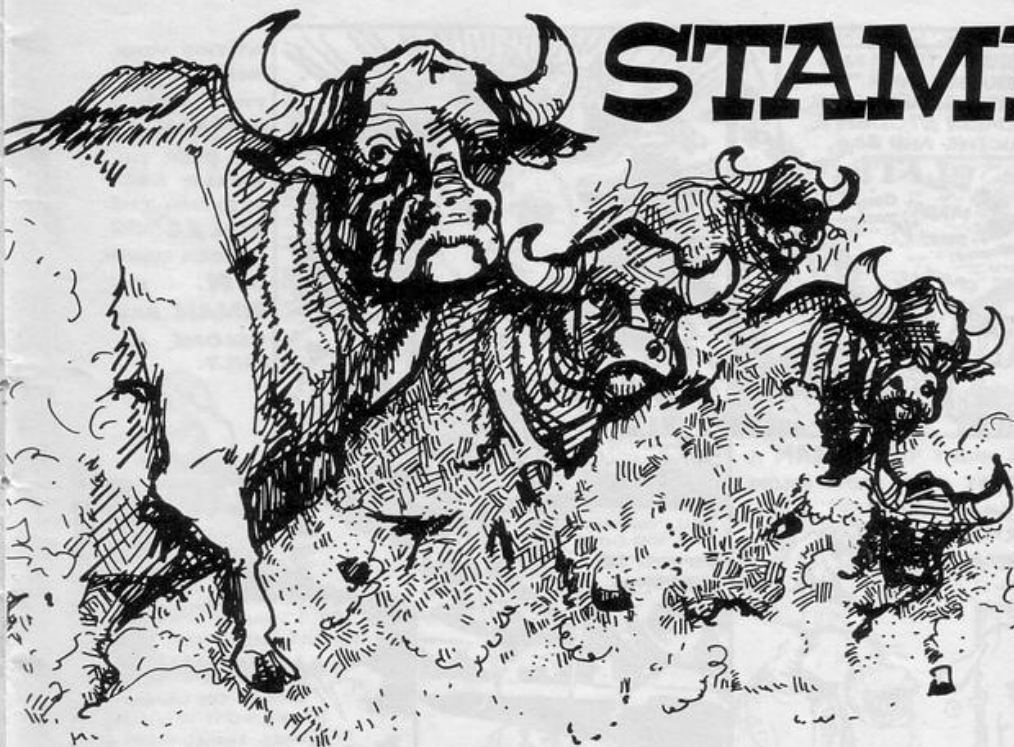
\* Please delete/complete as applicable.

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SP



# STAMPEDE

IT IS the law of the jungle — kill or be killed — as you drive your truck over the scrub straight into a stampede of wild buffalo. If you are within range you can fire with "." or you must dodge the wild beasts using "6" for down, "7" for up and "M" for over-

drive. If you hit five buffalo, you must stop to repair your vehicle; stop with "1".

**Stampede** was written for the 1K ZX-81 by A Chetwode of Ramsbury, Wilts.

```

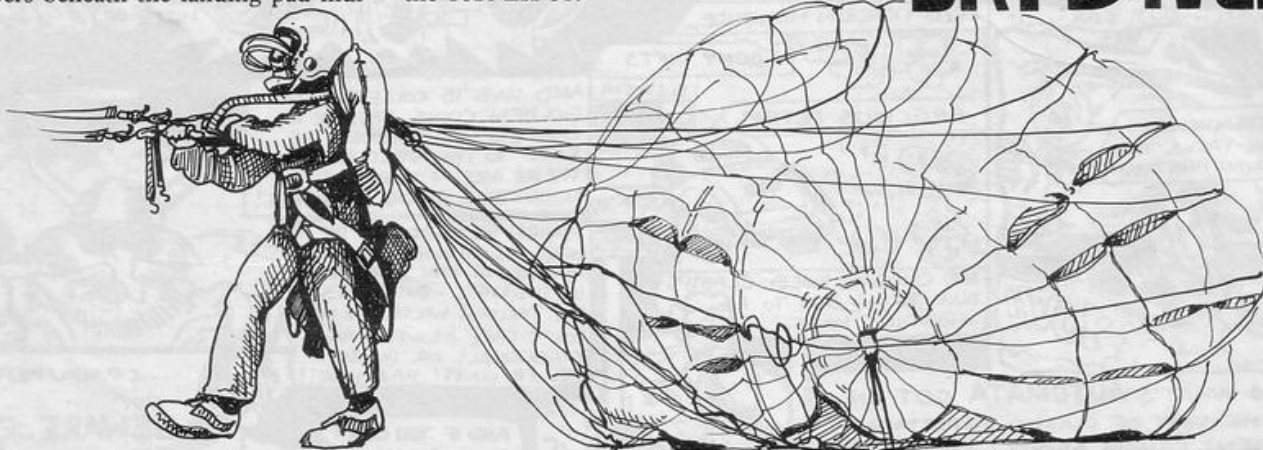
1000 LET A$=""
1001 LET S=0
1002 LET F=1
1003 LET A=12
1004 LET C=20
1005 LET D=INT (RAND*27)+2
1006 LET G=1
1007 LET S=S+1
1008 PRINT AT 10,0;A$
1009 SCROLL
1010 PRINT AT A,F;">-"
1011 PRINT AT A,F;" "
1012 LET F=F+1
1013 IF F>27 THEN LET F=1
1014 IF A=1 THEN LET A=2
1015 IF A=2 THEN LET A=19
1016 IF INKEY$="" THEN GOSUB 600
1017 IF INKEY$="7" THEN LET A=A-1
1018 IF INKEY$="6" THEN LET A=A+1
1019 IF INKEY$="5" THEN LET F=F-1
1020 IF INKEY$="M" THEN LET F=F+1
1021 IF INKEY$="1" THEN GOTO 200
1022 GOTO 130
2000 PAUSE 1
3000 PRINT "SCORE ";S
4000 PAUSE 500
5000 CLS
5001 RUN
5002 PRINT AT A,F+2;"-----"
5003 PRINT AT A,F+2;" "
5004 RETURN

```

RELEASE your parachutist using key "0" to make a controlled landing on the landing pad. The numbers beneath the landing pad indi-

cate the points you score if you land accurately. **Sky Diver** was written by Jeremy Bell of Tuffley, Gloucester for the 16K ZX-81.

# SKY DIVER



```

1 REM "SKY DIVER"
5 LET HS=0
10 CLS
15 LET S=0
20 LET L=10
30 LET A=INT (RAND*21)+1
40 LET D=INT (RAND*7)+2
41 LET G=D+1
42 LET K=0
44 PRINT AT 0,9;"**SKY DIVER**"
"AT 1,3;"SCORE=";S;AT 1,14;"HIGHEST SCORE=";HS;AT 21,0;"JUMPS=";L
50 PRINT AT 19,A;"(3*9a:2*1sp:3*9a)"
60 PRINT AT 20,A+1;"5";AT 20,A+3;"10";AT 20,A+5;"5"
70 FOR C=0 TO 28

```

```

75 PRINT AT D,C;"(9w:9f:96)"
77 IF INKEY$="" THEN LET K=1
80 IF K=1 THEN PRINT AT G,C+1;"(9d)";AT G+1,C+1;"Y"
81 IF G=17 AND C+1>A AND C+1<A+3 OR G=17 AND C+1>A+4 AND C+1<A+8 THEN GOTO 300
82 IF G=17 AND C+1=A+3 OR G=17 AND C+1=A+4 THEN GOTO 350
85 IF G=18 THEN GOTO 400
131 PRINT AT G,C+1;" "AT G+1,C+1;" "
132 IF K=1 THEN LET G=G+1
140 PRINT AT D,C;" "
141 IF C=28 THEN LET C=0
150 NEXT C
160 STOP
300 LET S=S+5

```

```

320 GOTO 400
350 LET S=S+10
400 CLS
401 IF S>HS THEN LET HS=S
410 LET L=L-1
420 IF L=0 THEN GOTO 500
430 GOTO 30
500 CLS
510 PRINT AT 10,3;"DO YOU WANT ANOTHER GO?"AT 11,12;"(Y/N)?"
520 IF INKEY$="Y" THEN GOTO 10
530 IF INKEY$="N" THEN GOTO 550
540 GOTO 520
550 CLS
560 PRINT AT 10,6;"HIGHEST SCORE=";HS
570 STOP

```

THE STORY SO FAR...

# AUTOMATA

PUT SOME TING IN COMPUTING! IN 1981 THEY WERE THE FIRST TO PUT FREE MUSIC TRACKS ON COMPUTER CASSETTES. IN 1982 THEY WERE THE FIRST WITH BIG PRIZE GAMES. IN '83 IT WAS COMIC STRIP ADS. THIS IS THEIR STORY.

ONCE UPON A TIME (AND A MISERABLE TIME 'T' WAS), COMPUTER GAMES WERE EXTREMELY VIOLENT, DESTRUCTIVE AND BORN.



LATE ONE NIGHT THE PIMAN IS DISTURBED BY A VISITOR FROM THE DISTANT GALAXY OF MORRIS MINOR.



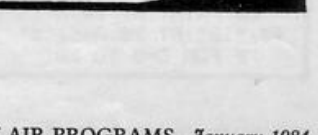
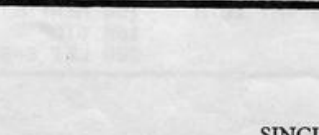
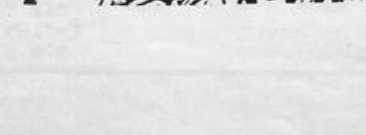
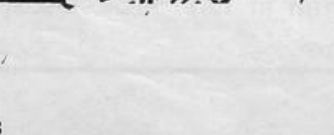
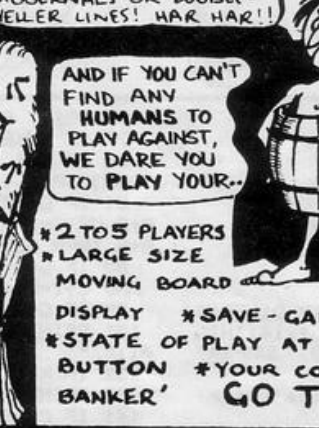
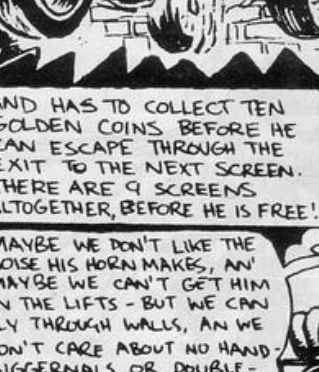
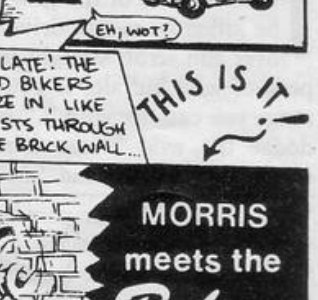
AT THIS VERY MOMENT, THOUSANDS OF PIMANIACS ALL OVER THE WORLD, ARE SEEKING THE REAL £6000 GOLDEN SUNDAY OF PI. THE PIMAN HAS BECOME A CULT.



THE CRITICS GO WILD! PIMANIA IS HAILED AS AN



ALL-TIME CLASSIC!



# THE STORY SO FURTHER



HAVING LOST AT GO TO JAIL TO THEIR COMPUTER, THE PIMAN & A PAL GO TO THE

FLICKS... WHEREIN AUTOMATA SPRING A SURPRISE.

GROUCHO! IT'S YOU!!

OUT NOW  
MY NAME IS  
**UNCLE GROUCHO**  
YOU WIN A  
FAT CIGAR!

FIND THE HOLLYWOOD PERSONALITY IN THIS GAME, AND WIN A TRIP TO MEET 'EM! FLY OUT BY CONCORDE, STAY AT A REAL LUXURY HOTEL AND HAVE £500 TO SPEND...

WHAT IS THIS, THE STAMPEDE SEASON? WE'RE BEING TRAMPLED! ...THIS TRIP FOR 2 FINISHES WITH A LEISURELY CRUISE HOME ON THE Q-E-Z!



THEY MUST BE OFF TO GET THEIR "UNCLE GROUCHO'S"



I THINK THAT MUST BE THE LAST OF THEM NOW...

HAVING HIDDEN A WORLD-FAMOUS HOLLYWOOD STAR IN "GROUCHO," AUTOMATA WILL SEND 2 LUCKY PLAYERS TO MEET THEM! TRACK GROUCHO AS HE TOURS THE U.S.A. - CARTOONS, MUSIC & LARFS.



HEY, POND-LIFE, CAN'T YOU MAKE THIS THING GO FASTER?

I'D LIKE TO SEE YOU DO BETTER, BIG EAD! JUST £OS YOU'VE NOW GOT TOP BILLING IN THE INTRO PANEL...



THAT MULE WAS SLOW TO THE LAST! IT'S BEEN SITTING IN MY STOMACH FOR 2 DAYS NOW



WE SHOULD NEVER HAVE TRADED THE MAP AND COMPASS FOR FUR COATS! WE'RE LOST AGAIN!



FOR HIRE HOLLYWOOD, 5,000 MILES AS THE CROW FLIES



ON THE OPPOSITE PAGE, THE PIMAN WAS SOLD A CANTANKEROUS MORRIS, WHICH HE PROMPTLY ABANDONED IN A MULTI-STORY EYESORE... BUT GROUCHO HAS OTHER IDEAS...



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SP

# CHOPPER SQUAD

**A**S A helicopter pilot you must destroy all the enemy bases. A variety of points can be gained for the different types of buildings and

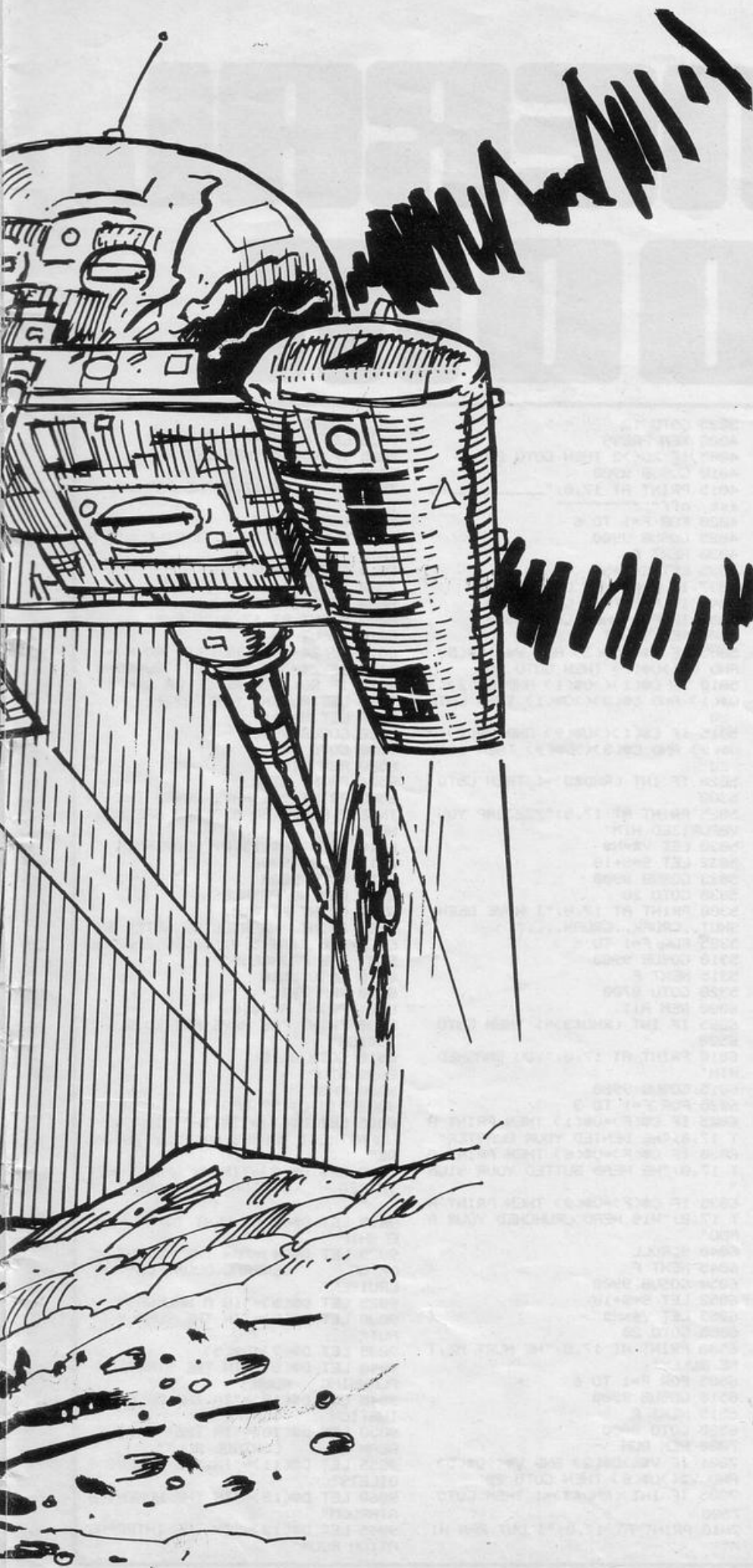
firing needs expert timing. **Chopper Squad** was written for the 16K Spectrum by R Davidson and P Watts of Seamills, Bristol.

```

1 LET HS=0:CLS:GO SUB 301:
GO SUB 1000
2 LET SC=0:LET SHOT=14:LET
Z=RND/100:LET X=RND*50
3 INK 4: BORDER 1:CLS:FOR
N=0 TO 20: BEEP Z,X:PRINT AT N,
31:"(isp)":NEXT N
4 FOR N=0 TO 20: BEEP Z,X:PR
INT AT N,0:"(isp)":NEXT N:FOR
N=0 TO 31: BEEP Z,X:PRINT AT 20
,N:"(isp)":NEXT N:FOR N=0 TO 3
1: BEEP Z,X:PRINT AT 0,N:"(isp)
":NEXT N
5 INK 0:PRINT AT 19,1:INK 1
:FLASH 1:"a":PRINT AT 19,3:"a"
:PRINT AT 19,4:"f":PRINT AT 19
,7:"a":PRINT AT 19,9:"a":PRINT
AT 19,10:"a":PRINT AT 19,11:"a
"
6 PRINT AT 19,13:"f":PRINT A
T 19,14:"f":PRINT AT 19,16:"a":
PRINT AT 19,19:"a":PRINT AT 19
,20:"a":PRINT AT 19,24:"a"
7 INK 1:PRINT AT 2,2:"999999
999 99 9 99"
8 PRINT AT 3,3:"99 9 9 9 9
99 9 9"
9 FOR N=0 TO 5: INK 2: CIRCLE
240,160,N:NEXT N:INK 0
10 LET A=4:LET B=1
20 PRINT AT 21,17:"SHOTS LEFT=
":SHOT:PRINT AT 21,0:"SCORE= "
:SC:PRINT AT A,B:"cd":BEEP .0
03,40
21 IF SC=0 THEN PRINT AT 21,8
,"":PRINT AT 21,0:"SCORE= "
:SC
22 IF SC>1000 THEN GO TO 600
0
23 IF SC=-50 THEN PRINT AT 21
,10,""
24 IF SHOT=9 THEN PRINT AT 21
,30,""
25 IF SC=50 THEN PRINT AT 21,
10,""
30 LET B=B+1
40 FOR Z=0 TO 5: IF B=25 THEN
LET B=1:LET A=4:PRINT AT 4,25
,""
50 IF INKEY$="D" OR INKEY$="d"
THEN LET SHOT=SHOT-1:PRINT AT
A,B,"":GO TO 99
60 GO TO 20
99 IF SHOT=0 THEN PRINT INVE
RSE 1:FLASH 1:AT 11,10:"GAME OV
ER":FOR N=0 TO 500:NEXT N:GO
TO 6000
100 PRINT AT A,B,"":LET A=A+1
:BEEP .05,A+5
101 PRINT AT A,B:"e":FOR Z=0 T
O 5:NEXT Z
104 IF A=19 AND B=1 THEN PRINT
AT A,B:FLASH 1:INK 2:"b":LET
SC=SC+200:GO TO 10
105 IF A=19 AND B=3 THEN PRINT
AT A,B:FLASH 1:INK 2:"b":LET
SC=SC+50:GO TO 10
106 IF A=19 AND B=4 THEN PRINT
AT A,B:FLASH 1:INK 2:"b":LET
SC=SC+100:GO TO 10
107 IF A=19 AND B=7 THEN PRINT
AT A,B:FLASH 1:INK 2:"b":LET
SC=SC+50:GO TO 10
108 IF A=19 AND B=9 THEN PRINT
AT A,B:FLASH 1:INK 2:"b":LET
SC=SC+50:GO TO 10
109 IF A=19 AND B=10 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+50:GO TO 10
110 IF A=19 AND B=11 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+50:GO TO 10
111 IF A=19 AND B=13 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+100:GO TO 10
112 IF A=19 AND B=14 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+100:GO TO 10
113 IF A=19 AND B=16 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+50:GO TO 10
114 IF A=19 AND B=19 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+50:GO TO 10
115 IF A=19 AND B=20 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+50:GO TO 10
116 IF A=19 AND B=24 THEN PRIN
T AT A,B:FLASH 1:INK 2:"b":LE
T SC=SC+100:GO TO 10
119 IF A>10 THEN PRINT INK 3:
FLASH 1:AT A,B:"e":BEEP .1,2:
BEEP .1,1:BEEP .2,1:BEEP .05
,.1:PAUSE 10:PRINT AT A,B,"":
LET SC=SC-200:GO TO 10
300 GO TO 100
301 POKE USR "a",BIN 00011010
302 POKE USR "a"+1,BIN 00111110
303 POKE USR "a"+2,BIN 01111111
304 POKE USR "a"+3,BIN 01111110
305 POKE USR "a"+4,BIN 10011001
306 POKE USR "a"+5,BIN 11111111
307 POKE USR "a"+6,BIN 11111111
308 POKE USR "a"+7,BIN 11100111
309 POKE USR "a"+8,BIN 11001111
310 POKE USR "b",BIN 00101010

```





```

311 POKE USR "b"+1,BIN 10011000
312 POKE USR "b"+2,BIN 10011010
313 POKE USR "b"+3,BIN 00100010
314 POKE USR "b"+4,BIN 01010101
315 POKE USR "b"+5,BIN 11101000
316 POKE USR "b"+6,BIN 11000110
317 POKE USR "b"+7,BIN 10100101
318 POKE USR "c",BIN 10001001
319 POKE USR "c"+1,BIN 01010000
320 POKE USR "c"+2,BIN 00111111
321 POKE USR "c"+3,BIN 01010011
322 POKE USR "c"+4,BIN 10001000
323 POKE USR "c"+5,BIN 00000000
324 POKE USR "c"+6,BIN 00000000
325 POKE USR "c"+7,BIN 00000000
326 POKE USR "d",BIN 11111111
327 POKE USR "d"+1,BIN 00010000
328 POKE USR "d"+2,BIN 11111100
329 POKE USR "d"+3,BIN 11111110
330 POKE USR "d"+4,BIN 11111110
331 POKE USR "d"+5,BIN 00111100
332 POKE USR "d"+6,BIN 00010001
333 POKE USR "d"+7,BIN 11111110
334 POKE USR "e",BIN 00000000
335 POKE USR "e"+1,BIN 00011000
336 POKE USR "e"+2,BIN 00111100
337 POKE USR "e"+3,BIN 00011000
338 POKE USR "e"+4,BIN 00011000
339 POKE USR "e"+5,BIN 00100100
340 POKE USR "e"+6,BIN 00111100
341 POKE USR "e"+7,BIN 00011000
342 POKE USR "f",BIN 11111111
343 POKE USR "f"+1,BIN 10011001
344 POKE USR "f"+2,BIN 11111111
345 POKE USR "f"+3,BIN 10011001
346 POKE USR "f"+4,BIN 11111111
347 POKE USR "f"+5,BIN 10011001
348 POKE USR "f"+6,BIN 11100111
349 POKE USR "f"+7,BIN 11100111
350 POKE USR "g",BIN 00111000
351 POKE USR "g"+1,BIN 00111100
352 POKE USR "g"+2,BIN 01000001
353 POKE USR "g"+3,BIN 10000001
354 POKE USR "g"+4,BIN 01000011
355 POKE USR "g"+5,BIN 01000001
356 POKE USR "g"+6,BIN 00100100
357 POKE USR "g"+7,BIN 00000000
900 RETURN

```

```

1000 LET A$="*****Q 1983
*****

```

```

~CHOPPER CO
NTROL~ YOU ARE IN CONTR
L OF A HELICOPTER IN WHI
CH YOU MUST DESTROY ALL THE E
NEMY BASES

```

```

..... POINTS RATIO---
a=50 f=100 (flash
in9 a=200) YOUR CHOPPER cd
the d key) MUST BOMB e (with
ALL THE BASES a f
TO MAKE THEM EXPL
ODE b GOOD LUCK!!"

```

```

1001 LET O=0: LET P=0: LET G=LEN
A$
1002 FOR N=1 TO G
1003 IF P<32 THEN GO TO 1005
1004 LET O=O+1: LET P=0
1005 PRINT AT O,P: INK 1;" cd"
1006 BEEP RND/50,RND*50
1007 PRINT AT O,P:A$(N): LET P=P
+1
1008 NEXT N
5000 RETURN
6000 CLS : IF SC>HS THEN PRINT
"WELL DONE! YOU HAVE TODAY
HIGH SCORE"
6001 PRINT AT 6,0;"DO YOU WANT T
O PLAY AGAIN Y/N?"
6002 INPUT A$
6005 IF A$="Y" OR A$="y" THEN C
LS : GO TO 2
6006 STOP

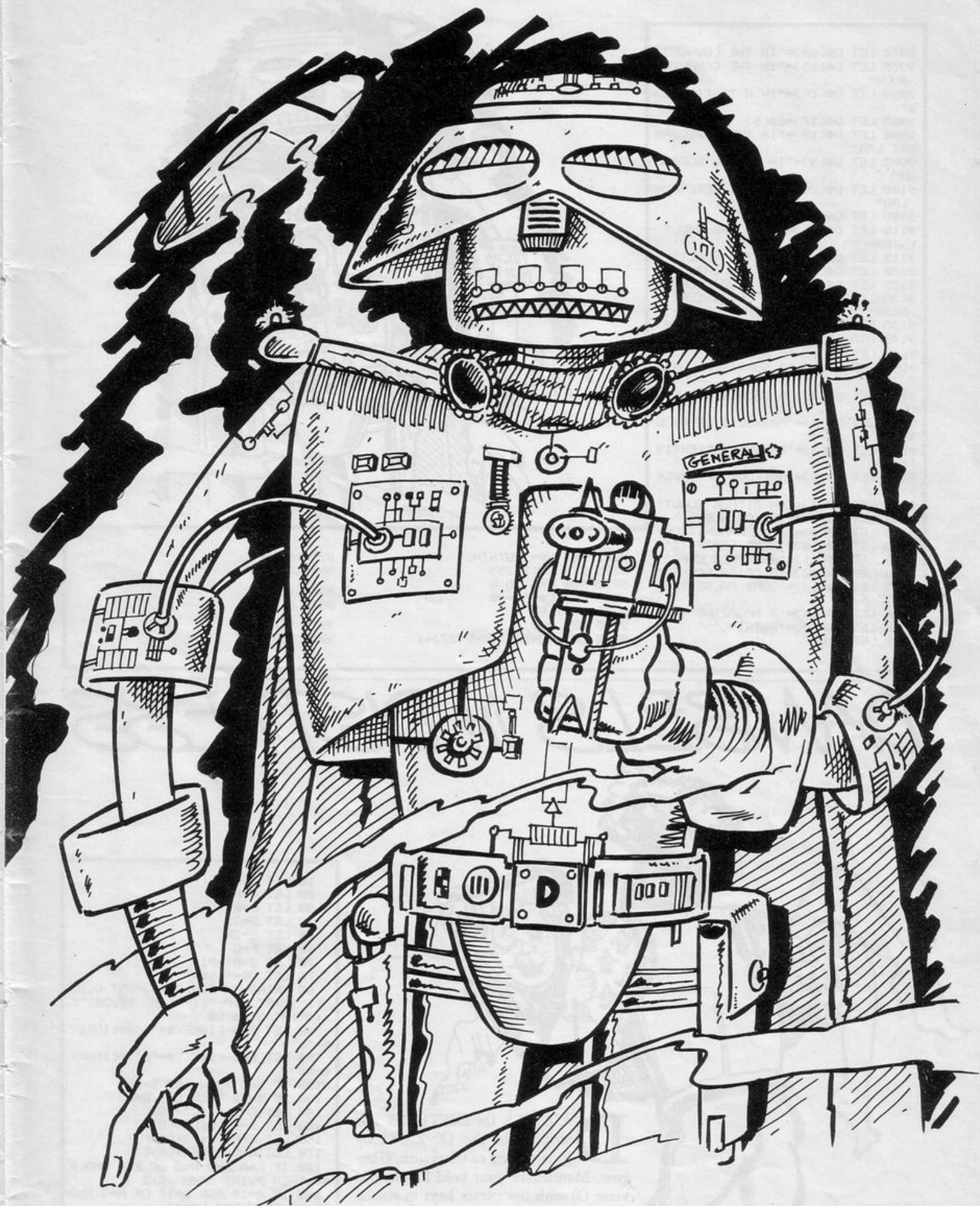
```

# GENERAL DOOM

```

5 GOSUB 9000
10 LET S=0*(RU)
15 LET V=0*(INT (RND*15)+1)
17 IF V=0*(8) AND P=1 THEN GO
TO 15
20 PRINT AT 17,0;"I CAN SEE ";
V$
25 GOSUB 9900
30 PRINT AT 17,0;"I AM ";S$
35 GOSUB 9900
40 PRINT AT 17,0;"I AM CARRYIN
G.:-"
45 FOR F=1 TO 3
50 PRINT C$(F)
55 NEXT F
60 GOSUB 9900
65 GOSUB 9900
70 PRINT AT 17,0;"WHAT NOW"
75 INPUT A$
78 GOSUB 9900
80 IF A$="T" THEN GOTO 1000
85 IF A$="D" THEN GOTO 2000
90 IF A$="Q" THEN GOTO 3000
95 IF A$="P" THEN GOTO 4000
100 IF A$="S" THEN GOTO 5000
105 IF A$="H" THEN GOTO 6000
110 IF A$="R" THEN GOTO 7000
115 IF A$="M" THEN GOTO 8000
120 GOTO 70
1000 REM TAKE
1005 IF V=0*(2) OR V=0*(5) OR
V=0*(7) OR V=0*(10) THEN GOTO
20
1010 IF C$(1,1 TO 7)<>N$ AND C$(
2,1 TO 7)<>N$ AND C$(3,1 TO 7)<>
N$ THEN GOTO 20
1015 IF C$(1,1 TO 7)=N$ THEN GOT
O 1030
1020 IF C$(2,1 TO 7)=N$ THEN GOT
O 1040
1025 IF C$(3,1 TO 7)=N$ THEN GOT
O 1050
1030 LET C$(1)=V$
1035 GOTO 1070
1040 LET C$(2)=V$
1045 GOTO 1070
1050 LET C$(3)=V$
1070 PRINT AT 17,0;"O.K."
1072 IF V=0*(3) THEN LET S=S+5
1073 IF V=0*(8) THEN LET S=S+50
1074 IF V=0*(8) THEN LET P=1
1075 GOSUB 9900
1077 LET V=N$
1080 GOTO 20
2000 REM DROP
2005 PRINT AT 17,0;"DROP WHAT(1,
2,3)"
2010 INPUT DR
2015 IF DR<1 OR DR>3 THEN GOTO 2
010
2017 IF C$(DR)=0*(3) THEN LET S=
S-5
2020 LET C$(DR)=N$
2025 GOSUB 9900
2030 GOTO 20
3000 REM QUIT
3005 FAST
3010 CLS
3015 SLOW
3020 STOP
3025 GOTO 10
4000 REM PRESS
4005 IF RU>2 THEN GOTO 20
4010 GOSUB 9900
4015 PRINT AT 17,0;"-----b1
ast off-----"
4020 FOR F=1 TO 6
4025 GOSUB 9900
4030 NEXT F
4035 LET S=S+50
4037 IF P=0 THEN LET S=S-30
4040 IF P=0 THEN GOTO 8700
4050 IF P=1 THEN GOTO 8500
5000 REM SHOOT
5005 IF V<>0*(2) AND V<>0*(5)
AND V<>0*(7) THEN GOTO 20
5010 IF C$(1)<>0*(1) AND C$(2)<>
0*(1) AND C$(3)<>0*(1) THEN GOTO
20
5015 IF C$(1)<>0*(9) AND C$(2)<>
0*(9) AND C$(3)<>0*(9) THEN GOTO
20
5020 IF INT (RND*3)=1 THEN GOTO
5300
5025 PRINT AT 17,0;"ZZZZZAP YOU
VAPORIZED HIM"
5030 LET V=N$
5032 LET S=S+10
5033 GOSUB 9900
5035 GOTO 20
5300 PRINT AT 17,0;"I HAVE BEEN
SHOT..CROAK..GROAN...."
5305 FOR F=1 TO 6
5310 GOSUB 9900
5315 NEXT F
5320 GOTO 8700
6000 REM HIT
6005 IF INT (RND*3)=1 THEN GOTO
6500
6010 PRINT AT 17,0;"YOU SMASHED
HIM"
6015 GOSUB 9900
6020 FOR F=1 TO 3
6025 IF C$(F)=0*(1) THEN PRINT A
T 17,0;"HE DENTED YOUR BLASTER"
6030 IF C$(F)=0*(6) THEN PRINT A
T 17,0;"HE HEAD BUTTED YOUR SIGN
"
6035 IF C$(F)=0*(9) THEN PRINT A
T 17,0;"HIS HEAD CRUNCHED YOUR A
MMO"
6040 SCROLL
6045 NEXT F
6050 GOSUB 9900
6052 LET S=S+10
6053 LET V=N$
6055 GOTO 20
6500 PRINT AT 17,0;"HE HURT ME,T
HE BULLY"
6505 FOR F=1 TO 6
6510 GOSUB 9900
6515 NEXT F
6520 GOTO 8900
7000 REM RUN
7001 IF V<>0*(2) AND V<>0*(5)
AND V<>0*(8) THEN GOTO 20
7005 IF INT (RND*3)=1 THEN GOTO
7500
7010 PRINT AT 17,0;"I OUT RAN HI
M"
7015 GOSUB 9900
7020 LET RU=RU+2
7025 IF RU>27 THEN LET RU=1
7030 GOTO 10
7500 PRINT AT 17,0;"HE HAS CAUGH
T ME"
7505 GOSUB 9900
7510 PRINT AT 17,0;"I WILL HIT H
IM"
7515 GOSUB 9900
7520 GOTO 6000
8000 REM MOVE
8005 PRINT AT 17,0;"F/B/S"
8010 INPUT Z$
8015 IF Z$="F" THEN LET RU=RU+1
8020 IF Z$="B" THEN LET RU=RU-1
8025 IF RU<1 OR RU>27 OR Z$="S"
THEN LET RU=INT (RND*27)+1
8027 LET S=S+1
8028 GOSUB 9900
8030 GOTO 10
8500 REM WIN
8501 PRINT AT 0,0;
8505 PRINT "WE HAVE SAVED THE PR
INCESS AND ";AT 5,0;"WE ARE NOW
HEROS"
8510 PRINT AT 15,0;"SCORE=";S
8515 PAUSE 9000
8520 GOTO 3000
8700 REM NO PRINCESS
8701 PRINT AT 0,0;
8705 PRINT "WE WILL BE HATED BY
EVERYONE ";AT 5,0;"BECAUSE WE FO
RGOT THE PRINCESS"
8710 GOTO 8510
8900 REM FAIL
8901 PRINT AT 0,0;
8905 PRINT "WE HAVE FAILED OUR M
ISSION"
8910 GOTO 8510
8999 STOP
9000 FAST
9002 DIM D$(27,60)
9005 LET D$(1)="IN THE STORAGE C
OMPARTMENT THERES AN ELEVATOR HE
RE"
9010 LET D$(2)="IN MY SPACE SHIP
,A RED BUTTON SAYS<<BLAST OF
F>>"
9015 LET D$(3)="NEXT TO MY SPAC
E SHIP"
9020 LET D$(4)="ON THE FLIGHT DE
CK OF GENERAL DOOMS BATTLE
CRUISER"
9025 LET D$(5)="IN A HALLWAY"
9030 LET D$(6)="IN THE SUPPLY DE
POT"
9035 LET D$(7)=0*(5)
9040 LET D$(8)="IN THE STRATEGY
PLANNING ROOM"
9045 LET D$(9)="IN THE DECONTAM
INATION CENTRE"
9050 LET D$(10)="IN THE TRACTOR
BEAM CONTROL ROOM"
9055 LET D$(11)="IN THE WOMENS T
OILETS"
9060 LET D$(12)="IN THE WOMENS B
ATHROOM"
9065 LET D$(13)="IN THE INTERROG
ATION ROOM"

```



**W**ICKED GENERAL DOOM has captured Princess Leya. Your mission is to find her and take her to safety in your spaceship. Commands to use are T(take), D(drop),

Q(quit), P(press), S(shoot), H(hit), R(run), M(move). Once you have entered M you will be asked F/B/S? (forward, backward, sideways).

You can shoot only when you have a

blaster and some ammunition. You can carry only three things at a time, including the princess.

Written for the 16K ZX-81 by Jonathan Huffer of Walsall, West Midlands.

```

9070 LET D$(14)="IN THE LOUNGE"
9075 LET D$(15)="IN THE COMPUTER
ROOM"
9080 LET D$(16)="IN A TESTING LA
B"
9085 LET D$(17)=D$(5)
9090 LET D$(18)="IN THE DEVELOPM
ENT LAB"
9095 LET D$(19)="IN A LONG CORRID
OR"
9100 LET D$(20)="IN THE RESEARCH
LAB"
9105 LET D$(23)="LOST"
9110 LET D$(21)="NEAR THE VAULT
ENTRANCE"
9115 LET D$(22)="IN THE VAULT"
9120 LET D$(24)="IN THE JAIL"
9125 LET D$(25)="IN A JAIL CELL"
9130 LET D$(26)="AT THE SECURITY
DESK"
9135 LET D$(27)="IN AN ELEVATOR"
9140 DIM U$(15,25)
9145 LET U$(1)="A BLASTER"
9150 LET U$(2)="A SURPRISED GUARD"
9155 LET U$(3)="A SHINESTONE NEC
KLACE"
9160 LET U$(4)="PRINCESS LEYAS C
APE"
9165 LET U$(5)="AN EVIL SCIENTIS
T"
9170 LET U$(6)="AN<<OUT OF ORDER
>>SIGN"
9175 LET U$(7)="AN ATTACK ROBOT"
9180 LET U$(8)="THE PRINCESS"
9185 LET U$(9)="SOME AMMUNITION"
9190 LET U$(10)="SOME GRAFFITI"
9195 LET U$(11)="AN APPLE CORE"
9200 LET U$(12)="A CRISP PACKET"
9205 LET U$(13)="SOME FALSE TEET
H"
9210 LET U$(14)="A MAGAZINE"
9215 LET U$(15)="NOTHING"
9220 LET S=0

```



```

9222 LET N$="NOTHING"
9225 DIM C$(3,25)
9230 FOR F=1 TO 3
9235 LET C$(F)=N$
9240 NEXT F
9245 LET P=0
9250 LET RO=INT (RND*27)+1

```

```

9255 SLOW
9500 RETURN
9900 SCROLL
9910 SCROLL
9915 SCROLL
9999 RETURN

```

# DAMSELS in DISTRESS



**D**AMSELS IN DISTRESS was written for the 1K ZX-81 by Stuart Lang of Clarkston, Glasgow. Manoeuvre your bold knight (inverse O) with the cursor keys to rescue the damsel (inverse asterisk) and take her to the castle (inverse +). To make it easier you can run off one side of the screen and you will re-appear on the other. You must avoid the dragons (inverse ") which guard her.

```

10 LET A=PI/PI
20 LET B=A
30 LET C=B
40 LET D=31
50 LET E=20
60 LET F=C
70 LET S=PI-PI
75 LET U$="(1*)"
80 PRINT AT A,B;"(1U)";AT C,D;"
(1)";AT E,F;"(1)";AT 17,20;"(
1+)";AT 3,28;U$
90 LET A=A-(INKEY$="7")+INKEY
$="5"
100 LET B=B-(INKEY$="5")+INKEY
$="8"
120 IF B=0 THEN LET B=30
130 IF B=31 THEN LET B=0
140 LET C=C-(A<C)+(A>C)
150 LET D=D-(B<D)+(B>D)
160 LET F=F-(B<F)+(B>F)
170 LET E=E-(A<E)+(A>E)
180 IF C=A AND D=B OR E=A AND F
=B THEN PRINT "AHH";S;Z
185 IF A=10 AND B=10 OR A=3 AND
B=20 THEN LET U$=""
190 IF A=17 AND B=28 AND U$=""
THEN GOTO 350
200 CLS
300 GOTO 80
350 LET S=S+1
360 GOTO 75

```

# AGF PROGRAMMABLE JOYSTICK INTERFACE



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or **ZX81**

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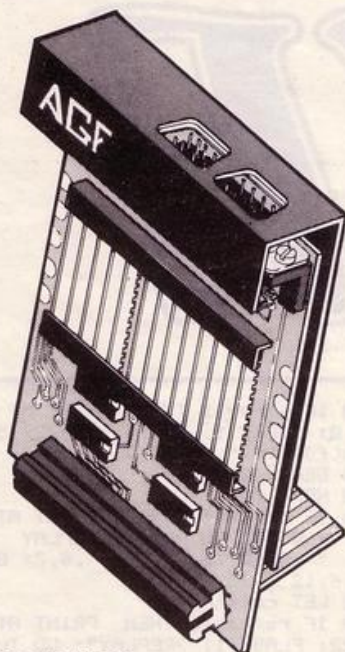
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**Leave-one** was written by John Aries, aged 14, of Dunstable, Bedfordshire for the 16K Spectrum.

```

268 IF d1<d THEN LET t=d-1
269 IF d1>d THEN LET t=d+1
270 LET l=((e-1)*8)+t
275 IF a(f)=1 AND a(g)=0 AND a(
1)=1 THEN GO TO 300
280 BEEP .2,12: PRINT AT 10,22
,PAPER 3:" " GO TO 210
300 REM move peice
310 IF rePlay=0 THEN LET p(nc,
d)=LET a(nc)=c: LET r(nc)=d1: L
ET s(nc)=c1: LET nc=rnc+1
360 PRINT AT x(f),y(f):"(9a:9b)
";AT x(f)+1,y(f):"(9c:9d)": BEEP
.2,36: PRINT AT x(g),y(g):"(9e:
9f)":AT x(g)+1,y(g):"(9g:9h)":
370 PRINT AT x(l),y(l):"(9a:9b)
";AT x(l)+1,y(l):"(9c:9d)"
380 LET count=count+1: IF rePla
y=0 THEN PRINT AT 10,22: PAPER
3:" "
385 IF count>=47 AND fi=0 THEN
GO TO 409
390 LET a(l)=0: LET a(f)=0
400 LET a(g)=1
405 IF rePlay=0 THEN GO TO 210
406 IF rePlay=1 THEN NEXT v: F
OR f=0 TO 7: BEEP .1,f: BEEP .01
,f: BEEP .05,f+f: BEEP .1,f*f: B
EEP .01,f*f: BEEP .05,f*f+f: NEX
T f: GO TO 430
408 GO TO 410
409 GO SUB 600
410 PRINT AT 21,0:"YOU MADE ";c
ount): MOVE: LET fi=1: IF coun
t<>1 THEN PRINT "S"
411 BEEP .1,36
420 LET rePlay=1: GO TO 90
430 PRINT 10:"PRESS ANY KEY TO
PLAY AGAIN "
440 IF INKEY$<"") THEN GO TO 4
0
450 BEEP .1,36: PAUSE 10: GO TO
440
600 LET s="
**CONGRATULATIONS Y
OU FINISHED**"

```



```

610 FOR f=0 TO 32
620 PRINT AT 0,0;:a$( TO 32)
630 LET a$=a$(2 TO )+a$(1)
640 BEEP .01,CODE a$(f+32)/3
650 NEXT f
660 BEEP .5,36: RETURN
1000 BORDER 2: PAPER 1: BRIGHT 1
: INK 6: CLS
1010 PRINT "-----LEAVE-ONE
-----"
1020 PRINT TAB 10; INK 4; "(11*19
3)"
1030 PRINT : PRINT TAB 2; " Leav
e-one is a version of Solita
ire. The object of the game i
s to jump over pieces horizo
ntally, vertically or diagon
ally, until only one piece
remains."
1040 PRINT : PRINT " DON'T CHEA
T...the SPECTRUM will recog
nise any illegal move and
ignore you."
1050 PRINT : PRINT " To make a
move you type the number of
the column then the number
of the row. You do this tw
ice once for the piece you
wish to move and then to th
e place you wish to jump it
to."
1060 PRINT 60; PAPER 1; "PRESS AN
Y KEY"
1070 IF INKEY#(">") THEN GO TO 1
090
1080 BEEP .1,0: PAUSE 100: GO TO
1070
1090 FOR f=1 TO 3: BEEP .1,0: BE
EP .1,19: BEEP .1,24: BEEP .1,7:
NEXT f: BEEP .1,0
1100 DIM z$(640): PRINT AT 2,0;
PAPER 1;:z$: PRINT AT 6,0; " If y
ou find yourself in the Posi
tion that you cannot jump
another piece you must Pres
s ~9~. This will abort the
game and you will see an a
ction replay of your move
s. If you succeed the SPECT
RUM will know and you will
be congratulated. "
1130 IF INKEY#="" THEN GO TO 11
30
1140 FOR f=1 TO 3: BEEP .24,0: B
EEP .1,19: BEEP .1,12: BEEP .1,1
9: NEXT f: BEEP .1,24
1150 RETURN
9999 SAVE "LEAVE-ONE" LINE 10

```

# FOOTBALL POOLS PROGRAM

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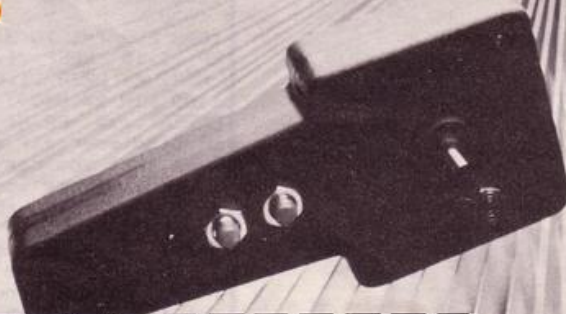
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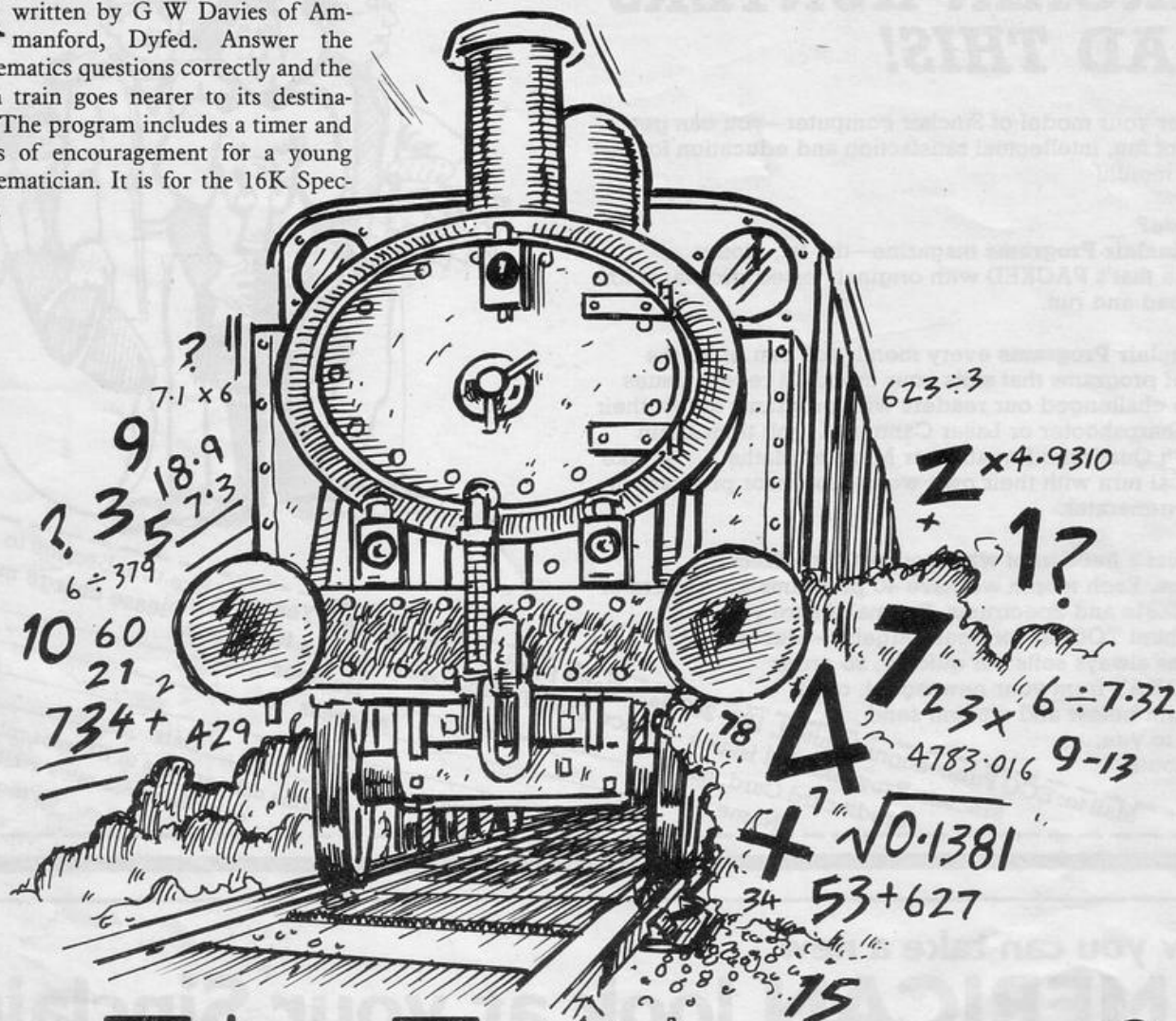
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**A**RITHMETIC EXPRESS was written by G W Davies of Ammanford, Dyfed. Answer the mathematics questions correctly and the steam train goes nearer to its destination. The program includes a timer and words of encouragement for a young mathematician. It is for the 16K Spectrum.



# ARITHMETIC EXPRESS

```

1 GO SUB 305
2 PRINT AT 6,0;"PLEASE TYPE Y
OUR NAME AND PRESS ENTER"
4 INPUT N$
5 CLS
6 PRINT TAB 2;"HELLO,";N$
10 LET Y=10
20 LET X=0
30 PRINT AT 3,0;"SKILL 1/2 UR
3?"
40 INPUT A$
50 LET A=INT (RND*10)
60 LET B=INT (RND*10)
70 LET C=INT (RND*10)
80 LET D=INT (RND*10)
85 LET E=INT (RND*10)
87 LET F=INT (RND*10)
90 CLS
100 PRINT AT Y,X;"(197'194' 195
)"
110 PRINT AT Y+1,X;"(195'3*1sP)
"
120 PRINT AT Y+2,X;"(197'94'1sP
'193'94)"
130 PRINT AT 13,0;"-----
"
140 PRINT AT 0,0;"GET TO THE EN
D"
150 IF A$="1" THEN PRINT AT 5,
0;"A;"+";B
160 IF A$="2" THEN PRINT AT 5,
0;"C;"+";D
165 IF A$="3" THEN PRINT AT 5,
0;"E;"+";F
170 LET H=A+B

```

```

180 LET K=C*D
185 LET M=E-F
190 INPUT Z
200 IF A$="1" AND Z=H THEN GO
TO 250
210 IF A$="2" AND Z=K THEN GO
TO 250
215 IF A$="3" AND Z=M THEN GO
TO 250
218 FOR J=1 TO 3: BEEP .1,-30:
NEXT J
220 PRINT AT 15,0;"WRONG"
225 LET X=X-1
226 IF X<0 THEN CLS: GO TO 10
230 PAUSE 100
240 GO TO 50
250 PRINT AT 9,X+2;"(1sP'93)"
252 IF A$="1" AND Z=H THEN PRI
NT AT 5,3;"=";H
253 IF A$="2" AND Z=K THEN PRI
NT AT 5,3;"=";K
254 IF A$="3" AND Z=M THEN PRI
NT AT 5,3;"=";M
255 LET X=X+1
265 IF X=10 OR X=13 OR X=15 THE
N PRINT AT 15,3;"Good ";N$
266 IF X=10 OR X=12 OR X=15 THE
N PRINT AT 16,3;"keep going"
270 IF X<24 THEN GO TO 300
272 BEEP .4,19: BEEP .2,10
275 PRINT AT 12,29;"(95)"
278 PRINT AT 13,29;"(95)"
280 PRINT AT 14,15;"WELL DONE
"
285 PRINT AT 15,15;"N$

```

```

286 LET t=FN t()
288 PRINT AT 20,5;"Time taken =
";t-t1;"seconds"
290 STOP
300 PAUSE 50
302 GO TO 50
305 PRINT AT 7,11;"ARITHMETIC"
306 PRINT AT 9,11;"EXPRESS"
307 PAUSE 300
308 CLS
311 PRINT AT 0,3;"The train is
now waiting for the driver"
312 PRINT
313 PRINT "You must obtain corr
ect answers to move the train"
314 PRINT
315 PRINT "Wrong answers put th
e train into reverse"
316 PRINT: PRINT "You should t
ry to improve your time of ar
rival"
317 PRINT
318 PRINT "Time taken is shown
on arrival"
319 PAUSE 800: CLS
320 DEF FN t()=(65536*PEEK 2367
4+256*PEEK 23673+PEEK 23672)/50:
REM secs since start
325 LET t1=FN t()
350 RETURN

```

# BMX

BECOME a fully-fledged **BMX Rider** in Ian Drake's program for the 48K Spectrum. The game requires skill, as you must judge the correct speed to jump to clear the ramps as they appear before you.

# RIDER

```

100 CLS
110 PRINT AT 0,10;"(9a: BMX:9d)"
"
120 PRINT AT 2,0;" The object o
f the game is to jump 7 death
defin9 ramps.You control your
BMX with keys 'B' to go right
and increase your speed by 2 a
nd '5' to go left and decrease
your speed by 1. You must hit
the ramp at the right speed
to clear it.Each time you cle
ar it the ramp increases in
length.If you clear all 7
ramps you become a BMX rider.Go
od luck!!!"
130 PRINT AT 10,2;"Press any ke
y to start"
240 PAUSE 0
1001 CLS
1005 LET s=10
1010 LET j=1
1015 LET sc=0
1025 PRINT AT 0,0; FLASH 1;"SPEE
D:";s
1030 PRINT AT 0,12; FLASH 1;"SCO
RE:";sc
1035 PRINT AT 0,22; FLASH 1;"JUM
P:";j
1045 PLOT 0,95: DRAW 255,0
1050 PLOT 0,94: DRAW 255,0
1060 LET b#="(9b:93:9c)"
1065 PRINT AT 9,15;b#
1070 PAUSE 50: BEEP .00,10: BEEP
.01,-2: BEEP .5,3: BEEP .00,10
2005 LET a=0
2010 LET b=9
2015 LET a#="(9a) " : IF INKEY#="
5" THEN LET a#="(9d)"
2020 LET a=a+(INKEY#="B" AND a<2
9)-(INKEY#="5" AND a>0)
2025 PRINT AT b,a;a#
2035 IF INKEY#="B" THEN LET s=s
+2: IF s>99 THEN LET s=99
2040 IF INKEY#="5" THEN LET s=s
-1: IF s<10 THEN LET s=10
2045 PRINT AT 0,0; FLASH 1;"SPEE
D:";s
2050 IF j=1 THEN GO TO 6000
2055 IF j=2 THEN GO TO 6000
2060 IF j=3 THEN GO TO 6000
2065 IF j=4 THEN GO TO 6000
2070 IF j=5 THEN GO TO 6000
2075 IF j=6 THEN GO TO 6000
2080 IF j=7 THEN GO TO 6000
2100 GO TO 2015
3005 PRINT AT b,a;" "
3010 LET b=b: LET a=a+1
3015 PRINT AT b,a;a#
3020 FOR a=14 TO j+16
3025 PRINT AT b,a;a# : PAUSE 3
3030 NEXT a
3035 PRINT AT b,a;" "
3040 LET b=9
3045 PRINT AT b,a;a#
3050 LET j=j+1: LET sc=sc+10: LE
T s=10
3055 PRINT AT 0,22; FLASH 1;"JUM
P:";j: PRINT AT 0,12; FLASH 1;"S
CORE:";sc
3060 IF j=2 THEN LET b#="(9a:2*
93:9c)"
3065 IF j=3 THEN LET b#="(9b:3*
93:9c)"
3070 IF j=4 THEN LET b#="(9b:4*
93:9c)"
3075 IF j=5 THEN LET b#="(9b:5*
93:9c)"

```

```

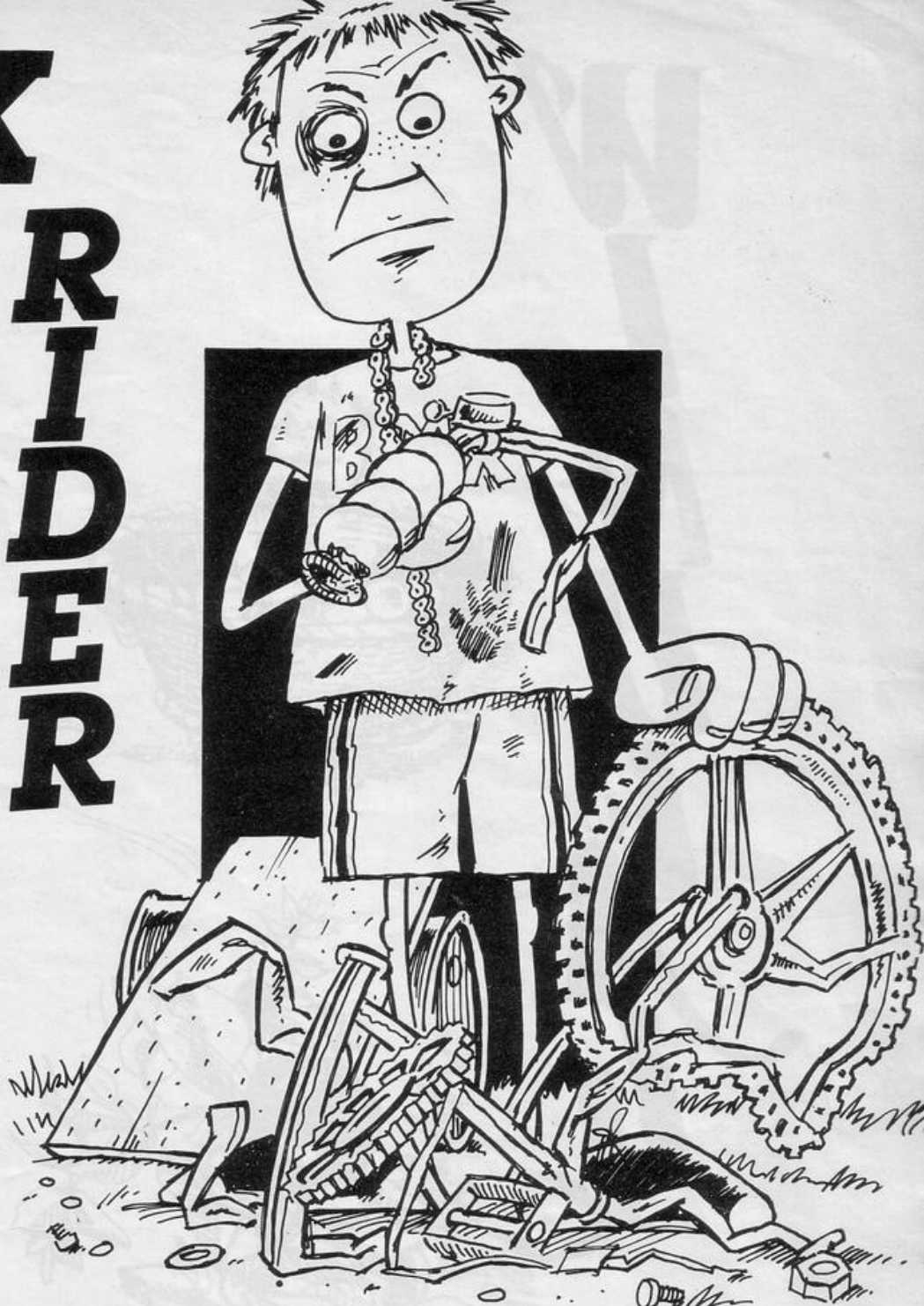
3080 IF j=6 THEN LET b#="(9b:6*9
3:9c)"
3085 IF j=7 THEN LET b#="(9b:7*
93:9c)"
3090 IF j=8 THEN GO TO 8000
3095 PRINT AT b,a;" "
3100 GO TO 1065
4005 PRINT AT b,a;" "
4010 LET b=8
4015 LET a=a+1
4020 PRINT AT b,a;a#
4025 FOR a=14 TO 15
4030 PRINT AT b,a;a# : PAUSE 10
4035 NEXT a
4040 PRINT AT b,a;" "
4045 LET b=9
4050 PRINT AT b,a;"(9a:)"
4055 PAUSE 50
4060 GO TO 7000
6000 IF a=12 AND s<sc+32 OR a=1
2 AND s>sc+40 THEN GO TO 4000
6005 IF a=12 AND s>sc+40 OR a=1
2 AND s<sc+50 THEN GO TO 3000
6010 GO TO 2015
7005 CLS
7015 FOR a=1 TO 9

```

```

7020 PRINT AT 3,a;" (9a:YOU CRAS
HED:9d)"; PAUSE 10
7025 NEXT a
7030 PRINT AT 9,10;"YOU SCORED:"
;sc
7040 PRINT AT 15,1;"PRESS ANY KE
Y FOR ANOTHER GAME"
7050 PAUSE 0
7060 RUN
8005 CLS
8010 PRINT AT 5,1;"YOU HAVE JUMP
ED ALL THE RAMPs YOU ARE NO
W A BMX RIDER WELL
DONE!!!"
8020 GO TO 7030
9000 FOR z=USR "a" TO USR "d"+7
9010 READ user: POKE z,user
9020 NEXT z
9030 DATA 48,56,48,127,118,153,1
53,102
9040 DATA 0,0,7,15,31,63,127,255
9050 DATA 0,0,224,240,248,252,25
4,255
9060 DATA 12,28,12,254,110,153,1
53,102
9070 RETURN

```



# WINDFALL



**C**ATCH the apples in your basket as the windfalls fall from the trees. Beware, because Farmer Haynes is on the prowl and if he catches you he will have your guts for garters.

**Windfall** was written for the 16K ZX-81 by Nicky Thorpe, aged 14, of Ashford, Kent.

```

1 REM "APPLE"
2 LET Y=13
3 LET Z=0
10 PRINT AT 0,10;" (4*1SP) "
20 PRINT AT 1,10;" (6*1SP) "
30 PRINT AT 2,10;" (8*1SP) "
40 PRINT AT 3,10;" (6*1SP) "
50 PRINT AT 4,10;" (4*1SP) "
60 PRINT AT 5,10;" (2*1SP) "
"
70 PRINT AT 6,10;" (2*1SP) "
"
80 PRINT AT 7,10;" (2*1SP) "
"
90 PRINT AT 8,10;" (2*1SP) "
"
95 PRINT AT 8,0;"(32*9h)"
96 PRINT AT 21,0;"(32*1SP)"
110 PRINT AT 4,11;"*"
120 PRINT AT 4,16;"*"
130 PRINT AT 3,10;"*"
140 PRINT AT 3,17;"*"

141 PRINT AT 9,0;"(1SP:30*SP:1SP)"
142 PRINT "(1SP:30*SP:1SP)"
143 PRINT "(1SP:30*SP:1SP)"
144 PRINT "(1SP:30*SP:1SP)"
145 PRINT "(1SP:30*SP:1SP)"
146 PRINT "(1SP:30*SP:1SP)"
147 PRINT "(1SP:30*SP:1SP)"
148 PRINT "(1SP:30*SP:1SP)"
149 PRINT "(1SP:30*SP:1SP)"
150 LET X=20
151 PRINT "(1SP:30*SP:1SP)"
152 PRINT "(1SP:30*SP:1SP)"
153 PRINT "(1SP:30*SP:1SP)"
154 LET A=INT (RND*10+8)
155 LET B=10
157 PRINT AT B,A;"*" AT B-1,A;"
"
158 LET B=B+1
170 IF INKEY#="5" THEN LET Y=Y-1
180 IF INKEY#="8" THEN LET Y=Y+1

185 IF B=X AND A=Y+1 THEN GOTO 300
186 IF B=X AND A=Y+2 THEN GOTO 300
190 IF Y<1 THEN LET Y=Y+1
192 PRINT AT 19,8;"
"
200 IF Y>26 THEN LET Y=Y-1
205 IF B=21 THEN GOTO 400
210 PRINT AT X,Y;" (9w:9q:)"
220 GOTO 157
300 LET Z=Z+5
305 PRINT AT 0,0;"SCORE=";Z
310 GOTO 154
400 CLS
410 PRINT "YOU DROPPED AN APPLE
"
411 PRINT "AND THE FARMER GOT Y
OU."
413 PRINT
415 PRINT "YOU SCORED ";Z
420 PRINT
430 PRINT "DO YOU WISH TO PLAY
AGAIN?"
435 PRINT
437 PRINT " (Y) OR (N) "
440 IF INKEY#="Y" THEN GOTO 500
450 IF INKEY#="N" THEN GOTO 600
460 IF INKEY#<>" " THEN GOTO 440
470 GOTO 440
500 CLS
510 GOTO 1
600 CLS
610 PRINT AT 10,10;"ok Goodbye"
620 STOP

```

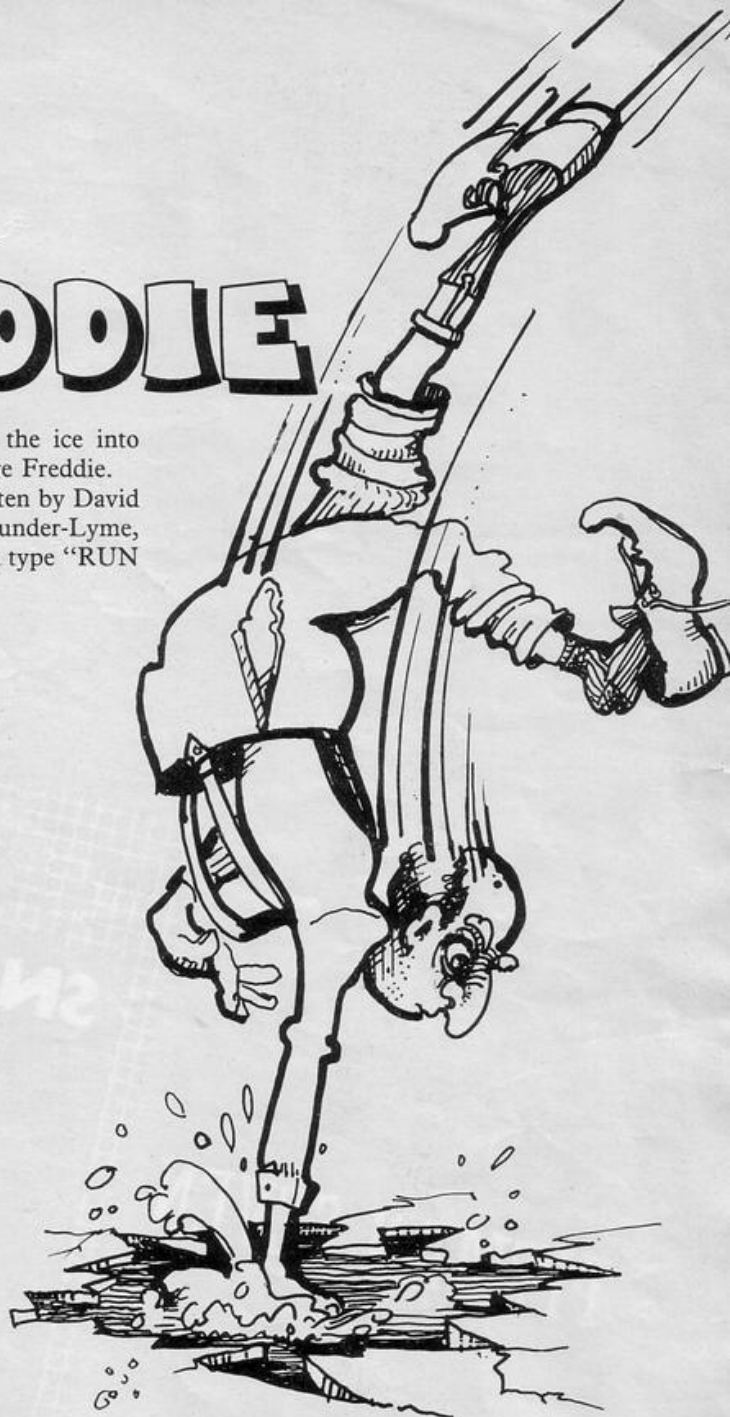
# SAVE FREDDIE

**P**OOOR OLD FREDDIE has fallen from an aeroplane on a cold winter day without his parachute. Guide Freddie using keys 5 and 8 towards a lake which will break his fall. Unfortunately the lake is frozen but

there is a small break in the ice into which you must manoeuvre Freddie.

**Save Freddie** was written by David Knight of Newcastle-under-Lyme, Staffs. To run the program type "RUN 300" then NEWLINE.

```
50 PRINT AT X,Y;"A"
60 LET Y=Y-(INKEY$="5")+(INKEY$="8")
70 LET X=X+X/X
80 PRINT AT X,Y;"(1)"
90 IF X<>L THEN GOTO 50
100 IF Y<>Q THEN GOTO 500
150 PRINT "BRRR, ITS COLD IN HER E..."
160 LET T=T+L/L
170 PAUSE L*L
180 CLS
190 LET X=L/L
200 PRINT T
210 LET Y=INT (RND*L)+L/L
220 LET Q=INT (RND*L)+L/L
230 PRINT AT L,Q-Q;"(isp:21*ah:isp)"
240 PRINT AT L,Q;" "
250 GOTO 50
300 LET L=19
310 LET T=L-L
320 GOTO 180
500 PRINT "SPLATTU"
```



**J**OHAN WEST, aged 11, of Mumbles, Swansea wrote **It's snowing again** for the 1K ZX-81.

Dodge the superfast snowflakes heading straight for you as you rush home from school, late for your dinner. Use keys 5 and 8 to escape a soaking. You receive 10 points for every snowflake which misses you.

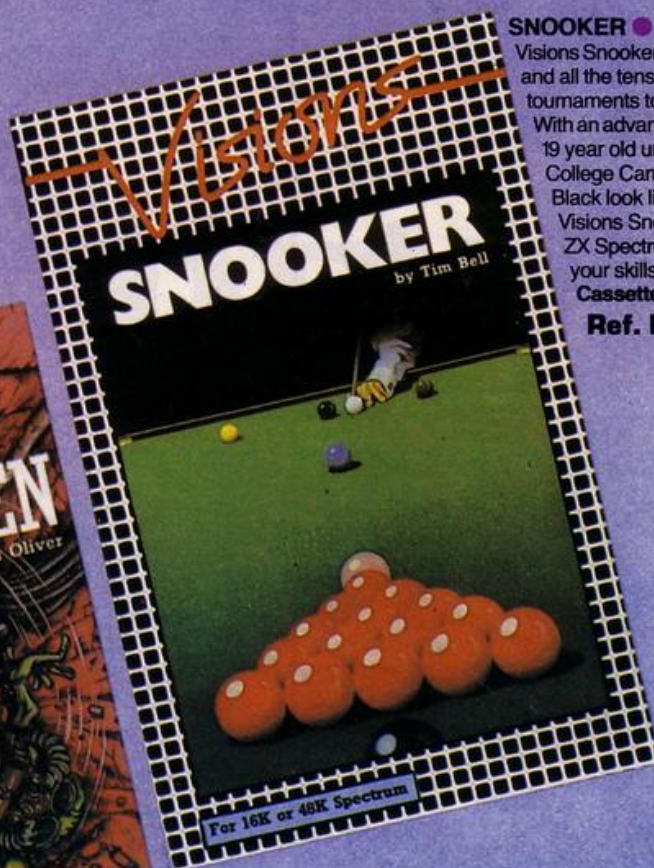
```
10 LET A=11
20 LET S=0
30 PRINT AT 21,INT (RND*26);"*"
40 PRINT AT 0,A;
50 IF PEEK (PEEK 16398+256*PEEK 16399)=23 THEN GOTO 120
60 PRINT "V"
70 SCROLL
80 IF INKEY$="5" THEN LET A=A-1
90 IF INKEY$="8" THEN LET A=A+1
100 LET S=S+10
110 GOTO 30
120 PRINT AT 0,0;S
```

# IT'S SNOWING AGAIN



# HAVE A HAPP

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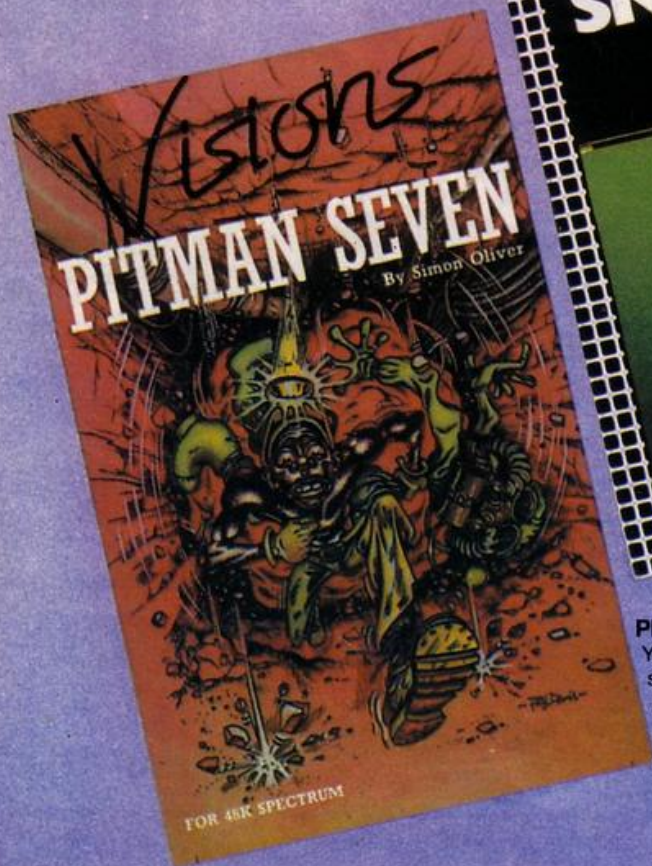
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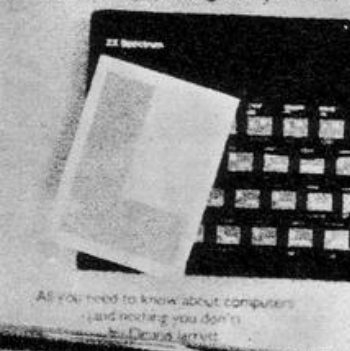
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