Home Computing WEEKLY

An Argus Specialist Publication

No. 34
Oct 25-31, 1983

38p

EVERY WEEK: Top 10 charts for Spectrum, ZX81, Dragon, VIC-20 and Commodore 64

FREE GIFT

make more of your Spectrum

Programs to type in for: Spectrum, VIC-20, Texas, Oric and Commodore 64

Software reviews for: BBC, Atari, Spectrum, Texas, ZX81, Jupiter Ace, Commodore 64

PLUS: U.S. Scene, your letters...

Drive Shaky to his Old House

Listen to Shakin' Stevens' new album...then play a computer game with him.

His next release, The Bop Won't Stop, includes a Spectrum arcade game called The Shaky Game.

But it will only be on the cassette version of the album. Epic Records' Jonathan Morrish explained: "If it was on the record they would have to tape that first and we don't want to encourage home taping."

The game occupies about 33K of RAM, so it will only work on the 48K Spectrum.

Specially written for Shaky, it includes subtle references to his previous hits.

continued on page 5

James, 15, and his VIC 'earn' a win

A schoolboy beat hundreds of competition entrants thanks to his financial skill — and help from his VIC-20.

James Clunie, 15, was second in a unit trust competition run by Radio Four's Money Box programme, even beating his father.

Entrants had to send in the names of five unit trusts they believed would perform best over the following year.

James, who is studying for

continued on page 5

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Briefly

Paddington bear features in a range of four Spectrum cassettes with story books for youngsters. Each pack, produced by Collins Educational, costs £6.10 and includes five programs.

Collins Educational, 8 Grafton St, London W1X 3LA

□ □ □

Commodore has published its first Vicsoft catalogue for the Commodore 64. Free to users, it includes details of 110 products. Also new for the 64: Radar Rat Race, a £9.99 cartridge, and Easy Script, on disc for £75.

Commodore, 675 Ajax Ave, Slough, Berks SL1 4BG

□ □ □

Elkan Electronics has brought out three appendages to improve your Dragon or Tandy Color computer. Dragon's Eye is an on-off indicator which, Elkan says, can be installed in 10 seconds and costs £3.95. Dragon's Tail extends your joystick's cable by about a metre and makes it easier to plug the joystick in. Price: £2.95. Dragon's Fork-tail is a joystick Y-adaptor which enables you to use the joystick port for two purposes at once. It costs £3.95

Elkan Electronics, Freepost, 11 Bury New Road, Prestwich, Manchester M25 6LZ

□ □ □

Brainteasers for the BBC and Electron Computers, out this month from Phoenix Publishing, contains 40 listings of games that demand logic, general knowledge and deduction. Some of the programs will even tell you your IQ when you've finished the game. They're all written by educational software author Genevieve Ludinski, and use the machines' graphics and sound to the full. The book costs £5.95 and will be on sale in W H Smith.

Phoenix Publishing, 14 Vernon Road, Bushey, Herts WD2 2JL

□ □ □

The 96K Lynx is now on sale in Dixons, along with the software and peripherals. Coming soon: the 128K Lynx. Other Lynx stockists are Laskys and Spectrum.

Computers, 33A Bridge Street, Gainsbridge CB2 1UW

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Acting Editor: Paul Liptrot
Assistant Editor: Candice Goodwin
Designer: Bryan Pitchford
Managing Editor: Ron Harris
Advertisement Manager: Coleen Pimm
Assistant Advertisement Manager: Ricky Holloway
Classified Advertising: Debra Stupple
Chief Executive: Jim Connell

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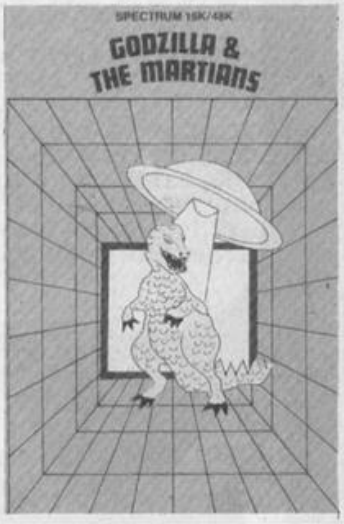
Try our exciting car race game for the VIC-20. It starts on page 30

Your micro can teach you a thing or two. Find out how with the reviews on page 32



Home Computing Weekly reviews more software than any other magazine

Spectrum screen planner

In this issue there is a free screen planner for Spectrum users. To remove it from the magazine carefully open the staples in the centre of Home Computing Weekly and lift out the centre section of pages.

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Shakin' Stevens — your chance to drive him home

Shaky's game

From front page

The idea is to drive a small car across the screen — avoiding hazards like bats — to This Old House. If play is slow the phrase "It's Late' appears and top scorers' names can be added to "Shaky's Top 10".

Mr Morrish said: "It's not for people who don't like puns."

He believes it is the first time a game has been specially written for a major recording artist.

He said: "I think that as a promotional idea it has great things ahead of it. We may well do it again."

The Bop Won't Stop, priced at £4.99 for cassette or LP, is due for release on November 18 coinciding with Shaky's British tour which is to reach Hammersmith Odeon on November 20 and 21.

When copies are available Shaky has promised to sign every one brought by fan club members to his concerts.

The Shaky Game, which is at the end of side two, was produced by a small London-based software group called Olympic Software.

One of them, Robert Wyatt, said: "We thrashed out the idea with the record company over a couple of lunches.

"It was a hell of a rushed job. We had to finish it in seven weeks. Getting it bug-free in that time was a real headache."

Epic Records, 17-19 Soho Square, London W1V 6HE

Oric takeover

Micro makers Oric Products International has been taken over by a large investment company, Edenspring, and three of Oric's six directors join the Edenspring board. The deal, worth £2.25m, is said to allow Oric to continue its growth here and overseas. Oric's loans of just over £1m are to be satisfied by a share issue. The combined company has net tangible assets of £4.7m.

James wins

From front page

eight O-levels, set about choosing his entries systematically.

Working from the piles of old newspapers — and his knowledge gained from studying the financial pages out of interest — he entered the names and details of 20 unit trusts into his VIC-20, plus Super Expander.

He has written a program which would not only highlight the best performance but those which were most active. Bar charts on screen made this easier to spot.

He stressed, however, that the VIC was used only as a tool. The first 20 were chosen because he believed they would do well and the computer was used to make the final choice easier.

James said: "I had been monitoring shares for other people and for myself just out of interest. It's quite good to have a notional gamble."

In fact, he could have ended up with £350 profit if he had invested in his Money Box choices.

Entrants were judged on how their choices performed if an imaginary £100 had been invested in each of the five trusts.

James' selections — three investing in America, one British and one international technology — clocked up a 70 per cent gain over the year, including costs.

He said: "At the three-quarters stage I was leading the field outright, but then I slipped back to No. 2. My father came seventh, but he didn't mind because he went to London for the show with me. Our rivalry was all very friendly.

"I'll be entering again this year, but I don't know about a win because there are too many complexities.

"Next year I'll be going for U.S. and Japan. These two sectors will go up a little bit and rise sharply in later months."

Appropriately enough, when James completes his education he would like to work at something involving maths, perhaps in the financial world.

In the meantime he has written some arcade games for a software company.

His father, Dr James Spence Clunie, a research scientist in the silk industry, said: "I'm only one of the also-rans. I was very very pleased for James. We were doing weekly checks on our programs and sometimes I was slightly ahead, would you believe."

And James' mother Marie, a social work student, said: "He's very keen on finance — he seems to know what's going to happen. It started when he was 10 and

James Clunie

since then he's been quite fanatical about it.

"It was quite amusing because during the year James would come up to his father and say he was ahead by so much."

As well as a pile of books and magazines, James' prize included a trip from his home in Witley, Tyne and Wear, to the programme's London studios.

Editor Vincent Duggleby said: "I've heard about teenage programming wizards, but teenage investment wizards are few and far between — they are a very rare breed.

"It's not something boys are normally interested in until they have a home and a family."

Drive into the High Street

Cumana is aiming to make the disc drive as popular as the cassette recorder with a new low-priced drive unit to be sold in High Street stores.

The 5¼ inch drive, available in versions for the BBC and Dragon micros, is priced at around £200 and will be on sale in chains such as W H Smith and Tandy, and through Spectrum.

There's a choice of single-sided 40 and 80 track, or double-sided 80 track formats, and an independent power supply supplied with the drive allows two drives to be connected to the BBC and four to the Dragon.

The drive also comes with a formatting disc, connecting cable and instruction book.

Cumana will be boosting the disc drive's High Street appeal with an advertising campaign during the run up to Christmas.

Cumana, Pines Trading Estate, Broad Street, Guildford, Surrey GU3 3BH

You could be on our pages

We welcome programs articles and tips from our readers.

PROGRAMS should, if possible, be computer printed to a width of 48 characters (use a new ribbon) and/or sent on cassette. Check carefully that they are bug-free. Include details of what your program does, how it works, variables you have used and hints on conversion.

ARTICLES on using home computers should be no longer than 2,000 words. Don't worry about your writing ability — just try to keep to the style in HCW. Articles most likely to be published will help our readers make better use of their micros by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.

TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

Competitive rates are paid.

Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.

Paul Liptrot, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE

Graphics up and running

You recently carried a newsitem (HCW 29) mentioning that our Power-Graphics program was incompatible with the new Series 3 Spectrums.

We'd just like to say that all our software is now available for any type of Spectrum. All customers who returned un-runnable tapes to us have now had them replaced.

Owners of Series 3 Spectrum might like to note that the IN function will malfunction if there is a signal at the cassette port — and also, in certain circumstances, after a BORDER command.

R. L. Butterfield, Buttercraft Software, Keighley, Yorks

Out of its element

Thank you for reviewing one of our Chemistry programs. Element Serpent.

Despite scoring a superb 90 per cent for the instructions, your reviewer failed to understand the object of the game!

The program is used to reinforce the formula concept.

The object of the game is to direct an element eating snake around the screen digesting elements until all the elements present in a compound named at the bottom of the screen are eaten.

Should you eat the wrong element symbol, collide with the wall, or kill the snake the game ends. Wrong symbols are corrected before the game begins again.

Simply really!!!

I hope that this letter clarifies any confusion.

H. K. Farmer, Cloud 9 Software, Tavistock, Devon

Too harsh on Panic

I read with interest your review for the Panic 64 game in issue 30 of Home Computing Weekly, which dropped through my door about an hour after we had just purchased the game for our Commodore 64.

We also experienced the same problem of the sprite corrupting after about an hour's play, but contrary to your report we have found it to be very entertaining.

I think you were unduly harsh when reviewing the game which, when all is said and done, is only an arcade game and meant to be purely entertainment.

With regard to the circuit your monsters managed to get themselves into, we also realised this but the answer is to get back down to the level on which they are gyrating and entice them up to the level you need, just giving your man enough time to get out of the way before they fall through the holes.

Another method is to lead them through the holes and just run away on landing, whereupon they will splat behind you.

Our highest score in just under a week of ownership is 2,200, but I'm not sure how the system works after you go on to level five as there are only four levels shown on the screen.

The highest we have been is level seven.

Sheila Wright, Peterborough

Send your letter to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Don't forget to name your computer — the best letter could win £5-worth of software. Queries cannot be answered on this page

Beyond the Invaders

As an Atari 400 owner I am pleased to see the new Atari computers — the 600XL (16K RAM, £160) and the 800XL (64K RAM, £250).

Both come with typewriter-style keyboards and one cartridge slot. Unlike most new computers they already have an excellent software backup because they are compatible with almost all existing Atari software.

Each has a parallel interface port and external processor bus, the latter for future peripherals including a Z80 CP/M module.

In addition, an expander box will be available, providing three interfaces and slots for eight expansion boards. These include IBM and Z80 interfaces, Winchester hard disc controller and a voice recognition system.

And for those of you that disapprove of Atari BASIC, a faster and better structured disc-based one is available — BASIC A+.

Can anyone now call this a games computer? What with the graphics capabilities, extensive hard and software do any other home computers come anywhere near this value?

Amin Hoque, Llanrwst, Gwynedd

Early warning

For all the people who thanked me for buying a Commodore 64 earlier this year, thus ensuring a massive price drop two weeks after purchase, I am announcing that I intended to buy a 1541 disk drive in mid-October.

Undoubtedly there will be a similar price drop early in November.

You have been warned!

David Gristwood, Sunderland, Tyne & Wear

★ *As a reward for your public-spiritedness, we'll be sending you our software prize*

Count your pellets

I found Barbara Baldwin's Slugs and Ladders program for the TI-99/4A (HCW 23) very addictive.

I entered the program into ordinary BASIC and SAVED it. I then LOADed it into Extended BASIC and, after a few alterations, added a display to show how many slug pellets were remaining.

I then found the program even better and faster. Here are the alterations, but remember you need Extended BASIC. An underscore represents a space.

```
131 PRINT
'' _____H O W _
   M A N Y _S L U G _
   P E L L E T S ? ''
   132 INPUT "_____
   (20 TO 40) ":SP
133 IF_(SP  20)+(SP
   40) THEN 360
```

Then erase lines 350,360, 370. Change the following lines:

```
240 CALL_CHAR (112,
   "OOFFFFFFFFFFFF
   OO")
250 CALL_CHAR (40,
   "10925438FE385492")
280 CALL_COLOR (2,14,
   11)
340 CALL_COLOR (11,
   2,16)
1700 IF_K=89_THEN_
   131_ELSE_1310
```

To save your delicate Texas space bar, change line 1010 to:

```
1010 IF  46_THEN_720
```

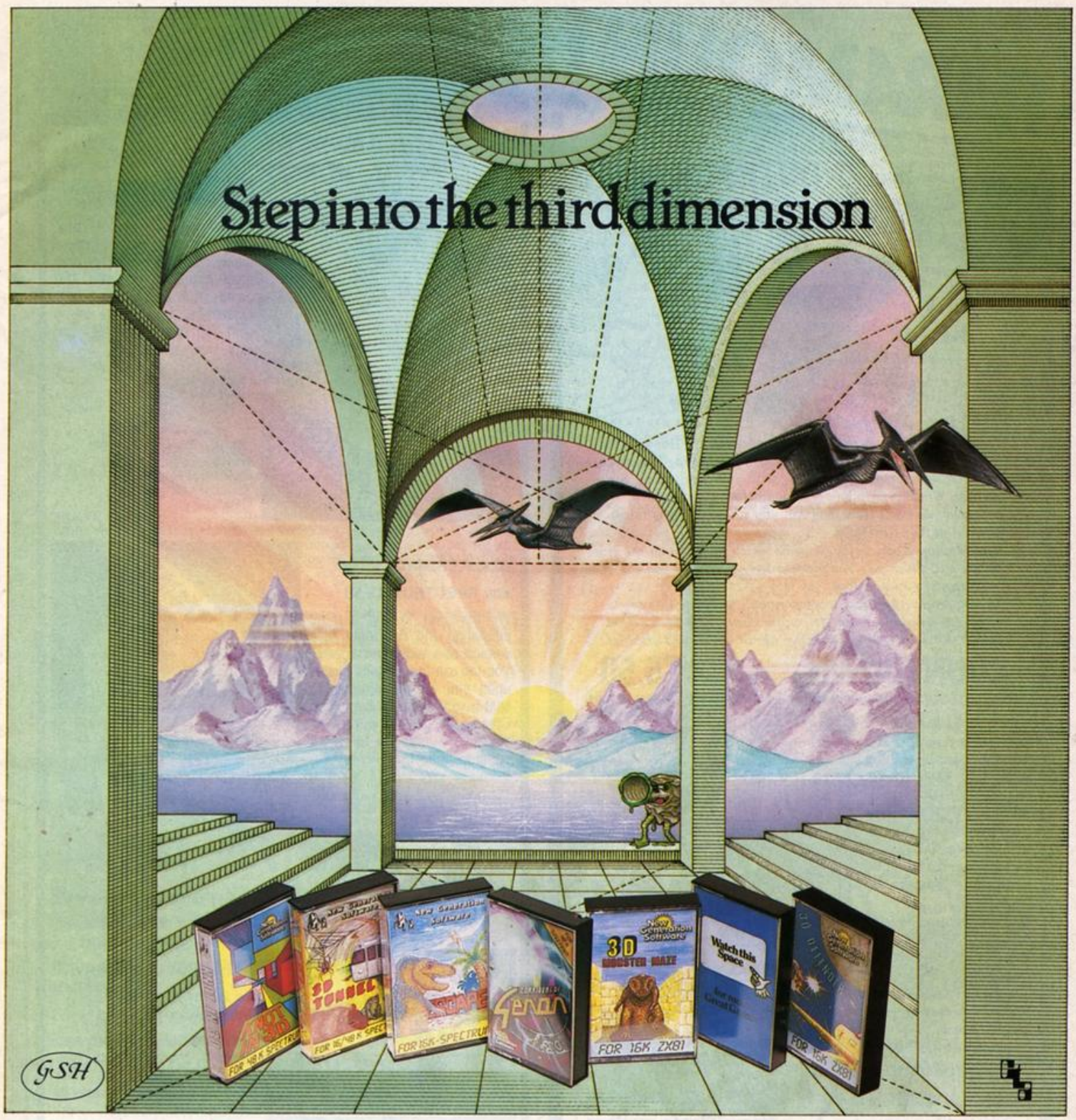
You can then use the full stop key to drop a slug pellet.

Next, insert the following lines so that the lose, win and another game request routines don't have defined characters as brackets etc.

```
1281 CALL_CHARSET
1381 CALL_CHARSET
1651 CALL_CHARSET
1751 CALL_CHARSET
```

And in Extended BASIC, the colons after a print statement should be deleted.

Michael Waldron, Sheffield, South Yorks



Take a giant step closer to reality with New Generation Software. The 3D Graphics of New Generation programs bring the screen alive and makes other games look as flat as snakes and ladders.

Spectrum owners will find that seeing is believing when they open the door on 'THE CORRIDORS OF GENON', the latest creation from New Generation. You will be saving the Universe from the evil that now controls all things. But beware – the sound of footsteps approaching could be Bogul!

Hurtle into a void leaving a trail for your unseen pursuers in 'KNOT IN 3D'. Weave your way through up to five trails but be careful, you could get knotted! Or travel through the depths of a moving tunnel full of bats, rats, spiders and toads in '3D TUNNEL', with a special surprise in the 48K version.

Stamina is the vital ingredient of 'ESCAPE', as you'll be venturing into the maze pursued by walking and flying dinosaurs.

ZX81 owners must be prepared for the shock of coming face to face with the T. Rex that leaps out from '3D MONSTER MAZE'. '3D DEFENDER' takes you out of this world and plunges you into space in a fast moving game to defend your home planet against alien spacecraft in a blitz of explosions, plasma blasts and photon beams.

All these exciting 3D games have been designed by Malcolm Evans, the 3D expert. They'll have you leaping out of your seat because you don't just play New Generation games, you live them.

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'Another 3D Winner' Sinclair User

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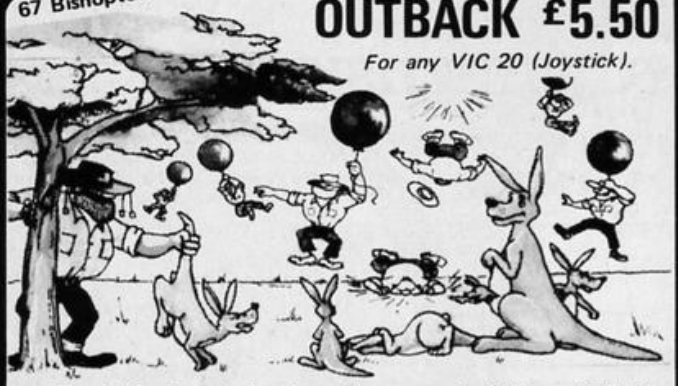

Trouble is about to drop in on the occupants of 'Hoppy Valley' in the form of rather cunning swagmen. 'Ma Hoppy' has a very sophistocated defence set-up and , with your help, could win the day. Which is it to be– a tranquil Hoppy Valley or a swagmen takeover? How long will you survive? It gets tough and hot in the OUTBACK.

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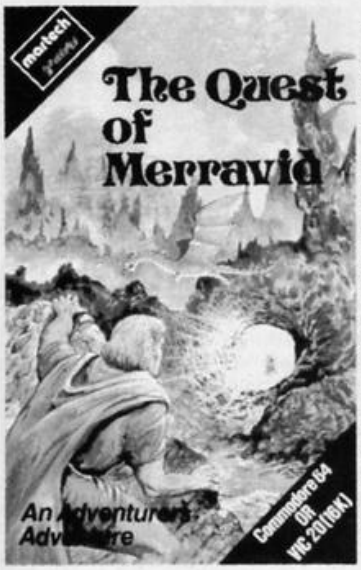

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KWAZY KWAKS
Accuracy and speed are required for this Shooting Gallery, superb use of colour & graphics in this new and challenging game from the author of **Jackpot.** 100% machine code, joystick or keyboard control **£5.50**

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COMMODORE 64 GAMES & UTILITIES

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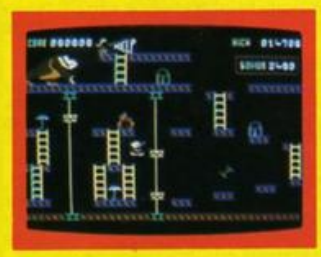

3. THE ONLY WAY UP IS BY THE LIFT WHICH IS UNDER A CONSTANT BARRAGE OF GIRDERS.

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A POPULAR ARCADE GAME BROUGHT TO LIFE WITH BRILLIANT ANIMATED GRAPHICS

K.B. / J.S. £5.95

You're the air ace — get out of this one

So this is what they meant by a crash course. Stephen Pearl tells you how to bomb your way out of a sticky situation

This is a version of the popular Blitz game for any Spectrum.

The idea of the game is to fly over a city with many tall skyscrapers and bomb as many buildings as possible, starting with the highest.

The altitude of your plane will decrease every time you fly over the city, so if a building is left standing for too long you could crash into the side of it.

The bombs will only fall a certain distance before they automatically de-activate.

The score is given for survival time. There is a high score feature, along with full instructions written into the program.

The height of the skyscrapers is random and therefore different with every game. The only control is the space key, which drops a bomb. You can't drop more than one bomb at the same time.

The position of the plane is plotted from the space behind it; therefore when this space is at the end of the screen, the plane has already moved to the next line.

Special care had to be taken to make sure bombs could still be dropped and the plane would still crash into skyscrapers during the time when half of the plane was at the end of one line, and the other half was at the beginning of the next line!

How it works

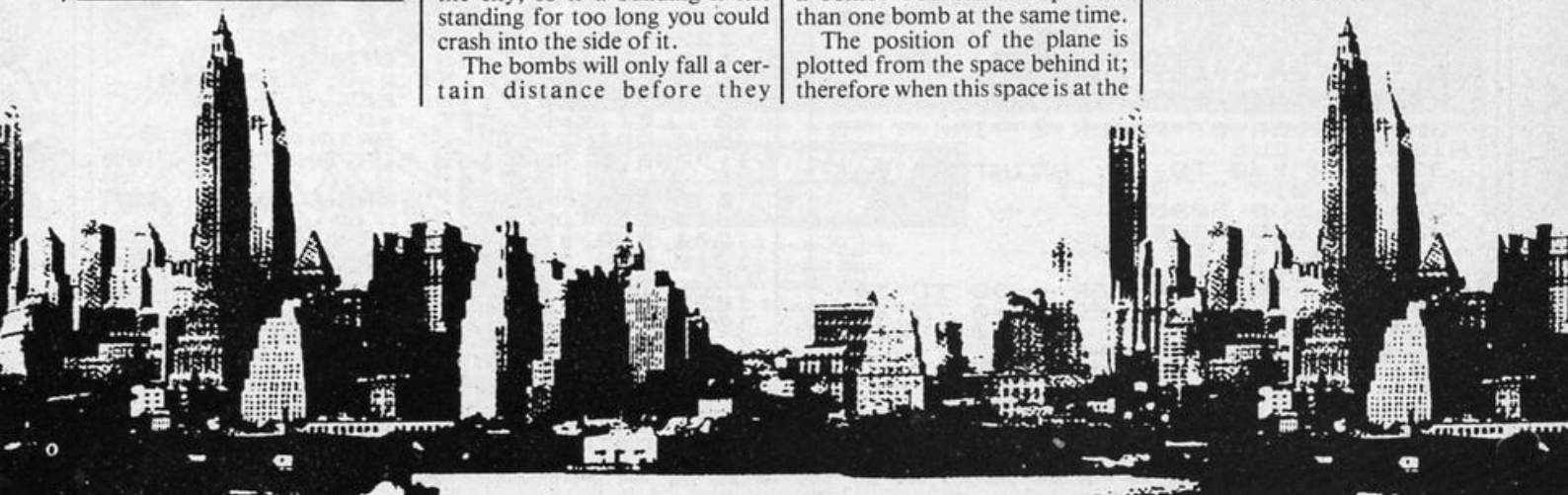
1-2 set variables
10-30 set colours, print large title using built-in graphics characters
40-103 print rest of opening picture
105-137 print moving plane in picture
140-150 goes to instruction stage if it is pressed, starts game if any other key is pressed
200-260 print instructions
270 start game if any key pressed
300-330 set screen for game
340-415 main loop, including check whether plane has crashed and whether any keys have been pressed
420 re-starts loop if player destroys every building
600-640 game over, offer of another
1000-1090 set user-definable graphics
2000-2080 print random skyscrapers
5000-5010 print scores at beginning of game
6000-6020 drop bombs

Graphics characters

A skyscraper blocks
B tail of plane
C front of plane
D bomb
E explosion
F skyscraper tops

Loop variables

a,p position of cyan paper spaces
d position across screen of moving plane in opening picture
e,f crash noise variables
i,u position of green paper spaces
j position for printing skyscraper blocks
k position of black paper spaces
l position across screen of skyscrapers
n,s user-definable graphics variables
x,y position of plane



Hints on conversion

An obvious difficulty is the use of the Spectrum's built-in graphics characters in the large opening title. Of course, this will cause no problem to ZX81 users, but owners of machines with totally different character sets can either make up the title differently, use ordinary letters or omit the title altogether.

Now for some of the less obvious problems. The ATTR command in lines 384 and 385 checks whether the character and colours at the co-ordinates given match up with the information in the number-code, 104 in this case. If the numbers were altered accordingly, a PEEK statement could be used instead, just as a POKE statement can replace the PRINT AT command. The INKEY$ statement is the equivalent of the GET on other computers.

The statement in line 2020 finds a random number between 8 and 18, and this can easily be altered to suit your own micro.

Finally, the colours used in this program were black for the border and the score-line at the top of the screen, cyan or light blue for the background, green for the ground, black for the skyscapers, dark blue for the plane and bombs, red for explosions and white for the scores, although of course these can all be changed.

```
  1 LET q=0: LET w=0: LET c=0:
LET m=0: LET b=0
  2 LET g=0: LET r=0: LET t=0:
LET v=0: LET h=0
  10 BORDER 0: PAPER 1: INK 6: B
RIGHT 1: CLS
  15 GO SUB 1000
  20 PRINT "
  30 PRINT "                    by S.
Pearl    1983"
  40 FOR a=6 TO 19
  50 FOR p=0 TO 31: PRINT AT a,p
; PAPER 5;" ": NEXT p
  60 NEXT a
 100 GO SUB 2000
 102 PRINT INK 0; PAPER 4;AT 20,
0;"PRESS 'I' FOR INSTRUCTIONS...
..."
 103 PRINT INK 0; PAPER 4;AT 21,
0;"PRESS ANY OTHER KEY TO START.
..."
 105 PAUSE 5: BEEP .005,0: PRINT
 AT 6,0; INK 1; PAPER 5;"▶"
 106 GO SUB 140
 107 PAUSE 5: BEEP .005,0: PRINT
 AT 6,0; INK 1; PAPER 5;"▶"
 108 GO SUB 140
 110 FOR d=0 TO 29
 120 PAUSE 5: BEEP .005,0: PRINT
 AT 6,d; INK 1; PAPER 5;" ▶"
 121 GO SUB 140
 125 NEXT d
 126 GO SUB 140
 130 PAUSE 5: BEEP .005,0: PRINT
 AT 6,30; INK 1; PAPER 5;" ▶"
 131 GO SUB 140
 135 PAUSE 5: BEEP .005,0: PRINT
 AT 6,31; PAPER 5;" "
 136 GO SUB 140
 137 GO TO 105
```

Variables

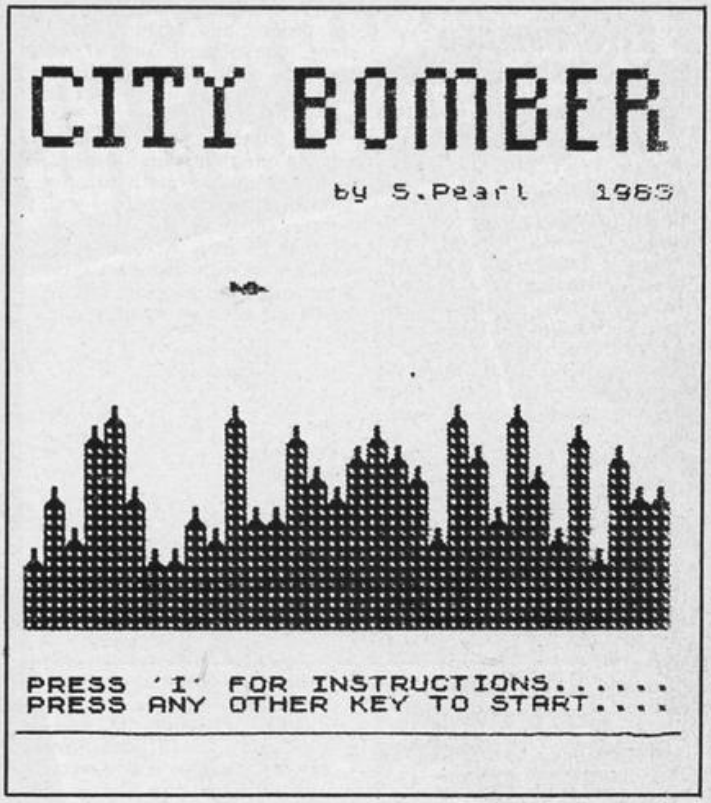
- b position of nose of plane for printing explosion
- c checks whether bomb is already being dropped
- g position of space in front of plane's nose; checks whether plane has crashed
- h random height of each skyscraper
- m height on screen of plane's nose (different from height of rest of plane when at edge of screen)
- q score
- r position (height) for start of drop of bomb
- t position of nose of plane for dropping bombs
- v height on screen of bomb deactivation
- w high score
- z user-definable graphics data

```
 140 IF INKEY$="" THEN RETURN
 145 IF INKEY$="i" OR INKEY$="I"
 THEN GO TO 200
 150 GO TO 300
 200 BORDER 4: INK 0: PAPER 7: B
RIGHT 1: CLS
 210 PRINT PAPER 5;AT 0,0;" Inst
ructions For CITY BOMBER:- "
 220 PRINT : PRINT "     You are
 the pilot of a war-time bomber.
You are on a missionto continue
bombing a city untilno buildings
 remain standing...."
 230 PRINT "Your altitude will a
utomaticallydecrease every time
you fly overthe city."
 240 PRINT : PRINT "     Unfortu
nately,the plane hasno manual al
titude control,whichmeans that y
ou will run the riskof crashing
into a skyscraper..."
 245 PRINT : PRINT "     Your sc
ore will be given onthe basis of
 how long you manageto survive."
 255 PRINT : PRINT " Press "; P
APER 6; BRIGHT 1;"'SPACE'"; PAPE
R 7; BRIGHT 1;" to drop bombs."
 260 PRINT : PRINT INK 3;"PRESS
ANY KEY TO START GAME....."
 270 IF INKEY$="" THEN GO TO 270

 300 BORDER 0: PAPER 5: INK 7: B
RIGHT 1: CLS
 310 FOR k=0 TO 31: PRINT AT 0,k
; PAPER 0;" ": NEXT k
 320 GO SUB 5000
 330 GO SUB 2000
 340 FOR x=0 TO 19
 350 FOR y=0 TO 31
 355 IF x=0 THEN FOR y=30 TO 31
 357 IF x=19 THEN FOR y=0 TO 29
 360 PAUSE 1: BEEP .005,0: PRINT
 AT x,y; INK 1;"▶"
 381 IF y<29 THEN GO TO 385
 382 LET g=y-29
 383 LET m=x+1: LET b=g-1: IF b<
0 THEN LET b=31: LET m=m-1
 384 IF ATTR (x+1,g)=104 THEN PR
INT AT m,b; INK 2; BRIGHT 1;"▓":
 PRINT AT 5,11; INK 0; PAPER 7;
BRIGHT 1; FLASH 1;"GAME OVER": F
OR e=0 TO 2: FOR f=10 TO 0 STEP
-1: BEEP .01,f: NEXT f: NEXT e:
GO TO 600
 385 IF ATTR (x,y+3)=104 THEN PR
INT AT x,y+2; INK 2; BRIGHT 1;"▓
": PRINT AT 5,11; INK 0; PAPER 7
; BRIGHT 1; FLASH 1;"GAME OVER":
 FOR e=0 TO 2: FOR f=10 TO 0 STE
P -1: BEEP .01,f: NEXT f: NEXT e
: GO TO 600
 390 IF INKEY$="" THEN GO SUB 60
00
 395 IF INKEY$=" " AND c=1 THEN
GO SUB 6000
 398 IF y>29 THEN LET t=30-y: GO
 TO 400
 399 LET t=y+2
 400 IF INKEY$=" " THEN LET c=1:
 LET r=x+1: LET v=r+8: GO SUB 60
00
 410 LET q=q+1: PRINT AT 0,6; IN
K 7; BRIGHT 1; PAPER 0;q
 415 NEXT y: NEXT x
 420 BEEP 1,10: GO TO 300
 600 IF q>w THEN LET w=q
 610 LET h=0: LET m=0: LET b=0:
LET q=0: LET c=0: LET g=0: LET r
=0: LET t=0: LET v=0
 620 PRINT INK 0; BRIGHT 1;AT 7,
1;"PRESS ANY KEY FOR ANOTHER GAM
E"
 630 IF INKEY$="" THEN GO TO 630
 640 GO TO 300
1000 FOR s=0 TO 5
1010 FOR n=0 TO 7: READ z: POKE
USR (CHR$ (97+s))+n,z: NEXT n
1020 NEXT s
1030 DATA 255,153,153,255,255,15
3,153,255
1040 DATA 0,96,115,127,127,3,0,0
1050 DATA 0,224,240,254,255,240,
0,0
1060 DATA 0,36,60,24,60,60,24,0
1070 DATA 137,247,133,65,66,132,
```

```
178,207
1080 DATA 24,24,24,24,24,60,126,
255
1090 RETURN
2000 FOR u=20 TO 21: FOR i=0 TO
31: PRINT AT u,i; PAPER 4;" ": N
EXT i: NEXT u
2009 RANDOMIZE
2010 FOR l=0 TO 31
2020 LET h=INT (RND*6+10)
2030 FOR j=19 TO h STEP -1
2040 PRINT AT j,l; PAPER 5; INK
0;"■"
2050 NEXT j
2060 PRINT AT h-1,l; PAPER 5; IN
K 0;"▟"
```

```
2070 NEXT l
2080 RETURN
5000 PRINT AT 0,0; PAPER 0;"SCOR
E:";s: PRINT AT 0,13; PAPER 0;"H
IGH SCORE:";w
5005 PRINT AT 0,30; INK 1; BRIGH
T 1; PAPER 5;"▄▀"
5010 RETURN
6000 IF c=0 THEN GO TO 410
6005 IF r=y OR r=19 THEN LET c=0
: PRINT AT r,t;" ": GO TO 410
6010 IF c=1 THEN PRINT AT r,t;"
": PRINT AT r+1,t; INK 1; BRIGHT
1;"▚": LET r=r+1
6020 GO TO 410
```



Screen print of the stars of City Bomber

Take a break from the action

Our reviewers tried out a selection of programs that don't need quick reactions

The Oracle 16K ZX81 £5.50

Peacock Software, 32 Redfern Avenue, Kenilworth, Warwicks CV8 2NA

The blurb with this cassette tells you that it can provide "entertaining fun" — which is a reasonable claim — or "a serious aid to developing your hidden mind powers" — which is not.

It's fine for fun at a party, but if you're seriously into psychic matters, it's a joke. (Of course, if you sneer at these things, you probably wouldn't buy the tape anyway.)

What The Oracle claims to do is answer questions, of course, along the lines of finding lost possessions, getting over a run of bad luck, or patching things up with a loved one.

There is a different program for general and personal questions, one of each side of the tape, but although the programs take ages to load, there isn't an awful lot to them.

You tell the ZX81 your name, select a question from the menu, and then concentrate hard on a number of patterns it offers you, before choosing the one you "respond" to. According to your choice, you receive a short answer to your question, followed by the offer of another one. That's it.

C.C-R.

instructions	n/a
playability	50%
graphics	n/a
value for money	30%

★ ★

Shirley Conran's Magic Garden 32K BBC £9.95 (cass.) £11.50 (disc)

Acornsoft, 4a Market Hill, Cambridge CB2 3NJ

This program is 'for busy people...who prefer to spend what time they've got lazing in the garden rather than digging it', according to the cassette cover.

In reality it is a database program with two data files on flowers and shrubs. It enables you to select certain criteria and then provides a read-out of all the plants fitting those criteria.

As database programs go it is really quite a good one, and is particularly good in its use of 'wildcards'.

What you cannot do is set up your own data file specification and then store your own records, which is a real pity.

This, in fact, is the real problem with this package. If the flowers and shrubs were simply a demonstration for the database it could be a world beater, but in its present form it is little more than a gimmick.

There is no doubt that it can provide accurate information to help you plan your garden but a picture is worth a thousand words and this program has none at all.

D.C.

instructions	85%
ease of use	70%
display	50%
value for money	15%

★

Enigma 48K Spectrum £5

Work Force, 140 Wilsden Avenue, Luton, Beds

Enigma is an implementation of Black Box, a game for which Waddington hold the copyright.

However, there may be no serious objection to this version, for two reasons: Firstly, it was found necessary to use the Waddington equipment in order to play the game sensibly, and it was noted that there was an error in the way the rules were worked.

The idea is that a number of objects are concealed within an 8×8 matrix, and their positions are found by shooting tracers into the matrix at various points.

The objects may deflect, reflect or absorb the tracers, sending them out of the matrix at unexpected points or not sending them out at all.

The original game allowed up to five objects. Enigma allows eight, which it too many for accurate deductions to be made. A tracer might bounce around inside the matrix for ever, given a particular configuration.

The biggest fault, however, was that the results of each trial with a tracer were lost, and had to be jotted down on paper or set up on the Black Box board.

The latter was made more difficult because the numbering of the box and the screen display was difficult.

D.T.

instructions	60%
playability	40%
graphics	n/a
value for money	30%

★ ★

Devil's Revenge 48K Spectrum £4.50

Work Force, 140 Wilsden Avenue, Luton, Beds

The three Work Force tapes on this page all appeared for review with little notes attached saying that they were advance promotion copies, and would not include all 'spelling revisions and other niceties' that would apply with the production version.

That means there is no way to predicting whether the version finally put on sale will be better — or worse — than the one we have seen. There are certainly some points which need attention.

Devil's Revenge is a straight copy of Nightmare Park, give or take a detail here and there. Even the older name appears on the screen from time to time, and that seems a little tactless.

The idea of the thing is that you are exploring a maze-like adventure playground. When you take a step forward in the maze, you may — or may not — be faced with one of 15 problems and tests, such as which of three doors hides a lion that will eat you.

The tests appear in random order, and if you fail one you go back to the start.

D.T.

	70%
instructions	70%
playability	60%
graphics	70%
value for money	

★ ★ ★ ★

Pirate Island 48K Spectrum £5.50

Work Force, 140 Wilsden Avenue, Luton, Beds

Pirate Island is a straightforward adventure on fairly typical lines.

However, the instructions lead one to expect that there will at least be a brief glimpse of a map, with a vocabulary of available words, but neither appeared.

This was unfortunate, as some of the key words are not quite in the familiar form. GET was rejected, TAKE being required, and SUM was required to obtain an inventory. Dedicated adventurers like to have the familiar words at their disposal.

However, it was possible to explore about 35 'rooms', amounting to about a fifth of the whole, according to the score, before all ways appeared blocked by deathtraps.

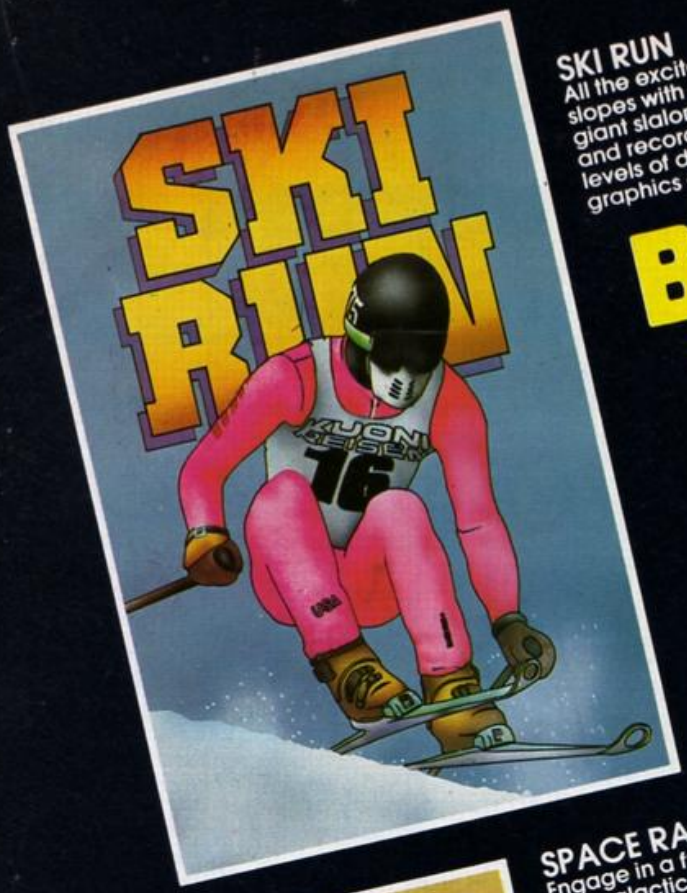
The text was sufficiently expressive to create the necessary atmosphere, but the trick of drawing a 'curtain' down over the screen before showing the next location was irritating, and the curtain sometimes failed to appear in time to avoid loss of an input.

A steady scrolling action would be better, allowing reference back to an earlier move.

D.T.

instructions	30%
playability	60%
graphics	n/a
value for money	60%

★ ★ ★



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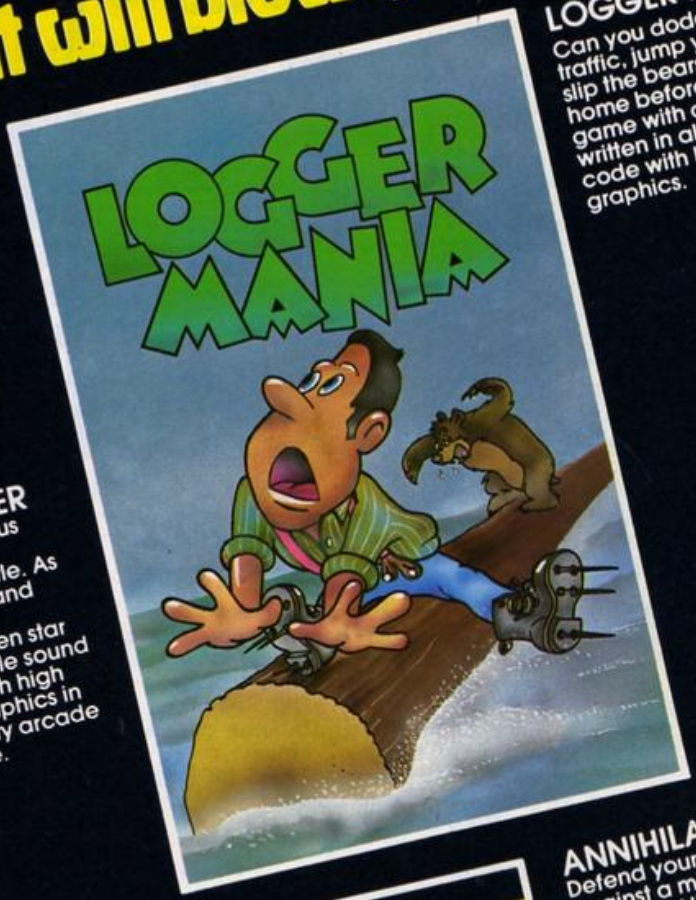

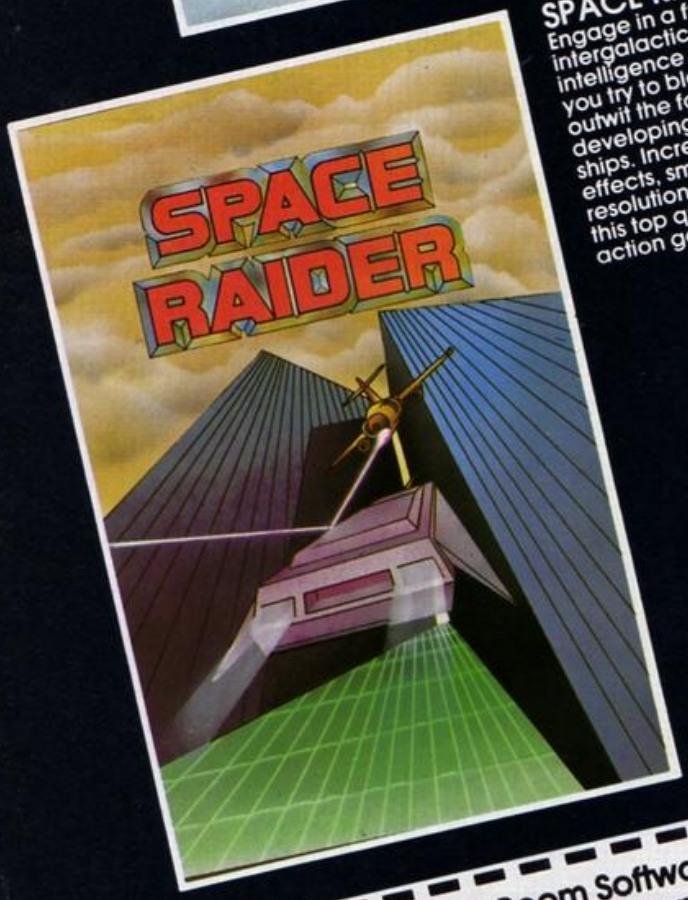

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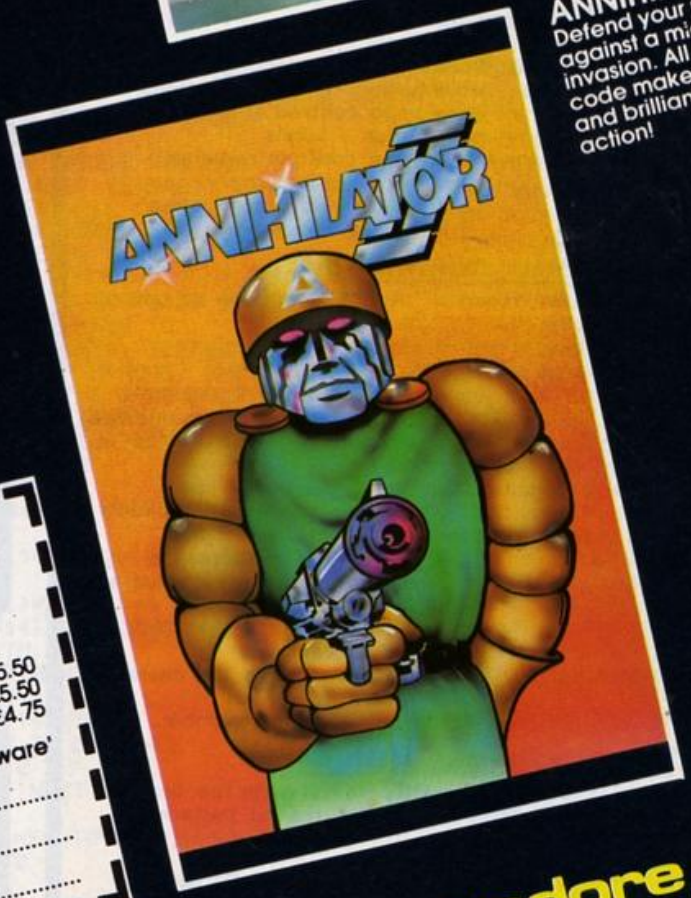

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commodore 64
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PIXEL-PAD
for ZX-SPECTRUM

Programming Information

Colours

0. Black
1. Blue
2. Red
3. Magenta
4. Green
5. Cyan
6. Yellow
7. White
8. No Change
9. Contrast

Graphics Characters

Normal		Inverse
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	

Colour Control

INK n : n = Colour (0 to 9)
PAPER n : n = Colour (0 to 9)
FLASH n : n = 0 Steady, 1 Flashing, 8 No Change
BRIGHT n : n = 0 Normal, 1 Bright , 8 No Change
INVERSE n : n = 0 Normal (Ink on Paper)
n = 1 Inverse (Paper on Ink)
OVER n : n = 0 New character obliterates old one
n = 1 New and old characters combine to give ink colour where either (not both) were ink, otherwise paper colour
BORDER n : n = Colour (0 to 7)
ATTR(l,c) : Function returning attributes of the character at line l, column c
Bit: 7 is 1 for Flashing; 6 is 1 for Bright
5,4,3 – Paper Colour
2,1,0 – Ink Colour

Graphics Commands

PLOT c;x,y : Ink in pixel x,y
DRAW c;x,y,Θ: Draw line x,y pixels long (relative) while turning Θ radians (Optional)
CIRCLE c;x,y,r: Draw circle centred at pixel x,y with radius r pixels
(Note: c is any local colour controls required)
POINT (x,y) : Function which returns:-
0 if pixel x,y is paper colour
1 if it is ink colour

Character Commands

PRINT item, item... A print item can be one of
- Null
- Numeric expression
- String expression
- **AT l,c**: moves cursor to line l, column c
- **TAB c**: moves cursor to column c, same line
- Colour control command

Items can be seperated by
- a comma, next item at next half line
- a semi-colon; next item follows immediately
- an apostrophe' next item on new line

POKE a,n : Writes the value n to address a
PEEK a : Function which returns the value at address a
USR "a" : Function which returns the start address of character a
SCREEN$(l,c): Function which returns the character at line l, column c
BIN n : Indicates n is a binary number

User Defined Graphics

POKE USR "a"+x, BIN n: will write the binary number n to the xth row of the bit pattern for character a

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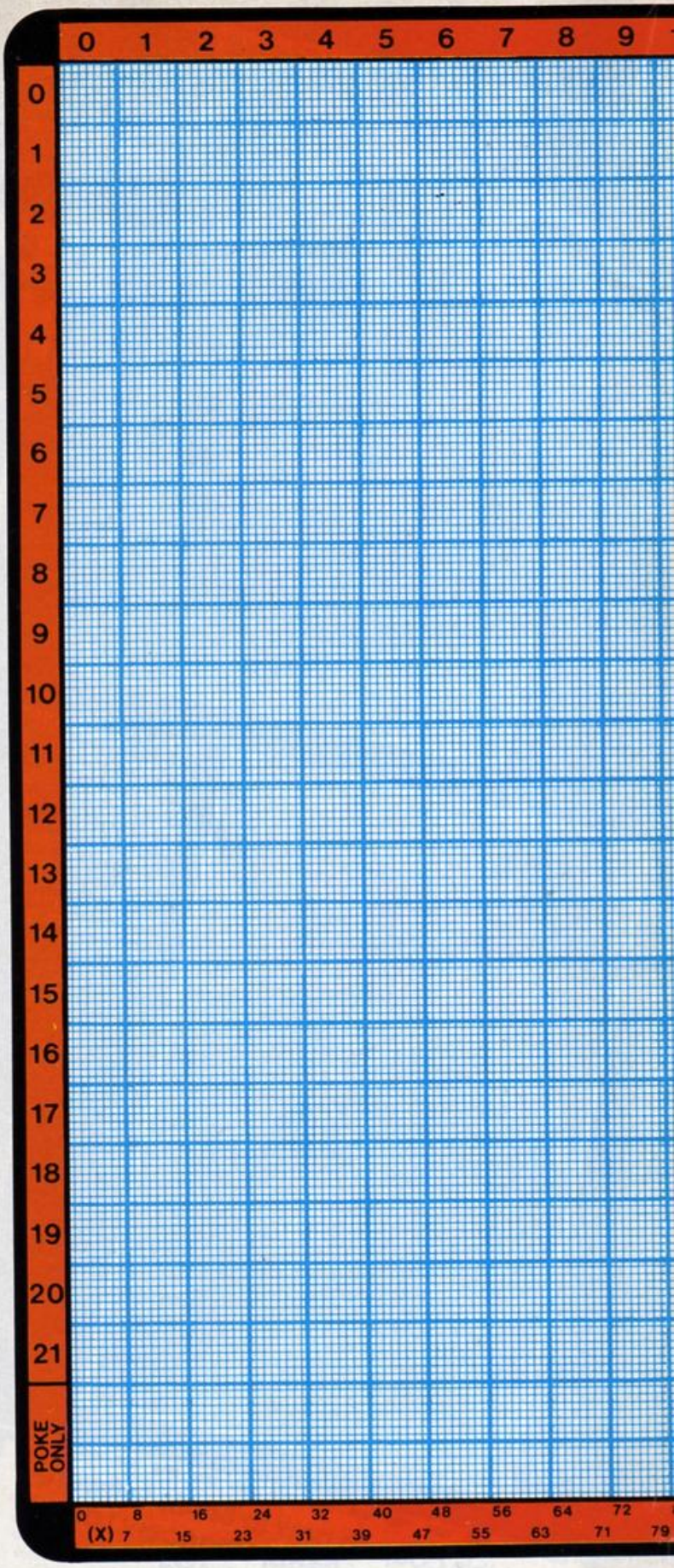
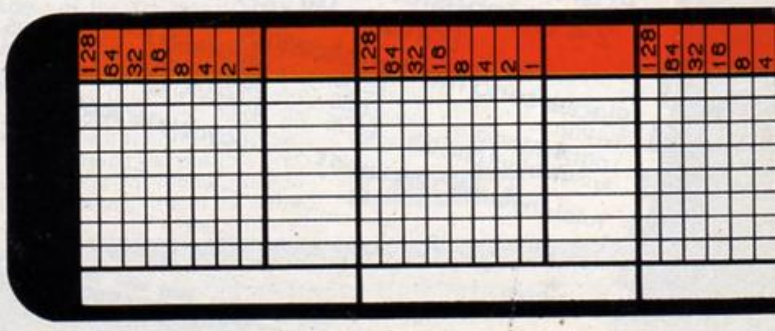




Treasure beyond your wildest dreams . . . if you survive

It's a hard life in The Kingdom, with a hazardous journey to make, monsters waiting to chomp you and dungeons where you could waste away for years. But you have a chance to grab a fortune in David Rees' graphics adventure for the Commodore 64

Your house is being ransacked by monsters from the forest. To defeat them and save your family you must travel miles through forest and over rivers to reach The Castle. To enter you must find and grab The Key (the letter K) and move to the entrance.

Inside, Dungeons will trap you, and you must grab treasure found in The Rooms. By converting treasure (found as diamond characters) to strength you may fight and defeat the monsters following you, finally to enter the Treasure Room.

This contains amounts of treasure beyond your wildest imaginings, but beware! Once you have entered this room you have but one chance to grab the treasure. Upon leaving the room all further treasure will vanish, so it will be useless to return.

Now, stocked with treasure and strength, you may return home. Once you lie by the side of the H character (in the doorway) and press g the game ends.

How it works

10-90 initialise variables
100-195 instructions printout
200-360 set up the grid
510-910 main routine
1000-5200 draw the display for different scenes
5500-5930 draw map
6000-6150 move and draw your character
6500-6810 if you hit the screen edge...
7000-7100 monster logic and draw
7110-7130 fight outcome
7510-7597 choose screen to be drawn
7630-7950 wizard's message
8200-8250 get key, treasure or home character
10000-10010 DATA: display characters for grid map
11000-12020 end messages

However, this only works if you have some treasure in reserve, preventing people from ending the game immediately.

This graphic adventure game is made different by the fact that you can attain a score expressed in treasure and strength, displayed at the end of the game. Thus, even after you have completed the adventure, you can play it again to get a better score.

The game is played out on a 15 by 15 Kingdom grid. Your home and the castle are both in fixed positions, but the river, entrance and castle rooms are randomly generated at the beginning of each game.

```
6 REM******************
7 REM*  THE KINGDOM  *
8 REM* BY DAVID REES *
9 REM******************
10 V=53248:POKEV+32,0:POKEV+33,0
20 K$=""
30 S=1024:C=55296
40 FORN=0TO4:READA(N):NEXTN
50 DATA3,5,7,13,14
60 W$="■":X$="■"
70 FORN=0TO9
80 W$=W$+"■■ ":X$=X$+" ■■ "
90 NEXTN
100 PRINT"■■";TAB(10);"THE QUEST"
105 PRINT"■ ▙YOU ARE IN A DARK AND LONELY";
110 PRINT" LAND OF   MONSTERS. TO SAVE YOUR ";
115 PRINT"FAMILY YOU MUST  GO TO THE CASTLE";
120 PRINT" TO COLLECT AS MUCH     TREA";
125 PRINT"SURE AS POSSIBLE."
130 PRINT" ■TO ENTER THE CASTLE YOU MUST ";
135 PRINT"FIND THE  KEY,▙BUT BEWARE!"
140 PRINT"■EVIL CREATURES WILL CHASE YOU ";
145 PRINT"THROUGHOUTTHE KINGDOM,MAKING ";
150 PRINT"YOU LOSE STRENGTH."
160 PRINT"■■NOTE:"
165 PRINT"TO PICK UP ANY OBJECT STOP BY ITS";
170 PRINT" LEFT  SIDE AND PRESS 'G'."
175 PRINT"YOU CAN PICK UP KEYS, TREASURE AND";
180 PRINT" IF   YOU PICK UP H(HOME) AND ";
185 PRINT"HAVE TREASURE,  THE GAME ENDS."
190 PRINT"▙KEYS:F1   UP;F7 DOWN"
195 PRINT"     Z  LEFT;X  RIGHT■■"
198 REM■0=F;1=H:2=R:3=E:4=C■
199 REM■5=D:6=T:7=W:8="■"■
200 DIMP(14,14):X=1+RND(1)■4
220 FORY=0TO14
230 X=X-1+RND(1)■2-(X<1)+(X>13):P(X,Y)=8
240 NEXTY
250 P(0,0)=1:R(0)=2:R(1)=5:R(2)=4
260 FORN=0TO4:FORM=0TO14:Z=INT(RND(1)■3)
270 P(N+10,M)=R(Z):NEXTM,N
280 FORM=0TO14:P(9,M)=7:NEXT
290 Z=RND(1)■10+2:P(9,Z)=3
295 X=INT(RND(1)■14):P(14,X)=6
300 PRINT"PRESS ANY KEY TO CONTINUE"
310 GETA$:IFA$=""THEN310
320 FORN=0TO8:READB$(N):NEXT
360 GOSUB5500
460 PRINT"■■■PRESS ANY KEY TO CONTINUE"
470 GETA$:IFA$=""THEN470
480 P1=39:P2=39
500 XX=0:YY=0:XS=9:YS=10:L=20:T=0
510 GOSUB7500
```

Hints on conversion

Conversion should not be that difficult as most of the BASIC is standard, apart from ON...GOSUB and the PRINT control commands. Line 10 changes the screen colour to black, and so should be changed or removed. S and C should be changed to your screen and colour start.

POKES are based on a 40 × 25 screen and come in two types. One is set out as X + Y*column number, and the other is set out as a number plus a multiple of the screen size, in this case 1000 bytes.

Lines 6500-6810 should be changed as they specify when the character reaches the screen edge. Finally, some sample screen displays have been included to aid with translation of the PRINT and POKE statements.

The Key appears in a randomly chosen forest square and, if missed, will reappear later. This grid is shown at the beginning of the game, and may also be seen between rooms within the Castle — for a small consideration!

Finally, beware of monsters! They fight you when they touch you and you lose (or sometimes gain) a random amount of strength.

If your strength level falls below zero, you are dead. Thus, it is a good idea to gain plenty of strength in the treasure room or before entering it, as you will have to spend much time fighting to gain all the treasure.

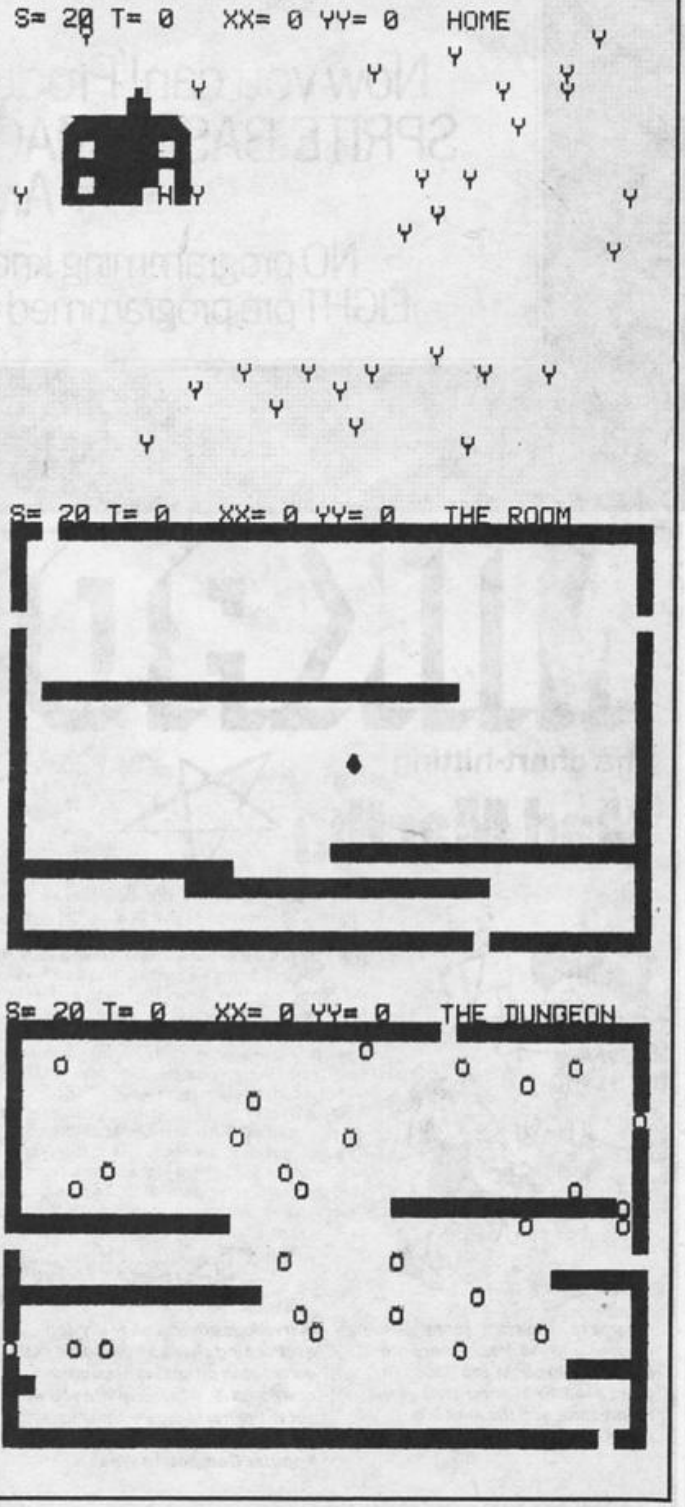
Variables

C colour memory start
L strength
MM scene number
S screen memory start
T treasure
XX,YY your grid position
XS,YS your on screen position
X1,Y1;X2,Y2 monster on screen positions
G$ The Key pickup store
W$,X$ wall draw graphics
A(4) tree colours for forest scene
P(14,14) which scene per grid section
R(2) choice of castle rooms
B$(8) graphic symbols for the grid map

COMMODORE 64 PROGRAM

```
520 PRINT"■S="L"T="T:PRINT"■","■■■XX="XX"YY="YY
560 GOSUB6000
570 IFEE=1THEN11000
580 GOSUB7000
590 IFL<1THEN12000
900 GOTO560
905 PRINT"■"
910 END
997 REM*SETTUP DISPLAY"
999 REM*  FOREST  *
1000 PRINT"■",,,"■■■■THE FOREST"
1005 IFINT(RND(1)*10)=5THEN5000
1010 X=RND(1)*20+10
1020 FORN=0TOX
1030 A=RND(1)*960+40:B=RND(1)*4
1040 POKEA+S,25:POKEA+C,A(B)
1050 NEXTN
1060 RETURN
1499 REM*ENTRANCE*
1500 PRINT"■":GOSUB1010
1510 A=INT(RND(1)*7)+2
1520 FORN=1TOA
1530 PRINT,,W$,,X$;
1540 NEXTN
1550 PRINT,,"■                    ";
1560 FORN=A+2TO12
1570 PRINT,,X$,,W$;
1580 NEXT
1590 PRINT,,LEFT$(X$,39);
1610 POKES+999,160:POKEC+999,11
1620 IFZZ=1THENZZ=0:GOTO1690
1630 PRINT"■■",,,"■■■■THE ENTRANCE"
1690 RETURN
1999 REM*CORRIDOR*
2000 A$="■                    ":PRINT"■"
2010 FORN=0TO7:PRINTA$,,"■■■■■"A$;
2020 NEXT
2030 PRINT"■■■■■■■■"
2040 FORN=0TO6:PRINTA$,,"■■■■■"A$;
2050 NEXT
2060 PRINTA$,,"■■■■■"LEFT$(A$,15);
2070 POKES+999,160:POKEC+999,14
2080 PRINT"■",,,"■■■■■THE CORRIDOR"
2090 IFXS=1THENYS=12
2100 IFXS=38THENYS=12
2110 IFYS=2THENXS=20
2120 IFYS=23THENXS=20
2490 RETURN
2499 REM*THE ROOM*
2500 PRINT"■",,,"■■■■THE ROOM"
2504 X=RND(1)*38+1:Y=INT(RND(1)*22)+2
2508 POKES+X+Y*40,90:POKEC+X+Y*40,7
2510 A$="                "
2520 PRINT"■■ ";A$;A$;A$;A$;
2530 FORN=0TO21:PRINT,,,,"■■  ";:NEXT
2540 PRINT"■■■"A$;A$;A$;A$;"■"
2610 POKES+999,160:POKEC+999,10
2620 X=RND(1)*39:POKES+40+X,32
2630 X=RND(1)*39:POKES+960+X,32
2640 X=INT(RND(1)*23):POKES+40+X*40,32
2650 X=INT(RND(1)*23):POKES+79+X*40,32
2700 FORN=0TO2
2710 A=RND(1)*37:B=RND(1)*760+120
2720 FORM=0TOA
2730 POKES+B+M,160:POKEC+B+M,12
2740 NEXTM,N
2900 RETURN
2999 REM*HOME*
3000 PRINT"■":GOSUB1010
3010 PRINT"■■■■■■■■
```

```
7030 Y1=Y1-((YS>Y1)-(YS<Y1))/2
7040 Y2=Y2-((YS>Y2)-(YS<Y2))/2
7050 P1=X1+INT(Y1)*40
7060 P2=X2+INT(Y2)*40
7070 POKEP1+S,88:POKEP1+C,3
7080 POKEP2+S,81:POKEP2+C,3
7090 IFP1=PORP2=PTHEN7110
7100 RETURN
7110 L=INT(L/1.1+4-RND(1)*6)
7120 PRINT"■S="L"■ T="T"■ "
7130 RETURN
7400 RETURN
7500 REM*SCREEN*
7510 Z1=P(XX,YY):IFZ1=7THEN8000
7512 GOSUB7600
7515 IFMM=3THEN8300
7520 IFP(XX,YY)>4THEN7550
7530 ONP(XX,YY)+1GOSUB1000,3000,2500,1500,2000
7540 GOTO7560
7550 ONP(XX,YY)-3GOSUB0,3500,5100,4500,4000
7560 PRINT"■","■■■■ "
7570 PRINT"■","■■■X="XX"■ Y="YY
7575 PRINT"■■S="L"T="T
7580 X1=INT(RND(1)*38)+1:Y1=INT(RND(1)*22)+2
7590 X2=INT(RND(1)*38)+1:Y2=INT(RND(1)*22)+2
7595 IFZ1=3THEN8100
7597 RETURN
7600 IFZ1=2ORZ1=5THEN7630
7610 IFZ1=6THEN7630
7620 RETURN
7630 IFMM=3THENRETURN
7635 PRINT"■","  ■THE  QUEST"
7640 PRINT"■■YOUR STATUS IS AS FOLLOWS:"
7650 PRINT"■AREA- X="XX" Y="YY
7660 PRINT"STRENGTH="L"TREASURE="T"■■■"
7670 PRINT" YOU HAVE MET A WIZARD WHO CAN";
7680 PRINT" GIVE YOU STENGTH IN EXCHANGE FOR";
7690 PRINT" TREASURE."
7700 X=3+INT(RND(1)*7)
7710 PRINT" HIS EXCHANGE RATE IS ONE ";
7720 PRINT"TREASURE TO"
7730 PRINT"■"X"STRENGTH."
7740 PRINT" ■DO YOU WISH TO EXCHANGE?"
7750 INPUTD$:IFD$="N"THEN7830
7760 IFD$="Y"THEN7790
7770 PRINT"PLEASE ENTER 'Y' OR 'N'"
7780 GOTO7750
7790 INPUT"HOW MUCH TREASURE";A
7800 A=ABS(A):T=T-A:IFT>=0THEN7820
7810 T=T+A:PRINT"THAT'S TOO MUCH!":GOTO7790
7820 L=L+X*A
7830 PRINT"■ FOR THE SUM OF TEN TREASURES YOU";
7840 PRINT" MAY   SEE THE MAP."
7850 INPUT"■DO YOU WANT TO?";D$
7860 IFD$="N"THEN7930
7870 IFD$="Y"THEN7890
7880 PRINT"ANSWER 'Y' OR 'N'":GOTO7850
7890 IFT>10THENT=T-10:GOSUB5500:GOTO7930
7900 PRINT"YOU DO NOT HAVE ENOUGH TREASURE"
7930 PRINT"■■■PRESS ANY KEY TO CONTINUE"
7940 GETD$:IFD$=""THEN7940
7950 RETURN
8000 IFMM=2ORMM=5THEN8030
8010 IFMM=6ORMM=4THEN8030
8020 GOTO7520
8030 XX=MX:YY=MY:XS=1:YS=YS-VY
8040 RETURN
8100 IFMM=2ORMM=5THEN8130
8110 IFMM=6ORMM=4THEN8130
8120 RETURN
8130 XS=18:G$=""
8140 RETURN
8200 P=XS+1+YS*40+S
8210 IFPEEK(P)=11THENG$="K":GOTO8250
8220 IFPEEK(P)=90THENT=T+5:GOTO8260
8230 IFPEEK(P)=8ANDT>0THENEE=1
8240 RETURN
8250 POKEP,32:RETURN
8260 PRINT"■S="L"■ T="T"■ "
8270 GOTO8250
8300 IFZ1=2ORZ1=5THEN8330
8310 IFZ1=6ORZ1=4THEN8330
8320 GOTO7520
8330 IFG$="K"THEN7520
8340 XS=37:XX=MX:YY=MY:RETURN
10000 DATA"■F","■H","■R","■E","■C"
10010 DATA"■D","■T","■W","■■"
11000 PRINT"■■WELL DONE"
11010 PRINT"YOU HAVE FINISHED THE GAME WITH"
11020 PRINTL"STRENGTH AND"T"TREASURE."
11030 END
12000 PRINT"■■BAD LUCK,YOU RAN OUT OF ";
12010 PRINT"STRENGTH"
12020 END
```



Screen print-outs of how The Kingdom looks during play

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Mad Martha II

Time for the annual holiday and Martha decides to visit her half-cousin Manuel, who is a waiter in a plush hotel in Barcelona.
One afternoon, Martha sets out on a bus tour with her son, young Arbuthnot, leaving orders for Manuel to keep an eye on Henry. Unbeknown to Martha, crafty Henry has a Spanish pen-pal, and has planned a secret rendezvous. Henry leaves the hotel, brimming with enthusiasm and Manuel (who is totally wacky!) is hot on his trail. The adventure takes us through the thrills and spills of a madcap chase, taking in amongst other delights, a bull fight in which poor Henry is forced to play the leading role. Guaranteed laughs and fun for all the family!

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If you like Frogger you'll love Jogger, Johnathan Surridge's fast-moving game for the 48K Oric

I know jogging's supposed to be good for your health, but sometimes I have my doubts. Running round the park is one thing, but what about that busy road you have to dash across on the way home — not to mention the fast-flowing river?

In my Jogger game you have to guide the jogger home across the four-lane road and river using the Oric's cursor keys. You score 10 points for every step forward. But one false step and . . . well, at least you die healthy.

How it works

10-15 set up variables and screen
120-135 play tune
136-240 move jogger — check if safe
250-345 move obstacles
350-360 jogger safe?
370 print score
1000-1040 fallen in water
1100-1130 knocked down
1500-1720 if last jogger, play tune, play again?
2600-2655 jogger home
9000 set up graphics, tunes and obstacles

The program uses a few special techniques I have discovered. DOKE 621,47960:POKE 623,28: CLS enables you to print normally on the very top line of the Oric's screen.

POKE (hash sign)26A,10 switches off the cursor and keyboard click.

Hints on conversion

The Oric's screen is 38 characters wide, so all the routines for making sure that your jogger is not off the screen will have to be changed. Also, the length of the strings A$-G$ will need changing.

PLOT X,Y is similar to PRINT AT X,Y, but can be followed by a string or number. If it is a number, then it is the same as PRINT AT X,Y,CHR$ (number)

SCRN (X,Y) detects what character is at any place on the screen, with position 0,0 in the top left hand corner

MUSIC A,B,C,D where A = channel (1-3), B = octave (0-6), C = note (1 = C) and D = volume (0-15). Once started, music or sound will continue until told to stop

PRINT CHR$(30) sets the print position to the top of the screen. PEEK (520) reads the keyboard, and is quicker than using KEY$.

Variables

HS high score
S score
PO character which your jogger is about to go on to
KE key pressed (not ASCII)
GS() tune
DS() tune
H number of joggers home
C column of your jogger
L line of your jogger
I FOR/NEXT
A$-G$ obstacles

```
0 GOTO9000
10 CLS:PAPER0:INK7
20 S=0:LI=4:PRINTSPC(15)"HI-SCORE "HSCHR$(30)"SCORE "S
25 H=-1
30 IFH()-1THENPRINT:PRINT:PRINT:PLOT3,13,S$:PLOT3,14,S$:GOTO60
35 PRINTCHR$(27)"R"CHR$(27)"B"
40 PRINTCHR$(27)"R"CHR$(27)"D   pp   pp   pp   pp   pp   pp   pp"
50 PRINTCHR$(27)"R"CHR$(27)"D   pp   pp   pp   pp   pp   pp   pp"
60 FORI=1TO9:PRINTCHR$(27)"T"CHR$(27)"C":NEXT
70 PRINTCHR$(27)"R"CHR$(27)"@":PRINTCHR$(27)"R"CHR$(27)"@":PRINTCHR
$(27)"R"CHR$(27)"@"
80 PRINTCHR$(27)"P":PRINTCHR$(27)"P"CHR$(27)"C":PRINT:PRINTCHR$(27)
"P"CHR$(27)"D":PRINT
90 PRINTCHR$(27)"P"CHR$(27)"F":PRINT:PRINTCHR$(27)"P"CHR$(27)"C":PR
INT
```

ORIC PROGRAM

```
100 PRINTCHR$(27)"R"CHR$(27)"@":PRINTCHR$(27)"R"CHR$(27)"@"
110 PLOT1,4,A$:PLOT1,6,B$:PLOT1,8,A$:PLOT1,10,C$
115 PLOT1,16,D$:PLOT1,18,E$:PLOT1,20,F$:PLOT1,22,G$
116 IFH()-1THEN150
120 PLAY7,0,0,0:FORX=0TO18:MUSIC1,1,1,0:MUSIC2,1,1,0:MUSIC3,1,1,0
130 MUSIC1,2,GS(X,1),13:MUSIC2,3,GS(X,1),13:MUSIC3,4,GS(X,1),13
135 WAITGS(X,2)*20:NEXT
136 H=0
140 PLAY0,0,0,0
150 WAIT10:PLAY1,0,0,0:C=18:L=24
160 PO=SCRN(C,L):PLOTC,L,"h"
170 IFL(13ANDPO=32THEN1000
180 IFL>14ANDPO()32THEN1000
190 IFL(4THEN2000
200 KE=PEEK(520)
210 PLOTC,L,PO:IFKE=172THENC=C-1ELSEIFKE=188THENC=C+1
220 IFKE=180THENL=L+2ELSEIFKE=156THENL=L-2:S=S+10
225 IFKE()56THENSOUND1,200,13
230 IFC(1THENC=1ELSEIFC)37THENC=37ELSEIFL)26THENL=26
240 PO=SCRN(C,L):PLOTC,L,"h"
250 A$=RIGHT$(A$,LEN(A$)-1)+LEFT$(A$,1)
260 B$=RIGHT$(B$,1)+LEFT$(B$,LEN(B$)-1)
270 C$=RIGHT$(C$,1)+LEFT$(C$,LEN(C$)-1)
275 IFKE()56THENSOUND1,500,13
280 D$=RIGHT$(D$,1)+LEFT$(D$,LEN(D$)-1)
290 E$=RIGHT$(E$,LEN(E$)-1)+LEFT$(E$,1)
300 F$=RIGHT$(F$,1)+LEFT$(F$,LEN(F$)-1)
310 G$=RIGHT$(G$,LEN(G$)-1)+LEFT$(G$,1)
315 PLOTC,L,PO
320 PLOT1,4,A$:PLOT1,6,B$:PLOT1,8,A$:PLOT1,10,C$:PLOT1,16,D$:PLOT1,
18,E$
330 PLOT1,20,F$:PLOT1,22,G$
340 IFL=4ORL=8THENC=C-1ELSEIFL=6ORL=10THENC=C+1
345 SOUND1,1,0
350 IFC(1ORC)37THEN1000
360 PO=SCRN(C,L):PLOTC,L,"h":IFPO=32ANDL(11THEN1000ELSEIFPO()32ANDL
)14THEN1000
370 PRINTCHR$(30)"SCORE "S
380 IFL(4ANDPO()32THEN2000ELSEIFL(4ANDPO=32THEN1000
800 GOTO200
1000 IFL)14THEN1100
1010 PRINTCHR$(30):FORI=1TO13:PRINT:NEXT:PRINT"  "CHR$(4)CHR$(27)"N
        SPLASH!!!"
1015 PRINTCHR$(4)
1020 PLAY0,7,4,3000:SOUND4,0,0:WAIT150:PLAY7,0,0,0
1030 GOTO1500
1040 IFL)14THEN1100ELSE1010
1100 PRINTCHR$(30):FORI=1TOL-1:PRINT:NEXT:PRINTCHR$(27)"A"CHR$(27)"
L"
1110 FORI=36TO1STEP-1:PLOTI,L,"rs ":PLOTI,L-1,"q "
1120 IFI/2=INT(I/2)THENSOUND1,200,15ELSESOUND1,300,15
1130 WAIT20:NEXT:SOUND1,1,0
1500 LI=LI-1:IFLI(=1THEN1600
1505 IFC)1ANDC(37THENPLOTC,L,PO
1510 PRINTCHR$(30):GOTO30
1600 PRINTCHR$(30):FORN=1TO13:PRINT:NEXT:PRINT"  "CHR$(4)CHR$(27)"N
        GAME OVER"
1605 PRINTCHR$(4)
1610 PLAY1,0,0,0
1620 FORI=0TO10:MUSIC1,DM(I,1),DM(I,2),13:WAITDM(I,3)*2:MUSIC1,1,1,
0:NEXT
1630 IFS)HSTHENHS=S:PLAY7,0,0,0:GOTO1700
1640 PLOT1,26,"PRESS ANY KEY TO PLAY JOGGER AGAIN!!"
1650 R=RND(1):IFPEEK(520)=56THEN1650
1660 GOTO10
1700 CLS:INK7:FORI=1TO26:PRINTCHR$(27)CHR$(INT(RND(1)*7)+80)"
     NEW HIGH!
1710 SOUND1,I,13:SOUND2,I*2,13:SOUND3,I*4,13:NEXT
1720 WAIT100:PING:GOTO1640
```

```
2000 IFPO()112THEN1000ELSEH=H+1
2010 IFC/5=INT(C/5)THENC=C-1
2020 PLOTC,1,"ln":PLOTC,2,"mo"
2030 PLAY1,0,0,0:MUSIC1,3,5,13:WAIT15:MUSIC1,3,1,13:WAIT15:MUSIC1,3
,3,13:WAIT15
2040 MUSIC1,3,1,13:WAIT15:MUSIC1,1,1,0:S=S+100
2050 PRINTCHR$(30)"SCORE "S
2055 IFH)=7THEN2500
2060 GOTO150
2500 FORI=1TO100:SOUND1,400,13:S=S+10:PRINTCHR$(30)"SCORE "S:SOUND1
,1,0:WAIT5:NEXT
2510 GOTO25
8999 END
9000 DATA0,7,12,27,24,12,7,0,0,63,0,48,3,0,63,0,0,56,12,6,54,12,56,
0
9010 DATA33,30,63,63,63,30,33,0
9020 DATA0,0,63,63,63,63,20,8,0,0,59,58,58,63,1,0,0,0,48,16,24,56,1
6,32
9030 DATA31,21,31,4,31,4,10,17,0,0,30,18,50,63,20,8
9040 DATA0,0,63,63,63,63,1,0,0,0,56,56,56,56,16,32,31,31,25,25,31,3
1,1,17,31
9050 DATA31,1,1,6,6,24,24,62,62,38,38,62,62,32,34,62,62,32,32,24,24
,6,6
9055 DATA63,63,63,63,63,63,63,63
9056 DATA0,0,0,0,0,0,0,6,15,9,9,63,63,20,8,0,63,9,29,9,63,10,4,0
9060 DATA999
9070 DATA3,1,30,3,1,20,3,1,10,3,1,30,3,4,20,3,3,10,3,3,20,3,1,10,3,
1,20,2,12,10
9080 DATA3,1,30
9090 DATA3,2,6,3,8,2,10,3,11,1,10,2,8,4,5,2,1,3,3,1,5,2
9100 DATA6,4,3,2,3,3,2,1,3,2,5,4,2,2,2,3
9500 I=£B400+(97*8)
9510 READA:IFA=999THEN9520ELSE POKE I,A:I=I+1:GOTO9510
9520 DIMDM(10,3):FORI=0TO10:READDM(I,1),DM(I,2),DM(I,3):NEXT
9530 DIMGS(18,2):FORI=0TO18:READGS(I,1),GS(I,2):NEXT
9540 A$="abbbbbbbbbc          abbbbbbbbbc          "
9550 B$="ddddddddd    dddddd        dddddd    "
9560 C$="      ddd    ddd   ddd   ddd   ddd   "
9570 D$=" efgefgefg    efgefgefg    efgefg    "
9590 E$=" ijkijkijk    ijkijkijk    ijkijkijk  "
9591 F$="efg   efg   efg   efg   efg   efg     "
9592 G$=" ijk   ijk   ijk   ijk   ijk   ijk   "
9600 HS=0
9610 DOKE621,47960:POKE623,28:CLS
9620 POKE£26A,10
9630 S$="                                      "
9700 GOTO10
```

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Games for micros great and small

We take a look at a range of games spanning the low-cost ZX81 and the upmarket BBC

Greedy Gobbler and Blowing Up The World Jupiter Ace £5.95

Jupiter Cantab, Cheshunt Building, Bateman Street, Cambridge CB2 1LZ

As an example of what you can do with comparatively few bytes of machine code this is not bad, providing you think it was worth doing in the first place.

For yes, this is yet another version of our dear old friend — dots, maze, mouth, ghosts.....get the picture? With the usual sound accompaniments, rather like a mouse being electrocuted.

When a ghost — or is it a gook? — bears down on the munchiemouth to pacmanize him, there comes a sort of paralysis over our gobbling pal. He no longer responds to the keys.

This increases the difficulty of the game somewhat, but patient players will doubtless find a way round the problem.

Blowing Up the World is a tedious, silly game in which keys 1 to 8 bear a rather vague relationship to "bombs" which are released at various points on a Mercator projection.

If you persevere you can eventually delete the lot; this, it is claimed you can "indulge your megalomania." **G.M.**

instructions	75%
playability	50%
graphics	80%
value for money	50%

★★★

Plegaron People Eaters 32K BBC £8.95

R H Electronics, Chesterton Mill, French's Road, Cambridge

This game requires both forward planning and quick reactions if you want to stay alive.

You are being pursued by the beasts of the title, and the only method of escape is to trap them in such a way that they cannot move in any direction.

The material you need to do this is scattered around the floor in the guise of bricks which you can push around into the position you desire.

Therefore attention has to be divided. On the one hand, you are trying to build a trap, on the other, you are trying to lure the creatures into the trap, all the while avoiding them and their voracious appetities.

The graphics are a little on the crude side with unimaginative use of colour, but are about average for a BASIC game like this.

Play is reasonably fast. You can choose several level of difficulty but the sound effects can only be described as intrusive and lacking in imagination.

The game is reasonably addictive, but is by no means up to the standards set by the arcade games you see today.

Overall, quite enjoyable but uninspiring. **D.C.**

instructions	70%
playability	60%
graphics	60%
value for money	60%

★★★

Sabotage 16K ZX81 £4.95

Macronics, 26 Spiers Close, Knowle, Solihull, West Midlands

This is really two games in one. The screen represents a compound in which randomly placed boxes of ammunition are kept; a saboteur tries to blow up as many as he can, while a guard tries to prevent him.

You can be either participant. The games are quite different to play. As the guard, you either trap the saboteur (he can't get near you), or guess where he is going; he will make for where he can do the most damage.

If you get there first he is stymied and will eventually blow up in frustration (not very subtle, this saboteur). But if you guess wrong, his mission will be successful.

Being the Saboteur himself is a bit more difficult; you have to choose where to put your charge, lay it and get away without blowing yourself up or being caught by the guard, who, in this version of the game, has a gun and can shoot you. But this version is actually more interesting.

The game loads and runs smoothly, with no snags. The graphics are adequate — that is, they show clearly what is happening — if not particularly inspired, though the chain-reaction effect of boxes detonating is pleasing.

instructions	75%
playability	70%
graphics	65%
value for money	70%

★★★★

Firefleet 32K Atari plus joystick £14.95

English Software, 50 Newton Street, Piccadilly, Manchester M1 2EA

Vertical scrolling is employed to good effect in this implementation of a Caverns of Mars-type game.

Under joystick control, the player's cruiser continually descends through canyons, running a gauntlet of firepower spat out from enemy tanks and cannons embedded in the canyon walls.

By skilfully positioning the cruiser above obstacles, the player can blast them sky-high with two onboard laser cannons. Timing is essential though: scrolling is forced whatever the situation.

There are four sectors to navigate. As you venture further down, indestructible forcefields and shielded weaponry will be encountered.

In the fourth sector dead ends are an additional hazard for the unwary. Four lives are allowed.

Scoring is problematical. The instructions only tell you a new cruiser is awarded every 10,000 points. Presumably it is up to you to work out how to go about getting one. And having your score constantly scrolling sideways at the base of the screen, together with the title credits, doesn't help. **T.A.**

instructions	60%
playability	80%
graphics	85%
value for money	90%

★★★★★

Ten All-Time Greats For Your Jupiter Ace £5.95

Joseph Nicholson, 11 Latton Close, Chilton, Didcot, Oxon OX11 0SU

There is a book about what you can do on the unexpanded ZX81 with only 1K of RAM, and really it isn't a lot.

There is also only about 1K of available RAM on the basic Ace, once the operating system has taken its share, but this program tape demonstrates better than any argument what you can do with a 1K RAM when the language is Forth and not BASIC.

Ten programs, a 14-page book for documentation and voice recording on the tape to help locate each program, all for the same price as many a single program has to be superb value, especially when each application is also an object lesson in economical programming.

Most of them are old favourites — Snakes, Gobbleman, Invade and the like — which I would hesitate to claim as timeless monuments to the human spirit.

But what really is great about them is the skill with which these particular examples are written; you'll have no problem using VLIST to study this. **G.M.**

instructions	90%
playability	95%
graphics	95%
value for money	100%

★★★★★

Keep them slaving, or you'll be sacked

Slavery has been brought back by Iain Bartram, in his novel game for the unexpanded TI-99/4A. How hard a taskmaster are you?

At first you'll think Slave Labour is an easy game to play — but so far no-one has got past the first field. It seems to bring out the competitive spirit in everyone who plays it.

You are a task master and control a ball and chain with the control keys D and S.

A little slave runs up the screen and plants crops — for which you get a score — and then runs back down. You have to force him back up by placing the ball and chain in his path.

If you miss a slave he quickly makes his escape.

After three escapes by three different slaves you have no more chances and you're sacked from the job.

Main variables

A,B row, column number of slaves
X column of ball and chain
E ball and chain direction

```
100 CALL CLEAR
110 CALL SCREEN(4)
120 CALL COLOR(1,6,4)
130 CALL CHAR(35,"3C4299A1A199423C")
140 CALL CHAR(128,"70F8F8F8740201")
150 CALL CHAR(129,"00102826494986")
160 CALL CHAR(130,"0070F8F8F8700804")
170 CALL CHAR(131,"020C1026291906")
180 CALL CHAR(132,"00387C7C7C380601")
190 CALL CHAR(133,"804040202C12120C")
200 CALL CHAR(135,"3844AA82926C286C")
210 CALL CHAR(136,"3844AA82926C6C")
220 CALL CHAR(144,"0040242428281")
221 CALL CHAR(152,"0000000000083442")
230 CALL COLOR(13,2,1)
240 CALL COLOR(14,6,1)
250 CALL COLOR(15,7,1)
251 CALL COLOR(16,15,1)
260 FOR I=2 TO 12
270 CALL COLOR(I,2,1)
280 NEXT I
290 K$="DO YOU WANT
    INSTRUCTIONS?"
300 R=8
310 GOSUB 1960
320 R=10
330 K$="TO"
340 GOSUB 1960
350 R=12
360 K$=" SLAVE LABOUR. "
370 GOSUB 1960
380 R=14
390 K$="              "
400 GOSUB 1960
410 CALL KEY(0,K,S)
420 IF K=89 THEN 450
430 IF K=78 THEN 960
440 GOTO 410
450 CALL CLEAR
460 R=2
470 K$="RUNS ON TI-99/4A"
480 GOSUB 1960
490 R=4
500 K$="# OF IAIN BARTRAM."
510 GOSUB 1960
520 R=7
530 K$="SLAVE LABOUR"
540 GOSUB 1960
550 R=9
560 K$="YOU HAVE 3 SLAVES"
570 GOSUB 1960
580 R=11
590 K$=""
600 GOSUB 1960
610 R=13
620 K$="TO CONTROL WITH YOUR"
630 GOSUB 1960
640 R=15
650 K$="BALL & CHAIN"
660 GOSUB 1960
670 R=17
680 K$=""
690 GOSUB 1960
700 R=19
710 K$="KEYS D&S MOVE THE"
720 GOSUB 1960
730 R=21
740 K$="BALL & CHAIN"
750 GOSUB 1960
760 FOR D=1 TO 500
770 NEXT D
780 CALL CLEAR
790 R=2
800 K$="THE DIRECTION OF THE"
810 GOSUB 1960
820 R=4
830 K$="BALL & CHAIN ON IMPACT"
840 GOSUB 1960
850 R=6
860 K$="DETERMINES THE DIRECTION"
870 GOSUB 1960
880 R=8
890 K$="IN WHICH THE SLAVE
    RETURNS TO"
900 GOSUB 1960
910 R=10
920 K$="THE FIELDS TO PLANT
    MORE CROPS"
930 GOSUB 1960
940 FOR D=1 TO 400
950 NEXT D
960 CALL CLEAR
961 CALL COLOR(1,6,4)
962 FOR D=6 TO 10
963 CALL HCHAR(D,1,152,32)
964 NEXT D
970 RANDOMIZE
980 A=18
990 B=INT(20*RND)+5
```

How it works

100-120 set screen, edge colours
130-230 define characters
240-300 set colour of characters
310-460 set up title screen
470-970 instructions
980-1110 set screen for game, initialise variables
1120-1270 main subroutine for slave movement
1280-1320 ball and chain bouncing off walls
1330-1380 key control over ball and chain
1390-1410 slave bouncing off walls
1420-1690 ball and chain hitting slave back up field
1700-2020 escaping slaves routine
2030-2070 word centring for screen output
2080-2120 reset, return to main program
2130-2200 slave bouncing off walls and off ball and chain in correct direction
2210-2310 planting crop and determine direction of return
2320-2370 scoring
2380-2450 move to next field
2460-2700 end, play again?

Hints on conversion

TI BASIC is fairly standard with two main exceptions. Single statement lines are used and subroutines for graphics and sound are available, prefixed with CALL, as detailed below.

CALL CLEAR clears screen
CALL SCREEN defines screen colour
CALL CHAR defines a character with a 16-digit hex string from an eight by eight grid. Other machines will use a different method
CALL COLOR (character set, foreground, background) sets colour of character
CALL HCHAR (row, column, character code, number of repeats) places character on screen at co-ordinates specified and optionally repeats character horizontally
CALL VCHAR similar to HCHAR but repeats character vertically
CALL GCHAR (row,column, variable) similar to a screen PEEK on other machines. Gives the ASCII code at the given screen co-ordinates
CALL SOUND (D,F,V) gives sound of duration D, frequency F and volume V. Three sounds can be produced at once

TI-99/4A PROGRAM

```
1000 X=15
1010 ADIR=-1
1020 IF RND>.5 THEN 1050 ELSE 1030
1030 BDIR=-1
1040 GOTO 1060
1050 BDIR=1
1060 CALL KEY(0,K,S)
1070 CALL HCHAR(20,X,32,2)
1080 IF K=68 THEN 1260
1090 IF K=83 THEN 1290
1100 CALL HCHAR(20,X,128)
1110 CALL HCHAR(20,X+1,129)
1120 IF (X>29)+(X<3)THEN 1210
1130 CALL HCHAR(A,B,Q)
1140 A=A+ADIR
1150 B=B+BDIR
1151 CALL GCHAR(A,B,Q)
1160 CALL HCHAR(A,B,135)
1170 IF A<11 THEN 2120
1180 IF (B<2)+(B>31)THEN 1320
1190 IF A>18 THEN 1350
1200 GOTO 1060
1210 E=-E
1220 X=X+E
1230 CALL HCHAR(20,X-E,32,2)
1240 CALL SOUND(30,300,2)
1250 GOTO 1100
1260 E=2
1270 X=X+E
1280 GOTO 1100
1290 E=-2
1300 X=X+E
1310 GOTO 1100
1320 BDIR=-BDIR
1330 CALL SOUND(40,350,1)
1340 GOTO 1190
1350 IF B=X THEN 1360 ELSE 1490
1360 CALL HCHAR(20,X,32,2)
1370 CALL HCHAR(19,X,132)
1380 CALL HCHAR(20,X+1,133)
1390 FOR D=1 TO 15
1400 NEXT D
1410 B=B+1
1420 CALL HCHAR(A,B,135)
1430 FOR D=1 TO 35
1440 NEXT D
1450 CALL HCHAR(19,X,32)
1460 CALL HCHAR(20,X,128)
1470 CALL HCHAR(20,X+1,129)
1480 GOTO 2060
1490 IF B=X+1 THEN 1500 ELSE 1630
1500 CALL HCHAR(20,X,32,2)
1510 CALL HCHAR(19,X+1,130)
1520 CALL HCHAR(20,X+1,131)
1530 FOR D=1 TO 15
1540 NEXT D
1550 B=B+1
1560 CALL HCHAR(A,B,135)
1570 FOR D=1 TO 35
1580 NEXT D
1590 CALL HCHAR(19,X+1,32)
1600 CALL HCHAR(20,X,128)
1610 CALL HCHAR(20,X+1,129)
1620 GOTO 2060
1630 K$="ESCAPED SLAVES "
1640 R=23
1650 GOSUB 1960
1660 SL=SL+1
1670 GOSUB 1690
1680 GOTO 1770
1690 FOR M=1 TO 2
1700 CALL HCHAR(A,B,32)
1710 A=A+1
1720 CALL HCHAR(A,B,135)
1730 FOR D=1 TO 10
1740 NEXT D
1750 NEXT M
1760 RETURN
1770 C=135
1780 FOR M=B TO 31
1790 CALL HCHAR(A,B,32)
1800 B=B+1
1810 C=271-C
1820 CALL HCHAR(A,B,C)
1830 FOR D=1 TO 15
1840 NEXT D
1850 NEXT M
1860 GOSUB 1690
1870 FOR M=25+SL TO 32
1880 CALL HCHAR(A,B,32)
1890 B=B-1
1900 C=271-C
1910 CALL HCHAR(A,B,C)
1920 FOR D=1 TO 15
1930 NEXT D
1940 NEXT M
1950 GOTO 2010
1960 W=16-INT(LEN(K$)/2)
1970 FOR I=1 TO LEN(K$)
1980 CALL HCHAR(R,W+I,ASC(SEG$(K$,I,1)))
```

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Database BBC £19.95

Gemini, 9 Salterton Road, Exmouth, Devon EX8 2BR

This offering from Gemini is supplied on cassette and if required transfers to disc easily. That's useful, but when on disc it doesn't exploit the disc's capacity for high-volume data storage.

This, like many other database programs, seems to have been written only for cassette-based machines, which severely limits the number of records stored. How about someone writing a disc database?

Anyway, the first part of the program is a set-up procedure to set field size, with a maximum of 12 fields available, to name and classify the type, numeric or string.

You can't decide your own screen layout — the program does that, and not very well.

Part two is the main database with menu drive options to add, edit, delete sort, find, list, calculate records. You can also print a file and save a file to tape or disc.

The database performed its tasks well, though the printout of the file was not user-designable.

A third part is a demonstration data file, but I couldn't load this at all on my copy, even at 300 Baud!

J.H.

instructions	75%
ease of use	50%
display	20%
value for money	10%

★

Super Catalog/The Filing Clerk 48K Atari 400/800 £4.95

Home Entertainment, 212/213 Broad Street, Birmingham B15 1AY

These programs come in a neatly-presented library box along with several sheets of instructions. Super Catalog is used as a demonstration of just what can be achieved by Filing Clerk, on the other side of the cassette.

The Catalog takes several minutes to load, together with a list of what is on sale from Home Entertainment.

Once in RAM, several options are displayed which allow for a quick search through all the records for a specified item. If handled correctly it allows you to search for record titles by the first few letters, complete names, publisher, maximum price or media.

Unfortunately this process is quite slow — probably due to the method of implementation.

Filing Clerk allows you to build a number of records into a file to be saved onto the cassette.

The screen display is not as clear as I would like although it is adequate for the purpose.

D.R.

instructions	85%
ease of use	80%
display	75%
value for money	50%

★★★

Wordsworth BBC 32K £17.25 (cass.) £19.50 (disc)

Ian Copestake, 23 Connaught Crescent, Brookwood, Woking, Surrey

Wordprocessing programs quickly turn a games machine into a powerful tool. This program is a very powerful utility with some very advanced features.

It has good clear documentation which needs reading carefully — in fact I would advise you to read it at least twice before you start. The facilities described are complex, and work is needed to understand how to get the program to obey your wishes.

Among Wordsworth's outstanding features are the ability to print more than one copy of a text with a single command, allowing text input during printing, and the ease with which decimal numbers can be formatted and printer control codes inserted.

I didn't like the method of text amendment, which seemed long winded and error-prone, or the fact that I could not see the text formatted as it would be on the printed page (this is possible on the disc version, though).

Overall, though, this is a clever and complex program which will probably become indispensible over the long term for its users.

D.C.

instructions	85%
ease of use	50%
display	80%
value for money	85%

★★★★

Superfile Commodore 64 £12.95

Byteware, Unit 25, Handyside Arcade, Percy St, Newcastle upon Tyne

One of the most common business utilities is the data base, based around the creation of electronic filing clerk or records.

Each record is subdivided into fields, which carry such data as names, addresses, telephone numbers etc.

The beauty of using a computer-based system is the speed with which you can sort or search records. The fly in the ointment tends to be the fact that most data bases are disc-orientated.

This program sets up the database in RAM, making a system which can be used on any 64.

You are allowed to have up to eight fields for records with a maximum field size of 50 for character fields and 10 for numeric fields.

The maximum number of records possible depends on the size of the fields. An average sized record seems to allow about 100 records overall.

There are commands available for the sorting of the data base, the searching for specific fields, the mathematical processing of records and the saving of the data base on tape.

A.W.

instructions	95%
ease of use	90%
display	n/a
value for money	90%

★★★★

Grasp 48K Spectrum £6.50

Camel Micros, 33a Commercial Road, Weymouth, Dorset

This is an outstanding utility program which should find favour in many educational and semi-business applications. Although its purpose is basically to turn numerical data into graphs, pie charts or histograms, this does not do justice to this immensely powerful piece of software.

Its initial use is greatly assisted by a booklet which explains the various words used in the program.

A large menu enables you to define the shape and size of the graph, its position on screen, colour or pattern of the blocks etc.

Up to five separate graphs may be planned and instantly recalled, and a good number of datasets may be plotted or switched at will between the graphs. Each may be drawn on any grid of any complexity, or merely plotted against two axes.

For the more ambitious user, the possibilities are even more exciting. Any graphs, by selection of positions and size, may be shown on the same screen, or may even be superimposed upon each other to produce multicoloured results.

A text mode enables letters, numbers or symbols to be placed anywhere on the screen to enable tilting and labelling.

P.T.

instructions	90%
ease of use	88%
display	100%
value for money	100%

★★★★★

Keep your mind on the road, your hand on your VIC

With three listings, Robert King has crammed a lot into the unexpanded VIC-20. He's given 3D Road sophisticated graphics for an exciting game

My 3D Road program packs a lot into the unexpanded VIC-20 because I have written it in three parts.

The first contains the DATA for user-defined graphics and the machine code which POKEs the car onto the screen. The second listing has the machine code which moves the road.

And the third listing is the main program. Each of the first two programs LOADs the next automatically.

How it works
Listing 3

1-2 disable BREAK key, initialise variables
3-4 PEEKs for moving road
5 clear screen, change character set to user-defined, set screen and border colours
6-10 draw horizon
11-19 draw mountain
21-23 draw road
24-27 puts car on screen, eight spaces across
50-70 print score, high score, number of drivers, increase sound for car
100-101 check road does not go off screen
102-103 road move left or right?
105-180 main loop, including:
108-109 check for crash
110-130 read joystick
134-135 read keyboard
300-303 crash sound
305-370 print score, remaining drivers. Does MEN = 0?
400-425 print HIGH SCORE ACHIEVED
450-480 flash PRESS ANY KEY on screen, read from keyboard, joystick
500-549 print instructions, read from keyboard, joystick

Hints on conversion

Extensive use of POKEs makes this listing very difficult to convert, but here are some of the locations and what they do:
36874 alto sound register
36876 soprano sound register
36878 volume
7680-8186 top left-bottom right of screen
197 PEEK for current key depressed
37137,37152 joystick PEEK locations
7168- for user-defined graphics
6700 user memory for machine code

After displaying the instructions, the program waits for you to press a key. It then clears the screen, draws the mountains and waits for another key-press.

The 3D road is then shown with the car and the game begins.

As the road moves you can steer the car using the greater than and less than keys or a joystick.

Each time you crash your score and the number of drivers remaining is displayed. At the end of each game the program returns to the mountain-drawing routine and waits for you to press a key — including the one on the joystick — before starting a new game.

As well as your score and the number of drivers left, the high score is also printed at the top of the screen. These are constantly updated during the program.

Note: After typing in the programs, SAVE before RUNning as the BREAK key is disabled. Remember to check the DATA carefully — one mistake will lead to a crash.

Listing 1 — sets up user-defined characters and draws car

```
0 PRINT"□3D ROAD BY ROBERT KING":POKE788,194:POKE37150,2
1 FORF=7168TO7535:READA:POKEF,A:NEXT
2 DATA7,15,24,16,16,48,32,32,255,255,0,0,0,0,127,128,255,255,0,0,0,0,254,1
3 DATA224,240,24,8,8,12,4,4,33,98,68,73,82,103,144,127,63,64,128,0,0,255,0,255
4 DATA222,2,1,0,0,243,4,234,132,70,34,146,10,134,73,174
5 DATA0,56,56,56,56,56,56,0,0,0,28,28,28,28,28,28,28,0
6 DATA0,0,0,0,4,31,224,0,0,0,0,0,0,0,112,143,0,0,0,0,0,0,0,30,225,0
7 DATA0,0,0,0,12,18,161,64,0,0,0,0,0,0,32,255,0,0,0,0,0,0,0,0,14,19,224
8 DATA0,0,0,0,3,4,200,40,0,0,0,0,0,134,201,240,0
9 DATA0,0,0,0,16,60,199,0,192,96,96,32,32,46,243,0
10 DATA0,0,15,17,144,96,64,0,0,0,135,255,0,0,0,0,0,0,0,192,31,0,0,0,0
11 DATA0,0,127,128,0,0,0,0,0,0,0,192,49,14,0,0,0
12 DATA0,48,120,134,1,0,0,0,0,0,4,63,192,0,0,0,0,0,1,226,62,0,0,0
13 DATA115,140,0,0,0,0,0,0,0,0,1,130,68,40,16,8
14 DATA4,2,1,0,0,0,0,0,0,0,0,240,0,4,6,3
15 DATA0,0,0,0,0,0,0,0
16 DATA0,1,2,4,8,16,32,64,192,63,64,128,128,128,128,128,128,0,248,4,2,3,2,2,2
17 DATA9,31,32,64,192,64,64,64,35,252,2,1,1,1,1,1,0,128,64,32,16,8,4,2
18 DATA128,255,128,191,170,191,128,255,128,255,0,192,64,192,0,255,2,255,0,7,0,7,
0,255
19 DATA64,255,0,224,16,224,0,255,1,255,0,3,2,3,0,255,1,255,1,253,65,253,1,255
20 DATA126,126,126,126,126,60,60,0
30 FORI=6700TO6912:READA:POKEI,A:NEXT
31 DATA169,0,133,1,166,0,169,32,157,140,31,232,165,1,157,140,31
32 DATA169,6,157,140,151,232,230,1,169,4,197,1,208,237,169,32,157
33 DATA140,31,24,138,105,16,170,24,138,105,1,170,169,32,157,140
34 DATA31,232,165,1,157,140,31,169,6,157,140,151,232,230,1,169,0
35 DATA197,1,208,237,169,32,157,140,31,169,33,133,1,24,138,105,16
36 DATA170,169,32,157,140,31,232,165,1,157,140,31,169,6,157,140
37 DATA151,232,230,1,169,39,197,1,208,237,169,32,157,140,31,169
38 DATA39,133,1,24,138,105,15,170,169,32,157,140,31,232,165,1,157
39 DATA140,31,169,6,157,140,151,232,230,1,169,45,197,1,208,237
40 DATA169,32,157,140,31,169,45,133,1,24,138,105,15,170,169,32
41 DATA157,140,31,232,165,1,157,140,31,169,6,157,140,151,232,169,32,157,140,31,2
4,138
42 DATA105,3,170,169,32,157,140,31,232,165,1,157,140,31,169,6,157
43 DATA140,151,232,169,32,157,140,31,96
50 POKE198,3:POKE632,147:POKE633,131
```

Listing 2 — machine code to move the road

```
0 REM *** 3D ROAD ***
1 REM ****   BY   ****
2 REM * ROBERT KING *
3 REM ****************
5 PRINT"□■■■■■■■■3D ROAD"
6 PRINT"■■■■■■■BY ROBERT KING"
7 POKE788,194:POKE37150,2
10 FORI=6913TO7129:READA:POKEI,A:NEXT
15 DATA169,19,32,210,255,162,0,169,9,133,3,24,232,169,17,32,210
16 DATA255,138,197,3,144,244,169,29,32,210,255,165,2,32,210,255
17 DATA169,141,32,210,255,96
20 DATA169,29,32,210,255,165,4,32,210,255,169,141,32,210,255,96
21 DATA169,29,32,210,255,165,5,32,210,255,169,141,32,210,255,96
22 DATA169,29,32,210,255,165,6,32,210,255,169,141,32,210,255,96
23 DATA169,29,32,210,255,165,9,32,210,255,169,141,32,210,255,96
24 DATA169,29,32,210,255,165,251,32,210,255,169,141,32,210,255,96
25 DATA169,29,32,210,255,165,252,32,210,255,169,141,32,210,255,96
26 DATA169,29,32,210,255,165,253,32,210,255,169,141,32,210,255,96
27 DATA169,29,32,210,255,165,254,32,210,255,169,141,32,210,255
30 DATA165,253,133,254
31 DATA165,252,133,253
32 DATA165,251,133,252
33 DATA165,9,133,251
34 DATA165,6,133,9
35 DATA165,5,133,6
36 DATA165,4,133,5
37 DATA165,2,133,4
40 DATA162,0,169,10,133,3,24,232,169,145,32,210,255,138,197,3,144,244,96
50 POKE198,3:POKE632,147:POKE633,131
```

Listing 3 — main game program

```
0 REM*BY ROBERT KING *  ****     1983  ****
1 CLR:POKE788,194:POKE37150,2:H=100:V=36874:GOSUB500
2 S=0:M=3:L=1:A$="A":POKEV+4,15:Z=128:POKE650,128
3 POKE2,0:POKE4,0:POKE5,0:POKE6,0:POKE9,0
4 POKE251,0:POKE252,0:POKE253,0:POKE254,0
5 PRINTCHR$(147):POKE36869,255:POKE36879,30
6 A=7855:B=38575:C=7865:D=38585
7 FORI=1TO9:POKEA+I,I+9:POKEB+I,5:NEXT
8 POKEC,13:POKEC+1,19:POKEC+2,12:POKEC+3,17
9 POKED,5:POKED+1,5:POKED+2,5:POKED+3,5
10 FORI=1TO9:POKEA+13+I,I+9:POKEB+13+I,5:NEXT
11 POKE7843,31:POKE38563,5
12 POKE7842,30:POKE38562,0
13 A=7811:B=38531:C=7819:D=38539
14 FORI=1TO7:POKEA+I,I+20:POKEB+I,0:NEXT
15 POKEC,27:POKEC+1,29:POKEC+2,28:POKEC+3,22:POKEC+4,26:POKEC+5,27
16 POKED,0:POKED+1,0:POKED+2,0:POKED+3,0:POKED+4,0:POKED+5,0
17 FORI=1TO9:POKEA+13+I,I+20:POKEB+13+I,0:NEXT
18 POKE7833,28:POKE38531,0
19 POKEC,27:POKEC+1,29:POKEC+2,28:POKEC+3,22:POKEC+4,26:POKEC+5,27
20 IFA$="A"THENGOSUB450:A$=""
21 FORI=7884TO8070STEP22
22 POKEI,0:POKE30720+I,3:NEXT
23 FORI=7865TO8084STEP23:POKEI,9:POKE30720+I,3:NEXT
24 POKE0,0:POKEV+3,0
25 SYS6700
27 C=0
30 GOSUB50
40 GOTO100
50 PRINT"■■SC:";S:PRINT"■■■■■■■■■■■■HI:";H
60 PRINT"■■■■N:";M
65 Z=Z+.5:IFZ>200THENZ=200
70 RETURN
100 IFPEEK(7680)=0THENPOKE2,148:GOTO104
101 IFPEEK(7889)=9THENPOKE2,20:GOTO104
102 IFRND(1)>.5THENPOKE2,20:GOTO104
103 POKE2,148
104 SYS6913
105 FORI=6952TO7064STEP16
106 IFPEEK(8054+PEEK(0)+1)=0THEN300
109 IFPEEK(8054+PEEK(0)+4)=9THEN300
110 POKE37139,0:POKE37154,127
120 D=PEEK(37137):IF(DAND16)=0THENPOKE0,PEEK(0)-1:POKE36876,200
130 D=PEEK(37152):IF(DAND128)=0THENPOKE0,PEEK(0)+1:POKE36876,200
134 D=PEEK(197):IFD=29THENPOKE0,PEEK(0)-1:POKE36876,200
135 IFD=37THENPOKE0,PEEK(0)+1:POKE36876,200
140 POKE37154,255
150 SYS6700
155 POKEV+2,0
160 POKEV,Z
170 SYSI
172 S=S+1
174 POKE37139,0:POKE37154,127
176 POKE37154,255
180 NEXT
190 GOSUB50
199 GOTO100
300 POKEV+5,42:POKEV+1,200:POKEV+2,200:POKEV+3,200:POKEV,200
301 FORI=15TO0STEP-1:FORT=1TO100:NEXT:POKEV+4,I:NEXT
302 FORI=3TO0STEP-1:POKEV+I,0:NEXT
303 FORI=0TO900:NEXT
305 POKEV+5,42:PRINTCHR$(147)
310 M=M-1:PRINT"■■■■■■■■■■■■■■■■■SCORE:";S
320 PRINT"■■■■■■■■■MEN:";M
330 FORI=0TO2000:NEXT
360 IFM=0THEN400
370 Z=128:POKEV+4,15:POKEV+3,0:GOTO3
400 IFS>HTHENH=S:GOTO405
402 GOTO2
405 POKE36879,238:PRINTCHR$(147)
410 PRINT"■■■■■■■■■■YOU HAVE ACHIEVED"
412 PRINT"■■■■■■■■■■■A NEW"
414 PRINT"■■■■■■■■■■HIGH SCORE"
416 PRINT"■■■■■■■■■■■OF";S
418 FORI=1TO4000:NEXTI
420 PRINT"□■■■■■■■■■■■■■■CONGRATULATIONS!"
422 FORI=0TO2000:NEXT
425 GOTO2
450 POKE198,0:POKEV+4,15
452 PRINT"■■■■■■■■■■■    PRESS ANY KEY":POKEV+2,200
455 FORI=0TO400:NEXT:POKEV+2,0
460 PRINT"■■■■■■■■■■"
465 FORI=0TO10
470 GETA$:IFA$<>""THENRETURN
474 POKE37139,0:POKE37154,127
475 D=PEEK(37137):IF(DAND32)=0THENPOKE37154,255:RETURN
476 POKE37154,255
478 NEXT
480 GOTO452
500 PRINT"□■■■■*** 3D  ROAD ***■■■■■■■■■■■■■■■■■
```

Learning with your micro's as easy as abc . . .

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Time
48K Spectrum
£5.95

Stell Software, 36 Limefield Avenue, Whalley, Lancs

On loading this program, the introductory graphics of clock and mouse are shown and then, in large letters, a menu of options is displayed.

There are four options: hours, minutes, digital or instructions.

The instructions are well-written, but tend to be confusing as there are so many to remember. It would have been useful if they had been on the insert as well, to allow for leisurely assimilation.

All three sections are presented following the well-tried teaching technique of giving a couple of examples, then asking questions in a simple way and finally reversing the question.

For example, the program will show examples of 6 o'clock and 10 o'clock, tell the user to stop the clock at 1 o'clock and, after getting 10 correct answers, ask the user to enter the time shown by the clock.

A good simple clock display, very user-friendly, good prompts, and a well designed example/question combination makes this an effective educational program.

R.E.

instructions	72%
ease of use	60%
display	83%
value for money	90%

★ ★ ★ ★

Chattermaths
VIC-20 plus Adman speech synthesiser
£4.95

Currah, Graythorp Industrial Estate, Hartlepool, Cleveland

Conceptually, this is a simple maths game in which you do addition sums (no answer higher than 10).

A correct answer is rewarded by an animated man climbing up a diving board.

With each correct answer, he climbs higher until he makes his dive. You then start with another diver.

An incorrect answer prompts a display of objects (eg cars, boats, trains etc) which can be counted to give the child the correct answer.

If a second incorrect answer to the sum is given, the program 'counts' the objects for you and 'speaks' the numbers through the speech synthesiser.

For some strange reason, the program is limited to addition sums only. A range of difficulties would also be helpful.

Graphically, the game is good and the point of it is put over to the child well. Overall, a nice program which could however stand some improvement.

M.W.

instructions	40%
ease of use	70%
display	80%
value for money	60%

★ ★ ★

Chattercount
VIC-20 plus 16K and Adman synthesiser
£5.95

Currah, Graythorp Industrial Estate, Hartlepool, Cleveland

In essence the program consists of six games, each aimed at emphasising a particular aspect of counting. The games appear to be written for pre-school and reception class children.

The games ranged from a mediocre number recognition routine to a highly entertaining game using nice animation. They used the right approach of rewarding success while gently correcting failure.

One example game asks the child to match the number of honey jars to a number of bears. The correct answer resulted in happy teddies eating their honey. The wrong answer left hungry teddies.

The use of graphics was good, and emphasis was placed on objects which appeal to young children (eg teddies, boats, trains, trucks and houses). Several of the games used either animation or moving objects and were generally well programmed.

M.W.

instructions	40%
ease of use	90%
display	95%
value for money	85%

★ ★ ★ ★

Educational 1
BBC 32K £8

Golem, 77 Qualitas, Bracknell, Berks RG12 4QG

Seven programs, all aimed at the five to nine age range. The programs are Math1 (add and subtract), Math2 (multiply and divide), Cubecount, Shapes, Memory, Spell and Clock.

There is no doubt that each of these programs has much to recommend it, and none of them have any real educational or operational drawbacks.

The only small quibble I have is that some could have been taken that bit further, but this would be asking too much for programs at about a pound each.

They are all useful and of a uniformly good standard. They are also very well error trapped, an essential for such young children.

To single out just two of these programs, the concept and use of Clock is very good, with a choice of setting the hands (no danger of damage to the family heirloom either) or reading the time. The clock face is particularly clear and easy to read and set.

The memory program is also a very useful addition to anyone's library. The value of memory training is often underrated, yet it is a fundamental skill of both reading and writing.

D.C.

instructions	90%
ease of use	95%
display	90%
value for money	100%

★ ★ ★ ★ ★

Geometry
48K Spectrum
£7.50

Camel Micros, 33a Commercial Road, Weymouth, Dorset

There is almost unlimited potential for educational software, with the graphics, sound and colour of today's micros. Yet some firms still produce software like this — very little more than the traditional textbook seen in most schools.

The tape actually consists of two separate but linked programs. The first, **Geometry**, autoruns to five smaller sections accessed via a menu.

Each follows a similar pattern, with line diagrams explained by text. There is unlimited time for study, as each successive frame is presented on pressing enter.

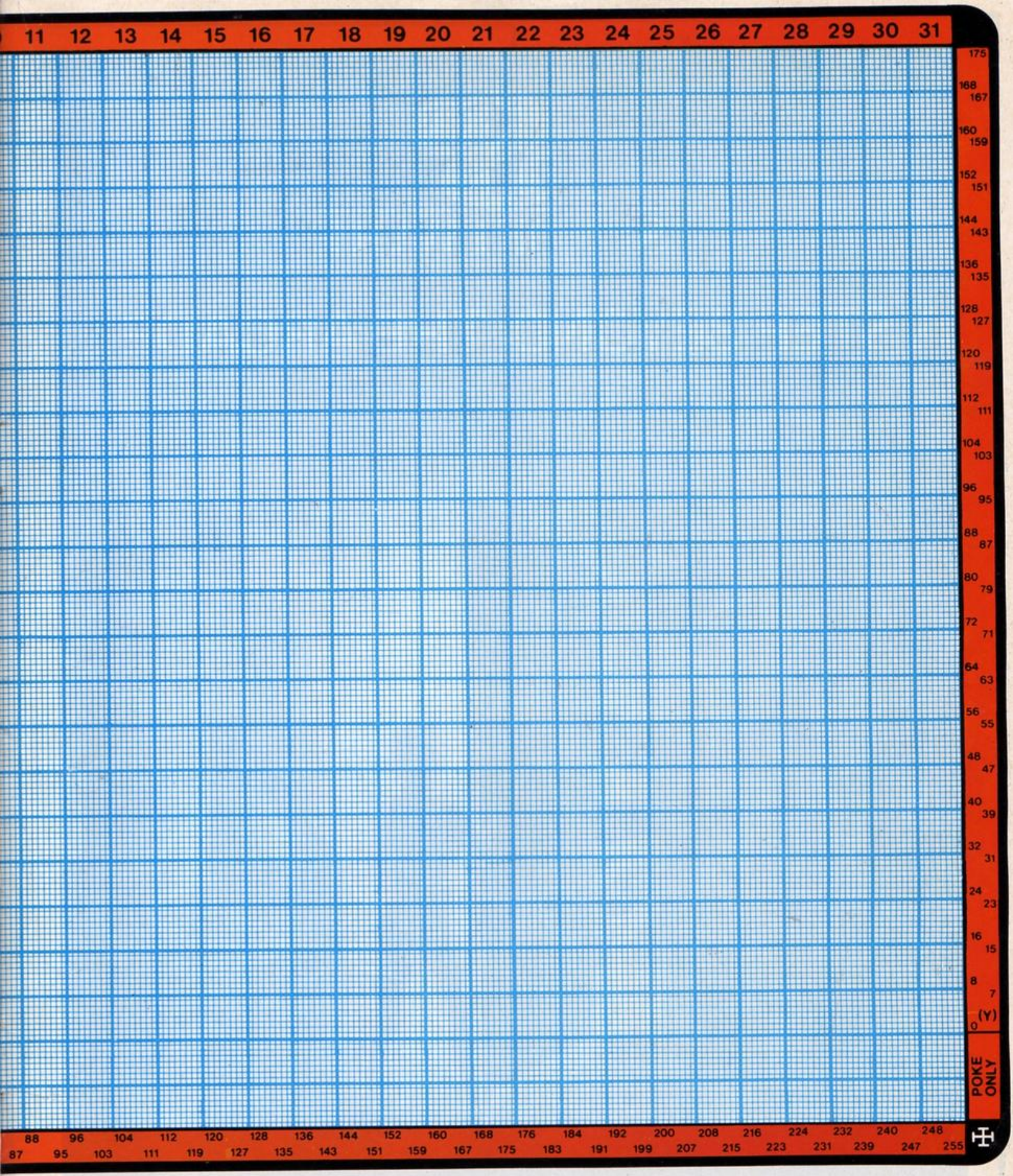
Towards the end of each section, there a few questions, each with three choices of answer. The wrong answer gives another chance, while the correct response too often gave a rather patronizing reply like "Well, that was obvious, because..".

Angles is again a series of questions and answers, along very similar (very similar lines. It shares with Geometry a number of minor but irritating weaknesses, such as an odd spelling of triangle and some equally bizarre phrases.

P.T.

instructions	85%
ease of use	85%
display	50%
value for money	50%

★ ★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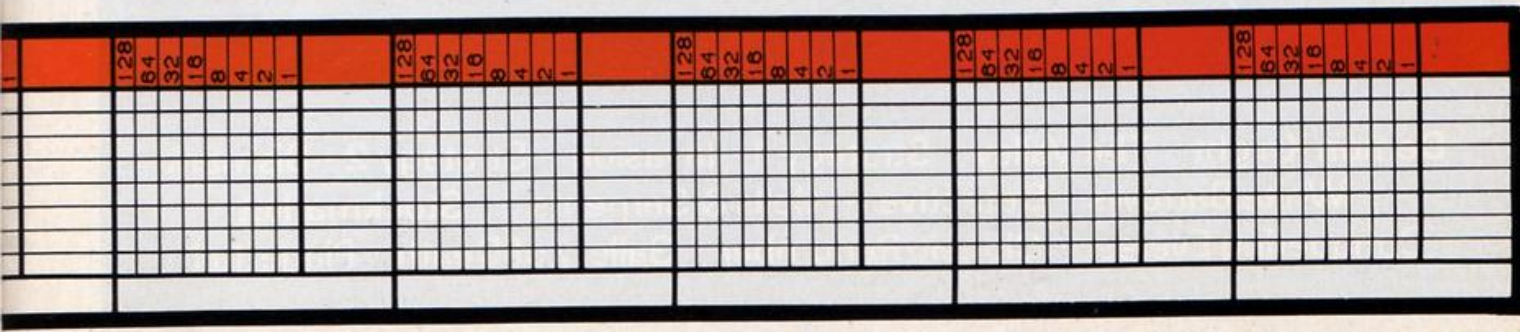
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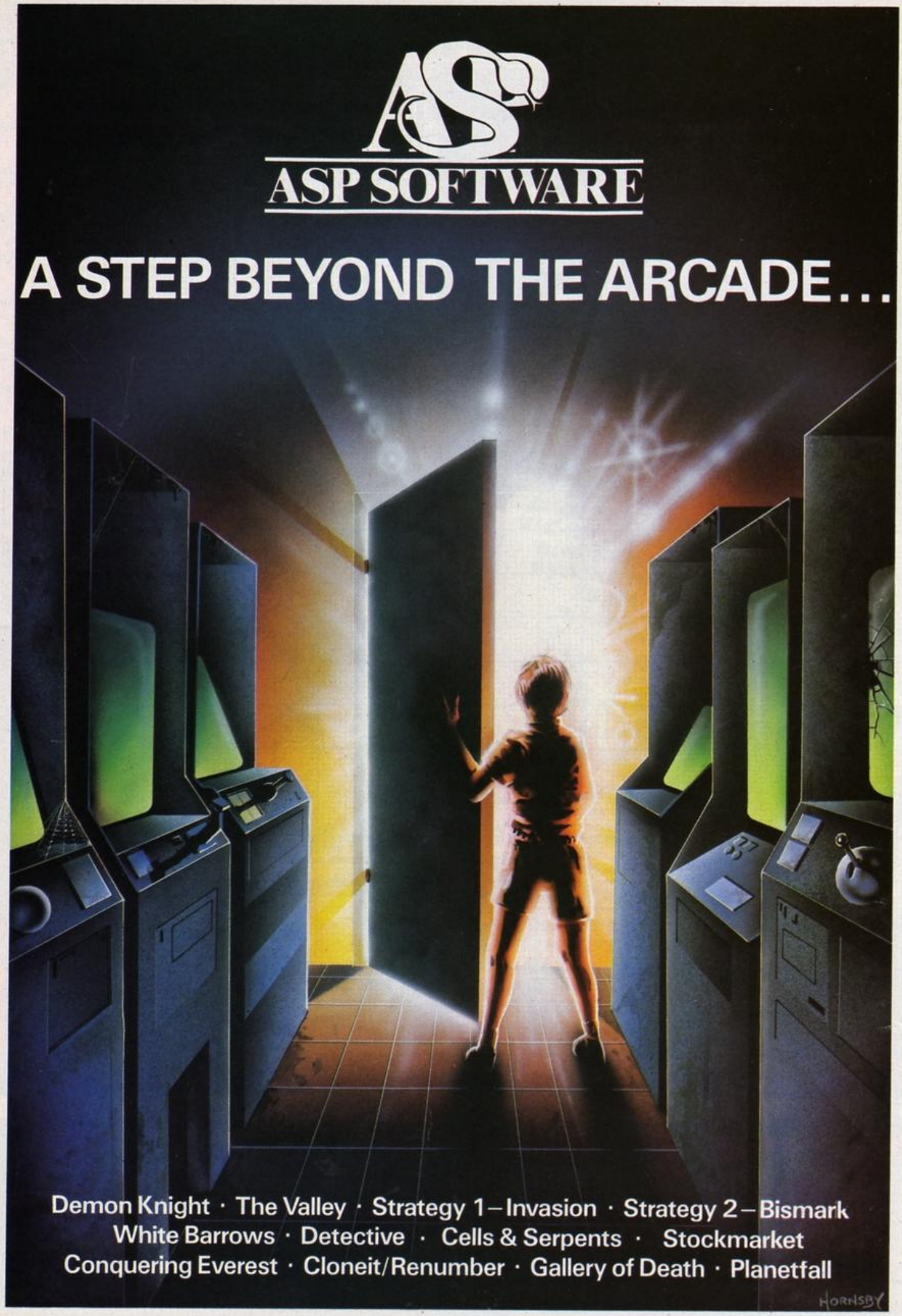
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£500 HI-SCORE PRIZE

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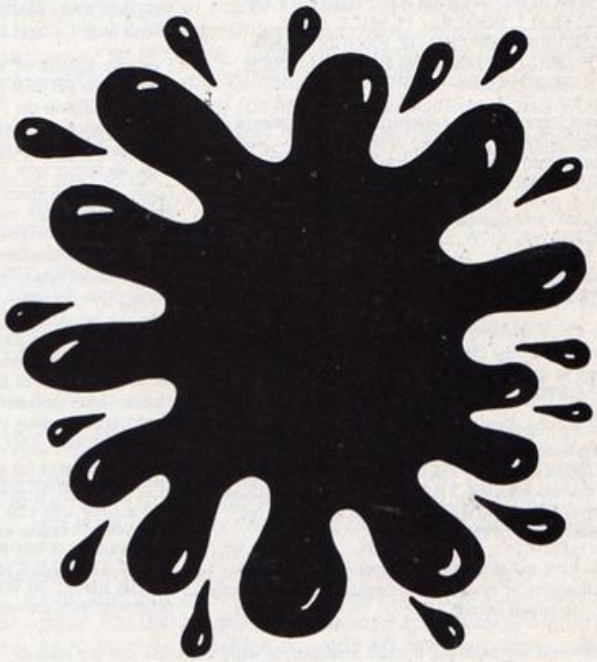

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HCW34

'NOW WIN THE POOLS'

THIS IS MEANT FOR YOU — ESPECIALLY IF YOU USE A SINCLAIR SPECTRUM COMPUTER or even ANY COMPUTER — OR NO COMPUTER AT ALL.

HAVE YOU EVER HAD THAT DREAM OR EVER WISHED THAT YOU HAD "WON ON THE POOLS" — AT LAST YOU CAN TURN IT INTO REALITY.

THERE **IS** A SECRET OF "HOW TO WIN ON THE FOOTBALL POOLS" — **IT CAN BE DONE.** I DISCOVERED THE SECRET A LONG TIME AGO — NOW, **FOR THE FIRST TIME** I'M PREPARED TO SHARE IT WITH YOU.

HOW DOES THIS INTEREST YOU — I HAVE DOCUMENTARY EVIDENCE BY WAY OF POOLS WINNINGS DIVIDEND SLIPS/ CANCELLED CHEQUES, etc, SHOWING MY PRESENT WINS ON THE POOLS AS FOLLOWS:—

First Dividends	Second Dividends	Third Dividends	Fourth Dividends	Fifth Dividends	Sixth Dividends
765	1,818	2,942	1,952	631	93

A GRAND TOTAL OF 8,201 (EIGHT THOUSAND, TWO HUNDRED AND ONE DIVIDENDS — so far).

I HOLD THE UNCHALLENGED WORLD'S RECORD FOR POOLS WINS

I AM MAKING THIS VERY SPECIAL, REDUCED PRICE OFFER TO READERS OF HOME COMPUTING WEEKLY FOR A LIMITED PERIOD ONLY.

Do not let anyone tell you that it is impossible to "WIN ON THE POOLS" — since I perfected my method, **I HAVE WON REGULARLY** for over **TWENTY-FIVE YEARS** — proof that it is no 'flash-in-the-pan'.

I have CHALLENGED THE WORLD with my record of wins and with all the evidence that I possess — NO ONE has ever been able to accept the Challenge — I KNOW NO ONE EVER WILL.

MY SECRET IS NOW PLACED ONTO COMPUTER CASSETTE FOR YOU.

THE METHOD IS THE GREATEST TREBLE CHANCE WINNER IN THE HISTORY OF FOOTBALL POOLS — IT WILL LAST FOREVER — BOTH FOR ENGLISH AND AUSTRALIAN FOOTBALL POOLS, WITH EQUAL SUCCESS.

I now intend to give a limited number of people the opportunity of making use of my method — perfected over 25 years and proving itself on **EVERY ONE OF THOSE TWENTY-FIVE YEARS.**

You will have noted details of my personal achievements so far, as given to you above.

A GRAND TOTAL of 8,201, yes 8,201 POOLS DIVIDENDS, including **765 FIRST DIVIDENDS.**

My Pools Winnings Dividend slips now number so many, that they fill a very large suitcase and will stand as my evidence of all claims in **ANY COURT OF LAW IN THE WHOLE WORLD.**

Taking just the past 25 years into consideration, I have won ON AVERAGE over 328, (THREE HUNDRED AND TWENTY—EIGHT) Pools Dividends **EVERY YEAR** — or — AN AVERAGE of over **SIX DIVIDENDS EVERY WEEK** for **TWENTY—FIVE YEARS.**

You have my absolute Guarantee of the complete authenticity of every claim, cheque, document, letter, etc, contained herein.

I do have losing weeks, but ON AVERAGE my winnings show over SIX DIVIDENDS **EVERY WEEK** for the past 25 years.

I know that you are now utterly flabbergasted, it always happens to everyone with whom I come into contact. Please just sit back and **imagine** for a moment my **FIRST DIVIDEND** wins alone — they now number 765 (seven hundred and sixty-five) and will probably be even more by the time this advertisement appears in print.

I AM NUMBER ONE IN THE WORLD AND NO ONE DISPUTES IT.

For as long as I continue to enter the Football Pools my wins will continue. I have already said, they apply, with equal success to both English and Australian Football Seasons.

I intend to release a STRICTLY LIMITED NUMBER of copies of my cassette — DO NOT DELAY AND FIND YOU ARE TOO LATE, in which case I would have to refund your money.

I am so confident of **YOUR** success that if do **not** win at least THREE FIRST TREBLE CHANCE DIVIDENDS in the first 20 weeks of entering, I will completely cancel the balance of the purchase price and you do not have to pay me another penny, at any time, no matter how vast your winnings.

I only wish that space would allow me to give you photographs of my winnings slips, cancelled cheques, etc, but it is of course impossible — they now number 8,201 dividends. I have however given JUST A FEW EXTRACTS from ORIGINAL LETTERS I hold from my small Clientele.

I am the Inventor and Sole Proprietor of my method, Registered as EUREKA — ('I have found it'). I am known as The Professor in Pools Circles — I am of the Highest Rank in Forecasting — this is beyond dispute. I am marketing a limited number of Computer Cassettes, under my Registered Company — FOOTBALL ENTERPRISES.

My initial charge for a copy was £75, but for this SPECIAL REDUCED PRICE OFFER I will send you a copy, for £20, (twenty pounds) ONLY, plus your Promise to pay me the balance of £55 — **ONLY** IF YOU WIN AT LEAST THREE FIRST TREBLE CHANCE DIVIDENDS IN YOUR FIRST 20 WEEKS OF ENTERING — otherwise you owe me NOTHING FURTHER.

This is surely proof absolute of my supreme and utter confidence in my own abilities and in the capabilities of my discovery. I could easily CHARGE £2,000 per cassette on the evidence I possess, but that would not be fair to everyone, which is what I want to do.

My method is WORLD COPYWRIGHT, any infringement and immediate proceedings will be taken, without prior warning. It is truly ingenious and has stood the test of time.

My cassette is simplicity itself to operate and you'll be given FULL DETAILS for weekly calculating. Your entry need not involve you in any large weekly stakes, you can enter for as little as 25p, if you wish.

I charge NO COMMISSION on any of your wins — no matter how BIG they may be.

I realised a long time ago, that it was no good sitting down and **dreaming** about winning the pools, so I burnt the candle at both ends, working late into the night, occasionally RIGHT THROUGH THE NIGHT, I **KNEW** there was a way, eventually it all paid off and has been doing so ever since.

I am unable to vary my offer to anyone, so please do not request it, as I shall very easily dispose of the cassettes I have prepared and am making available.

IMMEDIATELY I perfected my method I commenced winning right away, (first with just a little £163, the first week I used it), I HAVE NEVER LOOKED BACK SINCE, amongst all those dividends was one for over **EIGHT THOUSAND POUNDS** for just **one eighth of a penny stake.**

I will release a copy on cassette, to you, on receipt of the completed order form and your Signature thereon, confirming you will treat it in the STRICTEST CONFIDENCE between us and retain it for your **OWN USE ONLY.**

PLEASE NOTE:
If you happen to be the proud owner of a Computer, **other than** a Sinclair Spectrum, you can still purchase a copy of my method, for the same price and program it YOURSELF on to YOUR OWN COMPUTER — or even if you do not have a COMPUTER.

Don't take my word for it, read what people write about me and my method:—

I won on Zetters last weekend. It was not a big sum, but all the same it was a very nice surprise for me. J.C., Lancs.

I appreciate the straightforward method you adopt, which is such a contrast to the rubbish of misrepresentation which is so common in the Betting World, by unscupulous and self-opinionated charlatans. C.H., Devon

Winnings cheque received today, sincere thanks. D.N., Devon

I congratulate you on your achievement. R.R., Wales

I should like to thank you for a most exciting season and look forward to hearing from you again. J.C., Hants.

I would like to acknowledge cheque and say how much I appreciate your integrity. J.M., Scotland

Many thanks for your system, it is all you say and more. J.C., Lancs.

Your wonderful system won me £3,527. I intend to visit London soon and will be able to come and see you personally. (Overseas Client). P.M., Kampala.

Many thanks for trying so hard to please us all, your brother should be thanked also. One of our daughters, WHOSE HUSBAND YOU HELPED ENORMOUSLY, has just phoned, the four of them have just spent a lovely holiday in Spain. K.R.,Isle of Man.

I sent in my FIRST entry last week and won 2nd and 3rd dividends, as you will see from the enclosed certificate. One more and I would have collected over £400 for FIRST dividend. Once I've won a fair amount I shall be staking from winnings and at 2p per line, A FIRST DIVIDEND last week at this would have been over £3,000. C.A., Yorks.

I am very interested indeed and enclose £20 herewith. I agree to pay you the balance of £55 **ONLY** if I win at least THREE FIRST TREBLE CHANCE DIVIDENDS in my first 20 weeks of entering — otherwise I owe you NOTHING FURTHER at any time — no matter how much money I win. My Signature below is my Undertaking to retain complete and absolute confidence about the method.

Name.....

Address.....

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.....

Signature HCW34

The Managing Director,
Football Enterprises,
'Anvon',
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Haverfordwest, Pembs.

Please tick if cassette is for:
Sinclair ZX81 (16K) ☐
Sinclair Spectrum (48K) ☐
Any other Computer ☐
No Computer at all ☐

Top Ten programs for the ZX81

1	Flight Simulation	Sinclair (1)
2	Space Raiders	Sinclair (2)
3	Espionage Island	Sinclair (3)
4	1K Games	Sinclair (4)
5	Fantasy Games	Sinclair (5)
6	Defender	Quicksilva (6)
7	Scramble	Quicksilva (7)
8	Football Manager	Addictive (8)
9	Ship of Doom	Sinclair (9)
10	1K Chess	Sinclair (10)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the Dragon

1	Ring of Darkness	Wintersoft (1)
2	Frogger	Microdeal (4)
3	Cuthbert Goes Walkabout	Microdeal (6)
4	Shuttle	Microdeal (7)
5	Champions	Peaksoft (10)
6	Mined Out	Quicksilva (5)
7	Nightflight	Salamander (2)
8	Android Attack	Microdeal (3)
9	Graphics System	Salamander (–)
10	Franklin's Tomb	Salamander (–)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten for the VIC-20 and Commodore 64

1	Hovver Bovver (64)	Llamasoft (3)
2	Frogger (64)	Interceptor (5)
3	Wacky Waiters (VIC)	Imagine (7)
4	Gridrunner (64)	Llamasoft (4)
=	Arcadia (VIC)	Imagine (1)
6	Krazy Kong (64)	Interceptor (8)
7	Skyhawk (VIC)	Quicksilva (6)
8	Paratroopers (VIC/64)	Rabbit (–)
9	Pacacuda (VIC)	Rabbit (–)
10	Bonzo (VIC)	Audiogenic (–)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the Spectrum

1	Flight Simulation	Psion (4)
2	Zzoom	Imagine (–)
3	Trans-Am	Ultimate (5)
4	Zip-Zap	Imagine (–)
5	Jet Pac	Ultimate (2)
6	Kong	Ocean (–)
7	Transylvanian Tower	Richard Shepherd (–)
8	Pool	CDS (–)
9	Race Fun	Rabbit (–)
10	The Hobbit	Melbourne House (3)

Compiled by W. H. Smith. Figures in brackets are last week's positions

Sun, sea, sand . . . and computers

Imagine yourself on a warm desert island. You are on vacation. You are not sure exactly what you want to do. You've taken a tour. You don't feel like a drink. It's too early to sleep. So what's left? Well, if you have elected to go on vacation at the Club Mediterranee (Med for short) located in the Dominican Republic, you can learn about computers!

In conjunction with Atari, Club Med (which is the ninth largest hotel chain in the world) has a Computer Village set up at its Punta Can site.

Visitors have a chance to use one of the 60-odd Atari 800 and 1200XL computers along with exposure to certain topics such as Introduction to Micros, software survey, BASIC programming, Logo programming, Computers in Graphics, word processing, and (of course) VisiCalc. The workshops are offered in two- or three-day sessions for a not-so-strenuous two to three hours per day.

Rather than import computer nerds from Silicon Valley, Club Med has its very own GOs ("gentle organisers") do the teaching. They teach in French, Spanish, Italian, even English, and, I am told, do so in a very non-threatening way. For those who do not want to participate in the beachfront classrooms, there are computers in various kiosks that can be rolled around to perhaps the tennis court or the dock. Each computer has its own selection of business, personal, and, of course, entertainment software.

Computers are used for more than education. Club Med also uses them to set up electronic message centres (bulletin boards) on which guests can learn about daily activities, special events, tours, menus, and so on.

Atari also wrote some software specifically for Club Med. A program called Microsailing teaches new sailors about tides and wind conditions; Tennis Organiser performs the services of matching up players of comparable abilities, registers players for tournaments, and keeps track of the competitive ladders; Snorkeling is a guide to the seashells and underwater life a guest might see when out (guess what?) snorkeling.

When I learned about this, I was quite amused. A friend of mine has been to a couple of Club Meds and one of the things she liked was that it was an escape from civilization (of a sort). There were no televisions or radios, and no newspapers. I wonder how your average Club Med vacationer feels about going to get away from it all, only to be immersed in high technology? One thing is for sure, this aspect certainly does much to alter Club Med's image as a swinging every-night type of place. At least the emphasis is on education; there are no price lists and no sales pitches.

Club Med has been doing this sort of thing since 1981. Last year about 100,000 people went through computer workshops at Club Med Resorts of which roughly 90 per cent were complete novices. No guest is required to participate (I am told some actually resent the presence of the computers). There are now 12 Club Med resorts offering computer classes.

It costs about $800 for a week at the Club Med at Punta Cana, including air fare from New York. Your local travel agent probably has details of holidays from Britain. Club Med's address here is 40 West 57th Street, New York NY10019.

★ ★ ★ ★

Can't afford the real thing? Don't ask me why, but The Computer Practice Keyboard Company, of Union City, New Jersey, makes practice keyboards (what else?) for popular computers such as the Atari, Tandy, TI-99/4A, Sinclair, and others. They cost $4.95 each and are very portable. Each is printed on heavy laminated (cardboard?) stock. Hmmm. Just remember that they are made in New Jersey and **not** *California.*

That's it for this week. See you next time.

Bud Izen
Fairfield, California

Faster than a speeding bullet?

Our review panel gives some new action games a speed test

Lunar Rescue 32K BBC £7.95

Alligata, Superior Systems, 178 West Street, Sheffield S1 4ET

This arcade-style game is like Frogger in space.

The aim is to rescue men stranded on the planet surface and transport them to the mother ship somewhere in orbit above.

To do this you are equipped with a Rescue Rover which, using gravity and booster rockets, can be steered to the various launch pads on the planet surface.

On landing, one of the stranded men runs frantically to the Rover and disappears inside.

Unfortunately, the asteroids through which the Rover first travelled now turn into alien space ships. These then drop bombs in an attempt to prevent your safe return.

Failing to dock with the mothership causes the rescued man to fall back on to the planet to his death, with a suitable wailing sound.

As you can see, this is a game with a clearly thought-out story and is all the more impressive for this clarity.

The controls are very responsive and make the game fast and furious.

It is a pity however that there are no 'bonus screens' or real changes of visuals, the diet being just another, more difficult sheet to complete.

D.C.

instructions	85%
playability	80%
graphics	70%
value for money	80%

★★★★

Godzilla and the Martians Spectrum £5.95

Temptation Software, 27 Cinque Ports St, Rye, Sussex

This strangely-titled game is in fact a thinly-veiled version of Donkey Kong.

The scenario this time puts Godzilla — beautiful heroine, but with a purple face — as the top of the familiar series of ladders and platforms.

She is guarded there by a dinosaur — no, I don't know why either! — while the usual barrels have become most unusual Martians.

Otherwise, though, the game remains the same. The usual controls are there, and are reasonably easy to use, but the game soon becomes very easy to master despite the annoying feature of only having one life.

It is when you realize that there is only one screen to the game that the fun begins to pall, and boredom sets in. Although you are told that you have limited oxygen, I found it quite impossible to actually run out.

The colours are good, and the animation fair although the little man moves a little jerkily.

The sound is quite cute, but the speed of the program fails to keep excitement going.

P.T.

instructions	75%
playability	50%
graphics	70%
value for money	60%

★★★

Cybertanks Spectrum £5.50

Star Dreams, 17 Barn Close, Seaford, Sussex

This program arrived with a simple insert which contained loading instructions only. Loading was achieved easily and the game began, but no instructions were given and the idea of the game and the control keys were left to the player to discover. A serious lack of documentation.

A maze is displayed, with the player's tank at the centre. Four computer-controlled tanks begin a seemingly random search for your tank.

The walls of the maze can be shot away by either the player's tank or the computer tanks. You control turning and movement by the arrow keys, using key 0 to fire.

If you destroy all the opposition then a new, different maze is drawn. On later mazes, mines are left as added hazards.

Graphics are basic character square representation, colour is used well to produce a clear display, and movement is reasonably fast though slightly jerky. Sound is also used adequately. The highest scores are kept in a hall of fame chart.

Keys are easy to operate, the response is good and the program is compatible with the Kempston Joystick.

R.E.

instructions	10%
playability	42%
graphics	59%
value for money	66%

★★★

Trax! Commodore 64 £5.50

Soft Joe's, Claughton Rd, Birkenhead, Merseyside L41 6ES

This is a Pacman version with a difference.

The idea is to drive a train, complete with carriages, around a closed loop railway network on the screen, picking up passengers as you go.

Easy, you think, but there is a 'killer train' out to get you. You are destroyed if you hit the killer train. There is also a tunnel on the screen that you can go through, but only from right to left. If you go the other way then you are destroyed.

As in most arcade games, you have three lives. As the game goes in, the train moves faster and faster, and the number of carriages increases after every screen of passengers is cleared.

This is a very challenging game that makes good use of graphics and sound. The train noises and whistle blowing is very realistic.

Control of the train is difficult at first but can be mastered with practice, and there is a joystick option which can be more difficult than using the keyboard.

The instructions are printed by a little train chugging across the screen. Amusing as this is the first time, it soon loses its appeal as it takes about five minutes to print the whole thing.

M.D.R.

instructions	55%
playability	90%
graphics	95%
value for money	90%

★★★★

Killer Kong 48K Spectrum £5.95

Blaby Computer Games, Crossways House, Lutterworth Road, Blaby, Leicester

You must rescue the lady that the Killer Kong has captured — this game certainly wasn't designed to appeal to female computer users.

You must climb up the ladders and jump over the barrels, which Killer Kong throws down.

Points are gained for a successful jump and for jumping into the hamburgers which are inexplicably hanging from the girders. The love the lady has for you reduces the longer you take.

This is added to your score when you reach the top of the screen, and you then move on to the second stage with lifts.

There is a mistake in the instructions — it says 0 will fire but actually it makes the man jump. The unfortunate man you control has legs that are twisted in all the wrong directions — other than that the graphics are reasonable but jerky.

It's very difficult to time the jumps correctly — this isn't helped by the sluggish response to the keys, which makes the game very frustrating.

The game starts automatically so that if you're not quick off the mark you lose a life immediately. Very irritating.

S.E.

instructions	50%
playability	30%
graphics	40%
value for money	20%

★

NOW AVAILABLE FROM W.H. SMITH

SUPER SPY

48K Spectrum

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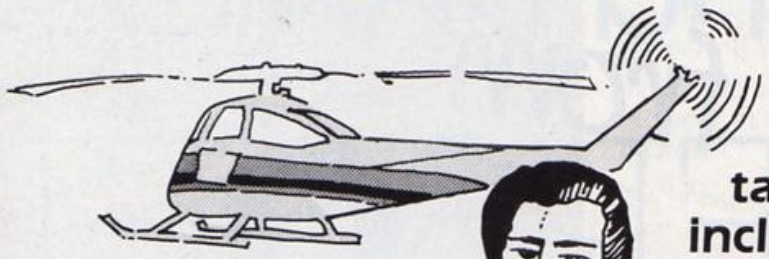

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Grand Slam TI-99/4A £6

B J Flynn, 103 Lossiemouth Road, Elgin, Morayshire

Bridge is a card game, where bidding for a contract at the beginning of each hand forms a major part of the game.

In Grand Slam the computer deals the hands, displaying only yours, and then gives its bid on the contract.

You then have the option to overbid or play the proposed contract, with the computer giving the points score at the end of each game.

Having played the hand you are given the option or replaying it and either changing your own bid or the manner in which you play your cards.

You should be able to do better second time round, having had the benefit of seeing where all the cards are.

The points score is then added to the original score and a running total kept. You can replay a game as many times as you wish or proceed onto another game — there is no set limit.

The calculation of points is basic, the most useful part of the program being the playing of the cards.

Grand Slam is, therefore, a long way from the original concept of the game and is of little value to the good player or complete novice.

J.W.

instructions	40%
playability	60%
graphics	90%
value for money	70%

★ ★ ★ ★

Duel TI-99/4A £9

Byteware, Unit 25, Handyside Arcade, Newcastle upon Tyne NE1 4PZ

Duel is a computer version of those popular boardgames such as Othello, where the object is to place counters on the board in such a way as to end up with the highest number of counters at the end of the game.

The game can be played by two players or by one player against the computer at four skill levels. An eight by eight squared board is displayed on screen, and the centre four squares are occupied by two red and two yellow counters.

Counters are placed by entering the coodinates of the appropriate square, and the aim is to sandwich one or more of your opponent's pieces between it and one already on the board.

The counters so captured then change to your colour.

The game continues until all the squares on the board are occupied. An indicator at the top of the screen shows whose turn it is and the number of each player's counters on the board.

The program is entertaining, highly absorbing and very well-thought-out and presented, with good graphics and colour.

There were no instructions sent with the review cassette and none are printed on screen, and I would hope that some sort of guidelines are included with retail versions.

D.B.

instructions	n/a
playability	100%
graphics	80%
value for money	90%

★ ★ ★ ★ ★

Bandit 48K Spectrum £5.95

Byteware, Unit 25, Handyside Arcade, Newcastle Upon Tyne NE1 4PZ

With the name Bandit, it could only be either a shoot-em-up cowboy game or a fruit machine simulation — in fact it's the latter.

Instructions are provided, if required, on screen, the cassette insert supplied was drab and devoid of any information, including how to load!

The screen display is a large one-armed bandit displaying three reels. Each fruit symbol is created by a 2×2 character square.

These symbols are very well designed, with good use of colour. However the rolling of the reel is disappointing — only one reel moves at a time, and very briefly at that.

Sound is not used very effectively — a few beeps and buzzes, no sound of falling coins or whirring reels or even a celebratory jackpot chime. Full hold, gamble and nudge features are included.

Mostly BASIC but with movement speeded up courtesy of PSS's MCODER, this is a fair simulation of a fruit machine which I think could have been made better.

R.E.

instructions	86%
playability	71%
graphics	42%
value for money	50%

★ ★ ★

Five-a-Side Soccer TI-99/4A £14.95

From TI dealers

This is a good reproduction of a five-a-side football match. The display is a three-dimensional football pitch, with all the appropriate pitch markings, goals, flags, and score board.

The game can be of any length and is split into two halves. Two teams must be named and both must be played by people — it would be a good addition if one side could be played by the computer.

Control is by joystick, or by using the arrow keys for the blue team and their counterparts on the right section of the keyboard for the red team.

You have control of one player, with the rest of the team following around in his general direction. On the whole this is a good system, and I found there was always another member of the team where I wanted him.

Kicking the ball is done using the fire button, and both speed and direction of the ball are catered for. You also use the fire button for tackling.

When a goal is scored there is the option of a slow motion replay.

The instructions are clear and concise although printed in six languages. The graphics are excellent with the pitch represented perfectly and the teams accurate with moving legs and arms.

M.D.R.

	85%
instructions	100%
playability	100%
graphics	90%
value for money	

★ ★ ★ ★ ★

Yahtzee BBC B £6.95

Byteware, Unit 25, Handyside Arcade, Newcastle upon Tyne NE1 4PZ

I can recommend Yahtzee — that is, the game itself, and you don't need a computer to enjoy it.

However, if you want an electronic scorekeeper or have problems finding an opponent, then this program is the answer.

It's a dice game, a distant relation of poker disc I suppose. You get five dice and two chances to reroll some of all of them.

There are 13 categories under which your end result can score, such as four of a kind, four of five in sequence, or all five the same — a yahtzee!

Each category can only be chosen once, and after 13 rounds the player with the highest score wins.

There is a lot of luck involved, but poker players would be quick to tell you that such gambling needs much skill in judging the odds as well.

The overall presentation isn't special — the dice don't look like dice for a start.

You get instructions on screen, but none on the cassette insert — or at least not on my review copy — which I think is poor attention to detail.

B.J.

instructions	60%
playability	90%
graphics	70%
value for money	70%

★ ★ ★ ★

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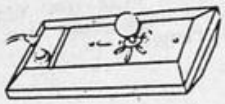

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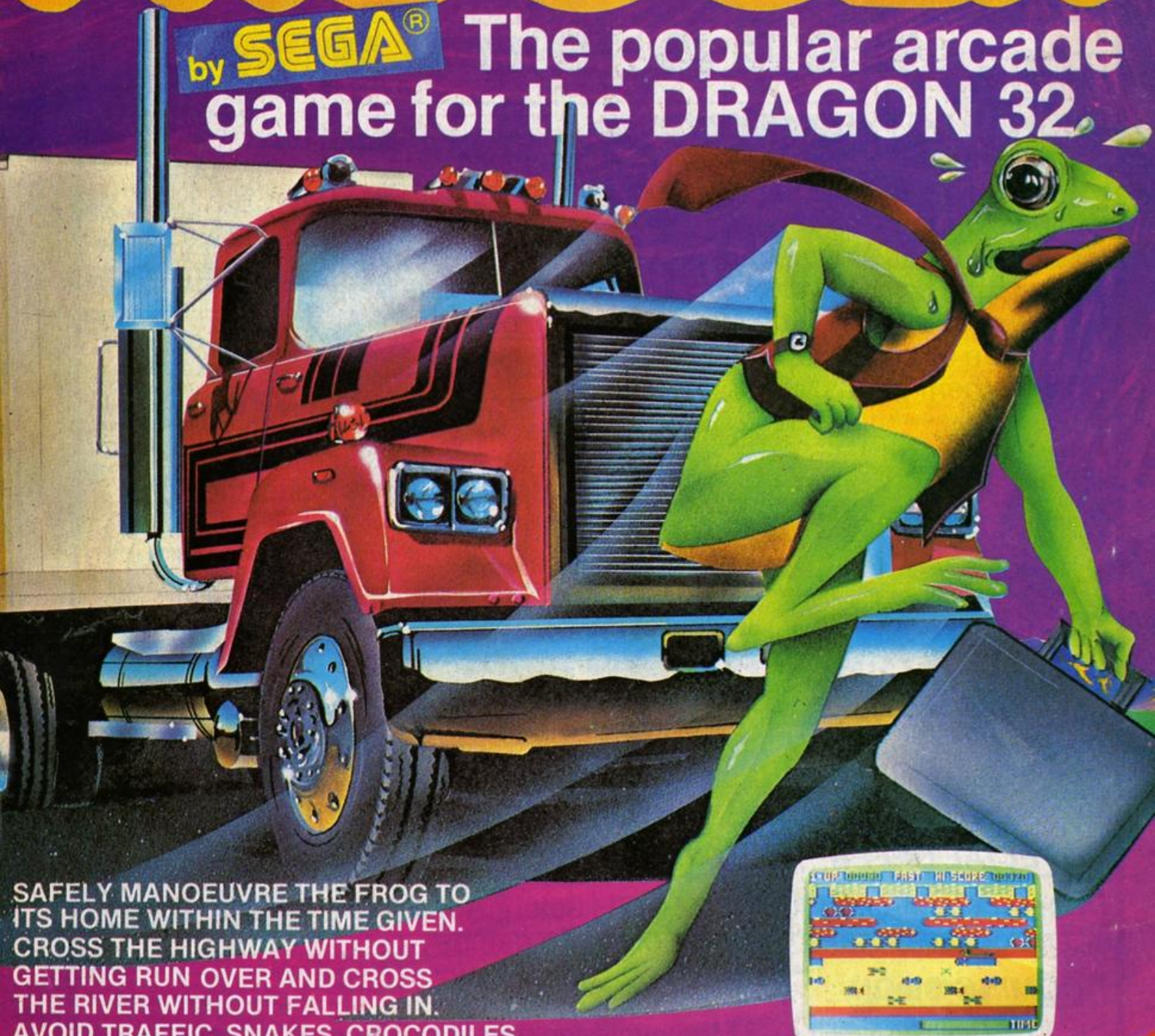

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