


R320

SINCLAIR PROGRAMS

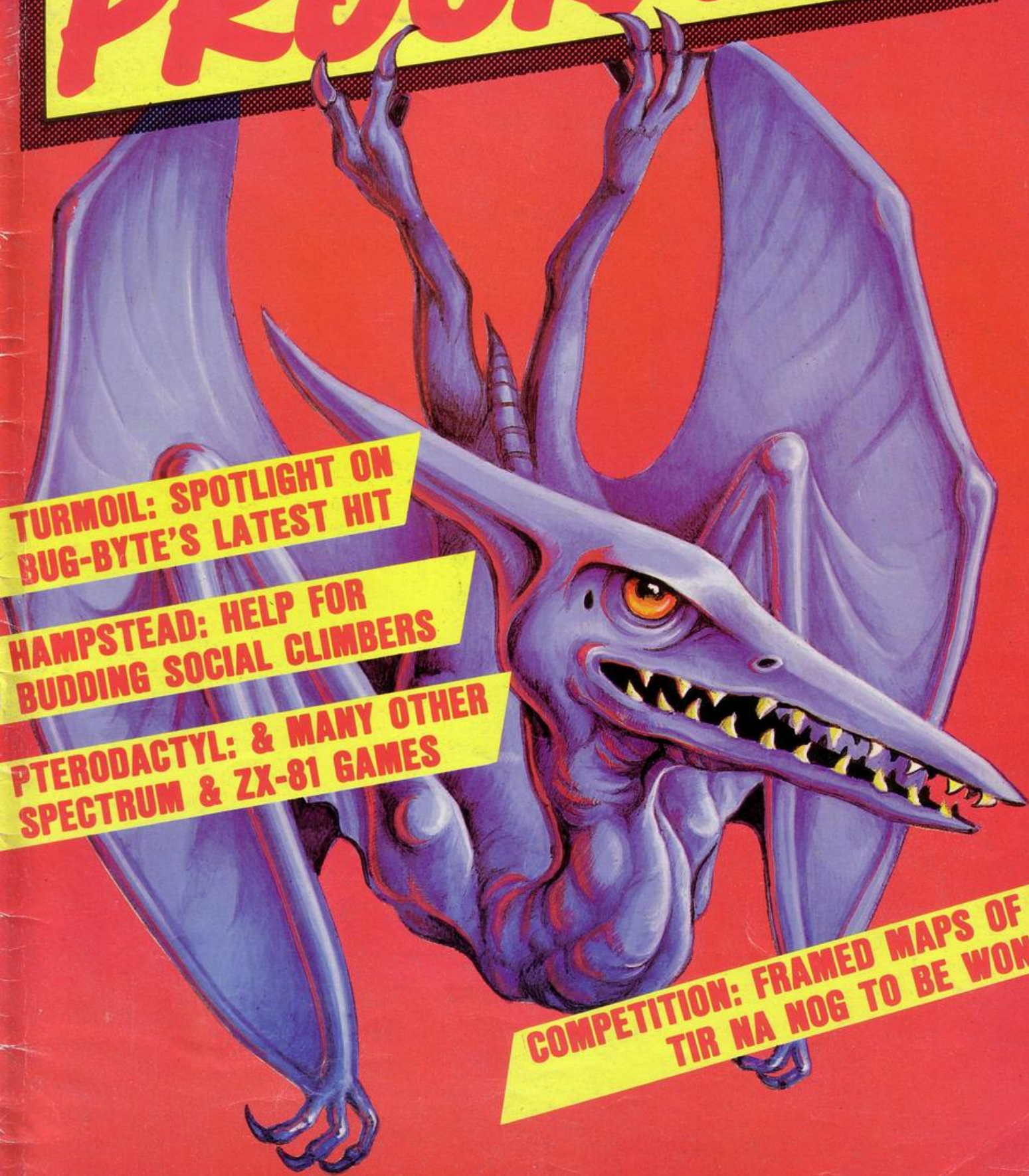


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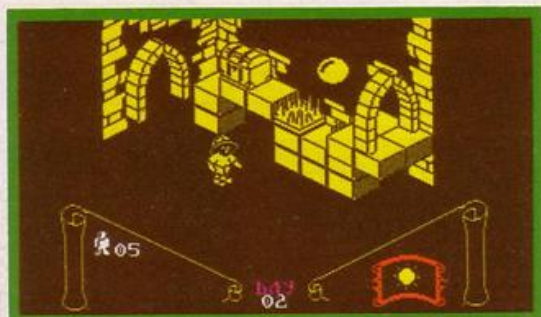
SPECTRUM 48K

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WITH
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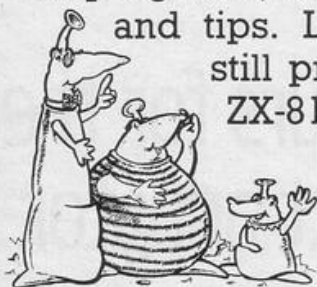
SP0185

RECENTLY we received an angry letter at *Sinclair Programs*. "I, and lots more ZX-81 owners, do not think there is enough support from you", it said. The writer then went on to lament the lack of hints, tip. maps, solutions and listings for the ZX-81 published in *Sinclair Programs*.

This is a common complaint from ZX-81 owners. "Everyone hates us!" they cry, and point to the lack of software for their machine, and the lack of coverage they receive in magazines.

Here in the editorial office, things look slightly different. Mail from Spectrum owners pours in, and there is a healthy pile of programs submitted for publication waiting for our attention. ZX-81 owners, on the other hand, are almost invisible. Readers' programs, which used to arrive by the sackful, now appear rarely. Letters are even more infrequent.

We know that you are out there. We know that thousands of people have bought ZX-81s, and that thousands more are still buying them. We know we used to hear from you regularly. Apart from this, all we have discovered recently is that you all love **Rocket Man**, and that you are all very quiet. Come on, let's hear from you. Send us programs, send us letters, send us hints and tips. Let us know that you are still programming, and let other ZX-81 owners know that there are other people out there.



Instructions for graphics characters are printed in lower-case letters in our listings. They are enclosed by brackets and separated by colons to distinguish them and the brackets and colons should not be entered. Do not attempt to underline the characters, the underlining is used specifically to point out a graphic character.

Inverse characters are represented by the letter "i" and graphics characters by "g" on the ZX-81. Thus an inverse W would be represented by "iW", a graphics W by "gW", and an inverse graphics W by "igW".

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

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

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

Editor
Rebecca Ferguson

Staff writer
June Mortimer

Design/Illustration
Elaine Bishop

Advertisement manager
Howard Rosen

Editorial assistant
Colette McDermott

Production co-ordinator
Claudia Viertel

Subscription manager
Carl Dunne

Assistant publisher
Neil Wood

Publisher
Gerry Murray

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LETTERS

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Fantastic factory

SINCE reading your October **Softspot** game review, I have bought **Factory Breakout** from Poppysoft, for the 48K Spectrum. I, and many other owners, think that the game is fantastic. It has great graphics, animation, movement and sound. It also has great musical tunes.

It seems to me that those concerned with Softfocus have reviewed games too much through the eyes of an adult, and not of the children who are going to buy it. The game is very addictive, and is well worth the money. You forgot to mention that it is quite difficult, the further you get into the game.

Some people, including myself, would compare it to such classics as **Manic Miner** and **Jetpac**. I highly recommend it to all arcade-games maniacs, such as myself. I am sure that they will also recommend it.

Russell Moxham,
Blandford Forum,
Dorset.

Midnight master

I WOULD be pleased to know whether any reader of *Sinclair Programs* has finished the game **Lords of Mid-**

night. If not, then I must assume that I am the first to do so.

For anybody who is stuck, here are a few hints. First, gather as many Lords as possible, and guide them to Xajorith. Eventually Doomdark will run out of armies and you will be able to attack.

Richard Bastow,
aged 12,
Pontefract,
West Yorkshire.

Dynamic decathlon

I AM writing to tell you that I have achieved a score of 164 263 on **Daley Thompson's Decathlon**. It is a brilliant game. I would like to know if anyone has beaten me.

I think that *Sinclair Programs* is great, even though I do not submit programs. Please, publish the magazine once a fortnight.

Andrew Milner,
Flint, Clwyd.

Rocketman record

I AM writing to tell you that I believe myself to be the holder of the highest score on the game **Rocket Man** from Software Farm. My high score is now 110 570 points. The game lasted almost an hour. I did, however, have a break, using the hold feature included in the game. I would be interested to know whether anyone

has beaten my high score.

Rocket Man is an absolute gem of a game and I recommend it to anyone. If you have not bought it, then I strongly recommend that you go out and do so.

Nicholas Mann,
Dirgelen,
West Germany.

Hi-res hints

I NOTICED in your October issue a letter from a reader requesting a high resolution **Draw** program for the 16K ZX-81.

My program **Hi-Sketch** allows the user to draw in eight different directions. The screen can be inverted at any time, and half-finished pictures may be saved to tape to be loaded and continued later.

Perhaps you would be kind enough to print my name and address so that the person concerned, and anyone interested, can contact me.

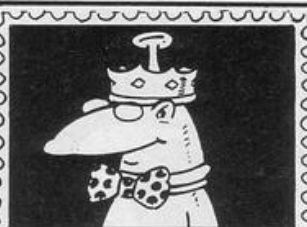
Finally, while on the subject of 81 hi-res, let me just add that, after several months of serious mining, my high score on **Forty Niner** is 118 574.

M. Phillips,
35 Elliston Road,
Redland, Bristol,
Avon.

• If anyone is interested in writing to Mr Phillips, please enclose a stamped, addressed envelope.

Pointless pokes

I WISH it was that simple. Having read the letter from A Horrocks in your November issue I had to put pen to paper in order to save Mr Horrocks all the trouble of POKEing a number into every conceivable location in the ZX-81 with the hope of somehow mirac-



ulously transforming his beloved machine into a hi-res beastie. Oh, how I wish it was that simple. If it were, it would not have taken me six months to develop and write the hi-res routines for **Forty-niner** and **Rocket Man**.

I am afraid that Mr Horrocks is labouring under a misapprehension. I do not know which utility he is using, as we do not yet market one, but I would guess that the POKE to which he is referring, far from being all that is needed, is simply a switch to turn on a rather powerful piece of programming.

Sorry and all that . . .

J N Chappell,
Software Farm,
Bristol.

Error

THE graphics were omitted from the program **Goldmaze** in the October issue of *Sinclair Programs*. The following listing should be saved on tape after the main part of Goldmaze.

```
1 REM graphics for goldmaze
2 REM
5 RESTORE
10 FOR a=USR "a" TO USR "n"+
7
15 READ b
20 POKE a,b
30 NEXT a
40 SAVE "goldgrafix" CODE USR
"a",21*8
50 PRINT "rewind tape for veri
fication"
60 VERIFY "" CODE
70 PRINT "O.K."
100 DATA 0,0,14,21,41,114,140,2
48,0,14,21,41,113,138,140,248,28
,28,8,28,42,8
110 DATA 20,34,127,190,220,232,
248,226,194,129,126,255,195,192,
206,195,255,126,126,255,195,195
120 DATA 195,195,255,126,192,19
2,192,192,192,192,255,127,254,25
5,99,99,99,99,255,254,195,231
130 DATA 255,219,195,195,195,19
5,126,255,195,195,255,255,195,19
5,255,255,14,28,56,112,255,255
140 DATA 127,255,192,248,248,19
2,255,127,0,53,37,50,37,53,0,0,0
,92,72,72,72,72
150 DATA 0,0
```


'PSSST!'

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Look out for the January issue of **COMMODORE USER**.
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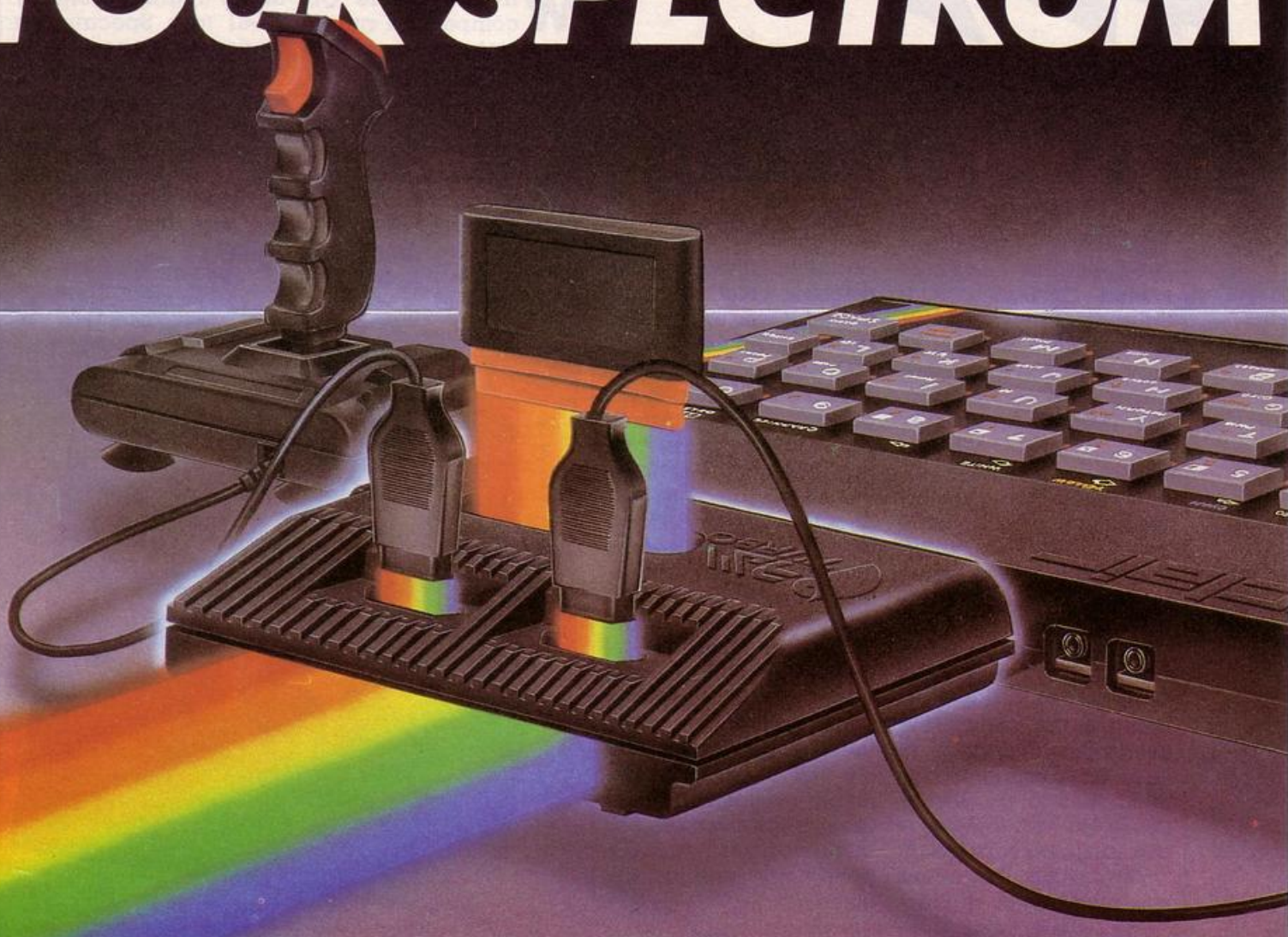
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It's boring

RECENT reports of Spectrum owners having problems with their machines and returning them as soon as they are bought were dispelled recently by Julian Goldsmith, spokesman for Sinclair Research. It would appear that the 'major' problems are actually trivial matters in which the most frequent cause for return is the keys falling off the machine. "The Spectrum is selling exceedingly well. The problem with the keyboard is the boring that keeps the keys on is in need of adjusting. If anything had to go wrong this is the best thing as it can easily be repaired."

The same comment was made by a spokes-

man for WH Smith who said that, although some machines had been returned it was mainly due to the keyboard fault.

One obvious problem with the Spectrum is the position of the interface port. The Kempston joystick interface does not fit but Kempston have produced a low-priced extender cable to allow the interface to be connected to the Spectrum.

On the subject of the possible withdrawal of the 16K Spectrum Goldsmith would only say "one recognises from the Gallup figures that the 16K is falling in demand but it is still going great guns overseas. Its sale over here will depend on public demand."

QL winner

WINNER of the QL competition run in the October issue of Sinclair Program was 14 year old Andrew Keen of Redditch, Worcestershire. Andrew was the only entrant who put the given options in the same order as that chosen by the panel of judges. On hearing the news he said "I was go-

ing to upgrade from my ZX-81 to a Spectrum at Christmas but now I'll be able to get something else." He plans to use his QL to improve his programming and he also hopes to get his family involved "although I'm not sure they'll be too keen".



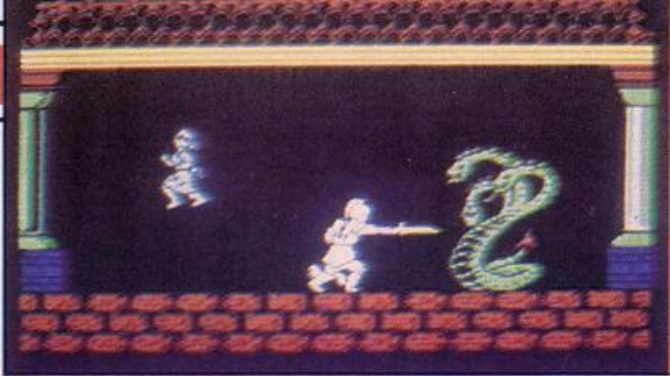
A Wally question

MIKRO-GEN creation, Wally Week star of **Automania** and **Pyjamarama** would like readers to put the record straight by voting for the best ever arcade adventure. Wally believes the three main contenders are **Pyjamarama** by Mikro-Gen, **Jet Set Willy** by Software Projects and **Kokotoni Wilf** by Elite. Put the three games in what you consider to be the correct order and send to Mikro-Gen, 44 The Broadway, Bracknell, Berkshire.

Software savers

THE Nationwide Building Society has decided that Spectrum users and young investors should go hand in hand. They are hoping to lure young savers by offering a £3 voucher to any child putting at least £25 into a new or existing account in England and Wales.

W H Smith are also in on the promotion of Nationwide Building Societies. They will honour the vouchers and accept them as part payment on any software available from their computer departments.



Football mad

THE THEME music from **Match of the Day** is incorporated in **Match Day**, a recent release from Ocean Software. Retailing at £7.95. **Match Day** provides a camera eye view "with the camera automatically scanning the pitch". Play is either against the computer for one player or up to eight players against each other. Tackling, passing, heading, blocking and extra time are all featured.

Greek Mythology and a hero called Orestes are the subjects in **Gift from the Gods** from Ocean Software. Orestes has recently been told of his

true heritage. As a young boy his mother Clytemnestra and her lover Aegisthus murdered his father Agamemnon. He was smuggled out of the palace at Mycenae and now, on his 21st birthday, he must visit the summit of Mount Parnassus where Zeus and Apollo will tell him how to avenge his father's death and return to the palace of Mycenae. Orestes must enter the catacombs beneath Mycenae and find the solution to Agamemnon's Puzzle in order to prove his heritage to the people of Mycenae. The program retails at £9.95.

Beyond go mad

SPRING will see the release of two new games for the Spectrum from Beyond Software. The first, **Spy vs Spy**, is already available for the Commodore 64 and is produced by American company First Star. Beyond has taken over the marketing of the game which is based on the comic strip of the same name which appears in the magazine MAD. **Spy vs Spy** is a game for one or two players and the action is shown on a split screen. According to Clive Bailey of Beyond "the players explore the maze like rooms setting traps for their opponents and endeavouring to find the secret plans".

The second game has a working title of **Shadow Wars** and will be re-

leased for the Spectrum and Commodore 64 simultaneously. "Shadow Wars is an intelligent adventure in which the characters confer amongst themselves within the computer. You can see what they are doing and also affect their actions".

Driven round the bend

BUG-BYTE will soon be releasing **Auto Man** for the 48K Spectrum. **Auto Man** will be a maze-cum-platform type animated game with, according to Tony Milner of Bug-Byte "a 3D car chase sequence, with line graphics". The retail price will probably be £6.95.

Asian pirates

QUICKSILVA are "pursuing various actions" against piracy after recently visiting the Percomp Asia exhibition in Singapore. Said Mark Eyles, of Quicksilva, "we found the piracy really prevalent, not just with the software side but with the hardware as well. Several of Quicksilva's games had been pirated. At the moment the home computer industry is really exciting over there and it seems that companies are pirating everything possible". One thing must be certain and that is that detecting pirated products must be difficult overseas as customers are often unaware that they are not buying the genuine article

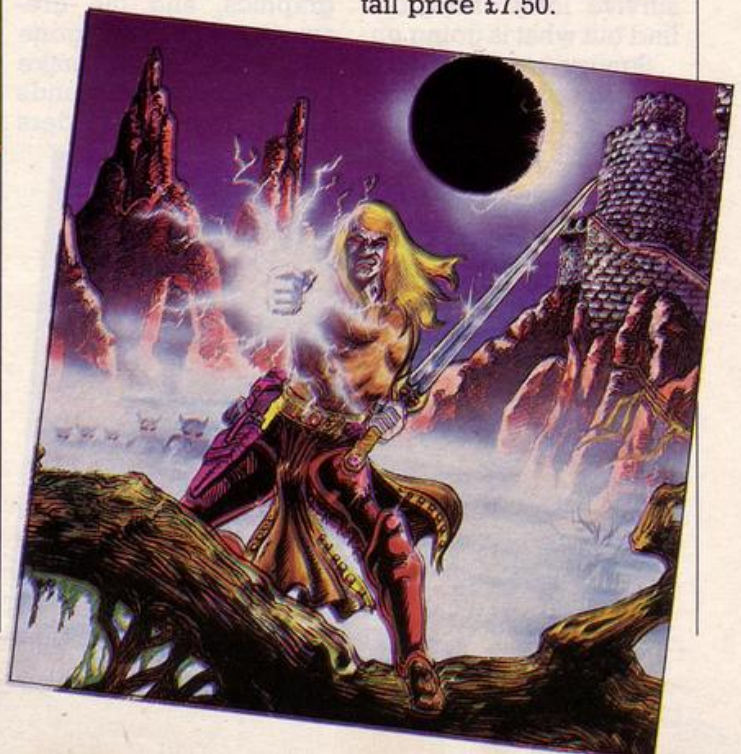
On the light side, **Ant Attack** and **Zombie Zombi** programmer. Sandy White was recently presented with a gold cassette after sales of **Ant Attack** topped 50,000 units. Although software companies can hand out gold cassettes at will Eyles does not think it necessary for a recognised body to control the distribution and presentation of such awards as this would mean "companies having to provide evidence of sales".

Hewson Consultants programmer Mike Male, author of **Nightflite II** and **Heathrow ATC** was recently awarded a gold cassette by Andrew Hewson after sales of the games topped 100,000.

Something else

THE SEQUEL to **Halls of the Things** has recently been released by Design Design. According to Brian Edward, a spokesman for Design Design, "**Return of the Things** is an animated graphic adventure which has been waited

for for some time so it should be well received". In **Return of the Things** you begin your quest in the swamp having just left the tower of the three evil lords. Find the Ankhs of Osiris and return them to Osiris at the Altar in the City. Retail price £7.50.



FLYING JELLYFISH

UNDERWURLDE AND KNIGHT LORE

STRANGE cries fill the office. "Aargh, the blue parrot strikes again", "Zap that flying jellyfish", "What does it mean, special effects: chest of drawers?" It can only mean one thing. Ultimate have released the final parts of their Sabreman trilogy, **Underwurlde** and **Knight Lore**.

Both games are brilliant, original and highly inventive. They must both confirm Ultimate in its place as number one manufacturer of consistently excellent Spectrum games. It is here that the similarities between the games end.

Underwurlde takes up the maze theme of earlier Ultimate games, in a strikingly new way. You begin on level fifteen of a labyrinthine series of underground caverns. Your aim is the Ultimate palace of darkness, where your final escape lies. In the first place, though, your aim is to survive long enough to find out what is going on.

Strange animals dive at you, knocking you from your perch. Falling too far will kill you, and extra

lives are not easy to find. Bubbles emerge from craters and float upwards. If you jump carefully, you can float up on them. Jump too high at the roof, and you will catch on a rope. Swing down quickly on it, and beware the falling stalactites.

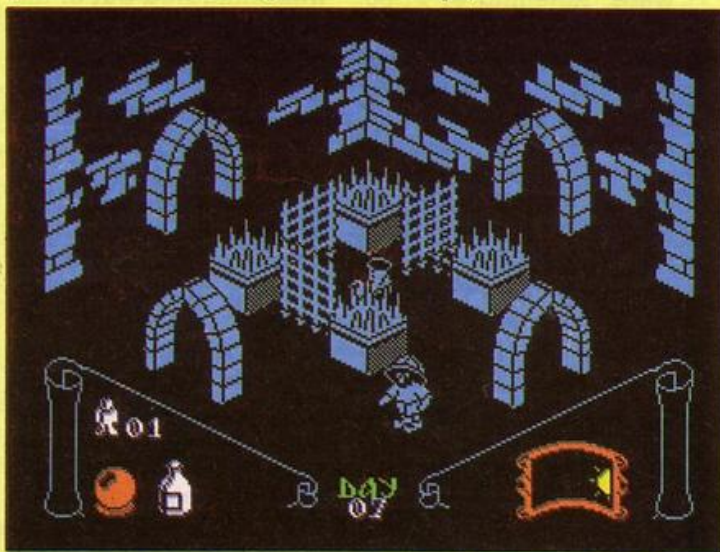
To go anywhere in reasonable safety you will need the bubble gun which you will find in the first room. To move further into the maze, and to kill creatures such as the giant beetle, you will need to find a sword.

The game is brilliant, the graphics are superb, and the program is surpassed by very few Spectrum programs.

One game which does surpass it is **Knight Lore**. In this game, three dimensional graphics are used to greater effect than ever before on the Spectrum. Once again the maze and quest theme combine, but the breathtakingly good graphics, and the creativity which has gone into every room, make this a game which stands head and shoulders

above the rest, a game by which all future maze games, and most other games, will be judged.

Three-dimensional graphics have had their problems in the past.



Perspective slides in and out of focus, attributes seem to go totally haywire and you are left, after half an hour, with crossed eyes, a blinding headache and a vocabulary of a few, very short words.

Ultimate have overcome all these problems. Their perspective is flawless, their outlines and colours sharp. Each room is shown in one colour only, and your character changes to that colour as it enters the room, so there is no colour clash, or merging of detail. The rooms are a pleasure to see, and they remain so, again, and again, and again.

Your aim, in **Knight Lore**, is to find the wizard's cauldron and to throw into it certain objects which will break the spell on you; the spell which turns you to

a werewolf every night, and which will leave you trapped in wolf's form for ever in forty days if you cannot break the spell. Finding the wizard's cauldron is one problem, finding the objects and getting them there are several more.

Each room has a puzzle within it. Some rooms have skittering ghosts, some taciturn soldiers, others balls of fire, huge spiked blocks, vanishing stairways, obstinate

flames. Most have deadly combinations of these problems. To make matters worse you change to a wolf as the moon rises, and to a man as the sun rises. Annoying at the best of times, this change is lethal if it occurs in the middle of some delicate manoeuvre.

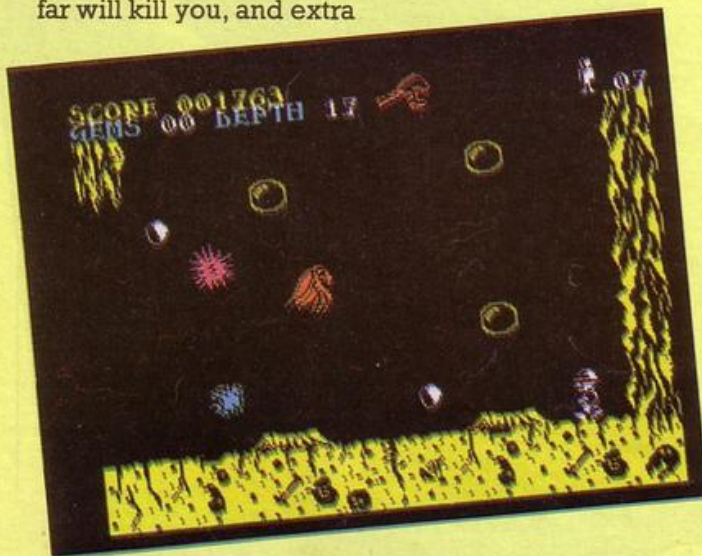
Underwurlde and **Knight Lore** would have been strong contenders for the Soft Spot if they had been launched any earlier in the month. They are both excellent games. If you can raise the money, buy them.

Produced for the 48K Spectrum by Ultimate, The Green, Ashby de la Zouch, Leicestershire.

Price: £9.95

Game type: Arcade adventure

Rating: 98%(U), 99%(K)



STRONTIUM DOG

LET THE killing begin. There you are, condemned to death, doomed to kill or be killed, with only a comic strip in 2000AD which you may or may not have read, and a cassette insert, to help you.

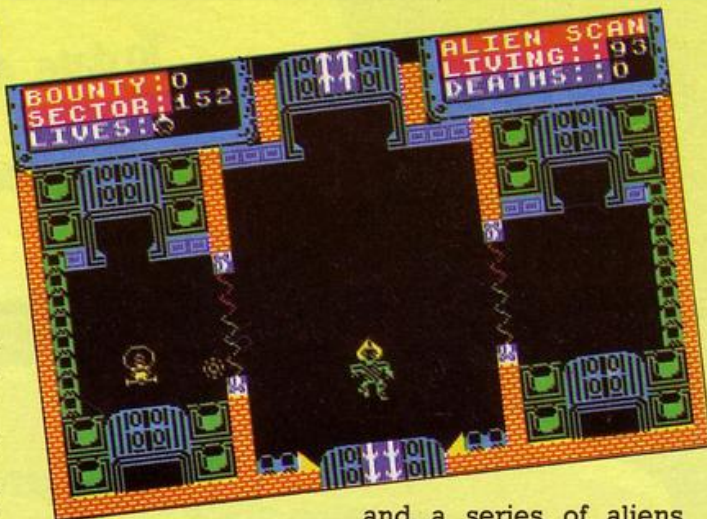
Strontium Dog, the killing, from Quicksilver is based on the story in 2000AD. In practice, this means you must travel through a maze, avoiding the parts of the maze which flash, and killing all the aliens you meet, before you can finally escape.

The maze is relatively simple. Draw a grid, number the first row 1 to 16, and the second row 17 to 32. Continue until you reach at least box

256. You are now ready to start mapping.

Killing the aliens is far more difficult. On the first three levels, at least, they appear in two basic types of room. One, where they run down the sides and shoot you, and a second where they appear in doorways at the top of the room and shoot at you. Shooting them appears to be largely a matter of chance.

Moving from one section to another is done by way of the Medis. These are ambushed, and require you to stand in exactly the right place, throw a flare bomb and start firing. If you are in the right place you will get through, if



not, you are doomed. Moving to the fourth level means passing the hanged man. The technique for shooting him is even more difficult to grasp, and failure means returning to the beginning again. So, what are you left with? A simple to map, if intricate, maze;

and a series of aliens which can only be killed by a combination of luck and skill. Not everybody's idea of fun.

Produced for the 48K Spectrum by Quicksilver, 13 Palmerston Road, Southampton.

Price: £6.95

Game type: Maze

Rating: 60%

GILLIGAN'S GOLD

THERE you were, innocently prospecting in the mine, collecting bags of gold and putting them in your barrow, when things began to be much more difficult. Green with envy, outlaws are trying to knock you out and steal your booty. It would be easy to avoid them except that the mine is maze-like in its intricacy, and there are pit trucks running out of control along many passages.

Gilligan's Gold has you racing against the clock to collect your gold and avoid the outlaws. There are some points in your favour. You can leap into the pit trucks at some points, and thus avoid the outlaws. You can also knock out the outlaws by dropping bags of gold on them as they climb ladders, or by taking a pickaxe and smashing them over the head with it.

There are a few minor irritations to the game.

Picking something up is very difficult. You seize a pick, rush towards an outlaw with it, only to discover the pick is still lying on the ground and you are defenceless. Moving from screen to screen does seem to confuse the outlaws. One minute they are following you along a straight passage, the next they have vanished. Conversely, one can appear, hot on your trail, as you run onto a screen.

Gilligan's Gold is both enjoyable and infuriating. You will either be fascinated by the challenge of collecting the gold, or annoyed by the constant repetition of the three screens and your inability to pick things up when you need them.

Produced for the 48K Spectrum by Ocean Software Ltd, Ralli Building, Stanley Street, Manchester M3 5FD.

Price: £5.90

Game type: Arcade

Rating: 50%

SPORTS HERO

HAVE YOU ever dreamt of building your way up from the status of local neighbourhood sports hero to internationally acclaimed Olympic hero, competing for your country? If so, try playing **Sports Hero** from Melbourne House.

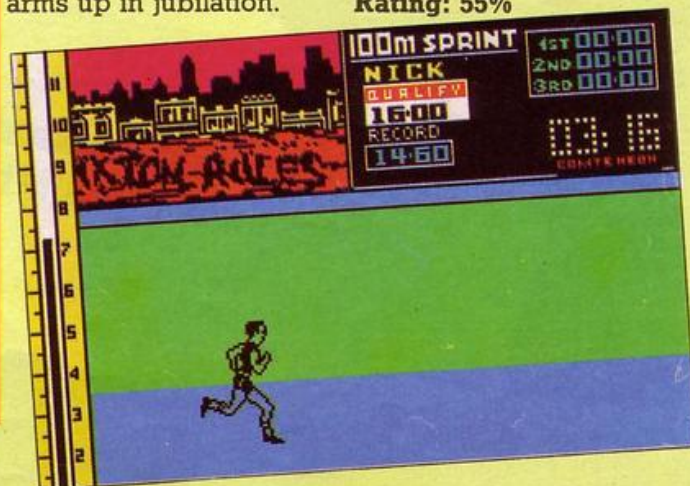
Sports Hero is a very good demonstration of animation and has excellent graphics. It features the 100m sprint, 110m hurdles, long jump and pole vault. Breaking a record results in the figure on-screen throwing his arms up in jubilation.

When you start the game as a street runner you run through the city and jump over dustbins. Once your skills have been recognised and you win a sports scholarship you get to run with a pleasanter background and real hurdles. The competition at this stage is much stiffer but this is only to be expected as the next step is a place in the Olympic team.

Sports Hero is produced by Melbourne House, Church Yard, Tring, Hertfordshire.

Price: £6.95

Rating: 55%



To date, Atari's most astonishing game is Pole Position... If you are only going to buy one game, then this is the one you should get.

COMPUTER & VIDEO GAMES.

...Pole Position gives a very strong sense of speed as you hurtle round the track. The super-realism of the three-dimensional effect adds a lot to the game. It is a great graphics demo.

PRACTICAL COMPUTING.

Brilliant!

WHICH MICRO? AND SOFTWARE REVIEW.

...a terrific version of the arcade motor racing game...graphics are superb...sound, too is very good as brakes screech and engines rev-up.

PERSONAL COMPUTER GAMES.

Exciting, exhilarating, excellent, Pole Position takes the lead as the best Atari race game around.

PERSONAL COMPUTER NEWS.

What can we say?

We're overwhelmed. Though we should just add that with Atarisoft, you can now play Pole Position* on the Commodore 64, BBC and Spectrum computers, as well as on all Atari® systems. And you'll also find available other games such as Galaxian*, Robotron†, Moon Patrol† and Ms Pacman.



KING ARTHUR'S QUEST

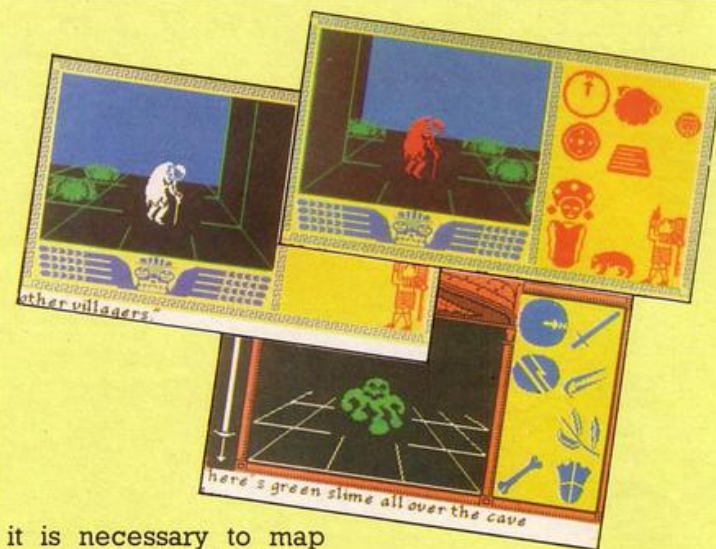
THERE are months when mapping aversion overcomes software reviewers. Indications of this are desks covered with enormous, badly-glued-together sheets of paper, a worn 'hold' button on the keyboard, and reviewers sitting in the corner of the room, murmuring through gritted teeth, "Take the right fork at the lion's den, swallow the mouldy cheese, bounce across the lake, turn left..."

Time comes, of course, when the editor drags them screaming to their type writers. "Show you know the game", she hisses, "but don't go on about the maps". It is true, though. Buy any good game this month

and you will be showing the same symptoms. They all need maps.

King Arthur's Quest and **Aztec: hunt for the sun god** are cases in point. They are both maze adventures, with excellent graphics. You move from one location to the next, able to see those locations a short way in front of you. You collect objects, and use them as you think necessary. Some will kill you, some are essential to your progress.

You can never see objects in a location, until you have been there. Each game has 800 locations, the majority of which can be visited. To avoid missing objects or walking round in circles,



it is necessary to map each location. Make a mistake, and making the right decision is based largely on chance, and you will have to begin again.

The story lines are charming, the graphics effective, but the games themselves are little more than tests of your

patience and mapping ability.

Produced for the 48K Spectrum by Hill Macgibbon, 92 Fleet Street, London.

Price: £7.95

Game type: Maze adventure

Rating: 50%

BACKPACKER'S GUIDE

YOU remember Ziggy, star of **The Pyramid**, and **Doomsday Castle**. Now he is back, in a game entitled **Backpacker's Guide to the Universe, part 1**. A title very similar to that of a well-known radio program, book, record and television program.

Ziggy's aim is, naturally, to save the universe, although his method of doing so is a little bizarre. Moving around a maze of underground passages, he must collect all the strange creatures he finds there, and return them to his ship.

As Ziggy left his ship, a

giant stalactite fell, blocking his way back. He can beam his way back, using his backpack, but this is only possible four times. Either he must find the key which will allow him to pass the stalactite, or he must be very careful which animals he stores in his backpack. Some will kill each other, some will kill themselves, and some will simply die.

Produced for the 48K Spectrum by Fantasy Software, 27a St George's Road, Cheltenham.

Price:

Game type: Maze

Rating: 75%

SUPER SAVERS

SOFTWARE projects have launched a new, cheap range of software known as the **Software Super Savers**. Both adventure and arcade games are included, although the arcade games predominate.

Fred's Fan is an ingenious game in which the balloon men float upwards. By rushing along the bottom passage you can switch fans on and off to blow them safely past dangerous spikes and whirling enemies, through the safe passages, and up to freedom. The gentle pace at which the balloons move is no guide to the speed of the game, for you will have to sprint from one switch to the next in order to save all your balloons.

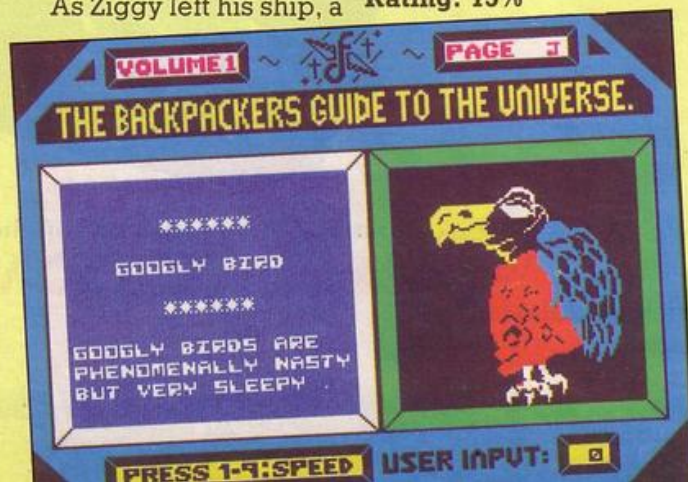
Moonlighter is an unimpressive version of the block-pushing game genre. Defend yourself against the rogue, radioactive tennis balls by blasting them before

they move, or pushing boxes over them as they move around the screen. The key response is slightly too slow to give the feeling of playing at your best, and the difficulty of distinguishing between fire and push when using a joystick makes this a very tricky game.

Flip Flap is a computerised version of pinball. The graphics are smooth and clear and the score combinations are inventive. Pinball enthusiasts will certainly enjoy this. The keys, though, are very confusing. Moving the left hand flipper of each pair with you left hand, and the right hand flippers with your right hand looks good on paper, but feels very nasty in practice.

Software Super Savers are produced by Software Projects, Bear Brand Complex, Allerton Road, Woolton, Liverpool L25 7SF.

Price: £2.99



TIR NA NOG

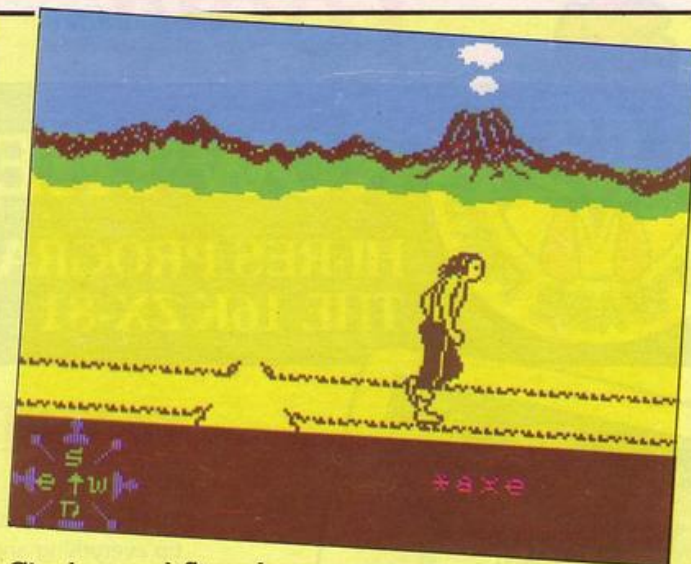
GREAT were the heroes of Celtic lore, and greatest of all was the hero, Cuchulainn. When he was but a boy the druid Cathbadh prophesied that any who took arms on a certain day would do great deeds, and be renowned for ever, but would be fated to be short-lived. Cuchulainn took arms that day, his deeds were great, but his fate came upon him swiftly. Now, in **Tir Na Nog**, the land of youth, Cuchulainn faces his greatest challenge. He must find and unite the four sections of the Seal of Calum.

Great too are the programmers of Gargoyle games, and great is the animation they have wrought. Through the four views mortal watchers have of the land of Tir Na Nog can be seen the

hero Cuchulainn, a character of the epic height of 56 pixels. As he walks the labyrinthine paths of the land, mortals can change both his direction, and their view.

In the records we read of the fabled characters animated in **Valhalla** and **Oracle's Cave** but, verily, the animation of this game doth surpass all those of which we know. Those who are privileged to see the hero's hair blowing in the wind, to meet the other denizens of this strange land and see the range and variety of the smoothly scrolling landscape will agree that here is the animated adventure in its most complete form.

Pity the poor seeker after truth who must chart the wanderings of the paths through the regions of Badheim, of Tir



Clechan and Stormbase.

The seeker who must show the undercover ways, the customs of the characters and the uses and positions of the many objects. The seeker who must make sense of the ramblings of the Bard of Sidhe, who must face the cave wights and the sidhe, pass by the olcweed and uncover the mysteries of the standing stones of Stormbase. Such seekers must

be pitied, but also envied, for it is they who will see the rich life of Tir Na Nog and they who will finally help Cuchulainn to the Seal.

Those eager searchers after truth who wish to visit Tir Na Nog will find it produced by Gargoyle Games, 74 King Street, Dudley, West Midlands.

Cost: £9.95

Game type: Adventure
Rating: 87%



EUREKA

WITH all the hype and the publicity about **Eureka**, there must be few Spectrum owners who do not yet know that the Eureka games have been billed as containing "250K of pure mystery", and that a £25,000 prize is offered to the first person to solve the adventures before the end of 1985.

The arcade games are all fun, easy enough to be played by those who never normally touch arcade games, tricky enough to keep the experienced fighting for

those essential points. The main problem with them is that all the moving objects on the screen flash on and off. Acceptable at first, this quickly becomes an eye-straining nuisance.

The adventures are also enjoyable. Difficult, of course, and you will not see even a hint of a clue in this review. It would not be fair, would it? Suffice it to say that the adventures are all set in different time periods, from prehistoric time, to the modern Caribbean. They have accompanying graphics, which can be frightening, as when the Pterodactyl swoops in for the kill.

Produced for the 48K Spectrum by Domark Ltd, 228 Munster Road, London SW6.

Price: £14.95

Game type: Arcade and adventure

Rating: 70%

GILLIGAN'S GOLD

THERE you were, innocently prospecting in the mine, collecting bags of gold and putting them in your barrow, when things began to be much more difficult. Green with envy, outlaws are trying to knock you out and steal your booty. It would be easy to avoid them except that the mine is maze-like in its intricacy, and there are pit trucks running out of control along many passages.

Gilligan's Gold has you racing against the clock to collect your gold and avoid the outlaws. There are some points in your favour. You can leap into the pit trucks at some points, and thus avoid the outlaws. You can also knock out the outlaws by dropping bags of gold on them as they climb lad-

ders, or by taking a pickaxe and smashing them over the head with it.

There are a few minor irritations to the game. Picking something up is very difficult. You seize a pick, rush towards an outlaw with it, only to discover the pick is still lying on the ground and you are defenceless. Moving from screen to screen does seem to confuse the outlaws. One minute they are following you along a straight passage, the next they have vanished. Conversely, one can appear, hot on your trail, as you run onto a screen.

Produced for the 48K Spectrum by Ocean Software Ltd, Ralli Building, Stanley Street, Manchester M3 5FD.

Cost: £5.90

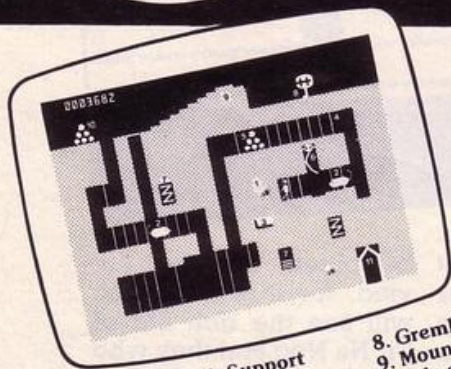
Game type: Arcade
Rating: 55%



LOOK!

NOW THERE ARE HI-RES PROGRAMS FOR THE 16K ZX-81

3



FORTY NINER

In 1849 the Great American Gold Rush started. Almost everyone who could sold up everything and dashed to the west coast to look for this precious metal – including you!

You must excavate this precious metal – but can you survive the giant rats and that vicious Gremlin which will come to infest your mine? Can you trick the snakes into leaving their comfortable nests and destroy the rats for you? Can you keep the Gremlin at bay?

Riches await you – but so do the hazards!

1. Nuggets
2. Giant Rats
3. Burrowing Rat
4. Support
5. Cave In
6. Snake
7. Snake Nest
8. Gremlin
9. Mound
10. Pile of Earth
11. Cave

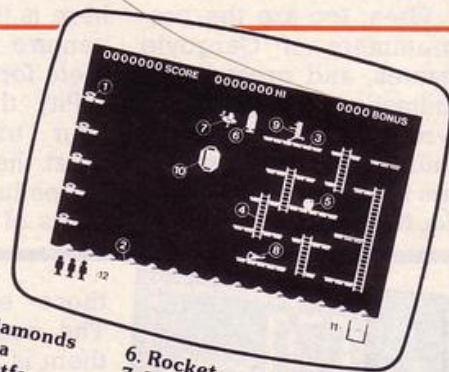
ROCKET MAN

Get rich quick by collecting Diamonds that are simply lying there waiting for you! Oh... I forgot to mention that there are one or two problems!

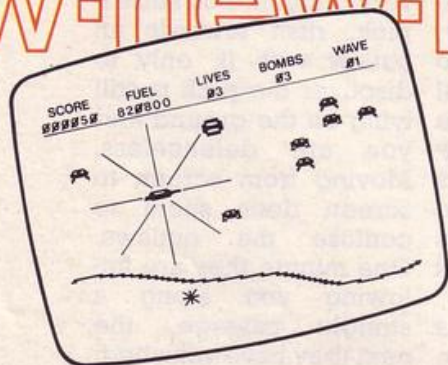
There is an expanse of shark infested water between you and the Diamonds and a strange breed of Bubble that seems hell bent on getting you in it! Somehow you must cross it...

You have a Rocket Pack to help you (a Vulture on higher levels) but you must rush around the platforms and ladders collecting cans of fuel (legs of lamb with the Vulture) and cursing that weird Bubble. Once you have enough fuel then it's Chocks Away!

Oh... but don't run out of fuel on the way – otherwise it's... SPLASH!



1. Diamonds
2. Sea
3. Platforms
4. Ladders
5. Fuel Cans
6. Rocket
7. Vulture
8. Leg of Lamb
9. Player
10. Bubloid
11. Fuel Gauge
12. Men remaining



Z-XTRICATOR

A long time ago, in a galaxy far, far, away a terrible war took place between two hostile races. Any prisoners taken could not expect to live very long in the hands of their captors. Their only hope lay with a group of valiant warriors – the XTRICATORS – whose task it was to rescue fellow beings from the alien planet's surface. You are about to take on the role of such a warrior....

Please send me:

	QTY	TOTAL AMOUNT
FORTY NINER £5.95		
ROCKET MAN £5.95		
Z-XTRICATOR £5.95		
TOTAL		

Available from all good computer shops or send cheque/P.O. for £5.95 (inc. P&P) to:
Software Farm,
FREEPOST (No stamp required) (BS3658),
BS8 2YY.

Software Farm, 155 Whiteladies Road, Clifton, Bristol BS8 2RF.
Telephone (0272) 731411. Telex 444742 AFMADV G

TOOTLES

Poor Tootles is stuck in a deep pit. What is more, enormous concrete blocks are raining down upon her. Luckily, she is a resourceful girl and, if she is careful, and dodges all the blocks she will be able to use them as a ladder up which she can climb. She can only climb one block at a time so must try to stop the blocks forming a wall. Guide Tootles left using Q and right using W.

Tootles in the pit was written for the Spectrum by John Lonsdale of West Ferry, Dundee.

```

5 POKE 23658,8: BORDER 0: PAP
ER 0: INK 6: CLS: LET HI=0
10 GO SUB 2000
20 CLS: REM SCREEN SET UP
25 LET D=5: LET X=19: LET Y=16

30 FOR N=20 TO 20-(L+4) STEP -1:
1: PRINT AT N,0: INK 2: "AAAAAA"
14: N: NEXT N
35 PRINT AT 20,6: INK 2: "AAAA
AAAAAAAAAAAAAAAA"
40 PRINT AT 0,0: "MEN:": L1: "S
CORE:": S: "HIGH:": HI: "LEVEL:": L

90 LET B=Y
100 IF ATTR (D+1,B) <> 6 THEN
GO TO 760
110 LET D=D+1: PRINT AT D,B: I
NK 2: "A": AT D,1 B: INK 6: I
F ATTR (D+1,B)=2 THEN LET D=5:
GO TO 90
150 LET H=H+1: IF H=3 THEN LET
H=1
190 PRINT AT X,Y: "
200 IF INKEY$="W" AND ATTR (
X-1,Y+1) <> 2 THEN LET X=X-1
F ATTR (X,Y)=2 THEN LET X=X-1
230 IF INKEY$="Q" AND ATTR (
X-1,Y-1) <> 2 THEN LET Y=Y-1: I
F ATTR (X,Y)=2 THEN LET X=X-1
250 IF ATTR (X+1,Y) <> 2 THEN
LET X=X+1
300 PRINT AT X,Y: INK 6: C$(H)
400 IF D+1=X AND B=Y THEN GO T
O 760
410 IF X=20-(L+5) THEN GO TO 1
000
750 GO TO 100
760 LET L=L-1: FOR N=30 TO 1
STEP -1: BEEP 1 N: NEXT N: PRIN
T AT 5: "BRIGHT 1: BUNK!": PRIN
T AT 8: "PAUSE 50: PAUSE 50: IF L
=0 THEN GO TO 900
770 CLS: GO TO 20
900 IF S=HI THEN LET HI=S
910 GO SUB 2000: GO TO 20
1000 FOR N=20 TO Y+1 STEP -1: PR
INT AT X,N: NEXT N
1010 FOR N=Y TO 25: PRINT AT X,
N: "C": BEEP 1 N+20: NEXT N: LE
T L=L+1: LET S=S+L*200: INT (RN
D*100): FOR N=1 TO 150: NEXT N:
IF L=8 THEN GO TO 1500
1020 GO TO 20
1500 CLS: PRINT AT 5,10: "TOOTL
ES SAYS: -M- OUT OF THAT
GETTING FIT!"
1560 FOR N=-30 TO 30: BEEP .01 N
: BEEP .01 N+5: BEEP .01 10: BEE
P .01 2: BEEP .01 N: NEXT N:
BEEP .5 40: CLS: GO TO 900
1560 STOP
2000 RESTORE: PRINT AT 5
: "PRESS ANY KEY TO PLAY THE PR
G": AT 10,9: "TOOTLES IN THE PIT"
: "WRITTEN BY J. LONSDALE"
2010 READ A: IF A=99 THEN PAUSE
10: RESTORE 1 A
2220 BEEP 1 A
2230 IF INKEY$="" THEN GO TO
2240
2240 RESTORE 9100: CLS: FOR N=
USR "A" TO USR "C"+7: READ A: P
RSE N,A: NEXT N
2245 LET L1=3: LET L=1: LET X=19
: LET Y=16: LET S=0: LET D=5: LE
T C$=""
2250 RETURN
9000 DATA -12,0,4,7,-17,-5,-1,2,
-15,-3,0,4
9010 DATA -20,-8,-5,-1,-19,-7,-3
0,-17,-5,-1,13,0,4,9,9
9100 DATA 0,127,127,127,127,127,
127,127
9110 DATA 24,88,126,26,24,36,34,
9220 DATA 26,26,126,88,88,36,68,
9999 CLS: SAVE "TOOTLES" LINE 1
: CLS: PRINT "REWIND:PRESS PLAY"
: TO VERIFY: VERIFY "TOOTLES": R
UN

```



HERE'S WHAT YOU'VE SAID.....

"The standard of the programme is far, far better than we were expecting" ALAN DAIRE.

"Eureka! is superb. It's marvellous to have computer software of such high standard from Ian Livingstone"
CAROLE SKAIFE.

"It's taken over my life – I only have three hours sleep a night. I hated adventure games before this but Eureka! is brilliant!" ANONYMOUS CALLER.

"Congratulations on producing such an entertaining and stimulating package" J. GOODENOUGH.

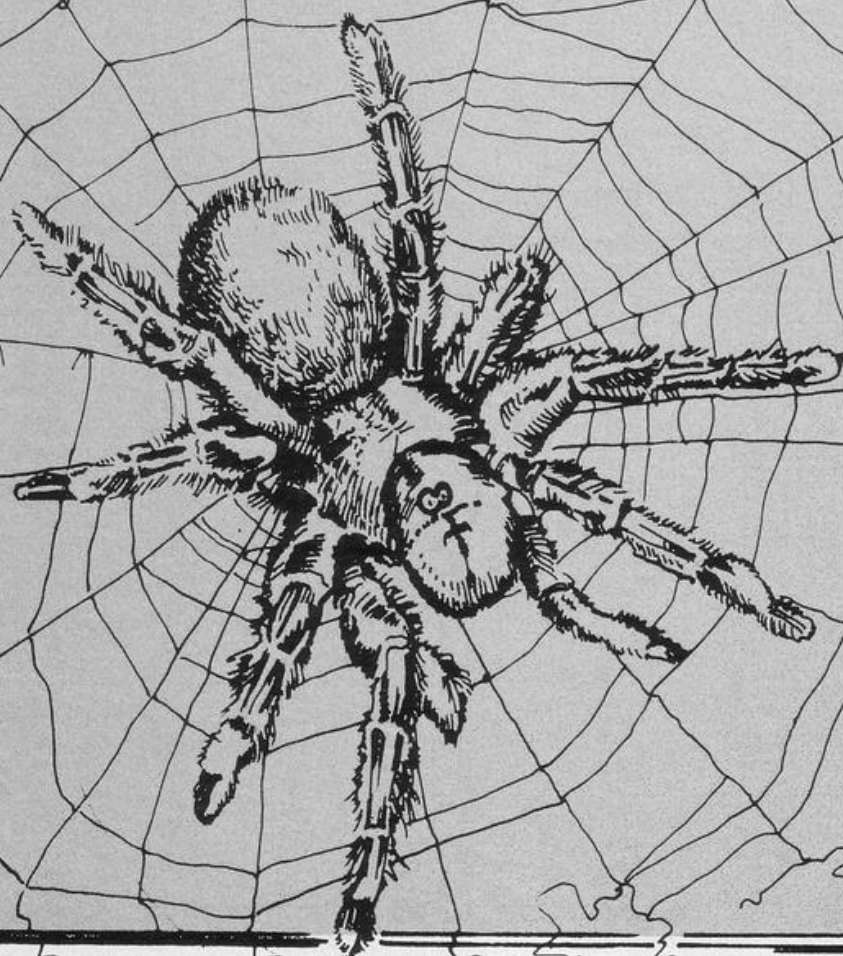
"I would like to thank all involved for making such an interesting game, especially the riddles"
NORMAN SCOTTER.

"Please, give me a clue to the £25,000"
CHARLES COOPER.
(Sorry, Charles)

"I hate this game. I seem to be missing all my favourite TV shows" ADAM BOWLES. (*Poor old Adam*)

Eureka!

TELL US WHAT YOU THINK.



SPIDER ATTACK

AS THE spider moves across the screen you must shoot him ten times using key 0. Avoid the webs which the spider fires at you as, if you are hit three times, you will die. You have to hit the spider ten times before he is killed.

Spider Attack was written for the 16K ZX-81 by Michael Fear and Garry Davenport of Cranleigh, Surrey.

```

10 LET HI=0
20 POKE 10000,0
30 PRINT "      WEB ATTACK"
40 PRINT "THE OBJECT OF THE GAME IS TO DESTROY THE SPIDER. HE MOVES AROUND THE SCREEN FIRING WEBS AS HE MOVES. YOU MUST SHOOT HIM 10 TIMES TO WIN. IF YOU ARE HIT 3 TIMES, YOU'RE DEAD."
50 PRINT "MOVE WITH KEYS"
60 PRINT "1 LEFT"
70 PRINT "2 RIGHT"
80 PRINT "0 FIRE"
90 PRINT "PRESS ANY KEY TO PLAY..."
100 IF INKEY$="" THEN GOTO 100
105 FAST
110 CLS

```

```

120 LET SHOT=0
130 LET LI=0
140 LET LI=3
150 LET LI=4
160 LET LI=4
170 LET LI=4
180 LET LI=4
190 LET LI=4
200 LET LI=4
210 LET LI=4
220 LET LI=4
230 LET LI=4
240 LET LI=4
250 LET LI=4
260 PRINT AT A,B;ES;AT A+1,B;AS
270 AT A+2,B;BS;AT A+3,B;CS;AT A+4,B;DS
280 AT A+5,B;FS
290 LET Y=15
300 PRINT AT 15,Y;
310 PRINT AT 0,0;"SCORE:";SC;AT 0,1;"HI:";HI;TAB 21;"LIVES:";L
320 PRINT AT 1,0;
330 PRINT AT 20,0;
340 SLOW
350 PRINT AT 15,Y;
360 PRINT AT A,B;ES;AT A+1,B;AS
370 AT A+2,B;BS;AT A+3,B;CS;AT A+4,B;DS
380 AT A+5,B;FS
390 LET L=INT (RND*4)+1
400 IF L=1 AND A<12 THEN LET A=A+1
410 IF L=2 AND A>3 THEN LET A=A-1
420 IF L=3 AND B>1 THEN LET B=B-1
430 IF L=4 AND B<24 THEN LET B=B+1
440 LET Y=Y+(INKEY$="2" AND Y<25)-(INKEY$="1" AND Y>1)
450 IF INKEY$="0" THEN GOSUB 500
460 LET Z=INT (RND*5)
470 GOTO 500 THEN GOSUB 500
480 PRINT AT 17,Y+2;" ";AT A+6,Y+2;" ";AT 17,Y+2;" ";AT A+6,Y+2
490 IF Y+2=B+1 OR Y+2=B+2 OR Y+2=B+3 OR Y+2=B+4 OR Y+2=B+5 OR Y+2=B+6 THEN GOTO 530
500 RETURN
510 LET SHOT=SHOT+1
520 LET SC=SC+10
530 PRINT AT 0,5;SC
540 IF SHOT=10 THEN GOTO 1000
550 RETURN
560 PRINT AT A+6,B+4;" ";AT 18,B+4;" ";AT A+6,B+4;" ";AT 18,B+4

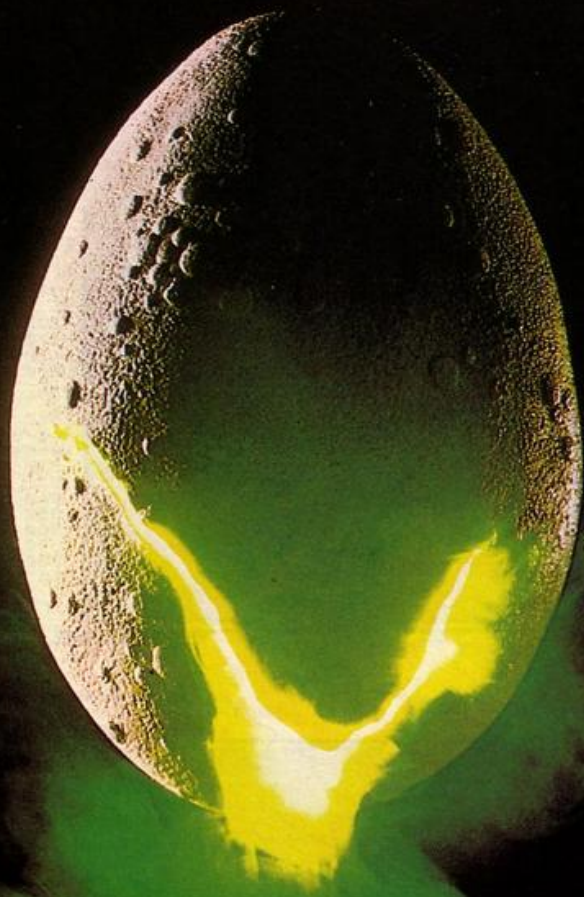
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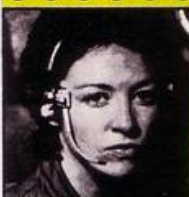
510 IF B+4=Y+1 OR B+4=Y+2 OR B+4=Y+3 THEN GOTO 530
520 RETURN
530 LET LI=LI-1
540 IF LI=1 TO 20
550 PRINT AT 18,Y;
560 AT 18,Y;
570 NEXT F
580 PRINT AT 0,21;"SHIPS:";LI
590 IF LI<0 THEN GOTO 2000
600 CLS
610 LET SHOT=0
620 GOTO 150
630 CLS
640 PRINT "WELL DONE. YOU HAVE BEATEN THE SPIDER AND HAVE RETURNED HOME..."
650 PRINT
660 PRINT A$
670 PRINT B$
680 PRINT C$
690 PRINT D$
700 PRINT
710 PRINT "BUT THE SPIDER SAYS:"
720 PRINT "PRESS ANY KEY TO PLAY AGAIN... BUT I WILL GET YOU, SEE IF I DON'T... BE WARNED"
730 IF SC>HI THEN LET HI=SC
740 PRINT "SCORE:";SC
750 PRINT "HI-SCORE:";HI
760 IF INKEY$="" THEN GOTO 1120
770 CLS
780 GOTO 30
790 CLS
800 PRINT "BAD LUCK. THE SPIDER HAS BEATEN YOU. YOU HAVE DIED."
810 PRINT
820 PRINT A$
830 PRINT B$
840 PRINT C$
850 PRINT D$
860 PRINT "THE SPIDER SAYS:"
870 PRINT "PRESS ANY KEY TO PLAY AGAIN... SEE IF YOU CAN BEAT ME BUT I DOUBT IT... HA HA"
880 GOTO 1090
890 SAVE "SPIDER"
900 RUN

```


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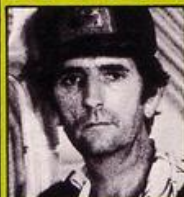
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Sub Sea was written for the 48K Spectrum by Leigh Howells of Deeping St James, Peterborough.

```
5 RESTORE 5: FOR f=0 TO 167
: READ a: POKE USR "a"+f,a: NEX
T f
```

```
10 DATA 16,16,124,84,70,118,24
6,255
```

```
20 DATA 63,127,255,127,63,16,1
5,3
```

```
30 DATA 255,255,255,255,255,0,
255,255,0,207,232,254,252,232,20
7,0
```

```
40 DATA 24,126,118,243,251,114
,126,24
```

```
50 DATA 255,136,136,136,255,13
6,136,136,24,24,24,60,90,153,255
,36,0,129,195,60,24,60,90,255
```

```
60 DATA 133,74,8,107,92,138,82
,133,4,65,8,128,1,72,0,34
```

```
70 DATA 251,195,127,63,31,12,7
,3,251,195,254,252,248,48,224,19
2
```

```
80 DATA 0,16,124,84,124,40,254
,254,1,1,31,255,31,6,127,255,1,1
0,28,190,124,60,22,6
```

```
90 RESTORE 90: LET TOT=0: FOR
E=42500 TO 42545: READ a: LET TO
T=TOT+A: POKE E,a: NEXT E: IF TO
T <> 4156 THEN BEEP 1,0: PRINT
"ERROR LINE 10"
```

```
100 DATA 33,0,0,14,10,22,4,126,
230,30,211,254,65,16,254,35,21,3
2,244,12,32,239,201
```

```
110 DATA 33,0,0,14,3,22,2,126,2
30,25,211,254,65,16,254,35,21,32
,244,12,32,239,201
```

```
120 PRINT AT 21,0: INK 7: "
PRESS ANY KEY TO BEGIN": PAUSE 0
: LET HIGR=5
```

```
130 POKE 23658,8: LET T=1: LET
GR=0: LET LI=3: LET E=0: LET FIR
ED=0: LET X=18: LET MIS=19: LET
GA=1: LET MX=10: LET MIX=20: LET
B=0
```

```
140 LET BOAT=0: LET BO=2
```

```
150 LET W=5: BORDER 1: BRIGHT 0
: FLASH 0: PAPER 2: CLS : INK 7
```

```
160 FOR F=2 TO 21: PRINT AT F,
0: INK 5: "(27*IG8)": NEXT F
```

```
170 PRINT AT 0,0: PAPER 1: " "
: AT 1,0: " " : AT 20,27: " "
: AT 21,27: " "
```

```
180 IF T=1 THEN GO TO 940
```

```
190 PAPER 2: INK 7: FOR R=1 TO
3
```

```
200 PRINT AT 9,0: "(IG8)FFFFFFF
FFFFFFFFFFFFFFFFFFFF(IG8)": AT 8,0
: "(IG8)FFFFFFFFFFFFFFFFFFFF
(IG8)"
```

```
210 PRINT AT 14,28: PAPER 1: I
NK 7: BRIGHT 1: "HIT": AT 17,28:
PAPER 0: "LVS": PRINT AT 18,28: "
HHH"
```

```
220 PRINT AT 10,28: PAPER 1: "1
": AT 11,28: "2": AT 12,28: "3"
```

```
230 PRINT AT 21,0: INK 2: PAPE
R 6: "JJJJJJJJJJJJJJJJJJJJJJJJJJ
"
```

```
240 PRINT AT 9,28: PAPER 4: IN
K 7: BRIGHT 1: "CNV"
```

```
250 PRINT AT R+9,28: OVER 1: F
LASH 1: BRIGHT 1: " " : AT R+8,2
8: FLASH 0: BRIGHT 0: " "
```

```
260 PRINT AT 2,28: PAPER 7: BR
IGHT 1: INK 1: "SUB": AT 4,28: IN
K 3: "MNE": AT 6,28: INK 0: "ZAP"
```

```
270 FOR F=0 TO 17: PRINT AT F,
31: INK 2: "(IG8)": NEXT F
```

```
280 LET A#="(32*IG8)KCCCCCCCCCL
(5*SP)KCCCCCL(2*SP)KCCCCCL(2*SP
)KCCCCCL(5*SP)KCCCCCCCCCCCCCL(6*SP
)KCCCCCCCCCCCCCL(4*SP)KCCCCCCCCCL(7*SP
)KCCCCCCCCCL(4*SP)KCCCCCCCCCL(3
*SP)"
```

```
290 LET B#="(35*SP)NAM(SP)O(10*
SP)O(SP)AM(7*SP)NA(6*SP)A(SP)O(8
*SP)OD(2*SP)A(SP)NM(16*SP)NAD(9*
SP)N(SP)NAD(12*SP)O(SP)A(SP)N(8*
SP)NNAN(SP)OD(39*SP)"
```

```
310 FOR a=0 TO LEN a#-32 STEP
T: PRINT AT 4,0: PAPER 5: INK 0
: a#(a+1 TO a+27)
```

```
320 PRINT AT 3,0: PAPER 5: INK
1: b#(a+1 TO a+27)
```

```
330 PRINT AT 15,28: PAPER 2: I
NK 7: BRIGHT 1: GR: IF LI <> 3 TH
EN PRINT : AT 18,28+(LI): PAPER
1: " "
```

```
340 IF LI=0 THEN GO TO 0710
```

```
350 PRINT : AT 21,x: INK 2: PAP
ER 6: "JHJ"
```

```
360 PRINT AT 7,29: PAPER 1: W
```

```
370 IF E <> 1 THEN IF INKEY#
="P" OR IN 31=1 THEN LET x=x+1
```

```
380 IF E <> 1 THEN IF INKEY#
="O" OR IN 31=2 THEN LET x=x-1
```

```
390 IF X >= 24 THEN LET X=24
```

```
400 IF X <= 0 THEN LET X=0
```

```
410 IF RND <.05 THEN LET BOAT
=1
```

```
420 IF RND >.85 THEN PRINT A
T RND *5+10, RND *26: INK 3: PA
PER 5: "E"
```

```
430 IF RND >.98 THEN PRINT A
T RND *5+10, RND *26: FLASH 1:
INK 4: PAPER 5: "*" "
```

```
440 PRINT AT 17,MX: INK 2: PAP
ER 5: "BCCD" : AT 16,MX+2: "A "
```

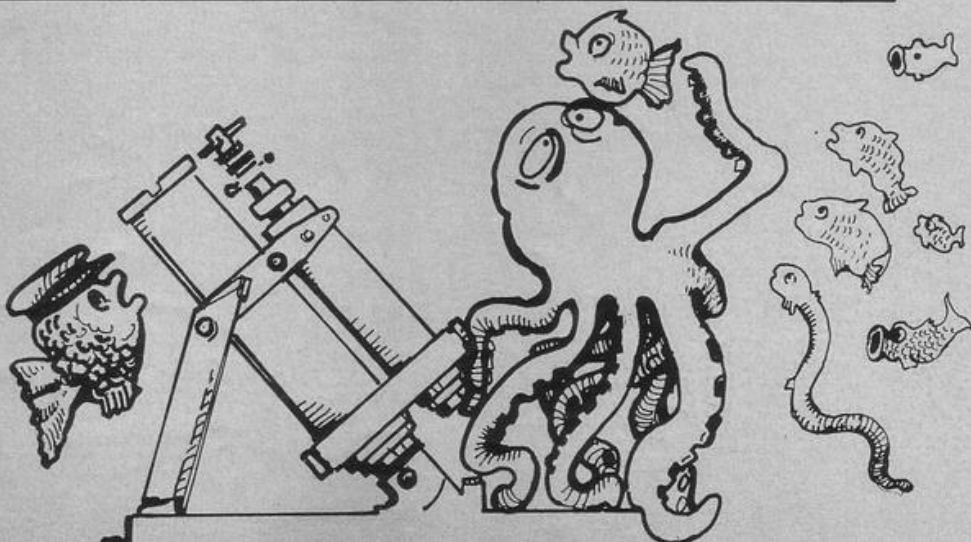
```
450 BORDER 1: IF GR >= 19 THEN
GO TO 0710
```

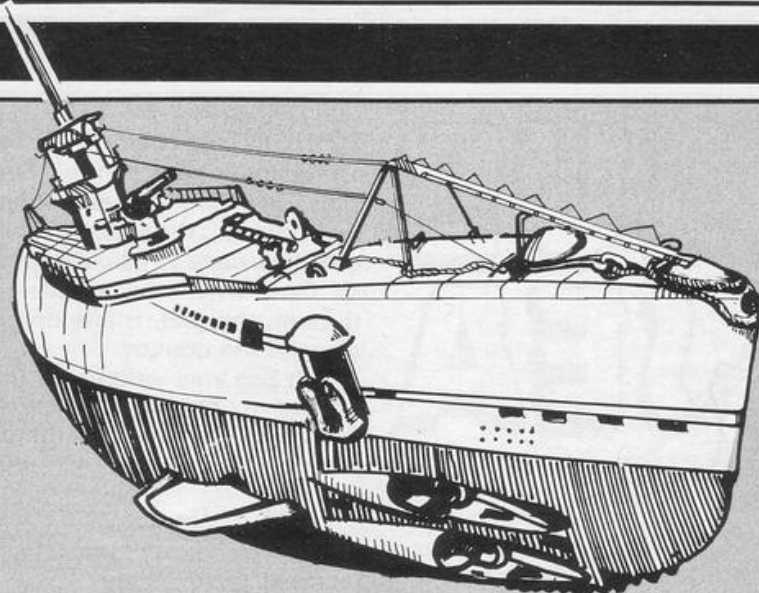
```
460 IF BOAT=1 THEN PRINT AT 6
,B0: PAPER 5: INK 4: "KCCCL" : AT
5,B0: "A O"
```

```
470 IF BOAT=1 THEN BEEP .001,B
0+10: BEEP .001,20: PRINT AT 5,
B0-1: PAPER 5: INK 5: " " : AT 6,B
0-2: " " : LET BO=B0+1: IF BO >=
22 THEN LET BOAT=0: PRINT AT 6
,B0: PAPER 5: " " : AT 5,B0: " "
```

```
480 RANDOMIZE : LET Q= INT ( RN
D *2)+1: IF Q=1 THEN LET MX=MX+
1: PRINT AT 17,MX-1: PAPER 5: I
NK 5: " " : AT 16,MX-1: " "
```

```
490 IF Q=2 THEN LET MX=MX-1: P
RINT AT 17,MX+6: PAPER 5: INK 5
: " " : AT 16,MX+5: " "
```





```

500 IF MX >= 21 THEN LET MX=21
510 IF MX <= 0 THEN LET MX=0

520 IF INKEY$="A" OR IN 31=2
4 AND W>0 THEN LET W=W-1: FOR F
=20 TO 10 STEP -1: PRINT AT F,0
; PAPER 5; INK 5;
": RANDOMIZE USR 4
2523: NEXT F
530 IF GA>2 THEN PRINT AT 8,G
A-1;"F"; AT 9,GA-1;"F"
540 PRINT AT 9,GA; PAPER 5;"
"; AT 8,GA;" ": LET GA=GA+.2:
IF INT GA=23 THEN LET GA=1: P
RINT AT 8,22;"FFFF"; AT 9,22;"F
FFF"
550 IF E <> 1 THEN IF INKEY$
="Q" OR IN 31=16 THEN RANDOMIZ
E USR 42523: GO SUB 0660
560 IF FIRED=1 THEN PRINT AT
MIS,X+1; PAPER 5; INK 0;"G": PRI
NT AT MIS+1,X+1; INK 5;"(ig8)"

570 IF FIRED=1 THEN LET MIS=MIS-1: BEEP .007,MIS-20
580 IF ATTR (MIS,X+1)=42 THEN
GO SUB 0680: PRINT AT 2,28; FL
ASH 1; OVER 1; BRIGHT 1;"(3*ig8)
": RANDOMIZE USR 42500: RANDOMI
ZE USR 42523: LET LI=LI-1: GO S
UB 1280: PAUSE 100: PRINT AT 2,
28; FLASH 0; OVER 1;" ": GO TO
500
590 IF ATTR (MIS,X+1)=172 THEN
LET W=W+1: PRINT AT MIS,X+1;
PAPER 5; INK 5;" ": FOR F=20 TO
25: BEEP .007,F: NEXT F
600 IF ATTR (MIS,X+1)=23 THEN
GO SUB 0700
610 IF ATTR (MIS,X+1)=44 THEN
GO SUB 0680: RANDOMIZE USR 425
00: RANDOMIZE USR 42523: RANDOM
IZE USR 42500: RANDOMIZE USR 4
2523: RANDOMIZE USR 42500: LET
BOAT=0: LET BO=1: LET GR=GR+4
620 IF ATTR (MIS,X+1)=43 THEN
PRINT AT 4,31; BRIGHT 1; FLASH
1;" ": GO SUB 0680: PRINT AT 4
,31;" ": IF GR <> 0 THEN LET GR
=GR-1
630 IF SCREEN$ (MIS,X+1) <> "
" AND ATTR (MIS,X+1) <> 44 THEN
RANDOMIZE USR 42500: RANDOMIZ
E USR 42523: PRINT AT 6,31; BR
IGHT 1; FLASH 1;"(ig8)": GO SUB
0680: LET GR=GR+1: PRINT AT 6,3
1;" "
640 IF MIS <= 2 THEN LET MIS=1
9: LET FIRED=0: LET E=0
650 NEXT a: NEXT R: GO TO 0710

660 LET MIS=18: PRINT AT MIS,X
+1; PAPER 5; INK 0;"G": LET E=1:
LET FIRED=1
670 RETURN
680 RANDOMIZE USR 42500: FOR F
=0 TO 5: PRINT AT MIS+1,X+1; PA
PER 5; INK F;"I"; AT MIS,X;"III"
; AT MIS-1,X+1;"I"; AT MIS-1,X+1
;" "; AT MIS,X;" ": AT MIS+1,X
+1;" ": NEXT F
690 LET FIRED=0: LET MIS=19: LE
T E=0: RETURN

```

```

700 RANDOMIZE USR 42500: PRINT
AT MIS+1,X+1; PAPER 6; INK 2;"
I": FOR F=1 TO 100: NEXT F: PRIN
T AT MIS+1,X+1; PAPER 5; INK 5;
" ": LET FIRED=0: LET E=0: LET M
IS=19: RETURN
710 POKE 42506,50: RANDOMIZE U
SR 42500: IF LI=0 THEN PRINT A
T 10,9; PAPER 0; FLASH 1;"GAME O
VER": REM ***HIT MIS*****
720 IF GR >= 19 THEN LET A$="W
ORDS FAIL ME.."
730 IF GR<3 THEN LET A$="CABBA
GE FEATURES"
740 IF GR<6 THEN IF GR >= 3 TH
EN LET A$="GO BACK TO SLEEP"
750 IF GR<9 THEN IF GR >= 6 TH
EN LET A$="PRETTY FEEBLE"
760 IF GR<12 THEN IF GR >= 9 T
HEN LET A$="NOT BAD AT ALL"
770 IF GR<15 THEN IF GR >= 12
THEN LET A$="AMAZING- W O W!!"

780 IF GR >= 15 THEN IF GR<19
THEN LET A$="FANTASTIC-W O W!!"

790 PRINT AT 0,3; INK 5; PAPER
1;"RANKING="
800 PRINT AT 0,3; INK 7; PAPER
3;"RANK=";A$
810 FOR F=0 TO 18: PRINT AT F,
27; PAPER 2;" ": NEXT F
820 PRINT AT 0,27;"MISS": AT 1
9,29;"HIT"
830 FOR F=18 TO 1 STEP -1: PRIN
T PAPER 1; AT F,27;"----": NEXT
F
840 FOR F=24 TO 24+((18-GR)*7):
PLOT 218,F: DRAW 5,0: DRAW INK
5;4,4: NEXT F
850 FOR F=24 TO 24+((GR)*7): PL
OT 234,F: DRAW 5,0: DRAW INK 5;
4,4: NEXT F
860 GO SUB 0900
870 IF GR>HIGR THEN LET HIGR=G
R
880 RANDOMIZE USR 42500: POKE
42506,4: IF LI=0 THEN GO TO 130

890 LET T=T+.5: LET GR=0: LET R
=0: GO TO 20
900 RESTORE 0900: FOR F=1 TO 29
: READ A,B: BEEP A,B-12: NEXT F

910 RETURN
920 DATA .5,0,.15,7,.15,0,.15,7
,.15,7,.15,0,.15,7,.15,7,.15,0,.
15,7,.5,9,.5,7,.5,6,.5,2
930 DATA .5,0,.15,7,.15,0,.15,7
,.15,7,.15,0,.15,7,.15,7,.15,0,.
15,7,.5,14,.5,12,.5,11,1,7,1,0

940 REM /////TITLE SCREEN/////

950 FOR F=0 TO 10: PRINT AT R
ND *17+2, RND *26; INK 3; PAPER
5;"E": NEXT F
960 FLASH 1: BRIGHT 1: PAPER 2:
INK 6: FOR F=6 TO 16 STEP 5: PR
INT AT F,4;"FFFF": NEXT F
970 FOR F=9 TO 15 STEP 2: FOR G
=6 TO 10: PRINT AT G,F;"C": NEX
T G: NEXT F
980 FOR F=7 TO 10: PRINT AT F,

```

```

4;"F": NEXT F: FOR F=12 TO 15: P
RINT AT F,7;"F": NEXT F: PRINT
AT 10,9;"CCC"; AT 10,13;"CCC"
990 PRINT AT 6,14;"C"; AT 8,14
;"C"; AT 12,9;"III"; AT 12,13;"
NK 1; PAPER 5;"III"; AT 14,9;"II
I"; AT 14,13;"III"; AT 13,9;"I"
1000 PRINT AT 16,9; INK 2; PAPE
R 6;"III"; AT 15,9;"I": FOR F=13
TO 16: PRINT AT F,13;"I"; AT F
,15;"I": NEXT F
1010 INK 1: FLASH 0: BRIGHT 0: P
APER 5: PRINT AT 9,17;"KCCCCCCC
L"; AT 8,17;" N NMA O"
1020 PRINT AT 14,17; INK 2;"BCC
CCCCCD"; AT 13,21;"A"
1030 PRINT INK 5; PAPER 1; AT 1
9,2;"PRESS -ENTER- TO START."
1040 PRINT INK 1; PAPER 5; AT 2
0,2;"PRESS -I- FOR BRIEFING."
1050 PRINT INK 1; PAPER 5; BRIG
HT 1; AT 3,3;"WRITTEN BY L.HOWEL
LS."
1060 PRINT INK 7; PAPER 2; BRIG
HT 1; AT 16,28;"HI:"; AT 17,28;H
IGR
1070 RESTORE 1070: FOR F=0 TO 47
: READ A: BEEP .12,A+B
1080 IF INKEY$ = CHR$ 13 OR IN
31=16 THEN GO SUB 1110: BEEP .
1,0: GO TO 190
1090 IF INKEY$="I" OR IN 31=2
4 THEN GO SUB 1110: GO SUB 1180

1100 NEXT F: LET B=B+2: GO TO 10
70
1110 FOR F=2 TO 21: PRINT AT F,
0; INK 5;"(27*ig8)": BEEP .007,F
: NEXT F: RETURN
1120 DATA -1,11,-6,6,-2,10,11,-1

1130 DATA -1,11,-6,6,-2,10,-6,6

1140 DATA -3,9,-6,6,-2,10,11,-1

1150 DATA -3,9,-6,6,-2,10,-6,6

1160 DATA -5,7,-5,7,-2,10,11,-1

1170 DATA -5,7,-5,7,-2,10,11,-1

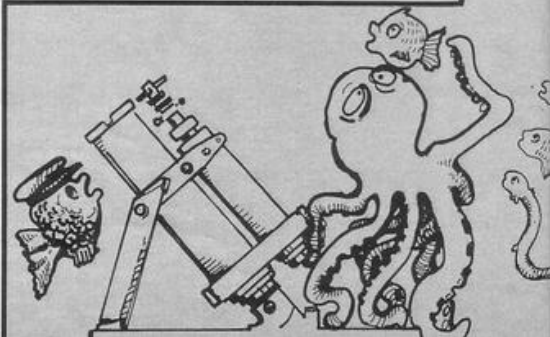
1180 PAPER 5: INK 1: PRINT AT 4
,1;"SUB IF SUB IS HIT,FLASHES"

1190 PAPER 5: INK 1: PRINT AT 2
,8; BRIGHT 1; FLASH 1;"BRIEFING"

1200 PRINT AT 5,1;"MNE IF MINE
HIT,FLASHES"
1210 PRINT AT 9,1;"LVS BASES RE
MAINING": AT 6,1;"ZAP ZAPS LEFT"
; AT 7,1;"CNV NO. OF CONVOYS LEF
T."; AT 8,1;"HIT NO. SHIPS HIT."

1220 PRINT AT 11,1;"KEYS: 0=LEF
T P=RIGHT"; AT 12,7;"Q= FIRE A=
ZAP"
1230 PRINT AT 13,1;"KEMPSTON JO
YSTICK:"; AT 14,1;"UP AND FIRE=Z
AP"
1240 PRINT AT 17,1; INK 2;"BCCC
D KCCCCCCCCCL"; AT 16,3;"A
N N AM DO"; AT 16,22; INK 4;"A
Q"; AT 17,21;"KCCCL"
1250 PRINT AT 18,1;"DEADLY
1 PT 4 PTS"
1260 PRINT AT 20,1; INK 3;"E";
INK 1;" -1 POINT "; FLASH 1; IN
K 4;"*"; FLASH 0; INK 1;" EXTRA
ZAP"
1270 GO TO 1070
1280 BEEP .5,0: BEEP .15,7: BEEP
.15,0: BEEP .15,7: BEEP 1,7: BE
EP .5,12: BEEP .5,7: BEEP 1,0: R
ETURN
9000 SAVE "SUB SEA" LINE 1

```



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1984

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16

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■ ■ ■ ■ ■
I AM replying to the letter published in the November issue concerning **Urban Upstart**.

I have completed **Urban Upstart** several times and have found that if you get stuck in the cell you need to go to the Police Sergeant's desk and type **WAIT**. You continue waiting until the telephone rings and the Sergeant pops out to answer it. As he does so you automatically go out of the police station. Then, to complete the adventure, you need the following things: red tape, book, a fiver, official papers, small key and a flying suit.

Please remember to read the book before taking off or you may have a nasty accident.

S Jay, aged 14, Bristol.

■ ■ ■ ■ ■
RE Urban Upstart (C P Ball), I offer the following advice.

You will only be arrested if:

1. You are not wearing dungarees in the street (indecent exposure).
2. You examine cars, lor-

ries or vans (loitering with intent).

If you do find yourself in jail then go to the sergeant, wearing dungarees and carrying the hat if you have removed it from the wasteland. Type **WAIT**. After an interval it may be necessary to type **WAIT** again.

Beware. There are 23 items. The additional one must be given up to escape with 22 points.

E Smith, Brentford, Middlesex.

■ ■ ■ ■ ■
I AM writing with regard to C P Ball's letter in the November 1984 issue about the game **Urban Upstart**. To escape from prison you must first take a can of beer out of the fridge while you are in the kitchen. While in prison drink the beer and you will find you are taken to hospital.

Craig Carter, Leeds, West Yorkshire.

● Many thanks to all the readers who have written concerning the game **Urban Upstart**.

■ ■ ■ ■ ■
IN ORDER to make a buzzing sound with your ZX-81, use **RAND USR 821 to 829**. This works by using the **SAVE** routine, as this short program will demonstrate:

```
10 FOR A=821 TO 829
20 RAND USR A
30 NEXT A
40 GOTO 10
```

A small tip, if your television has a separate tone control, turn this full up but not the volume. You will then be able to hear much better. This will also make the ZX-81 give out sounds while you are playing games. This also works for **POKEs**, for example:

POKE USR 1,1 which will give a high-pitched screech.

J Archer, aged 14, Southampton, Hants.

■ ■ ■ ■ ■
I **PURCHASED Rocket Man** from Software Farm several weeks after its release. Within a week I had passed through all six screens and started back on screen one. I have now passed through all six screens over fifteen times, achieving a high score of 1,019,796. The program crashed before I finished because I had over 30 lives.

I have discovered that if **POKE 23698,0** is entered, the fourth diamond does not need to be collected.

M Pleasance Brampton.

■ ■ ■ ■ ■
I **BOUGHT Jet Set Willy** last month, and I have already found a lot of useful **POKEs**. For instance:

```
MERGE the first part (called Jetset) and then NEW. Then ENTER:
10 CLEAR 32767: LOAD "" CODE
20 FOR A=43780 TO 45823: POKE A,O: NEXT A
30 FOR A=46080 TO 49151: POKE A,O: NEXT A
40 POKE 36477,1
50 RANDOMIZE USR 33792
Now RUN
```

This will eliminate all moving objects, allow you to jump from room to room, let you fall from any height, clear the attic bug, suck you up walls as if in a lift and, of course, give you infinite lives.



If you want to get sucked up a wall, stand beneath it and press jump. This takes getting used to, and does not work on all walls. In the nightmare room, as soon as you get in, move left and jump to get the single, high-up object. Leave straight away as there is nothing else there.

Alex Kruczkowski, Nottingham.

● Of course, if you enter **PRINT "YOU HAVE JUST FINISHED JET SET WILLY"**, you can avoid all this trouble.

■ ■ ■ ■ ■
HERE is a note for all **Jet Set Willy** fans. To skip stages you have to go into the first landing room, jump through the ladder and press keys **WRITETYP**. Then press any number key with key 9. Example: keys 9 and 8 will take you to the off-licence.

To skip stages on **Manic Miner**, press enter to play the game, then press 6031769 followed by any key with 6. Keys 6 and 1, for example, will take you to the cold room.

Kevin Gale, aged 11, Sandy, Bedfordshire.



Simple ANIMATION

THE easiest part of programming is learning to print characters on the screen. Simple PRINT statements, though, will not produce many games. To program most good games it is necessary to have your character move around the screen.

Professional programmers, of course, are able to produce large, flicker-free graphics, using machine code routines. These are complex, and can take weeks or months to perfect. Luckily, it is not always necessary to program such complicated routines. Simple Basic statements will produce clear, trouble-free movement with a little thought.

Print a character on the screen, for example:

```
100 PRINT AT 2,2;"O"
```

In order to make your "O" move, it is necessary to amend the above line a little:

```
80 LET X=2
```

```
90 LET Y=2
```

```
100 PRINT AT X,Y;"O"
```

The effect is the same, but the introduction of the variables X and Y makes line 100 much more flexible. Line 100 will always PRINT the "O" at co-ordinates X and Y, but the values of X and Y can easily be altered.

Add lines

```
110 LET Y=Y+1
```

```
120 GOTO 100
```

The position of the O will now change much more easily than it

would have done if you had entered a series of PRINT statements. It can also be changed much more quickly. Try changing line 110 to alter the value of X, or to let Y increase by a larger amount each time.

Despite the speed of printing there is, as yet, no illusion of movement. This can be changed by inserting a space just before the O on line 100:

```
100 PRINT AT X,Y;" O"
```

Your O will now streak across the screen, to end with an error code as the computer tries to print it off-screen.

Very simple movement but, as yet, nothing for a player to control. Control can be introduced by using the INKEY\$ statement. Replace lines 110 and 120 with:

```
110 IF INKEY$="5" THEN LET Y=Y-1
```

```
120 IF INKEY$="8" THEN LET Y=Y+1
```

```
130 IF INKEY$="6" THEN LET X=X+1
```

```
140 IF INKEY$="7" THEN LET X=X-1
```

```
150 GOTO 100
```

Suddenly the O is under your control, and can be moved by pressing the cursor keys 5 to 8. Each time you press a key, the value of X or Y will be changed and so, next time the O is printed, it will appear in a different place.

Tidy up these lines, and avoid the problem of trying to print off screen by replacing lines 110 to 140 with the following two lines which serve the same purpose, but are slightly less easy to understand:

```
110 LET Y=Y+(INKEY$="8" AND Y<27)-(INKEY$="5" AND Y>0)
```

```
120 LET X=X+(INKEY$="6" AND X<20)-(INKEY$="7" AND X>0)
```

Running with this version will give you an O which runs to the right, and leaves a trail behind it in all other directions. Experiment to make it run in all directions without leaving a trail, and then to run in all directions leaving a trail behind. Try using two characters instead of a single

"O", or producing a horizontal line as you move across the screen, and a vertical line as you move up and down.

Addition of a few more lines develops the rudiments of movement into a simple hurkle game. A and B are the co-ordinates of the invisible hurkle. Line 10 counts how many turns you have had, and line 11 checks whether or not you have found the hurkle.



N gives the number of turns which have been had. Note how the space has been removed from line 6 in order to mark where you have been.

```
1 LET N=0
```

```
2 LET A=INT(RND*28)
```

```
3 LET B=INT(RND*21)
```

```
4 LET X=2
```

```
5 LET Y=2
```

```
6 PRINT AT X,Y;"O"
```

```
7 LET Y=Y+(INKEY$="8" AND Y<27)-(INKEY$="5" AND Y>0)
```

```
8 LET X=X+(INKEY$="6" AND X<20)-(INKEY$="7" AND X>0)
```

```
9 PAUSE 4E4
```

```
10 LET N=N+1
```

```
11 IF Y=A AND X=B THEN GO-
```

```
SUB 1000
```

```
12 GOTO 6
```

```
13 CLS: PRINT "WELL DONE, YOU TOOK "N;" TURNS"
```

Turn over for Beginners' programs



Programming-- Slow and easy with Computer Sloth



strokes

I: position of moving ball

LINE NUMBERS

5-80: Print score (you are given a five point start) and draw the table excluding the pocket.

100-165: Print title and play tune (data giving the pitch and duration of the notes are contained in line 1000).

170: Sets the start position of the ball. As the ball can only travel from right to left across the screen (along row 11 down the

THE CUE ball appears on the table together with a hole into which the ball must be played. Enter the force at which you wish the cue to hit the cue ball. The higher the entry, the farther the cue ball will travel.

Pot the Ball was written for the 16K Spectrum by Philip Todhunter, aged 14, of Whitehaven, Cumbria.

This game uses special graphics characters and you should turn to page five to find out how to enter them. Take care, especially with the underlined letters A and B. These are not ordinary capitals, as they must be entered by pressing a and b in graphics mode.

A variable is the name given to a location in memory used by a program to store information. As the value of a variable changes when a program is RUN, so the contents of the memory location are altered. A list of the important variables follows, which will help you to understand how Pot the Ball works.

SC: holds your score

P: force used to strike the ball

Q: start position of the ball

R: position of pocket

graphic a: user defined graphic for ball

graphic b: user defined graphic for pocket

T: number of warm-up cue

POT THE BALL

screen), it is only necessary to set the column number 29. Position of the pocket along the line of travel is randomly selected as a number between 0 and 27.

175: Reads the data for the user defined graphics which is held in lines 1010 for the ball and 1020 for the pocket. The data is in decimal format. Such numbers are easier to enter than the BINARY format explained in chapter 14 of the manual. This information is POKEd into the 16 bytes representing graphics characters A and B.

180-190: Print ball and pocket.

200-202: Request player to enter strength of cue stroke.

205-250: Draw cue strokes as alternative one and two character lengths of graphic 3.

260-282: Draw ball at each character position from start to end of travel (29-P),




```

1 REM "BASKETBALL"
2 PRINT AT 0,7;"BASKETBALL"
3 PRINT AT 0,1;"THE OBJECT OF"
4 THE GAME IS TO SCORE BASKET
5 INTO THE NET." AT 7,3;"SELECT"
6 PRINT AT 10,3;"PRESS A KEY"
7 TO START GAME"
8 IF INKEY$="" THEN GOTO 5
9 CLS
10 PRINT AT 0,5;"**BASKETBALL"
11
12 LET G=10
13 LET H=20
14 LET N=10
15 LET M=0
16 PRINT AT 21,0;"
17
18 60 PRINT AT G,H;"
19
20 70 PRINT AT N,M;"
21
22 80 PRINT AT N,M;"
23
24 85 PRINT AT N,M;"
25
26 90 IF INKEY$="5" THEN LET M=M-
27 100 IF INKEY$="8" THEN LET M=M+
28 110 IF INKEY$="0" THEN GOTO 200
29 GOTO 70
30 PRINT AT N,M;"
31
32 AT N-2,M
33 AT N-4,M+3
34 AT N-8,M+6
35 AT N-12,M+8
36 AT N-12,M+1
37 AT N-10,M+13
38 AT N-7,M+
39 210 PRINT AT N,M;"
40
41 AT N-2,M
42 AT N-4,M+3
43 AT N-8,M+6
44 AT N-12,M+8
45 AT N-12,M+1
46 AT N-10,M+13
47 230 PRINT AT N,M;"
48
49 240 PRINT AT 10,5;"ANOTHER GAME"
50 AT 12,5;"PRESS A KEY"
51 250 IF INKEY$="" THEN GOTO 250
52 CLS
53 GOTO 1

```



BASKETBALL



The object of the game is to score a basket by throwing the ball into the net. Guide your man across the screen using keys 7 and 8. When you think he is in the right spot press 0 to have a shot at the basket.

Basket Ball was written for the 16K ZX-81 by Allan Beck of Knightswood, Glasgow.



Fly - Spray



Spray as many flies as possible with your aerosol can before you run out of squirts. When all the Fly-spray has been used you are given a score and told how many flies you managed to eliminate. Use keys 6, 7 and 0 to play.

Written for the 16K Spectrum by Gaynor Fletcher of Irlam, Manchester.

```

10 REM FLY-SPRAY
20 BORDER 0: PAPER 0: INK 7: C
30 PRINT AT 0,11;"FLY-SPRAY";
40 AT 2,0;"Shoot as many flies as
50 possible before the spray runs o
60 ut." AT 7,8;"(16)-move down"; A
70 T 9,8;"(17)-move up"; AT 11,8;"(
80 10)-fire"; AT 16,0;"Press any ke
90 y to begin combat." PAUSE 0: RE
10 M inverse FLY-SPRAY
11 70 FOR a=0 TO 23: READ b: POKE
12 USR "a"+a,b: NEXT a
13 80 CLS: LET s=10: LET e=0: LE
14 T sc=0: GO TO 260
15 90 PRINT AT s,0;" "; AT s+1,0
16 " "
17 100 IF INKEY$="6" THEN LET s
18 =s+1
19 110 IF INKEY$="7" THEN LET s
20 =s-1
21 120 IF INKEY$="0" THEN LET e
22 =e+1: GO SUB 500
23 130 IF s<0 THEN LET s=0
24 140 IF s>19 THEN LET s=19
25 150 BEEP .01,40: PRINT AT s,0:
26 "B"; AT s+1,0;"C"
27 160 RETURN
28 270 LET x=17: LET y=10
29 280 LET xo=x: LET yo=y
30 290 LET m=INT (RND *8)
31 300 IF m=1 THEN LET x=x+1: LET
32 y=y-1
33 310 IF m=2 THEN LET x=x+1
34 320 IF m=3 THEN LET x=x+1: LET
35 y=y+1
36 330 IF m=4 THEN LET y=y+1
37 340 IF m=5 THEN LET x=x-1: LET
38 y=y+1
39 350 IF m=6 THEN LET x=x-1
40 360 IF m=7 THEN LET x=x-1: LET
41 y=y-1
42 370 IF m=8 THEN LET y=y-1
43 380 IF x>30 THEN LET x=30
44 390 IF x<5 THEN LET x=5
45 400 IF y>19 THEN LET y=19
46 410 IF y<0 THEN LET y=0
47 420 PRINT AT yo,xo;" "; AT y,x
48 " "; INK 6;"A"
49 430 GO SUB 90: GO TO 280
50 500 FOR c=1 TO 30
51 510 BEEP .002,50: PRINT AT s,c
52 " "; IF s=y THEN LET sc=sc+1:
53 PRINT AT 0,11;"SCORE=";sc: REM
54 inverse SCORE=
55 520 NEXT c: PRINT AT s,0;" "
56
57 530 IF e>30 THEN GO TO 600
58 540 RETURN
59 600 CLS: PRINT AT 10,10;"CAN
60 EMPTY-"; AT 11,10;"-----";
61 AT 13,8;sc/30;"flies killed!";
62 AT 15,6;"Press '1' for replay";
63 INPUT z: IF z=1 THEN GO TO 80
64
65 700 DATA 36,24,90,126,126,90,24
66 ,0
67 710 DATA 124,127,124,124,255,12
68 9,189,189
69 720 DATA 189,189,189,189,189,18
70 9,129,255

```


BEGINNERS

ST

PPIT

ST

PPIT

STOP THE flashing cursor over the arrow using the "O" key. For each cursor that is stopped in the correct place fifty points are gained. The game ends when you misjudge the placing of the cursor. Stoppit was written for the 16K Spectrum by Kevin Wilson of Ryhope, Sunderland.



```

1 REM STOPPIT
2 PRINT "The object of the game is to stop the cursor at the arrow for fifty points"
10 PRINT AT 10,1;"@ STOPPIT BY KEVIN WILSON 1984"
15 INPUT "Press ENTER to play"
;as
16 IF a$="p" OR a$="P" THEN GOTO 20
20 PAUSE 10: LET sc=50
39 FOR h=0 TO 7
40 READ b: POKE USR "b"+h,b:
NEXT h
42 DATA 0,126,126,126,126,126,126,0
48
99 CLS
100 FOR n=0 TO 31
120 FOR k=0 TO 31
125 BORDER 2: PAPER 7: INK 1
130 PRINT AT 1,k;"BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB"
200 PRINT AT 2,17;"^"
250 IF INKEY$="O" AND n=18 THEN BEEP .25,20: PRINT "GOOD": P
RINT "SCORE ";sc: GO TO 9996
260 IF INKEY$="O" AND n <> 17 THEN LET sc=sc-50: BEEP .25,-1
1: PRINT AT 3,0;"
": PRINT AT 4,0;"HARD LUCK FINAL SCORE ";sc: STOP
400 PRINT AT 1,n;" "
410 IF n >= 30 THEN LET n=1
420 NEXT n
9995 IF sc >= 500 THEN PRINT AT 3,0;"
": PRINT AT 3,0;"
VERY GOOD"
9996 IF sc >= 1000 THEN PRINT AT 3,0;"VERY GOOD"
9997 IF sc >= 1500 THEN PRINT AT 3,0;"EXCELLENT"
9998 IF sc >= 2000 THEN PRINT AT 3,0;"BRILLIANT"
9999 LET *sc=sc+50: GO TO 100
    
```



LASER TRAIL

LASER TRAIL is a game for two players, written for the 16K Spectrum by A Parsons and R Dallas of Bedford, Bedfordshire.

You have both been deposited in an arena and must fight for your lives. The laser bikes you ride leave trails as you move. Avoid your opponent's trail and try to force the other bike into the wall. The keys for each player to use are included in the program.



```

5 REM LASER TRAIL
20 BORDER 0: PAPER 0: INK 7: L
LS
30 GO SUB 270
40 CLS : LET 11=0: LET 12=4: L
ET 13=0: LET 14=4: LET *1=85: L
T y1=83: LET *2=169: LET y2=83
50 PLOT 1,3: DRAW 253,0: DRAW
0,172: DRAW -253,0: DRAW 0,-172
60 IF IN 64510=190 OR IN 645
10=254 THEN LET 11=0: LET 12=4
70 IF IN 65022=190 OR IN 650
22=254 THEN LET 11=0: LET 12=-4
80 IF IN 65278=183 OR IN 652
78=247 THEN LET 11=4: LET 12=0
90 IF IN 65278=187 OR IN 652
78=251 THEN LET 11=-4: LET 12=0
100 IF IN 57342=190 OR IN 573
42=254 THEN LET 13=0: LET 14=4
110 IF IN 49150=189 OR IN 491
50=253 THEN LET 13=0: LET 14=-4
120 IF IN 32766=187 OR IN 327
66=251 THEN LET 13=4: LET 14=0
130 IF IN 32766=183 OR IN 327
66=247 THEN LET 13=-4: LET 14=0
140 IF POINT (x1+11,y1+12)=1 T
HEN PLOT x1,y1: DRAW 11,12: GO
TO 230
150 IF POINT (x2+13,y2+14)=1 T
HEN PLOT x2,y2: DRAW 13,14: GO
TO 210
160 PLOT x1,y1: DRAW 11,12: PLO
T x2,y2: DRAW 13,14
170 LET *1=*1+11: LET y1=y1+12:
LET *2=*2+13: LET y2=y2+14
180 IF *1 <= 1 OR *1 >= 253 OR
y1 >= 175 OR y1 <= 3 THEN GO TO
230
    
```

```

190 IF *2 <= 1 OR *2 >= 253 OR
y2 >= 175 OR y2 <= 3 THEN GO TO
210
200 GO TO 60
210 FOR i=1 TO 20: FOR b=1 TO 7
: BORDER b: NEXT b: BEEP .01,20:
BEEP .001,30: NEXT i: CLS : PRI
NT AT 10,4;"PLAYER 1 WINS!!"
220 GO TO 240
230 FOR i=1 TO 20: FOR b=1 TO 7
: BORDER b: NEXT b: BEEP .01,15:
BEEP .01,35: NEXT i: CLS : PRIN
T AT 10,4;"PLAYER 2 WINS!!"
240 PRINT AT 21,1;"PRESS ANY K
EY TO TRY AGAIN"
250 IF INKEY$="" THEN GO TO
250
260 RUN
270 PRINT "LASER TRAIL"
280 PRINT "...IN THIS GAME FOR T
WO PLAYERS YOUHAVE TO CONTROL TH
    
```

```

E TRAIL LEFT BY A LASER CYCLE"
290 PRINT "...YOU LOSE IF YOU RA
M THE BORDER, YOUR OPPONENT'S TR
AIL,OR YOUR OWN!"
300 PRINT FLASH 1;"PRESS ANY
KEY TO CONTINUE"
305 PRINT AT 21,0;"WRITTEN BY
A.Parsons & R.Dallas"
310 IF INKEY$="" THEN GO TO
310
320 CLS : PRINT "CONTROLS:- PL
AYER 1 PLAYER 2
Q P UP
A L DOWN
X L LEFT
C N RIGHT
M"
330 PRINT FLASH 1;"PRESS ANY
KEY TO START"
340 IF INKEY$="" THEN GO TO
340
350 RETURN
    
```



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**PROGRAMMABLE
INTERFACE**

ROMSLOT

**INTERFACE
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**QUICKSHOT
II**

QUICKSHOT

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TURMOIL

TURMOIL is quite simply a game in which you have to help Mic the Mechanic to steal oil from the Arabs' oil refinery in order to build a car. This is not as easy as it sounds as you are chased by the Arabs who are incensed at the thought of their oil being stolen.

At the beginning of the game players have a quick view of all 26 stages if they do not choose to start playing or to sample the training mode. I am glad to see that the author retains some sympathy for the player and allows Mic the Mechanic to fall from any height without meeting with death. Unless, of course, he collides with an Arab in mid-flight. It also makes a change not to have to watch a time and fuel limit as you can devote more concentration to the game. For those of you who feel a sense of achievement whenever a high score is obtained you can collect the tools that appear at intervals and return them to the shed at the bottom of the screen.

I chose to ignore the tools and aimed to fill my oil can with five drops of oil. Once the oil was collected I poured it through a grid and watched my car grow. We all know it takes six drops of oil to build a car so I was compelled to risk life and limb once again by returning to the refinery for a refill. At this point it is best to collect another five drops of oil as the extra drops can be spilt in front of the Arabs when the going gets hot. The pursuing Arab, and his skirts, are consequently sent flying and you can then finish building your car.

After playing the game for a very long time I was determined to surpass myself and send the car off to the fourth screen, screen D. I had completed the first three levels numerous times and finally managed to access screen D. It was not long, however, before I was whacked on the head by an angry Arab wield-

ing a lethal weapon. The last of my five lives was gone and I was back to the beginning. Feeling dejected, I sat for five minutes debating whether or not to pull the plug. All thoughts of saving my sanity were soon abandoned when I pressed the START key and headed for another bout. Through screen A, and then B with the help of the rope and then on to screen C and the moving platforms.

All three screens were nearly as difficult as the first time I played Turmoil which shows that the game will still be playable should all 26 screens be completed, and not discarded to a drawer marked 'Conquered'.

I moved on to screen D with three lives to hand and rather fancying my chances of completing the level. Success at last, and I was on to screen E and then F. At this point I decided to give the game a rest.

The next time I played I was lucky enough to have a reviewer's copy which allowed me to practise on all the levels. Moving

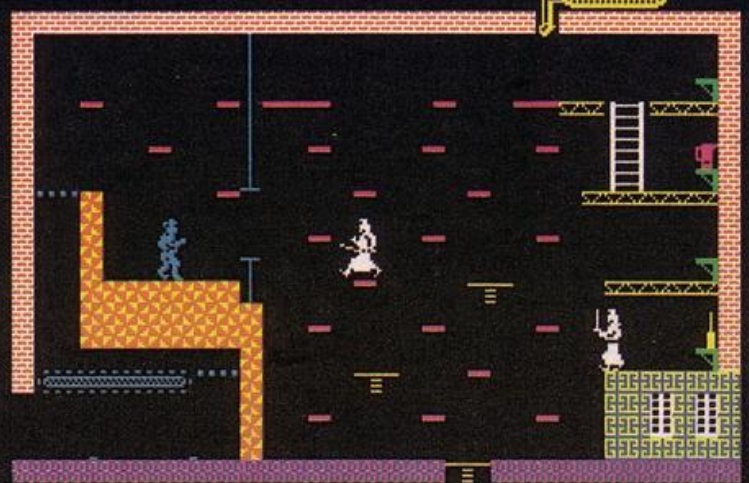
platforms, disappearing walls, lifts, lift shafts, ropes and conveyor belts were rife. I found some screens harder than those following them and at times could not work out how to drop the oil onto the grid. The refinery, jug and grid were often difficult to reach and these points combined with the obstacles added up to make the game more challenging. As you complete each harder level you get a different car so you are able to work up from Mini and Volkswagen to a flash sports car.

The playing keys are easy to master and the game can also be controlled via a joystick. The animation and graphics are good although there do appear to be a couple of problems. You can often walk up ladders when not properly positioned and on the screens where a rope is involved it is possible to stand in mid-air whilst waiting for the rope. Obviously a fault but it makes for easier playing.

Anyway, there's no point crying over spilt oil, as they say, oil's well that ends well.

SCORE 5 LIVES 5 LEVEL 5 HIGH 00100

OIL





June Mortimer travelled to Manchester to meet David Turner, programmer of Turmoil.

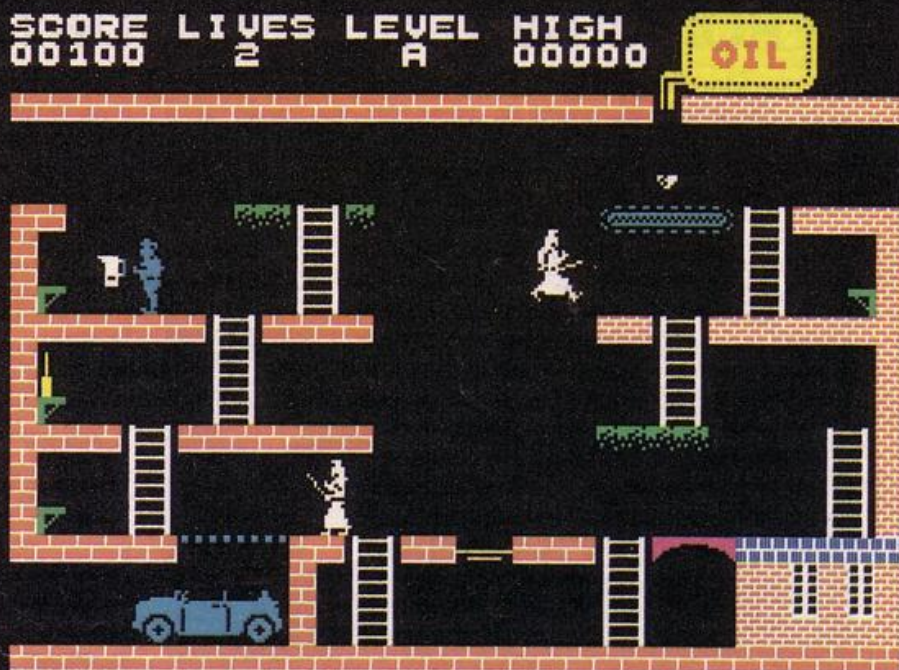
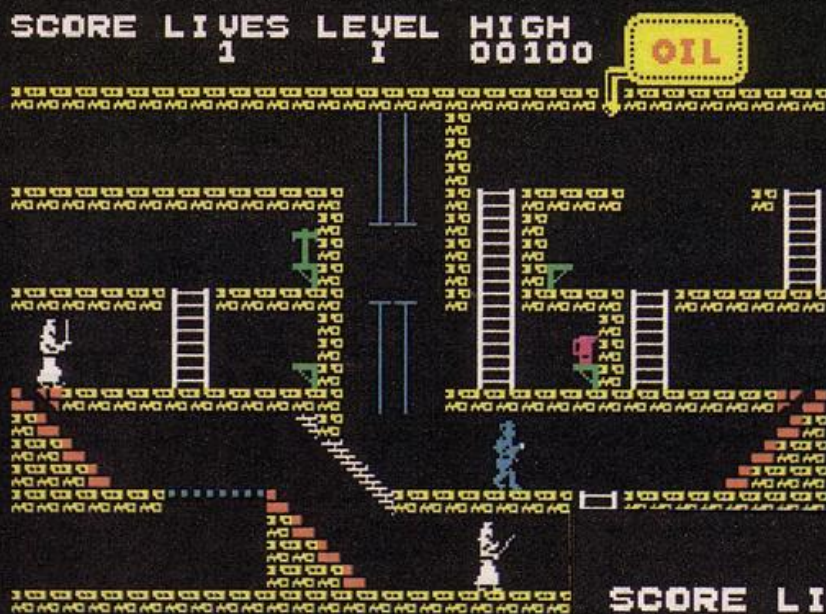
David is currently one of Manchester's 60,000 students. He shares a flat with eight others in

gram? "No, I had a game published by dk'tronics last year called **Galactians**, but I decided for one reason and another to see if I could get **Turmoil** accepted by a different software house. I sent the game to Bug-Byte and they sent it back saying they would be interested if I made some modifications. I had to change the keys and add some background music. Bug-Byte finally accepted the game after I had sent it in five times."

Were you influenced by **Manic Miner** whilst writing **Turmoil**? "I started writing **Turmoil** shortly after finishing **Galactians** which was about a year ago. I hadn't seen **Manic Miner** and was really influenced by the arcade games **Kong** and **Popeye**. In all it took me about nine months to complete **Turmoil**."

Where did the idea for **Turmoil** originate? "A friend worked in a garage which was taken over by Arabs and that's quite simply where the idea came from." Did you have any help with the sound, graphics or machine code? "No, as I said the idea originally started with the garage but all the programming was done by me. Bug-Byte gave me the title as **Turmoil** was originally called **Pit-stop**, a title that they felt immediately conjured up visions of a car racing game." Have you been asked by Bug-Byte to convert **Turmoil** for any other machines? "I'm not committed to Bug-Byte in any way. They haven't asked me to convert **Turmoil** for any other computers. They've left me to get on with what I want to do." In between studying, homework and indulging in Manchester night life David is working on an arcade adventure.

David's computing career started at school where he joined the computer club and was able to use a PET. "Then I saw the advert for the ZX-81 and things went on from there. I upgraded to a Spectrum eventually and have stuck with it." David had his first program published when he was 17. Now at 18 he has had two games accepted by leading software houses. Who knows, maybe this time next year, the arcade adventure will be finished and David will have another game to his credit.



the students' residences.

"My studies aren't directly connected with my computing interests but they join up somewhere along the line. I'm actually doing a three year course in electronics at UMIST (University of Manchester Institute of Science and Technology). I don't really know what I want to do at the end of the course but it's something in computing, maybe programming or hardware, I can't say yet."

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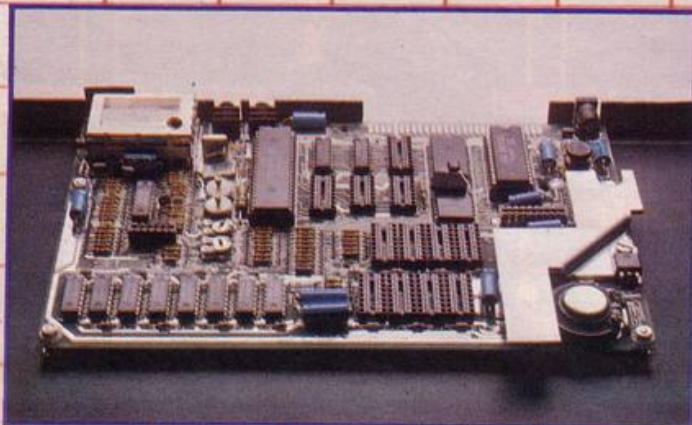


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Getting more from your print statements



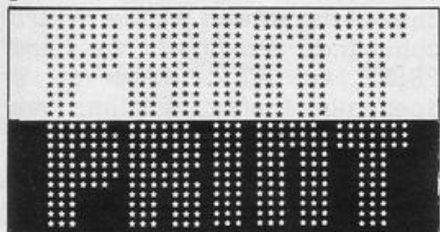
IF YOU have ever wondered how to program your Spectrum to switch output from TV screen to printer and vice versa, then this article is for you.

A typical example of the kind of situation where you might require an optional switch is in the printing of instructions. With a printer connected, users of your program might prefer to have a hard copy of instructions, although you must also provide for screen printing. Your manual



would have you believe that the only solution is to write separate subroutines, identical in all respects except that one set use PRINT and the other LPRINT. Microdrive owners, however, will have become acquainted with File Devices and streams, and it is these concepts which open up more possibilities for the PRINT statement.

A file device is any piece of hardware attached to your Spectrum. Peripheral is an equivalent term. This might be TV screen, printer, cassette or microdrive.



You might also be surprised to learn that the keyboard is a peripheral in the sense that it is an input device which is peripheral to the brain or CPU (central processing unit) of your machine.

A stream is simply an integer between 0 and 15 which tells the computer which file device to use each time the CPU receives

an I/O (input or output) instruction. In other words, this is an identification number to earmark where data is coming from or going to (though not to be confused with labels identifying the hardware; these will be explained later).

We shall confine ourselves for the moment to just the screen and printer for the purpose of examining the PRINT statement. The default stream numbers (those which are automatically recognised by the ROM on power-up) are:

Screen: default stream no.=2

Printer: default stream no.=3



So, to switch from screen to printer and vice versa, all that is required is to switch these stream number. Microdrive owners will have been enlightened on the use of the PRINT# command to achieve this. The fact is, though, that the microdrive manual is only making up for an important oversight in the Spectrum manual in this respect. For the benefit of non-microdrive users, here is a note you can pencil into Chapter 15 of the Spectrum manual "More about PRINT": "Any PRINT statement can be followed by the expression '#S' where S is any integer number in the range 0-3 (or equivalent expression)"

Actually, streams 4 to 15 can also be used, but only in conjunction with an OPEN# command which I shall deal with shortly. For the present though, assuming you have a printer connected, try this program:

```
10 FOR S=2 TO 3
20 PRINT #S; "MESSAGE ON STREAM";S
30 NEXT S
```

This will clearly demonstrate how the same PRINT statement can be used for at least two differ-

ent file devices, ie screen and printer. It should also convince you that PRINT is an abbreviation for PRINT #2. Similarly, LPRINT is shorthand for PRINT #3. Although you could change line 20



to LPRINT #S and receive the same result, to all intents and purposes, LPRINT is really not needed as a separate command on your keyboard.

The same applies to LIST and LLIST as LIST #S or LLIST #S, line number (where S=2 for screen

and 3 for printer as before), is the universal format for directing program listings to the screen or printer.

So who needs LPRINT and LLIST anyway? In defence, it might be argued that the shorthand forms built into the ROM require less memory (one byte only, against three bytes for the universal forms). Personally, though, I feel that the Spectrum



ROM might have been designed to do even more if such unnecessary commands had been omitted.

Anyway, if you are now satisfied that PRINT #S is what you should now be writing, how can you use it? Taking the situation I suggested earlier about optionally "switching" a print-out of instructions between screen and printer, try this program:

```
10 REM Print Instructions
20 INPUT "Screen (S) or Printer (P) ?"; LINE a$
30 IF a$="S" THEN LET S=2 GO TO 60
```

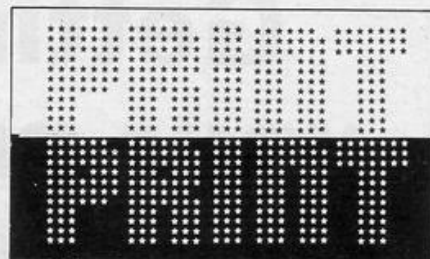


```
40 IF a$="P" THEN LET S=3 GO
TO 60
50 GO TO 20
60 PRINT #S; "Instructions..."
```

Lines 30 and 40 set the stream number to correspond to either screen or printer as required.

You may also find this kind of option useful for printing lengthy tables of data/results. Scrolling

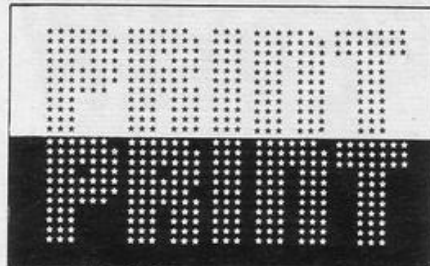
```
10 REM print instructions
20 INPUT "Screen (S) or Printer
(P) ?";LINE a$
30 IF a$="S" THEN OPEN #2,
"S": GO TO 60
40 IF a$="P" THEN OPEN #2,
"P": GO TO 60
50 GO TO 20
60 PRINT "Instructions..."
100 OPEN #2, "S"
```



Chapter 15 of your manual which says "You cannot print on the bottom two lines (22 and 23) on the screen because they are reserved for commands, INPUT data, reports and so on."

To fully satisfy yourself that this statement is manifestly untrue, try running this program

```
10 FOR N=0 TO 23
15 LET Y=N
20 IF Y<22 THEN LET S=2
30 IF N>=22 THEN LET S=0:
LET Y=N-22
40 PRINT #S; AT Y,O,"THIS LINE
";N
50 NEXT N
60 PAUSE 0
```



In this example, the stream number has been set to zero for



printing on the bottom two lines, although PRINT #1 would achieve the same result.

The keyboard is assigned two stream numbers 0 to 1 as it is connected to the bottom two lines of the screen via the INPUT command. Provided we use PRINT #s; AT... however, it does not matter whether we make S 0 or 1. It is important to observe, though, that the Y co-ordinate for the AT must be 0 or 1 to PRINT the bottom two lines separately. Hence the need to make Y dependent on N in the above program.

You should also note that the PAUSE 0 at the end of this program (causing an indefinite stop until any key is pressed) is essential to avoid having the bottom two lines immediately overwritten by the "O/OK" message.



through long lists of figures on the screen may be alright for a quick check: for analysis, a hard copy would be better. Now you can have either or both with very little extra programming. An important point to remember though, when setting up dual purpose PRINT statements for tables, is that TABS serve both screen and printer equally well whereas ATs do not and should be avoided.

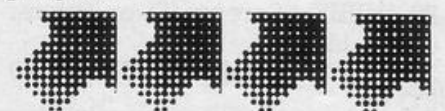


Apart from switching stream numbers, another possibility is to keep the stream numbers at their default values and switch the file devices attached to them by changing the labels of "device mnemonics" assigned to them. First, though, here is another little addendum you might like to pencil in to Chapter 22 of the manual for "Other Equipment" (as this wrongly states that OPEN # "cannot be used without the extra attachments", referring to microdrives):

"OPEN #: To OPEN screen, printer or keyboard to any stream use a command of the type:
OPEN #S, "dev"

Where S=stream number (0-15), dev=device mnemonic, (P=Printer: S=Screen: K=Keyboard)"

The OPEN # command can be used to upgrade programs for optional screen or printer without changing each PRINT statement to incorporate the "#S". Try this program:



We can imagine line 60 to be many lines with PRINT in them, which would take some time to change to PRINT #. So all we do instead (in lines 30 and 40) is to provide two alternative file devices for stream two, this being the standard for the PRINT statement. Line 100 ensures that any other PRINTs (apart from instructions) go to the screen only, thereby restoring default conditions on Stream two.

To cover all possibilities, an existing program which you wish to upgrade may also contain large sections of LPRINTS. To obtain optional printing without changing all these, you will see how this is done by making the following changes to the previous program: Lines 30-40, change OPEN #2 to OPEN #3: Line 60, change PRINT to LPRINT.

So far, I have not said much



about the keyboard as a file device, and associated stream numbers 0 and 1. Those of you who do not own a printer will be pleased to learn that further improvements in your PRINTing are possible by exploiting these streams.



First, I suggest you change line 10 of the first example program to read:

```
10 FOR s=0 TO 1 and re-run.
You may be surprised to find that you are PRINTing on lines 22 and 23 of the screen. Yet again, you might like to pencil in some suitable correction to the section of
```




1 Daley's Decathlon	Ocean
2 Jet Set Willy	Software Projects
3 Lords of Midnight	Beyond
4 Tornado Low Level	Vortex
5 Sherlock	Melbourne House
6 Beach Head	US Gold
7 Underwurlde	Ultimate
8 Sabre Wulf	Ultimate
9 Matchpoint	Psion
10 Full Throttle	Micromega

HEIGHTS ↑ DEPTHS ↓

YOUR CHANCE TO WIN!

The chart above was compiled from the questionnaire which was included in many copies of last month's *Sinclair Programs*. Next month we intend to publish two charts; a top ten and an anti-chart of your most hated programs.

To register your vote, please send the following information on a postcard, or on the back of a sealed envelope: your NAME, your ADDRESS, the PROGRAM YOU LIKE MOST, and the COMPANY which manufactures it, the PROGRAM YOU HATE MOST, and the COMPANY which manufactures it. At the end of the month, when the votes have been counted, one card will be selected at random, and its writer will win £10.

Send your cards to: CHARTLINE, Sinclair Programs, 67 Clerkenwell Road, London EC1R 5BH. Only votes on postcards or the outside of envelopes will be eligible.

Pick a Beetle is based on the popular family game, Beetle Drive. When the program is RUN the keyboard layout is shown on screen. Three parts of the beetle's body are hidden under each key. A body must be found before the legs can be added and the head parts can only be added when the head has been found. As each beetle is completed the finishing position is given. The game continues until all beetles have been finished and the number of goes taken is displayed.

Written for the 16K ZX-81 by R. H. Entwistle of Cheltenham, Gloucestershire.

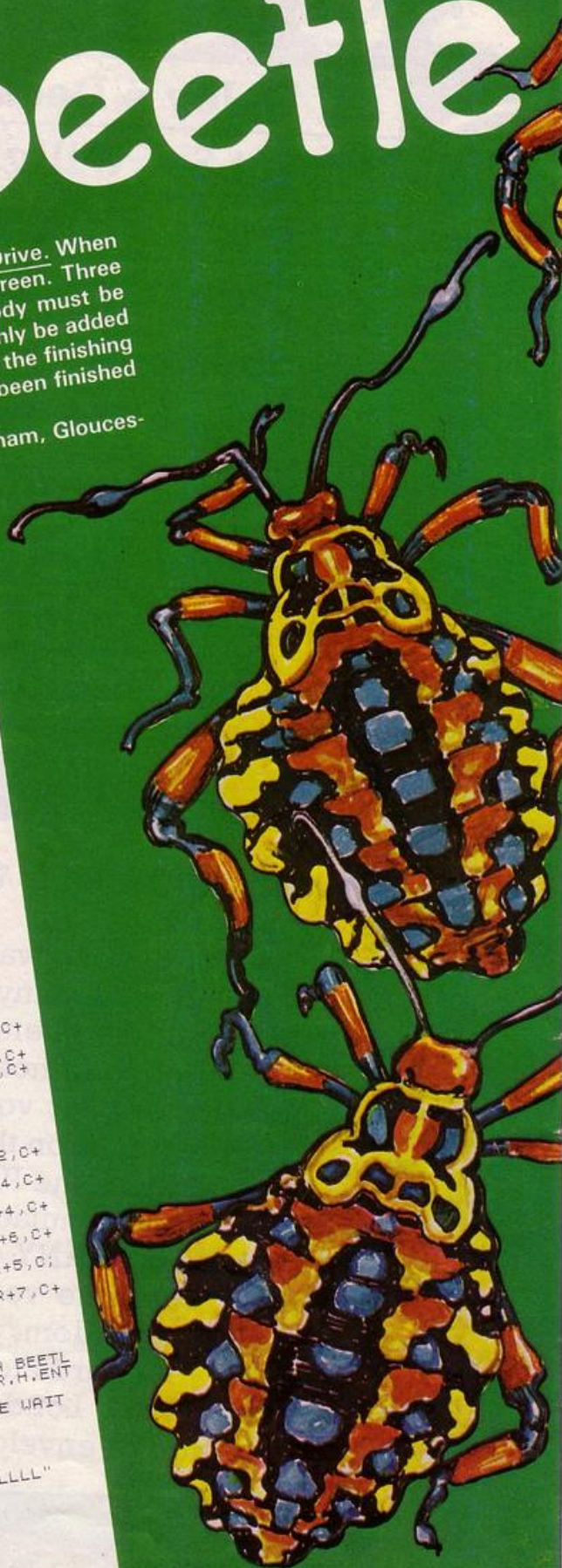
```
10 POKE 16416,0
20 RAND
30 LET M=0
40 LET L$="PEEK 16391+255*PEEK
```

Written for the 16K ZX-81 by R. H. Entwistle of Cheltenham, Gloucestershire.

```

10 POKE 15418,0
20 RAND
30 LET M=0
40 LET L$="PEEK 16391+256*PEEK
15399+10"
50 DIM A$(4,10)
60 DIM A$(1)="1234567890"
70 LET A$(2)="QWERTYUIOP"
80 LET A$(3)="ASDFGHJKL"
90 LET A$(4)="ZXCVBNM"
100 FOR P=1 TO 5
110 FOR POS=VAL L$
120 LET R=16*(P\3)
130 LET C=10*(P-1-3*(P\3))
140 IF M THEN RETURN
150 LET SB=VAL L$
160 PRINT AT R+2,C+4;" ";AT R+3
170 PRINT AT R+4,C+2;" ";AT R
180 PRINT AT R+6,C+1;" ";
190 C=C+1
200 IF M THEN RETURN
210 LET SH=VAL L$
220 PRINT AT R+1,C+5;" ";AT R+
230 C=C+5
240 IF M THEN RETURN
250 FOR S=1 TO 2
260 LET SA=VAL L$
270 PRINT AT R-1+S,C+5+S;" "
280 IF M THEN RETURN
290 NEXT S
300 FOR S=1 TO 2
310 LET SE=VAL L$
320 PRINT AT R+S,C+4+S;" "
330 IF M THEN RETURN
340 NEXT S
350 LET SM=VAL L$
360 PRINT AT R+2,C+5;" "
370 IF M THEN RETURN
380 FOR S=1 TO 2
390 LET SU=VAL L$
400 PRINT AT R+2,C+
410 LET SV=VAL L$
420 PRINT AT R+5,C+
430 IF S=1 THEN
440 PRINT AT R+3,C;" "
450 IF S=2 THEN PRINT AT R+7,C+
460 IF S=3 THEN PRINT AT R+4,C+
470 IF S=4 THEN PRINT AT R+6,C+
480 IF S=5 THEN PRINT AT R+5,C+
490 IF S=6 THEN PRINT AT R+7,C+
500 IF M THEN RETURN
510 NEXT S
520 REM NEXT P
530 PRINT AT 3,12;"PICK A BEETL
540 PRINT AT 7,12;"R.H.ENT
550 PRINT AT 5,17;"BY";
560 PRINT AT 10,0;"PLEASE WAIT
570 WISTLE"
580 PRINT AT 10,0;"
590 WHISTL SETTING UP."
600 LET M=0
610 DIM F$(6)
620 LET F$=""
630 DIM D$(4,10)
640 DIM D$(4,10,3)
650 DIM B$(6,7)
660 LET D(3,10)=3
670 LET D(4,9)=3
680 LET D(4,10)=3
690 FOR P=1 TO 6
700 LET R=1+INT (4*RND)

```





```

850 LET C=1+INT (10*RND)
860 LET D(R,C) THEN GOTO 540
870 NEXT D(R,C)=1
880 NEXT B(R,C)="B"
890 FOR B=1 TO 5
900 LET A=1+2*(B/3) TO 15
910 LET C=1+INT (4*RND)
920 LET D(R,C)=3 THEN GOTO 730
930 NEXT D(R,C)=1
940 NEXT B(R,C,T)=5*(S)
950 FOR A=1 TO 4
960 IF C=1 TO 10
970 LET D(R,C)=3 THEN GOTO 880
980 LET C(R,C)=T
990 NEXT C(R,C,T)=5*(1+13*RND)
1000 SLOW
1010 FOR A=1 TO 4
1020 PRINT=1 TO 10
1030 NEXT C(R,C),D(R,C)
1040 STOP
1050 PRINT AT 10,0;"HOW MANY PLA
1060 PRINT AT 12,3;"",AT 12+COS
1070 IF K$="INKEY$ THEN GOTO 105
1080 LET N=VAL K$
1090 IF LEN INKEY$ THEN GOTO 105
1100 PRINT AT 20,0;"PRESS ANY KE
1110 TO GO THROUGH" INSTRUCTIONS"
1120 PRINT AT 23,31;"",AT 23+CO
1130 IF NOT LEN INKEY$ THEN GOTO
1140 CLS
1150 IF LEN INKEY$ THEN GOTO 111
1160 PRINT AT 3,0;"THIS IS A VER
1170 LE DRIVE THE GAME" AT 5,7;"BEET
1180 AND MEMORY TO A USE YOUR SKI
1190 FOR YOUR BEETLE, FIND THE PART
1200 COMPLETE A BEETLE
1210 PRINT AT 18,0;"THE FIRST TO
1220 IS THE WINNE
1230 PRINT AT 23,31;"",AT 23+CO
1240 IF NOT LEN INKEY$ THEN GOTO
1250 CLS
1260 IF LEN INKEY$ THEN GOTO
1270 PRINT "PRESS A KEY TO PICK
1280 YOU ARE LUCKY" YOUR BEETLE...IF Y
1290 PRINT AT 6,0;"PRESS "" "" "" T
1300 WICE FOR NEW GAME"" AT 9,0;"DO N
1310 OT USE ""SPACE"" ""SHIFT"" ""OR
1320 ""NEW LINE""
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Dear Diary

Today being a wet Sunday we spent what mother calls a "real family day", which consists of dad lying on the settee and worrying and going bald, mum cooking and complaining in the kitchen, my snobby sister Eustacia constructing 6th generation computers in her bedroom, and me killing aliens courtesy of the Sinclair Spectrum.

Usually I try to repress any desire to understand computers, but today was deadline day for the Sinclair Programs problem page (amazing how quickly it started to feel like homework), so I thought I might ask myself technical questions about this alien-zapping game.

Then I thought there was no point asking myself technical questions if I couldn't answer myself. I went upstairs into Eustacia's room.

"Don't you ever knock?" she said in her squeaky ten-year-old voice.

"You know in that program Death Rays of Doomdark," I said, leaning against her Wham poster, "when you fire the thermo laser rockets and blast the alien Star Cruisers and then go into hyperspace drive?"

"No."

"How does the picture move sideways so smoothly?"

Eustacia sighed but didn't stop programming.

"Each Spectrum character square

has 8×8 dots, called pixels. The screen has 32 columns and 24 lines, so there are clearly" (she paused for about a second) "49152 of these pixels.

"By no coincidence whatever, this is also the number of bits in the 6K of RAM which controls the display; every bit between memory addresses 16384 and 22527 corresponds to one pixel. Try POKE 16384,255 — the line in the first character square is 8 pixels long because all 8 bits of one byte have been set.

"A smooth scroll means moving the display one pixel at once, and this requires machine code. The following routine can be adapted for any of your programs."

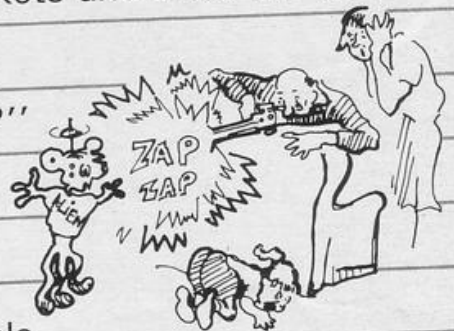
And very quickly she said,

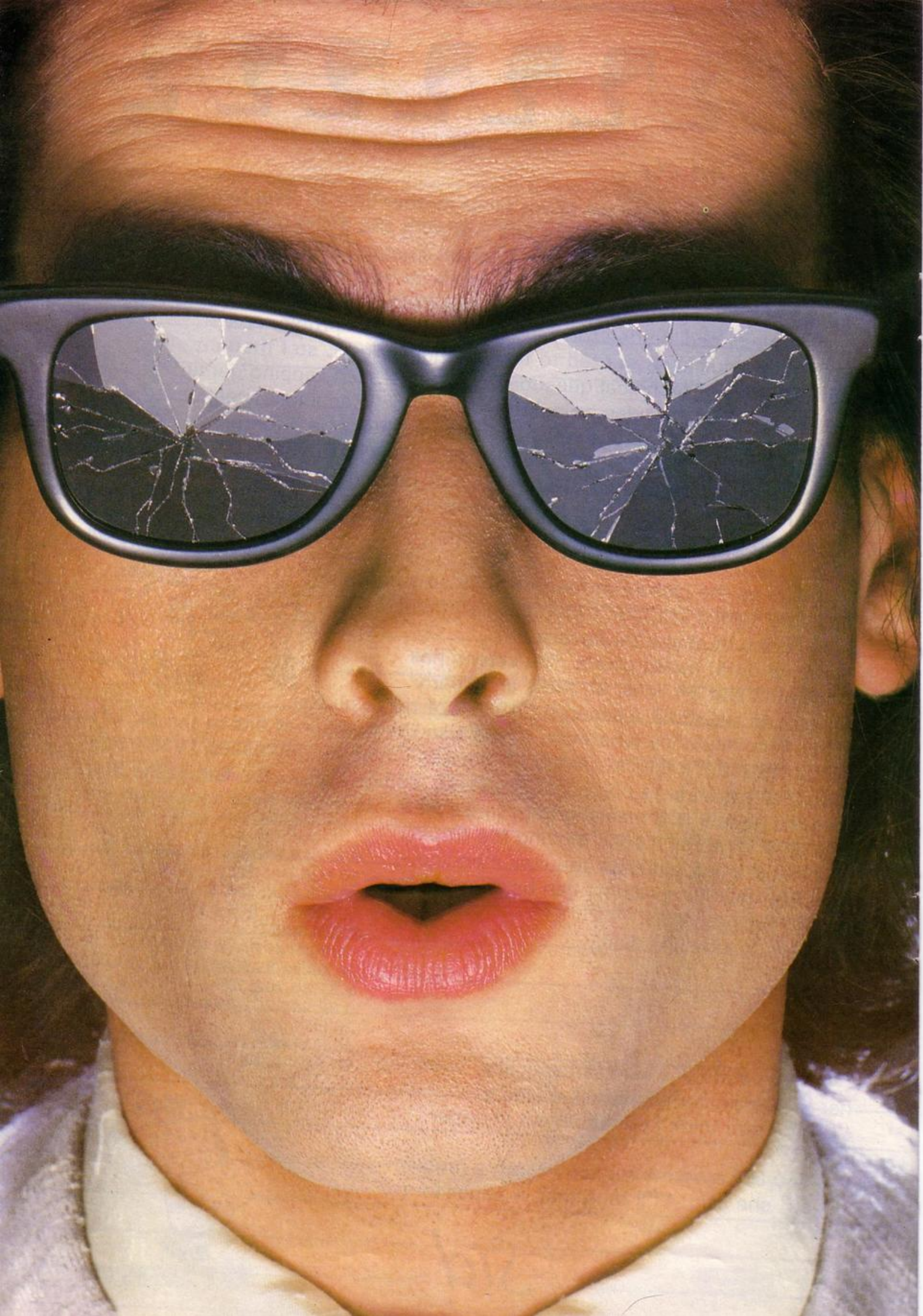
```
5 CLEAR 64000: LET S=0
10 FOR I=1 TO 21: READ X: POKE
63999+I,X: LET S=S+X: NEXT I
15 READ T: IF S<>T
THEN PRINT
"ERROR IN DATA ENTRY": STOP
20 DATA 33,0,64,62,192,203,62,
6,31,35,203,30,16,251,35,61,254,
0,32,241,201,2012
30 LIST
40 FOR I=1 TO 256: RANDOMIZE U
SR 64000: NEXT I
```

"Very helpful," I said sarcastically, wrinkling her Wham poster slightly as a kind of warning. "But do you think I could have it in paper form?"

"You still owe me for last month's problem page," she said. "I'll take that in paper form, too."

Sid.





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Workington. Technology Store, 12 Finkle Street. Tel: 0900 66972.

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Hitchin. GK Photographic & Computers, 68 Hermitage Road. Tel: 0462 59285.
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York. York Computer Centre, 7 Stonegate Arcade. Tel: 0904 641862.




```

310 PRINT AT 1.0;"
320 PRINT AT 20.0;"
-----
330 LET B=3
335 FOR C=1 TO 20
340 PRINT AT 19.B;" (.) "
355 LET S=INT (RAND*25)+1
356 FOR A=2 TO 19
360 PRINT AT A,3;" /"; AT A,5;" "
370 LET B=B+(INKEY$="3")-(INKEY
$="5")
371 PRINT AT 19.B;" (.) "
380 IF B+3=5 AND INKEY$="0" THE
N GOTO 350
390 IF A=19 THEN GOTO 2000
400 NEXT A
410 NEXT C
415 FOR A=1 TO 20
420 PRINT AT 0.0;" CONGRAD
ULATIONS"; AT 0.0;"
425 NEXT A
430 PRINT "YOU HAVE BAKED THE C
AKE"
440 PRINT "TRY AGAIN?"
450 PAUSE 4E4
460 IF INKEY$="Y" THEN RUN
470 STOP
1000 PRINT "HARD LUCK YOU RAN OU
T OF LIVES BETTER LUCK NEX
T TIME;"
1111 STOP
2000 PRINT "YOUR GAS PIPE WAS BU
RST AND YOU WERE GASSSED HARD
LUCK"
2222 STOP
3000 PRINT "NOW YOU MUST GET ACC
ROSS THE HALL WAY WITHOUT THE
BITS OF CEMENT HITTING YO
U"
3333 RETURN
4000 PRINT "NOW YOU MUST STOP TH
E KNIVES HITTING THE GAS PIPE
WITH THE INVISI-LAZER (KE
Y ""0""")
4444 RETURN

```


Frolicks of a

9 RANDOMIZE 9: LET HSC=1520

10 LET X=15: LET Y=10: LET SC=0: LET MN=3: LET DRG=0: LET CLK=15

11 LET E\$="Q": LET R\$="A": LET T\$="O": LET Y\$="P"

30 INK 7: BORDER 1: PAPER 0: CLS

40 PRINT : BRIGHT 1: INK 1: AT 8,8:"THE FROLICKS OF A"

42 PRINT : BRIGHT 1: INK 1: AT 10,10:"CHUCKLEBUTTY"

45 PRINT : FLASH 1: INK 3: PAPER 0: AT 5,4:"(24*ig6)"

46 PRINT : FLASH 1: INK 3: PAPER 0: AT 15,4:"(24*ig6)"

47 FOR Q=6 TO 14: PRINT FLASH 1: INK 3: PAPER 0: AT Q,4:"(ig6)" : AT Q,27:"(ig6)": NEXT Q

50 PRINT : INK 2: AT 12,5:"Press 'S' key to start"

100 LET A\$="The Frolicks of a Chucklebutty by Timothy Dunn @.Guide your Frollicking Chucklebutty to collect Tukkers..Avoid going above or below the Uckbags or they will champ you up"

200 PAUSE 50: RESTORE 1000: FOR Q=0 TO LEN A\$:32: PRINT PAPER 0: INK Q-INT (Q/4)*4+4: AT 18,0:A\$(Q+1 TO Q+32): IF Q/3=INT (Q/3) THEN READ N

300 BEEP .1,N: LET N=N-12: IF INKEY\$="S" THEN GO TO 312

311 NEXT Q

312 FOR T=1 TO 1000: IF INKEY\$="S" THEN GO TO 2000

313 NEXT T: GO TO 200

1000 DATA 4,4,4,4,2,0,0,-1,-3,-3,0,4,9,9,9,9,7,5,5,4,2,2,4,5,4,5,4,8,5,4,4,2,0,0,-1,-3,-1,-1,-1,-1,0,-1,-3,0,4,9,99

2000 CLS : INK 7

2010 RESTORE 2020: FOR F=0 TO 7: READ INVADER: POKE USR "I"+F,INVADER: NEXT F

2013 RESTORE 2029: FOR F=0 TO 7: READ BLOW: POKE USR "B"+F,BLOW: NEXT F

2015 RESTORE 2030: FOR F=0 TO 7: READ DROID: POKE USR "D"+F,DROID: NEXT F

2016 RESTORE 2025: FOR F=0 TO 7: READ BRICK: POKE USR "M"+F,BRICK: NEXT F

2017 RESTORE 2035: FOR F=0 TO 7: READ SHIP: POKE USR "S"+F,SHIP: NEXT F

2018 RESTORE 2027: FOR F=0 TO 6: READ INTEL: POKE USR "P"+F,INTEL: NEXT F

2019 RESTORE 2028: FOR F=0 TO 7: READ INTLE: POKE USR "Q"+F,INTLE: NEXT F

2020 DATA 24,60,90,126,24,36,66,0

2025 DATA 0,63,0,252,0,63,0,252

2027 DATA 36,126,219,189,165,36,24

2028 DATA 36,189,219,126,60,66,129

2029 DATA 137,74,36,27,216,36,82,145

2030 DATA 0,56,84,56,124,170,170,170

2035 DATA 24,36,24,90,189,153,165,129

2050 REM ****1ST SHEET****

2055 CLS : LET BGIN=2050: LET X=15: LET Y=10: LET DRG=0: LET CLK=15: LET SHEET=5000: LET SH1=3065

2060 REM

2065 GO SUB 2070: GO SUB 3000: GO TO 3050

2070 INK 5: DRAW 255,0: DRAW 0,175: DRAW -255,0: DRAW 0,-175

2075 INK 6: PLOT 0,18: DRAW 255,0

2078 INK 7: PRINT AT 18,1:"OXY: MEN=";MN: AT 18,12:"SC=";SC: AT 18,21:"HIGH=";HSC:

2080 INK 6: PLOT 0,40: DRAW 255,0: INK 1: FOR T=15 TO 240 STEP 2: PLOT T,8: DRAW 0,5: NEXT T

2090 RETURN

3000 REM

3010 REM

3020 FOR T=1 TO 30: PRINT : INK 6: AT RND *14+1, RND *29+1;"D": NEXT T

3030 FOR T=1 TO 35: PRINT : INK 4: AT RND *14+1, RND *29+1;"I": NEXT T

3040 RETURN

3050 FOR E=245 TO 8 STEP -1: INK 0: PLOT E,12

3060 GO SUB 8000: GO SUB SH1

3065 NEXT E:

4000 REM

4010 CLS : REM ** REM NO MEN **

4015 IF E <= 8 THEN PRINT AT 7,9: INK 2:"OUT OF OXYGEN"

4020 PRINT : INK 6: AT 10,2:"E N D O-F G A M E !!": AT 12,4: INK 5:"BETTER LUCK NEXT TIME": INK 7: AT 15,9:"SCORE = ";SC: FOR Q=3 TO 40: FOR S=1 TO 69 STEP Q: BEEP .001,S: NEXT S: NEXT Q

4030 IF SC >= HSC THEN LET HSC=SC

4040 PAUSE 0: GO TO 10

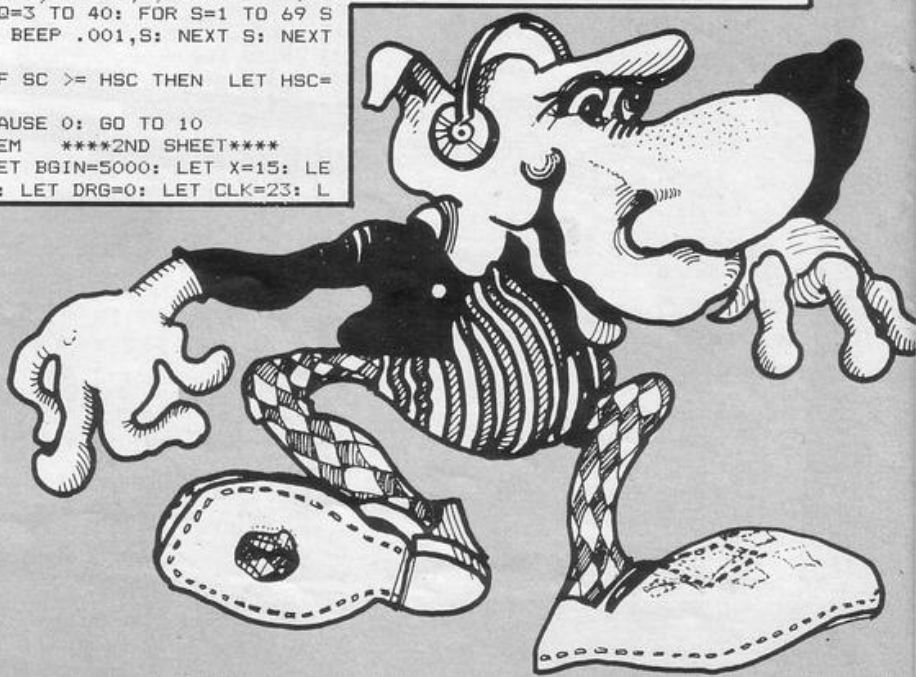
5000 REM ****2ND SHEET****

5010 LET BGIN=5000: LET X=15: LET Y=12: LET DRG=0: LET CLK=23: L

Guide your frolicking chucklebutty around the screen, collecting tukkers as you go. Avoid going under or above the green uckbugs as they will kill you. The tukkers should be collected from the left or right as they will disappear if you approach from the top or bottom. To destroy the uckbugs, run into them from the side. A certain number of tukkers have to be eaten before you can advance to the next screen. Use keys Q, A, O and P to play.

Frolicks of a Chucklebutty was written for the 48K Spectrum by Timothy Dunn of Wallasey, Merseyside.

ET SHEET=5100
5015 CLS : GO SUB 2070: GO SUB 5030: GO SUB 3050
5025 GO TO 5020
5030 FOR Q=4 TO 12: PRINT : INK 6: AT Q,Q;"D": INK 4: AT Q,7;"I": NEXT Q
5035 FOR Q=10 TO 28: PRINT AT 8,Q: INK 4;"I": AT 9,Q: INK 6;"D": AT 10,Q: INK 4;"I": NEXT Q
5040 RETURN
5100 REM ***3RD SHEET***
5110 LET BGIN=5100: LET Y=11: LET X=2: LET DRG=0: LET CLK=52: LET SHEET=5190: LET SH1=5130
5120 CLS : GO SUB 5140
5125 GO SUB 2070: GO TO 3050
5130 IF E=200 THEN PRINT AT 3,5: INK 7:" "; AT 4,5:" "; AT 5,5:" "
5135 RETURN
5140 INK 6: PRINT AT 3,12:"DDDD DD": AT 4,11:"DDDDDDDD": AT 5,12:"D DD D": AT 6,12:"DD DD"
5150 PRINT AT 7,14:"DD": AT 8,13:"DDDD": AT 9,12:"DDDDDD"



Chucklebutty



```
5160 FOR Q=10 TO 13: PRINT AT Q
,12;"D DD D": NEXT Q
5170 FOR Q=2 TO 14 STEP 1: PRINT
AT Q,5; INK 4;"I": AT Q,23;"I"
: NEXT Q
5180 RETURN
5190 REM ***4TH SHEET***
5200 LET BGIN=5190: LET Y=10: LE
T X=2: LET DRG=0: LET CLK=1: LET
SHEET=5310: LET SH1=5280
5210 CLS : GO SUB 5260
5220 GO SUB 2070: GO TO 3050
5260 FOR Q=2 TO 14: INK 4: FOR W
=3 TO 24 STEP 3: PRINT AT Q,W;"
I": NEXT W: NEXT Q
5270 PRINT AT 10,27; INK 6;"D"
```

```
5271 RETURN
5280 IF E=90 THEN PRINT : AT 2,
6;" "; AT 3,6;" "; AT 4,6;" "
```



```
5290 IF E=230 THEN PRINT : AT 1
,24;" "; AT 12,24;" "; AT 13,24
," "
```

```
5293 IF E=200 THEN PRINT : AT 3
,21;" "; AT 4,21;" "; AT 5,21;" "
```

```
5295 IF E=150 THEN PRINT AT 7,
15;" "; AT 8,15;" "; AT 9,15;" "
```

```
5296 IF E=120 THEN PRINT : AT 3
,9;" "; AT 4,9;" "; AT 5,9;" "
```

```
5297 IF E=100 THEN PRINT : AT 4
,3;" "; AT 5,3;" "; AT 6,3;" "
```

```
5298 IF E=85 THEN PRINT : AT 11
,12;" "; AT 12,12;" "; AT 13,12;" "
```

```
5299 IF E=70 THEN PRINT : AT 11
,18;" "; AT 12,18;" "; AT 13,18;" "
```

```
5300 RETURN
5310 REM ***5TH SHEET***
5320 LET BGIN=5310: LET Y=10: LE
T X=10: LET DRG=0: LET CLK=20: L
ET SHEET=5400: LET SH1=5362
```

```
5325 CLS : GO SUB 5340
5330 GO SUB 2070: GO SUB 3050
5340 LET Y1=2: LET X1=2: LET Y2=
14: LET X2=29
```

```
5345 PRINT AT X,Y; AT Y1,X1; IN
K 4;"P"; AT Y2,X2;"Q"
```

```
5350 GO SUB 3000
5360 RETURN
5362 PRINT AT Y1,X1;" "; AT Y2,
X2;" "
```

```
5365 IF Y1 >= Y THEN LET Y1=Y1-
.4
```

```
5366 IF Y1 <= Y THEN LET Y1=Y1+
.4
```

```
5368 IF Y2 <= Y THEN LET Y2=Y2+
.4
```

```
5369 IF Y2 >= Y THEN LET Y2=Y2-
.4
```

```
5370 IF X1 >= X THEN LET X1=X1-
.4
```

```
5371 IF X1 <= X THEN LET X1=X1+
.4
```

```
5372 IF X2 <= X THEN LET X2=X2+
.4
```

```
5373 IF X2 >= X THEN LET X2=X2-
.4
```

```
5375 PRINT AT Y1,X1; INK 4;"Q";
AT Y2,X2;"Q"; AT Y1,X1;"P"; AT
Y2,X2;"P"
```

```
5380 RETURN
5400 REM ***SHEET 6***
5410 LET BGIN=5400: LET Y=14: LE
T X=9: LET DRG=0: LET CLK=15: LE
T SHEET=5450: LET SH1=5420: LET
Y1=15: LET X1=28: LET TI=.4
```

```
5415 CLS : GO SUB 5030
5417 GO SUB 2070: GO TO 3050
5420 PRINT AT Y1,X1; INK 4;"Q";
AT Y1,X1; INK 0;" "
```

```
5422 IF Y1 <= Y THEN LET Y1=Y1+
TI
```

```
5425 IF Y1 >= Y THEN LET Y1=Y1-
TI
```

```
5430 IF X1 >= X THEN LET X1=X1-
TI
```

```
5435 IF X1 <= X THEN LET X1=X1+
TI
```

```
5437 PRINT AT Y1,X1; INK 4;"P"
5440 RETURN
5450 REM ***SHEET 7***
```

```
5460 LET BGIN=5450: LET Y=11: LE
T X=2: LET DRG=0: LET CLK=42: LE
T SHEET=5481: LET SH1=5420: LET
Y1=11: LET X1=28: LET TI=.5
```

```
5470 CLS : GO SUB 5140: FOR Q=3
TO 6: PRINT AT Q,5; INK 7;" ":
NEXT Q
```

```
5480 GO SUB 2070: GO TO 3050
5481 REM ***SHEET 8***
5482 LET BGIN=5481: LET TI=.3: L
ET Y=11: LET X=2: LET DRG=0: LET
CLK=1: LET SHEET=5495: LET SH1=
5485: LET X1=25
```

```
5483 CLS : GO SUB 5260
5484 GO SUB 2070: GO TO 3050
5485 GO SUB 5280: PRINT AT 11,X
1;" "
```

```
5486 IF X1 >= X THEN LET X1=X1-
TI
```

```
5487 IF X1 <= X THEN LET X1=X1+
TI
```

```
5488 PRINT AT 11,X1; INK 4;"Q":
RETURN
```

```
5500 REM ***LAST SHEET***
5510 LET BGIN=5500: LET Y=14: LE
T X=15: LET DRG=0: LET CLK=1: LE
T SH1=5700: LET SHEET=6000
```

```
5515 CLS : GO SUB 2070
5520 GO SUB 5550: GO TO 3050
5550 FOR Q=1 TO 4: INK 4: PRINT
AT Q,26;"IIII": NEXT Q: PRINT
AT 2,28; INK 6;"D"
```

```
5560 PRINT AT 12,1; INK 4;"MMMM
MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM"
```

```
5570 PRINT AT 12,2; INK 0;" ":
FOR Q=5 TO 11: INK 4: PRINT AT
Q,1;"M"; AT Q,3;"M": NEXT Q
```

```
5580 FOR Q=1 TO 8: PRINT AT Q,5
;"M"; AT Q+3,13;"M": NEXT Q
```

```
5590 FOR Q=3 TO 9 STEP 3: PRINT
AT Q,10;"MM"; AT Q+1,6;"MMMM":
NEXT Q
```

```
5595 FOR Q=4 TO 11: PRINT AT Q,
12;"M": NEXT Q: PRINT AT 6,10;
INK 0;" "; AT 4,6;" "
```

```
5600 FOR Q=2 TO 8 STEP 1.5: PRIN
T AT Q,15; INK 4;"MMMMMMMMMM": NE
XT Q
```

```
5615 PRINT AT 3,22;"M"; AT 6,22
;"M"
```

```
5620 PRINT AT 7,28; INK 7;"Q"
5700 IF ATTR (Y,X+1)=7 THEN FO
R Q=3 TO 4: PRINT AT Q,26; INK
```

```
3;"PPPP": NEXT Q: PRINT AT 2,21
; BRIGHT 1; INK 1;"Q"
```

```
5710 IF ATTR (Y,X+1)=65 THEN P
RINT AT 1,26; INK 3;"PP"
```

```
5720 RETURN
6000 FOR Q=0 TO 255: INK 4: PLOT
Q,0: DRAW 0,175: NEXT Q
```

```
6010 FOR W=1 TO 3: FOR S=30 TO 2
0 STEP -1: FOR Q=30 TO 40: BEEP
.01,S: BEEP .01,Q: NEXT S: NEXT
Q: NEXT W
```

```
6020 CLS : PRINT AT 10,2; INK 2
;"C O N G R A T U L A T I O N S"
; AT 12,8; INK 7;"YOU'VE DONE IT
!"
```

```
6030 FOR Q=0 TO 300: NEXT Q
6040 PRINT AT 15,27; INK 2;"S"
```

```
6050 FOR Q=0 TO 100: NEXT Q
6060 FOR Q=0 TO 24: PRINT AT 15
,Q; INK 6;"D ": PAUSE 30: NEXT
Q: PRINT AT 15,12; INK 5;"MY HE
RO": FOR S=1 TO 3: BEEP .1,40: N
EXT S
```

```
6065 FOR Q=28 TO 2 STEP -1: PRIN
T AT 17,Q; INK 7;"P ": PAUSE 20
: NEXT Q
```

```
6070 FOR Q=1 TO 100: NEXT Q
6075 PRINT AT 17,5; INK 4;"NOW
TRY AGAIN...EARTHLING": FOR Q=1
TO 300: NEXT Q: IF SC>HSC THEN
LET HSC=SC
```

```
6080 LET E$="A": LET R$="Q": LET
T$="P": LET Y$="Q": LET SC=SC+1
000: LET MN=MN+1: INK 7: GO TO 2
050
```

```
7000 STOP
8000 PRINT AT Y,X;" "
```

```
8002 LET X=X+(INKEY$=Y$)-(INKE
Y$=T$)+(X <= 1)-(X >= 30)
```

```
8005 LET Y=Y+(INKEY$=R$)-(INKE
Y$=E$)+(Y <= 1)-(Y >= 15)
```

```
8016 IF INKEY$="*" THEN GO TO
10
```

```
8020 PRINT INK 2; AT Y,X;"S"
```

```
8026 IF ATTR (Y,X+1)=6 THEN LE
T SC=SC+25: PRINT AT Y,X+1; INK
7;"B": FOR S=1 TO 69 STEP 7: BE
EP .001,S: NEXT S: LET DRG=DRG+1
```

```
8028 IF ATTR (Y,X-1)=6 THEN LE
T SC=SC+25: PRINT AT Y,X-1; INK
7;"B": FOR S=1 TO 69 STEP 7: BE
EP .001,S: NEXT S: LET DRG=DRG+1
```

```
8030 IF ATTR (Y+1,X)=4 THEN LE
T MN=MN-1: FOR S=69 TO 40 STEP -
1: BEEP .001,S: NEXT S: LET DRG=
0: CLS : GO TO BGIN
```

```
8035 IF ATTR (Y-1,X)=4 THEN LE
T MN=MN-1: FOR S=69 TO 40 STEP -
1: BEEP .001,S: NEXT S: LET DRG=
0: CLS : GO TO BGIN
```

```
8085 PRINT : INK 7; AT 18,10;MN;
AT 18,15;SC
```

```
8087 IF MN <= 0 THEN GO SUB 400
0
```

```
8090 IF DRG >= CLK THEN FOR Q=E
TO 15 STEP -1: BEEP .001,50: IN
K 0: PLOT Q,8: LET SC=SC+3: PRIN
T AT 18,15; INK 2; PAPER 6; FLA
SH 1;SC: NEXT Q: GO TO SHEET
```

```
8100 BEEP .01,Y+X
9020 RETURN : REM ANOTHER THINGS
```

```
9030 GO TO 4010
9999 INK 7
```




HE'S HERE! HE'S MADE IT!

Son of Blagger for 48K Spectrum

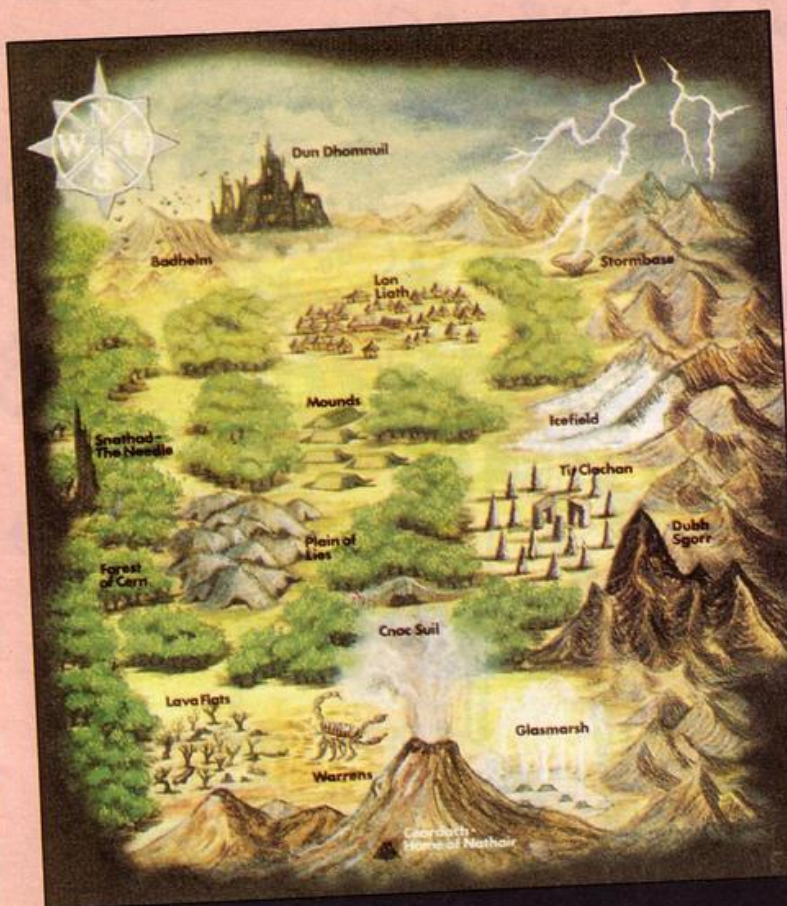
Relive the daring exploits of Roger the Dodger through his prodigy Slippery Sid. More skill, more nerve, this cool little character seeks not only to follow in his famous parent's footsteps, but to establish some amazing feats of his own. Money's not his game. Espionage is his middle name and having forced his way into the National Security HQ he's faced with a no return journey through one of the most dangerous, most complex buildings in the land. Can he successfully complete a nerve tingling search for the golden keys – his only means of escape – or this time has his skill and daring taken him too far. Watch out for those weird killer security guards – you never know what chilling surprises the mad scientists have produced – and beware the floor doesn't disappear from under your feet, sending you to an early grave.



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TIR NA NOG COMPETITION

FIRST PRIZE: Five first prize winners will win a framed copy of the map of Tir Na Nog
RUNNERS UP: Fifty runners-up will win a copy of the game Tir Na Nog

How to enter:

Read the review of Tir Na Nog in the Soft Focus section of this magazine, and use the information you find there and on this page to answer the five questions below. Write the answers to the competitions, together with your name and address, on a postcard, and send it to us at TIR NA NOG competition, Sinclair Programs, 67 Clerkenwell Road, London EC1R 5BH. If you would also like to be eligible for the CHART competition, add the name of your favourite game, and of your least favourite game below, your answers to the five questions.

The winners of the competition will be first correct answers selected after the closing date of January 31st, 1985.

Employees of EMAP and Gargoyle are not eligible to enter. The editor's decision in all matters concerning the competition is final.

1. What is Tir Na Nog, besides being a computer game?
2. Who is the hero of Tir Na Nog?
3. Name two enemies the hero must face.
4. What is the hero's greatest challenge?
5. Name one other game produced by Gargoyle.



Tir Na Nog is the latest release from Gargoyle Games, producers of Ad Astra. It takes as its theme the heroes of Celtic folklore, and the fabled world in which they exist. These powerful mythical images are brought together in a superb animated adventure. Both the hero and the enemies he must face are large-scale animated graphics, which can be moved by the player across a massive, complex landscape which scrolls smoothly across the screen



PIGLET

```

1 REM "honey"
10 GO SUB 9000
20 GO SUB 9500
25 LET hs=0
30 INK 0: PAPER 5: BORDER 1
35 LET s=0: LET p=0
40 LET z=11
50 LET stones=0
105 GO SUB 5000
110 LET x=17: LET y=30
120 PRINT AT 21,0: INK 2: PAPE
R 7: "Score ":s: IF hs=0 THEN GO
TO 150
130 PRINT AT 21,15:hs: " by ":n
$
150 PRINT AT x,y: INK 2: "A": "
": AT x+1,y: "B": "
160 LET y=y-1: IF y=0 THEN PRI
NT AT x,1: " ": IF y=0 THEN PRI
NT AT x+1,1: " ": LET y=30
170 IF INKEY$ <> "" AND p=0 T
HEN LET p=1: LET sy=y: LET sx=x
: LET stones=stones+1: IF stones
=101 THEN GO TO 8000
180 IF p=1 THEN GO SUB 1000
185 IF p=0 THEN PAUSE 4
200 GO TO 120
1000 LET sx=sx-1: IF sx <> 1 THE
N PRINT AT sx+1,sy: " ": AT sx,
sy: INK 1: PAPER 5: "G": BEEP .05
5,30
1020 IF ATTR (sx-1,sy)=42 THEN
LET p=0: PRINT AT sx,sy: " ": R
ETURN
1030 IF sx-1=4 THEN LET p=0: PR
INT AT sx,sy: " ": RETURN
1040 IF ATTR (sx-1,sy)=48 THEN
LET s=s+100: LET p=0: PRINT AT
sx,sy: " ": AT x,y: " ": AT sx-1,
sy: PAPER 5: INK 2: "H": BEEP .05
5,50: LET pc=pc+1
1050 IF pc=t THEN GO SUB 2000
1070 RETURN
1080 STOP
2000 LET z=z-1: GO TO 1
05
2010 RETURN
4999 STOP
5000 REM set up screen
5010 CLS
5050 LET pc=0: LET t=0
5090 INK 0: PAPER 5
5100 PRINT AT 3,0: "CCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCC"
5101 PRINT "DDDDDDDDDDDDDDDDDDDDDDDD
DDDDDDDDDDDD"
5110 PRINT AT 19,0: INK 4: "IIII
IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
Igg)"
5200 FOR i=1 TO 27: LET w= INT (
RND *4+2): FOR e=5 TO w: PRINT
AT e,i: INK 0: "F": NEXT e: PRIN
T AT e,i: INK 0: PAPER 6: "E": L
ET t=t+1: LET i=i+ INT ( RND *3)
+1: NEXT i
5500 RETURN
8000 REM end routine
8050 BEEP .05,0: BEEP .05,1: BEE
P .05,2: BEEP .05,3: BEEP .05,4:
BEEP .05,5: BEEP .05,6: BEEP .0
5,7

```

```

8100 PRINT AT 0,0: INK 7: PAPER
2: FLASH 1: "You scored ":s
8200 IF s>hs THEN INPUT BRIGHT
1: "Name please! ":n$: LET hs=s:
IF LEN n$>12 THEN GO TO 8200

```

```

8500 PRINT FLASH 1: "Do you want
another game? (Y/N)"
8505 PAUSE 0
8510 IF INKEY$ ="y" OR INKEY$
="Y" THEN GO TO 30
8520 IF INKEY$ ="n" OR INKEY$
="N" THEN STOP
8530 IF INKEY$ <> "y" OR INKE
Y$ <> "Y" OR INKEY$ <> "n" OR
INKEY$ <> "N" THEN GO TO 850
0
8600 STOP
9000 RESTORE : FOR a=1 TO 9: REA
D a$: FOR b=0 TO 7: READ c: POKE
USR a$+b,c: NEXT b: NEXT a
9010 RETURN
9100 DATA "A",0,0,20,28,28,28,8,
28
9110 DATA "B",255,62,62,62,28,20,
20,20
9120 DATA "C",129,195,247,255,25
5,255,255,255
9130 DATA "D",255,255,255,255,25
5,195,195,129
9140 DATA "E",129,129,129,129,12
9,129,129,255
9150 DATA "F",16,16,16,16,16,16,
16,16
9160 DATA "G",8,28,62,28,8,0,0,0

```

```

9170 DATA "H",129,129,129,129,12
9,129,129,231
9180 DATA "I",170,170,255,255,25
5,255,255,255
9200 RETURN
9500 REM instructions
9503 INK 1: PAPER 5: BORDER 1
9505 CLS
9510 PRINT TAB 9: INVERSE 1: "#I
NSTRUCTIONS#"
9520 PRINT : PRINT "Pooh Bear ha
s gone on holiday" and left all
his honey pots"
9530 PRINT "hanging from the bra
nch of his" "favourite tree in t
he Hundred" "Acre Wood."
9540 PRINT : PRINT "However, Pig
let is hungry: food" "is scarce.
He has collected" "100 stones
with which he intends"
9550 PRINT "to knock down the po
ts of honey."
9560 PRINT : PRINT "You help Pig
let by pressing any" "key to mak
e him throw a stone"
9570 PRINT "as he runs across th
e grass" "under the branch."
9580 PRINT : PRINT "You will sco
re 100 points for" "every jar th
at Piglet hits."
9590 PRINT : PRINT INK 7: PAPER
2: "GOOD LUCK!": PRINT TAB 17:
"Any key ....."
9592 PAUSE 0
9595 CLS
9600 RETURN

```

POOH BEAR has gone on holi-day and left all his honey pots hanging from the branch of a tree. Help Piglet to knock the honey pots off the branch using one of the one hundred stones he has collected. As Piglet runs across the grass underneath the tree press any key to throw a stone.

Written for the 16K Spectrum by Cathryn Corns of Enfield, Middx.



SPROGS

THE SPROGS ARE HOLIDAYING
AT CAMELOT



HOORAY—
A WHOLE
MONTH AWAY
FROM THE
SOFTWARE
PIRATE

LANCELOT AND A SPROG
SET OFF DOWNSTREAM



YES—WE MUST
CAPTURE THE
GREAT SEA-
SERPENT BY
NIGHTFALL

THEY CAN GO PICKNICKING
— I PREFER TO GO
QUESTING

WHAT'S THAT
SWORD?



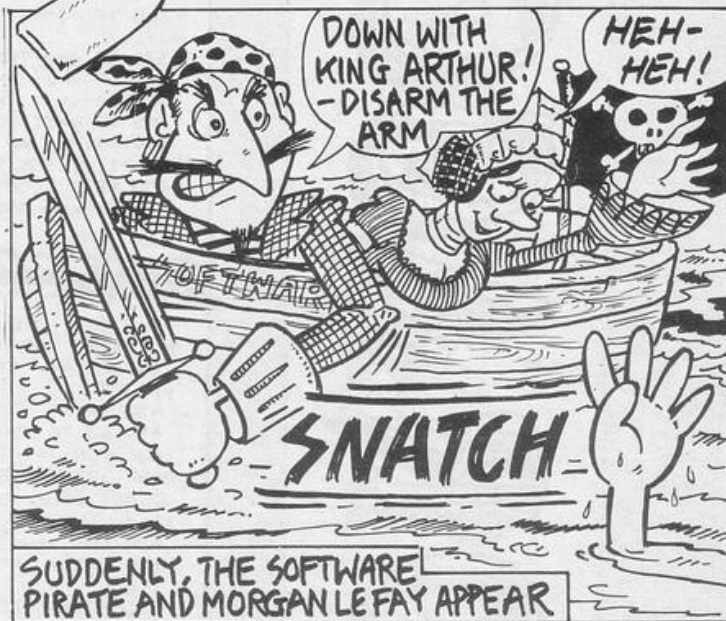
THE MAGICAL SWORD
EXCALIBUR, HELD
THERE FOR TIMES
OF PERIL—ITS LOSS
WOULD ENDANGER
THE WHOLE COUNTRY



SO EVEN IF YOU
ARE NOT FOREWARNED
YOU ARE FOREARMED

DOWN WITH
KING ARTHUR!
— DISARM THE
ARM

HEH-
HEH!



SNATCH

SUDDENLY, THE SOFTWARE
PIRATE AND MORGAN LE FAY APPEAR

CATASTROPHE!
WOE! CALL AN
ARMADA



LANCELOT AND SPROG CRASH
INTO THE SOFTWARE PIRATE

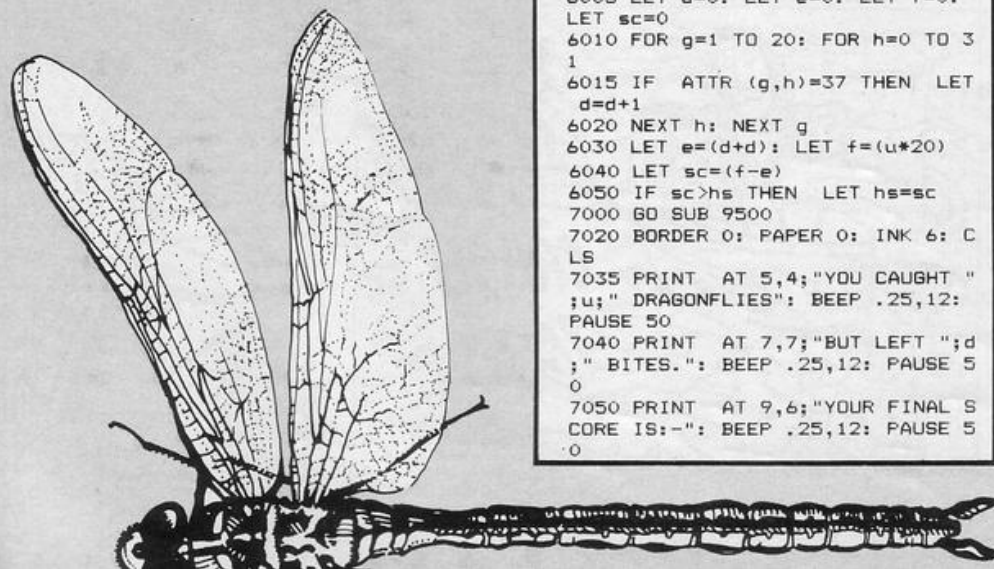


CRASH



DISARMED,
BUT UNARMED!

DRAGONFLIES



```

10 GO SUB 9000
15 BORDER 0: PAPER 4: INK 0: C
LS
60 LET hs=0
65 LET u=0
70 BORDER 0: PAPER 4: INK 0: C
LS
75 PRINT AT 0,0: PAPER 1: "
";
AT 21,0: PAPER 1: "
"

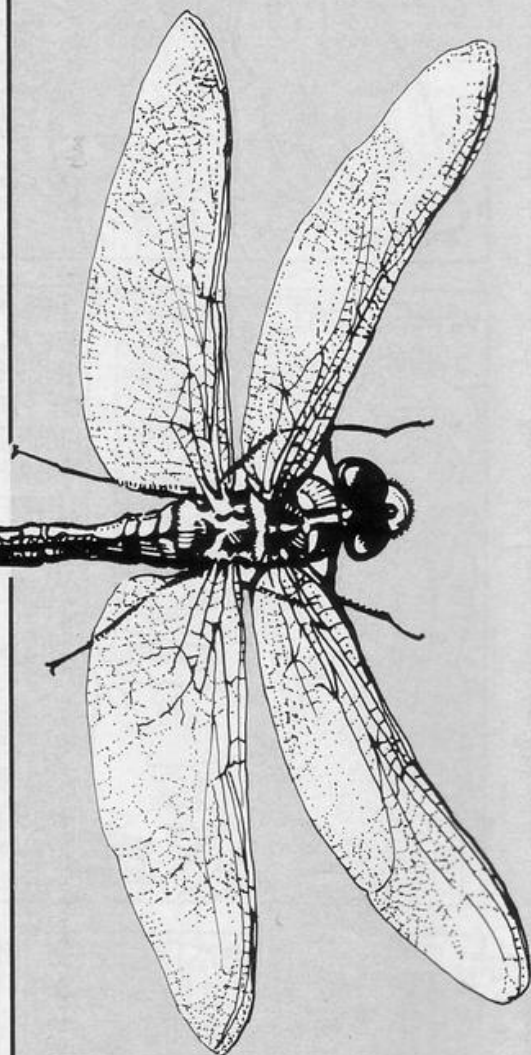
80 LET t=1000
85 PRINT AT 21,17: INK 6: PAPER 1: "HIGH SCORE="
90 PRINT AT 21,29: INK 6: PAPER 1: hs
100 PRINT AT 21,1: INK 6: PAPER 1: "TIME"
110 PRINT AT 0,0: INK 6: PAPER 1: "CAUGHT:"
190 LET x=3: LET y=29
200 LET b=INT (RND *19)+1
210 LET c=INT (RND *29)+1
220 LET z=INT (RND *4)+1
230 IF z=1 THEN LET b=b+1
240 IF z=2 THEN LET b=b-1
250 IF z=3 THEN LET c=c+1
260 IF z=4 THEN LET c=c-1
270 IF b=0 THEN LET b=1
280 IF b=21 THEN LET b=20
290 IF c=-1 THEN LET c=0
300 IF c=32 THEN LET c=31
310 PRINT AT b,c: INK 3: "A"
315 PRINT AT 21,6: INK 6: PAPER 1: t: " ": LET t=t-1
320 IF t=-1 THEN GO TO 6000
330 IF INKEY$="7" THEN LET x=x-1
340 IF INKEY$="6" THEN LET x=x+1
350 IF INKEY$="5" THEN LET y=y-1
360 IF INKEY$="8" THEN LET y=y+1
370 IF x=0 THEN LET x=1
375 IF x=20 THEN LET x=19
380 IF y=-1 THEN LET y=0
385 IF y=31 THEN LET y=30
390 PRINT AT x,y: INK 1: "BC";
AT x+1,y: INK 1: "DE"
400 BEEP .0001,60
410 IF x=b AND y=c OR x=b AND y

```

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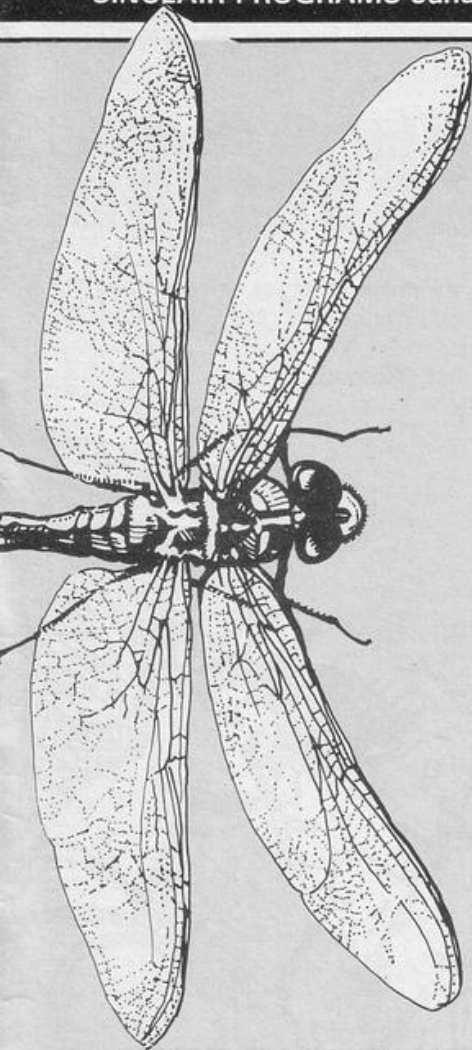
+1=c OR x+1=b AND y=c OR x+1=b AND y+1=c THEN GO TO 600
420 PRINT AT x,y: " "; AT x+1,y: " "
430 PRINT AT b,c: INK 5: "F"
440 GO TO 220
600 FOR j=1 TO 4: BEEP .02,20: BEEP .02,40: BEEP .02,20: BEEP .02,40: BEEP .02,20: PAUSE 15: NEXT j
620 LET u=u+1
650 PRINT AT 0,8: INK 6: PAPER 1: u
660 PRINT AT x,y: " "; AT x+1,y: " "
670 GO TO 200
6000 PRINT AT 0,12: PAPER 1: INK 6: FLASH 1: "CALCULATING SCORE"
6005 LET d=0: LET e=0: LET f=0: LET sc=0
6010 FOR g=1 TO 20: FOR h=0 TO 31
6015 IF ATTR (g,h)=37 THEN LET d=d+1
6020 NEXT h: NEXT g
6030 LET e=(d+d): LET f=(u*20)
6040 LET sc=(f-e)
6050 IF sc>hs THEN LET hs=sc
7000 GO SUB 9500
7020 BORDER 0: PAPER 0: INK 6: C
LS
7035 PRINT AT 5,4: "YOU CAUGHT "
;u: " DRAGONFLIES": BEEP .25,12: PAUSE 50
7040 PRINT AT 7,7: "BUT LEFT ";d
;" BITES.": BEEP .25,12: PAUSE 50
7050 PRINT AT 9,6: "YOUR FINAL SCORE IS:-": BEEP .25,12: PAUSE 50

```



The dragonflies have hatched and are hunting for food. Some of them have found your lily-pad and are eating it away. To prevent them from ruining the lily-pad you have to hop after them in an attempt to catch them. The holes left by the Dragonflies can be repaired by going over them. You have 999 time units in which to eat as many dragonflies as possible.

Written for the 16K Spectrum by P. E. Thompson of Westgate, Kent.



```

7060 PRINT AT 11,13;"POINTS ";
f: BEEP .25,12: PAUSE 100: PRINT
AT 12,13;"PENALTY ";e: BEEP .2
5,12: PAUSE 50: PRINT AT 12,21;
OVER 1;"-----": BEEP .25,12: PAU
SE 50: PRINT AT 13,13;"SCORE="
";sc: AT 13,21; OVER 1;"-----": B
EEP .25,12
7070 PAUSE 100: PRINT AT 16,7;"
HIGHEST SCORE:";hs
7080 PRINT AT 21,3; FLASH 1;"Pr
ess any key to play again"
7085 GO SUB 9500
7090 IF INKEY$="" THEN GO TO
7090
7100 PAUSE 50
7110 GO TO 65
9000 FOR k=1 TO 6: FOR n=0 TO 7:
READ a: POKE USR ( CHR$ (143+k
))+n,a: NEXT n: NEXT k
9010 DATA 36,24,255,126,16,8,16,
8,120,236,126,191,123,61,30,29,0
,0,0,0,128,224,248,252,27,30,29,
27,39,63,94,56,252,126,190,223,2
39,255,254,124,8,60,126,252,124,
120,40,0
9030 BURDER 0: PAPER 0: INK 6: C
LS
9040 PRINT AT 11,6; FLASH 1;"IN
STRUCTIONS? (y/n)"
9050 IF INKEY$="" THEN GO TO
9050
9060 IF INKEY$="y" OR INKEY$
="Y" THEN GO TO 9100
9070 IF INKEY$="n" OR INKEY$
="N" THEN RETURN
9080 GO TO 9050
9100 GO SUB 9900
9110 CLS
9120 GO SUB 9850
9130 PRINT AT 8,0;"The Dragonfl
ies have hatched, and are hunting
for food. Some of them have fo
und your lily-pad, and are busi
ly munching away your home.
Not only do

```

you have to eat the dragonflies, but also repair the holes they have made by moving over them.

Move using t

he following keys:-

9140 PRINT AT 18,6;"LEFT '5'
RIGHT '8'; AT 19,6;"UP

7' DOWN '6'"

9150 PRINT AT 21,3; FLASH 1;"Pr
ess any key to continue"

9160 IF INKEY\$="" THEN GO TO
9160

9170 GO SUB 9900

9180 CLS : GO SUB 9850

9190 PRINT AT 8,0;"Every dragon
fly you catch is worth 20 poi
nts, but every hole you leave at
the end of the gamewill lose yo
u 2 points. You start wi
th 1000 time units, and the game
is over when you run out of t
ime. At the end of the game your
score will be calculated and
displayed."

9200 PRINT AT 19,10; FLASH 1;"
'GOOD LUCK' "; AT 21,5; INVERSE
1;"Press any key to play"

9210 IF INKEY\$="" THEN GO TO
9210

9500 FOR q=0 TO 31

9510 BEEP .04,q: NEXT q

9520 RETURN

9850 PRINT AT 1,11; INK 5;"****
*****"; AT 2,11; INK 5;"*"; AT
2,12; INK 4;"DRAGONFLY"; AT 2,2
1; INK 5;"*"; AT 3,11; INK 5;"**
*****"

9860 PRINT AT 2,9; INK 3;"A"; A
T 2,23; INK 3;"A"; AT 5,16; INK
5;"BC"; AT 6,16; INK 5;"DE"

9870 RETURN

9900 FOR a=0 TO 14

9910 BEEP .1,a: BEEP .05,a+3

9920 NEXT a

9930 BEEP .1,20

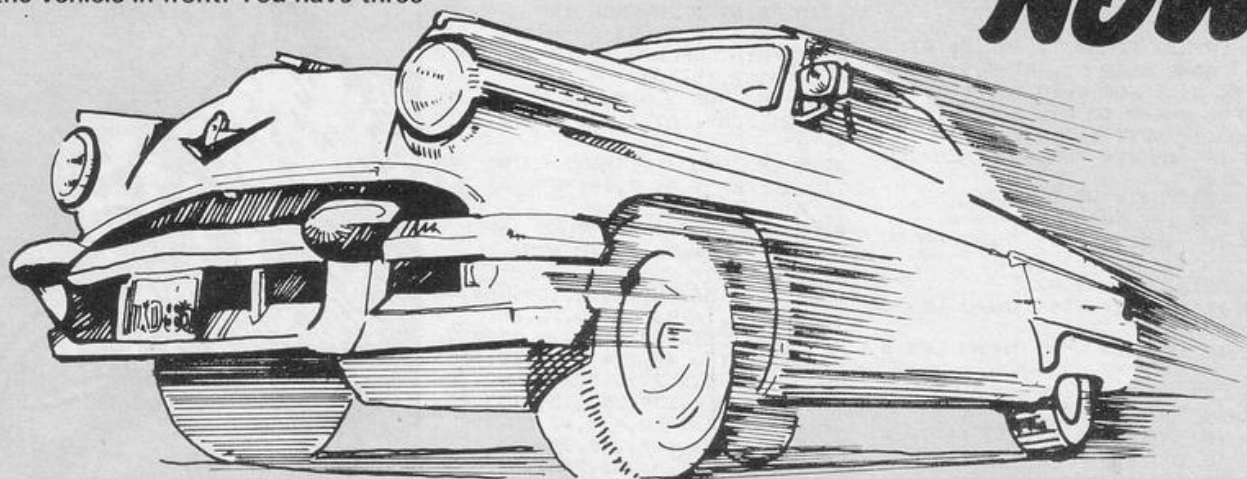
9940 RETURN

THE SPEED at which a car is travelling is shown on the screen. Input the distance you think is needed for the car to brake without stopping short or hitting the vehicle in front. You have three

attempts at each speed and are told if your guess is too big or too small.

Brake Now was written for the 16K ZX-81 by Leo Sullivan, London N1.

BRAKE NOW



```

100 CLS
200 LET U=0
300 LET M=10*INT (RND*7)
400 IF M=20 THEN GOTO 20
500 LET X=M+(M-20)/10+.5*M+M
600 PRINT "WHAT IS THE MINIMUM
STOPPING"
700 PRINT "DISTANCE IN FEET FOR
A CAR"
800 PRINT "TRAVELLING AT ",M,"M
.P.H."
900 INPUT A
1000 FOR N=5 TO 7
1100 PRINT AT N,0,"
1200 NEXT N
1300 PRINT AT 5,0;A;" FEET"
1400 LET U=U+1

```

```

1500 IF X=R THEN GOTO 3100
1600 PRINT AT 7,0;"WRONG-"
1700 IF R>X THEN PRINT "TOO FAR,
ENOUGH"
1800 IF R<X THEN PRINT "NOT FAR
ENOUGH"
1900 IF U=3 THEN GOTO 2200
2000 PRINT "TRY AGAIN"
2100 GOTO 900
2200 LET P$=""
2300 LET Y$=""
2400 PRINT AT 9,17;P$;AT 10,16;Y
$;AT 9,1;P$;AT 10,0;Y$;
2500 FOR N=0 TO 40
2600 NEXT N
2700 PRINT AT 9,3;P$;AT 10,2;Y$;
AT 9,5;P$;AT 10,4;Y$;AT 9,7;P$;A
T 10,6;Y$;AT 9,9;P$;AT 10,8;Y$;A

```

```

T 9,11;P$;AT 10,10;Y$;AT 9,13;P$
;AT 10,12;Y$;AT 9,15;P$;AT 10,14
;Y$;AT 9,17;" ";AT 10,15;"
CRUNCH"
2800 PRINT
2900 PRINT "CORRECT DISTANCE ="
"X"
3000 GOTO 3400
3100 IF U=1 THEN LET P$="" ATTEMPT
T$
3200 IF U=1 THEN LET P$="" ATTEMPT
T$
3300 PRINT AT 10,0;"RIGHT, YOU
NEEDED ",U,P$
3400 PRINT AT 13,0;"PRESS N/L FO
R ANOTHER TRY"
3500 INPUT P$
3600 RUN

```


Gus the Caveman

HELP Gus the caveman climb the cliff to the pterodactyl's nest so that he can collect twigs. Once he has collected a twig he can take it back to his campfire before he advances to the next screen. Do not let Gus bump into the ledges or other obstacles and look out for the angry pterodactyl.

Written for the 16K Spectrum by Anthony Sherwood of West Bromwich, West Midlands.

```

1 RESTORE : LET kk=0: PAPER 7
: INK 0: BORDER 7: CLS
2 GO TO 4000
6 FOR j=1 TO 2: BEEP .02,5+10
*j: IF m2=0 OR m2=31 THEN LET d
=0
7 PRINT AT m1,m2: " ": LET m1
=m1-1: BEEP .02,10+10*j: LET m2=
m2+d: IF ATTR (m1,m2) <> 56 THE
N GO TO 200
8 PRINT AT m1,m2;m$(j): NEXT
j
9 FOR j=0 TO 2: BEEP .02,35-1
0*j
10 IF m2=0 OR m2=31 THEN LET
d=0
11 IF ATTR (m1+1,m2) <> 56 TH
EN RETURN
12 PRINT AT m1,m2: " ": BEEP .
02,30-10*j: LET m1=m1+1: LET m2=
m2+d
13 IF ATTR (m1,m2) <> 56 THEN
GO TO 200
14 PRINT AT m1,m2;"A": NEXT j
15 RETURN
20 LET ct=ct+1: PRINT AT m1,m
2: " ": LET m1=m1+1: PRINT AT m1
,m2;"A": BEEP .05,3*(21-m1): IF
ct=6 THEN PRINT AT m1,m2: " ":
GO TO 200
22 IF ATTR (m1+1,m2) <> 56 TH
EN GO TO 1061
24 GO TO 20
200 BORDER 2: FOR j=1 TO 30 STE
P 3: BEEP .005,j: NEXT j: BORDER
7
210 PRINT AT p1,p2: " "
215 LET li=li-1: PRINT AT 0,31
;li: IF li=0 THEN GO TO 300
220 GO TO 5700
300 PRINT FLASH 1: INK 2: AT 7
,9;" GAME OVER ": AT 9,9;" PRE
SS KEY B ": FOR k=10 TO -5 STEP
-1: FOR j=k+2 TO k-1 STEP -1: BE
EP .03,j: NEXT j: NEXT k
310 IF INKEY$ <> "B" THEN GO
TO 310
311 LET sn=1: GO TO 5080
1020 FOR i=1 TO 2
1025 IF INKEY$ ="1" THEN GO SU
B 4
1030 PRINT AT m1,m2: " "
1039 IF INKEY$ ="9" THEN LET d
=-1
1040 IF INKEY$ ="0" THEN LET d
=1
1045 LET m2=m2+d: IF m2<0 OR m2>
31 THEN LET m2=m2-d
1050 IF ATTR (m1,m2) <> 56 THEN
GO TO 200
1060 IF ATTR (m1+1,m2)=56 THEN
LET ct=0: GO TO 20
1070 PRINT AT m1,m2;m$(i)
1075 BEEP .005,i*15+10
1085 IF ATTR (m1+1,m2)=50 THEN
LET z=1: FOR k=-20 TO 20 STEP 5
: BEEP .04,k: NEXT k
1087 IF ATTR (m1+1,m2)=178 THEN
IF z=1 THEN LET s=s+50: FOR l
=40 TO 0 STEP -1: BEEP .03,l: NE
XT l: LET z=0: LET sn=sn+1: GO T
O 5090
1093 LET py=p1: LET px=p2
1095 IF RND >.7 THEN LET p1=p1
-1: GO TO 1110
1100 LET p1=p1+((p1<m1)-(p1>m1))
1110 LET p2=p2+((p2<m2)-(p2>m2))
1120 IF ATTR (p1,p2) <> 56 OR
ATTR (p1,p2+1) <> 56 OR RND >.6
OR p2=31 OR p1<5 THEN LET p1=p
y: LET p2=px
1125 IF RND >.7 THEN PRINT AT
py,px: " ": INK 1: AT p1,p2;"EF
": GO TO 1131
1130 PRINT AT py,px: " ": INK 1
: AT p1,p2;"CD"
1999 NEXT i
2000 GO TO 1000
4010 CLS : PAPER 5: PRINT AT 0,
10;"CAVEMAN GUS"
4015 PRINT AT 0,0: OVER 1: INK
1;"(32*ig3)"
4020 PRINT "HELP GUS TO CLIMB T
HE CLIFF TO THE PTERODACTYL NES
T.HE NEEDS TOBRING TWIGS DOWN FR
OM THE NEST TO KEEP HIS CAMPFIR
E BURNING. "
4025 PRINT " "
4030 PRINT " " DON'T LET HIM BUM
P INTO ANY OBSTACLES OR FALL
TOO FAR. HE ALSO HAS TO AV
OID THE ANGRY PTERODACTYL.
.
4040 PRINT " " IF HE GETS A TWIG
AND PUTS IT ON HIS CAMPFIRE,
HE WILL THEN MOVE TO SCREEN TW
O.
4050 PRINT " " LEFT-9 RIGHT-0
JUMP-1 "
4200 FOR i=USR "a" TO USR "n"+
7
4201 READ j: POKE i,j: NEXT i
4210 PRINT " INVERSE 1:" PR
ESS A KEY TO START "
4255 PRINT FLASH 1: INK 2: PAPE
R 6: AT 7,15;"HJ"
4257 IF RND >.8 THEN PRINT AT
12,21;"CD": AT 7,14;"A": AT 7,1
7;"B"
4258 IF RND >.9 THEN PRINT AT
12,21;"EF": AT 7,14;"B": AT 7,1
7;"A"
4259 IF INKEY$ =" " THEN BEEP .
00012, RND *60: GO TO 4257
4260 PAPER 7
5003 DATA 56,56,16,56,124,186,40
,68,56,56,16,56,40,40,16,16
5004 DATA 224,241,123,25,15,7,2,
2,15,159,188,48,224,192,128,128
5005 DATA 0,1,3,1,15,127,242,226
,0,128,128,0,224,252,159,143,40,
28,56,20,4,53,30,4,3,47,55,127,2
51,127,63,25,183,255,255,63,123,
243,223,191,174,255,246,254,223,
247,254,176,255,62,60,60,60,60,6
1,62,60,52,54,118,126,126,254,12
4
5006 DATA 255,255,190,62,20,4,0,

```





```
0,255,127,63,22,0,0,0,0
5010 LET m$="AB"
5050 LET s=0: LET sn=1: LET h=0
```

```
5080 IF s>h THEN LET h=s
5085 LET li=6: LET s=0
5100 IF sn>2 THEN LET sn=1
5101 CLS: PRINT #0; AT 1,0; INK
5;"(32*ig3)"
5102 PRINT #0; AT 1,4;"CAVEMAN G
US"; AT 1,20;"SCREEN ";sn
5103 PRINT #0; AT 1,4; INK 3; OV
ER 1;"(11*ig3)"; AT 1,20;"(8*ig3
)"
5105 PRINT INK 2; AT 0,0;"SCORE
"; AT 0,15;"TOP"; AT 0,30;"A"
5106 PRINT AT 0,6;"00000"; AT 0
,19;"00000"
5107 PRINT AT 0,11- LEN STR$ s
;s; AT 0,24- LEN STR$ h;h; AT 0
,31;li
5108 FOR j=21 TO 1 STEP -1: PRIN
T AT j,15;"CD": BEEP .03,30-j:
```

```
PRINT AT j,15;"EF": BEEP .03,30
-j: PRINT AT j,15;" ": NEXT j
5109 RESTORE 9000+sn*100: PLOT 0
,156: DRAW 255,0: PLOT 0,144: DR
AW 85,3: DRAW 85,-6: DRAW 85,3
```

```
5110 FOR j=1 TO 6: READ a,b: PRI
NT INK 4; AT a,b;"HIJ"; AT a+1,
b+1; INK 1;"K"; AT a+2,b+1;"L":
NEXT j
```

```
5120 FOR j=1 TO 5: READ a,b: PRI
NT AT a,b; INK 4;"HIJ": NEXT j
```

```
5130 FOR j=1 TO 10: READ a,b: PR
INT AT a,b; INK 3;"GGG": NEXT j
```

```
5140 FOR j=1 TO 17: READ a,b: PR
INT AT a,b; INK 2;"MNM": NEXT j
```

```
5150 PRINT AT 7,30; PAPER 6; IN
K 2;"HJ"; AT 21,0; FLASH 1;"HJ"
```

```
5700 LET z=0: LET p1=6: LET p2=3
0: LET d=-1: LET m1=20: LET m2=0
```

```
6000 GO TO 1000
9100 DATA 1,19,1,23,13,0,18,11,1
8,17,19,29: REM 6 trees
9105 DATA 17,19,21,6,10,12,21,15
,21,24
9110 DATA 2,2,2,7,3,17,9,0,13,23
,15,10,20,7,21,12,21,21,27
9115 DATA 8,22,8,27,9,6,21,9,10,
18,11,4,13,29,14,15,14,21,15,4,1
5,26,15,29,16,0,17,22,21,0,21,3,
21,18
9200 DATA 1,17,8,29,12,0,14,24,1
7,14,19,22
9205 DATA 3,26,17,20,19,10,21,15
,21,24
9210 DATA 2,7,10,20,8,9,10,0,10,
23,13,7,19,29,21,3,21,6,21,20
9215 DATA 8,4,8,14,8,26,9,17,12,
3,13,13,13,19,15,29,16,5,17,26,2
0,5,20,29,21,0,21,9,21,12,21,18,
21,27
```

DOORWAYS

```
1 POKE 23658,8: BORDER 6: PAP
ER 7: CLS: FOR U=USR "B" TO U
SR "C"+7: READ W: POKE U,W: NEXT
U: DATA 145,82,0,192,3,0,74,137
,56,56,16,124,16,56,68,68: PAPER
6: INK 1: PRINT AT 0,0;"BBBBBB
BBBBBBBBBBBBBBBBBBBBBBBBBB": LET
T=0: LET X=20: LET Y=1
2 PRINT AT 21,0;"BBBBBBBBBBBB
BBBBBBBBBBBBBBBBBBBBBBBBBB"
10 FOR r=0 TO 30 STEP 2: FOR t
=0 TO 21: PRINT AT t,r: PAPER 6
; INK 1;"B": NEXT t: NEXT r
20 INK 0: FOR R=2 TO 30 STEP 2
: PRINT AT 3+ INT (RND *15),R;
" ": NEXT R
24 INK 0: LET T=0
25 PRINT AT X,Y;"C"
35 BEEP .01,Y
38 PRINT AT X,Y;" "
40 IF INKEY$="B" THEN LET Y
=Y+1
45 LET T=T+.07
48 PRINT AT 21,0;"TIME:";T
50 IF INKEY$="7" THEN LET X
=X-1
60 IF INKEY$="6" THEN LET X
=X+1
70 IF Y=31 THEN BEEP .1,5: BE
EP .1,5: GO TO 200
80 IF ATTR (X,Y) <> 49 THEN
GO TO 25: BEEP .2,2
100 LET Y=Y-1: GO TO 25
200 CLS: PRINT AT 10,0;"YOU E
SCAPED IN ";T;" SECONDS"
210 INPUT "WOULD YOU LIKE ANOTH
ER GAME (Y/N)";A$
220 IF A$="Y" THEN CLS: RESTO
RE 1: GO TO 1
230 BEEP .1,1: BEEP .1,1
```

FIFTEEN doorways appear randomly in the corridors on the screen. Run up or down the corridor to reach the doorway and the next corridor. When you have been

through all fifteen doorways and along each corridor you will be told how long you took.

Doorways was written for the 16K Spectrum by Barry Jones of Handsworth, Birmingham.



Questline

Hampstead and Kentilla

HAMPSTEAD has a totally unreasonable grip. If I find my feet aching during the day this is automatically put down to my having wandered all round Piccadilly Circus last night. It takes a conscious effort to recall that I was in fact doing nothing more arduous than typing.

In my usual daze, I got up to sign on and was struck by the desire to succeed for a change. I resolved to claw my way up the social ladder, from a tacky two-up two-down in what estate agents manage to call West Hampstead, and attain Hampstead — *res veritas*. Mind you, I suppose I could always settle for Richmond instead, take a trip to Waterloo, and thence by bus to a round of wine bars and bistros, or take the train to Kings Cross for the trip of a lifetime!

After about fifty dismal failures (and a few intriguing ones) I have managed to take a job with a company car with which I can get to Islington, St John's Wood, dear old West Hampstead, or go up the M11 to Cambridge. I have still not attained Hampstead, but at least they no longer throw me out

If you want to impress him you have to brave the estate, where you find a really tempting item for an art critic.

The decisions you make in your job are crucial. They can earn you a bonus but even THAT does not impress Pippa, another social climber.

A pity the key to your filing cabinet has been lost — maybe a visit to the shops is needed.

DO make a saved copy of the earlier parts of the game. Once you have investigated that thoroughly it swiftly becomes a bit of a bore getting to where you REALLY want to be.

Early in the first evening I made 28% — by settling down elsewhere — but remained stuck at 38%, with Hampstead remaining a tantalising and unattainable glow on the horizon, until late last night and early this morning when, in a group effort, we made 85%.

The game was developed using the Quill interpreter, but then re-written entirely. Strangely enough, it does not so much demonstrate how much one can improve Quill adventures, as how much can be done within them, since at times it almost seems like a graphic game.

As if the game itself were not enough, the SCREEN\$ when loading is one of the best I've ever seen.

Addiction Factor 9

Kentilla has the misfortune to be in the same review as Hampstead. It is less compelling, but only just! The aim of the game seems to be to match twisted minds with the author. Maps have a tendency to work one way, if then. The topology of this world is quite something!

I still have a preference for some sort of visual input to help me think — only in this does Kentilla rate more highly than Hampstead. One of my friends was not impressed by the SCREEN\$ but the rest of us beg to differ! As you go through the game you find more and more that apart from the excellence of the loading screen in its own right, Image Systems have chosen a scene that brilliantly evokes Derek Brewster's world.

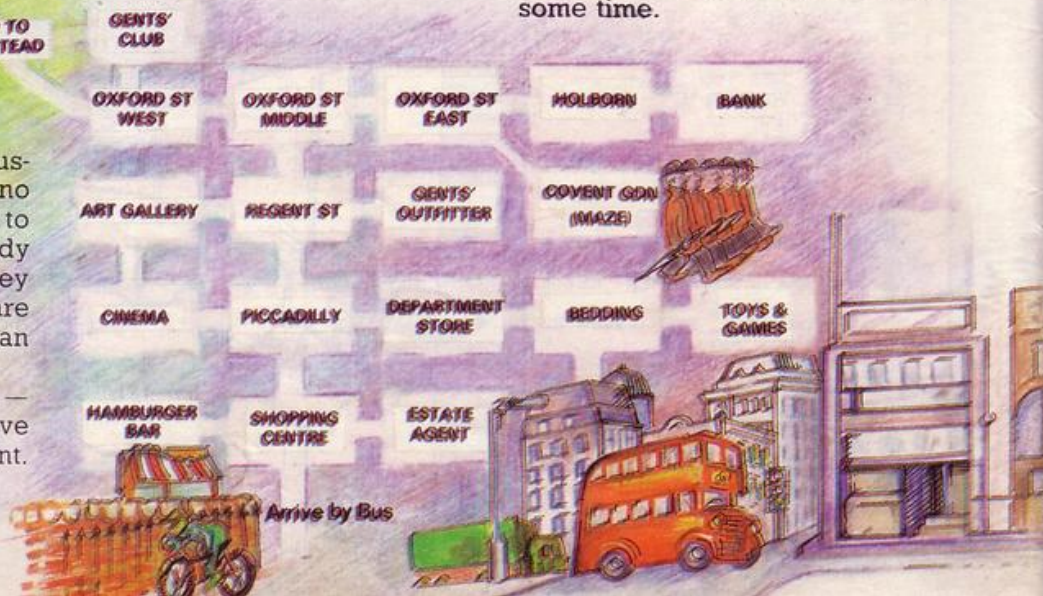
The input routine is a little unusual and has some very useful features, especially the use of EDIT (CAPS SHIFT 1) to recall the previous command — other programmers please copy.

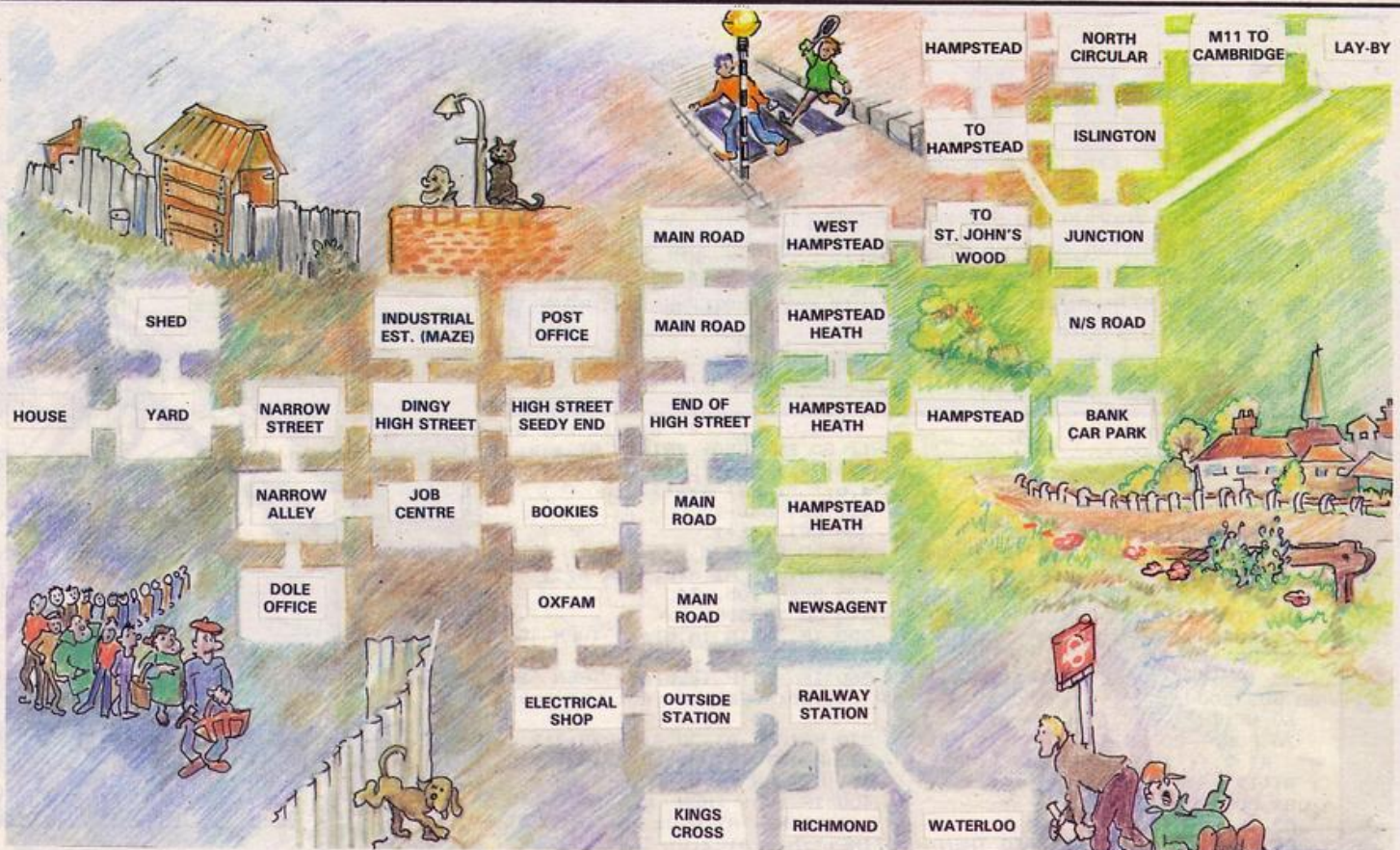
Back in the Mists of Time Grako wrought his evil and was vanquished, and was returned to the flames of the Abyss. The world rejoiced... Too soon — for Velnor found the Tomes of Grako and, using these, brought evil again to the land. He, too, was consigned to the flames — but Grako escaped with the Moonstone of Algrath... the cassette insert carries on like this for quite some time.

of my club.

Do not go naked into the industrial estate — maybe there is no ball or string, but it is still useful to remember Theseus. Everybody gets lost in places like this — they can be mapped provided you are not too committed to Euclidean geometry.

The gentleman on the train — you know the one if you have been to Waterloo — IS important.





To continue the story . . .

For all the menace of his name, the first character met, Ogeron, is a nice guy, hung up on the thought that he has to trust yours truly to save the world! Maybe he has a point there! Apart from his gift of the sword, Ogeron offers some necessary background information: the evil Grako has moved into the Black Tower — shown in the distance, beyond the vile swamps of Caradoom on the loading screen — and is discovering the secrets of Velnor's power. Unless I can reach the Tower and stop Grako the world will enter eternal darkness!

The order of events in the Cavezat cavern is crucial, since Cavezats dislike thieves and will not allow one to leave; benefactors, on the other hand, are extremely well treated (just find THE TORCH in that well-lit cavern and anything available is yours for the taking).

The river can, and must, be crossed . . . there is no boat, so do the logical thing — swim! Again, careful attention to detail gets the desired results, much depends on the exact word used. Two interesting, if completely useless facts — the sword floats, and the rope catches up in an invisible tree. The rope you can regain, but the sword vanishes

forever down the rapidly flowing river.

In Carawood there is an Oracle which has a message for you. If you explore this strange wood and the adjacent swamps you will also find a castle and a maiden to save. You can avoid death at the hands of the Urga-maul in their caverns. In order to do this, the best idea is to arrange to be somewhere else as soon as they open the door.

Avoid ambiguity and be as precise as possible — for instance, since you cannot be sure that your first blow will end the fight, "kill", though valid in so many adventures and in Role Playing

Games similar to this, is not accepted here. No need to depair, though, "attack" serves quite well! As with **The Hobbit**, life goes on whether or not you do anything. The correct actions, if you can think fast enough, can change alignments, making enemies into friends, which can be more useful than hacking your way through with your trusty sword!

This is not an adventure to complete in an evening — it could take weeks, or even months to plumb its depths, so Happy Adventuring, and Good Luck! More Adventures in Caraland please!

Addiction Factor 8

To: Questline, Sinclair Programs,
67 Clerkenwell Road, London EC1R 5BH

From:

HELP OFFERED

HELP WANTED

COLLECT-A-KEY

WORK your way up the screen collecting the keys as quickly as you can. A monster, a hammer, an electrified wall and a moving wall have joined forces in an attempt to hamper your progress, and they should be avoided. If you manage to collect all fifty keys, you must return to the flashing wall at the bottom of the screen.

Collect-a-Key was written for the 16K Spectrum by Mark Freeman of Colchester, Essex.

```

1 GO SUB 9000
5 GO SUB 4000
6 LET hi=3000
10 LET a=18: LET t=0: LET b=1:
LET k=0
15 BORDER 0: PAPER 0: CLS
20 GO SUB 800: GO SUB 1000
40 FOR f=14 TO 20: PRINT AT 7
,f; INK 7; BRIGHT 1;"E"; AT 17,
f-10; INK 3;"B"
50 GO SUB 500
54 LET t=t+1
55 IF INT ( RND *20)=5 THEN
GO SUB 200
60 NEXT f
70 FOR f=20 TO 14 STEP -1: PRI
NT AT 7,f; INK 7; BRIGHT 1;"E"
; AT 17,f-10; INK 3;"H"
80 GO SUB 500
82 LET t=t+1
85 IF INT ( RND *20)=10 THEN
GO SUB 200
90 NEXT f
100 GO TO 40
200 FOR n=13 TO 15: PRINT AT n
,16; INK 2; PAPER 6;"AAA": BEEP
.01,30
205 IF ATTR (a,b)=50 THEN FOR
f=0 TO 10: BEEP .1,-30: NEXT f:
PRINT AT 10,9; INK 3;"Killed b
y wall": GO TO 2000
206 NEXT n
210 FOR n=15 TO 13 STEP -1: PRI
NT AT n,16;" ": BEEP .01,30:
NEXT n
220 RETURN
299 PRINT AT a,b; BRIGHT 1; IN
K 7;"D"
300 LET a=2
320 IF b<2 THEN LET b=1: GO TO
40
322 PRINT AT a,b;" "
326 IF INKEY$="0" THEN PRINT

```

```

AT a,b;" ": LET a=a-1: LET b=b
-1: GO SUB 350: PRINT AT a,b; I
NK 6;"I": BEEP .01,30: PRINT AT
a,b;" ": LET a=a+1
327 LET b=b-1
328 LET t=t+1
330 GO SUB 350
331 PRINT AT a,b; INK 6;"I"
335 BEEP .05,-30
340 GO TO 300
350 IF ATTR (a,b)=50 THEN GO
TO 590
360 IF ATTR (a,b)=70 THEN BEE
P .01,50: BEEP .01,60: LET k=k+1

```

```

370 PRINT AT 20,4;"KEYS:";k
380 PRINT AT 20,20;"TIME:";t
390 RETURN
400 IF t<hi THEN LET hi=t
410 PRINT AT 0,0; INK 3;"BEST
TIME:";hi; AT 2,0; INK 5;"YOUR T
IME:";t: RETURN
500 IF a=3 THEN IF b=30 AND I
NKEY$="q" THEN GO TO 299
505 IF ATTR (a,b)=71 THEN BEE
P .1,3: BEEP .1,0: PRINT AT 10,
9; INK 5;"Killed by ghost": GO T
O 2000
510 IF ATTR (a,b)=67 THEN BEE
P .1,0: BEEP .1,3: PRINT AT 10,
8; INK 4;"killed by monster": GO
TO 2000

```

```

515 PRINT AT a,b;" "
520 LET a=a+( INKEY$="a")-( IN
KEY$="q")
530 LET b=b+( INKEY$="p")-( IN
KEY$="o")

```

```

540 IF ATTR (a,b)=2 THEN BEEP
.01,50: LET k=k+1
550 IF ATTR (a,b)=3 THEN BEEP
.01,40: LET k=k+1
560 IF ATTR (a,b)=4 THEN BEEP
.01,30: LET k=k+1
570 IF ATTR (a,b)=5 THEN BEEP
.01,10: LET k=k+1
580 IF ATTR (a,b)=1 THEN BEEP
.01,10: LET t=t+100: PRINT AT
a,b; INK 1;"C": LET a=3: LET b=3
0

```

```

590 IF ATTR (a,b)=50 THEN FOR
f=0 TO 10: BEEP .1,-30: NEXT f:
PRINT AT 10,9; INK 3;"killed b
y wall": GO TO 2000
595 IF ATTR (a,b)=71 THEN GO
SUB 1000

```

```

596 PRINT AT 20,4;"KEYS:";k
597 IF k=50 THEN PRINT AT 17,
1; PAPER 7; INK 1; FLASH 1;"AA"

```

```

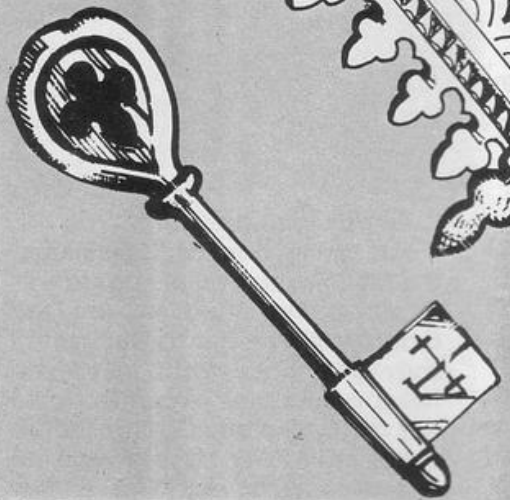
598 IF ATTR (a,b)=185 THEN FO
R f=0 TO 60: BEEP .01,f: NEXT f:
FOR f=60 TO 0 STEP -1: BEEP .01
,f: NEXT f: PAUSE 100: CLS : FOR
f=0 TO 10: BEEP .01,f: PRINT A
T 10,10; INK INT ( RND *6+1);"C
ONGRATULATIONS!"; AT 12,9;"your
task is over!": NEXT f: GO SUB
(400: GO TO 2000)

```

```

599 PRINT AT 20,20;"TIME:";t
600 LET a=a+(a<1)-(a>18)
610 LET b=b+(b<1)-(b>30)
620 PRINT AT a,b; INK 6;"I"
630 RETURN

```



```

800 INK 2: PAPER 6
810 FOR f=0 TO 31: PRINT AT 0,
f;"A"; AT 21,f;"A"; AT 19,f;"A";
AT 20,f;"A"; AT 4,f;"A"; AT 8,f
;"A"; AT 12,f;"A"; AT 16,f;"A";
NEXT f

```

```

820 FOR f=0 TO 21: PRINT AT f,
0;"A"; AT f,31;"A": NEXT f
830 FOR f=3 TO 28 STEP 4: PRINT
AT 2,f;"A"; AT 3,f;"A"; AT 1,f
; INK 6; PAPER 0; BRIGHT 1;"B":
NEXT f

```

```

840 PRINT AT 10,2;"AAAAAAAAAAAA
AA"; AT 10,18;"AAAAAAAAAAAA"
850 PRINT AT 11,9;"A"; AT 11,2
2;"A"; AT 18,7;"A"; AT 17,3;"A";
AT 17,12;"A"

```

```

855 PAPER 0
860 FOR f=4 TO 27 STEP 4: PRINT
AT 3,f; INK 1;"CCC": NEXT f: P
RINT AT 3,28; INK 1;"CC"; AT 3,
1;"CC"

```

```

920 PRINT AT 5,3; INK 3;"B"; A
T 5,11;"B"; AT 5,14;"B"; AT 5,19
;"B"; AT 7,28;"B"; AT 5,23;"B";
AT 5,26;"B"; AT 6,5;"B"; AT 7,1;
"B"; AT 7,8;"B"; AT 7,24;"B"

```

```

930 PRINT AT 9,2; INK 5;"B"; A
T 9,7;"B"; AT 9,11;"B"; AT 9,15;
"B"; AT 9,21;"B"; AT 9,26;"B"; A
T 9,30;"B"; AT 11,29;"B"; AT 11,
25;"B"; AT 11,16;"B"; AT 11,12;"
B"; AT 11,6;"B"; AT 11,1;"B"

```

```

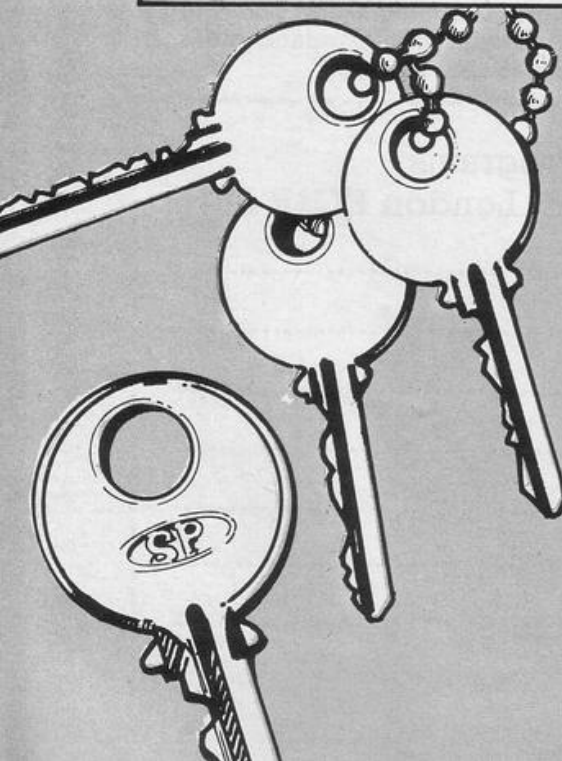
940 PRINT AT 13,3; INK 2;"B";
AT 13,11;"B"; AT 13,13;"B"; AT 1
3,20;"B"; AT 13,27;"B"; AT 13,30
;"B"; AT 14,5;"B"; AT 14,23;"B";
AT 15,12;"B"; AT 15,19;"B"; AT
15,25;"B"; AT 15,27;"B"

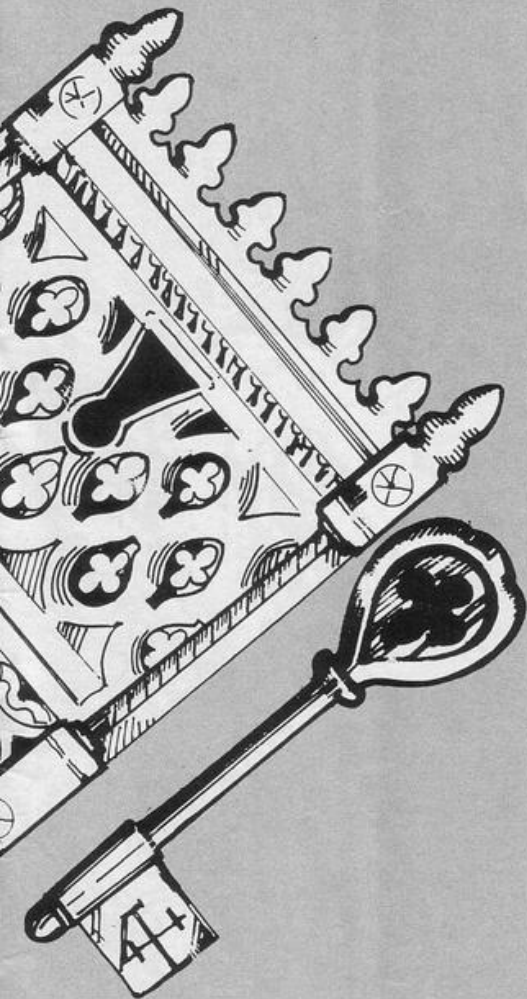
```

```

950 PRINT INK 4; AT 18,3;"B";
AT 18,8;"B"; AT 18,18;"B"; AT 18

```

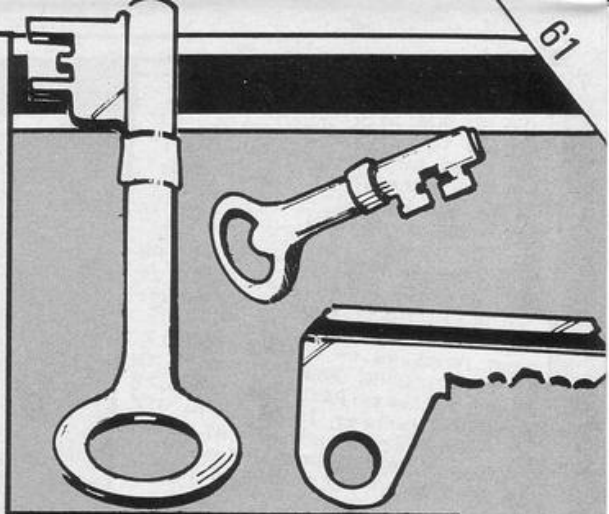




```

,27;"B"; AT 17,30;"B"; AT 17,22;
"B"; AT 17,15;"B"
960 RETURN
1000 INK 7: BRIGHT 1
1010 PRINT AT 3,30;"D"; AT 4,30;
"D"; AT 5,30;"D"; AT 6,30;"D";
AT 7,30;"D"
1020 PRINT AT 8,17;"D"; AT 9,17;
"D"; AT 10,17;"D"; AT 11,17;"D"
1030 PRINT AT 12,8;"D"; AT 13,8;
"D"; AT 14,8;"D"; AT 15,8;"D"
1040 PRINT AT 16,24;"D"; AT 17,
24;"D"; AT 18,24;"D"
1050 PRINT AT 16,24;"D"; AT 17,
24;"D"; AT 18,24;"D"
1060 BRIGHT 0: RETURN
2000 INPUT "Another go?";a$
2010 IF a$="y" THEN GO TO 10
2020 IF a$="n" THEN STOP
2030 GO TO 2000
4000 BORDER 0: PAPER 0: INK 7: C
LS
4010 PRINT AT 0,10;"COLLECT-A-K
EY"; AT 1,9;"-----"
4020 PRINT AT 3,0;"You must wor
k your way up the screen colle
cting the keys as fast as you
can."
4030 PRINT AT 6,0;"When you hav
e all 50 keys go back too the
bottom of the screen and t
ouch the flashing wall."
4040 PRINT AT 10,0;"The game wi
ll end if you touch the: - monst
er,hammer,wall or thefalling WAL
L."
4050 PRINT AT 13,0;"100 points
will be added too your TIME i
f you touch the blue girders."
4060 PRINT AT 16,0;"On the top
part of the game the computer ta
kes control of your direction a
nd you just have too jump the wa
lls and get the keys."
4065 PRINT #1; FLASH 1;" -
--PRESS A KEY-- "
4066 PAUSE 0: CLS
4070 PRINT AT 8,5;"KEYS:-"; AT
10,5;"o-left"; AT 11,5;"p-right"

```



```

; AT 12,5;"q-up"; AT 13,5;"a-dow
n"; AT 14,5;"o-jump (top section
only)"
4080 PRINT AT 21,7; FLASH 1;"PR
ESS A KEY TO START": PAUSE 0
4090 RETURN
9000 FOR i=0 TO 71: READ a: POKE
USR "a"+i,a: NEXT i
9010 DATA 251,251,251,0,191,191,
191,0
9020 DATA 28,34,17,30,48,96,208,
160
9030 DATA 255,255,36,66,129,255,
255,0
9040 DATA 129,129,129,129,255,12
9,129,129
9050 DATA 24,60,62,31,63,115,227
,198
9060 DATA 24,60,124,248,252,206,
199,99
9070 DATA 14,15,12,30,62,60,124,
206
9080 DATA 112,240,48,120,124,60,
62,115
9090 DATA 0,24,24,126,90,90,60,1
02
9100 RETURN

```

WHILST hunting in the jungle you are confronted by a huge snake. Above you is a large net which you can use to trap the snake. To reach the net you have to climb up six vines to cut it down. The vines are frail and can only be climbed once before they collapse. Watch out for the four large birds who can knock you off the vines.

Vine Climb was written for the 16K Spectrum by Andrew Clark, Queensland, Australia.

```

1 CLS
2 PRINT AT 11,0;"DO YOU WANT
INSTRUCTIONS?(Y/N) ": PAUSE 0:
IF INKEY$="y" THEN GO TO 700
0
3 RESTORE : GO SUB 3000
4 LET hi=0: LET h$="SPECTRUM"
5 LET z=0
6 LET k=0
9 LET q=31
10 RESTORE : GO SUB 3000
20 LET score=0
30 LET lives=3
100 CLS
105 GO SUB 2410
110 GO SUB 8005: GO SUB 8010: G
O SUB 8015
120 LET a$="A"
210 LET x=14: LET y=0
310 GO SUB 8000
320 PRINT AT 0,1; INVERSE 1;"L
IVES:";lives;" SCORE:";score;
" HI:";hi: PRINT #0; INVERSE
1: AT 0,0;"HI-SCORER:";h$
410 PRINT AT x,y; INK 0;" ": I
F z=1 THEN GO TO 590
500 LET x=x+( INKEY$="6" AND x
<14)-( INKEY$="7" AND x>1): LET
y=y+( INKEY$="8" AND y<30)-( I
NKEY$="5" AND y>0)
510 IF INKEY$="7" THEN BEEP
.01,-x+10
511 IF INKEY$="8" THEN LET a

```

```

$="A": BEEP .01,8
512 IF INKEY$="5" THEN LET a
$="F": BEEP .01,5
513 IF k=6 THEN GO TO 5000
514 IF x<2 THEN GO TO 6000
515 IF SCREEN$ (x,y)=" " AND x
<> 14 THEN IF SCREEN$ (x-1,y)
=" " THEN GO TO 4000
516 IF x<14 THEN LET a$="G"
517 IF x=14 AND a$="G" THEN LE
T a$="A"
520 PRINT AT 0,20; INVERSE 1;s
core; INVERSE 1;" HI:";hi
590 IF z=1 THEN LET x=x+1: BEE
P .02,x-5: IF x=14 THEN LET z=0
: GO TO 410
610:PRINT AT x,y; INK 1;a$
710 LET bird1=bird1+1: IF bird1
>31 THEN GO SUB 8000
810 LET bird2=bird2+1: IF bird2
>31 THEN GO SUB 8005
910 LET bird3=bird3+1: IF bird3
<0 THEN GO SUB 8010
1010 LET bird4=bird4+1: IF bird4
<0 THEN GO SUB 8015
1110 IF ATTR (a,bird1)=57 OR A
TTR (b,bird2)=57 OR ATTR (c,bir
d3)=57 OR ATTR (d,bird4)=57 THE
N GO TO 4000
1115 LET q=q-1: IF q<0 THEN LET
q=30: PRINT AT 14,0;" "
1120 PRINT AT 14,q;"E "
1130 IF q-1=y AND x=14 OR q=y AN

```

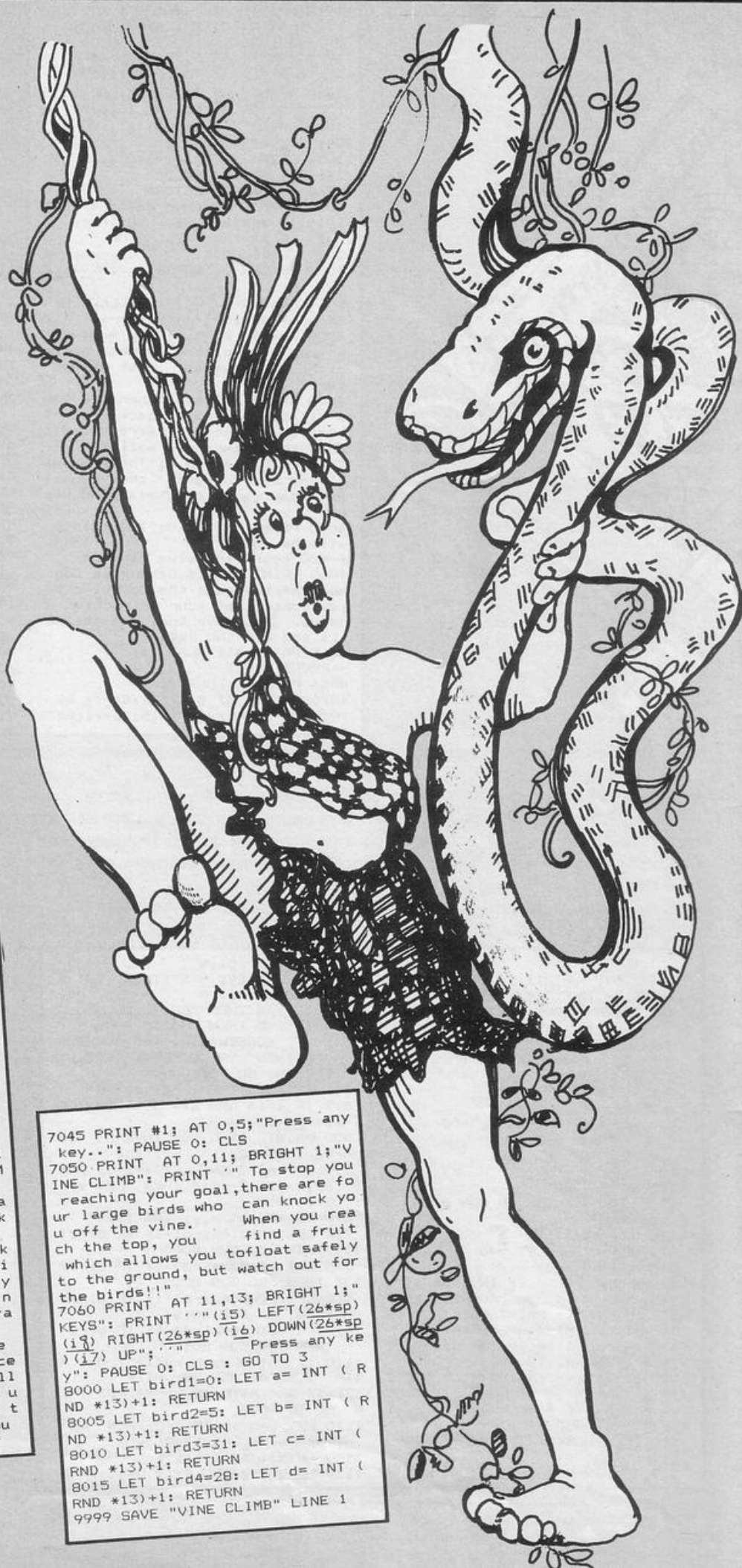
VINE CLIMB




```

D x=14 THEN GO TO 2210
1210 GO SUB 1410: GO SUB 1410
1310 GO TO 1610
1410 OVER 1: PRINT AT a,bird1;"
B"; AT b,bird2;"B"; AT c,bird3;"
C"; AT d,bird4;"C"
1510 OVER 0: RETURN
1710 GO TO 410
2210 FOR z=10 TO -10 STEP -1: PR
INT AT x,y; FLASH 1;a$: BEEP .1
,z: NEXT z: LET k=0: LET lives=1
ives-1
2220 IF lives <= 0 THEN PRINT
AT 11,12;"GAME OVER"; AT 0,7; IN
VERSE 1;lives: PRINT AT 14,0;"S
CORE IS ";score: IF score>hi THE
N LET hi=score: PRINT AT 15,0;
"YOU HAVE THE HIGH SCORE !!!
PLEASE ENTER YOUR NAME": INPUT
h$
2230 IF lives <= 0 THEN PRINT
AT 17,0;"HI SCORE IS ";hi; AT 18
,0;"BY ";h$: PRINT AT 19,6;"And
ther game ??": PAUSE 0: IF INKE
Y$="Y" THEN GO TO 5
2300 IF lives <= 0 AND INKEY$
<> "n" THEN GO TO 2230
2310 IF INKEY$="n" OR INKEY$
="N" THEN INK 0: PAPER 7: BRIGH
T 0: FLASH 0: INVERSE 0: BEEP 1,
0: CLS : STOP
2320 GO TO 100
2340 IF lives <= 0 THEN STOP
2410 FOR z=0 TO 32 STEP 6: FOR q
=1 TO 13: PRINT AT q,z;"D"; AT
1,z; OVER 1;"D": OVER 0: NEXT q:
NEXT z
2510 FOR z=15 TO 21: PRINT AT z
,0; INK 5;"(32*igB)": NEXT z
2610 PRINT AT 0,0; INK 5;"(32*i
q8)"
2710 RETURN
3010 FOR a=USR "a" TO USR "a"+
7*8-1: READ d: POKE a,d: NEXT a
3020 DATA 24,24,16,60,80,24,40,4
0,128,224,48,184,158,125,16,44,1
,7,12,29,121,190,8,52
3040 DATA 16,16,76,16,16,8,8,16,
0,248,40,200,17,34,66,60,24,24,8
,60,10,24,20,20,66,90,90,52,24,9
0,189,129
3999 RETURN
4000 FOR z=x TO 14: BEEP .05,-x+
10: PRINT AT z,y;"G"; AT z-1,y;
" ": NEXT z
4099 LET x=z-1: GO TO 2210
5000 FOR z=2 TO 14: PRINT AT z,
0;"(32*g6)": PRINT AT z-1,0;"
":
BEEP .01,z: NEXT z: LET score=s
core+300
5020 PRINT AT 9,11;"GOOD PLAY!!
""Now try and capture them aga
in!!""
": PAUSE 0: PAUSE 0:
5030 LET z=0: LET k=0: LET q=31:
GO TO 100
6000 BEEP .6,8: LET k=k+1: LET z
=1: LET score=score+100: GO TO 4
10
7010 CLS : PRINT AT 11,11; FLAS
H 1; BRIGHT 1; INK 0; PAPER 5;"V
INE CLIMB": PRINT AT 13,11;"any
key..."
7015 PAUSE 0: PAUSE 0: CLS : PRI
NT AT 0,11; BRIGHT 1;"VINE CLIM
B"
7020 PRINT AT 3,4;"Hunting in a
jungle, you are suddenly attack
ed by a huge snake!!"
7030 PRINT "Looking into the sk
y, you see a large vine net hi
gh above. To reach the net, y
ou must climb a series of six vin
es and cut down the net to tra
p the snake."
7040 PRINT "Unfortunately, the
vines are very frail and once
you pass over them they coll
apse. You may advance one step u
p a vine before it becomes t
oo high too reach and then you
cannot release the net."

```



```

7045 PRINT #1; AT 0,5;"Press any
key..": PAUSE 0: CLS
7050 PRINT AT 0,11; BRIGHT 1;"V
INE CLIMB": PRINT " To stop you
reaching your goal, there are fo
ur large birds who can knock yo
u off the vine. When you rea
ch the top, you find a fruit
which allows you to float safely
to the ground, but watch out for
the birds!!"
7060 PRINT AT 11,13; BRIGHT 1;"
KEYS": PRINT " (15) LEFT(26*sp)
(19) RIGHT(26*sp) (16) DOWN(26*sp)
(17) UP"; "
y": PAUSE 0: CLS : GO TO 3
8000 LET bird1=0: LET a= INT ( R
ND *13)+1: RETURN
8005 LET bird2=5: LET b= INT ( R
ND *13)+1: RETURN
8010 LET bird3=31: LET c= INT (
RND *13)+1: RETURN
8015 LET bird4=28: LET d= INT (
RND *13)+1: RETURN
9999 SAVE "VINE CLIMB" LINE 1

```



```

1 GO SUB 9000
5 GO SUB 7000
10 INK 7: PAPER 0: BORDER 0: C
LS
20 LET hs=0: LET h$="Zx Spectr
um"
30 LET s=0: LET hm=0
35 INPUT "Skill level (0-5).0 i
s easy ";skill: IF skill <> INT
skill OR skill<0 OR skill>5 THE
N GO TO 35
36 LET skill=skill/10
40 PRINT AT 0,0;"SCORE:";s; A
T 0,15;"HEARTS MISSED:";hm; AT 2
1,0;"HIGH SCORE:";hs;" By ";h$
50 PRINT AT 1,0: INK 1:" "
60 PRINT AT 4,0: INK 2:"AAAAA
AAAAAAAAAAAAAAAAAAAAA"
70 PRINT AT 20,0: INK 4:"FFFF
FFFFFFFFFFFFFFFFFFFFF"
80 LET x1=1: LET x= INT ( RND
*31): LET a= INT ( RND *31)
90 LET c=5: LET d=x
100 PRINT AT 3,x: INK 3;"C"; A
T 19,a: INK 6;"B"
105 IF INKEY$="x" AND a<31 TH
EN PRINT AT 19,a;" ": LET a=a+
1
110 IF INKEY$="z" AND a>0 THE
N PRINT AT 19,a;" ": LET a=a-1
120 IF ATTR (19,a)=5 THEN GO
TO 250
130 PRINT AT 19,a: INK 6;"B"
140 PRINT AT 3,x;" ": LET x=x+
x1: IF x=31 OR x=0 THEN LET x1=
x1*-1
150 PRINT AT 3,x: INK 3;"C"
160 PRINT AT c,d;" ": LET c=c+
1: IF c >= 18 AND d <> a THEN P
RINT AT c,d;" ": PRINT AT 19,d
: INK 5;"E": BEEP .1,-10: LET hm
=hm+1: PRINT AT 0,29;hm: LET c=
5: LET d=x
165 IF hm=10 THEN GO TO 400
167 LET d=d+( RND >skill AND d<
31)-( RND >skill AND d>0)
170 PRINT AT c,d: INK 2;"D": B
EEP .005,30-c
180 IF a=d AND c=18 THEN LET s
=s+10: PRINT AT 0,6;s: LET c=5:
LET d=x: BEEP .006,10: BEEP .00
6,15: BEEP .006,20: PRINT AT 18
,a;" "
200 GO TO 100
250 FOR n=20 TO 0 STEP -1: PRIN
T AT 19,a: INK RND *7;"B": BEE
P .005,n: BEEP .005,n-10: PRINT
AT 19,a: INK RND *7;"C": BEEP
.005,n: BEEP .005,n-10: NEXT n
260 PRINT AT 9,10:"GAME OVER":

```

```

IF s <= hs THEN GO TO 300
265 INPUT "WELL DONE, YOU HAVE
GOT THE HIGH SCORE, PLEASE EN
TER YOUR NAME (15 LETTERS MAX)
"; LINE h$: IF h$="" OR LEN h$>
15 THEN GO TO 265
270 LET hs=s
300 PRINT AT 15,2;"PRESS ANY K
EY TO PLAY AGAIN"
310 IF INKEY$="" THEN GO TO
320
320 IF INKEY$ <> "" THEN GO
TO 320
330 CLS : GO TO 30
400 FOR n=5 TO 19: PRINT AT n,
0: INK 5;"EEEEEEEEEEEEEEEEEE
EEEEEEEEEE": BEEP .01,10-n: NEXT
n
410 GO TO 260
7000 INK 6: PAPER 0: BORDER 0: C
LS
7010 PRINT TAB 10;"HEARTS"
7020 PRINT "The object of the g
ame is to"
7030 PRINT "catch the hearts (";
INK 2;"D"; INK 6;"") as they"
7040 PRINT "fall from above. If
you miss a"
7050 PRINT "heart it will break.
n heart or"
7070 PRINT "if you touch a broke
s the game"
7080 PRINT "is over."
7082 PRINT "You control the man
at the"
7084 PRINT "bottom of the screen
. Press z to"
7087 PRINT "make him move left a
nd x to make"
7088 PRINT "him move right."
7090 PRINT "INK 4;"Press any ke
y to play"
7100 IF INKEY$="" THEN GO TO
7110
7110 IF INKEY$ <> "" THEN GO
TO 7110
7120 RETURN
9000 RESTORE 9000: FOR n=USR "a
a: NEXT n: READ a: POKE n,
239,0
9010 DATA 254,254,254,0,239,239,
9020 DATA 28,28,73,62,8,8,20,34
9030 DATA 28,28,8,62,73,8,20,34
9040 DATA 0,68,238,254,124,124,5
6,16
9050 DATA 0,68,238,246,100,92,40
,16
9060 DATA 0,0,164,82,85,189,255,
255
9900 SAVE "HEARTS" LINE 1

```

Broken Hearts

Catch the hearts as they fall from above. If you miss a heart it will fall to the ground and break. Once a heart is broken you cannot touch it. There are six levels of play. Use keys Z and X to move left and right.

Broken Hearts was written for the 16K Spectrum by Neil Cooper, aged 14, of Saltburn, Cleveland.

DEADLY DYNAMITE

Defuse the bomb by moving over it before the time runs out. The screen is filled with squares and the bomb can appear in any of these squares. After you have walked over a square it turns black and cannot be walked over again until the level has been completed. Avoid the skulls, for they will cause instant death upon contact.

Deadly Dynamite was written for the 16K Spectrum by Christopher Roper, aged 10, of Blackwood, Gwent.

```

1 LET hi=1000: LET time=30: L
ET b1= INT ( RND *8+2)*2-1: LET
b2= INT ( RND *15)*2: POKE USR
"a"+0, BIN 00011111
2 POKE USR "a"+1, BIN 111111
11 3 POKE USR "a"+2, BIN 000100
00 4 POKE USR "a"+3, BIN 001101
10 5 POKE USR "a"+4, BIN 001100
10 6 POKE USR "a"+5, BIN 000100
00 7 POKE USR "a"+6, BIN 000111
00 8 POKE USR "a"+7, BIN 000100
00 9 POKE USR "b"+0, BIN 111110
00 10 POKE USR "b"+1, BIN 111110
00 11 POKE USR "b"+2, BIN 000010
00 12 POKE USR "b"+3, BIN 000010
00 13 POKE USR "b"+4, BIN 000010
00 14 POKE USR "b"+5, BIN 000010
00 15 POKE USR "b"+6, BIN 000010
00 16 POKE USR "b"+7, BIN 000010
00 17 POKE USR "c"+0, BIN 110010
00

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18 POKE USR "c"+1, BIN 000010
00 19 POKE USR "c"+2, BIN 111110
00 20 POKE USR "c"+3, BIN 000110
00 21 POKE USR "c"+4, BIN 011110
00 22 POKE USR "c"+5, BIN 011110
00 23 POKE USR "c"+6, BIN 000000
11 24 POKE USR "d"+0, BIN 000111
00 25 POKE USR "d"+1, BIN 000110
11 26 POKE USR "d"+2, BIN 000111
00 27 POKE USR "d"+3, BIN 000110
00 28 POKE USR "d"+4, BIN 011110
00 29 POKE USR "d"+5, BIN 011110
00 30 POKE USR "d"+6, BIN 000000
11 31 POKE USR "e"+0, BIN 000001
11 32 POKE USR "e"+1, BIN 001111
11 33 POKE USR "e"+2, BIN 011000
11 34 POKE USR "e"+3, BIN 011000
10 35 POKE USR "e"+4, BIN 011101

```




```

36 POKE USR "e"+5, BIN 001111
01
37 POKE USR "e"+6, BIN 001111
11
38 POKE USR "e"+7, BIN 001111
11
39 POKE USR "f"+0, BIN 111000
00
40 POKE USR "f"+1, BIN 111111
00
41 POKE USR "f"+2, BIN 110001
10
42 POKE USR "f"+3, BIN 110001
10
43 POKE USR "f"+4, BIN 011011
10
44 POKE USR "f"+5, BIN 101111
00
45 POKE USR "f"+6, BIN 111111
00
46 POKE USR "f"+7, BIN 111111
00
47 POKE USR "g"+0, BIN 000100
00
48 POKE USR "g"+1, BIN 000100
00
49 POKE USR "g"+2, BIN 000111
11
50 POKE USR "g"+3, BIN 010000
00
51 POKE USR "g"+4, BIN 001111
11
52 POKE USR "g"+5, BIN 010000
00
53 POKE USR "g"+6, BIN 000000
00
54 POKE USR "g"+7, BIN 000000
00
55 POKE USR "h"+0, BIN 000010
00
56 POKE USR "h"+1, BIN 000010
00
57 POKE USR "h"+2, BIN 111110
00
58 POKE USR "h"+3, BIN 000000
10
59 POKE USR "h"+4, BIN 111111
00
60 POKE USR "h"+5, BIN 000000
10
61 POKE USR "h"+6, BIN 000000
00
62 POKE USR "i"+0, BIN 000000
01
63 POKE USR "i"+1, BIN 000000
01
67 POKE USR "i"+2, BIN 000000
01

```

```

68 POKE USR "i"+3, BIN 000000
01
69 POKE USR "i"+4, BIN 000000
01
70 POKE USR "i"+5, BIN 000000
01
71 POKE USR "i"+6, BIN 000000
01
72 POKE USR "i"+7, BIN 111111
11
73 POKE USR "j"+0, BIN 000000
01
74 POKE USR "j"+1, BIN 000000
01
75 POKE USR "j"+2, BIN 000000
01
76 POKE USR "j"+3, BIN 000000
01
77 POKE USR "j"+4, BIN 000000
01
78 POKE USR "j"+5, BIN 000000
01
79 POKE USR "j"+6, BIN 000000
01
80 POKE USR "j"+7, BIN 000000
01
90 BORDER 0: PAPER 0: INK 7: B
100 POKE USR "k"+0, BIN 010101
01
101 POKE USR "k"+1, BIN 001000
10
102 POKE USR "k"+2, BIN 011101
11
103 POKE USR "k"+3, BIN 011101
11
104 POKE USR "k"+4, BIN 011101
11
105 POKE USR "k"+5, BIN 011101
11
106 POKE USR "k"+6, BIN 011101
11
107 POKE USR "k"+7, BIN 011101
11

```

```

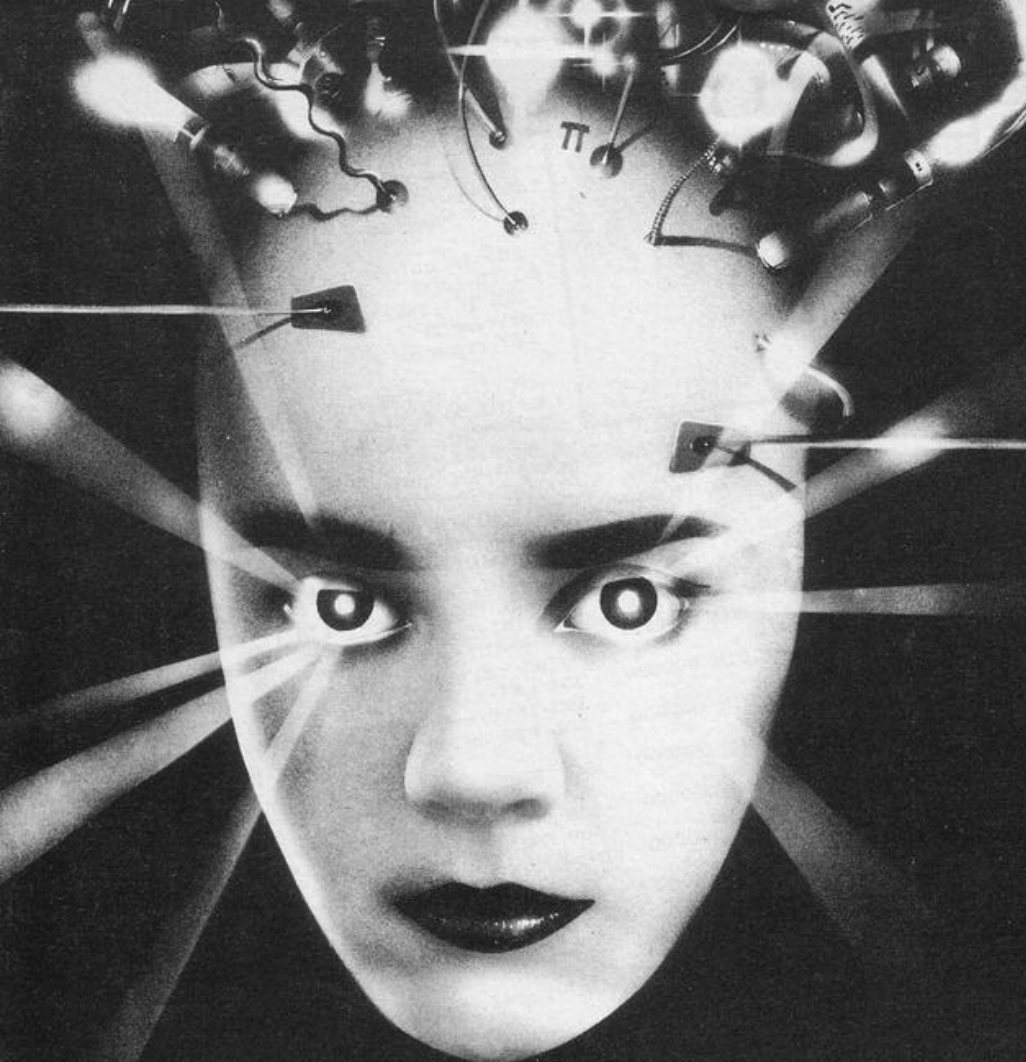
LET col=col+2: LET score=score
+5
270 IF INKEY$="m" AND ATTR (
col,row+2) <> 71 AND row<31 THEN
LET row=row+2: LET score=score
+5
280 IF col=b1 AND row=b2 THEN
GO TO 6000
285 IF INKEY$="n" AND ATTR (
col,row-2) <> 71 AND row>1 THEN
LET row=row-2: LET score=score+
5
290 IF ATTR (col,row)=70 THEN
GO TO 5000
300 PRINT AT b1,b2; INK 3;time
; AT b1+1,b2; INK 2;"KK": IF tim
e<10 THEN PRINT AT b1,b2+1;" "
301 PRINT AT 0,0;"Score ";scor
e
302 PRINT AT 0,11;"Level ";lev
el; AT 0,22;"LIVES"; FOR u=1 TO
lives: PRINT INK 6;"A";: NEXT
u: PRINT " "
303 PRINT AT col,row; INK 6;"A
B"; AT col+1,row; INK 5;"DC"
304 LET time=time-1
305 IF time<1 THEN GO TO 5000
306 FOR a=20 TO 20-level: NEXT
a
307 BEEP .001,3: BEEP .001,38
308 BEEP .001,3
309 PRINT AT col,row;" "; AT
col+1,row;" "
400 GO TO 250
5000 BEEP 1,-20: BEEP 1,1: BEEP
1,-10: BEEP 2,2: BEEP .001,2: BE
EP .001,38
5001 PRINT AT col,row; INK 6;"E
F"; AT col+1,row;"GH": PAUSE 700
5002 LET lives=lives-1: IF lives
<1 THEN GO TO 9000
5003 LET b1= INT ( RND *9)*2+1:
LET b2= INT ( RND *15)*2+2: LET
time=30: GO TO 207
6000 BEEP .1,-5: BEEP .1,0: BEEP
.1,5: BEEP .1,10
6001 PRINT AT col,row;" "; AT
col+1,row;" "
6002 LET score=score+time*10: LE
T bombs=bombs-1: IF bombs<1 THEN
GO TO 6700
6003 LET b1= INT ( RND *9)*2+1:
LET b2= INT ( RND *15)*2+2: LET
time=30
6004 GO TO 250
6700 FOR a=0 TO 21 STEP 2: PRINT
AT a,0; INK 6;"ABABABABABABABA
BABABABABABABABABABABABABAB
a=1 TO 20 STEP 2: PRINT AT a,0;
INK 5;"DCDCDCDCDCDCDCDCDCDCDC
DCDCDCDCDCDCDCDCDCDCDCDCDCDC
0: NEXT a: FOR g=0 TO 10
INT AT 15,5;"LEVEL ";level;" CO
Mplete !": LET level=level+1: LE
T b1= INT ( RND *9)*2+1: LET b2=
INT ( RND *15)*2+2: BEEP 1,1: B
EEP 1,2: BEEP 1,-1: BEEP 1,-2:
6810 LET score=score+600
6920 GO TO 207
9000 FOR a=0 TO 7: FOR b=0 TO 7:
PRINT AT col,row; INK b;"AB";
: NEXT a
9001 PRINT AT col,row; INK 6;"E
F"; AT col+1,row;"GH": PAUSE 100
0: FOR a=0 TO 20 STEP 2: PRINT
AT a,0; INK 6;"EFEFEFEFEFEFEFEF
EFEFEFEFEFEFEFEFEFEFEFEFEFEFE
FGHGHGHGHGHGHGHGHGHGHGHGHGHG
HGHGHGHGHGHGHGHGHGHGHGHGHGHG
100: IF score>hi THEN LET hi=s
core: GO TO 2
9020 GO TO 2

```

```

200 PRINT AT 6,7; INK 2;"KKKKK
KDDANGER DYNAMITE !K"; AT 7,7; INK 2;"
KKKKKKKKKKKKKKKKKKKKKKKKKKKK
201 PRINT AT 10,0;"A UP Z DO
WN N LEFT M RIGHT"
202 PRINT AT 12,0; INK 7;"AB
YOU "; AT 13,0; INK 5;"DC"
203 PRINT AT 15,0; INK 6;"EF
DEADLY DAVID"; AT 16,0;"GH"
204 PRINT AT 19,0;"Press any k
ey to play.": PRINT AT 17,0;"HI
SCORE=";hi;".BEAT THAT!"
205 PAUSE 0: CLS
206 LET level=1: LET score=0: L
ET lives=3
207 LET bombs=3
208 FOR a=1 TO 20 STEP 2: PRINT
AT a,0; INK 1; PAPER 6; INVERS
E 1;" J J J J J J J J J J J J J
J J J"; AT a+1,0;" I I I I I I I
I I I I I I I I I I I I I I I I
210 LET col=9: LET row=10
220 FOR c=-6 TO level
230 LET a= INT ( RND *9+1): LET
b= INT ( RND *15): PRINT AT a*
2+1,b*2; INK 6;"EF"; AT a*2+2,b*
2;"GH": NEXT c
240 PRINT AT col,row; INK 1; I
, row;" I "
250 IF INKEY$="a" AND ATTR (
col-2,row) <> 71 AND col>1 THEN
LET col=col-2: LET score=score+
5
260 IF INKEY$="z" AND ATTR (
col+2,row) <> 71 AND col<20 THEN

```

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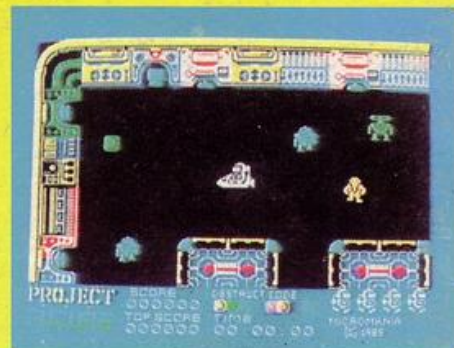
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