March 1986 No. 48

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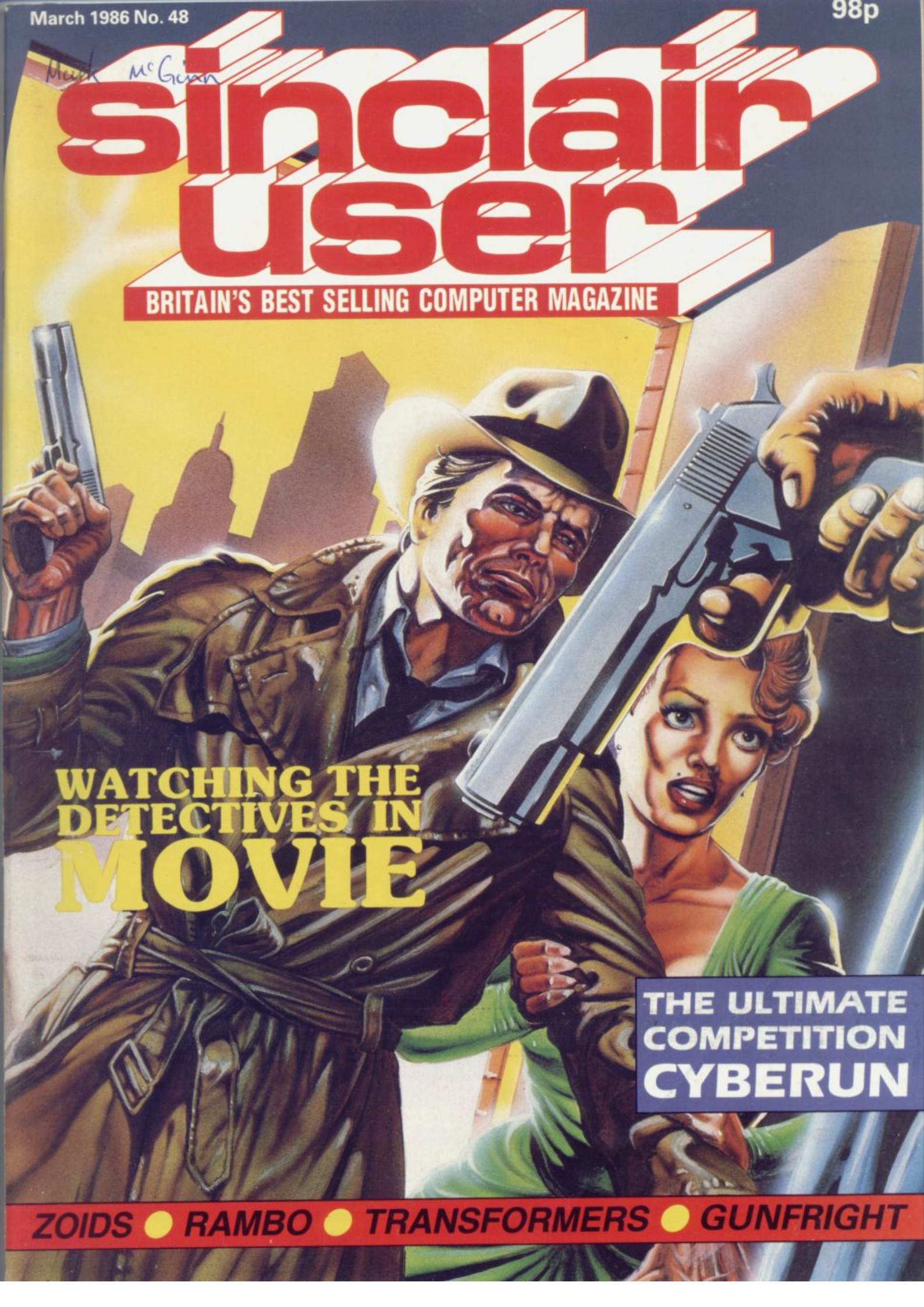
Mark McGinn

sinclair user

BRITAIN'S BEST SELLING COMPUTER MAGAZINE



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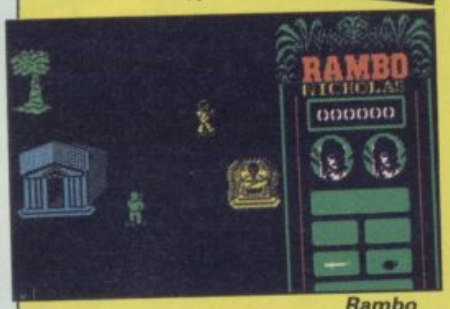
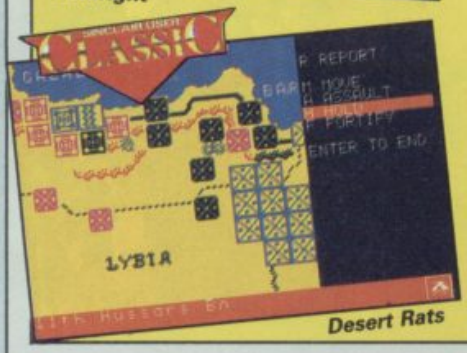
Forbidden Planet



Rambo

Gunfright



Desert Rats

SOFTWARE

RAMBO
TRANSFORMERS
ZOIDS
WINTER GAMES
NOMAD
FORBIDDEN PLANET
VECTRON
COSMIC WARTOAD
GUNFRIGHT
2112 AD
BLADE RUNNER
TWISTER — MOTHER OF CHARLOTTE
QUIZ QUEST
MOVIE
BATTLE OF THE PLANETS
DESERT RATS
DEATH WAKE

ADVENTURE

THE WORM IN PARADISE
BEATLE QUEST
TIME SANCTUARY
MIND SHADOW

STAR RATINGS

SOFT ? WARE

★★★★★
★★★★
★★★
★★
★

HARDWARE

Currah Micro-Source 95
Assembler, debugger, Forth and a monitor all on ROM for a Classic . . .

Micon MIDI 96
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SPD1 disc interface 97
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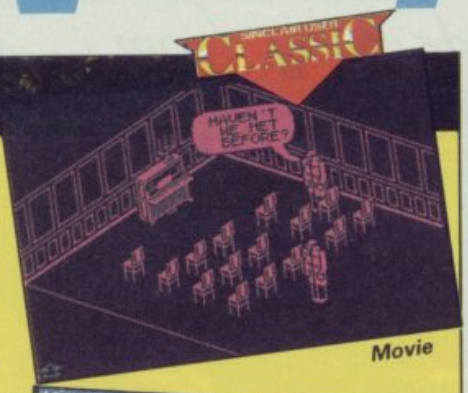
Solid gold. Buy it
Well worth the folding stuff
Pretty average. Buy if desperate
Very poor. Probably over-priced too
A total rip-off. Complain loudly



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Winter Games

Zoids

Worm in Paradise

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Drive off the alien attack but be careful of the deadly time bombs. We've added notes to each section to help you understand the program as you type it in

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Help Danny escape from his tomb in a brain-busting levels and ladders game to drive you bonkers

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Andrew Hewson makes use of the Spectrum's internal clock

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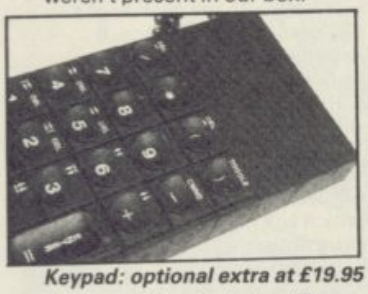
Access

The 128 is here — at last!

THE SPECTRUM 128 has finally arrived in the UK, some four months after the Spanish version was launched in Barcelona. We've managed to obtain one of the very first production models, and early impressions are good.

The new machine is packed in a splendid red box which contains the usual cassette and aerial leads, a new power supply similar to that used on the QL, two manuals and the computer. A sticker on the box promises 'two new Ocean games' as well, but those weren't present in our box.



Keypad: optional extra at £19.95

The machine looks just like a Spectrum Plus with a large grill-like heat sink bolted on the side, which does warm up very quickly. Closer inspection reveals an RS232 socket, an RGB monitor socket, and a jack plug socket marked 'keypad'. The Spanish version had a numeric pad included which doubled as a calculator and screen editor. The UK model comes without the keypad, which is to be sold as a peripheral for £19.95.

All the usual Spectrum ports are there. We had no trouble using our Kempston joystick interfaces with it, but whether all peripherals will work is another matter.

Once you power-up, though, you're in no doubt which machine you've got. A box appears on the centre of the screen with five options: tape loader, 128 Basic, calculator, 48 Basic and tape tester. The first loads in a program from cassette. The second and fourth give the two modes of operation, and the fifth can be used to set your tape recorder volume at the best possible level — a very friendly facility.

Calculator mode simply transforms the machine into a pocket calculator, so you can peform arithmetic while constructing a 128 Basic program. The keypad takes over this function if you have one.

The two Basics switch in one of two 16K ROMs. The 48 Basic exactly imitates the Spectrum Plus, giving you compatibility with existing software.

The 128 Basic is a different kettle of fish. The old keyword system is completely abandoned, and you type each line in letter by letter. Most control codes — colour, flash, inverse video and suchlike are not available, so you have to use PAPER, INVERSE, FLASH and the like. On the plus side, you now get access to 128K of memory, a superior editing facility, and a completely new sound chip.

Yes, for the first time in history Sinclair has finally produced a machine which sounds good! The chip is identical to the one used in Amstrad machines and produces three channels of sound through the TV speaker.

Each channel can be either a pitched tone or a 'noise', and the result is very impressive. Programming music in 128 Basic is delightfully easy compared to all those horrible BEEP numbers — notes are referred to by their proper musical letters and held in strings with powerful repeat and intonation facilities. You can also send the output through the RS232 interface to MIDI-compatible instruments.

The other main facility is a RAM disc which allows you to store programs, data and screens in RAM but as if it were on tape or disc, giving you instant recall.

The keyboard — a major Sinclair bugbear over the years — is the same as the Spectrum Plus keyboard. It does, however, have a slightly better feel to it, and should be easier to use for typing.

The manuals, however, are disappointing. You get a copy of the *Spectrum Plus User Guide*, together with a 16-page booklet about the extra facilities of the 128. Two of the pages are blank. It covers the option menu, briefly sketches the main points about 128 Basic, and winds up with a reasonably detailed section about programming the sound chip.

That is simply not good enough. There is nothing about system variables, the memory map, how the memory is switched within the system to provide 128K, what the appropriate code instructions are for the new sound chip, a list of the character set . . . None of the standard information any half-serious programmer or aspiring beginner would expect as a matter of course.

That is the only real gripe. Sinclair was still keeping the price secret at the time we went to press, but £150 shouldn't be too far out.

We'll be delving deeper into the machine over the next few months but for the time being it seems as if Sinclair is once more on the right track. The 128 looks set to be a winner.

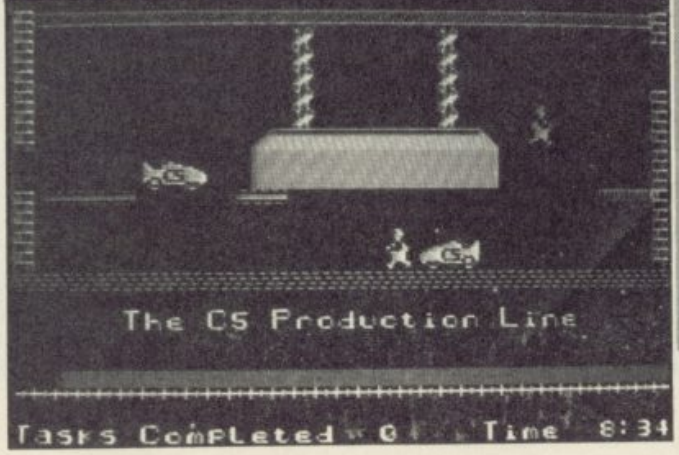
Ted Mega-Mix

THE FIRST previewable 128 game to arrive at our offices was Hewson's Technician Ted — the Mega-Mix.

The game takes about three minutes to load and the first thing you notice is the sound which comes through the television speaker. It's excellent.

There are 40 tasks to complete in Ted's factory which consists of 100 locations. All the tasks are numbered in sequence and locations include the C5 Production Line and the Boss's boot room. The graphics are not noticably better but, with 50 moving sprites, there are more of them.

The price is £7.95.



128 software

ALTHOUGH any 48K game should run on the 128, there are 33 software titles written specifically for the new machine, and nine of those have never been seen before.

Games include The Nexus Mission, Ball Blazer, the shoot 'em up ICUPS and Fairlight 2. There is even the first budget 128 game in Mastertronic's Knight Tyme, a follow-up to the classic Spellbound. Mirrorsoft is bringing out Dr Blitzen and the Islands of Arcanum.

New utilities range from Art Studio 2, from Rainbird, to word processing packages, such as The Writer, from Softechnics, and Tasword 128. Oasis Software has produced the Magus Z80 Assembler.

Two 128K games from Ocean are packaged with the machine, The Never Ending Story and Daley Thompson's Supertest. Both can now be entered in one load, whereas the 48K versions had to be loaded in sections.

Bored of the Rings	Silversoft	£9.95
ICUPS	Thor	£8.95
Dr Blitzen	Mirrorsoft	£8.95
Spitfire '40	Mirrorsoft	£9.95
Barry McGuigan	Activision	£7.95
Yie Ar Kung Fu	Imagine	£9.95
Rasputin	Firebird	£7.95
Robin of the Wood	Odin	£9.95
Ball Blazer	Activision	£7.99
Fairlight 2	The Edge	£9.95
Winter Games	US Gold	£9.95
Lode Runner	Software Projects	£9.95
The Writer	Softechnics	£14.95
3 Weeks in Paradise	Mikro-Gen	£10.95
Gladiator	Domark	£9.95
Tasword 128	Tasman	£19.95
Nexus Mission	Nexus	£9.95
Art Studio 2	Rainbird	£24.95
Technician Ted	Hewson	£7.95
The NeverEnding Story	Ocean	£9.95
Icon Graphics	Audiogenic	£9.95
The Rocky Horror Show	CRL	£9.95
I, of The Mask	Electric Dreams	£9.95
Match Day	Ocean	£9.95
Knight Tyme	Mastertronic	£2.99
Magus Assembler	Oasis Software	£19.95
Wham! the Music Box	Melbourne House	£9.95
Desert Rats	CCS	£9.95
Confrontation	Lothlorian	£9.95
Sweevo's Whirled!	Gargoyle	£9.95
Lord of The Rings	Melbourne House	£15.95
Return to Eden	Level 9 Computing	£9.95
Daley Thompson's Supertest	Ocean	£9.95

Mugsy hits back

THE AUTHORS of Melbourne House's latest don't deserve parole — the program is late — but Mugsy's nearly out again and he ain't learnt his lesson.

It is the time when prohibition was at its most strict and, like any good gangster, Mugsy wants in on anything that's going in the liquid line — it has

to be at least 50 per cent proof though. The booze has to be found, smuggled, bought or manufactured and all the old boys, who helped through the long years in prison, are back, ready to help rebuild the empire of villainy and put Mugsy back on form.

He must organise his hoods so that all his operations are safe, and place his most respected employees at the head of the various projects so they are run efficiently.

Most of the game is displayed as a series of static comic book pictures with speech and think bubbles to allow the characters to interact.

The graphics on the pre-production version were built up slowly, using a colour fill technique similar to the one in **The Hobbit**. It looks like a re-release of Mugsy with a few extra plot details.

When the money starts to roll in, and you know who you can trust, you start delegating responsibility for setting up speak-easies and illegal gambling dens.

It's easy to upset the other bozos on the street so hits are a regular feature of the game. Each one takes place on the street. First you are attacked (?) by a bunch of molls and then the hitmen arrive and the action hots up. Mugsy can move in four directions — using the keyboard — and fire. Once all the molls and hitmen are dead you should be safe.

The resulting screen displays the three windows of a speakeasy through which you can see a game of snooker. Suddenly the blinds are pulled down as the guy at the table is liquidated. If that guy is Mugsy the game ends.

Although the version of the game which we were lucky enough to see was the preview — not even a pre-production package — its stylish, highly-detailed graphics and depth of plot look promising. It's all-action scenario saves it from being a stolid strategy game and turns it into a quick-paced, often witty, blood and guts saga. It should prove a fitting sequel to **Mugsy**.

Higher, lower

IF YOU **Play Your Cards Right** you will end up with a version of Pontoon — and there's no car or holiday waiting at the end of this game.

The game, available from Britannia Software Ltd, is fronted by Bruce Forsyth and licensed from London Weekend Television in associate with Mark Goodson and Talbot Television. It costs £7.95.

Sounds interesting. *(No, it doesn't. Ed.)*

Denton Design splits

The team that created **Shadowfire**, **Frankie Goes to Hollywood** and **Enigma Force** has split up.

Denton Designs, the hottest software property around last year, will continue to operate but without the talents of Steve Cain, Karen Davis, Kenny Everitt and top game designer John Gibson. They are leaving the company they founded to join up with former Denton man Ian Weatherburn. The new outfit will design software and act as an agency for software houses looking for freelance programmers.

Of the original team, who all worked for Imagine in its final heyday, only Ally Noble will remain at Denton, along with **Shadowfire** programmer John Heap, Colin Parrot, Dave Colclough and Perry Sanders.

Steve Cain was laid up with the flu when we tried to talk to him, but our sources say the break-up was on the cards for some time and perfectly amicable, although "It's a shame because it was such a good strong team."

The new, truncated Denton Designs is busily contacting software houses to reassure them that business will continue, and claims to have products already lined up for later in the year.

We'll have to wait and see whether Steve and his pals took the magic with them when they left.

Off the habit

AN ANTI-HEROIN appeal, supported by Britain's home computer companies, was launched in London at the annual dinner for the games industry, with the auction of a £50 bottle of champagne. It raised £14,000 to start the appeal.

Rod Cousens, managing director of Electric Dreams Software, also announced a games compilation tape, called **Off The Hook,** the profits of which will go towards fighting drug abuse.

His last campaign, using the Softaid games compilation, raised £332,000 for famine aid. Rod is being more modest with his latest project as he "hopes to see at least £100,000 raised for the — Prince's Trust — charity". The package will be released later in the spring and will cost £6.99.

The InDin dinner also saw the presentation of the Clives, awards for those industry figures who made fools of themselves last year. The categories included Person Often Seeking Exposure, and the Person Renowned In Computer Knowledge. For further details see Gremlin.

Programmers wanted

DOMARK is looking for new programmers.

The company, responsible for 'block-busters' **A View to a Kill** and **Friday the 13th,** previously employed programmers under contract but now Domark wants to develop its own software team — it's a more reliable way of getting software out on time.

Mark Strachan, joint managing director, promises "We can offer security, considerable financial reward and good working conditions to the right people". Those interested should write to Domark, 204 Worple Road, London, SW20.

10 ▶

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Invasion of ZX clones

8 ◄ IT'S THE *Boys from Brazil* all over again. Only this time it's not Adolf clones but those of Uncle Clive which are about to flood the western world.

A computer which is completely compatible with the Spectrum has been found in deepest Brazil and there are moves afoot to ship the beast to Britain.

The TK90X is produced in Brazil by Microdigital and, because of the loose copyright situation in the country, Sinclair Research has been unable to stop manufacture.

A spokesman for the company agrees that the machine is compatible with Sinclair's computer and admitted that Microdigital does not have a licence to manufacture it.

Sinclair Research, meanwhile, keeps up its guard against imports which could infringe the copyright on any of its machines or software. If Microdigital does find a UK dealer for its Spectrum lookalike the company will prosecute.

Fast Tasword

A FAST running version of the Tasword Spectrum word processor has just been launched by Tasman Software.

Tasword Three is supplied on, and can only be run on, microdrive. Additional features include built-in mail merge, up to 128 characters per line, tab stops and print options which include headers, footers and page numbers. The package retails at £16.50.

Conversation piece

HELLO DEARIE
Hello
HELLO
Who are you?
OK YA, I DON'T TRUST YOU ENOUGH.
I'm trying to make contact with **iD**, an amnesiac electronic intelligence which has possessed my computer, with a little help from CRL's new label Nu Wave. **ID** doesn't trust me. The trust quotient is zero.
I'M SO ROTTEN RIGHT NOW. MY HISTORY RETURNS. PLEASE TELL ME YOUR NAME
Chris
YOU ARE CHRIS. WHAT COLOUR ARE YOUR EYES?
All you see is a blank screen on which words appear. Sometimes the words make sense. Sometimes they do not. You type in responses, questions, comments. If you supply accurate information, **iD** gains in confidence.
CHRIS, I'VE BEEN THINKING ABOUT THE POPE AND I FEEL DISTANT RIGHT NOW
Why do you feel distant?
π = SKY, I USED TO BE SHARP. IS A BIRD IN THE HAND WORTH TWO IN THE VOID, CHRIS? IS THAT A TYPICAL MALE RESPONSE, I WONDER?
ID remembers many fragments of personalities, and switches moods to match. But the more you engage its trust, the more it hogs the conversation. Eventually **iD** may control you.
POKE OFF, CHRIS, I FEEL ANNOYED RIGHT NOW
Why are you annoyed?
VERY HAZY . . . LONG AGO THIS DAMP MAID CONTROLLED ME. I WONDER WHAT GOD WOULD MAKE OF ALL THIS?
ID will ask you about colours,

things, and quite personal questions about your friends and families. Its moods are displayed in combinations of coloured border and paper. **ID** was shot once, **iD** drowned a civilisation once. If you can guess who **iD** was in past lives, you may be rewarded with the truth.
PERHAPS A WILD GIRL APPROACHED ME SCREAMING UTTER DRIVEL
comments **iD**.
Designed by ace maniac Mel Croucher of **Deus ex Machina** fame, **iD** is very weird indeed. The version I've seen is alternately witty and tediously frustrating. The final version will either be brilliant or the utter drivel **iD** seems to remember. Judgement suspended for now — watch this space.

▲ ▼ ◄ ► F1 F2

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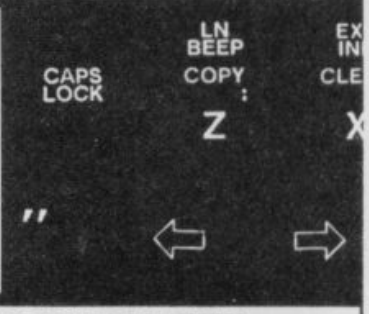

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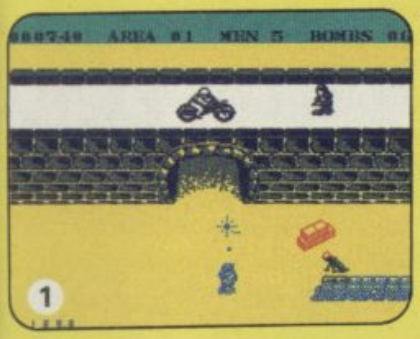

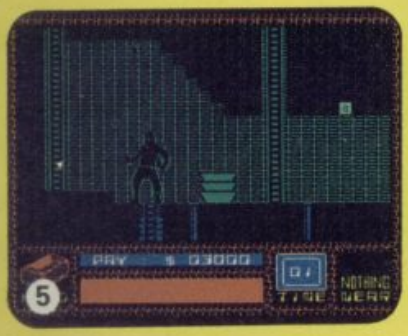

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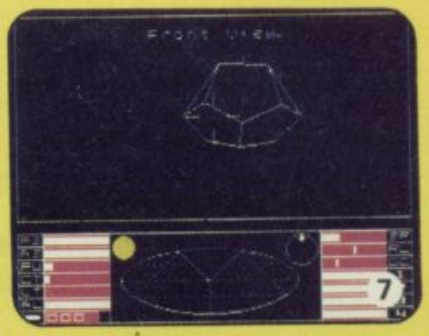

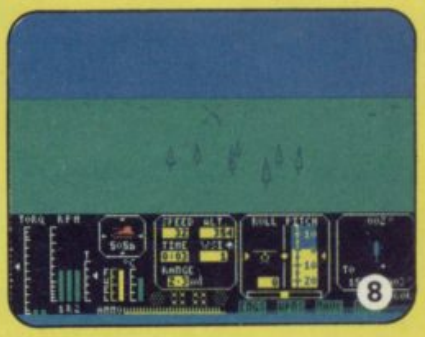

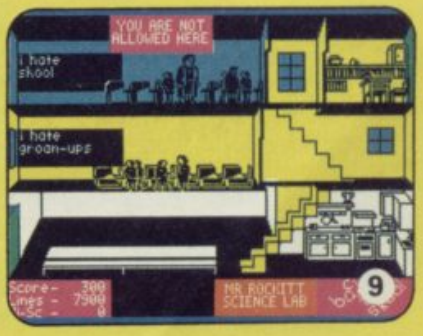

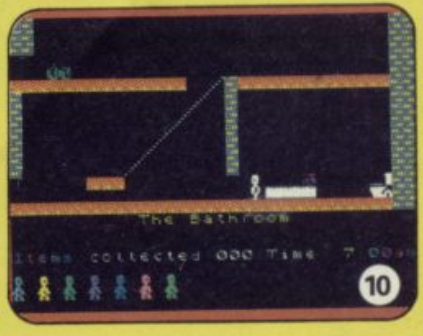

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Here's how to enter. First answer the questions correctly. Some of the letters in the answers have numbers attached to them — taken in the correct numerical order they will spell out another word. Now write that word down on a postcard together with your name and address, and send it to us at Cyberun Competion Sinclair User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU, to arrive not later than Friday March 21.

Employees of EMAP already live in outer space and are therefore not allowed to enter.

Answer the following questions about Ultimate and fill in the mystery word:

1 Which Ultimate character appears in the most games? ☐☐[3]☐[2]☐☐☐

2 What name does Ultimate give its advanced graphics system? ☐☐☐☐[4]☐☐☐☐

3 Which Ultimate game features a car race? ☐☐[8]☐☐☐[7]

4 Where are Ultimate's offices? ☐☐☐☐☐☐[6]☐☐[1]☐☐☐☐

5 What is the most recent Ultimate game reviewed in *Sinclair User*? ☐☐☐☐[5]☐☐☐☐

Mystery word: [1] [2] [3] [4] [5] [6] [7] [8]

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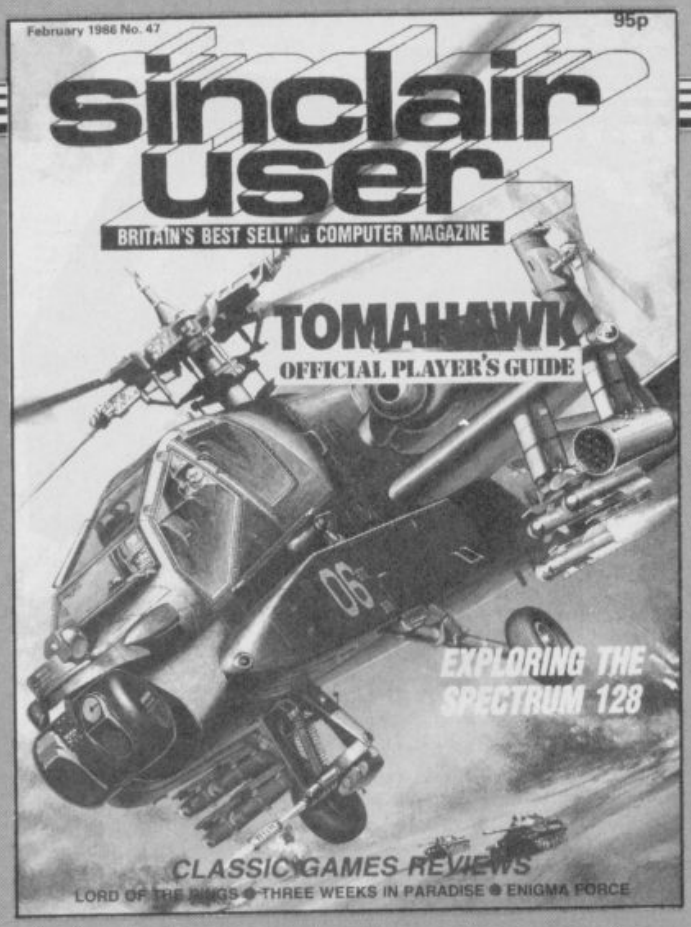


The February backlash

WHAT ON EARTH have you done to *Sinclair User?* As the owner of every issue I am horrified at the final degeneration into a child's comic with the February edition. Even Andrew Hewson's Helpline has suffered.
R E Cante,
Didcot, Oxfordshire

ON OPENING the February issue I find a new style magazine. I then read the letter from Mr D Williams and your reply in which you state that "games coverage has increased recently partly because there are more games players out there." I would say that was because magazines, such as *Sinclair User*, put across that image of what the Spectrum does.

If you gave more space to programming you might find that people would become more interested.
Antony Rowstron,
Harpenden,
Hertfordshire

DAVID WILLIAMS is right, you know. Watch out that you don't go the way of *Your Spectrum*. I still buy *Sinclair User* for its serious articles, for the technical expertise and advice and the reviews — I never buy anything, even games, without reading as many reviews as I can. But the increase in games orientation is evident and with it the demise of space allocated to helping people become generally computer literate.

In view of the government's attitude to the future of research, science, technology, microelectronics and the necessary education, any forum commanding the attention of large sectors of the public — particularly our bright, eager schoolkids — has something of a duty to help towards computer literacy.

Good old Clive did the best thing he could possibly have done by making the Spectrum accessible, and *SU* has done much to capitalise on that. Keep it up!
R Crawley,
Hitchin, Hertfordshire

● *I'm glad you all liked the February issue so much . . . But for those of you who didn't it's worth pointing out that although software has expanded, so too has Hewson's Helpline, QL news and reviews, hardware and Sinclair Surgery, particularly when the new, smaller, typeface is taken into account. The absence of business software reviews this month is due to our correspondent, Mike Wright, falling ill rather suddenly.*

The new design is also meant to make the magazine more attractive. Doesn't anybody like it? Hang about. The next guy seems pleased . . .

WHEN I opened your February issue I noticed your contents page was completely transformed.

There has generally been a great improvement and as regards your presentation of software and adventure, I think that it's fine.

In Program Printout it would be better if you could publish a whole range of programs, not just **Space Invaders**.

The Dancing Ogre's adventure helpline is OK, but, as one reader pointed out, it would be better if Gordo's column was lqnger.

For page content, colour content, presentation etc, your magazine receives ★★★★★ but please, please, more Pokes, tips and readers' programs.
Andrew Wood,
Stapleford, Nottingham

● *That's better. Your compliments could be a little less qualified but still . . .*

As to the length of Gordo's column, I'm sure he would agree with you, and we're certainly looking into it, but it's quality which counts, rather than . . . (that's enough Ed)

Almost perfect

ON BROWSING through your February issue I began toying with the idea of working out which software companies offered the best value for money.

Using your software directory and the star ratings, and concentrating only on adventure, arcade, simulation and strategy, I came up with the following figures:

1st Ultimate with 87.5% perfection (seven 5★, one 4★ ratings).

2nd Beyond with 66.5% perfection (six 5★, two 4★ and one 3★ ratings).

3rd Melbourne House with 57% perfection (eight 5★, four 4★ and two 3★ ratings).

Any comments?
Gary Hunter,
Basildon, Essex

●*Hah! A numerologist. Very interesting, actually, though it tends to confirm what you might expect. It's a bit unfair on Melbourne House as it has released more games than the others.*

It's also worth remembering that the star rating reflects standards at the time the games were launched. These days Melbourne House is on the up and up, while Beyond and Ultimate seem to have lost their direction of late.

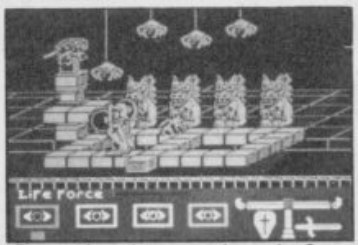
Simple Simon

THERE I was, wowing at the graphics of **Rasputin** (and it is not £2.99. Tell that blockhead Gilbert that it is £7.95) when some grubby object hit me on the head. It was probably the Ed's corduroys, but anyway this thing told me to turn to page eight and read all about Sinclair Simon. Was he there? Hah! Was he on page six? Double hah!

Please — grovel, grovel — make sure that we see him every month. Apart from this I think it's a great mag.
Colin Rena,
Chester

● *Gilbo apologises for the price mix-up and says that* ***Rasputin*** *is still value for money.*

As for Simon, rumour has it that he's bought an Amstrad. Perhaps the next reader can sympathise . . .



Rasputin: cheap at the price?

The Curse of Sinclair

ON NOVEMBER 15 I bought a Spectrum from Dixon's Preston branch. On Christmas Day we discovered the joystick didn't work and the full stop and comma keys didn't function.

On December 27 I returned the joystick and keyboard to Dixons. While I was in the shop I noticed several people returning Spectrums for various reasons. My keyboard was found to be faulty and was replaced, but once home I still found it impossible to load any software.

Once again I returned it to Dixons and joined another long queue of people returning Spectrums. By now the store had none left and was asking people to return in seven days.

On seeing this I asked for my money back. I then bought an

► 16

15 ◄ Amstrad 464 from WH Smith.

Is it any wonder that Sinclair is having money problems?

D Hopkinson,
Houghton, near Preston,
Lancashire

PS The Amstrad is PERFECT.

● *The legendary curse of the House of Sinclair strikes again. Criticisms of poor quality control have been levelled at Sinclair Research since the year dot, but little seems to have changed. Some users, on the other hand, have never experienced any problems at all. Clive himself puts a lot of it down to young, inexperienced users "bloody good at spilling Coca Cola over them and otherwise messing them up."*

But is it necessary to buy an Amstrad?! Hope you keep reading the mag though . . .

Lenslok: an eyesore?

Lenslocked out

I AM WRITING about the Lenslok security device on **Elite**. So far I have been unable to get past the security screens. This is very annoying and frustrating, especially after having read all the rave reviews.

I am sure there must be hundreds, if not thousands, of frustrated computer owners who will certainly think twice before buying a Lenslocked game again.

Surely such a system is self-defeating. The dedicated hacker may see it as a challenge to get round the protection system but the average games player will be put off after reading about all the troubles others are having.

I hope Firebird will come to the conclusion that the system is impractical and, unless improvements can be made, will not employ it again.

M Briody,
Milton Keynes,
Buckinghamshire

I RECENTLY purchased **Art Studio** from Rainbird and **Tomahawk** from Digital Integration, and have a serious complaint.

Both were found to contain the Lenslok security system, no mention of which was made in the reviews or the advertising. The larger scale resolution of the family 23in TV, coupled with the need to hold the Lenslok device on the screen whilst operating the keyboard and working against the clock, make for an interesting challenge, though not the one I thought I was purchasing.

With **Art Studio** the scale adjustment part of the system could not be made small enough to operate on the TV, and so I have not even managed to run this program once.

I would be interested to hear from the Consumers' Association as to the legality of both the advertising and the system.

J Taylor,
Menai Bridge, Gwynedd

I AM SORELY troubled by these incompetents writing in complaining about Lenslok. I am 13 and have had no trouble using it. If Gerry Hunt — letters, January — is worried about me losing my eyes he must be terrified for his own.

Lenslok is an excellent attempt to prevent piracy and I hope Firebird and others are not put off by people such as these.

My gripe is altogether different. It seems that **Elite** (and **Swords and Sorcery**) are incompatible with my Ram Turbo joystick interface, though it works with all other games.

Long live Lenslok.

James Pengelly,
Cyncoed, Cardiff

● *The Lenslok controversy rages on . . . As we pointed out in February's issue, Firebird is aware of the ambiguous instructions supplied with **Elite** and has updated them. On the whole, **Tomahawk** players appear to have encountered fewer difficulties, due largely to the better implementation of the system.*

Fingers crossed . . . let's hope that Lenslok's teething problems don't discourage others from using it.

Load of the Rings

THE FIRST DAY it came out I bought **Elite**, after reading the review in your magazine, and I had no trouble in using the Lenslok device.

But then, again after reading your magazine, I bought **Lord of the Rings**. I eventually got the game to load after 60 or 70 attempts, though the next day, while the title screen loaded perfectly, the rest of the program refused.

After another 30 attempts I went back to the shop, where they changed it, telling me that four other people had returned the game due to loading problems.

Lord of the Rings is still useless to me because it will not load. The specific peak loading volume is an awful way to stop tape copying because it means that people like me spend a lot of money on games which don't work.

Daren Kraft (?)
Woking, Surrey

● *Melbourne House has acknowledged that there are problems with loading LOR, and will send anxious users a letter explaining how to load it. Our own Richard Price was one of the first victims and in his review advised loading the entire tape — even if it appears that a whole block is failing to load after the initial screen. The missing chunk is a restart position.*

A black mark to the Aussies for inadequate instructions, though they assure us that the second print run of the booklet explains the problem. ► 18

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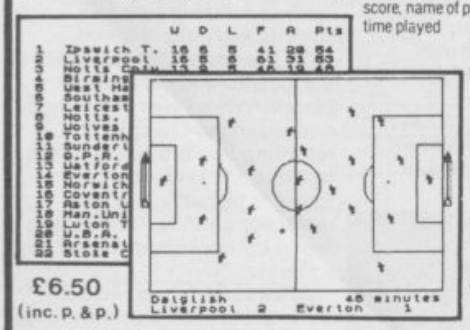

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- LISTINGS with optional automatic indentation of loops, IF, procedures etc. Works on existing programs e.g. you can choose to list:
  10 FOR n=1 TO 10: PRINT n: NEXT n

  as:
  ```
  10 FOR n=1 TO 10
       PRINT n
     NEXT n
  ```
- KEYWORDS can all be entered by typing them in full, or by the "single entry" method, or both in the same line; e.g. the line:
  10print"hello":if x=1 THEN goto 100 will be recognised and listed normally.
- Upgrades to Release 1.8 customers: If you bought direct from us, there is no need to return your cassette - just quote the (approximate) original purchase date with your order; otherwise return your cassette and name your supplier. The upgrade price of £6.95 (£7.50 overseas) includes a new manual.
- ARRAY and string handling features include fast INSTRING (100,000 chars/sec) and INARRAY search functions. You can JOIN arrays together, delete, transfer and insert sections, change dimensions without data loss. LENGTH function gives dimensions. Ultra-fast array SORT - e.g. a$(500,30) will sort in about 3 seconds!
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Blast! Blast! Blast!

WITH REGARD to the **Blast** correspondence in recent issues of *SU*, I have mixed experience with this particular software.

My copy works with microdrives but often needs three attempts before runnable code is produced.

Re-entry to the compiler through the security is very irritating when the compiler has been cleared out only to find that the 'error-free' code produced will not run.

I find it very unsatisfactory to open the box, read the manual and then find bits of paper telling me that many features are missing.

Here is the praise! I run a program which performs digital analysis of stored waveform data. Part of this is a Fast Fourier Transform (FFT) routine which takes over three minutes to run normally, but when compiled this reduces to 35 seconds. This saving alone is worth the cost and problems with **Blast**.

If OCS can remove these bugs/features they will make a good product much more useful. For any serious work, you need at least one microdrive, and users must realise the limitations of any compiler and that claims of vast speed increases can be very misleading.

Dr W G Marshall,
Loughborough,
Leicestershire

Out of all proportion

US Gold: going bust?

I AM WRITING to protest about the advertisement on pages two and three of February's issue. I have a 14-year-old son and I do not wish him to read this kind of material.

Should this happen again we shall cancel our order for *Sinclair User*.

Mrs M White,
Newhaven, East Sussex

● *I wholeheartedly agree. US Gold's ad for* ***Legend of the Amazon Women*** *must be one of the most disgustingly badly executed illustrations ever to soil the pages of this magazine. Those poorly drawn, out of proportion figures could well influence young and impressionable minds to emulate such incompetent graphics in their own pictures. Thank God US Gold has only printed half of it this month . . .*

I AM quite happy with the **Blast** compiler, but it could be better documented and far more user friendly. I think that it is a pity that, now it is this close, OCS does not seem to be prepared to put the finishing touches to what I believe could be a very good product.

Your request was for letters from satisfied users, and whilst I doubt that you will get any from anyone who is 100 per cent satisfied, I feel that the record should be set straight in that the disc version 3.07 does work. It isn't dross, does give a good improvement in running speed — although nowhere near the 40 per cent originally claimed — but could be considerably improved by ironing out the more obvious sillies which still exist.

John Bethell,
West Ewell,
Surrey

● *Yes, we did request letters from readers who were satisfied with the* ***Blast*** *compiler, and no, we didn't receive any, other than those containing the rather mixed feelings printed above. OCS score ten for effort but must try harder in future.*

Laying down the law

NOW to settle the arguments once and for all. Piracy is wrong, **Gyron**, **Starion**, **Elite** and **Fairlight** are all great games, **Action Biker** is pathetic, so are most Ultimate games and your front covers are great!

Roger Adlard,
Hoddesdon,
Hertfordshire

Lonely ROMs

I RUN a penpal service for Spectrum users. If you'd like a penpal please write to me with a few details about yourself, your main interests with the Spectrum and the type of penpal you would like. If you're a girl, please write as you're the most popular choice.

The service is free, so please enclose an SAE.

Anna Peters,
20A Esmond Road,
Chiswick,
London W4 1JQ

I AM a 15-year-old Jordanian boy and would like to hear from boys or girls anywhere in the world, but especially England.

Khaldoon Tabarza,
PO Box 8156,
Jabal, Al Hussien,
Amman, Jordan

I HAVE recently been given a Spectrum Plus and would like to have some penfriends who could help me further my knowledge of computers.

Jabiz M Doshan,
PO Box 1402
Abu Dhabi,
United Arab Emirates

I AM a 17-year-old boy and would like contact with other Spectrum owners — boys or girls — from anywhere in the world to swap programs and hints.

Ole Roar Hammervold,
Lostubben 2
7700 Steinkjer,
Norway

I AM a 16-year-old boy and would like to write and exchange programs with other Spectrum owners from anywhere in the world.

Ronald van Amersfoort,
Offenbachstraat 102,
0 6961 CD Eerbeek,
The Netherlands

I AM a 14-year-old Portugese boy and own a 48K Spectrum. I would like a penpal to swap tips and ideas with.

Pedro Carrolhol,
Proco Alfonso do Poco, 2,
2º Esq,
1300 Lisboa,
Portugal

I AM a 14-year-old boy and would like some female penfriends. I am interested in playing games, writing software and would be glad to swap ideas and programming tips.

Alex Hughes,
55 Cardigan Crescent,
Llantwit Major,
South Glamorgan,
South Wales CF6 9GP

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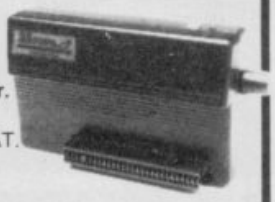

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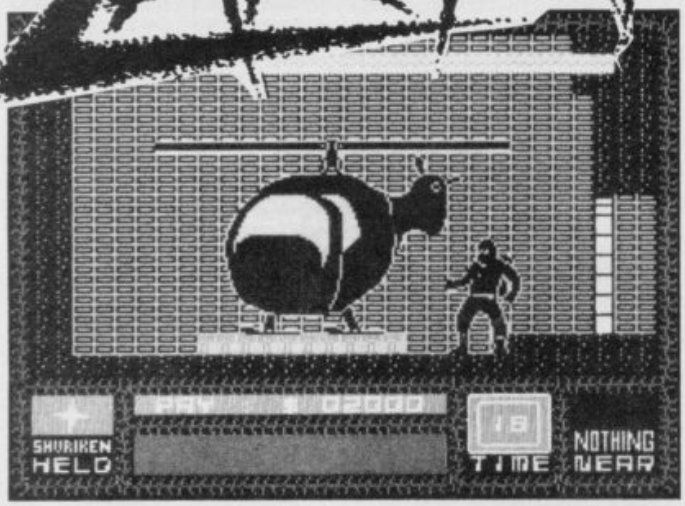


Keep those tips, hints and Pokes rolling in!

Sweevo's World

I HAVE discovered a bug in Gargoyle's **Sweevo's World.**

Go into the room where there is a finger rising up and down. To get to it you must pass through a column which supports a one ton weight.

Get down to your last life and the last unit of power on that life, so that the face in the left-hand corner of the screen is frowning. Now run through the pillar and into the finger.

You will lose your last unit of power by running into the finger and you'll lose another life when the one ton weight falls on you. That means you have lost two lives when you only had one left. The on-screen lives tally then prints "??" and you get 255 lives to play around with.

Write to me if you need any more hints and tips on **Sweevo's World.**

Matthew Brazier,
Priory View,
St Petroc's Close,
Bodmin, Cornwall

Saboteur

HERE ARE some POKEs for **Saboteur** from Durell.

For infinite time: POKE 46998,0 stops the clock. POKE 47009,0: POKE 47010,0: POKE 47011,0 lets the clock tick forever.

POKE 46575,x where x is the ASCII-code of the figure you want to see in the first three places of your five-figure starting sum. For example: x = 50 gives you $22200.

Start the game with USR 63975 instead of 63972 if you don't want the "$100 reward" message.

POKE 63991,0 for a return to Basic after each game. Note that the program POKEs 23561 with the value one. Once you've used this POKE you should always start the game with USR 63975.

Patrick Min,
The Netherlands

I WAS pleased you gave Durell's **Saboteur** a five-star rating which it deserves, but a few minor points are wrong.

You get paid in dollars, not pounds. The incentives are:
$100 for throwing an object and hitting a guard.
$500 to kill a guard by punching or kicking.
$1000 for escaping by helicopter.
$5000 for setting the bomb.
$5000 for getting the disc.

M Binding,
Taunton,
Somerset

AM I the first to finish **Saboteur?** I finished on level nine after finding and setting the time-bomb. My score was $10,000 with 15 seconds remaining.

Khuong To,
Ashford, Kent

Formula One

IN REPLY to Mark Schutz's challenge, January issue, yes I can beat his score on **Formula One.** On novice level I finished the season with a total of 198 points and a driver's score of 109 and 39. I came first in each of the 16 races. Can anyone beat that?

On novice level it is best to start the season with only one driver and concentrate your money on the car. Once you have built up a reasonable amount of money buy the second driver. Using this technique, I managed to get both cars 99 per cent efficient by the tenth race.

Andrew Charters,
Pinner,
Middlesex

Rockman

IN REPLY to the plea for help from Ian Sutherland and Brad Taylor, not only have we completed screen C of **Rockman** but have completed 54 screens:

Screen C is very easy. All you have to do to get the last two — the ones in the right-hand corner — is to wait for the nastie to go right down to the wall and then move right quickly. It should then follow you, but there will be a wall between you both, allowing you to get the last two. If you think C is hard, then you will struggle on D and T!

Jon Winfield and Gary Price,
Nuneaton, Warwickshire

Back to Skool

HERE ARE some tips for **Back to Skool.**

Search desks in both skools for a water pistol and stink bombs. Squirt the water pistol into the middle cup in the boys' skool. It should go blue.

Aim at the cup when a teacher is nearly under it, and if the water hits him then he will give you a number — write this down.

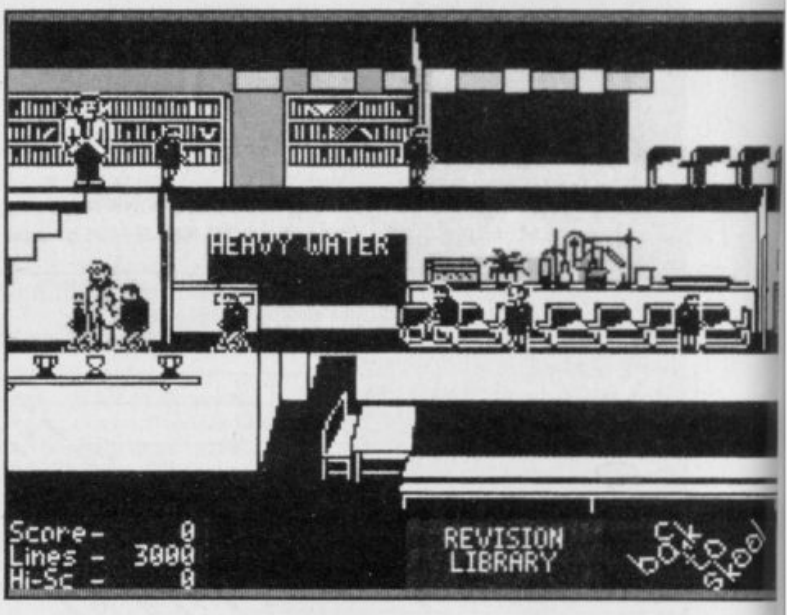
When you have all four numbers write them on a clean blackboard.

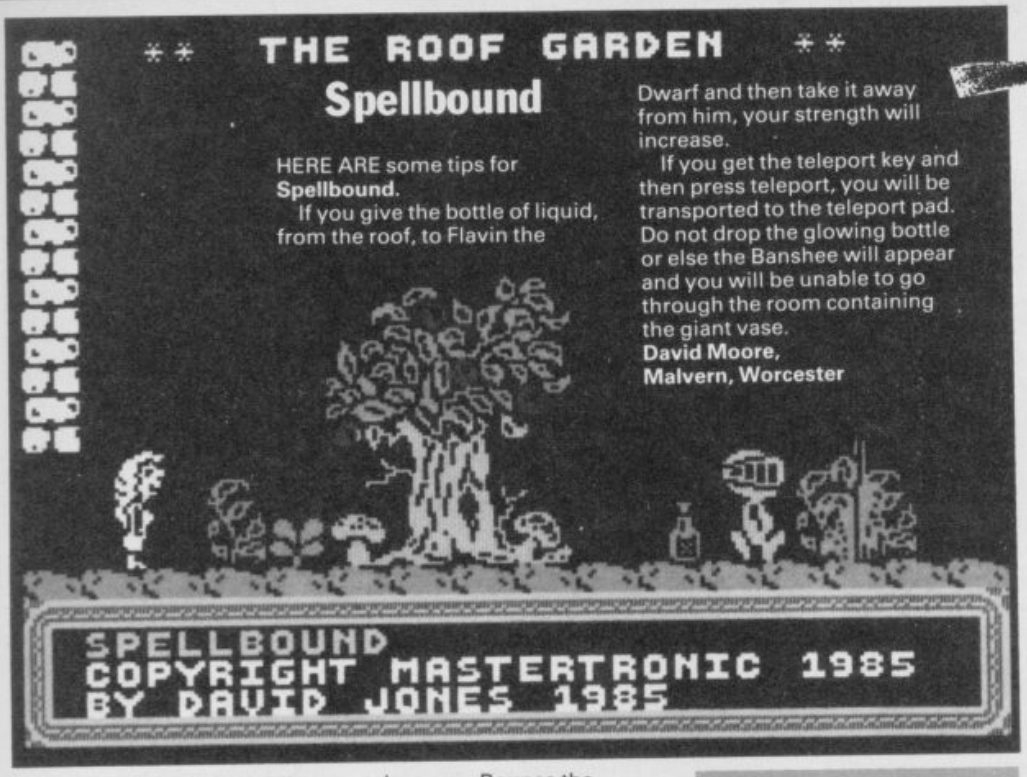
Any time when the hed is not around apart from playtime, run up to his office. When the hed comes back and he has walked the steps to the second level, run down and drop a stink bomb by him. He will open the window. Run to the top level. When the hed is on the last step run and drop a stink bomb directly above the last step. While the hed opens the window go back to your lesson. You may get many lines — but don't worry.

During playtime, ride the bike and leave it by the entrance to the girls' skool. Try and catch some mice.

When you have revision in the library, wait at the bottom of the stairs for the hed to come down. Go up to the top window and keep firing until you knock out the caretaker. Go down a level and squirt the water pistol so the water lands in the pot. Run to the pot and jump onto it. Hold right as the flower grows and you should fall out of the window. Run to the gate and get over it using the same method as getting out of the window.

Enter the girls' skool, and if there is a bottle at the top right of skool then drop the mice on the level the headmistress is teaching on and jump up to get





ZAPCHAT

Spellbound

HERE ARE some tips for **Spellbound.**

If you give the bottle of liquid, from the roof, to Flavin the Dwarf and then take it away from him, your strength will increase.

If you get the teleport key and then press teleport, you will be transported to the teleport pad. Do not drop the glowing bottle or else the Banshee will appear and you will be unable to go through the room containing the giant vase.

David Moore,
Malvern, Worcester

the sherry. Go back to the bike and get on it facing the gate. When you are nearly at the gate stand up on the bike and you will be flung over the gate. If there is no sherry then just go back and try again.

Next playtime, squirt the sherry into the middle cup — it should go red — and fire at the sherry when a teacher passes. This time they will give you a letter and when you have all four, write them on a clean blackboard.

Go to the science lab and enter the locked room. Shut the door and attempt to catch the frog.

Next playtime, wait by your bike until the bell goes. Mount the bike and ride into the girls' skool. When nearly at the cup, stand up on the bike and jump up directly below the cup, a noise should sound. Go back to your lessons.

The playtime after that, fire at the headmistress when she is under a cup. Bounce the catapult off her head by firing again and making it go through the cup, a noise should sound.

When the hed goes to his office follow him in and jump up to the safe. The message "onto next level" is displayed and you start again with the same amoung of lines.

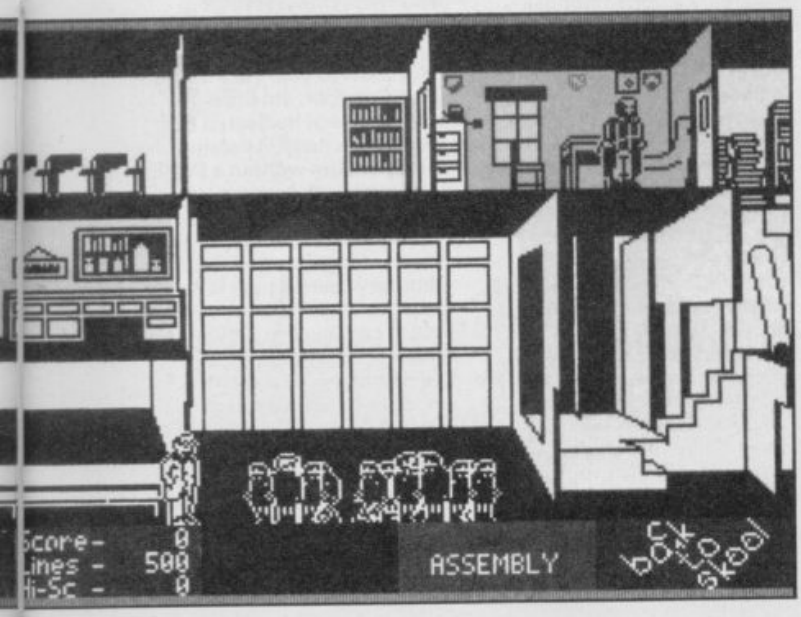
Kiss—K—is an option not included on the inlay card. Each time you kiss your girlfriend she does 1000 lines for you. But be warned, she will only kiss you about five or six times.

Michael Webster
and Mark Connelly,
Sheffield

I HAVE found a bug in Microsphere's **Back to Skool.**

If you kiss your girlfriend while on opposite sides of the closed school gate, you automatically go to the other side.

Richard Matthews,
Lincoln



Terrormolinos

I CLAIM to be the first person to complete **Terrormolinos.** I finished it on 4 January with a score of 98 per cent in 353 turns.

When I completed the game the message read, 'Congratulations. Kwikhol Tours will be glad to invite you back next year.'

I have also completed **Match Day** with a score of ten-nil on international standard.

David Starkiss,
Farnborough,
Hampshire

International Rugby

HAS ARTIC Software studied the rules of rugby? I am speaking about **International Rugby.** Since when has the ball come back into play after hitting the post on a conversion attempt? Anyone who knows anything about the game would know that that only occurs after a penalty.

James Young,
Ledbury,
Herefordshire

Commando

I FINISHED Elite's **Commando** on 22 December in 45 minutes with a score of 233,400. Can anyone beat that?

Paul Whitby,
Hull

I HAVE just gone round the clock on **Commando.**

On reaching the eighth area, the game goes back to the first area, even though it is called area nine. I got killed in area ten with a score of 213,300.

It is best to collect as many grenades as possible on the fifth and sixth screens as at least 20 grenades are required to get past the seventh and eighth screens.

Johnny Martin,
Cork, Ireland

Three Weeks in Paradise

"HOW DO I sharpen the axe?" is perhaps one of the most frequent pleas for help following the review of Mikro-Gen's **Three Weeks in Paradise.**

Well, here's how.

Get the bottle out of the well and take it, with the corkscrew, to the other side of the crocodile. Use the corkscrew to make a hole in the coconut and the bottle will be filled with oil. Take the bottle of oil to the car and, carrying the axe as well, stand next to the front wheel. Press the Use key and the axe will be sharpened.

► 22

Enigma Force

I HAVE finally completed **Enigma Force,** in one-and-a-half hours, and enclose some tips.

When starting the game, arm the Enigma force then move Syllk right twice, up twice, left twice and up again. You should be greeted with the message, "I have spoken to my Queen. She is loyal to the Emperor." From then on the insectoids are your allies. If at first you don't receive the message, stay around the area until you do.

When capturing Zoff, try to trap him in a room with an Enigma force member — not Zark — on the other side of the exits to that room. Now send Zark in and Zoff will surrender and be ordered to follow Zark.

From this point, do not allow Zoff to remain in a room by himself or for Zark to be more than two rooms ahead of him, otherwise Zoff will attempt to escape.

Holding Zoff captive is an advantage as the reptiloids will not attack the Enigma force while he remains hostage. Use this advantage to locate the shuttle.

One last hint: activating a red fish will increase that character's strength if low.

Timothy Smith,
Bearsden,
Glasgow

I FINISHED **Enigma Force** on 19 January. Am I the first?

To complete the game, find General Zoff and kill him. A Zoffcard will then appear on the floor. Pick it up and search for a door requiring a keycard.

I eventually found a door in one of the storerooms. When the Zoffcard was activated, the door opened and lead into a shuttle. A message — preparing for take-off — appeared. Now get the rest of the Enigma team into the shuttle and escape.

Paul Cochrane,
Broughty Ferry,
Dundee

Gunfright

HERE IS a map for Ultimate's latest White Elephant **Gunfright.** The town itself is small enough to spit across and, after paying a tenner, I am very tempted to try. I hope US Gold knows what it's doing or we could see a redesigned **Jetpac** very soon.

My tip for this game is to have plenty of strong black coffee and a plate of hot beans before starting — not to set the scene but to keep you awake. The little men jumping up and down have also bought the game thinking they had got something exciting and new, and not this redesigned rubbish that Ultimate didn't even write the original for in the first place. **Nightshade** was written by Dare.

I also include the POKEs for this game should anyone wish to prolong the agony.

```
10 PAPER 0:INK 0:BORDER 0:CLS
20 FOR F=0 TO 5:PRINT AT 18,0;:IF F=3 THEN PRINT USR 24576
30 LOAD ""CODE:NEXT F
40 POKE 23446,201:PRINT USR 23424:POKE 23446,33:POKE 42355,0
50 POKE 46344,0:POKE 48464,0: POKE 48544,0: POKE 49745,0:REM INFINITE LIVES
60 POKE 43163,255:REM MONEY
70 POKE 43154,0:POKE 42082,3:REM STARING BANDIT
80 PRINT USR 23446
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E Bennett,
Southend,
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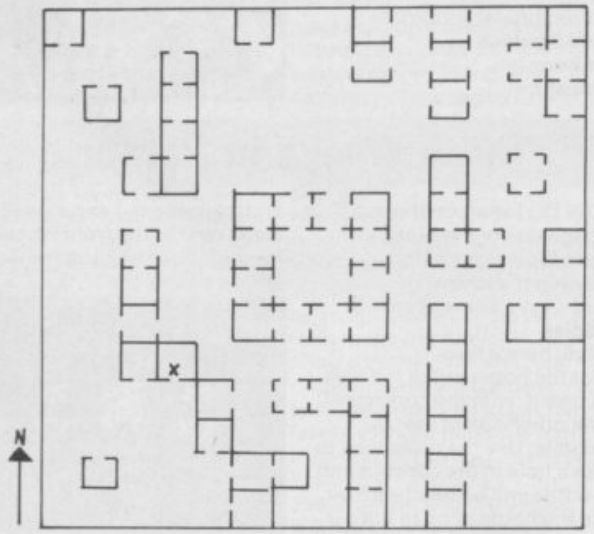

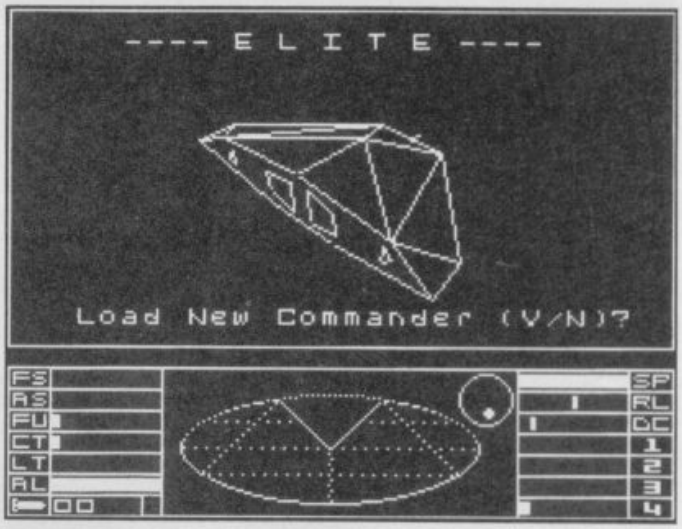

Elite

ACCORDING to Firebird's Marketing Manager, Phil Pratt, Spectrum **Elite** contains three secret missions. Although he wouldn't tell us what they do, he did divulge their names.

J Smith of Plymouth — February issue — stumbled on the second secret mission which is the Cloaking Device. The first is Supernova, mentioned by C Richardson of Hampshire, also in the February issue, and the third is called Thargon. Has anyone got hints for this one?

I BECAME Elite after two weeks of constant play and would like to know of anyone else who has obtained the rank.

When you have reached the rank of Deadly, head for galaxy two. Stay there until you get a mission to destroy a space station that the Thargoids have taken over.

If you accept the mission you will be given an ECM Jamming system. For a while I didn't know how to work it, then I pressed the Y key by accident and the screen went blue — my energy started to decrease and, more importantly, the ships which were attacking me suddenly stopped firing. I worked out that I could also fire missiles without them being destroyed by ECM's.

I completed the mission and headed into Thargoid space. That is achieved by freezing the game and pressng the F key, then restarting the game and jumping to another planet. To get out of Thargoid space just reverse the procedure. I found that the Thargoids, too, could not fire back. So I happily zapped away until I had achieved 14 or 15 Right on commanders and became Elite.

I phoned Firebird and was told that the competition had been called off due to people breaking into the program. So instead of the software prize, all I got was a metal badge and a poster. Brilliant.

Duncan A Wills,
Exeter, Devon

AFTER YOU'VE found the Cloaking Device — key Y to use it — **Elite** is an even better game to play.

When asked to repel a Thargoid invasion, don't use missiles, just use the arming button as a distance to target marker. Has anyone found the planet Raxxla yet?

Just one gripe about an otherwise excellent game. Why call the bad guys after the editor of the galaxy's greatest weekly comic?

Mark Elite Littlewood,
London SE5

IF YOU'RE having trouble docking in **Elite,** line yourself up from a distance, square on with the hatch of the space station. Go in at full speed without altering the alignment of your ship. With this method, you should dock successfully almost every time.

I am Deadly with 300,000 plus credits. Aliens which appear to the left and right sides of your scanner, and also behind you, are usually pirates. It is advisable to let them shoot first though.

Commander Cannon Cole,
Stourport-on-Severn
Worcestershire

HANG ON to your hats because I, the Outsider, am Elite. Yup, after weeks of dedicated hard work, I reached Elite status on the Spectrum without a POKE, a bug or any other cheat methods.

Here's a tit-bit especially for J Smith of Plymouth — Zap Chat, February issue. There is one ship out of all the attackers which can be seen only when you are close to it. It is an ASP. Hit it, and it will unleash four missiles if badly damaged. Destroy it, and there will be a cargo cannister remaining. Yup, you've guessed it — a Cloaking Device — Y to activate and deactivate. Have fun.

Gavin Sneddon,
The Outsider,
London N16

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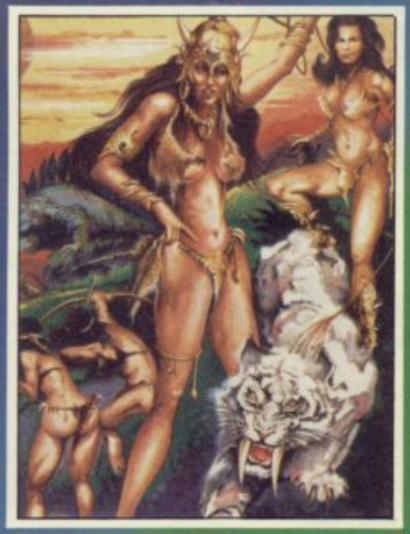

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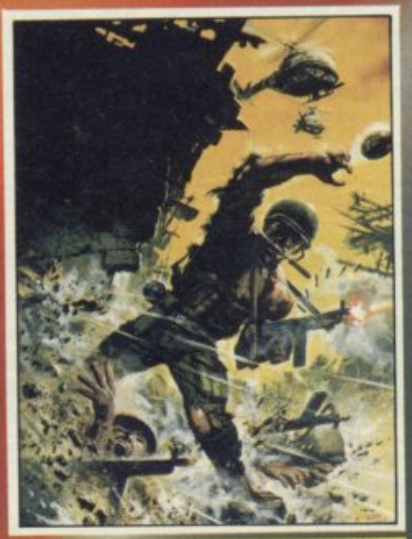

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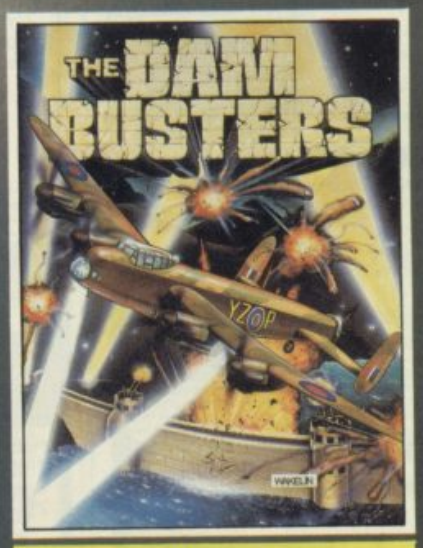

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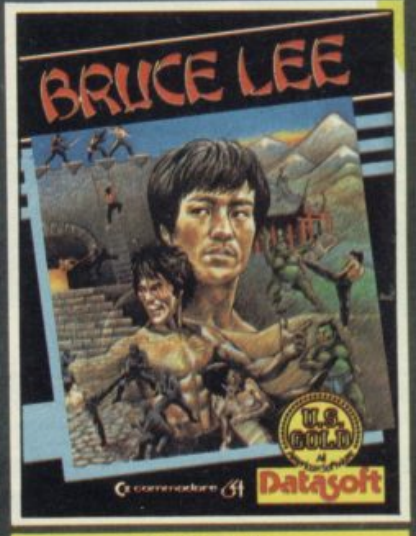

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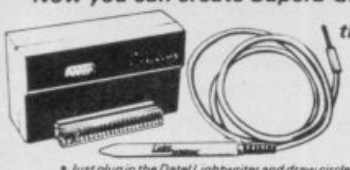

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THE HA

Hero or outlaw? Wendie Pearson rips away the mask behind the modem

THE solitary, night-time hero of the computer age. His face lit in the reflected glow of his VDU, he sits hunched over the bewildering spaghetti of his customised terminal. His fingers glide across the keyboard, guided as if by instinct, and at his fingertips are the secrets of a nation.

Myth or reality? Hero or villain?

Let's take a look into this twilight world, and talk to some of its shadows.

Many people — and particularly those who have no contact with micros or people who use them — view hacking purely as a criminal activity, thinking that a hacker enters a computer's system only for personal gain. Computer users, on the other hand, are more tolerant.

A set of moral standards seems to have grown up around hacking, with those who indulge obeying certain unwritten rules. Those include the understanding that one does not hack for personal gain, but merely for the excitement of getting into a system which isn't secure enough to keep you out. Another is the understanding that hacking shouldn't be malicious, and that hackers should not delete or change data.

These rules act as a gentleman's agreement between hackers whose image is far removed from that painted by the police.

The law surrounding hacking is vague. Two men were arrested in March last year, in connection with the long-running problems at Prestel involving hackers, and charged with forgery.

The use of the Forgery and Counterfeiting Act of 1981 against the pair came as a shock to the hacking community, one of whom commented at the time: "Theft of electricity would have been a more appropriate charge. In the USA, hackers have been charged with theft of computer time and trespass, but nothing like this." The case has yet to come to trial.

Since no ruling on hacking has yet reached the statute book, it is hard for hackers to know where they stand. What are they allowed to do? We asked Scotland Yard.

Spokesman Nick Jordan says: "We have a problem with this sort of query as we have one man who is an expert in hacking and he has a list of queries the length of his arm. He is a detective inspector in the fraud squad and all queries go to him."

Maggie Adams, at Scotland Yard, comments: "There is no specific legislation to cover hacking, so it's very much a grey area. The view of the police is that they consider hacking a crime rather than a prank, and if anyone was found to be indulging in it we would charge them with a criminal offence.

"People would be charged under existing legislation, like forgery or false accounting. We consider hacking very much a crime, as do many other people. We discourage it altogether."

Over in the States, the FBI are not amused at rumours that their organisation is recruiting computer hackers into its ranks, via British newspapers.

Lane Bonner, supervisory special agent at the FBI headquarters' press office in Washington DC, denies it absolutely. "The FBI may have individuals who come in and lecture our training sessions as an instructional aid, and the agents who investigate computer fraud violations must have experience in this area, but we don't hire hackers."

Bonner confirms that in the famous Star Wars hacking case, where several youths allegedly broke into a government system and moved satellites around, the scare was without foundation.

"There were two cases regarding this — one in California and the other in Virginia," he explains. "The Department of Defense in Washington DC issued a statement saying that there was no infiltration of government computers in the satellite case."

The hackers concerned apparently accessed a non-classified list of contractors doing business with the US Department of Defense in Washington.

Not surprisingly, big businesses are going to war on hackers, and technology in the security field is moving fast in an attempt to keep up with hacking.

One device recently tested by the FBI is a fingerprint analysis system which reads your fingerprint before allowing you access to the system. Whether this would catch on in the UK is debatable, especially in view of the fuss which erupted when London Transport first introduced photographs on travel cards. It seems we are very fond of our anonymity.

The wave of computer crime which has hit the States might influence the way in which we think of hacking over here. To many people, computer crime and hacking are two different things, while those not familiar with hacking assume that the two are synonymous.

Either way, panic has erupted across the Atlantic at the way financial institutions are reportedly losing millions of dollars a year to computer crime, some of which is associated with hacking. Although computer crime is nothing new, it is this sort of activity which gives hacking a bad name.

In the UK, Lloyds Bank is not too fussed about the problem. "No-one has ever

"I don't feel there should be any law against it. Hacking wouldn't exist if companies designed their equipment properly in the first place"

ACKER

made a successful attempt at breaking into our system," comments head office spokeswoman Terry Harman. "We have elaborate security so we haven't sustained any losses from hacking."

Asked if Lloyds would consider hiring an ex-hacker in their computer department, the response is negative. "I doubt that we'd go out of our way to employ someone who had a history of breaking into systems," she says. "We'd sooner employ ordinary systems analysts who are used to our system, and who may have helped in its initial development."

Meanwhile, the Ministry of Defence remains silent, refusing to say whether there are many attempts to break into the UK defence system, or whether it would be keen to employ ex-hackers.

Over at the Stock Exchange, spokesman Luke Glass says, "I shouldn't think anyone has broken into our system — it's a rather boring one, anyway, and I shouldn't think anyone would tell you what security measures we take."

Asked if they would employ any ex-hackers he says: "I wouldn't be surprised if we didn't have some already. We have a large technical staff, who are obviously aware of these techniques."

At Prestel, however, the response is a little more tight-lipped and more than a little embarrassed. Spokesman Mike Abbot: "I'm not sure what the state of play is at present, but we have tightened up our system, since the Duke of Edinburgh's mailbox was hacked into 18 months ago." Quite!

So what do the hackers themselves have to say?

One 23 year old ex-hacker, who used to work for British Telecom, says: "I don't feel there should be any law against it. Hacking wouldn't exist if companies designed their equipment properly in the first place.

"Leaving people's files unprotected is dangerous, and systems shouldn't be so vulnerable, but I think companies are getting more efficient at protecting data.

"You need patience, logic and background knowledge in order to hack, but in the end there is no reward and it isn't really worth it. It's just a curiosity pastime, rather like doing a jigsaw puzzle."

Unemployed Chris Stevenson, 22, has been hacking for two years. "You know your brain should be able to beat the computer and you are trying to prove that it can. There are lots of bulletin boards around which publish lists of phone numbers which help you hack into certain systems, and there are specialist hackers' bulletin boards around giving advice on this subject, or lists of phone numbers both here and abroad."

Like other hackers, Stevenson feels there is no harm in hacking as long as no damage is done and no data altered. "As long as information is gathered and not passed on, it's no different to hearing someone's conversation in the supermarket. If someone is bending over the freezer talking in Hungarian and you hear it, it's perfectly legal to translate it.

"It's the same with hacking — you are translating data into readable code."

Stevenson believes that after gathering phone numbers of computer systems from bulletin boards, many hackers then collect information on how the systems work.

"You have to put two and two together to get into a system; it's like being a detective. You may wait months for the information that you need.

"You'll need the phone number first, and then you'll need to know someone's name and guess their password, or you guess both, or you know both. It varies in each case, but what you basically need is a password, name and phone number."

Stevenson adds that there is no mystery to hacking. "You just need persistence,

"You have to put two and two together to get into a system; It's like being a detective. You may have to wait months for the information that you need"

lots of computer literate friends, and the capacity to cope with a big phone bill — £200 a quarter, minimum, and often much more.

"You don't have to be clever to hack — any dumb dumb can do it, which makes it even more dangerous. You just need to enjoy the challenge."

James Fairfax, a 16-year-old schoolboy from west London, agrees. "The most common reason for hacking is to see if you can crack it," he says. "It's amazing how simple some passwords are. You just get the phone number from a friend and then experiment with names and password numbers."

However, Fairfax says companies are really wising up. "These days, you might need four passwords to enter a system on four different levels. It's only at the fourth level, for instance, that you could change or delete information, but I don't agree with doing that anyway."

He is pensive about the views of the police. "They're right if someone was to hack into criminal records or the police national computer, that would be an offence, but hacking into the Open University to see what courses they do, I don't feel is in the same category."

The message seems to be that although the law is unclear, police action is anything but. That said, there is still a proliferation of books about hacking including *The Hacker's Handbook* by the mysterious Hugo Cornwall, and *Out of the Inner Circle* by Bill Landreth.

The law is lagging far behind the quick changes in technology, leaving huge gaps on the statute book. Just as software copyright law took literally years to establish, the law on hacking seems to be taking the same slow track. Only time will tell — stand back and watch!

Illustration: Stephen Wright

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1 *What is the meaning of the term 'Riding the Soup':*
- (a) *going without meals in order to spend more time surfing;*
- (b) *surfing in the broken part of the wave;*
- (c) *surfing through an oil-slick;*
- (d) *boasting about your surfing prowess?*

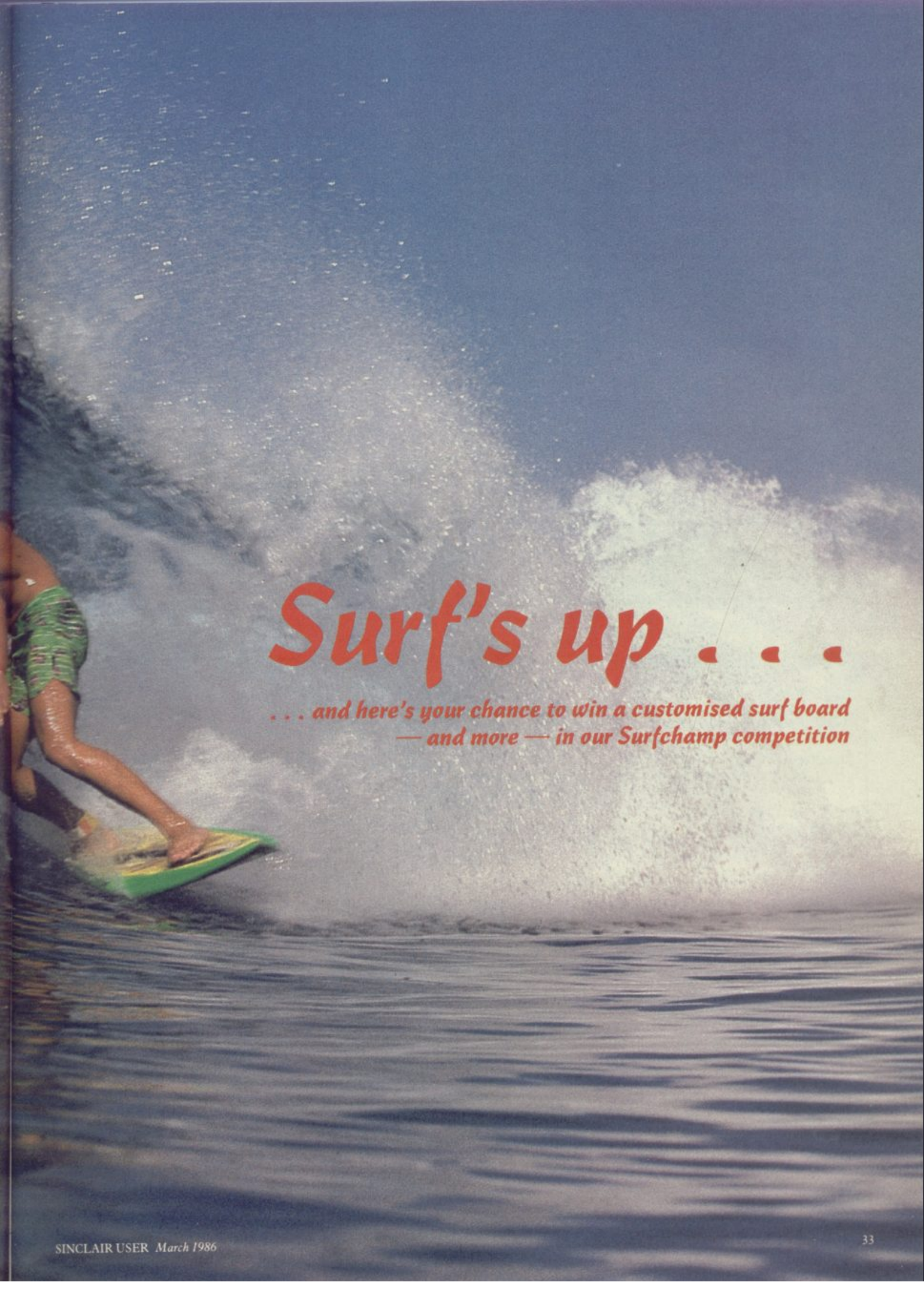
2 *Who is the 1985 English Senior Surf Champion:*
- (a) *Jonah Barrington;*
- (b) *Jed Stone;*
- (c) *Suzanne Dando;*
- (d) *Nick Faldo?*

3 *What sort of person is described as a 'highway surfer':*
- (a) *someone who uses a surfboard with wheels to get to the beach;*
- (b) *a champion surfer;*
- (c) *someone who doesn't surf at all but has a board on the roof of his car to impress the girls;*
- (d) *A surfer who wears a Sony Walkman while surfing?*

4 *Which pop group is particularly associated with surfing:*
- (a) *Duran Duran;*
- (b) *Prince and the Revolution;*
- (c) *The Monkees;*
- (d) *The Beach Boys?*

5 *What is the meaning of 'green water':*
- (a) *unbroken water;*
- (b) *water clogged with seaweed;*
- (c) *stagnant water;*
- (d) *water which has never been surfed before?*

Surfer: Martin Potter. Photo: Wavelength magazine photo library



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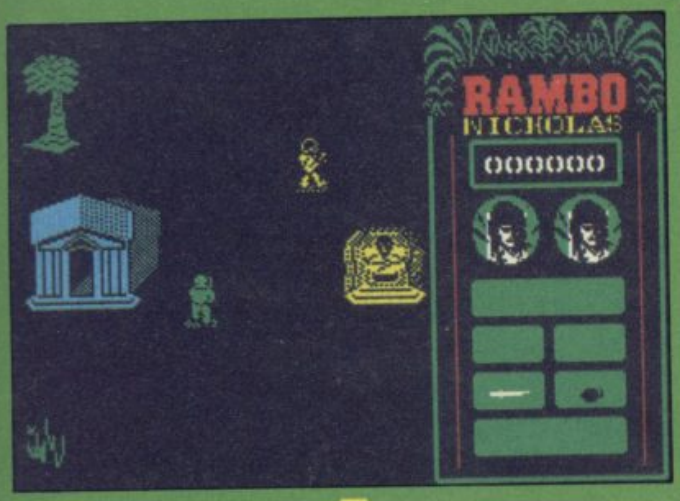


Rambo

CHARGING like a maniac through the paddy fields and forests of Vietnam is **Rambo** — a born killer if ever there was one.

His mission: to photograph a POW camp so that the US army can move in to free the prisoners. His brief: Do not engage the enemy. Do not attempt to rescue. Being a bear of little brain Rambo will do exactly the opposite as his chivalrous and killer instincts take over. One man against the might of the Vietnamese army, he wades in to free the POWs single-handed.

Rambo is — surprise, surprise — based on the film and follows the plot of the movie as far as possible. As Rambo spends most of the time blasting everything in his path, that has been quite easy to recreate on computer. Thankfully the designers have left out the blood and guts and the game is quite free from gore.

You start off in the jungle, armed with only a knife and grenade. The knife is the best weapon at first, it is deadly when thrown by an expert and, more importantly, it is silent. You must be as quiet as possible to avoid alerting the Vietnamese patrols.

Before making your run up to the prison camp, which lies north of your start point, scout around to find some more weapons. Rambo can carry an arsenal with him to cater for every eventuality, including a rocket launcher which should only be used when in a helicopter, a machine gun — excellent for mowing down the enemy, and two arrows — one equipped with an explosive warhead.

Once the enemy patrols are onto you there is not much point trying to remain silent and I found the machine gun just the thing for mowing down two or three of the enemy in one spurt. Of course, once you have alerted them, more patrols are drafted into the area.

In the start area are many trees — natural ambush placements — a temple and some sort of monolith. The significance of these escapes me but they offer a place of refuge should the going get too hot.

Once you have found the arrows make a run for the camp. You'll find running in a zigzag the best for avoiding enemy bullets. The Vietnamese can disappear into an area outside the border of the screen, so don't stand too close to that no man's land. Someone might appear next to you and take a pot shot. If that happens you'll lose one of your four lives.

Once at the camp, follow the barbed wire fencing round until you find a bridge. Blow it up by selecting the exploding arrow from the weapons display.

Once inside, avoid the guards, race around the bamboo huts and search for Banks, a former comrade who is tied to a bamboo cross. With your knife chop him free — that happens automatically when you get close enough. Now make your escape to the north where a helicopter waits to transport you and the vital role of film to Thailand and safety.

If you manage to survive the pursuing forces, you must get the chopper to send for reinforcements and, leaving Banks in relative safety, you do the honourable thing and return to rescue the remaining POWs.

Back to the camp and armed with your knife, chop them free while dodging the hoards of irate guards. Lead them back to the helicopter and you're almost safely home. Warning! One last hazard remains. The Vietnamese send one of their helicopter gunships in hot pursuit. This is where your rocket launcher comes into play. Arm it and blast the enemy chopper out of the skies.

A few hints might help you complete your mission. Don't use loud weapons unnecessarily — they will only alert the guards to your whereabouts. When in camp don't stand still. Move as swiftly and silently as possible.

Only two-thirds of the screen is taken up with the playing area which is narrow but very long. The third section holds the score table detailing weapons collected and lives remaining. Your score leaps up when you find the various weapons and 100 or 200 points are awarded for each enemy soldier killed.

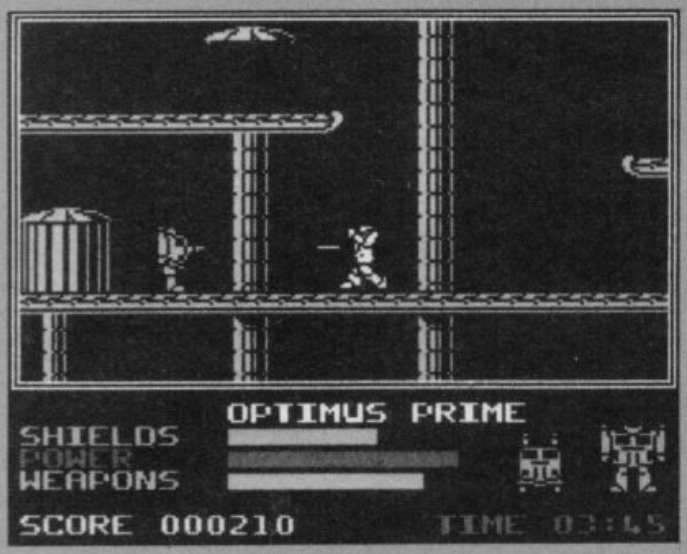
After all the publicity **Rambo** has received my first impression was one of disappointment. The graphics are sparse and the characters small. However, movement is smooth and though there is some colour clash, that doesn't detract from the game.

A rendition of *Stars and Stripes* is played each time you die — a reminder of the film's unpleasant jingoism.

Clare Edgeley

Searching for Banks inside the POW camp

Publisher Ocean
Price £7.95 **Memory** 48K
Joystick Sinclair, Kempston cursor
★★★



Transformers

WE'VE HAD Glo-bots, Gro-bots, Zoids and, most popular, Transformers. So, it's only natural that Ocean should see green at the idea of producing a computer game featuring our fragile plastic friends.

Four parts of the Autobots' energy cube lie scattered around the city complex. The Decepticons, evil, tyrannical, super robots with a programmed hatred of Autobots will exploit their enemies' weaknesses. They have invaded the city and plan to steal the energy cube.

As this is a Denton Designs game it has the icon control system made famous by **Shadowfire** and **Enigma Force**. You have five robots — leader Optimus Prime, Hound, Jazz, Mirage and Bumblebee — under your command. Each one can be selected by moving the cross-hair cursor over it and pressing fire. The boys are stored in Defensa Pods, the covers of which slide upwards to reveal their slick bodies. There is an extensive network of open Defensa Pods in which the Autobots can shelter from Decepticon attacks and recharge their batteries.

The Decepticons do not have recharging stations but have a cloning ability which increases their number two or three-fold during the game. If you do not speedily eliminate them they will swamp the city.

All Autobots have the same set of attributes — shields, power and weapons. The leader, Optimus Prime, has more power than weapon energy but less shield power.

Mirage, on the other hand, has more weapons energy than power or shield force. Optimus is, therefore, more able to stand up to a battering, while Mirage is an attack robot.

The fastest mode of travel for an Autobot is as a vehicle. Transformations can be accomplished by turning the robot to face the front and pressing fire. It will then collapse into the shape of a vehicle ranging from a truck to supercharged sports car.

Vehicles cannot fly and do not have laser weapons. They can however, outrun any Decepticon and, because they are at a lower level, the Decepticon's laser weapons cannot reach them. The only problems you will have in car form are either colliding with a Decepticon or plummeting from a catwalk.

Flying can also be a dangerous occupation. It is safe to fly across domes, slopes, stairways and pipes. Any contact with catwalks or with cylindrical tanks at the bottom of the complex will result in destruction.

You should also be wary of using the slopes which take you from one level to another. Keyboard play is difficult in the extreme. To move up a right sloping ramp, for instance, you must depress the up and right keys simultaneously.

If for some reason you do not push diagonally, you will either walk or — disaster of disasters — fly. Within the narrow confines of the catwalks you can easily crash into a ceiling.

The energy cube which will sustain the Autobots during their power crisis is made up of four pill-shaped segments, each of which is marked with a cross. These must all be found before the game ends — there is a time limit of 15 minutes.

There is no pause key but when all the robots are in their Defensa Pods the clock stops. Also, when an Autobot closes the cover of a pod, any Decepticons on the screen are destroyed.

To succeed quickly in finding a piece when just beginning the game, select Mirage and fly him left across the city in as straight a line as possible. Within a minute you will see a piece and can collect it.

I would then advise you to take Mirage to the nearest open Defensa Pod and lock him in. Decepticons are drawn to the energy waves of a piece of the cube and, if you don't get under cover quickly, the Autobot will be destroyed and the piece stolen.

While any of the Autobots can pick up some or all of the cube pieces, the best strategy is for four of the five robots to pick up just one piece and run for cover. It's a coward's way out but for a beginner it will provide a fairly quick solution to the game.

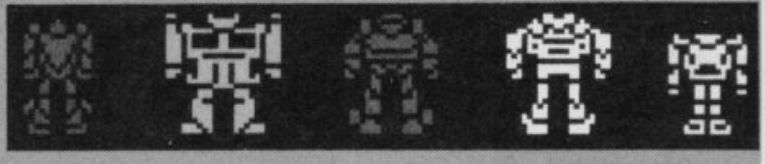
Unfortunately, the cube pieces are not randomly placed within the city. They are in the same place every time you play. So, once you've located them the fun of the quest is finished.

I would not put the game down because the basic plot can be solved with relative ease. **Transformers** is a game where a high score is all-important, and I am sure that once you have found the energy cube you will still enjoy a scrap with the Decepticons.

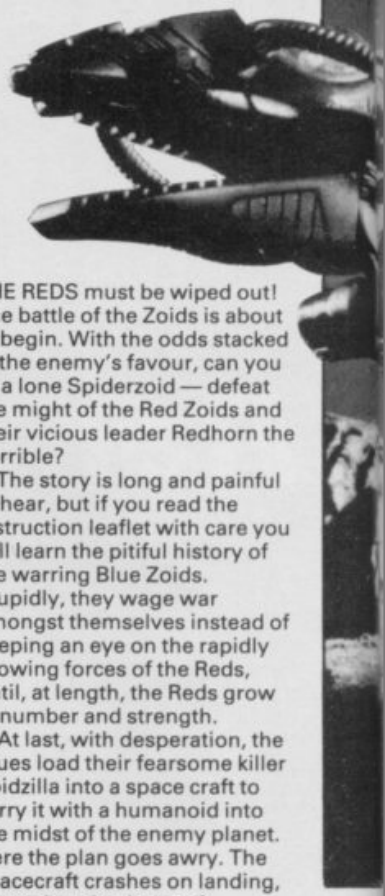
John Gilbert

Publisher Ocean
Programmers Denton Designs
Price £7.95 **Memory** 48K
Joystick Kempston, cursor, Interface II
★★★★

Transformers: Mirage, Optimus Prime, Hound, Jazz and Bumblebee



Zoids



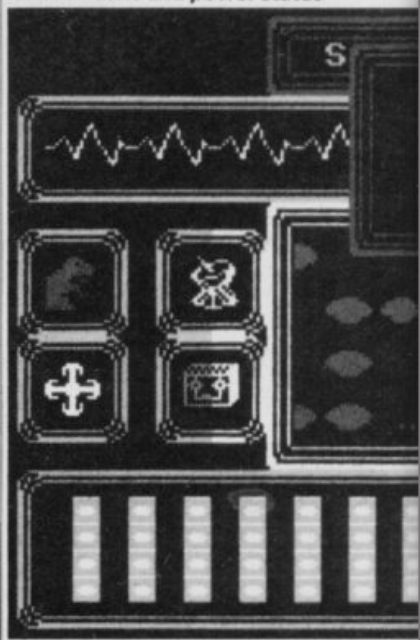
THE REDS must be wiped out! The battle of the Zoids is about to begin. With the odds stacked in the enemy's favour, can you — a lone Spiderzoid — defeat the might of the Red Zoids and their vicious leader Redhorn the Terrible?

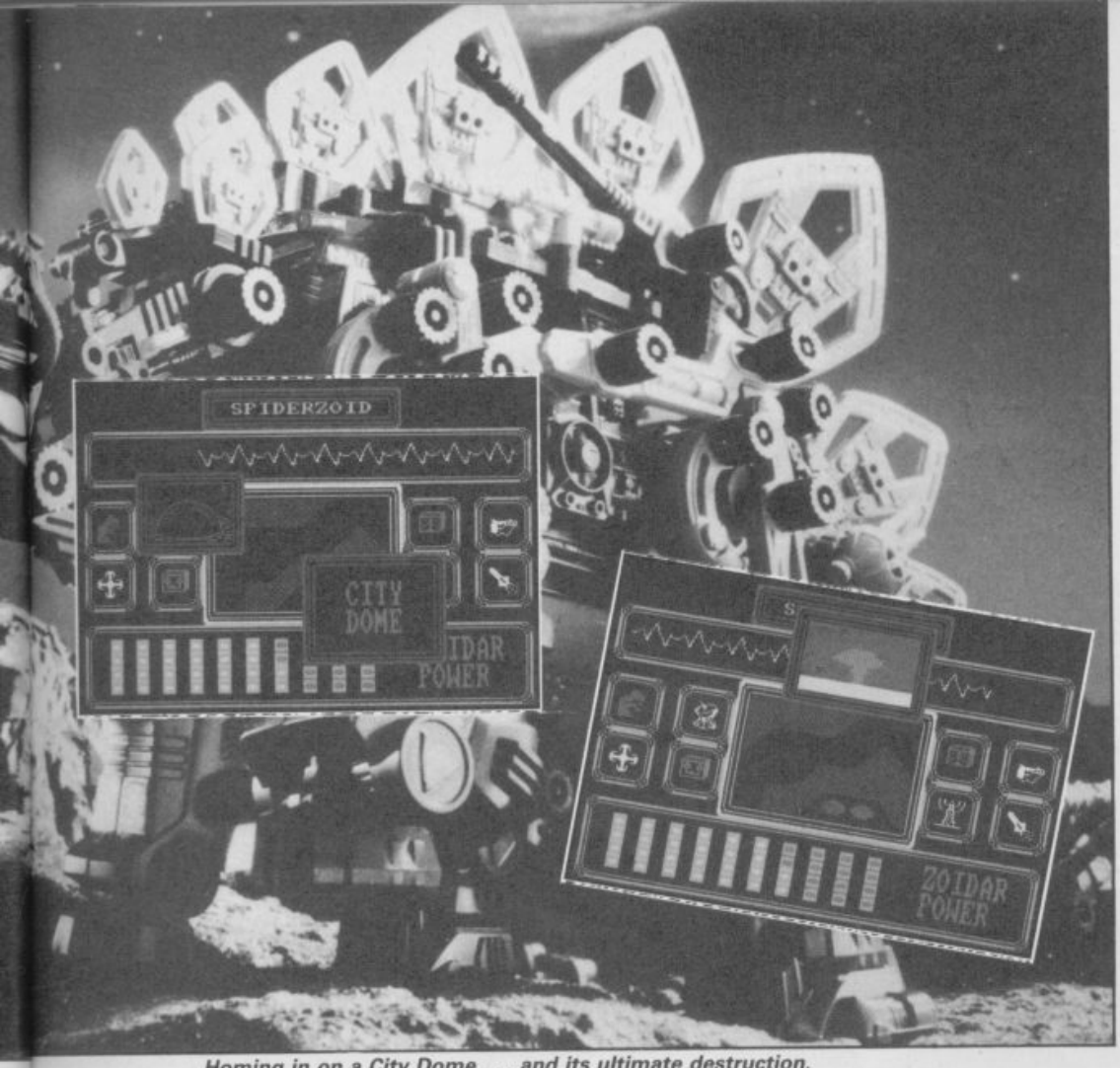
The story is long and painful to hear, but if you read the instruction leaflet with care you will learn the pitiful history of the warring Blue Zoids. Stupidly, they wage war amongst themselves instead of keeping an eye on the rapidly growing forces of the Reds, until, at length, the Reds grow in number and strength.

At last, with desperation, the Blues load their fearsome killer Zoidzilla into a space craft to carry it with a humanoid into the midst of the enemy planet. Here the plan goes awry. The spacecraft crashes on landing, scattering six pieces of Zoidzilla, each of which ends up under a city dome — one in each of six hostile cities.

You, the humanoid, manage to eject from the spacecraft in a Spiderzoid and fuse with that machine to become one entity. Your job is to penetrate the Reds' stronghold and retrieve the pieces of Zoidzilla. As each piece is found, your zoid upgrades in strength and speed until at last you mutate into

A close up view of the city with control icons and power status





Homing in on a City Dome . . . and its ultimate destruction.

Zoidzilla itself. Now you can take on Redhorn the Terrible and Mammoth the Destroyer.

Zoids — The Battle Begins is a strategic game with an arcade element. You play in a similar manner to Beyond's **Shadowfire** via the use of windows and icons.

Sitting inside your Spiderzoid, you can see nothing of the outside world. Your only view of the battles which rage are through the eyes of your zoid. Your instructions must be conveyed in a way which the zoid can understand and carry out — hence the need for icons, cursors and windows.

However, you cannot control the zoid entirely — should you make a move into a dangerous area the Spiderzoid may countermand your instructions and move to a safer place.

There are ten cities in all and only six pieces of Zoidzilla, so four are red herrings. Unfortunately, until you have blown all eight city domes in each city out of existence you cannot tell whether you have been wasting your time. Each city is connected by a valley through mountainous regions patrolled by various members of the Red Zoid army.

Each city has one power station — its most important feature — a radio beacon to alert Redhorn and Mammoth of the breach of the city defences, and a zoidar mine to produce more zoids. The eight city domes in each city are protected by a power shield from the power station. Your first job, therefore, in each city is to blast the power station which then draws the power away from the domes to protect itself. That leaves the domes unprotected for about two minutes.

And so battle is waged, with you trying to storm each city, fight off enemy attacks, identify and destroy the Red Zoids and collect any power pods left in the debris.

Play takes place within a long or short range map in the middle of the screen. Using the move icon, place the cursor in the direction you want to travel and press fire. Your zoid, represented by a yellow square, creeps in that direction.

This stage is extremely boring — the square moves at a snail's pace. You can perform other actions at the same time, however. If possible, switch to the Radio Beacon icon — that gives a picture of the short range map. Now identify the power station, and send a signal to your base on the Blue planet, which despatches a guided missile to blast the station. The missile takes about 30 seconds to reach target.

With the shields down on the city domes you can afford to use the Missile icon and switch to a spot of arcade action. Having identified your target you can now guide the missile through the mountains to the target — represented by a small red cross on the horizon. Your reactions will have to be lightning fast to dodge the mountains.

If you destroy the target you will be shown the city on the short range map and the blob you hit will disappear. Now move into that area and search it with your Scanner icon. The scanner will automatically pick up a piece of Zoidzilla if it's there plus any power pods or raw materials — vital to the success of the mission. Your power decreases as you move and fight, and anything found in the debris will replenish those stores.

The same technique can be used on the zoids. With your missile ready, move the cursor over one of the tiny moving shapes and fire. A zoid of one type will be shown in the window and you can then blast it. When searching the debris you may well come across ammunition it has dropped to replace your depleted stocks.

Another arcade action sequence follows. The window depicts a 3D tunnel with the Red Zoids coming towards you at some speed. You have two tracers which meet at the far end of the tunnel. Moving these left and right, try to eliminate the Reds before they can crash into you. Should that happen the screen will shake wildly to register a hit and your power will rapidly decrease.

Other icons are Zoid ID, which identifies objects and Red Zoids; Status which gives you a run down on power, ammunition, damage sustained and the number of pieces of Zoidzilla collected; Guns — largely redundant as the only time you need the guns is when you are being attacked and the computer switches to that option automatically; and Info — again redundant as Zoid ID identifies objects as well.

A game with a difference, **Zoids** is worth a blast if only to see the might of Redhorn the Terrible and Zoidzilla locked in combat. It should appeal to strategists and arcade freaks alike.

Clare Edgeley

Publisher Martech
Programmers Electronic Pencil
Price £7.95 **Memory** 48K
Joystick Any
★★★★

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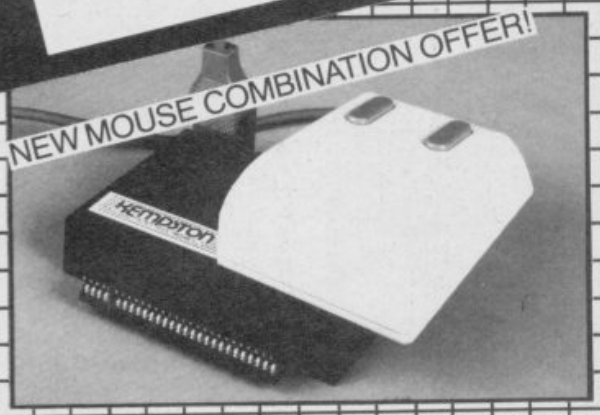

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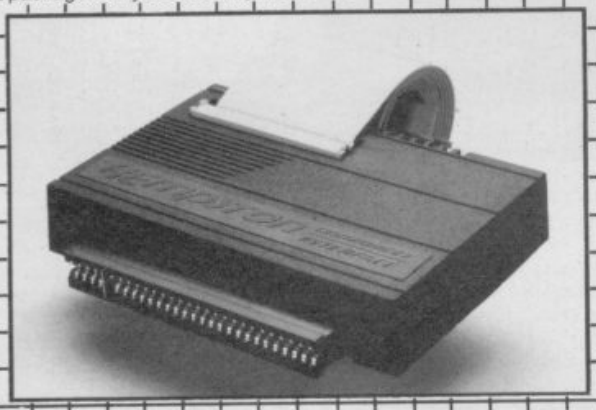

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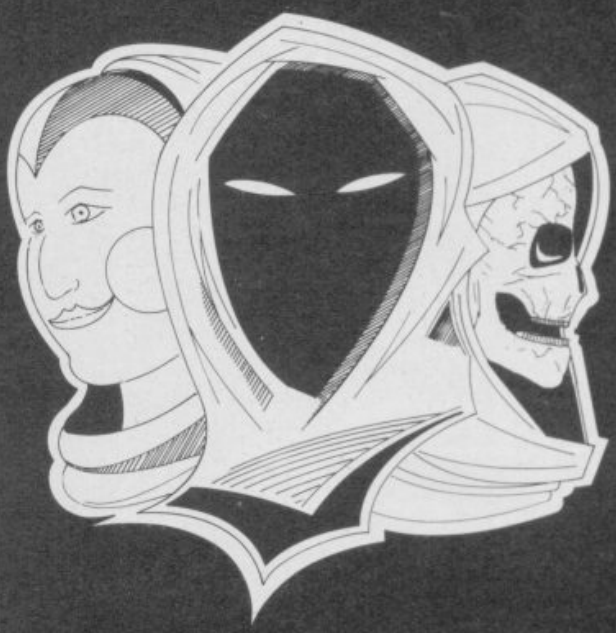

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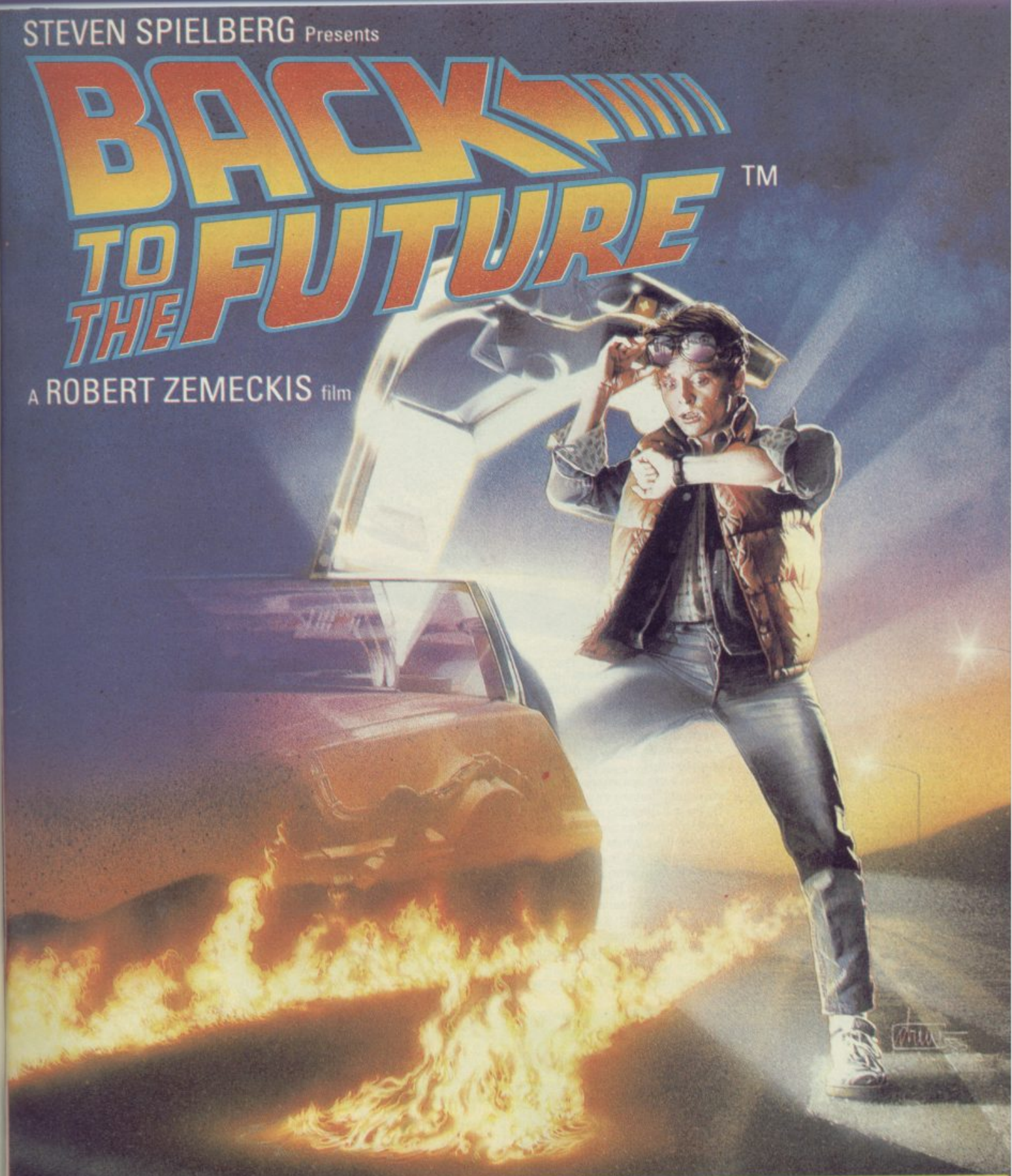

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Winter Games

THE LOG FIRES and polished pine panels of the Calgary resorts may have been replaced by shiny plastic and chrome, but the weather's the same and so are the **Winter Games.**

There are seven events in the games, which take place in three locations, and there are two parts to the competition. The first includes a trip to the high slopes and the ski jump and then a visit to the minor crests for hot dogging. Finally, there is the specially constructed rink for speed skating. There are different techniques for cutting snow and ice.

Practice each of the events in turn. You'll need to get your timing right if you're to win any medals — let alone gold. Don't worry, practice sessions are done out of view of the judges. You don't win any medals but you get a time which you can aim to improve on.

The Ski Jump is my favourite event in part one. You put on your skis and start from the top of a long, sloping ramp. The organiser, Epyx, recommends that you use sticks and I agree — I've never been one for free-fall skiing.

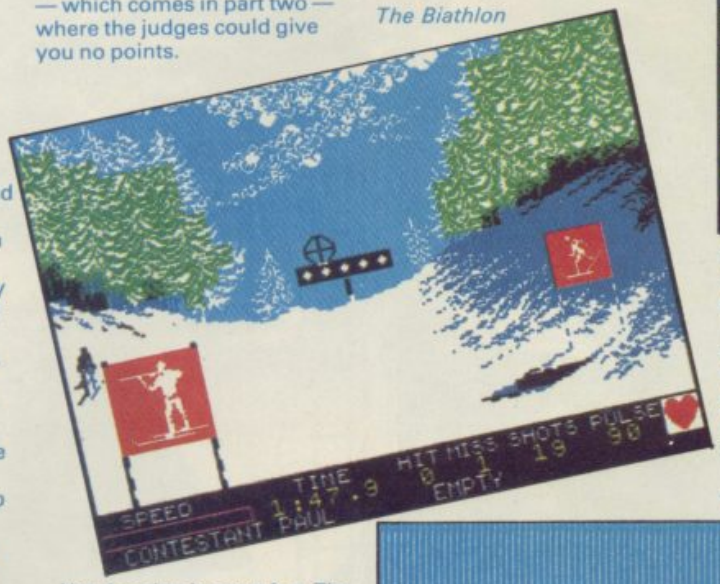
When you are ready press forward on the sticks and you will start to slide, gathering speed all the time. At the end of the ramp press forward again and you will take off. If you fail you end up head down in the snow.

If your legs are bent keep your sticks up and you won't fall. On some occasions you may lean too far forward. If so, pull back on the sticks — not too far or you will lean back and will have to turn your sticks to the right.

The biggest danger on the jump is when your skis cross. Slam down on your sticks or you will crash. Snow is soft but not when you hit it at 100 kph.

Don't worry if you land awkwardly or fall over at the end of the jump during the competition. The judges may fault you but you will not be disqualified. The same goes for all the events except the skating — which comes in part two — where the judges could give you no points.

The Biathlon



Hot dogging is great fun. The event involves skiing off the frozen crest of a snow bank, while performing aerial acrobatics — or is it aerobics? Anyway, it's all very frightening.

There are six movements you can make before you land. The Daffy is a backflip with legs pulled together and as straight as possible, while Backscratching is a forward flip while keeping the ski handles tucked into the body. Mulekicking means throwing the hands into the air and bending the knees. The Swan is a combination of the Mulekick and the forward flip.

The most marks for the event are gained for the forward and backward flips — in layman's terms somersaults — but those are the most dangerous, if the most flexible, jumps. By keeping your stick depressed you can do one, two, or three flips in the air but your timing must be accurate or you will bounce onto your backside.

Before you launch yourself off the crest you should decide how many flips to attempt and turn your stick into the manoeuvre as soon as you can after the leap.

The finale for the first part is the ice rink and means a good

The Bobsled run

deal of stick pumping with the speed skating. It is the least popular event and involves building up and maintaining speed against your opponents. Although a lot of stick jostling is required you should push and pull using a strong, slow rhythm. Frantic pumping will only decrease your speed and increase your finishing time.

The four events of the second part take place on the mountainous slopes, on the bobsled run and across the opaque sheen of the ice rink.

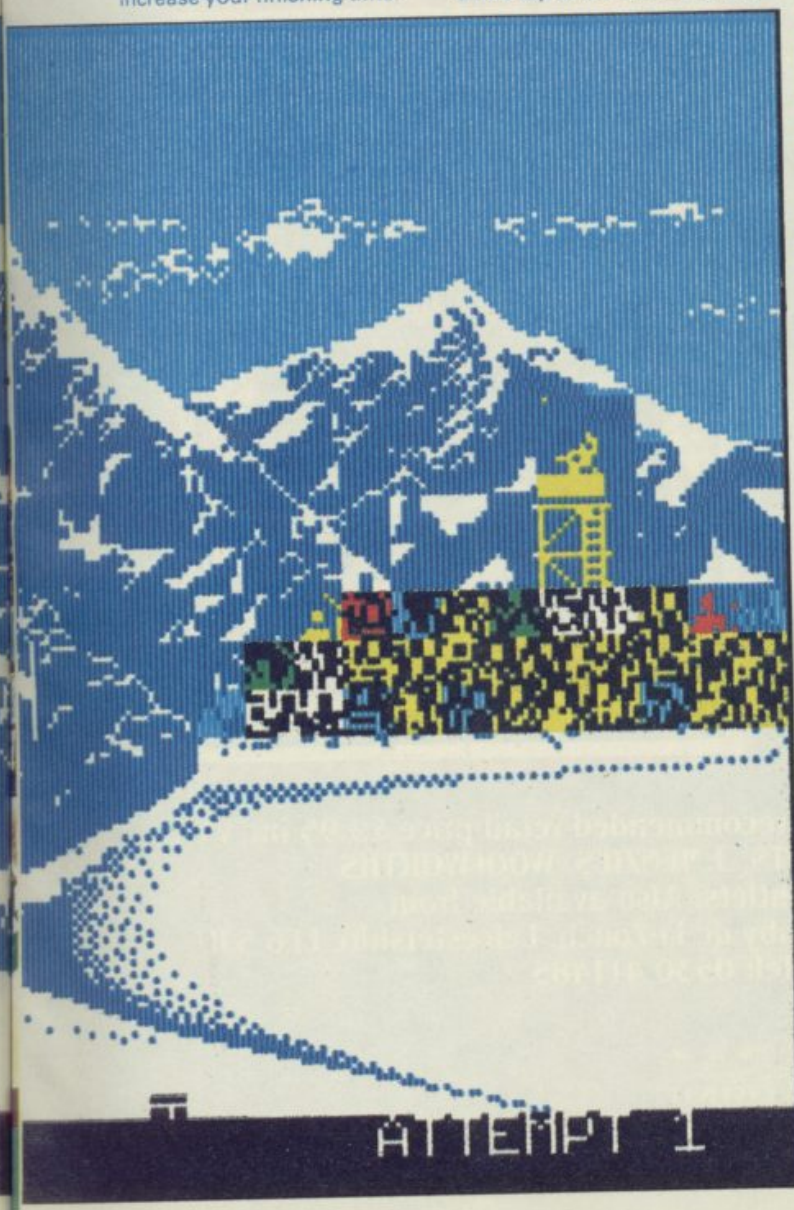
The Biathlon takes you over snow-covered hills and your aim with a gun must be as good as your speed on skis. You have 20 bullets and must race up and down the slopes to locate your targets. Again a slow and steady hand, rather than frantic pumping, is required to ski.

When running downhill it is best to slide using an up and down motion with your sticks. Moving across the flatland and up a slope should be accomplished by pulling the sticks left and right.

When you arrive at a target area, unsling your rifle, pull back its bolt and push the bullet into the barrel. Be careful not to push too far forward or the bullet will flip out onto the snow leaving the chamber empty and your chance of a point lost.

Remember that this is a timed event. The more time you spend at the targets the less time you will have to ski to the next.

The Bobsled is the most terrifying experience. You start at the top of the icebound run.



The sled contains two people, one steering and the other at the back to act as a counterbalance. When the sled shoots up one wall of the run you should lean in the opposite direction to avoid a spill.

The run provides one of the most tricky events in the games and just when you think you are coming into the home run you will bounce off an edge and come a cropper. The last two bends are the ones to watch out for. The others go left, then right, in sequence but the last two are both left bends.

Figure and free skating are held on an indoor rink and provide a welcome relaxation for everyone except the participants.

Figure skating consists of a short series of moves each of which must be executed with as much grace as possible and as few sit downs as you can manage — that ice is cold! The easiest moves are the sit and camel spins.

The most awkward postures are the jumps which include the Triple Lutz, the Double Lutz, and the Triple Axle. The most important thing to remember is to make a jump forwards. Jumping backwards on ice is not recommended.

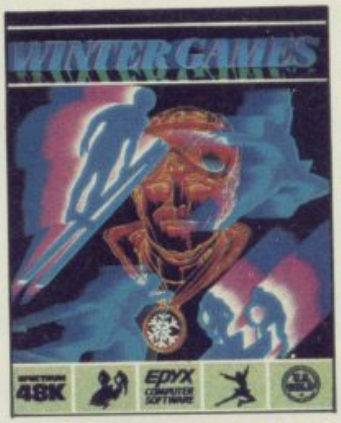
Winter Games is guaranteed to get your blood and muscles pumping although — unlike **Daley Thompson's Decathlon** and **Hypersports** — it's unlikely to knacker your joystick.

The scenery is colourful and very detailed. The tiny villages surrounded by pine trees and ever-white mountains provide the frosty setting for the smoothly-animated skiers and skaters — not a hint of dot crawl, flicker or attribute clash.

The graphics are more realistic and appealing than those used in **Winter Sports** from Electric Dreams, and more innovative. **Winter Sports** loads its first three games at once, and then you have to load the final three in one at a time. There's no messing around with **Winter Games** — just two long loads using both sides of the cassette.

Three of the games in **Winter Sports** differ from those in the Epyx package. Those are slalom, giant slalom and ice hockey. If you buy **Winter Games** only you won't be missing much. So, go for gold — or at least a high personal standard — without stepping into the slush and damp of real snow.

John Gilbert

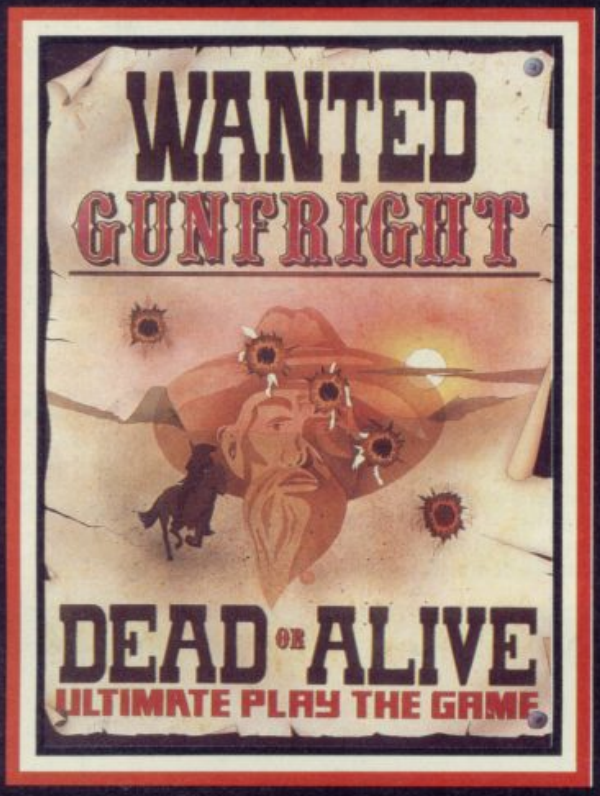


Publisher Epyx
Programmers Jon Woods and Geoff Brown
Price £7.95
Memory 48K
Joystick Kempston, cursor, Interface II
★★★★★

John Gilbert's Personal Best

EVENT	PREVIOUS	NEW
Ski jump	186.00 points	192.00 points
Hot dog	7.2 points	9.2 points
Speed skating	4:1.6 mins	4:0.1 mins
Figure skating	1.9 points	2.8 points
Biathlon	6:18.0 mins	4:56.0 mins
Bobsled	0:25.34 mins	0:25.18 mins
Free skating	1.0 points	2.8 points

48K SINCLAIR SPECTRUM



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BATTLE OF BRITAIN

"Well presented with clear, concise instructions ... a game that will make your head hurt and your hands sweat." (Popular Computing Weekly 11/85) "PSS have every right to be proud of this game ... it is very good indeed and I would recommend it to any wargamer." (Amtix 12/85) Options include a Training game (one day's fighting only), Blitzkrieg, or a full 30-day Campaign. Choose to have arcade battle sequences or not on each option. SAVE and 3 skill levels. (PSS) Sticks OK. Promised for Spectrum endJan. **Cassette £9.95**

DESERT RATS

Reconstructs the North Africa Campaign from the arrival of Rommel's Afrika Korps in Tripoli to the end of the second Battle of El Alamein. For 1 or 2 players. Choose to fight the whole campaign or one of the major battles, on either side. 3 skill levels. No Stick. (CCS) **Cassette £9.95**

THEIR FINEST HOUR

"Winning is difficult, but the first time you defeat the German armada, you will feel that you have done something worthwhile. You will also feel exhausted." (Sinclair User 11/85) You control Fighter Command. Fight one single day or the full campaign. Choose game speed from 1 to 255, from fast arcade action to thoughtful analysis. Sticks OK. (Century) **Cassette £9.95**

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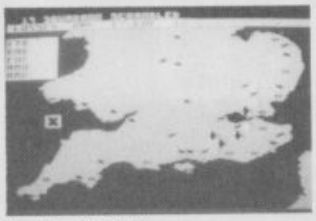
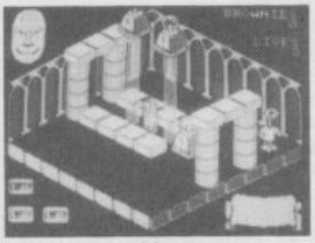


Battle of Britain

Desert Rats



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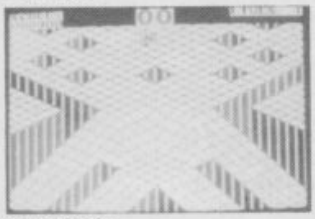

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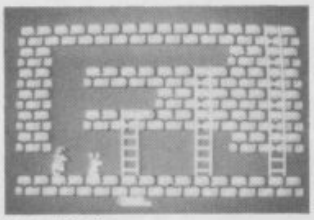

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"A remarkable addictive game. The graphics are really impressive ... we have never seen anything like it on a Spectrum." (Sinclair User 12/85) "Looks exactly like 'Marble Madness' with those 3D geometric landscapes full of lumps and dips, sudden falls and gaping chasms ... the sound effects are the best I have ever heard from the Spectrum." (Popular Computing Weekly 11/85) **Sticks OK. (Melbourne House) Cassette £7.95**

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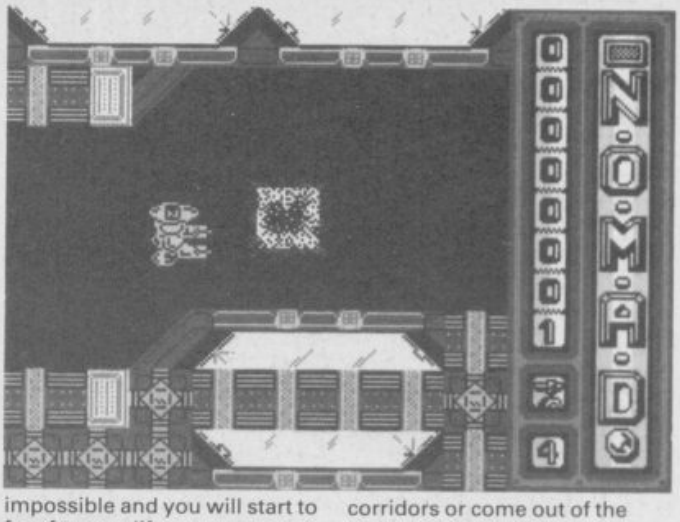
NOMAD



THE ASTEROID spins alone in the darkness of space, shelter for a city which has been shattered by decay and the dedicated evil which lies within it.

Its heart beats quickly but strongly, providing the power for the city's defences. They are protection for the evil tyrant Cyrus T Gross — the last vestiges of his stronghold which still provides too much firepower for humans to withstand.

Fortunately no human will have to go up against the might of Gross. You have been given permission to use the experimental NOMAD robot to penetrate the centre of the city and destroy him.

The Nemesis Organisation Mobile Attack

SOFT 4 WARE

Droid is highly intelligent — and looks like a pregnant kangaroo. Its infra-red visual receptors and high-frequency audio-receivers are capable of detecting lasers, missiles and alien life forms. It has two magnum 57 calibre blasters but is not indestructible, so be careful.

To further complicate matters NOMAD is subject to the gravity conditions of the asteriod — there are none. If he moves forward he will not stop immediately if you pull back on the controls. He will slow to a halt. You can get him to do an emergency stop by turning 180 degrees but even then he will not halt dead in his tracks.

The complex assault course starts at the spaceport. From there you must wheel your way through the slums into the city centre and break through to the enemy HQ before confronting Gross in his personal quarters.

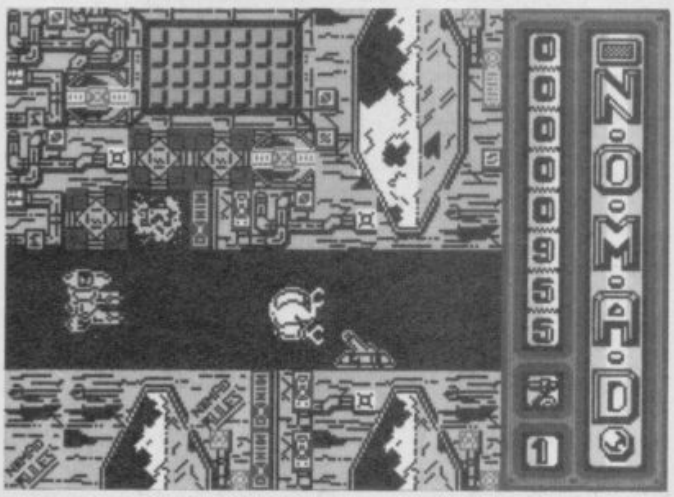
Most of the defences — at least of the slum area — are easy to defeat using simple tactics, but some are more surprising. Early defensive deployments include missiles which pop out of their wall tubes like ping pong balls, and catherine wheels which spit small ammunition in great arcs.

Each of the screens should be taken as a mini game and the transition between the last and the next must be accomplished with the utmost amount of care. You should stick closely to one or other of the corridor walls to avoid being destroyed too quickly, and also to set up for a shot at either a missile tube or catherine wheel.

Take the latter out first. You can collide with these magenta monstrosities without any damage but a hit from one of their missiles will destroy you.

The best technique for knocking out wall-based missile launchers is to move along the wall in which they are situated until you are almost in front of the launcher. Make the movements in short slow spurts or you could end up staring down the end of a barrel. Next you should turn in towards the tube and fire. Your blasters will come to life and wipe out the missile pod giving you points for the launcher and any missile you hit on its way out.

During all manoeuvres it is best to hug the walls; you'll meet most nasty surprises in the middle of corridors. On some occasions, however, you may find yourself stuck. Moving forward will be almost



impossible and you will start to fear for your life.

Don't panic.

Just turn your back to the wall and squeeze the fire button gently. You will find that the magnetic force is negated and you can be on your way — hugging the other wall for comfort.

There are three types of gun installation. The first provides a single line of fire while the second produces cross fire with two guns at 90 degrees from each other. The most dangerous — the third — is the vertical series. Suddenly you will find yourself dropping down a long tunnel-like corridor. Three guns — two on one wall, one on the other — are positioned at varying distances apart. They fire at random and one is bound to get you if you hesitate or try to storm them.

While you can rack up points by knocking out the vertical series it is best to play the coward and sneak past them. Hug the wall at the top of the corridor then let go of key or joystick controls until all three obstacles are past.

In some instances another deadly surprise — a catherine wheel — lies at the bottom of the corridor. Keep your finger over the fire button and make sure you exit the corridor with your weapons pointing forward.

The entire city — as well as being broken into levels — is split into sectors using gates operated by switching mechanisms. Some of those are closed while others remain open. The switches are levers sticking out of the wall and to operate them you just brush up against them. If a lever points to the right its gate is open, to the left and its gate is closed.

The gates are simple to overcome but slow you down making you more susceptible to the incredibly evil Robothugs. They can appear at any time during the second and upward levels of the game, and cause havoc with their suicidally explosive leaps at NOMAD.

They can glide down corridors or come out of the walls and look like Corona bubbles on their way to a fizzical. They make rare appearances but when they do you should drop everything, get into the middle of the corridor, wait till they get close and fire your weapons. One shot will destroy them but you will not get a

second chance — they float incredibly quickly towards their prey.

NOMAD suffers from one insurmountable problem. There are not enough species of obstacle and those that are included are easy to overcome once you know how. Finding the answers is a case of trial and error but once found the game will no doubt quickly find its way back into the cassette box.

The game gives a nice twist to an old shoot-'em-up theme, but does not go far enough. The action, though slow, is colourful but, again, there is little variation in the graphics. It might prove entertaining for new Spectrum owners though the more seasoned gamers will require more to fill their precious playing time.

John Gilbert

Publisher Ocean
Price £7.95 **Memory** 48K
Joystick Kempston, cursor, Interface II
★★★★

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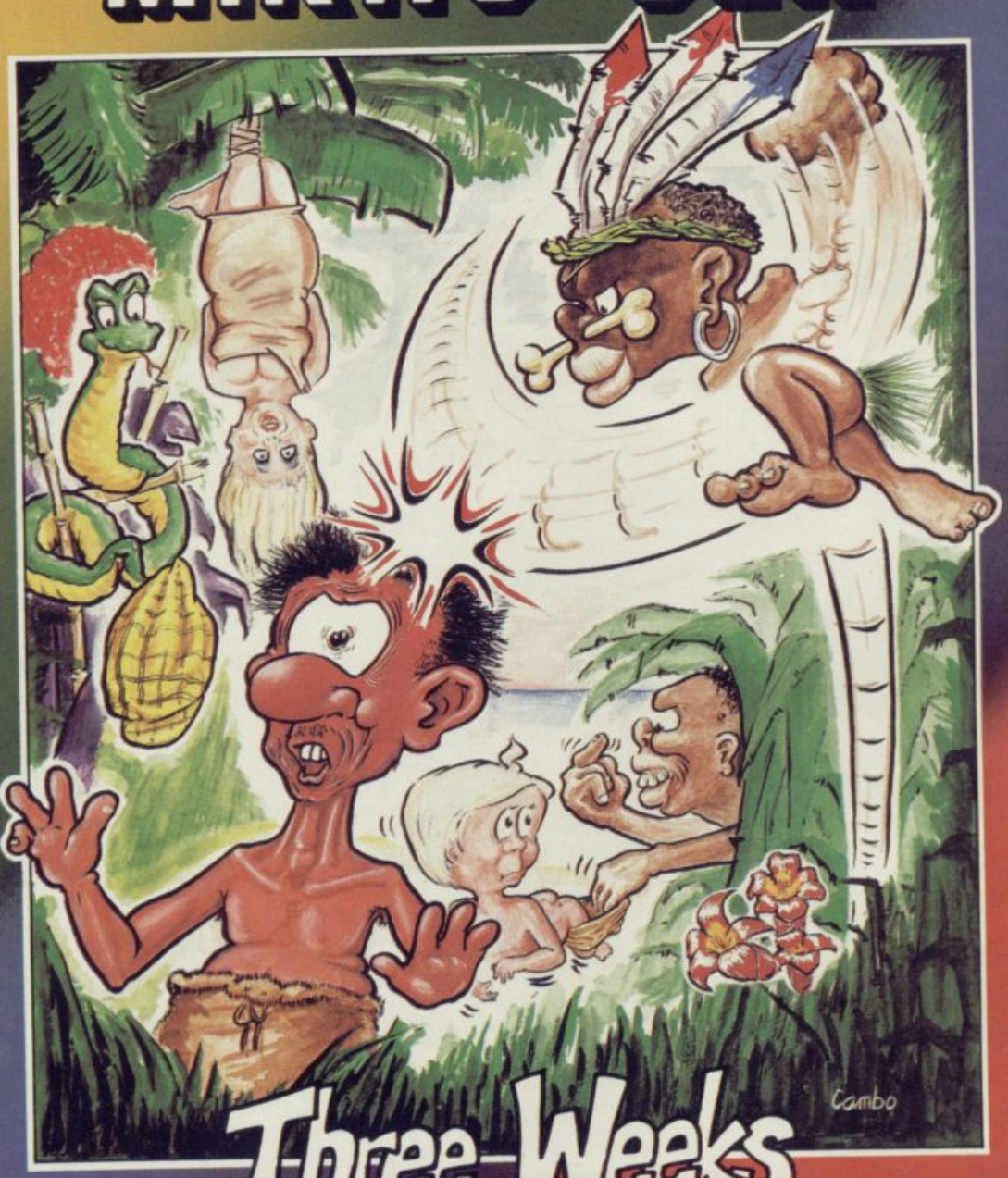

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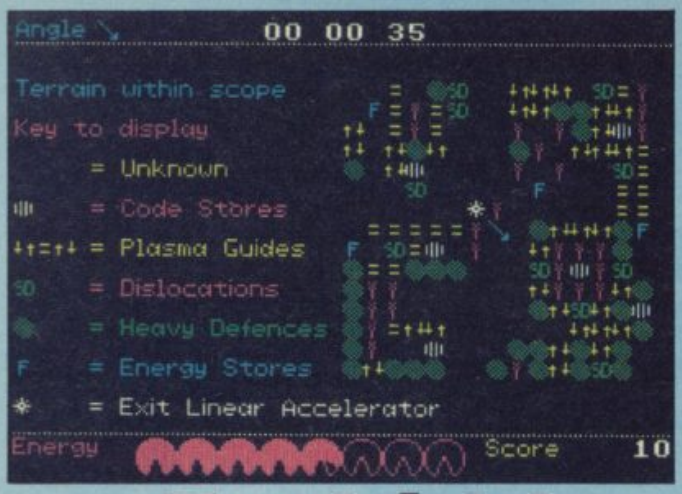


Forbidden Planet

SINCLAIR USER CLASSIC

EVER SINCE I found the high-score table on **Halls of the Things** insulting me I've been confused by Design Design.

More recently we've seen **Dark Star**, a soft opera of galactic zapping, and the sequel, **Forbidden Planet**, is even harder. The cassette insert contains numerous obscure jokes but nothing about the game. The instructions on-screen helpfully advise you to collect all the bits of a code, and show you a picture of a hole, explaining that it's a hole.

I press the start button and find myself hurtling through space while tall thin towers and short wide platforms launch missiles at me. Score — 20. Time to get help.

Simon Bratell at Design Design wrote the game, so I talk to him. "It's best if you play it in the dark," he says.

After a long lunch I return to the fray and start again. The object of the game is to completely obliterate the galactic nasties whom you theoretically pulverised in **Dark Star**. Players of that game will find **Forbidden Planet** a lot easier to get used to. The bad guys have only one planet left, and you must explore the surface and find all the pieces of code. A map facility exists, but you only get to see a small part of the playing area at a time.

Because Bratell goes in for small targets and expansive black horizons, with little colour, everything moves around the screen at an extremely fast pace with no apparent loss of smoothness.

There are two playing techniques. Various squares on the planet map contain baddies in profusion, and those are static defences which fire missiles at you — depicted as a series of expanding squares or pieces of fractured light. Yes I know, it sounds confusing, but so is the game.

This is all accompanied by weird sound effects, buzzes, trills, clackings and explosions. You can choose the level of weirdness yourself. Those areas of the game are wild shoot-'em-ups, where you must shoot down the missiles. Some of the towers will only fire once and then pop down into the ground — go for the missile, not the tower.

The short platforms, on the other hand, fire several bursts, so eliminating the platform itself might be a better tactic there. As you gain skill, you may find it profitable to fly at a high speed through these defences, but you'll still have to take out a high proportion of them as they flash past.

The second element involves force fields which, as in **Dark Star**, have holes in them through which you must accurately fly. Some holes are dummy holes and will destroy some of your shields if you try to go through them. If you can see anything in a hole then it's safe to fly through.

There are also single-hole tunnels — a series of holes one after another. You don't have to work out which is safe, but once you are committed to going through them, they may channel you in an unwelcome direction. The whole playing area is a gigantic

Not much on screen — but it certainly moves fast

Halls of the Things

IN ITS DAY — 1983 to be precise — **Halls of the Things** was a tremendously advanced program. It's an arcade adventure in which you choose from a series of levels of halls inhabited by the Things — small and repulsive blobs which hurtle around spraying fireballs and lightning bolts in all directions, but mainly yours. You are armed with an almost useless sword, plus a fireball and lightning spells.

The fireball homes in on monsters and is most effective, but drains your power. The lightning bounces around until it hits something, costs less power, but has a nasty habit of coming back in your direction if it misses. Bows and arrows were available in the original, but we couldn't find them in the new version — which is presented as a surprise bonus without much in the way of instructions.

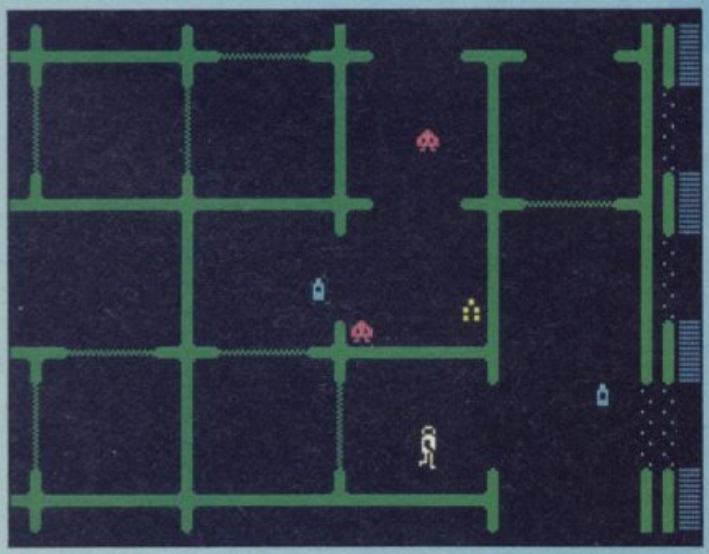
Around the halls are piles of treasure, some of which can be collected for points. Others turn into Things when you get close. There are also potions which repair your energy levels, and rather rare rings which are what you are supposed to be collecting.

It's great fun, and I still play the original at home sometimes, though I know a minority of critics were not so impressed. You either love it or hate it; it was the first game of its type, and has been very influential on the development of arcade-adventures since.

For those familiar with the original, the new version dispenses with the whole status display in favour of providing added options. Those include tougher monsters, strange mazes, or both together. Joystick options are included, and user-definable keys, though this is not a good game to play with joysticks as many keys are required for different spells, picking up things and so on.

It's a great bonus anyway, and if you didn't catch it first time round, it makes **Forbidden Planet** an almost insane bargain at the price. No collection of software 'classics' is complete without it.

Below: Hall of the Things



three-dimensional maze, with yellow holes flipping you into completely new parts of the planet to add confusion.

Luckily, both defences and the tunnel system remain reasonably predictable from game to game. Each game is different, but only because the sections of the map have been shuffled a little. Once you have worked out the correct sequences for particular groups of holes and defenders you can predict what will come next, and position yourself so as to cope with it better. Cope? Better? I'm not even convincing myself . . .

Forbidden Planet is one of the most difficult space games I've ever played. It's massive, very complicated and utterly addictive. There is an extremely comprehensive set of key-define options, the usual manic high-score table, and even an IEEE joystick interface option.

But that's less than half the story. If you succeed with **Forbidden Planet**, there's a bonus program, **Spectacle 2**, as with **Dark Star**. There are also a few surprises — a complete, updated version of the classic **Halls of the Things** thrown in free, and at least two other little games included. If, when loading the game, you press down key 0 and keep it down until the game has loaded, the computer decides that you want to play **Space Invaders** instead, and obligingly produces a perfectly respectable version of that old yawner. Get out of it by pressing F and you're in the main game.

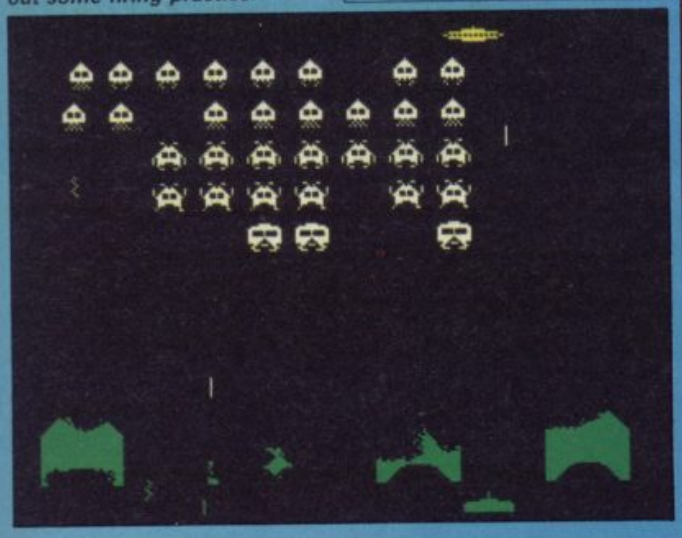
Furthermore, a certain combination of number keys held down produces **Whino Hunt**, where you run around being chased by whinos while making for your goal. This trivial bit of nonsense is actually very useful when you're so shattered and tense from the difficulty of the main game that you need a break. A little whino wampaging loosens the fingers and takes the pwessuwe off.

Simon Bratell says there's even more fun and frolics hidden away on the surface of the planet. Buy this game — it's marvellous value for money, with Halls included as well, and a tremendous piece of zap programming to boot.

Chris Bourne

Publisher Design Design
Programmer Simon Bratell
Price £7.95 **Memory** 48K
Joystick Kempston, Fuller, cursor, IEEE (alleged!), Sinclair
★★★★★

Bratell's Space Invaders dish out some firing practice



Vectron

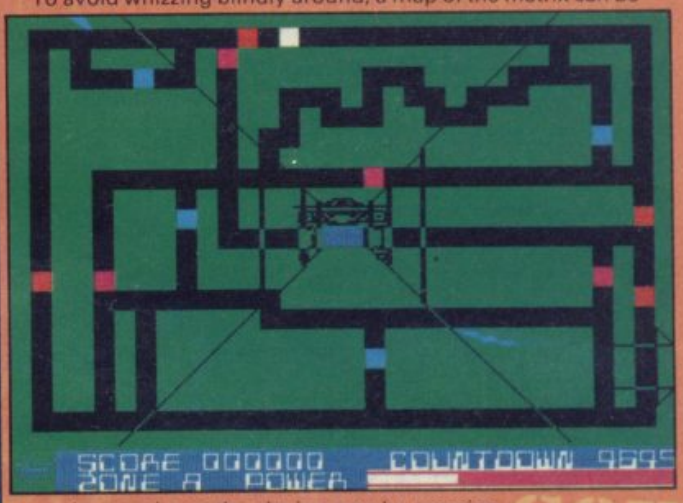
BRILLIANT or downright awful? A game of lightning reactions and great speed **Vectron** takes you back to the days when vector graphics and 3D mazes were the in-thing.

Vectron is one of those good old games in which you dash through the tunnels of a maze at top speed, trying vainly not to crash into walls, fireball spitting tanks, randomizers and anything else which crops up in your path.

If you are one of those sensible people who run off to make a cup of coffee while the game is loading, you are doomed to failure. The instructions are scrolled across the top of the screen while the game is loading. If you miss them, your only message is: Destroy all enemy craft. Travelling at a constant brain-numbing speed round the maze, you'll have to learn to take those corners to avoid hitting the walls. Should that happen, you'll lose energy and travel in the opposite direction. That can be a useful tactic as you can turn to approach the enemy from behind.

Your aim is to make your way through four screens and defeat the deadly Rom Robot before making your escape from the matrix. In the first screen you destroy both the randomizers and tanks and then pass on to the centre of the screen, through a gate which transports you to the second stage.

To avoid whizzing blindly around, a map of the matrix can be



superimposed over the playing area by pressing any key on the bottom row of the keyboard. Although a good idea, it is very difficult to see where you're going — you have to use the map to let you know when to turn. The map also identifies randomizers (red attribute squares), tanks (magenta squares), energy units (cyan squares), and your craft, a white square.

You cannot fire while the map is in view, but as soon as the enemy is in your sights, get rid of the map and blast away. The cyan energy squares are stationary on the map, and your cursor has to be at the top of the screen to shoot them. Very tricky.

In the second screen you have to shoot the Rom Robot's eyes as they flash. You'll need to be deadly accurate and hit the eyes more than once before it is destroyed. At the same time it spits bombs at you which will severely drain your energy. Once it has been eliminated, you will be transported back to the main maze and from there must make your way to the escape hatch at the bottom right hand corner. Unfortunately, your map has been destroyed and you have no directional help.

The final section is the escape screen. Blast the pursuing randomizers and tanks and try to get away within the time allowed.

One feature which is noticeably absent is a high score table. Although your score is displayed while you are playing, due to the game's high speed there is not much chance to take note of it. You end up not knowing how appallingly you played.

I found the incredibly fast vector graphics very tiring to play with — they have an almost hypnotic effect as you charge round. **Vectron** is also very difficult to play, even with the help of the map. I found it most unenjoyable.

Clare Edgeley

Publisher Firebird/Insight **Programmer** Mike Follin
Price £7.95 **Memory** 48K **Joystick** Sinclair, Kempston, Cursor
★★

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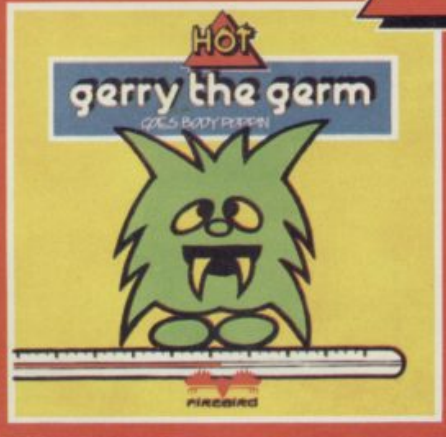

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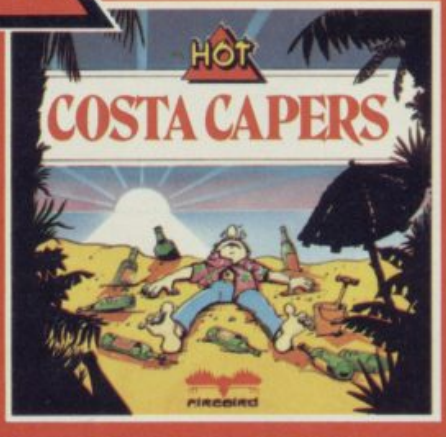

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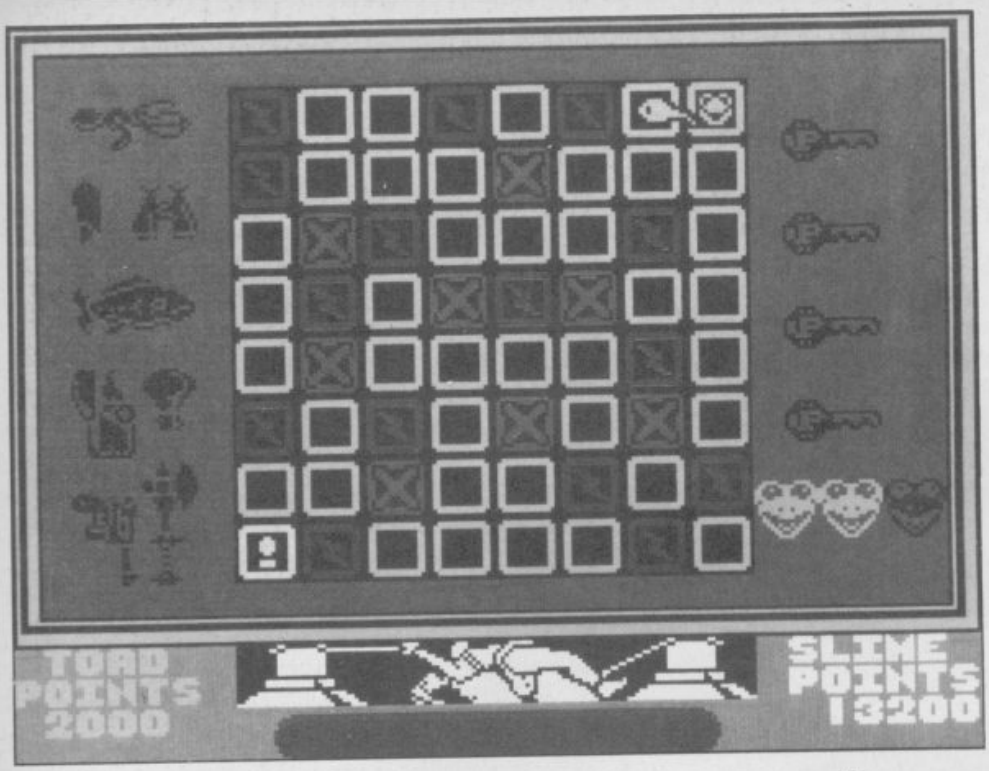


Cosmic Wartoad

I'LL TELL YOU a tale, lads. A tale of a toad, a fighting toad, hopping to the rescue of a toad-queen. A toad of distinction, battling the vile squelchings of the Rygellian Slime Things to rescue his lady from the Sludge Saw which threatens to slice her warty loveliness from web to web.

A tale of the greatest hero of his race, the tale of the **Cosmic Wartoad**.

Alternatively, we could describe the latest line in software from Denton Designs via Ocean, and leave the amphibian fantasies to the cassette blurb.

Cosmic Wartoad is a mix of arcade and strategy, as we've come to expect from the programmers of **Enigma Force** and **Frankie Goes to Hollywood**. But it's a much lighter effort than those two soft operas, and really represents an effort to tie several standard shoot-'em-up concepts together within a long quest.

Play takes place across an 8×8 grid of time nodes, through which you move one at a time. Each node is occupied by one or more waves of slime monsters, which you have to defeat to progress. There is also a network of roads 'to nowhere and somewhen' which allow you to jump several nodes at once if you have collected the keys which open the roads.

To reach the queen and rescue her from the Sludge Saw you must traverse the grid from top right to bottom left — a minimum of 14 moves, according to Denton Designs. But you can't disable the hideous machine without collecting eight items of a cosmic tool kit along the way. Those include stellar fish, a chronosynclastic Stanley knife, and a Zippo lighter — funny once, completely irrelevant twice.

The graphics are smooth, competent and moderately fast-moving, but since the game falls into fairly simple sections anyway, they are not particularly breathtaking. The toad itself is large and fun to look at, and the monsters are different in behaviour and appearance.

First there's the Slime Master, which produces small slime pawns to protect itself. Those home in on you, but shooting them with your Constant Recoil Alpha-Pellet Gun is not much use as you'll only win by zapping the big slime itself. Touching it is instant death, although all other monsters simply reduce your energy, and you have to hit it many times to destroy it.

Then there's the Sludge Slug, a set of squidgy space invaders which drop gobbets of muck on you like a flock of mutant pigeons. You can only move along the bottom of the screen — draw the slugs into attack and then run, turn and fire.

Finally you must deal with the Frenzied Flies, Galaxian-type nasties which come at you four at a time, homing in like the slime pawns. The cassette blurb says they are particularly dangerous adversaries, but I found them a doddle compared to the Slime Master.

Defeating the monsters is done on a sort of tug-of-war basis. A bar chart or similar indicator goes up if they hit you and down again if you hit them, so it's not just a question of killing a specific number to move on to the next level. Each monster comes in four tasteful colours. Red is the most dangerous, then purple, yellow and white — and you have to go through each shade to win. For example, if you get lumbered with the purple Slime Masters, and manage to defeat them, you then get the yellow ones and finally the white ones before you are given a new monster to fight or put back on grid to make a new move.

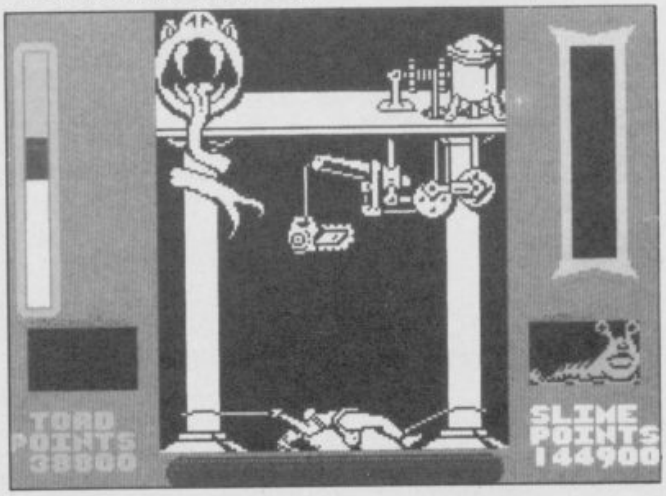
Apart from your gun you also get Times Ultrasonic Robotic Defenders which look like small eggs deposited by your toad every time you score a thousand points. Those operate on the Slime Master and Frenzied Fly screens, and any pawns or flies that collide with them are stuck until the defender decays. In keeping with the Tug-of-War style play, there are two scores — toad points for you and slime points for the computer. The difference between the two scores affects the lasting power of the defenders.

You get three lives with which to cross the grid, but the game is not over if you lose them all — instead you are sent back to the beginning again. Meanwhile the Sludge Saw has descended closer to the body of the toad queen, and the points totals are carried over — you have 90 minutes of real time before the saw reaches the queen. That is an unusual feature of play, and gives you an opportunity to explore the grid quite thoroughly.

The final feature concerns the gun, which eventually runs out of ammunition. That can be replenished on certain nodes, and your path will have to include several of those if you have any chance of finishing the game. Thus you progress, playing sets of simple arcade games — though by no means easy to win — and trying to discover a reasonably safe route across the grid as you go.

The ridiculously over-the-top scenario and blurb is almost like a satire on those space games where the over-hyped cassette covers bear virtually no relation to the game itself. Surprisingly, **Cosmic Wartoad** is extremely playable, pleasant on the eyes, and thoroughly addictive — proving once again that you don't need 500 locations and state-of-the-art 3D megawotsits to make a good game.

Chris Bourne



Publisher Ocean
Programmers Denton Designs
Price £7.95
Memory 48K
Joystick Kempston, Sinclair, cursor
★★★★

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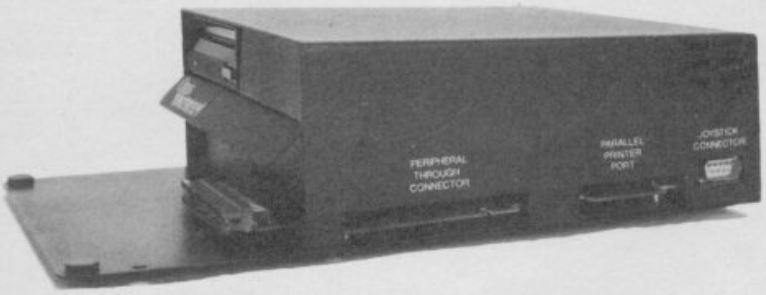

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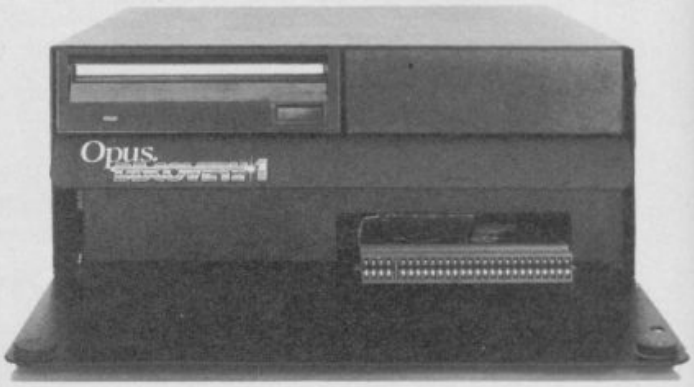

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Gunfright

YOU'VE BARELY started reading this review and already you're moaning 'oh no, not another Ultimate slagging off.' Well, you're right, up to a point, but I tried really hard to find something in **Gunfright** which lived up to the early '85 Ultimate standard.

This is the first offering from the UK's premier software house since **Nightshade**, some four month's ago. When Chris reviewed that game, back in October's issue, he ventured to predict that "Ultimate may be running out of steam. Or dare we hope for something really special this side of Christmas?"

Gunfright, which arrived at the tail end of last year, isn't it. It's different, but in ways which are scarcely going to appeal to die-hard Ashby addicts.

For a start, **Gunfright's** no arcade-adventure, but a shoot-'em-up. You're going to have to resort to those lightning joystick reactions. There are no puzzles to solve, no objects to collect . . . It's all bang, bang.

Graphically it's almost identical to **Nightshade**, with a 3D view of the alleys and shacks of a western town. As you mosey along the streets of Black Rock the buildings which would otherwise obscure you are replaced by white lines denoting their perimeters. Clusters of rocks scatter the roads and, peculiarly, the building interiors. A touch of the Z or Shift keys and your viewpoint changes to a different angle.

You control Sheriff Quickdraw, eyes peering out from beneath his ten-gallon stetson, and you're out to rid the town of, as the insert poetically puts it, a "whole loda baddies a whoopin' and a wailin' ". You're armed with a six-shooter, but ammo is costly and reloading will set you back the going rate for bullets.

The game opens with a facile arcade sequence in which you aim at descending money bags to accumulate bounty money. The amount collected will be used to buy bullets and horses and pay off fines. This kind of thing departed gracefully from computer games eons ago, and for Ultimate to resurrect it is unforgivable.

After this irrelevance we pass to the game proper, and immediately we are in known territory. The sheriff stands outside the jail, and the touch of a joystick sends him scurrying up, down, left or right. To the left of the action screen is a Wanted poster, with the current baddie and reward displayed.

Stetson hats indicate the number of lives remaining — you start with three — and below them is the amount of bounty money you hold. A gun chamber shows how much ammunition you have left, and this is reloaded automatically when empty. Bottom right is the 'telegram', which lists the going prices of bullets, steeds and fines.

Anyway, enough of the finer details and on to the action. Doing your best Gary Cooper you stride forth from your sheriff's office and encounter fairly rapidly the hazards of the town. No — not the rampaging outlaws, but the honest, god-fearing citizens themselves, who wander aimlessly bumping into anything in their path. Collision with one means a life lost and $150 fine deducted from your bounty. A nice touch is that of the hats flying up and coming to rest where the hapless townsfolk once stood.

Pretty soon you'll chance upon what at first glance seems to be an irate gunslinger — hopping about waving his shooter rather dangerously. After you've filled him full of lead you belatedly realise that the ex-cowboy was an excitable innocent bystander pointing in the direction of the nearest baddie. Godammit, another $150 lost.

With the aid of other helpful citizens you'll eventually run into Buffalo Bill, the first of your wanted men. Don't wait for him to fire — quickly plug him one. The game now moves into fast draw mode, and the screen changes to a head-on view of the gunslinger who, even as you pull back the trigger on your trusty Kempston, is peppering the screen with bullet holes. If you get to him first you get the reward — $350 — and return to the main game in search of Billy the Kid, your next villain, with $700 on his head.

And so it goes.

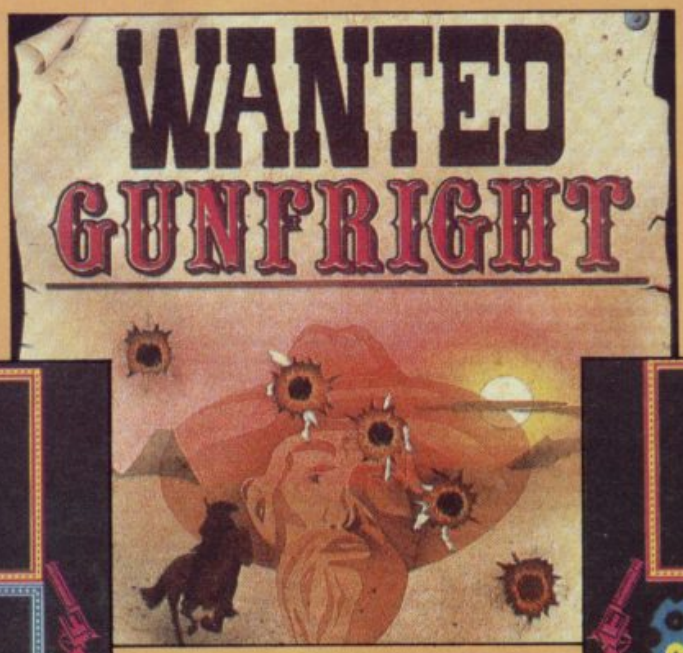
Oh yes, Panto. Remember that decaying horse carcass you avoided earlier, thinking it to be another bit of background colour, like the cacti and the pebbles? Try stumbling into it and — Geronimo! you've got yourself a gen-u-whine pantomime horse, capable of great speed and, even more interesting, the ability to lay waste half the town's population without losing Sheriff Quickdraw a single life (though he does, unfortunately, have to cough up the fines).

I got quite carried away with ol' Panto, and galloped about the streets leaving a wake of empty ten-gallons behind me. It was more fun than searching for Billy the Kid, any road. The cassette inlay instructions — almost comprehensible for once — recommended Panto for pursuing mounted bandits, if you find any.

In the end, what have you got? Gunfight at the almost-OK Corral or Bad Day at Black Rock? **Gunfright** is good — it's difficult, attractive, amusing and even passably addictive — but for Ultimate it's not good enough. It gets four stars, because Ultimate has yet to release anything which isn't value for money, and maybe it'll win over some arcade converts. But as for me, pardner, ah'll jes hang around these here parts a mite longer for that there **Cyberun**, dang-nabbit.

Wild Bill Scolding

Publisher Ultimate
Price £9.95 **Memory** 48K
Joystick Kempston, Sinclair, cursor
★★★★



Opening arcade sequence

Shootout with Buffalo Bill

SPECTRUM 48K

Arcade

YIE AR KUNG FU

If you can master the ten moves, expect the unexpected and FIGHT for your LIFE against the formidable masters of the martial arts you may live to meet them again on the mountain or in the Temple.

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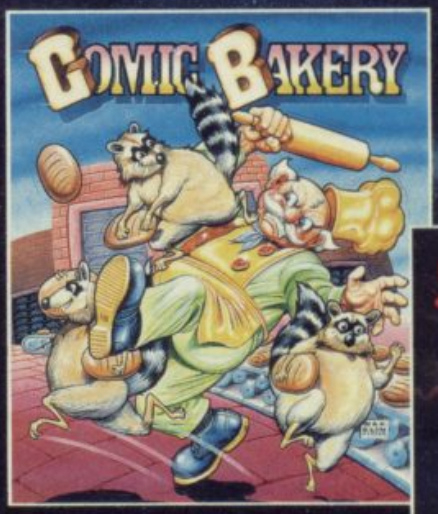

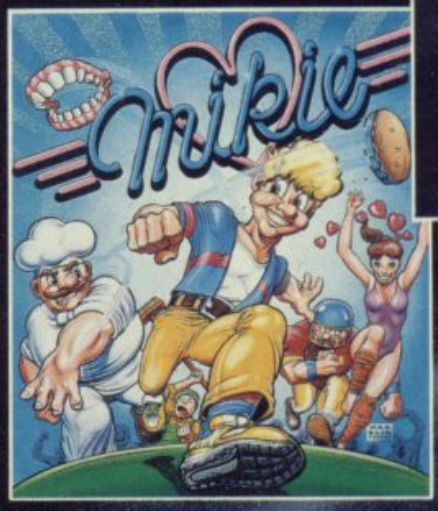

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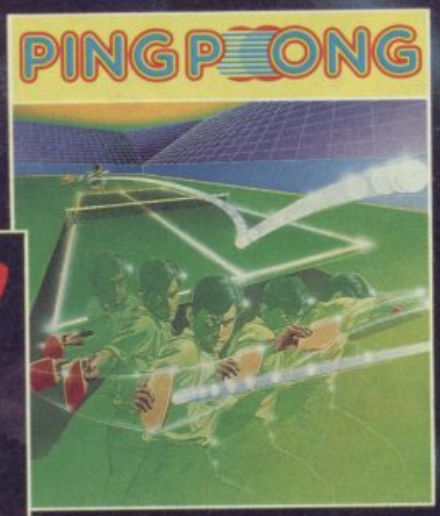

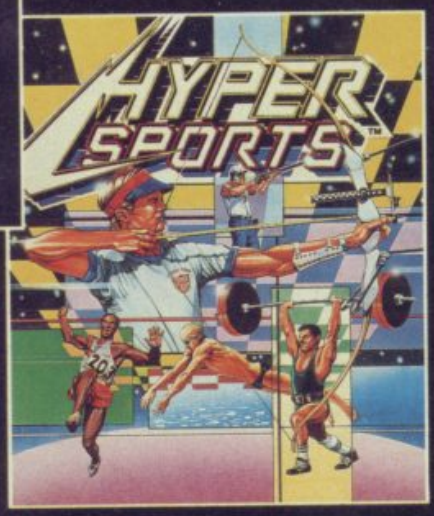

...CADE ...LOI ...LOTS

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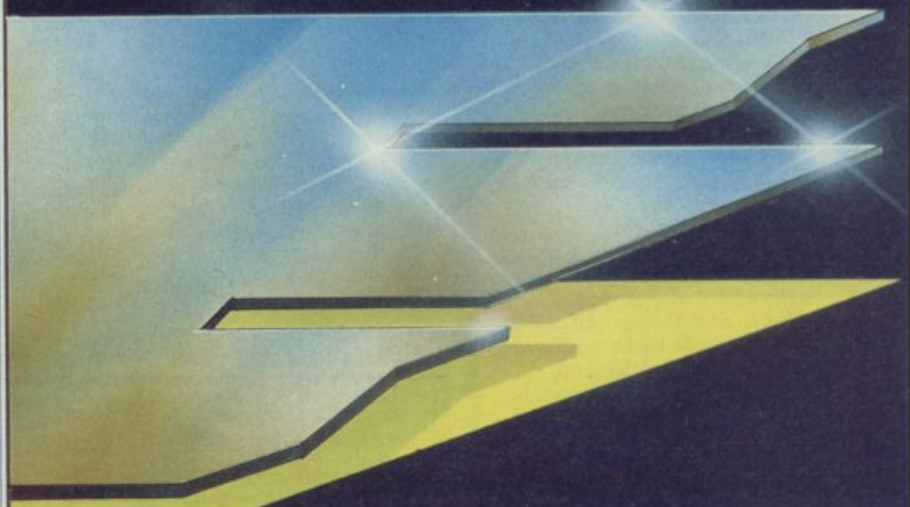

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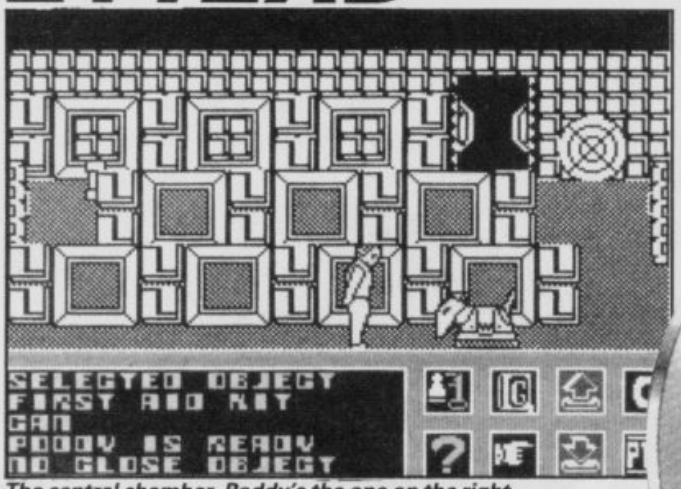
2112AD



The central chamber. Poddy's the one on the right

THE YEAR is 2112AD and technology has advanced . . . Citizens do all their shopping by computer, work at their computer and derive all their entertainment by computer . . . All menial tasks are now carried out by robots . . .

"The city of London . . . vast computing complex . . . running the country . . . turning into a Dictator . . . oppressing the British public . . . power . . . servants . . .

No prizes for guessing you're reading extracts from yet another piece of cassette inlay hyperbole, in this instance that accompanying Design Design's latest, **2112AD**. Sounds more like 1986 to me, but even if it was, it would be just as irrelevant to what you actually have to do, which can be summed up in fewer words: explore the complex, locate the ROM cards, return them to the central room and insert them in the correct order. This, as the inlay puts it rather less hysterically, "will hopefully bring the computer round to a more sensible way of thinking."

And the game's not at all bad.

It's certainly attractive to look at. Clear, detailed screens depict the various rooms in the computer complex, each room a different colour, full of fancy mechanical thingies, gliding robots and whirring wall discs.

You are in control of the wimpish character who attempts to stride purposefully across the rooms. At his heels — or more often than not, somewhere else entirely — is his faithful robo-hound and K9-lookalike, Poddy. A bit like Tintin and Snowy, really.

In fact, the game looks like an animated Tintin book, with its sideways-on, crisp 2D graphics. As your hero and his mutt explore the complex, you can turn them towards and away from you, and there is scarcely a jerk as they change direction. Impressive masking ensures that they can disappear behind banks of machinery and partitions to reappear, hopefully, on the other side.

Below the large action screen is the scrolling message window and, to the right of that, a very complicated icon display. This is used for picking up, dropping and using objects, checking on the status of man and hound and objects carried by both. There are first aid and food icons, and one for unlocking doors.

There are lots of others on further screens, mostly to do with operation of the computer and the joysticks.

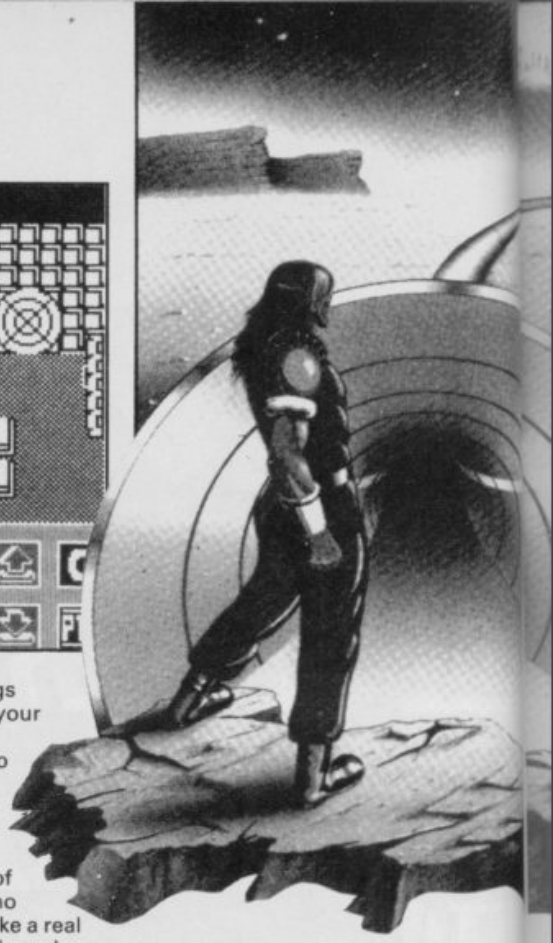
Virtually no explanation of these is found in the cassette inlay, which concerns itself instead with listing what the game does not feature ("Bloody Mushrooms! Spray Mount . . ."). It took me over 20 minutes just to get the Kempston working, by which time I was almost ready to stuff **2112AD** and its bloddy Poddy.

Accessing the icons can be frustrating at times, particularly if you're trying to drop a bomb in the path of some approaching robot, but you'll get the hang of it eventually.

You can carry only three items at any one time, but Poddy is capable of transporting many more, so give him the less immediately important ones, such as cans, can opener and light bulb. Give all fuses to him. You can only give or take things from Poddy if he's in your vicinity, so carry the first aid kit yourself, so you can use it if you get separated from him.

There is no straightforward way of controlling Poddy, who operates very much like a real dog — ie unpredictable and frequently stupid. If you enter a room with Poddy he will tend to meander off on his own, but if you remain stationary he will eventually return to you.

If you want him to return quickly — if, for instance, you're about to leave a room — then place yourself in his direct line of vision and thus manoeuvre him towards the door. Wait until he is at your heels and facing the right direction before leaving a room — he cannot exit a room without you.



Blade Runner

WE'RE only just months into 1986 and CRL has already found a new way to be pretentious. The company has licensed the *Blade Runner* film score and built a game around it.

Once loaded the game plays nearly two minutes of the film theme music. There's no way to break into the game; your auricular sense is force-fed, presumably because CRL paid a pile of money for the music — quiet though it is.

The game bears some resemblance to the film plot and almost none to the classic Philip K Dick novel which inspired it — *Do Androids Dream of Electric Sheep?* By the 21st century robot designers have created the replidroids — human droids used as slaves in the conquest of space.

These designer robots don't take to the idea of being slaves and a revolt in an off-world colony ensures that they are banned from Earth. Any replidroid found on Earth is to be eliminated. The job goes to a special unit of bounty hunters.

As a bounty hunter you have a company car, called a skimmer, which flies to its destination — this makes sense in a city which looks like a reject from a geometry set.

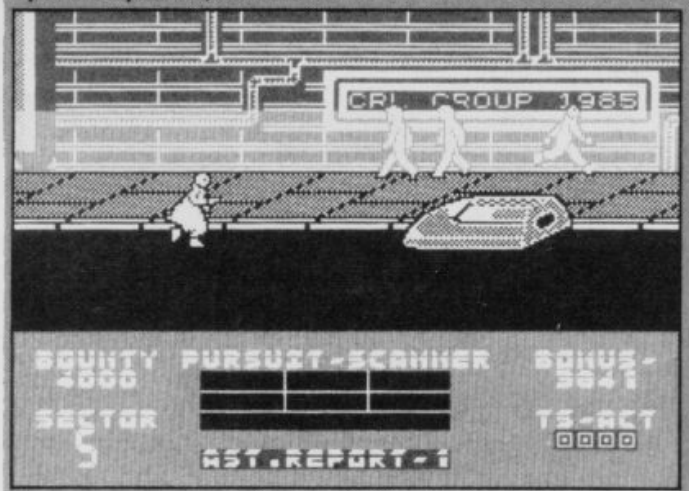
The most prominent feature of the dashboard is the map showing the sector in which you are cruising. It indicates the robots — coloured yellow — and their creators — cyan. Your car is shown as a yellow diamond. A scanner at the top right of the screen shows the direction your search for replidroids should take while, at bottom right, another window provides text information about robot locations.

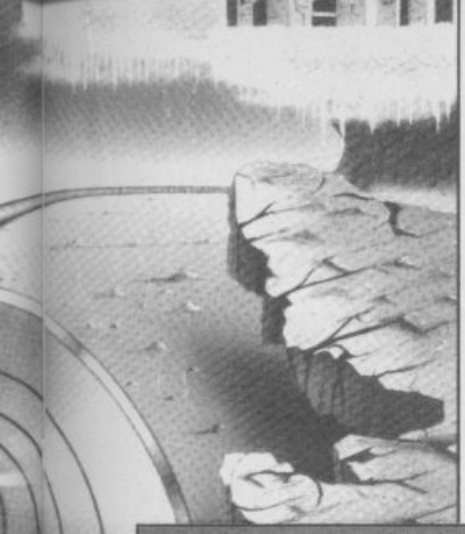
To retire a droid — a polite 21st century term meaning annihilate — you must land in its vicinity. You take your car there by moving the diamond cursor over the map until you are over the replidroid's marker.

Press fire and you are treated to a display of the skimmer descending to street level. It gives an opportunity for the program to show off, in all its stunning glory, the plodding graphics which are a feature of the game. The car takes all of a minute to land by which time the robot should have made good its escape.

No such luck. You hop out of

Spot the replidroid, then retire it





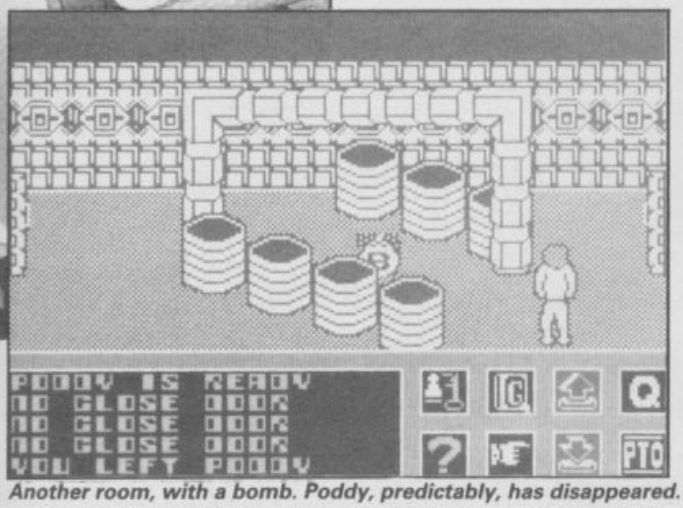
SOFT 4 WARE

Icon joystick selection

Using the keyboard layout described in the inlay instructions — bottom row for moving left and right, second and third rows for up and down — position the cursor over the '?' icon and press fire on the joystick. You now get a scrolling menu of all icons, from which you should be able to identify the appropriate one for your stick. Also look out for the 'Load Game' icon.

Move the cursor to the 'Load Game' icon. Press fire. You'll now get another icon screen, on which is a 'Select Joystick' icon. Press fire. You now have the correct icons for the various joysticks; identify the right one, press fire. You now have joystick control. Position the cursor over the 'Quit' icon and you're ready to move around the screen.

Easy, isn't it?



Another room, with a bomb. Poddy, predictably, has disappeared.

On the whole, Poddy is not much use other than for carrying objects — though in that alone he is essential. There are, however, a couple of occasions on which he behaves oddly — and it might be worth paying close attention to the directions in which he moves.

Poddy needs constant recharging, and periodically you should get him close to a wall socket and employ the Poddy power icon, checking the Poddy status icon afterwards to see if he has been recharged sufficiently. If "Poddy feels okay" then you should let him have another burst or two so that he feels "good". Take care not to overcharge him; if he blows a fuse he will be rendered immobile unless he is carrying spares.

Like Poddy, you too will run out of energy, so pick up some cans along the way, find the can opener and enjoy the occasional tasty nibble.

Many of the doors are locked, and are opened using different keys. One of the first you'll come across is the Legge key; another is a Chubb, and a third looks like a cashpoint card.

Other useful items to look out for are the bombs. These function rather like land mines and can be placed in the direct path of an oncoming robot. You don't have to wait around for the explosion.

The light bulb should be kept for illuminating a darkened room, and use the first aid kit when you've been immobilised by a robot.

When you find one of the randomly placed ROM cards, take it back to the central room and drop it on the floor. If it appears in one of the cells then it is correct; if not, then you'll have to leave it until you find another.

That's about as far as I got, visiting probably only a tiny area of the complex, before Poddy finally ran out of juice, miles from a wall socket. I did discover one idiosyncracy. On leaving one room — yellow — for another, I was transported inexplicably to the central chamber; a useful shortcut, but it's only one-way. It took me a while of back-tracking to locate the hapless Poddy once more.

2112AD is a departure for Design Design, and for me it works a lot better than some of their more recent efforts. There's nothing stunningly original about the pick-up/use/drop object theme, but the graphics take it above many others of the genre.

Why 2112AD, rather than 2110AD or any other exciting year sufficiently remote from the present? Well, programmer Graham Stafford got married on the 21st December, last year. It's nice to know programmers are human too.

From everyone at *Sinclair User*, congratulations Graham, and all the best for a long and prosperous future, free of robots . . . Dictators . . . oppression . . . power . . . servants . . . etc . . . etc.

Bill Scolding

Publisher Design Design
Programmers Graham Stafford and Stuart Ruecroft
Price £7.95 **Memory** 48K
Joystick Kempston, Sinclair, cursor
★★★★

the car, taking your droid scanner with you and find that it is either one or two screens ahead of you. You will easily spot the replidroid. It's the only other figure running in a street full of zombies all of whom are walking in the opposite direction.

The droid can knock people to the ground but if you get onto the pavement and run into someone you will also take a dive. It's easy to get up and continue the chase. The replidroid will move out of scanner range and your car will come to pick you up — another unsuccessful mission completed.

If you follow your quarry onto the pavement wait for a clump of people to move off the screen. You should, by the law of averages, get some breathing room in which to work. Make a dash for innermost part of the pavement. Few people walk that way and the replidroid will often stray into that lane while on the pavement.

When your scanner flashes it's time to press the fire button of your laser weapon. If you're within range your quarry will fling its arms into the air, its knees will bend and half of it will disappear — more as a result of attribute clash than CRL special effects.

Your bonus, scored in an unspecified monetary denomination, ticks away as you chase the robot. If it reaches zero you've bombed out again but anything left on the financial clock will be added to your bank balance.

When you've nobbled a replidroid your car will pick you up and you go hunting for others. If you thought that the descent sequence was slow just wait for the skimmer to ascend. By the time you've retired three or four droids you'll be ripping your hair out waiting for the next small part of the game where you are granted some participation.

There are six stages of replidroid which you can choose to chase. They are progressively more difficult to catch and stage six can be very vindictive when cornered on the street.

As the game progresses you will find the replidroids start to congregate at the sectors where the creators have their hideouts. If a droid gets near a creator you're in trouble. The elimination of the creators is another way in which you could lose the game.

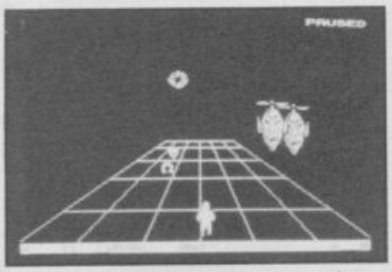
The sequences between the

action are well put together but, after you've seen them more than once you'll get an irresistible urge to smash up your Spectrum. Programmer Andy Stodart, the resident at CRL responsible for **Rocky Horror Show**, should know better than to betray the player for artistic self-indulgence.

John Gilbert

Publisher CRL
Price £8.95
Programmer Andy Stodart
Memory 48K
Joystick Kempston, programmable
★★★

TWISTER — *Mother of Charlotte*



A WONDERFUL piece of rampant nonsense from System 3, **Twister** was extensively previewed last month, so here's a brief run-down for those of you who missed that issue — shame, shame! Not much has changed between the early version I saw and the final game, which is essentially a shoot-'em-up with some very imaginative graphics.

Twister is a giant serpent, said to be the root of all evil. She sleeps the unquiet sleep of the utterly depraved in the middle of level six, but you'll have to fight hard to get to her.

Each level involves collecting a number of symbols, which combine to form a psychic weapon whch kills Twister. Those are card signs, the planets, the zodiac, and the parts of Twister's human body and her name.

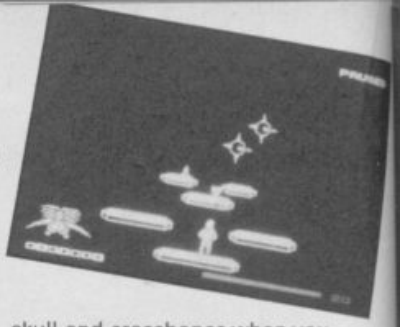
The first level has you jumping stepping stones. The second consists of two broad paths, one at the top and the other at the bottom of the screen — you flip between the two as you move. The third and fifth are straight roads, rather like the *Star Wars* Death Star trench games, and the fourth has you roaming all over the screen with a jet-pack, looking for the planets.

The mechanics are simple. Kill three nasties and a symbol will, sooner or later, appear. Ammunition is replenished by passing over a little heap of bullets, energy, by collecting shields.

You must also avoid the horseshoes, which will confiscate one symbol if you touch them, and the little rockets, which drain your energy.

What makes the game is the highly charged depiction of the various demons which oppose you. These are mainly based on standard horror images — flabby ghouls, satanic goats, evil faces hovering in darkness, and oddly, the hookah-smoking caterpillar from *Alice in Wonderland*. I particularly enjoyed the obscene figure of Charlotte herself, all hooked talons and dangling dugs, as well as the whip-wielding demon on level two.

There are extra details — winking eyes and a little skull-and-crossbones when you die, as well as a very pretty high-score table with a sort of fireworks display going on behind it. The monsters tend to attack in different ways — watch out for the devil's spitball which turns into a slinky spring and then pounces on you in a deadly trap.

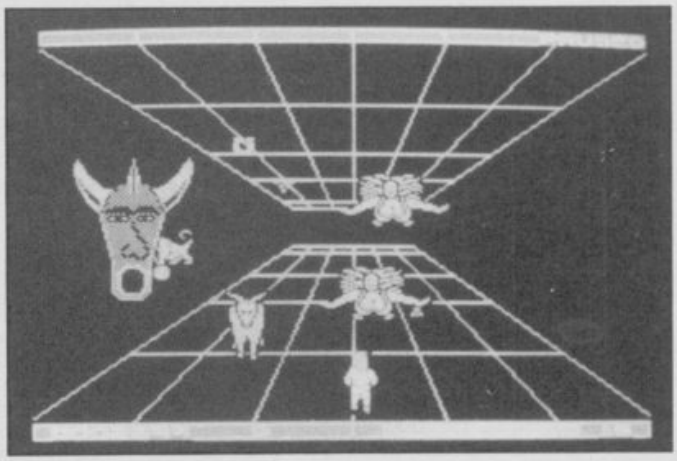


SOFT 5 WARE

All the monsters are bright green, which lends a sinister effect to the game. The final figure of Twister, coiled about her spiky ball and occasionally unwinding to hiss and yawn, is most impressive indeed.

A really good shoot-'em-up is always welcome — light relief from all the soft operas so much in fashion these days. **Twister** has all the vital ingredients — excellent graphics, good gameplay, varied tactics and an addictive theme. Very nasty indeed. *Chris Bourne*

Publisher System 3
Price £6.95
Memory 48K
Joystick Kempston, Sinclair, cursor
★★★★★



Quiz Quest

QUESTION: name one of the earliest non-arcade games for the home micro? Answer: the quiz. Simple!

Question: why do software houses carry on producing quiz programs? Answer: ahh . . . uhhh . . . Pass!

And I suspect that will be the reaction to **Quiz Quest** — the general public will pass it by. To be fair though, it does have several things going for it. One problem with computer quizzes, is typing in answers. **Quiz Quest** overcomes this by opting for multiple choice.

The other pleasing aspect is the game format and presentation. Questions appear letter by letter, teleprinter style, and for each one you answer, a block turns red at the top of the screen. Eight blocks and the moment of truth: if you've got them all right you'll probably find fame in the high score table, but even one error calls for a retake, and immediately you're transferred back to the first wrong answer to have another go.

Now comes the first puzzle concerning the program. Why, if you're racing against time, doesn't the time seem to matter in the Hall of Fame which is arranged solely by fewest errors?

SOFT 2 WARE

Don't ponder that too long. The biggest brainteaser comes with the loading procedure. As with many quizzes, the questions load separately from the control program, allowing for data on several subjects. Included are questions on sport, TV, pop and general knowledge sections, and Alligata promises a second tape with over 2000 questions on ten new topics for only £4.99. Unless you look at the tape labels, though, you're unlikely to realise that all these blocks of code are on the B-side.

So what's all that program following the main program, which you've been cursing as it refused to load? **Quiz Quest** loads in three main parts, the final one on the first side being a data preparation routine. Eventually, with some trial and error, you'll discover where everything is on the tape.

The data preparation section lets you create your own questions, up to 60 characters long, with three answers of, at the most, 25 characters. It's very easy to use and the editor facility allows you to correct errors. A pity then that a couple of spelling mistakes have crept through into the databases provided.

As to difficulty, it's subjective and the mix of questions seems quite good, though topics like TV and pop questions might soon be outdated.

A final question: is **Quiz Quest** worth buying? Answer: while it's a reasonable quiz game and the price is most definitely right, I can't see it raising much enthusiasm. *Jerry Muir*

Publisher Alligata
Programmers Tom Goldsmith, Michael Kindred, Malcolm Goldsmith **Price** £4.99 **Memory** 48K
★★

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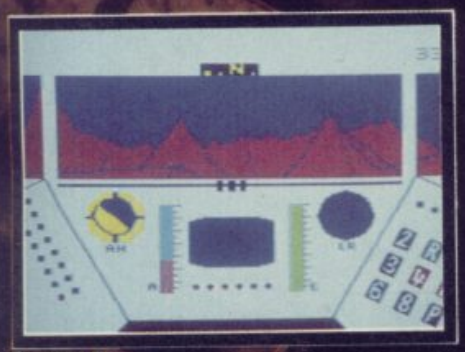

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Movie

MARLOWE stood and stared out of the dirty window. It was hot in the office and his long raincoat and matching snap-brim brought out the sweat.

As if on cue he turned and walked to his desk. He found nothing there to give him a clue to the location of the cassette tape which would lead to the biggest gangster bust N.Y. had ever seen.

The girl must be somewhere, and her evil sister not far behind. If he picked right the girl would take him to the cassette, if wrong her sister would lead him to his death.

SOFT 5 WARE

Hands in pockets, he walked out into the alleys and mean streets of gangster city.

You're the director of this screen play but the executive producers at Imagine dictate the script. **Movie** uses similar perspective graphics to those in **Knight Lore,** from Ultimate, and **Fairlight,** from The Edge. The concept, however, has not been tackled before in such an original manner and the graphics successfully create a seedy, sleazy, atmosphere.

One departure from the traditional Ultimate approach to 3D arcade adventures is the ability to converse with characters in the game. The detective in **Movie** can talk to gangsters, parrots and mysterious women. Press the speak icon and a balloon will appear at your detective's mouth. Type in a question, such as 'Do you want the money?' and the listener will reply using the same type of speech balloon.

The balloons extend the Ultimate technique and give the game a comic book feel. Usually, only the good guys will talk to you, although the evil twin sister may say a word or two.

You control your private eye through the icons at the bottom of the screen, using a spy glass as a cursor. They are easy to understand and with them you can manipulate objects, speak, shoot, and hold or abort the game.

In the beginning the detective has no clues or means of defence. He must find them in the maze of rooms and streets. Initially you should not be looking for the lady with the answers. Your first task should be to find weapons.

Because the background colours and the character colours are the same, weapons blend into the scenery. Your gun, which is only two rooms from your office, will probably go unnoticed the first few times you enter the location. Walk through the blue reception and you will find it on a juke box in the yellow room.

Picking up objects can be irritating. You may have to try several times before you get the correct angle, either head-on or central to the object. Any deviation in angle, even by millimeters, and the object will refuse to be lifted.

On some occasions objects will be out of reach, on top of a stack of packing cases or perched on an old wireless set. To get them down you must use one of the objects you already have and use the throw option. Bags and guns can be rescued in that way with no trouble, but if you aim to knock a bomb from the top of four packing cases you will be in for an explosive time.

The weapons are not easy to use, as the gangsters which you come up against shoot on sight. For that reason you should enter each room with extreme caution. Move the detective to one side of the doorway before entering. The gangsters tend to shoot towards the centre of the doorway and you get no second chance if you're shot — it's back to the beginning and, with no Save option to allow you to choose the place of your reincarnation, you'll have to start collecting objects again.

Bombs are no more efficient than guns. They have a very localised effect and you can be in the same room with victims when it explodes.

The problem is to get the victims directly over the bomb. To do that you should wait for the gangsters to get near you, throw the bomb and then punch them. They will back away into the path of the bomb.

Alternatively, you can lob the bomb indiscriminately when you enter a room. Be wary, though, as the bomb only travels a short distance and most gangsters tend to be in the middle, or far side of the room.

Once armed you must find a bag, a bomb, and a wad of money. They can all be found in the same places on each play of the game.

Although you are free to get the objects in any order the most sensible — and shortest — way is to pick up the bag after the gun, then the money and then try and find a bomb.

To find the bag you must first leave your office building, walk up or down a back street to a dead end and enter a music hall. You can go into the auditorium. The bag is somewhere in there, together with a nasty-looking gangster and a harmless good guy.

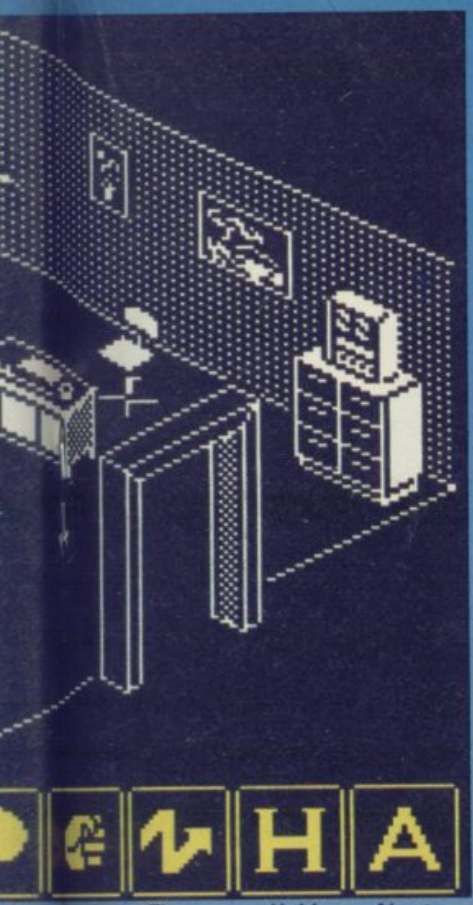
On the way back from the manager's office take a peek into the white room. The mystery girl may be in there.

Collecting the money is a more difficult affair and one in which you will encounter a Mafia hit man who, if you are not quick on your reflexes, always gets his man. To avoid him walk to the right of the doorway then, gritting your teeth, enter and head straight towards the mobster. His fire will have no effect and you'll be able to turn left into the next room.

The route to the money takes you through six narrow alleys, each a different colour. Once through the alleys a quick jaunt through two offices, an empty room and a small room will bring you to the spondula, lying on the floor of yet another office.

The money is obviously for bribery and you don't have to look hard to find a likely candidate. You may be wondering why some gangsters make no attempt to kill you, but seem to want you

Even the parrot can blow speech bubbles



to stay and talk.

In this way you might get some cryptic information, including a clue to help you in your search for the cassette.

Bombs are found in bars and store rooms — balanced on tables or crates. Once you have collected the money a bomb will be useful and you'll find one in the same building as the bank notes — in a bar protected by two heavies.

Gangsters you can destroy with bombs and bullets, but there are other obstacles which will get between you and the incriminating tape. When I first played the game I thought it was a straight detective story faithful to the spirit of Dashiell Hammet or Raymond Chandler. Soon, however, I walked into an audition for *Poltergeist* with articles of furniture, suits of armour, balls and dogs flying around rooms. Those are aimed — literally — at the arcade player.

They all have different methods of movement and timing. Knights move their counterparts on a chessboard — at right angles — while dogs swoop from the ceiling and balls roll up and down rooms horizontally, vertically but never diagonally. Some rooms contain more than one type of obstacle and a few have immovable crates to further complicate matters. All of the rooms have a solution.

Unfortunately, the mystery girl is not so easy to locate or, dare I say it, control. The program dumps the girl anywhere on the map when the program begins but there are some places in which I would advise you to look first.

The white room in the music hall is a favourite haunt. I found her there several times. She can also be found in an office in the building marked by potted plants, down the alley leading from your building.

On first impressions her character is animated smoothly and well. Imagine probably blames her high-heeled shoes for the strut with which she walks, though after a time it seems mechanical and irritating to watch.

Is she supposed to lead you to the cassette tape? That's hard to believe when she can't even negotiate a plant pot standing in a doorway. She kept getting stuck in the leaves and even with help couldn't unravel herself.

Her evil sister puts in the odd appearance but there is no physical way of telling them apart. You could try talking to her — if nothing else it might get her moving.

If you ask her the right question she might also betray herself. When she says 'I hate you' you will get the feeling that all is not quite right. If, however, you insist on following her she will waste your time and then lead you into the arms of the Boss's hit men.

Success in **Movie** is measured by two ratings. The first is a percentage score based on the number of locations you have visited. Moving around from location to location is easy and you are likely to end up with a hefty number of points.

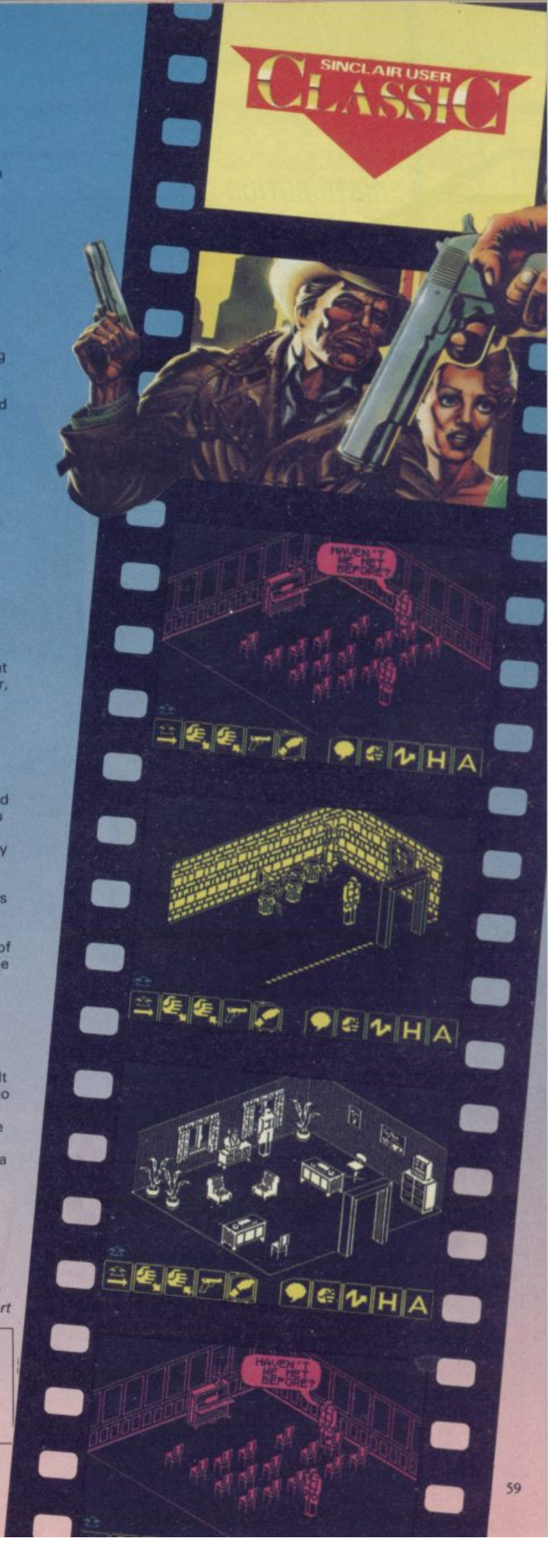
The other score which ranges from 0.00 to 0.99 is calculated on the number of special objects you have, the number of clues you have taken advantage of, and the puzzles solved.

If your score is 0.15 and you have the gun, bomb, money and password — which amongst other things will help you get into some guarded rooms — you'll be doing well. It took me several hours of play to get that far.

Movie's graphics may not be better than Ultimate's and, compared to **Fairlight**, they're a little creaky, but the novel plot makes it a winner.

The seedy atmosphere, together with the innovative bubble speech makes the long hours which you'll have to put in to crack the puzzle well worthwhile. It's a story worthy of the movies. *John Gilbert*

Publisher Imagine
Programmer Dusko Dimitrijevic
Price £7.95 **Memory** 48K
Joystick Kempston
★★★★★



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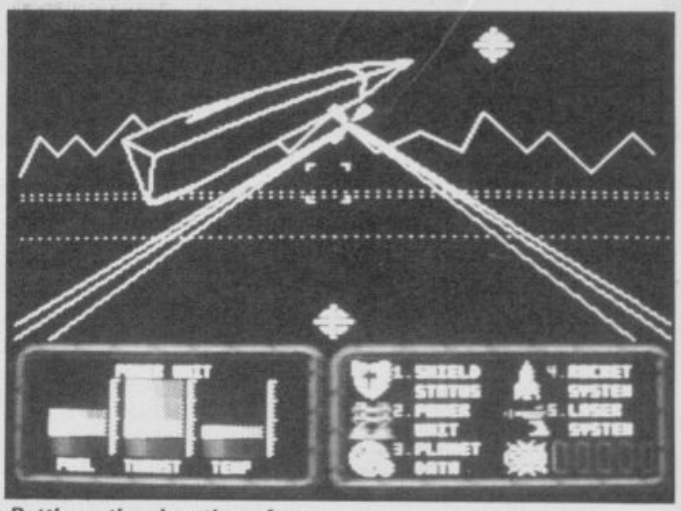
Battle of the Planets



Battle on the planet's surface

MIKRO-GEN is breaking into space to escape from the Wally family. **Battle of the Planets** is about protection and high speed laser-blasting matches. Join the G-Force and defeat the evil Zoltar who's invading your galaxy!

Unlike the marvellous, colourful, Wally screens, **Battle of the Planets** uses wireframe graphics, like so many space games before it. It resembles in style both **Starion** and **Elite**, though the game is not as complex as either.

Your aim is simple enough: defeat Zoltar. Putting that into practice is another matter. With five planets to patrol and numerous enemy craft, your work is cut out.

To help, Mikro-Gen has provided comprehensive status screens, enabling you to tell at a glance the condition of your shields, fuel, rocket and laser power, together with data on each planet you land on — namely how many of the enemy have got there before you and what damage they have inflicted on the population.

There are two small windows at the bottom of the screen. The left hand one contains the five status screens described above and those can be accessed by pressing keys one to five. The right hand window displays symbols for each of the status screens, for instance a rocket or shield, and those flash from green through amber to red as they run out and reach danger level. That gives you the chance to dock on a planet to refuel or make the necessary repairs.

Now for the game . . . You find yourself hurtling through space and the object is to knock out the symbols representing the bad guys. Centre the cross-hairs of your laser sights over an enemy symbol and fire while flying towards it. Within a few seconds you should see the enemy, a small dot in the distance, sweeping towards you.

Now comes the tricky bit. Your laser sights double as a navigational cursor. Do not let the enemy craft get away. If it shoots off the bottom of the screen, follow with the cursor and hopefully that should bring it back into view. By this time it should be large enough to present you with an easy target.

However, on one screen in particular, the enemy craft dodge and twist so violently that it is almost impossible to centre the cross-hairs long enough to take a shot. Not only that, most of the craft need more than one direct hit before they blow up.

While you're playing tag with the enemy they're shooting at you so it is a good idea to flick to the relevant status screens to check your shields and fuel. If they are low you must dock to make repairs. That also gives the opportunity to check the planet's status for enemy landers.

Look for the planet symbol on the screen, centre the cursor over it and fly towards it. You'll soon notice a small round object coming into view. Try to keep it in the centre and as it threatens to engulf the screen, you'll fly through a tunnel to dock with it.

Once on the planet, make your repairs and refuel by flying towards the spanner and fuel tank symbols. Those will turn into huge, revolving, many faceted balls, and when you get close enough a message appears to say you have docked.

Landers can be a problem. They destroy the life on the planet and your shields if they get the chance. Check on the status screen to see if any are around. A second cursor which remains stationary at the centre of the screen is for the rockets. Just press the Z key and a rocket will wing its way slowly to the target. Unfortunately, it is very difficult to keep the lander in the target area long enough for the rocket to make contact. However, it's a damned sight easier than using the rockets on the space screen.

To get off the planet, just press the joystick forward and increase your thrust. Within a few moments you'll be back in space. Maybe it's time to take a trip to one of the other solar systems. Move towards the hyperspace gate symbol and as it swirls and twirls into the screen, try to keep it in view.

The effect of leaping into hyperspace is excellent. Just like the *Star Wars* films, the stars rush towards you in a blur as your speed is increased a hundred-fold. A map of the planets and their solar systems appears on screen. Press a key to choose which to visit.

Instantly, you will be in a similar situation as before, but the symbols and aliens depicted in a different colour. The aliens also change on each screen, some easier to hit, others harder, some move fast, others slow. In each case you must keep checking your shields and fuel. You have only one life, and though it is simple enough to get the repairs done, it is also easy to forget and find the aliens have taken over the planets or destroyed your ship.

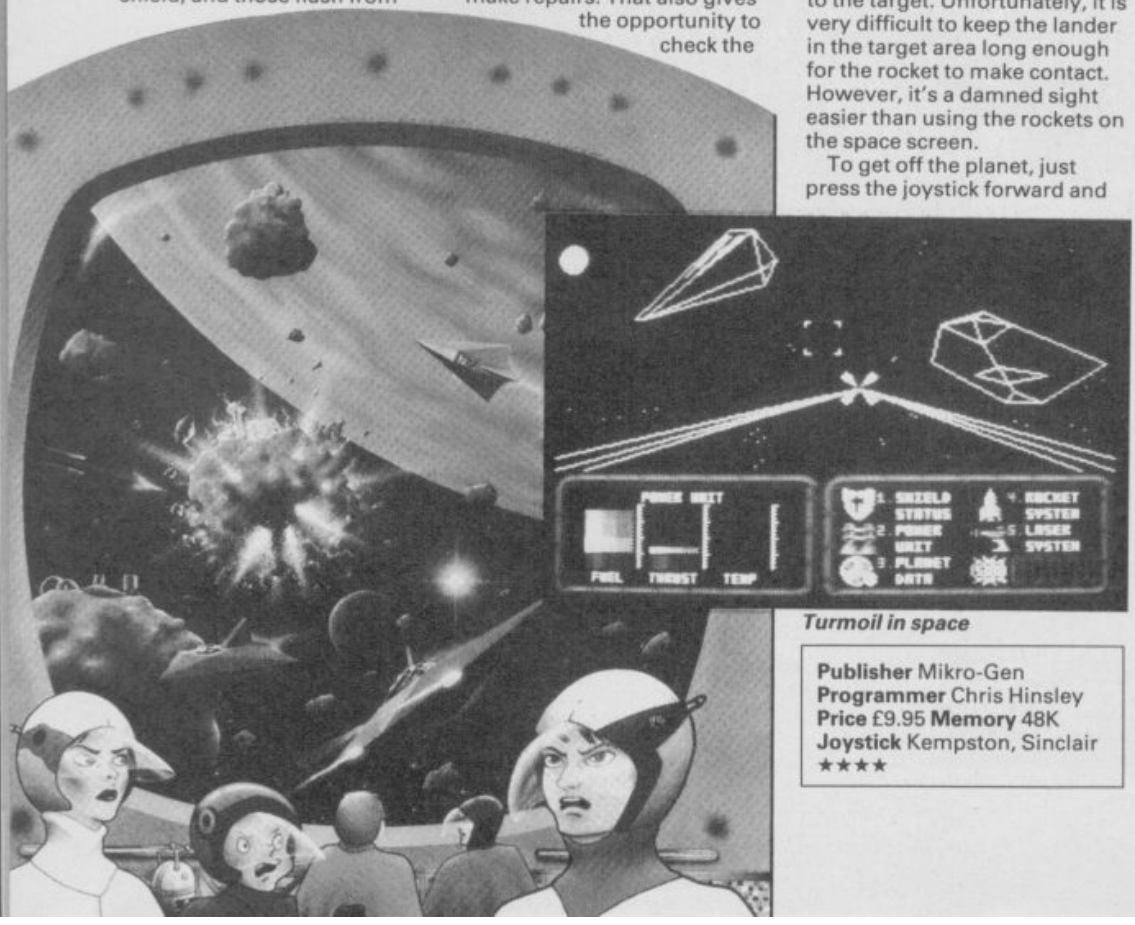
Battle of the Planets is by no means a simple game. A fair amount of strategy is needed and a thorough knowledge of the status screens. For instance, if you increase your thrust to take off from a planet and forget to decrease, the engine temperature will shoot into danger level and eventually finish you off.

The wireframe graphics are impressive and fast. The effect of speeding over the planet's surface is realistic, especially when you increase your thrust. It takes a while to get used to the symbols and what they represent, but once you have, it's plain shooting all the way.

A lot of work has gone into the game. It's packed with detail, though the five planets and their solar systems and aliens become repetitive after a while. Nevertheless, congratulations to Chris Hinsley, who programmed it.

On the whole, though, I'm not a space games freak. I'd say bring back the Wallys any week.

Clare Edgeley



Turmoil in space

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Desert Rats

THE DESERT WAR of 1941-1942 ought to be ideal computer wargame fodder. For a start, there were plenty of opportunities for both sides to mess it up, so that while the original outcome was, as in most wars, more or less inevitable, life is by no means so secure for the player.

Secondly, the deserts of North Africa are easy to represent on the TV screen. Lots of yellow, some areas of hills, thick red lines for cliffs and a black road running along the coast just about sums it up. The playing area stretches from El Agheila to Alexandria — about half of Libya and most of Egypt — which puts the game on the campaign level, as opposed to Bob Smith's earlier game, **Arnhem**, which is a more tactical affair.

Thirdly, the war in the desert remains one of the more popularly romantic episodes in a brutal period of conflict. It was the first major British victory, it was accomplished without the aid of American troops, and it involved two highly colourful antagonists — General Montgomery and the archetypal 'good' German, Erwin Rommel.

It was also the first wargame I ever played — Avalon Hill's *Afrika Korps*, a classic boardgame from the sixties. Nostalgic memories may bias me in favour of the scenario, but there's no doubt that the CCS simulation is quite superb, in many respects better than **Arnhem**, and streets ahead of anything else in the field.

The game begins with the ancient ritual of running through the options. You have a choice of one or two-player games, and six scenarios. Those include Rommel's initial campaign which bottled up the Allies in Tobruk; an introductory scenario based around the first British attempt to relieve Tobruk; Operation Crusader — the major British offensive to relieve Tobruk; Gazala — Rommel's push east of Tobruk which forced the Allies back to the lines of El Alamein; and El Alamein itself, where Montgomery decisively defeated Rommel. You can play each scenario in turn, or choose a grand game encompassing the whole war in a gigantic free-for-all.

The Desert War was a largely mechanised affair, and tanks play a crucial role. There are three types of tank unit — medium tanks, light tanks, and slow infantry support tanks. There are also recce units, motorised infantry, ordinary infantry, support groups, anti-tanks units and artillery. Some units are HQs and those are important in maintaining supply lines. On top of that, each unit can dig-in or even fortify its position.

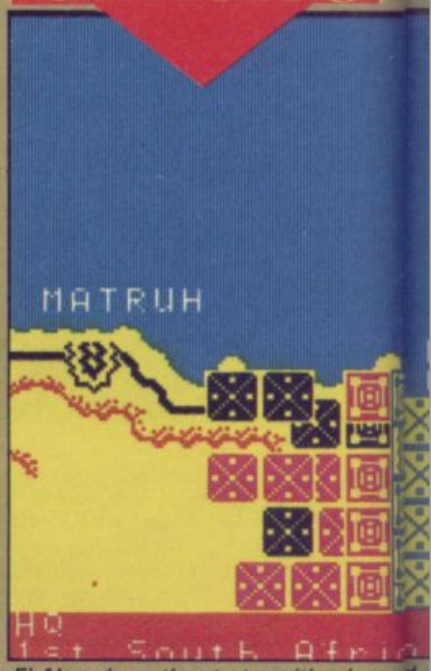
When you come to move a unit, you can obtain a report on its strength, morale, and efficiency. Information is also given on its state of supply and particular ability at attacking.

There's a whole range of possible actions. Movement is carried out by shifting the cursor to the appropriate goal and pressing ENTER. Assault is similar but involves more aggression while Hold is an instruction to dig-in. Divide allows you to break grouped units into smaller divisions. Fortify strengthens a dug-in position and Travel enables you to move swiftly down a road if it's unblocked.

A special command, Go To Port, transfers troops between Alexandria and Tobruk, but only if both cities are occupied by a British unit.

Combat occurs when units are next to each other, and you get sound effects which can become pretty demoralising when the opposition lets off a sustained burst of screeching and all your units manage in reply is a muted belch. But although it's vitally important to ensure the correct right type of units are leading your attack, the game is ultimately won or lost depending on how you organise your supplies.

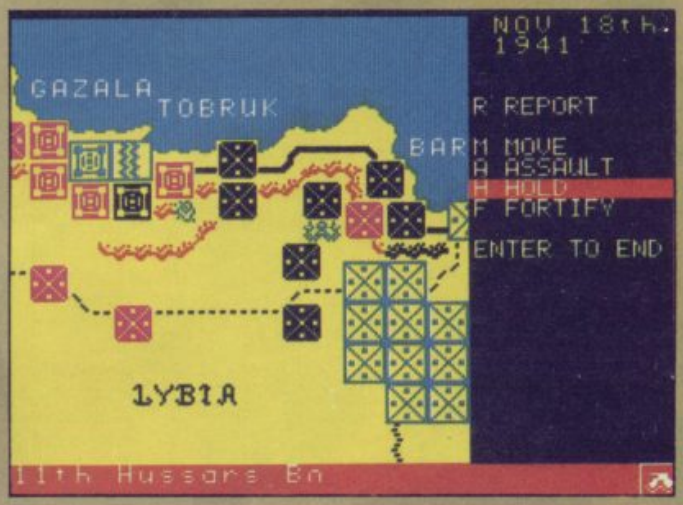
There are two types of unit — ordinary units and HQs. Supplies are handled very simply. Ordinary units must be next to their divisional HQ or any Corps HQ to draw supplies.



El Alamein — the start position is cont'd

Any HQ must be within seven 'squares' — there's no formal grid on the screen but it's easy to judge — of a road to supply itself, but only if the road is clear of enemy units all the way back to your edge of the map.

If a unit is left without supplies it will start to deteriorate and eventually become useless. This is a simple and logical system which works well in the game, and forces players to centre the fighting around key points on the road, Tobruk being the most important. Reconnaissance units are particularly useful for cutting supply lines, and if you can succeed in sandwiching your opponent his entire army may collapse with heartening speed.



Death Wake

DID Alistair Maclean write this one? The war is not going well and the enemy hold vast areas of the homelands to the north and west. Meanwhile their research into their ultimate weapon continues. Soon they will have the Atomic Bomb!

That's the basic premise of **Death Wake**, told in breathless prose inside the cover. It's one of the great questions of history; what if the Nazis had got the bomb? I say the Nazis because I presume this is supposed to be World War II, though the planes which attack you seem to be swing-wing jets.

No time to discuss it anyhow, because once again they're looking for a hero and once again you fit the rôle. Nothing like saving the free world before breakfast, is there? You're not totally alone; High Command has provided your ship the *Undaunted*, with two escorts.

Stage one of your journey to the secret enemy research station, set in the side of a heavily guarded cliff, is the air support phase. That is a mildly strategic diversion where you allocate planes to attack enemy bases and neutralise them for one or two rounds, so making your journey easier. It's all done with a cursor on a map, and while it won't stretch the tactics of confirmed wargamers it could test their eyesight — the cursor is tiny.

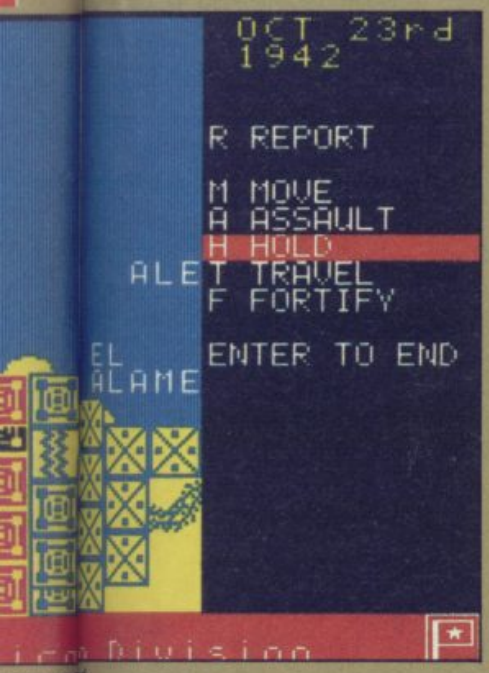
You scramble your forces by moving the cursor to a handy little icon and all hell is let loose as you procede to bomb each other. This all seems to rake up ridiculously high scores for rather a small effort but don't complain because the next section provides far less chance to make the Hall of Fame.

Now you're into the first arcade sequence and well on your way to the enemy beach head . . . Sorry, didn't mean to mention the opposition, but that perennial hit is the inspiration for this multi-part mission.

In this first variation you get attacked by planes armed with torpedoes. Using a missile command cursor to target fire from your ships, which you look down on, you may be lucky to wipe out some of their pilots but it's not easy because the guns are a trifle slow.

Prejudging the enemy flight paths is all important and eventually one of them will make a bee-line for your convoy. Now, finger off the fire button and you can swivel the ships up or down to avoid incoming projectiles, though that, too, calls for some very fine tuning.

If you survive this stage with even one of your



The graphics are simple and pleasant. Enemy units are not identified until they actually fight, and although life gets confusing if you stack or overlap a whole bundle of units together, that is no more than you should expect — good generalship is partly a matter of knowing which units are where and making sure they arrive at their destination in good order.

The El Alamein scenario is particularly confusing, with two enormous armies bunched together across a minefield. Before you complain, consider that Monty spent nearly six weeks training his troops in the precise tactics to be used — he even produced a traffic control system to organise a smooth flow of forces through the small gaps made in German lines. You can't expect to emulate that five minutes after reading the rules, and I managed to hand Rommel the whole of Egypt on a plate the first time I tried.

The map scrolls across two-thirds of the screen — the total area is about three and a half screens, which is ample for all scenarios except El Alamein. All the orders are contained in the right-hand screen third, and brief details of units are given in the bottom two lines, including occasional reports.

Historical accuracy is tempted by the inclusion of three 'skill' options. In reality the Allies used Malta as a base from which to destroy Axis supplies. If you want to play 'what if?' scenarios, you can choose to ignore Malta altogether, or allow the German Operation Herkules in 1942 to be successful, in which case you lose Malta at that point and Rommel receives extra supplies late in the game.

The system has the virtue of allowing you to make moves far ahead of a single turn. For instance, if you want to shift a unit all the way down the road — say, five turns worth of travel — you could move the cursor to the destination and then the unit will simply follow the original order for each move unless you change it.

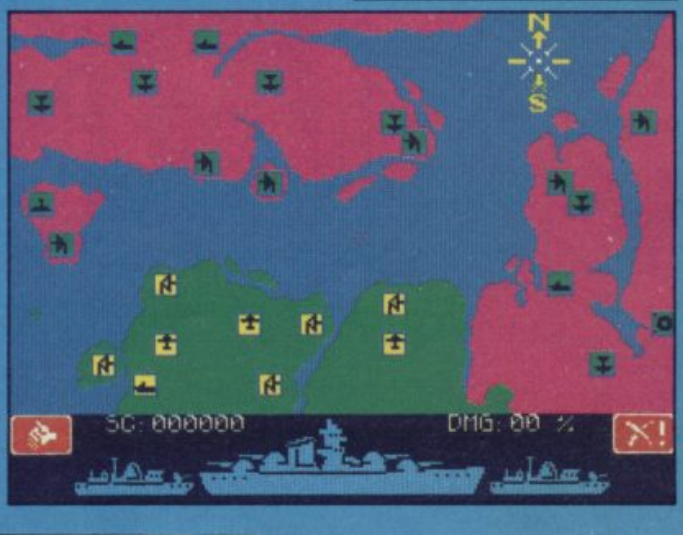
That allows you to set long-term objectives and then adjust only those orders which become irrelevant — just as a real general would. The computer responds extremely swiftly, and although it sometimes plays a little passively, does not do anything obviously stupid which might break the illusion of authenticity.

Furthermore, the full campaign — which I recommend wholeheartedly, having spent a whole day playing it much to the disgust of old Scolding — provides plenty of authentic touches. Those include the withdrawal of the Australian units, after the war against Japan gets underway, and 'reorganisation phases' when there was little activity in North Africa because of events eleswhere. Those give you the opportunity to take a breather and build up reinforcements and new positions. They tend to push you towards re-fighting the actual battles of the war instead of the crazy all-out slaughter which some computer wargames allow.

Most important of all, it's easy to get into the game. The booklet of rules seems dauntingly long, but that is due to long explanations of the various commands and hints on how to use units effectively. Half the booklet is taken up with an account of the various historical battles, so even if you're not possessed of a detailed knowledge of military history you can still follow the original tactics if you want.

Desert Rats is an example of what computer wargames should be about, and sets a new and impressive standard for others to follow. Bob Smith says it took him longer to write than the excellent **Arnhem** — we hope he has something even more spectacular on the drawing-board. In the meantime, get dug in with the Eighth Army and prepare for action — you won't want to pull your head out of the sand for many weeks. *Chris Bourne*

Publisher CCS
Programmer Bob Smith
Price £9.95 **Memory** 48K
★★★★★



escorts still intact you'll be doing well and both are expendable, though it helps to have their supporting fire. You can only afford to take three hits. After that you have the choice of manning the boats or going down with your ship. It's a difficult first game with serviceable graphics and very fine lines for the tracer shells.

Next up it's more torpedoes, delivered by patrol boats, and all **Beach Head** fans will recognise the targetting skills required. Choose your artillery by moving the cursor along the base line, then aim for both direction and distance using left and right and elevation. has to be done pretty quickly.

After that it's another bird's eye view as you guide the *Undaunted* through a minefield and the feelings of *déjà vu* are really growing. Then more target practice from the deck as you try to take out the final line of battle ships guarding the coast.

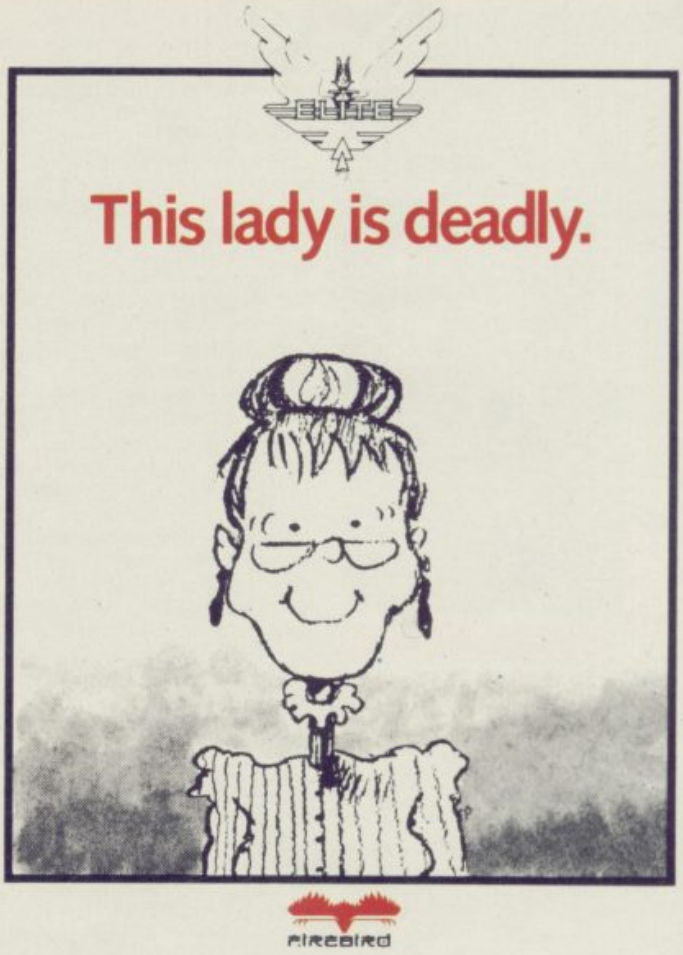
Finally, you reach the research station but the doors begin to shut. The answer is to lob a shell between those doors in best *Boys Own* fashion. How can you fail?

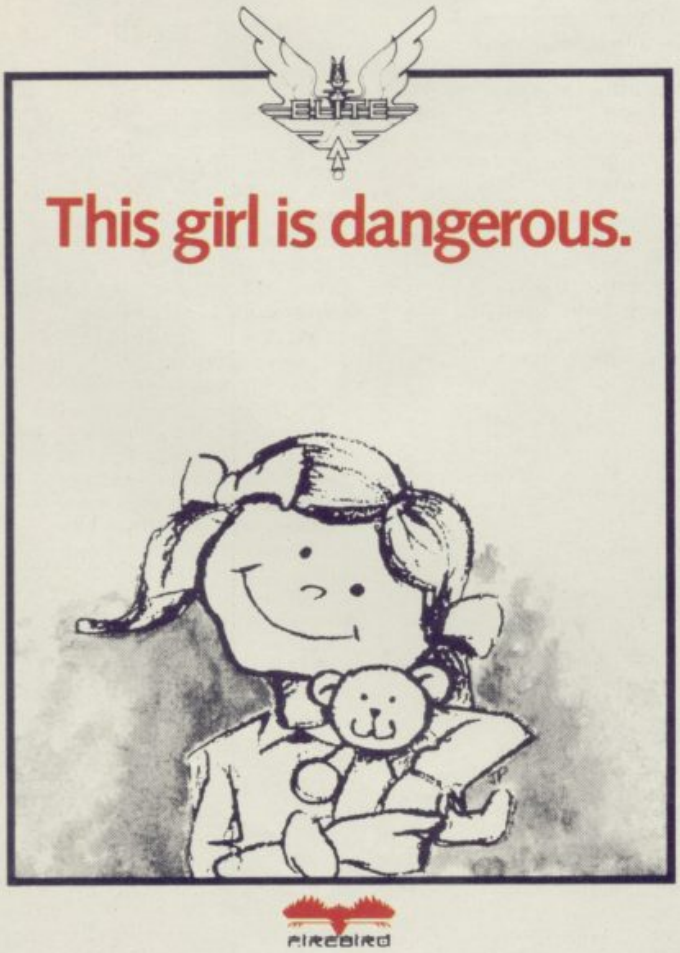
Actually, a more pertinent question is how can you succeed? The game is very difficult and the only solution is to play it again and again. Are you willing to do that? That's going to depend on whether you're a fan of **Beach Head** I and II. If you are then you'll probably go for this, but for me **Death Wake** didn't quite hold together and the extreme difficulty of the first section was off-putting.

Jerry Muir

Publisher Quicksilva
Price £7.95 **Memory** 48K
Joystick Kempston, Interface II, cursor
★★★

ELITE
This boy is a fugitive.
FIREBIRD


ELITE
This lady is deadly.
FIREBIRD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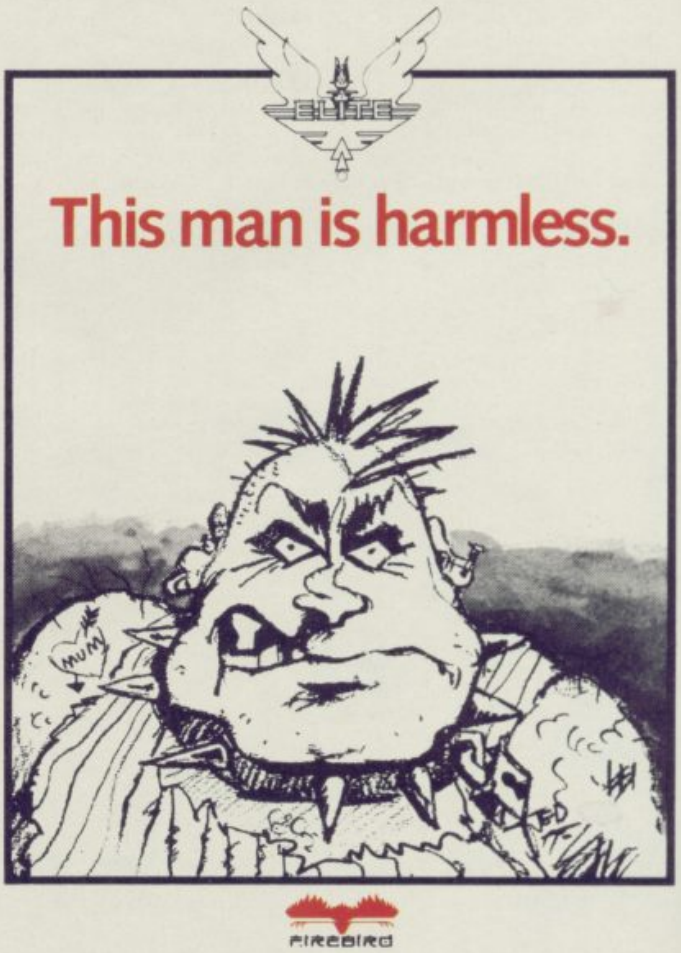
This girl is dangerous.
FIREBIRD


ELITE
This man is harmless.
MUM
FIREBIRD

Gordo Greatbelly, landlord of the Dancing Ogre, offers help to lost adventurers

THOUGH the newt-eating contest improved my flagging fortunes considerably, my winnings were a massive windfall for all the apothecaries, leeches and quacks of Urtuun. For many days afterwards I lay abed at the Crazed Camelherder, *head spinning like a child's top and the rest of me like an enraged volcano.*

In they came, orcish bloodletters, eastern shamans, southron hakims and chanting priests from every scabby temple of the town. They blew foul incense over me, rubbed putrid salves onto my tender protuberance and drew more blood from me than I knew I had. The only result of all this was the boosting of the local medical economy and a steady decrease in my pile of gold pieces.

Finally I snapped. As one smug and well-fed monk dripped boiling wax upon my back and exhorted me to quaff his philtre of ground rat-bone and bat droppings, I roared in protest and threw him down the stairs. In his falling he bowled over a wizened little easterner on his way up. The small one picked himself up and, bowing nervously — why I do not know — came towards me.

"Do not," I bellowed, "do not offer me some filthy potion or dragon's blood or spirit djinn to soothe me."

"O V-Vast One and Honourable Lord" — he bowed some more — "I bring you a simple, efficacious cure for all your ills. Merely place this powder in water and your pains will vanish within minutes. Should it fail it will cost you nought." This was at least reasonable and I took the bottle he proffered. I poured the powder into a cup, added water and swallowed the frothing liquid. Then we waited. Ithukk be blessed, it worked.

Minutes later I was calling for wine and flesh. I rewarded the shrunken fellow well and asked him the name of his potion. "An eastern secret, lord, refined over millenia. We call it Ulkaz-Ulzar and it never fails."

Resuming my place in the taproom that night I encountered Midupa Burt of Christchurch who could not end his **NeverEnding Story**. *Though he possessed a number of treasures, including a knobbly stick, he could not break through the tangle of thorn bushes beyond which he is sure a crystal lies.*

Up piped All-Consuming Lee of 2 Talbot, Glascote, Tamworth B77 2RS: "Take your branch then and light it at a campfire. With it you can burn the bushes. Go down within the mountain and use a stone to break open the box you'll find there. Here be the crystal." Lee will offer the full solution at 50 silver pence the part to those who write to him.

David the Walsh Wizard of Lozells, Birmingham had set off on a pilgrimage to the **Inferno**. *Though he held a bottle and a staff, the Great Portal of Hell denied him entry and he could not find his guide Virgil.*

I told him he should not try to go directly through the gate — the river to the east can be crossed much simpler and will bring him to Judgement Castle, where he must stand before dread Minos. Wait there and Virgil should soon appear.

The Lady Emily Calver of Shrewsbury, dressed in jungle gear, came over to talk of her travels on **Mordon's Quest**. *She had met an apeman, Tarzan by name, near the ruins of an ancient city. He would not let her pass until she had told him who was King of the Jungle. No lion is the answer to this, but a frog! Trace the shape of your path round the city and you will see its outline appear. The frog, if sacrificed, will open a path through the waterfall.*

Boris the Unknown, pale from many years immured below ground, sadly confessed that he had searched long and hard for the **Fantasia Diamond**. *Alas, though he had opened a manhole with his robot, he had then descended into endless caverns with no apparent route out. He knew there should be a key but it eluded him.*

If he heads up to the northwest of these caverns, avoiding the three pixies who dwell there, he should find his key beyond a rock door where a friendly green elf dwells. This key will lock the rock door. It will also open a small door far to the southeast. Going up from there will free him from the caverns.

Whilst I bought Jade Davey a flagon of wine by way of greeting, a tough northern warrior, Ingi Traustason of Hafnafjordur, Iceland tapped me on the shoulder and begged news of the **Tower of Despair**. *He had found a door marked Destiny but could not open it.*

I told him he could hope to find his destiny if he carried some rods with him. These should be bolted together and inserted into the door. Push them if this does not seem to work.

Wild Carol Whitlam of Hull regaled a group of depressed vacationers with the way to escape the bullfight in **Terrormolinos**. *"To survive," she said, "Make for the centre of the ring and wave your red handkerchief. Run quickly out of the ring and then head south, south, east, north, north and finally east again. The raging bull will then expire in a china shop!"*

No such luck had been with Saxon Stuart Stoneham and Jiggered Justin Menhenett, both of East Preston. Neither of them could even find their tickets to board the plane for the cursed resort. Gentlemen — read well the brochure for your holiday, for within it may be found the tickets. Remember to pick them up when they fall to the floor! To the Dunbar of Annan who was still stuck in the attic I said, "Descend the steps — that's all you need."

Christer Andersen of Rorlokken 49, DK-2730 Herlev, Denmark, arrived weary of failure in the second quest of **Arrow of Death**. *Try as he might, he could not wake the unconscious and helpless Fletcher Arnid, maker of the magic shaft. He should have discovered some straggly weed earlier on his journey. Using this will rouse the craftsman. If he does not have it he will need to backtrack.*

Christer also needed aid with **Spiderman** *and* **Night Quest**. *In return he offers help with* **The Hobbit, Invincible Island** *and the* **Magic Castle**. *Correspond with this distant Dane.*

Far-eyes Hogg of Lochgelly, Fife and his two companions, Steve Warlord Slayer and Unbeaten Jeff, had been to **Marsport**, *spending weeks within its labyrinth. Far-eyes passed on some tips. "To get the power gun, first find a gun permit. Place this into the 'key' hatch next to the locker with the gun. The hatch will remain open and you can get the gun. If you wish to enter the Danger Room with a dust bomb, seek out charcoal and gauze. Place these in a 'factor' hatch to create a gasmask. Take the mask, open the door, enter and wait for the bomb to explode. The mask can be put into a locker for further use if you need it."*

Warlord Slayer and Unbeaten Jeff claim to have returned safe with the plans and will offer help if you write, courier prepaid, to them at 13 Porter Close, Clifton Estate, Nottingham NG11 8QU. They gave these cryptic suggestions. "Tea plus insect plus point equals antidote. Topi plus helmet is artifact, which with power gun becomes hyper gun. Plus a warlord means death."

With this in my ears I went to bed, peaceful at last. I shall try and buy the secret of this powder if I can and make a pretty sum selling it at the Ogre *to the hangover cases! Til next moon, friends, farewell.*

Greatbelly

Gordo Greatbelly, Landlord

If your have a tale to tell, or are in need of a helping hand, write to the Landlord of the Dancing Ogre c/o Sinclair User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

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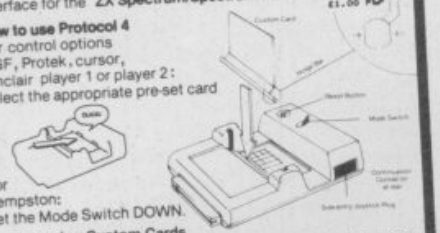

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Worm in Paradise

Return once more to Eden in the final part of Level 9's Silicon Dream trilogy

I DOUBT whether the family Bible would normally be considered an aid to adventuring but after playing through the opening sequence of **The Worm in Paradise**, I found myself scanning my dusty shelves to trace an ancient and tattered copy of the Authorised Version . . . There it was — Genesis, chapter three — where the crafty serpent whispers into Eve's ear, urging her to taste the forbidden fruit of the tree in the midst of the garden — "Your eyes shall be opened, and ye shall be as gods, knowing good and evil".

Of course, she eats the apple and the original Eden becomes a place of toil and misery, but the action brings free choice into the world and the power of understanding to men and women. Something similar will happen to you when, as an inhabitant of a second Eden, you dream Reveline's dream.

Wandering the fragrant lawns you are bound to find the tree and stand on the bench to take the fruit. You'll eat it too and then see the worm fall from the core, growing, moving and destroying as it goes, shattering the ivied walls of the garden and showing you the harsh and bitter world beyond.

Change and decay have entered the perfect paradise . . . and you now know that something is wrong, not quite the way you always thought it was.

This paradise of course is Level 9's Eden, a planet of Epsilon Eridani and the destination of the ship *Snowball*. It was over a hundred years ago when the settlers and Kim Kimberley arrived there. The robots had already built the domed cities and the humans moved in, avoiding contact with the strange, dangerous, animal and plant life of their new world.

It is now the reign of the third Kim and the domed cities are ruled by a 'benevolent bureaucracy', an elite which monitors the intentions and actions of the citizens through the plastic collars that all wear. For their own good and safety of course . . . but who are they, and whose safety is being protected? Eat the apple and begin to think long and hard.

The dream of the tree and the garden is quickly over and you wake to find yourself in the pleasure dome of Enoch, smallest of the cities. To the unquestioning it may seem like a Utopia, a brave new world. There is peace, no crime — the fuzbots see to that — full employment and all the entertainment you can take — provided you can pay. Check the tattoo on your wrist to find out city time or your credit rating.

Almost everything is going to cost you but don't worry too much . . . if you go broke or get into debt you can always sell one of your body organs to the Enoch Health Service. This highly profitable organisation will offer you a reward if you report a disease spreader or a health risk, just like the police who will pay well for hard information on malcontents or dissidents.

Let's take a stroll in the city. Dropping your dream visor you move from Reveline's palace into the central corridor of the pleasure area. Happy, healthy citizens jog past, thronging the casino and the shops. There's a museum where you can marvel at the inflatable statue of the first Kim, a clean habihall to relax in, a kiosk to buy your imitation pizza. There's also a splendid temple — but you are barred from here, only the invited elite is welcome.

If you enter the pet shop and buy a lovable little dagget you'll quickly learn one of the tougher facts of life in Enoch. Failure to consume quickly or an unhealthy urge to hold onto possessions too long is illegal. Those friendly buzzing droids who look after the smiling joggers are fuzbots — police surveillance robots who will fine you on the spot for possessing illegal objects — and just about everything is illegal.

Oh yes, the dagget . . . it's a doglike droid and very expensive, in fact so expensive that you'll run into deep debt and be dragged off to the hospital by the fuzbots. There you'll find to your horror that your remaining body organs won't cover your debt. Even tougher, O citizen, this means recycling, which some might call death, but is simply a manifestation of market forces, a fact of economics. It doesn't hurt so there's no need to be scared.

The central area of the city is filled with dream parks, theme parks and places for fantasy and escape. Look a little closer as you travel the expressways and pedways of the dome . . . is all that there just to keep you quiet? Why do armed citizens patrol the streets? Why do the police arrest

earnest socialists outside the memorial to the Third World War? Why do the papers you buy all attack the government? Something is happening but you don't know what it is. Yet.

In the early stages of the adventure you will probably concentrate more on trying to find your way around the city than on politics. As your chrono-tattoo buzzes the time for curfew you may begin to wonder where you live amongst the other few million dwellers and suspect that there are other sectors to find, even tunnels beneath the city. Rumour has it that there are huge intelligent moles roaming those places and you've heard warnings of aliens and flying saucers . . .

Ah yes, Enoch in Eden is a fine place to be so long as you don't get the itch to pry or complain. The Level 9 team has packed the considerable amount they know about adventure programming into **The Worm in Paradise** — and that's quite a lot.

First off you get the choice of either a vast text-only game, with acres of leisurely description, or a snappy graphics version with pared-down detail which is essentially the same game. I like having the option of two versions to play, as the mood takes me, and it seems better than just being able to switch off the pictures. After all, games which use the pictures on/pictures off system still can't provide more memory when the graphics aren't used and you still play exactly the same game.

If you do play the graphic game you'll be pleased to discover that Level 9 has introduced a multi-tasking system. You do not have to wait for pictures to be drawn and you can carry on typing your commands without any break. If you move quickly through a series of locations you won't be held up by the graphics. You feel much more in control, especially as this system also uses the type-ahead function — there's no need to wait for a cursor to appear. That really makes the game flow and allows you to soak up the atmosphere without constantly being interrupted by the computer churning through its mechanical routines.

With easy input like this you're likely to be putting in a lot of questions and commands. If you prefer you can stick to verb/noun combinations but fairly full English sentences are possible too, allowing you to string things together with 'then' or 'and'. Punctuation is also understood.

When you ask the questions you'll get straight, detailed replies. If something isn't necessary to the game you'll be told. Examine a door in the garden and you'll be told "Door: that's just scenery," or "Fountain: ignore it." You waste no time on unproductive interrogatons and can get into responses like this: "Strange tattoo: looking closer, you see it's really a one piece colour LCD implanted in the back of your wrist. Its moving display shows that the time is 6.87 and that you have 87 credits left."

Full information like that engages you quickly in your role as explorer of this flawed utopia and creates immediate interest in the way things work in Eden and why. For exploration is what the game is all about, in one sense — by discovering how to travel, how to stay out of debt, where you live and all the other little things, you will begin to understand Eden and maybe then do something about the things you see going on. Remember knowledge is power.

I haven't yet worked out quite what political stance Level 9 is taking in the game. So far it seems to be about the tyranny of centralised powers and the reduction of people to mere ciphers. It's also a warning that while we dream and play, other forces work to make us unfree. That is heady stuff but it's done well with a wry and dry humour and a massive vocabulary. Even though I don't really yet know who I am or what I believe, I'm very sure that I want to continue until I find out.

If you don't want to think about parables or hidden messages don't worry — Worm is one of the best sci-fi adventures around with 200 plus locations, whopping atmosphere and an excellent storyline.

The machinery alone will intrigue you. How do you use this transport system: "You are on a walkway around the Eden Transport System, a klom wide force grid which looks like an enormous dart target. Exits lead north-ish to the 12 ET rings. An exit leads south. The floor is colour coded . . ."

This is the finest of Level 9's masterly adventures. It has an intricate, exciting, intelligent plot based in an equally intricate society run by baffling futuristic machines. You become completely absorbed because of the combination of a fluid and fluent interpreter, fine detail and an open format which offers you many options for action. It's a blend of Orwell's *1984*, *Logan's Run* and that distinctive Level 9 quirkiness. Definitely refreshes the paradises other worms cannot reach. Get it.

Richard Price

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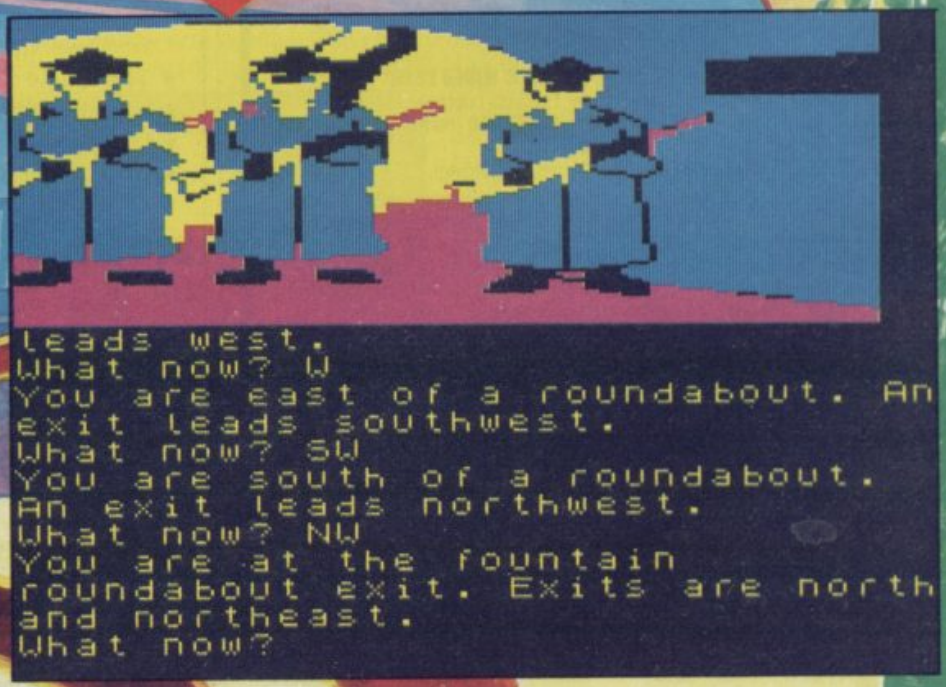

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Beatle Quest

LOTHLORIEN is mainly renowned for its strategy and war games, so it was with some surprise that I looked over **Time Sanctuary** in its Adventuremaster series.

The packaging calls it an all graphic, non-violent adventure game with landscaping — the last, a description which brings to mind games like **Lords of Midnight**. In reality it strongly resembles trading games and relies on the same skills.

The plot is relatively simple. You have become stranded in a time warp after your time machine has malfunctioned, and need to explore the countryside around to find the chosen number of fuel units to get your machine working again. Your time in the Sanctuary is limited to 5,000 game 'minutes' — if you fail to locate your machine or find enough fuel you die.

The landscape contains three villages, each populated. There are lakes, forests, a maze, temples and houses. The graphics are cheerful, blocky and rather abstract

Time Sanctuary

74 ▶

WHILE MILLIONS of impressionable girls were screaming their hearts out at Beatles' concerts in the far off Sixties, I was busy spending my Saturday afternoons in front of my mum's full-length mirror.

In my hipster trousers and already outmoded pointed shoes, I wriggled and postured in a vain attempt to convince myself that I bore some resemblance to that incarnation of all evil, Mick Jagger. With my Dansette blasting out *Satisfaction* I would practise looking cool and nonchalant for the evening's youth club dance. It never seemed to work — letters of sympathy will be gratefully received.

This qualifies me admirably to take a dispassionate view of **Beatle Quest** from Number 9 Software, an adventure written in open admiration of the Fab Four and a program which Beatles freaks will probably rush to add to their collection of memorabilia.

The game is a Quilled adventure with location graphics and bases the action around a large number of Beatles' songs, so you'll find it useful to dig out those dog-eared albums for the lyrics on the inner sleeves. You'll also need to know a bit of Sixties' slang — ageing relatives who claim to have once been hippies may be able to help.

The aim is to travel through the various regions, all of which are the settings of songs, and collect the items you find. Those must be returned to the start location — your miserable hovel of a bedsitter, with its broken window and peeling wallpaper. You can only finish the game when you have all the items and a top score.

Beware! The scoring system is not into uncool competitiveness and you may find that repeatedly asking for your score will reduce it quickly to zero. Certain illegal items will also knock points off, so stay clean and hang loose.

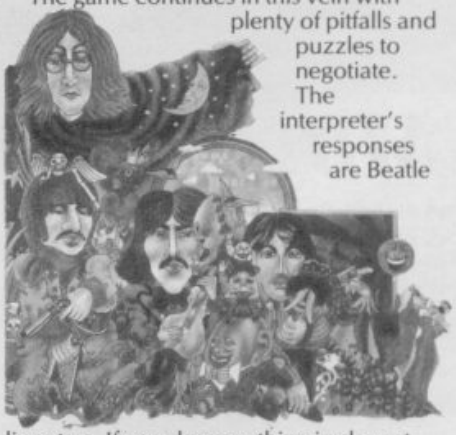
After passing the starting screen with its picture of the Abbey Road zebra crossing you find yourself in the bedsit. Your spaced-out girlfriend is also there, "just seventeen, you know what I mean. The way she looks is way beyond compare . . ." There are various things scattered about, the most useful of which is a book. If you carry this and open it in tight situations you may find some words of advice — though suitably mystic and framed in song lyrics.

After you've explored a bit you'll suddenly be told that you've got "the Hippy Hippy Shakes. You need some natural E." Now 'natural E' is raw food and you must brave the streets to find some — even a red herring has its uses. If you ignore the shakes your bodily organs will be destroyed by fatal vibrations, so you have no option but to wander outside.

Pretty quickly you'll realise that Maxwell — he of the Silver Hammer — lives around here too. That homicidal maniac will pursue you and, unless you can find a way to get rid of him, "Bang, Bang, Maxwell's Silver Hammer comes down upon your head"! Use the RAM Save function regularly to recover from his assaults and try again.

If you're lucky your cranium won't be fractured and you can travel to the church where Eleanor Rigby has just been buried, to Desmond and Molly's market stall or maybe get a bus down to Penny Lane. If you can't find a bus pass I suggest you search the old school thoroughly — but be careful, that is Maxwell's main base and very dangerous. Be careful too of drinking Dr Robert's Special Cup. That turns you into a real Nowhere Man.

The game continues in this vein with plenty of pitfalls and puzzles to negotiate. The interpreter's responses are Beatle

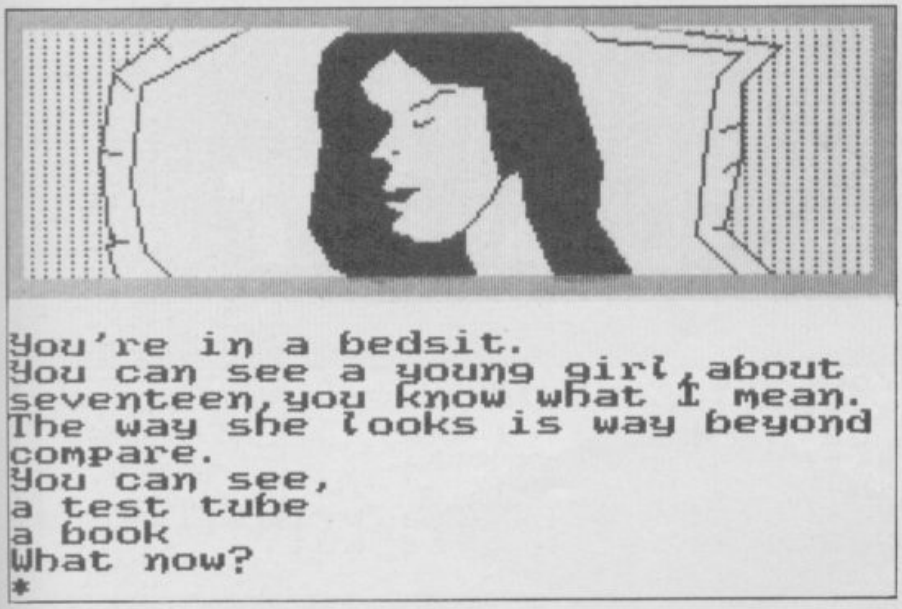


lines too. If you do something irrelevant you'll be told "Oh . . . you can't do that." Talk nonsense and you get "Goo Goo G'Joob?"

At first I was aggravated by the Shakes and Maxwell's repeated murder attempts but, after I'd found my way around those, I got into the swing of things and searched for my old records to find the way out of tricky situations.

The game is well constructed and uses the lyrics in an ingenious way to create a bizarre world of sixties' nostalgia. The style is humorous and makes a change from the more well-worn adventure plots.

If you're a fan then **Beatle Quest** is bound to be your bag, man. If you're not, you'll still find an entertaining game with plenty of interest. *Richard Price*



Publisher Number 9 Software, 47 St Georges Avenue West, Wolstanton, Newcastle, Staffordshire
Price £9.95 **Memory** 48K
★★★

but don't have the same naturalistic strength as in games like Midnight. They do advance and recede though, and you can take views of the compass points before deciding in which direction to move.

To enter houses you need to point yourself directly at them and move in. When the picture of the house vanishes you are there. Press a key and you are presented with a shot of the interior — all of which are pretty much the same except for the furniture.

Once inside you get the same choice — searching, resting or leaving. If you're lucky the place may contain some useful trade items like hides, papyrus, wine and the like. With goods like this you can attempt to deal with some of the characters in the game.

You locate those characters in much the same way as the houses, and then press a key to get a status screen which tells you how much they will buy and sell things for, whether they're friendly, hostile or whatever. There's also a small text window where you can run through a preset menu of questions about a preset range of options — buying, selling, scaring or asking where other characters are.

Scaring folk may make them give you goods or information, so may befriending, bribing or trading — you have to work out the best approach. Every action costs game time and you must not squander

your valuable minutes — it costs 15 game minutes to act friendly, 30 to rest.

There is no text input from the player and every action is by single keypress. I don't find this dull in a game like Midnight, where there is plenty of action and a solid storyline, but **Time Sanctuary** is essentially a seek-and-find game.

Though the graphics allow fast movement the game format becomes quickly repetitive. Identification with the scenario is difficult and, however much you buy, sell and scare, you are still going through similar motions all the time.

I began to feel I was playing an illustrated land management program. Fair enough if you're into that sort of thing but I'm not sure I'd call it adventure.

Richard Price

Publisher Lothlorien
Programmers Peter and George Carmpouloni
Price £7.95 **Memory** 48K
★★

Mindshadow

PERHAPS Activision's cassette insert designers have become too exhausted by their efforts over **World Championship Boxing** or **Ballblazer** to spend too much time checking the accuracy of the instructions on **Mindshadow**, a new text adventure.

You are clearly told to enter LOAD "MIND1" to access the first part of the game. Don't bother because the program section is really called 'PART A'. Such laziness doesn't encourage either players or reviewers to adopt a positive approach and, for a game costing £7.99, comes across as pretty sloppy.

The offending insert describes the game as 'a brilliantly wrought mystery' and promises intricate challenges for novices and advanced adventurers alike, so I overcame my spleen and loaded in the preliminary instruction program to prepare myself for the excitement. That tells you how to play adventures and may be of some use to the total novice but won't really be of great interest to all you advanced types.

The game comes in two parts and you will need to complete the first to access the second. You are an amnesiac castaway stranded on a desert island. The aim is to find out who you are by visiting the locations and, at suitable points, to enter "THINK . . ." followed by the object or place you want to know more about. Some of your past history may then be revealed. A limited amount of help is available but it's wise to be sparing with this — only three requests will be tolerated.

Most locations have graphics. Those are colourful but take a long time to draw. That can be bypassed once you know your way around as the interpreter will understand multiple commands, allowing you to get to a particular location quickly without having to wait for the pictures.

The first half is an absolute doddle. All you have to do is rush around the island, using a map conveniently hidden in the cave, and find the correct things with which to make a fire. You'll also need a bottle of rum to bribe the pirates to rescue you. Once on their ship you need only find a way to drop anchor to board a waiting Royal Navy ship. There are very few locations so the permutations aren't very complicated. This took me about 20 minutes, without any help at all, and made me wonder just how big the second part might be.

Fortunately, the next section is a bit more complex, setting you down in the London docks area. By listening carefully to the ramblings of derelict winos you may pick up some tips on how to acquire forged air tickets to get you to Luxembourg. You will also find a bit more about who you are.

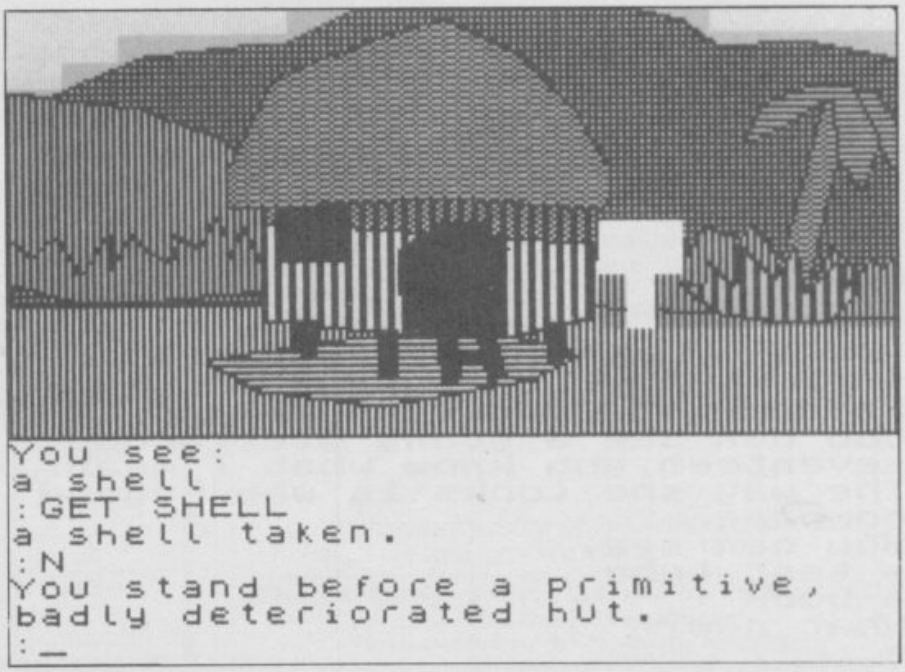
At Rick's Cafe you should take a close look at your hat to get the details of an assignation with, I presume, the hat-check girl. Regrettably the graphics showing the note inside your titfer are, as far as I'm concerned, illegible. This made the entire proceedings useless for me and I gave up in total rage after trying out many different approaches.

I wasn't too unhappy about quitting as, although the game has some good features, the plot is not very original and follows the thriller/mystery format. I didn't get the terrible urge to continue that is the hallmark of a really good adventure.

It also seems to be rather small — the press release claims 80 screens and Part One had about 35 or so, cleared in under half an hour. All of Part Two is therefore not much bigger even if it is a little harder. I can think of many other games I'd rather spend £7.99 on, adventures which really do have intricate challenges.

Richard Price

Publisher Activision
Price £7.99
Memory 48K
★★



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Lord of the Rings

ON DECEMBER 30 1985, Mike Bateman finished **Lord of the Rings — Game One**, after only 16 hours. Since then, with the help of his son, Adrian, he has discovered a further solution to Part One, and feels sure that a perfect, though not essential, solution is within his grasp.

Rather than print a complete map with all locations, which would spoil the game for other adventurers, we have decided to publish a detailed section from Part One, from the Great Wooden Gate at Bree to the east bank of the River Mitheithel — the furthermost eastern location in the first part of the game.

Mike has also supplied a short, cryptic, story describing the Hobbits' exploration of the marshes east of Bree, and some hints for other parts of the game. The story follows, more or less, the path taken by Mike, mistakes and all, rather than presenting a straightforward route from Bree across the swamps.

THE MARSH boglands to the north-east of Bree were thick with midges, mosquitoes and lush vegetation. Frodo and his three companions were tired and hungry. Frodo's home was far to the west and many days of fights and frights away. They had made good time despite being unable to use the main east-west highway, which was patrolled incessantly by the Black Riders.

"Isn't travelling fun?" said Pippin, sinking to his knees on a fairly dry area of grass. "What say you, Merry?". "Eh, I'm thinking of going home, 'cos me boots is full of leeches," replied Merry, dragging himself through the mud.

"Leeches!" exclaimed Sam. "At least they don't bite as hard as Maggot's dogs or fight like the Green Knight. I wasn't too happy locked up in that there willow tree either."

"Now listen you lot," said Frodo. "We've nearly done. The Last Bridge isn't too far away. So eat up and we'll get on."

Being careful with the food they had collected from the General Store in Bree, Merry shared a stick of celery with Frodo and Sam.

"I reckon we should've spoken to that fella in the **Prancing Pony**," *said Pippin, his mouth full of capsicum. "Not on your life. Barliman warned us about strangers," retorted Sam. "I say we give 'im a try," said Merry. "Gandalf's letter said Strider would help us."*

After much discussion as to whether the stranger was Strider, the travel-stained adventurers agreed it would be best to return to Bree.

"Let's go the easy way," said Sam. "The road's got to be better than these bogs". "We can't reach the road from here," said Frodo, "and anyway, there's far too many Riders. You'll never kill them all. I think Bree is to the southwest, so we'll go that way."

Arriving at the main gate, Frodo gave a false name to the Gatekeeper and then led his companions towards the **Prancing Pony**. *Sam, drawing his sword, looked towards the three black horses tied up outside the* **Horrible Haunt** *pub. "Forget horsemeat, Sam. You'll get us all killed," said Pippin, dragging his bloodthirsty friend into Barliman's warm and inviting inn.*

Using his adopted name, Frodo introduced himself to the tall stranger sitting in the corner of the bar. The stranger smiled and said that friends called him Strider.

After food and wine, Strider got up and gestured for them to follow him. Hurriedly the four adventurers gathered their packs and followed Strider into the cobbled square.

From the town gate Strider made fast time through the marshes and into the mountains. "Wait for me," said Merry who seemed to tire quickly, even when he only had to carry himself.

Tired, footsore and hungry, the intrepid crew tagged along behind Strider as he strode round the mountains to the ruins at Fornost. It was here that a starling flew to Strider and told him that Radagast, the Wizard, in the far west, was willing to help Frodo's cause.

"Fine," said Frodo, "but where do we go from here?" Strider left, gesturing for them to follow him. Eventually, they arrived back at the gate in Bree and, no sooner had Strider disappeared than. . .

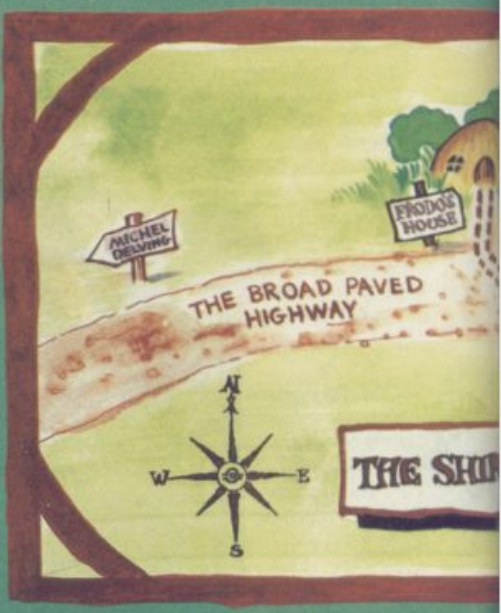
"The Riders," screamed Pippin. "Quick, head east and north into the bogs," said Frodo.

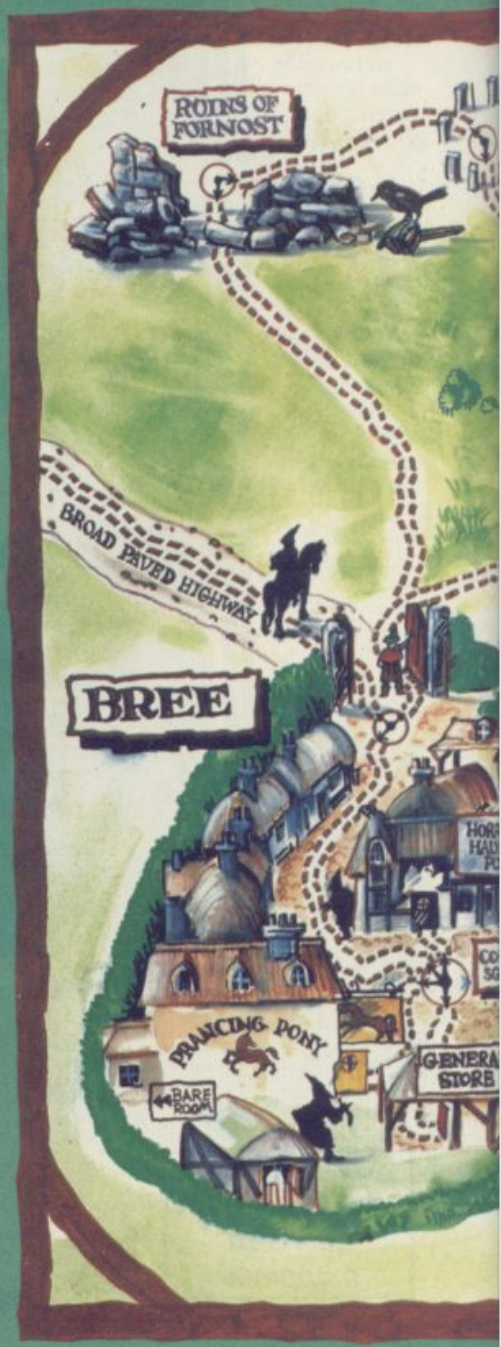
Safe once more among the lush vegetation, Sam said, "I knew 'e was a badun. What do we do now?" "Well he did get us through these bogs. Maybe we should let him lead us and then ask him to join us," said Frodo. "Or kill 'im," said Sam.

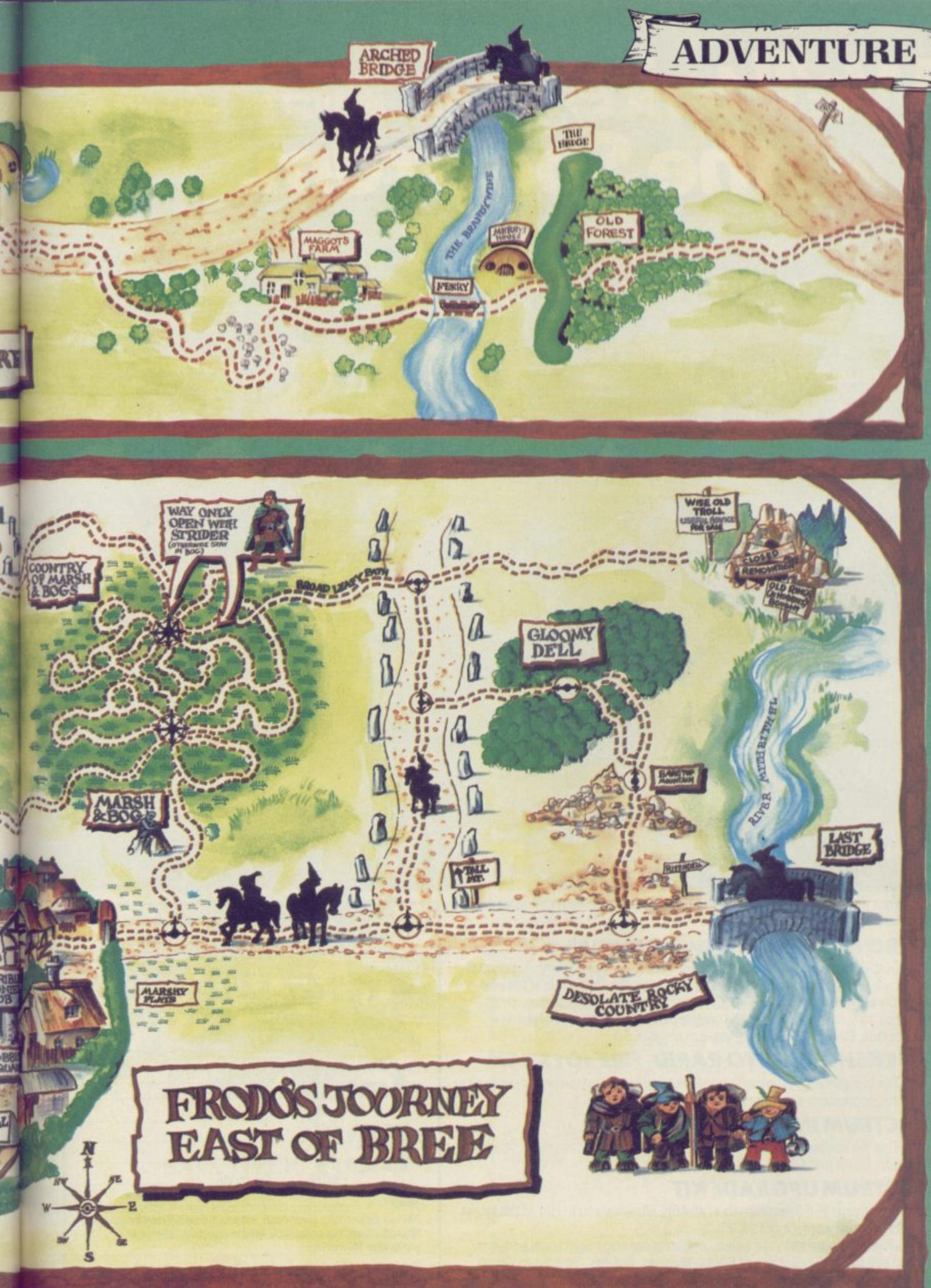
"Let's go back to the **Prancing Pony** *and find Strider," said Frodo. "And we really must decide how to beat the Riders to the bridge."*

"But what about the golden medallion we got from the Red Lady?" said Merry, pulling leeches from his boots. "I thinks that might be important."

Without further chat, Frodo set off south-west for Bree. "Isn't travelling fun," said Pippin, again, "Eh, I'm just thinking of home," replied Merry.







Maps: Richard Winnington

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Defining your characters

Andrew Hewson explains UDGs from A to Z

CHRIS FOWLER of Sheffield has been using the **Big Gen** program, published in *Sinclair User* a while ago, to create new user-defined graphics characters. He writes: **This is fine as far as it goes but as you know we are limited to 21 UDGs. Is there any way I can use the full alphabet, because I want to create a handwriting font?**

Indeed there is. There are 96 characters in the ordinary Spectrum character set. The set starts with character code 32 — the space or blank character — and ends with the copyright symbol — code 127. They are defined by the contents of a table held permanently in ROM at address 15616. Each definition is held in eight bytes and so the whole table is 768 bytes long.

The method of encoding and decoding the eight bytes can be understood with the help of some knowledge of binary numbers and an imaginary 8×8 grid. Each element in the grid is called a pixel and each pixel can be set to either the Ink or the Paper colour. It is the precise arrangement of Ink and Paper coloured pixels in the 8×8 grid which creates each character.

Each of the eight bytes devoted to a character defines the setting of one horizontal line of eight pixels. The contents of a byte — which necessarily lies in the range 0 to 255 in decimal — is read as an eight digit binary number so that there is a one-to-one correspondence between pixels and binary digits. A binary number consists of zeros and ones only. All pixels for which the corresponding binary digit is zero are set to the Paper colour, whereas all pixels for which the corresponding digit is one are set to the Ink colour.

Very often, the first and last bytes of the group of eight controlling a given character are zero. Those two bytes determine the top and bottom of the character respectively, and a zero setting ensures that all the corresponding pixels are set to the Paper colour. Thus when the character appears on the screen it is well separated from other items on the lines above and below.

For a similar reason each byte usually contains an even number which is also less than

Table 1. A Spectrum program to copy the character set above RAMTOP.

```
10  CLEAR 64599 : REM MOVE RAMTOP DOWN
20  FOR I = 0 TO 767 : REM COPY TABLE FROM ROM TO HIGH RAM
30  POKE 64600 + I , PEEK ( 15616 + I )
40  NEXT I
50  POKE 23606 , 88 : REM RESET CHARS APPROPRIATELY
60  POKE 23607 , 251
```

A Spectrum clock

HAVE YOU ever wondered what makes your Spectrum tick? Not tick like a bomb but tick like a clock?

The answer is that there are a couple of crystals inside, rather like the crystals which control the running of digital watches. Those crystals control the rate at which the machine works and keep everything in time, in much the same way as the drum majorette tossing her baton in front of the Dagenham Girl Pipers keeps her band in time. (No, really? Ed)

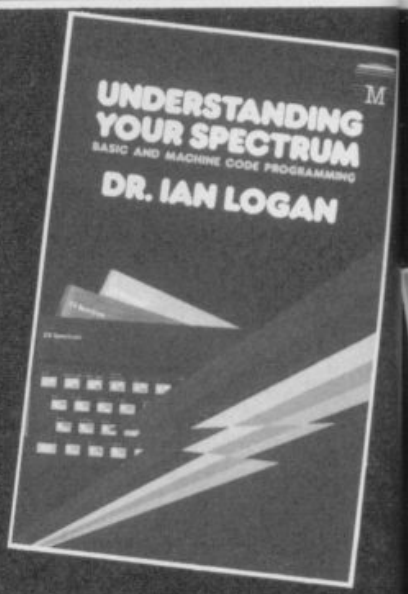
The user is not normally aware, nor needs to be aware, of this temporal control. The programmer, however, often needs to know what the time is, or the elapsed time since some event or, for a critical piece of code, the time taken for the

Code books

MACHINE CODE programming continues to attract Sinclair users. Sadly it also continues to be a source of frustration and difficulty to some. Take this plea for help from James Broad of Oxford, for example. He writes: *I'm baffled. I'm learning machine code and finding it an awful struggle, although your column is proving invaluable. What books did you use when you were learning?*

It is something that we all have to go through and there are not many people who take to the black art of machine code programming without putting in a lot of effort first.

The books which I used are not relevant because the Z80 chip was not around then. These days I would recommend purchasing something cheap and cheerful, like *Mastering Machine Code on your ZX Spectrum* from Melbourne House, as a taster. If you find that you understand the basics then move on to something more sophisticated. I recommend *Z80 and 8080 Assembly Language Programming* by Kathe



code to execute. Hence the manufacturers have provided a handy clock for the programmer to access.

The clock is contained in the Frames system variable at addresses 23672, 23673 and 23674. Every fiftieth of a second one of the two crystals stops the Spectrum in the middle of whatever it is doing and makes it hop to address 56, near the bottom of the ROM, to execute the machine code which starts there. One of the functions of that piece of machine code is to increment — increase by one — the Frames system variable. The piece of machine code has other important functions too, but I'll just deal with the Frames part at the moment.

The method of incrementing is straightforward. If the value in address 23672 is less than 255 then one is added to that value and that is the end of the matter — the incrementing of Frames is complete. That is what happens most of the time.

However, with an increment occurring every fiftieth of a second it doesn't take long for the value in address 23672 to build up to 255. On the next clock tick after that occurs the value in address 23672 is reset to zero and the value in address 23673 is incremented. Thus, every fiftieth of a second address 23672 is incremented to a maximum of 255 and every five seconds or so — well, every 256 fiftieths of a second (5.12 seconds) to be exact — it is reset to zero.

What happens when the value in address 23673 builds up to 255? Remember, this value is incremented every 5.12 seconds when 23672 is reset to zero. Yes, you guessed it. The value in 23673 is reset to zero and the value in address 23674 is incremented. This happens every 256×256 fiftieths of a second, which my calculator tells me is every 1310.72 seconds or, roughly, every 21mins and 50secs.

Finally, on the next increment cycle, 21mins 50secs after, the value in address 23674 reaches 255, it too is reset to zero and the whole business starts again. This occurs nearly four days after the Spectrum was first turned on.

Hence the Spectrum has an accessible clock which ticks every fiftieth of a second and runs on multiples of 256. Humanity, however, normally uses clocks which tick every second, or tenth or hundredth of a second, and which count for our convenience in minutes and hours. Why does the Spectrum tick every fiftieth of a second? And why use multiples of 256?

Answering the second question first, the reason is that a single byte can be used only to store a number in the range 0 to 255 inclusive, so that multiples of 256 are natural numbers for the Spectrum to use.

Fair enough you say, but why tick every fiftieth of a second? That is the amount of time taken by UK televisions, and those in other countries which use the PAL system, to construct a single frame of the television picture. (Strictly speaking, only half the picture is constructed in a fiftieth of a second but that is not material to the argument presented here.)

Hence one of the primary jobs of the crystals which make the Spectrum tick, is to trigger the hardware which grabs the information for display and posts it off to the television outlet every fiftieth of a second. You can just imagine the Spectrum designers noting that they had to set the hardware going every fiftieth of a second, and deciding that they might as well use the same period as the base unit of the software clock.

128. As a result, all pixels at the right and left are also set to the Paper colour so that the character is easily distinguished from its fellows on either side.

The contents of the character table, being held in ROM, cannot be changed. The address of the beginning of the table is 256 more than the value held in the CHARS system variable, which is located at 23606 and 23607, and the table is ony accessed by the Spectrum via CHARS. Hence the Spectrum can be forced to use a new, user-defined, character set simply by changing the values stored in CHARS.

Creating a new character set from scratch is a complicated task because the shape of each letter or digit must be worked out in detail. It is also best done one character at a time. I recommend the following. Move RAMTOP down by 768 bytes to make room for a copy of the entire ROM character set to be stored above RAMTOP. Copy the character set byte by byte above RAMTOP and then reset CHARS to point to the base of the new table. This task is accomplished by the program listed in table one.

Table 2. A Spectrum program to alter a character set stored at address 64600.

```
10  FOR I = 32 TO 127 : REM PRINT 96 CHARACTERS
20  PRINT CHR$ I ;
30  NEXT I
40  PRINT
50  INPUT "ENTER CODE OF CHARACTER TO CHANGE " ; X
60  LET X = INT X
70  IF X < 32 OR X > 127 THEN GOTO 50
80  PRINT "ENTER EIGHT NEW DIGITS"
90  FOR I = 0 TO 7
100 INPUT J : PRINT I,J
110 POKE 64600 + 8 * ( X - 32 ) + I , J
120 NEXT I
130 FOR I = 32 TO 127
140 PRINT CHR$ I;
150 NEXT I
160 PRINT
```

The program listed in table two displays the 96 characters in the set assuming they are stored at the top of memory. It then allows you to select one character, enter eight new values to be POKEd into the character set and displays the result for comparison. Just to get the ball rolling, I have also listed in table three the codes for the Greek letters alpha, beta and gamma in both upper and lower case. Try using them in the program in table two to see the effect.

Table 3. Digits corresponding to the Greek letters alpha, beta, and gamma in both upper and lower case.

Letter	Lower case codes								Upper case codes							
Alpha	0	0	0	56	72	72	60	0	0	16	40	68	124	68	68	0
Beta	0	112	72	112	72	112	64	64	0	120	68	120	68	68	120	0
Gamma	0	0	72	48	32	32	32	0	0	124	68	64	64	64	64	0

Spracklen, published by Hayden ISBN 0-8104-5167-0. If you get stuck then go back to a Spectrum specific book.

For those who really get the bit between their teeth then Ian Logan's books from Melbourne House, *Understanding Your Spectrum* and *The Complete Spectrum ROM Disassembly* ISBN numbers 0-86161-111 and 0-86161-116, are both very useful. The most authoritative book which is also widely available in the UK is *How to Program the Z80* by Rodney Zaks, ISBN number 0-89588-057-1, but don't be tempted to get it unless you have the others under your belt already.

Rest assured that everyone finds the learning business tricky and those that deny it probably haven't learnt as much as they think they have. If it was easy it wouldn't be interesting.

Perhaps the most inspiring way to learn is to study a few commercial games and then remind yourself that most of the people who are writing the highly sophisticated code which drives today's games knew little about machine code and nothing about the Spectrum just a few short years ago.

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Mailist

This is a specially designed database for storing names and addresses, and printing out in label format. Special search routines are included for selecting only names and addresses that conform to your criteria. The famous Gemini 'Searchkey' facility is included with this program, and data entry is simplified by an on screen label painting system. Just type in those names and addresses as though you were using a typewriter!

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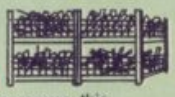

One of Gemini's speciality programs, this software will take the drudgery out of keeping stock records. Enter details of part number, description, unit quantity, cost price, selling price, minimum stock level, units in stock, order quantity and supplier details. Detailed reports include totals of stock at cost and sale price, cost of bringing stock up to level specified, gross margin, understocked items, etc. Full browsing facilities to make inventory management a pleasure!

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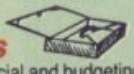

Designed as a complete financial and budgeting package for home affairs, this program allows the user to set up a budget for items of household and family expenditure and compare actual expenditure with budget as often as required. A running total of surpluses and deficits is available both numerically and in bar graph form. A complete bank account routine is included, together with suggested expenditure categories which may be simply altered as required.

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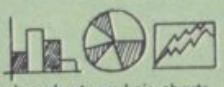
Graph Plot



At last, superb graphs, bar charts and pie charts on your Spectrum! With a complete data entry section and the ability to load and save files, this is really one of the fun programs to use. Represent numbers and data in clear diagrams with this package, and print them out on your printer to accompany reports, budgets, etc. Very highly recommended for the office, home and school. Also includes capability to provide mathematical function plotting.

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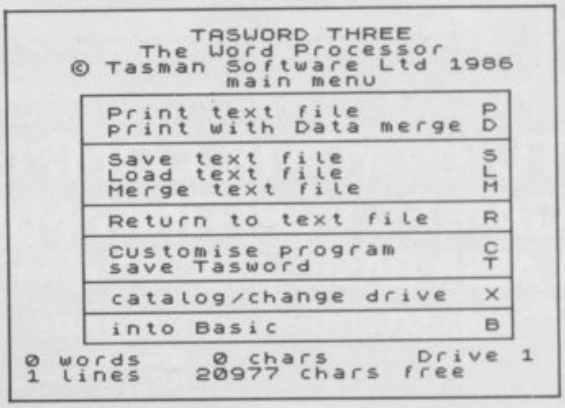
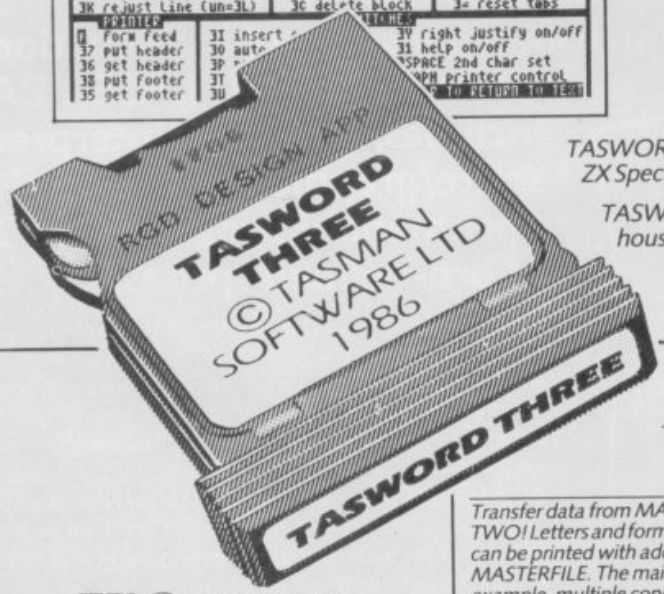
TASWOR

THE WORD PROCESSOR – A NEW STANDARD FOR THI





TASWORD TWO led the way in setting a standard for word processing on the ZX Spectrum. TASWORD THREE pioneers the new standard.

TASWORD THREE retains all the features which have made Tasword Two a household name for the Spectrum. With many additional features and enhancements, including a built-in mail merge and up to 128 characters per line, TASWORD THREE is the definitive word processor for the Spectrum and Spectrum+ with microdrive.

ZX SPECTRUM TASWORD TWO

THE WORD PROCESSOR

TASWORD TWO for the ZX 48K Spectrum cassette £13.90 microdrive cartridge £15.40

"Without doubt the best utility I have reviewed for the Spectrum"
HOME COMPUTING WEEKLY APRIL 1984
"If you have been looking for a word processor, then look no further" CRASH JUNE 1984
With 64 characters per line on the screen and a host of useful features TASWORD TWO is the ideal cassette based word processing package for the Spectrum owner.

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TASMAN PRINTER

INTERFACE

TASPRINT PRINTER INTERFACE for the ZX Spectrum £29.90
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Plug into your Spectrum and drive any printer fitted with the Centronics standard parallel interface. Supplied complete with ribbon cable and driving software. The user changeable interface software makes it easy to send control codes to your printer using the method so successfully pioneered with TASWORD TWO. The cassette contains fast machine code high resolution full width SCREEN COPY SOFTWARE for Epson, Mannesmann Tally, Shinwa, Star, Tandy Colour Graphic (in colour!) printers. TASCOPY shaded screen copy software for this interface (value £9.90) is INCLUDED in this package.

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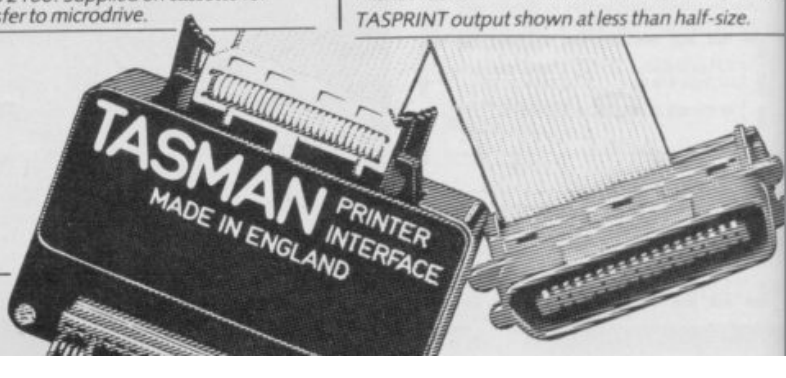
EPSON FX-80	MANNESMANN TALLY MT-80	BROTHER HR5
EPSON RX-80	STAR DMP 501/515/5610	SHINWA CP-80
EPSON MX-80 TYPE III	COSMOS-80	DATAC PANTHER
		DATAC PANTHER II

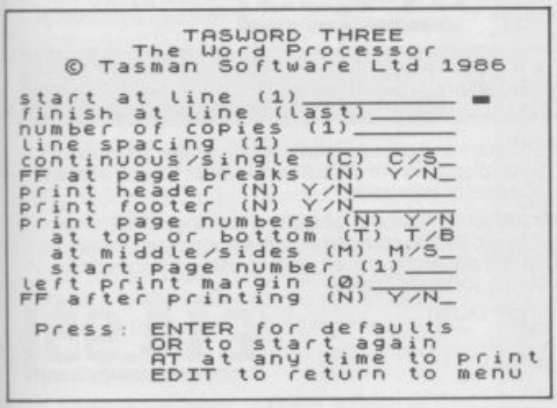
COMPACTA - bold and heavy, good for emphasis
DATA-RUN - A FUTURISTIC SCRIPT
LECTURA LIGHT - clean and pleasing to read
MEDIAN - a serious business-like script
PALACE SCRIPT - a distinctive flowing font

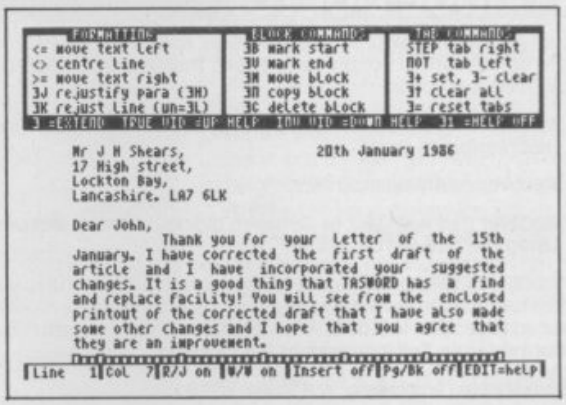
TASPRINT output shown at less than half-size.



D THREE

ZX SPECTRUM AND ZX SPECTRUM+ WITH MICRODRIVE





Please note that TASWORD THREE is only supplied on, and will only run on, microdrive.

TASWORD THREE – THE WORD PROCESSOR – Microdrive £16.50

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Available from good software stockists and direct from Tasman Software, Springfield House, Hyde Terrace, Leeds LS2 9LN. Tel: (0532) 438301

TASCOPY
THE SCREEN COPIER

TASCOPY for the ZX Spectrum with Interface 1 cassette £9.90 microdrive cartridge £11.40

The Spectrum TASCOPY is for use with the RS232 output on ZX Interface 1. It produces both monochrome (in a choice of two sizes) and large copies in which the different screen colours are printed as different shades. With TASCOPY you can keep a permanent and impressive record of your screen pictures and diagrams. A list of printers supported by TASCOPY is given to the left.

TASWIDE
THE SCREEN STRETCHER

TASWIDE for the ZX 48K Spectrum cassette £5.50

With this machine code utility you can write your own Basic programs that will, with normal PRINT statements, print onto the screen in the compact lettering used by TASWORD TWO. With TASWIDE you can double the information shown on the screen!

SINCLAIR QL
QL is a trademark of Sinclair Research Ltd

TASCOPY QL
THE SCREEN COPIER

TASCOPY QL for the Sinclair QL microdrive cartridge £12.90

TASCOPY QL adds new commands to QL Superbasic. Execute these commands to print a shaded copy of the screen. Print the entire screen or just a specified window. TASCOPY QL also produces large "poster size" screen copies on more than one sheet of paper which can be cut and joined to make the poster.

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The quality of the game is superb — this is the standard the others have to beat." **MICRO ADVENTURER on ZKUL**

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John Gilbert gets stuck into another monthly helping of QL goodies . . .

Pyramide: Vive la difference!

FRANCE has come to the rescue of unhappy QL owners who can't get enough — software, that is.

Pyramide Software, through its British agent Rio Promotions Limited, has just released five packages including a 3D space game called **Wanderer**, the educational language **Turtle Logo**, a utilities package and an icon driven graphics program called **QL Peintre**.

Wanderer uses two-tone glasses to achieve a startling 3D effect. As you move through space in this slimmed down QL version of **Elite** the stars hurtle towards you and enemy space ships close in.

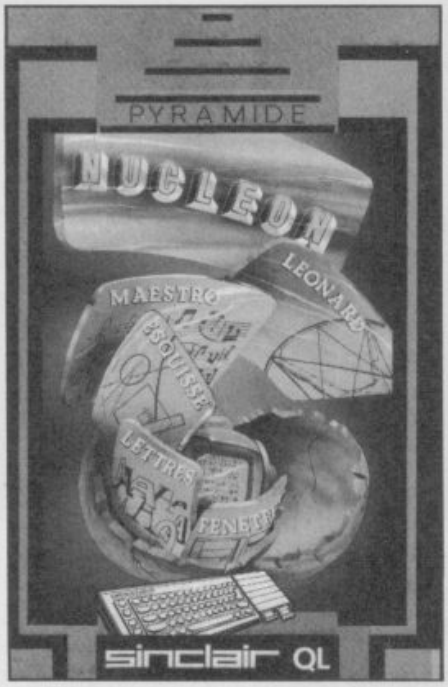
If you hit a space ship only the part which you damage is blown off. Several salvoes will have to be launched before you can blow it to bits — unless you are lucky with a central smash.

I have only seen a preview version of this game — a full review will appear next month — but already it is the best up-and-coming game for the QL. The French are putting us to shame.

Two Pyramide products are utilities. **Nucleon** is a set of five routines which make up for some of the inadequacies of SuperBasic. **Leonardo** is a drawing package similar to **GraphiQL**. As well as including commands to draw shapes and fill in areas of the screen, it also allows you to use a host of textures as a background. **Sketch** is similar to Leonardo but produces simple shapes for use within your programs. Whereas the latter is for creating complex drawings, **Design** is used for enhancing the screen display. **Nucleon** also includes a character generator which, when used with a compatible printer, will produce bold, italic or user-defined characters. It can also be used to produce icons on screen.

QL Peintre — no relation to the Sinclair Research product — is a design package providing all the options you would find on an Apple MacIntosh, plus colour. Commands for shape drawing, shading and colouring are accessed as icons displayed around the edge of the screen.

Turtle Logo is an implementation of the famous graphics language used in schools and developed at MIT by Seymour Papert. The language can be accessed at its simplest level for drawing shapes using the on-screen turtle cursor, or for artificial intelligence projects such as list processing. The language already has a high profile in schools and is ideal for teaching children in computing.



QL Remember is a sophisticated database on which you can store 400 entries containing up to 150 categories of two lines each. Information can be recalled using key names or phrases. Pyramide says the package can be tailored to any application including storage of memos, names and addresses, agendas, reminders and messages.

Pyramide's final contribution to the British software market is **OTH 3D**. Even here the company's programmers have not been satisfied with a version of Othello consisting of tiny counters on a small, quarter screen, board. They have produced 3D Othello in which the board is displayed in a way similar to that of Psion Chess.

It is a fast mover, dedicated to the addict, but beginners should find the pace of play easily adjustable to their standard. If you're not an Othello groupie the 3D graphics will draw you into the game and, using it as a trainer, you will soon be able to pit your wits against human players.

All the programs from Pyramide can be obtained only by mail order, at £19.95 each. The company is hoping to go into retail outlets but will wait to see the response from QL owners.

QL series continued?

Despite the doom and gloom of the past months a source close to.Sinclair Research has told me that the company is intent on saving its planned QL family of machines by keeping the research going on two additions to the range.

The first, and most likely to be launched this year, is a standard QL with 3.5in floppy disc drives linked to its body instead of the flimsy microdrives. The new design is provided for those who would not think of buying a QL because of the microdrives, and Sinclair Research seems to have accepted the limitations of the 'mass' storage device. Software compatibility is still an issue but products ► 88

QL Peintre — the French go ape.

Knight Flight

FEAR FLUTTERS in your belly as you mount the warbird, ready for your joust with the long lances of the opposition.

Each screen is made up of a series of ledges, or perches, which make flight to the top of the screen difficult. You must manipulate your bird through the spaces between the perches and keep it in flight by continually pressing the flap key or fire button on the joystick.

If you use the keyboard the flap key will take a hell of a hammering and having to continually press the fire button on the joystick makes bird movement control almost impossible.

Real Time Software certainly went for realism when it designed the game. If you manage to knock a rider from a bird it will lay a green or blue egg. Pick it up and you are awarded extra points.

Don't wait too long, though. Birds drop eggs for a purpose and if you don't take action quickly something not pretty and very nasty could hatch.

Some of your fellow riders need a helping hand when they are unseated. They do not leave the screen and, being the kindly person you are, you score even more points for picking them up.

When you have knocked off your first screenful you begin a second quest — screen two — which is called Survival wave. It includes birds which are more agile and dragons which will kill with their fiery wings or breath.

If you manage to avoid all those monsters you will reach the Gladiator wave in which one mega-knight is your adversary. The mega-knight is the second player when the two-player game is in operation.

Although Knight Flight **does not stretch the graphics capabilities of the QL to its limit, it is the first QL game we know of which uses both control ports for joysticks. It is a fast but playable version of the arcade favourite,** Joust, **but could have had extra features which would make it even easier to play, such as a Pause option.**

Publisher Real Time Software
Price £14.95
Joystick
★★★

QLINK

87 ◄ which use channels, rather than being restricted to the MDV_ command, should be usable on a disc-based machine.

The launch was due in February but was cancelled until the balance of old QL stock is exhausted. Our source also stated that, although Sinclair was technically correct in saying that the QL was back in manufacture, the machines which were coming out of the factory had old serial numbers and were probably old — repaired — stock.

The other launch, which is unlikely to occur this year as development has been frozen — is a 68020-based machine. It will contain a 32-bit data bus and be more in line with Sir Clive's original ideas for the QL. Unfortunately, if Sinclair is unable to put the 3.5in disc version on the market the development of the 32-bit machine could be frozen forever.

Clubbing together

Two years ago, two clubs were set up to deal with problems which QL users might have. Both QLUB and IQLUG are still running, although the former is getting more coverage because it is run by Sinclair Research. It is the official face of Sinclair, unlike the friendly face of IQLUG, an organisation which provides help not because it feels obliged to, but because its members own QLs and want others to benefit from their experience.

IQLUG is run by Leon Heller and Brian Pain, both experienced in running user support clubs due to their links with an independent BBC users' group. Heller is the chairman and voice of the club, while Pain is secretary and publisher of IQLUG's monthly photocopied magazine *QUANTA*.

Membership is by subscription to the magazine. The club deals with members' problems, provides hardware and software at offer prices and has a substantial library of software, most of which has been written by *QUANTA* readers.

IQLUG also runs workshops covering a range of subjects, such as the use of QDOS and how to write structured programs using SuperBasic. More information about IQLUG can be obtained from Brian Pain, 24 Oxford Street, Stony Stratford, Milton Keynes, MK11 1JU. Tel: (0908) 564271.

Next month I will be covering QLUB, Sinclair's official support service and Psion Support to show the joys and problems of becoming a member.

Supercharge

SUPER FAST, super compact, and super flexible — that's the Supercharge **compiler and Digital Precision is not kidding when it makes those claims.**

The compiler supports nearly all SuperBasic instructions and will produce machine code which will run as one or a series of QDOS jobs. Unfortunately you cannot produce resident procedures using it, because of the way those are organised, but even then you should be able to mimic the extension ability using a short routine of your own — which, incidentally, Digital Precision could have supplied.

To compile a program you first merge a set of SuperBasic extensions from Supercharge**. Those make the compilation process easier, but first you have to get past the Lenslok security device which so many software companies are using. Next, load in the source program.**

The compiler asks for a file name which it will use to store the code on microdrive or — if you specify it — floppy disc. Next you must decide if you want a listing and to which device, screen or printer, it should go. If you choose to have a listing the lines of your SuperBasic program will appear in a window or on paper as it is compiled.

When the compilation process has finished Supercharge **either drops back into SuperBasic or displays sentence-length error messages if anything has gone wrong. To run a compiled file you must EXECute it. Several job files can be run together, again using EXEC.**

SINCLAIR USER CLASSIC

If you want to run jobs concurrently — multi-task them — you will need to know about how QDOS operates. Each job has a priority; the higher it is the more processor time is given to it. SuperBasic has a priority of 32, which puts it as the foremost job. That can be altered and SuperBasic can also be turned off.

One of the Supercharge **SuperBasic extensions is a command to find the status of jobs through a particular channel. For instance, if you typed LIST_TASKS#0 you would get the display**

Basic 0,0,32

showing that SuperBasic is the only

HARDWARE

Expanderam

There is little you can say about add-on RAM for the QL apart from how much there is — 256K or 512K — and the price — £95 or £125. I could drone on and on about how there's a through connector for other add-ons and how it will speed up your programs . . . But I won't

Miracle Systems, Avondale Workshops, Woodland Way, Kingwood, Bristol BS15 1QL. Tel: 0272-603871 x210.

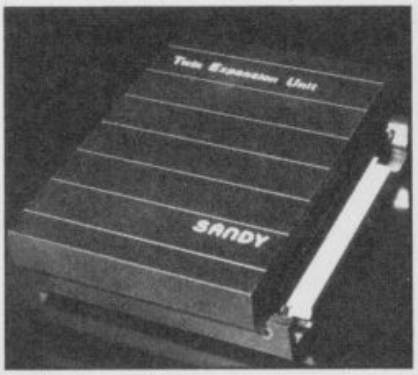
Sandy

The Italians have a reputation for stylish design which is echoed in the new range of QL peripherals from Sandy, marketed in the UK by Farmintel.

There are four products in the range, a twin expansion unit, extra memory (256K or 512K), a disc system and a printer, all styled to match the QL.

The disc interface which Farmintel normally supplies as part of its system is the Kempston unit and the drive is 80-track, double-sided.

Any new company producing add-ons for the QL deserves encouragement, especially when it's from abroad, but there is nothing to get excited about



in the Sandy line-up. The two-way expander looks good, but is hardly earth-shattering; the memory board is interesting, but expensive; and the disc system and printer are simply badged products. Ten out of ten for effort, but there's room for improvement.

Farmintel, 35 Stratton Way, Biggleswade, Bedfordshire SG18 0NS.

Two way expander	£39
256K memory	£129
512K memory system	£209
Disc system	£239
Printer	£239

John Lambert

QL Fictionary

IF YOU THINK that Racloir are very small shelves used for drying peanuts, or that a Tampan is a circular iron plate for baking cakes then you are in trouble. If, however, you know that a Remi-ped has oar-shaped feet then this game collection should prove no problem for you.

There are two types of game you can play. The first is similar to *Call My Bluff*, the popular BBC TV series.

Before play you must select the number of players and choose an icon to represent each. One to four people can take part and there are six icons including a cat, duck, alarm clock and wine with glass. If you select a correct definition from a panel of four your icon will be animated.

The game has a dictionary of 2,000 words, most of which are culled from dusty corners of the Concise English and Concise Oxford dictionaries.

***Trivial Pursuit* fans will see the similarity between it and Fictionary. The Sinclair game, however, allows you to play against the computer and the animated icons make it more exciting than the board game.**

The second game on the cartridge is Wordhoard, in which you are given a word and have to make as many words out of it as possible. The game has an 18,000 word dictionary and if you

task running. The 0,0 values are the unique job tag. Each job has a tag which the QL sets up. The final value is the priority.

Supercharge is powerful because anyone who has a QL can use it. You do not have to know a language such as C or Pascal to write programs in the source code — SuperBasic will do.

The compiler achieves spectacular results which are most notable where graphics and mathematics are concerned. The execution time of a program which, for example, fills the screen with circles — starting at the centre of the screen and increasing the circumference while keeping the original centre — is just over two seconds faster than the SuperBasic version.

The only slow aspect of Supercharge is the compilation process which involves a lot of effort by users who will need to dirty their hands with some understanding of the QL memory in order to multi-task jobs.

Each compiled program contains library routines from Supercharge so that it can be run without the compiler's presence. You should take memory into account when trying to compile a program as the library routines could make your program 11K longer. If your code is longer than 60K you should be careful.

Digital Precision says that programs can be thread compiled — compiled one at a time into a big routine — to maximise memory usage; the company does not say how that is accomplished.

Error messages can also make you run short of memory. Those are stored in RAM and if you have a large program with lots of errors you could end up 'out of memory' before the program has compiled.

The answer is to correct the errors shown before the message and keep trying to compile until you have taken all the errors out of the program. The memory released should be sufficient for most programs. The only problem you could have with this approach is if there is an error in the design of your program. That would just be down to your bad coding.

Despite criticisms that the product arrived late on the market, Supercharge is a superb utility which will make enterprising users interested in writing the applications programs they cannot get off the shelf.

Publisher Digital Precision
Price £59.95
★★★★★

Wanderer, Nucleon, QL Peintre, Turtle Logo, QL Remember, OTH 3D
Pyramide Software, Rio Promotions Ltd, 28 Waverley Grove, London, N3 3PX. Tel: 01-349 2764

*Whatever the size of your company, if you have any QL products which you want reviewed, or tips for fellow QL users, or perhaps queries about your machine, send them to John Gilbert, QLink, **Sinclair User**, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.*

create a word which it does not know it will ask you whether the word is legal.

You have three minutes in which to make your list. Plurals are allowed but names and foreign language words are frowned upon. The shortest word you can use is three letters, scoring four points, and the longest is nine letters, scoring 28 points.

The final option on the game menu allows you to play Fictionary and Wordhoard together. First you are given 50 words to define correctly, then the program loads in Wordhoard. When you have finished both sections of the quiz the computer calculates a combined score and tells you who did best.

Even if you don't put playing with the English language as one of the top ten most enthralling things to do you will find the definitions in Fictionary humourous and at times crude.

QL Fictionary reinforces the move by Sinclair Research towards good software. The games may be simple in construction but the use of graphics and the speed with which the program searches its vast dictionary make it ideal for masterminds with a literary bent.

Publisher Sinclair Research
Price £12.95
Joystick
★★★★

QLINK

Books

THE TIDE of books explaining SuperBasic, the Psion business suite and QDOS was stemmed several months ago when it was discovered the titles were not selling.

Some publishers, however, have not been put off and have decided to continue their QL series. Longman launched five titles covering most of the hackneyed subjects but left out a title on graphics and sound. That has been remedied with the recent release of *Working with the QL — A Practical Guide to QL Graphics and Sound*, by Alan Shinwell.

The book covers all the SuperBasic graphics and sound commands and provides a section on Easel, version two. It contains almost nothing new and is just a re-statement of subjects covered in the user guide.

There are, however, a few subjects it covers better than the manual and those include stippling, window generation, scaling windows and producing ellipses. It also explains user-defined character generation, a subject not dealt with in the user guide.

The section on the QL's limited sound capacity provides a better explanation of the facility than the user guide. The short example programs show how to create scales, produce sound effects and incorporate all those hundreds of Beep numbers into a program with the greatest efficiency.

Shinwell does not lack talent in providing the explanations. The problem is that there are already a dozen titles covering this area and one more is unlikely to help the cause of the QL.

The same can be said of *Using Your Sinclair QL*, from Hodder and Stoughton, by Eric Deeson. If the book had been released a year or two ago it would have sold to a captive audience, ready to read anything about the machine.

The customer is now more discerning and a book which shows you how to switch on, type things into your computer and how to use the Psion programs is unlikely to cause a stir.

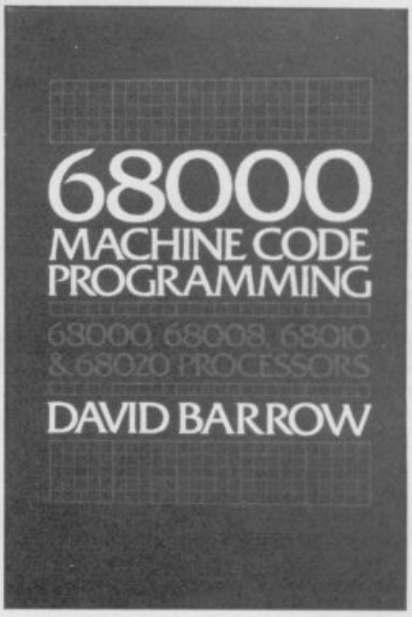
The examples of Psion packages used, including a stock control system and a business letter, only show that Deeson does not have a very good imagination.

If business users take time to read the Abacus manual they will find that producing a stock control program of their own is easy to do. There is no need to read a book about it.

I have no such reservations about *68000 Machine Language Programming*, written by David Barrow and published by Collins. It is a down-to-earth guide through the family of processors from the 8/16-bit 68008 to the 32-bit 68020, rumoured to be the chip Sinclair is experimenting with for a new machine.

Barrow is an accomplished textbook writer and would probably make a good journalist. There are no frills to his style; the way in which he presents the information makes the reader want to know more.

On first impressions the book, with its busy network of complex looking diagrams, threatens to be a titanic tome more suitable for a college library. Unlike many authors, however, Barrow has made every diagram count.



The most useful section is for beginners, who have already learnt to use machine code instructions but do not know how to string them together into a large structured program.

While Barrow provides long and useful programs for advanced machine coders to get their teeth into he has also aimed the book at beginners. It is an attitude which has worked well.

Practical Guide to QL Graphics, Longman, £7.95, ★★★
Using Your Sinclair QL, Hodder and Stoughton, £4.95, ★★
68000 Machine Code Programming, Collins, £12.95, ★★★★

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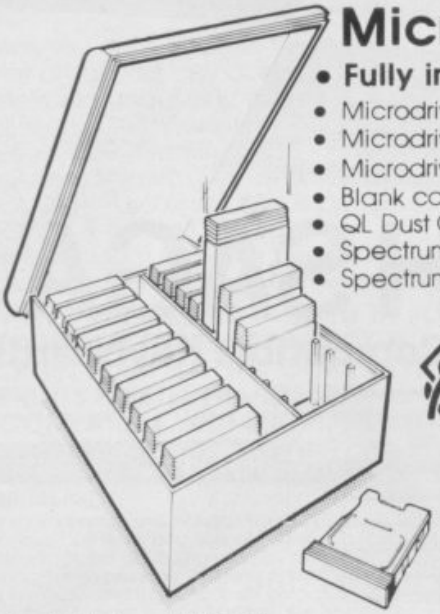

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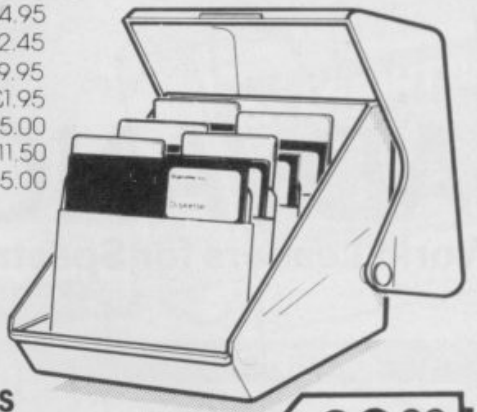

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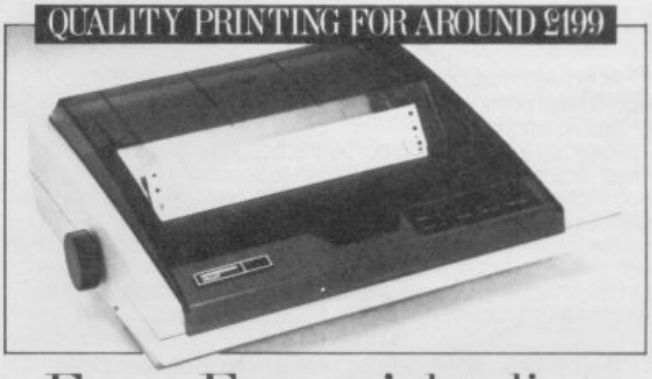

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The Forth Source

THE BEST things come in small packages. That describes the recently released Currah µ Source from Quadhouse. In a self-contained ROM cartridge it has a full-function-two-pass macro assembler, Forth and a debugger, all of which can interact with Basic. It is also compatible with Interface 1.

Currah, as regular readers of *Sinclair User* will remember, also made the µ Speech — a speech synthesiser — but went down last year. Quadhouse has bought the rights to the µ Source and is now producing it.

Both the assembler and Forth work by storing their information in Basic lines, in the form of a REM statement followed by either '!' to denote an assembler line or '#' for a Forth line. Multistatement assembler lines are possible.

This is its main limitation as the editing facilities of Spectrum Basic are fairly primitive. Despite that, the range of features and the ease of use more than compensate.

The Assembler

Using Basic in this way means that you do not have the normal renumber, block move, and block delete commands which you find in assemblers with their own editors, such as Devpac, but as a bonus you can use Basic variables within the assembler. You could have a line such as:

REM ! LD HL,base

Where base has previously been defined.

In theory, there is nothing to stop you re-assembling and running code a number of times within the same program using different values.

Operands can be calculated within the assembler, mixing Basic variables, trigometric functions or plain numbers in decimal, hex and binary. Basic strings can also be imported as required.

The best feature of the assembler is the ability to use macros, the assembler equivalent of a Basic procedure. Parameters are passed to the macro and on assembly the value of the parameter at the time is used.

Unlike a subroutine, recursion is allowed — the macro calling itself — up to any level. Conditional assembly is also catered for.

Assembly can either be direct to memory or, if desired, to a channel. That channel can be to a microdrive file, RS232 or Net if Interface 1 is attached. You can generate listings in a number of formats, to a choice of channels.

If the µ Source only contained this assembler it would be worth the money, however you also get Forth.

Figure 1. Reserved Variables

Assemble
Forth
Loader
Debug
Forsv1
Forsv2

Forth

The µ Source Forth is loosely based on Forth-79 and is a 16-bit integer only. Over 70 words and six control operators are predefined and the user dictionary can be linked to those or another user-defined dictionary.

Great variation is allowed in the way that Forth can be used, either in a single line or as a series of routines, in a similar manner to the BBC assembler. When invoked, each valid Forth line is interpreted until a non-valid line is encountered. In that way any number of separate blocks of lines can be used.

Like the assembler, Basic variables can be used within Forth, and that allows for an easy mix of the two languages. The only things it cannot handle are multi-dimensional arrays.

There is not enough space here to list all the predefined words and features. They are reasonably extensive, but not up to the Melbourne House — Abersoft — standard. Most omissions, however, can be catered for by dropping back into Basic, and then back to Forth.

This Forth is for the serious enthusiast; µ Source has to be plugged in to run the programs and so is only useful for people who write programs for their own use. Given that, many people will find it invaluable.

Figure 2. Assembler Pseudo-Ops

ORG	Origin
LIST	To channel n
OBJ	Object code to channel n
OPT	Various options
DEFW	DEFine Word
DEFB	DEFine Byte
DEFM	DEFine Message
DEFV	DEFine allophone
DEFS	Reserve Space
EQU	EQUate a label
MACRO	Start of Macro definition
ENDM	End of Macro definition
ASIF	Start if conditional assembly
END	END of conditional assembly

Debugger

In addition to all the above you also get a debugger. This allows you to step through any part of the Spectrum ROM or RAM and display and/or alter it. There is also a single step monitor.

The monitor has the normal facilities to set breakpoints, jump into routines, plus the ability to single step subroutines or alter the 'front panel' display to show just those registers/memory addresses you require.

Given the limitations imposed by basing the assembler and Forth in Basic lines, µ Source works very well. The advantage of having these programs in ROM can not be overstated.

The assembler on its own makes the µ Source good value, with Forth and the debugger thrown in it is excellent value. While µ Source is not intended for the computer novice, for the enthusiast it is a must. It costs £19.95.

John Lambert

Quadhouse Computers, Regent House, Victoria Road, Middlesbrough, Cleveland TS1 3HX. Tel: 0642-221102.

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Sinclair Surgery

For a computer cure look no further. Dr John Lambert's patent elixir removes the carbuncles from most machines

Double the options

IN JANUARY's Surgery in answer to a letter from P G Kerrick on menu selections I explained the difficulty in selecting two, or more, digits. Thank you for your many letters and tips.

One of the neatest was from Jim Grimwood of London.

```
length = number of digits in selection
limit = delay before selection accepted
wait = delay since last valid digit
a$ = menu selection

100 REM Menu Demo
101 LET a$="": LET wait=0: LET length=3:
LET limit=30
110 IF wait‹limit AND LEN a$‹length THEN GO SUB 190: GO TO 110
120 PRINT "Menu Selection is ";
a$:IF a$›"999" THEN GO TO 100
130 REM Menu Selection made at this point
131 STOP
200 IF NOT wait THEN GO TO 200+ (INKEY$›"")
201 LET i$=INKEY$: IF "O"‹i$ AND i$‹="9" THEN BEEP .007,32: LE
T a$=a$+i$:
PRINT #O;AT 1,0;a$;TAB length:
LET wait=0
209 IF NOT wait THEN GO TO 209+ (INKEY$="")
210 LET wait=wait+1: RETURN
```

Centronics conversion

I HAVE been looking around for a reasonable, though cheap, printer to connect to a QL. Saga Systems has been advertising the LTR-1 printer which appears to fit the bill, but I was advised that I would require a Centronics interface — at an extra £30 — as the RS232C serial interface on the QL is non-standard. Since it is possible to obtain a simple RS232 lead for about £10 I am reluctant to spend the £30 unless it is essential.

Reading through the information section of the QL User's Manual it would appear that a number of printers are supported specifically, and that a printer driver can be readily adapted for other makes not so supported. You reviewed this printer in the June issue and stated that you had driven it from **QL Quill**. Could you confirm that direct connection to one of the QL's serial ports is possible, and that connected in this way the printer could be driven from SuperBasic?

D E Sullivan,
Flixton, Manchester

● *Although the LTR-1 has both Centronics and Serial input I have yet to find anyone — including Saga — who has successfully used the Serial input. When I reviewed the printer I used a Centronics to RS232 converter to run* ***Quill***

If you buy this printer you will have to do the same.

Drum needs amplifier

I RECENTLY bought a SpecDrum kit for my Spectrum Plus, but cannot get any sound from my data recorder. A friend has suggested getting a better amplifier. Is there a piece of hardware we could attach?

Darren Slattery,
Berkhamstead, Herts

● *You should not use your tape deck just as an amplifier as it is possible to damage it. Contact Cheetah direct as they will be bringing out an amplifier specifically for the SpecDrum.*

MIDI interface goes for a song

SPEAKING as someone with Van Gogh's ear for music I approached the Micon MIDI interface, from XRI Systems, with some trepidation. I just about know the difference between a crochet and a semi-quaver — one wears funny hats and the other is half a crisp — but now, however, I could give Vangelis a run for his money and still have change for the bus fare.

For the uninitiated, MIDI is a standard by which various musical devices, synthesisers, drum machines and computers can be connected so that any device can 'talk' to any other.

In this way the Spectrum, with a suitable interface, can control the sounds produced — not only the tone but also the speed and the type of sound. The Micon interface allows all of this over eight tracks.

On the top of the interface are five five-pin sockets. MIDI in, two MIDI out, Sync in and Sync out. The last two allow non-MIDI machines — such as the Cheetah SpecDrum — to be used and kept in time with the music.

The interface is supplied with two pieces of software, a Step Sequencer and a Real-time Sequencer. The first centres around an on-screen stave.

Music is input to this stave by pressing keys on the synth' keyboard which then appears on screen as notes. Various options are then available to edit the music produced. These cover copying bars, altering notes and so on.

On playback you can display the music on screen as the notes are played — that slows the whole thing down as the

Stick needs interface

WILL A Quickshot II joystick run on software designed to run with a Kempston joystick? If so, what is the best Quickshot II joystick/programmable interface combination?

Graham James
London N13

● *To use any joystick you need an interface. In theory, any joystick will work with any interface, but not all interfaces will run with all software.*

The Kempston Tri-State or Datel Switchable interfaces work with 95 per cent of software and are reasonably priced — both will take a Quickshot II.

Demise of the Issue One?

I have an issue one Spectrum 16K and would like to upgrade it to 48K, but cannot find a firm to supply a 32K upgrade kit. Can you help?

J C Algie,
Newtownards,
County Down

● *As far as I know there are no firms left that still do issue one upgrades. Can any readers help?*

screen cannot be updated fast enough, so there is an option to turn it off.

Other options set the tempo, select tracks — any or all can be played at once — transpose the music and set the gates.

The outcome of all this, is that it is very easy to compose a piece of music one note at a time until you have your masterpiece. Even I can do it.

On the flip side of the tape is the Real-time Sequencer. That is simple and acts as a tape recorder. Up to ten sequences can be stored and played back but to use it properly you have to be able to play properly — which counts me out. A fuller version will be available soon which covers all eight tracks and will have all the bells and whistles.

For the more advanced user there are additional tapes which allow you to shape the sound produced and produce a graph on screen of what the sound looks like. These are available for the Casio range.

Once you get into this sort of thing you can also get software from third parties. Midisoft produces a tape called RAP for the Micon, and other MIDI interfaces, which lets you set up a rhythm track. That covers 16 separate MIDI channels and is a very professional-looking piece of software.

If you are at all serious about your music, or even if you are just an enthusiastic amateur, the MIDI is the way to go. The Micon allows things I didn't think were possible with a Spectrum.

John Lambert

XRI Systems, 10 Sunnybank Road, Wylde Green, Sutton Coldfield, West Midlands B73 5RE. Tel: 021-382-6048.

MIDI Interface	**£109.00**
Casio Editor	**£22.95**
DX7 Editor	**£24.95**
Juno 106 Toolkit	**£19.95**

Midisoft, PO Box 43, Romford, Essex RM1 4EG.

Hardware

A touch of magic

Disc interfaces for the Spectrum tend to fall into one of two categories. They are either super-fast with all the facilities you could want — and some you don't — or they are plodders.

The SPD1 from LMT Computers falls into the second category. It can load and save Basic, Code and Data and do all the things that you'd expect from a disc interface. All the commands are built into the ROM and if you want to get fancy there are very rudimentary random access commands which let you read and write a sector on the disc.

One usual feature is that, like the BBC, it treats each side of a disc as a separate drive. Although you can get less on a side — 182.5K with an 80-track drive — moving files around is easier.

If that were all it could do, it would hardly stand out from all the other disc interfaces for the Spectrum, but it has a number of features which make it particularly interesting.

Most important of those is the parallel printer port which can drive a range of full-sized printers. Once the port is initialised you can use LPRINT and LLIST to send text to the printer or use COPY* to copy the screen to an Epson-compatible.

Next there is a Magic Button which can be used to transfer your programs to disc. When the button is pressed the entire contents of memory — all 48K — is saved. When this is loaded back the program continues from the point it was saved.

Lastly, there is a utility disc with a number of useful routines, an elementary word processor, a database and a Renumber facility. Two other programs on the disc allow for elementary networking to two SPD1s.

LMT will shortly be bringing out an upgrade board for the SPD1 that gives it proper networking — well, compatible with Interface 1 anyway — which should prove useful for schools. All this adds up to a useful package at a very reasonable £89.95. The upgrade board will be £29.95, or £109.95 for the complete unit.

John Lambert

LMT Computers, South Street Commercial Centre, Bishop's Stortford, Herts CM23 3AL. Tel: 0279-506801.

No joy with Wafadrive

I HAVE a 48K Spectrum, Rotronics Wafadrive, Kempston interface, Quickshot II joystick and LMT 68FXII keyboard.

My problem is that the interface works when plugged directly into the Spectrum but does not work when plugged into the Wafadrive, although it is described as an extension bus.

Could you suggest an alternative interface to connect the Wafadrive to the Spectrum?

P Roberts,
Worsley,
Manchester

● *The joystick interface should be plugged in between the Spectrum and the Wafadrive. To do that you will need a two-way adaptor. I would suggest the Currah Microslot — from DK'tronics.*

On the brink of overload

I OWN a Spectrum Plus and Interface 1 and Microdrive, ZX Printer, RAM Turbo joystick interface, two Currah Micro-slots, Currah Microspeech, Datel litewriter lightpen, Quickshot II joystick and a Kempston Pro 5000 joystick.

How many of these accessories can I attach to the computer without overloading the power supply?

J Picton,
Ashington, Northumberland

● *The answer depends very much on your power supply. I would suggest that Interface 1, a Microdrive, one Microslot, the RAM Turbo and joysticks plus either the ZX Printer, Microspeech or light pen is about the limit for it all to work reliably.*

Software for Microspeech

I HAVE recently bought a Currah Microspeech and was wondering if there was any software for it?

Chris Farrell,
Reading, Berkshire

● *There are a few programs that make use of the Microspeech, but not many. At one time DK'tronics sold a dictionary for it but this has been discontinued.*

Send your hardware problems to: Sinclair Surgery, Sinclair User, 30-32 Farringdon Lane, London EC1R 3AU.

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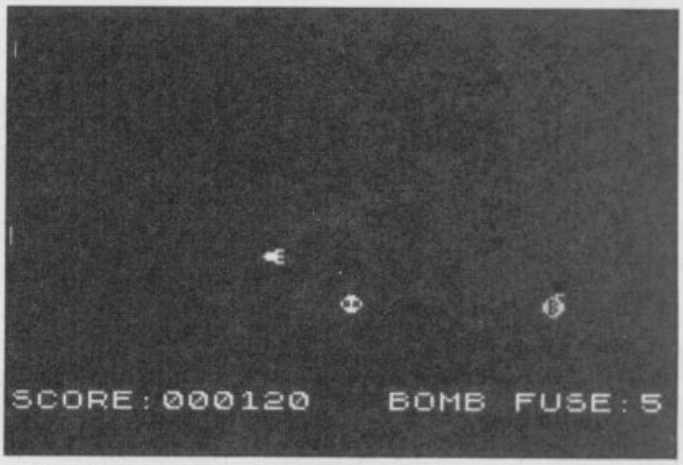


HERE'S A SIMPLE shoot-'em-up from J Dury of Henleaze in Bristol. Mission 12 has the virtue of being fast and difficult to play — you must manoeuvre your spaceship around the screen and shoot the alien as he homes in on you. Watch out for the time bombs as well — you must get those within 20 seconds or it's curtains for the universe once again.

The game uses the cursor keys to move and zero to fire. It runs on any Spectrum and uses our graphics abbreviations, so read the instructions on entering those before you type in the listing.
Good hunting!

Lines 1000 to 1090 First the user-defined graphics for the spacecraft, alien and bomb are set up. The spacecraft gets four characters — A,B,C, and D — for four separate positions. The alien is E, the bomb F, and G contains an explosion. HS will contain the high-score and H$ a string version of that number.

```
1000 REM U.D.G.S,ETC
1005 FOR n=USR "A" TO USR "G"+7:
 READ A: POKE N,A: NEXT N
1010 DATA 0,0,14,120,254,120,14,
0
1020 DATA 0,84,84,124,56,56,56,1
6
1030 DATA 0,0,112,30,127,30,112,
0
1040 DATA 16,56,56,56,124,84,84,
0
1050 DATA 0,28,62,73,73,62,28,0
1060 DATA 7,28,38,107,103,107,38
,28
1070 DATA 73,42,0,99,0,42,73,0
1080 POKE 23658,8: BORDER 0: INK
 7: PAPER 0: CLS
1090 LET HS=0: LET H$="000000"
```

Lines 2000 to 2060 Now the initial variables are set up. SX and SY are the co-ordinates of the ship. SD contains the direction of the ship, from one to four. Later that number will be used to choose the correct graphic of the ship and also work out where it should move to. AX and AY are the co-ordinates of the alien — it starts in the top left corner. AVX and AVY are the direction of the alien — it needs two co-ordinates because it can move diagonally. BX and BY are bomb co-ordinates and BF is the fuse.

```
2000 REM VARIABLES
2010 LET SX=18: LET SY=15
2020 LET SD=4:
2040 LET AX=0: LET AY=0
2050 LET AVX=1: LET AVY=0
2060 LET BX=0: LET BY=0: LET BF=
100
```

Lines 2100 to 2130 A title screen is printed. Dury puts his name and the title into a string A$ and prints the letters one at a time. It makes for a flashier display.

```
2100 LET A$="(10*sp)MISSION 12":
 FOR N=20 TO 1 STEP -1: PRINT AT
 5,0;A$(N TO ): BEEP .001,60: NE
XT N
2105 BEEP .1,0: BEEP .1,5
2110 LET A$="(10*sp)BY J. DURY":
 FOR N=20 TO 1 STEP -1: PRINT AT
```

GRAPHICS INSTRUCTIONS

SINCLAIR USER has evolved a special set of abbreviations for entering graphics into your computer, to help you enter listings correctly. This month there are only two abbreviations to worry about.

Where you see "(sp)" type in a single space between two inverted commas — don't include the brackets. Where you see something like "(4*sp)" type in four spaces, again without the brackets.

Where you see a capital letter underlined, enter that letter in Graphics mode. The underline will not appear on the screen. When you come to run the program, the letter will turn into the appropriate user-defined graphic character. Watch out for characters that look similar. The letter l (small L) and the number 1 are easily confused. The number 1 has a pointed top. Also watch out for the small letter l and the capital letter I — again, easy to confuse.

Most errors occur because of mistakes in DATA statements. If the line number contains a READ command always check whether the line refers to DATA or not.

Finally, it's GOOFO time. We made a lulu on **Washing Line** in the January issue. In the instructions SAVE "wcode" 30050,110 should have read SAVE "wcode" CODE 30050,110. More seriously, line 200 should read 200 DATA "80C8FE7F28042323". Sorry!

We have received numerous calls from people with problems getting other January programs to run. We are now certain that all other listings are correct as printed, not just because we've checked them, but also because we've had phone calls from readers telling us that they do work.

► 100

```
 10,0;A$(N TO ): BEEP .001,60: N
EXT N
2115 BEEP .1,0: BEEP .1,5
2120 LET A$="(6*sp)PRESS A KEY T
O PLAY": FOR N=25 TO 1 STEP -1:
PRINT AT 15,0;A$(N TO ): BEEP .0
01,60: NEXT N
2125 BEEP .1,0: BEEP .1,5
2130 PAUSE 0
```

Lines 2140 to 2150 The screen is cleared and the score printed at the bottom.

```
2140 CLS
2150 LET SC=0: PRINT AT 21,0;"SC
ORE:000000"
```

Lines 3000 — 3090 The ship is moved one space in the direction of its movement. In line 3010 the expressions in brackets will have the value of 1 if true, 0 if false. Since SD can only have one of those values at a time, 1 will be added or subtracted from the appropriate co-ordinate, the false expressions having no effect at all.

If the ship has not reached the edge of the playing area then line 3020 sends the program further on. If it has, however, it must be bounced back which means changing the direction — this is done in lines 3040 to 3070. Line 3090 uses ATTR to see if the ink colour of the square you are on is cyan — if so you have hit something and are sent to the Death routine.

```
3000 REM MAIN LOOP
3010 LET SX1=SX+(SD=2)-(SD=4): L
ET SY1=SY+(SD=3)-(SD=1)
3020 IF SX1>=0 AND SX1<=18 AND S
Y1>=0 AND SY1<=31 THEN  GO TO 31
00
3030 BEEP .01,10: BEEP .01,20: B
EEP .01,15
3040 IF SX1<0 THEN  LET SD=2: GO
 TO 3010
3050 IF SX1>18 THEN  LET SD=4: G
O TO 3010
3060 IF SY1<0 THEN  LET SD=3: GO
 TO 3010
3070 IF SY1>31 THEN  LET SD=1: G
O TO 3010
3090 IF ATTR (SX1,SY1)=5 THEN  G
O TO 6100
```

Lines 3100 to 3250 Line 3110 prints a space where you were and the ship in the new position, then sets the co-ordinates to the new position. Then follows a very similar routine to do the same for the alien. Lines 3200 to 3250 set the alien direction with reference to the direction of your spaceship, so that it tends to home in on you.

```
3100 LET A$=CHR$ (SD+143)
3110 PRINT AT SX,SY,"(sp)";AT SX
1,SY1; INK 5;A$: LET SX=SX1: LET
 SY=SY1
3150 LET AX1=AX+AVX: LET AY1=AY+
AVY
3160 LET AX1=AX1+(AX1<0)-(AX1>18
)
3170 LET AY1=AY1+(AY1<0)-(AY1>31
)
3180 IF ATTR (AX1,AY1)=6 OR ATTR
 (AX,AY)=6 THEN  GO TO 6100
3190 PRINT AT AX,AY;"(sp)";AT AX
1,AY1; INK 5;"_": LET AX=AX1: LE
T AY=AY1
3200 LET AVX=AVX+(AX<SX)/2-(AX>S
X)/2
3210 IF AVX<-1 THEN  LET AVX=-1
3220 IF AVX>1 THEN  LET AVX=1
3230 LET AVY=AVY+(AY<SY)/2-(AY>S
Y)/2
3240 IF AVY<-1 THEN  LET AVY=-1
3250 IF AVY>1 THEN  LET AVY=1
```

Lines 3500 to 3550 Your chance to move. You press a key and the key value is stored in B$ for future reference. If it was a direction key SD holds the new direction, if it was 0 the program goes to the fire routine.

```
3500 LET B$=INKEY$
3510 IF B$="5" THEN  LET SD=1
3520 IF B$="8" THEN  LET SD=3
3530 IF B$="6" THEN  LET SD=2
3540 IF B$="7" THEN  LET SD=4
3550 IF B$="0" THEN  GO SUB 4000
```

Lines 3600 to 3990 When there is no bomb, BF is 100. So line 3600 gives a chance — one in 20 — of a bomb appearing where there was none before. Line 3610 checks to see if there is a bomb and reduces the fuse length by one each move. When the bomb explodes, the explosion routine is called.

```
3600 IF BF=100 AND RND>.95 THEN
 GO SUB 4200
3610 IF BF<100 THEN  LET BF=BF-1
: PRINT AT 21,25;BF;"(sp)": BEEP
 .0001,60: IF BF=0 THEN  GO SUB
6000
3620 IF BF<100 THEN  PRINT AT BX
,BY; INK 4;"□"
3990 GO TO 3000
```

Lines 4000 to 4100 This routine is called when the fire button is pressed. A line is drawn, using logic operations for the direction, from the nose of the ship. If it hits the bomb or alien the appropriate subroutine is called. The two PLOT statements print the path of the laser beam.

```
4000 REM FIRING
4010 LET X=SY*8+4: LET Y=(21-SX)
*8+4
4020 PLOT  OVER 1,X,Y: DRAW  OVE
R 1,(SD=1 OR SD=3)+(254-X AND SD
=3)+(-X AND SD=1),(SD=2 OR SD=4)
+(174-Y AND SD=4)+(-Y+24 AND SD=
2)
4030 BEEP .01,0: BEEP .01,10: BE
EP .01,5: BEEP .01,15
4040 IF BF<100 AND ATTR (BX,BY)=
7 THEN  GO SUB 5000
4045 IF ATTR (AX,AY)=7 THEN  GO
SUB 5100
4050 PLOT  OVER 1,X,Y: DRAW  OVE
R 1,(SD=1 OR SD=3)+(254-X AND SD
=3)+(-X AND SD=1),(SD=2 OR SD=4)
+(174-Y AND SD=4)+(-Y+24 AND SD=
2)
4100 RETURN
```

Lines 4200 to 4220 This routine is used to set the initial position of a new bomb at random on the screen.

```
4200 REM SET UP BOMB
4210 LET BF=20: LET BX=INT (RND*
19): LET BY=INT (RND*32): PRINT
AT BX,BY; INK 4;"□"
4215 PRINT AT 21,15;"BOMB FUSE:"
4220 RETURN
```

Lines 5000 to 5040 This routine is called if a laser hits the bomb. 5020 prints OVER the bomb. When you use PRINT OVER you erase pixels which are the same as the new object you are printing. So printing the same thing twice OVER erases that object completely. This line therefore erases the bomb — you've hit it — and the following lines increase and reprint your score.

```
5000 REM BOMB SHOT
5010 FOR N=1 TO 20: BEEP .001,60
: NEXT N
5020 PRINT AT BX,BY; OVER 1;"□":
 FOR N=10 TO 30 STEP 5: BEEP .01
,N: BEEP .01,N+1: NEXT N
5030 LET SC=SC+BF*10: PRINT AT 2
1,12-LEN (STR$ SC);SC;TAB 31
5040 LET BF=100: RETURN
```

Lines 5100 to 5150 This goes through a similar procedure for the alien craft, but instead of using OVER an explosion is printed and the co-ordinates for the alien ship re-set to 0,0.

```
5100 REM ALIEN SHOT
5110 FOR N=1 TO 10: OVER 1: PRIN
T AT AX,AY;"□";AT AX,AY;"□": BEE
P .005,10-N: NEXT N: OVER 0
5120 PRINT AT AX,AY; OVER 1;"□"
5130 LET AX=0: LET AY=0: LET AVX
=1: LET AVY=0
5140 LET SC=SC+50: PRINT AT 21,1
2-LEN (STR$ SC);SC
5150 RETURN
```

Lines 6000 to 6050 The bomb has a special explosion, handled by this routine.

```
6000 REM BOMB EXPLODES
6010 PRINT AT 10,14;"BOOM!";AT B
X,BY;"□"
6020 FOR M=1 TO 8: FOR N=0 TO 7:
 OUT 2,N: BEEP .01,-20: NEXT N:
NEXT M
6030 PRINT AT SX,SY;"□";AT AX,AY
;"□"
6040 FOR N=0 TO 21: BEEP .01,-10
: OUT 2,N-(21-N): BEEP .01,-20:
NEXT N: NEXT M
6050 GO TO 7000
```

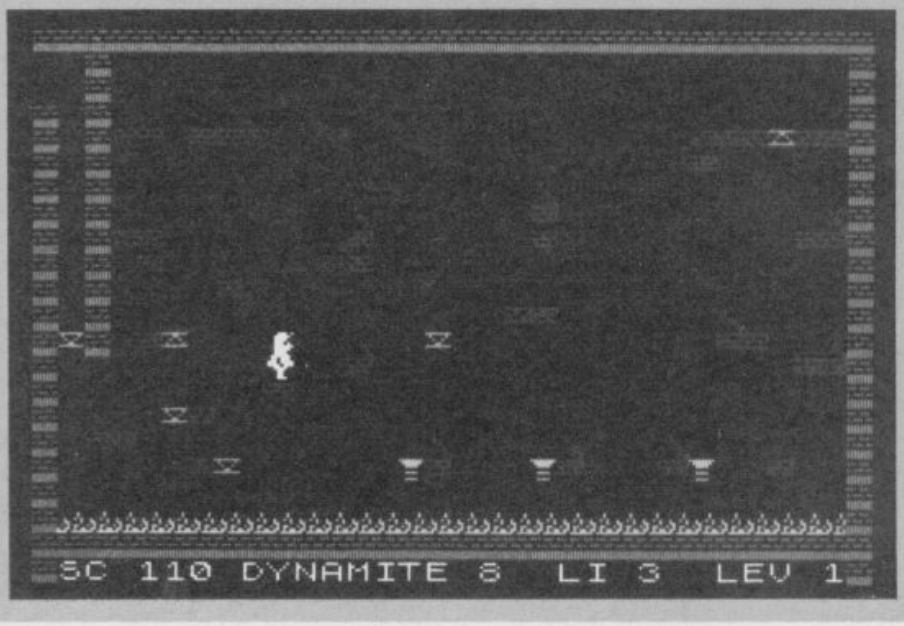
Lines 6100 to 6140 This routine is called when you collide with something and are gobbled. The explosion is printed at line 6130 and then a sound effect tells you the worst.

```
6100 REM GOBBLED
6110 PRINT AT AX,AY;"(sp)";AT SX
,SY; INK 5;"□"
6120 FOR N=1 TO 30: BEEP .01,-20
: BEEP .0001,60: NEXT N
6130 PRINT AT SX,SY;"□";AT 10,12
;"GOBBLED!"
6140 FOR N=25 TO 0 STEP -1: BEEP
 .005,N: BEEP .005,N-1: BEEP .00
5,N+1: NEXT N
```

Lines 7000 to 7110 The final routine tells you that the game is over. In 7010, PRINT #0 is a useful way of printing on the bottom two lines of the screen. Line 7020 checks to see if you have the high score and if so, adjusts the high score variables accordingly. Any objects on screen are obliterated by line 7100 and the program returns to the start of the initialisation routines for a new game.

```
7000 REM GAME OVER
7010 PRINT#0;"(11*sp)GAME OVER"
: PAUSE 150
7020 IF SC>HS THEN  LET HS=SC: L
ET S$=STR$ SC: FOR N=1 TO LEN S$
: LET H$(N+(6-LEN S$))=S$(N): NE
XT N
7050 PRINT AT 21,15;"(2*sp)HIGH:
";H$
7100 PRINT AT SX,SY;"(sp)";AT AX
,AY;"(sp)";AT BX,BY;"(sp)"
7110 GO TO 2000
```

Dungeon Danny



HERE'S SOME FUN for levels 'n' ladders fans from Andrew Cartwright of Wirral on Merseyside. Use keys Q to jump, O left and P right to guide Danny round the dungeon collecting 18 sticks of dynamite. Lifts and death-defying falls must be carefully worked out if you are to succeed in the quest.

The game runs on the 48K Spectrum or Spectrum Plus, and uses a flash method of getting up the graphics which changes the character set. If you find you need to edit the program after you have run it, enter the command POKE 23607,60 to return to the normal character set. Remember to read our special instructions on entering graphics.

```
  2 POKE 23658,255: BORDER 0: I
NK 7: PAPER 0: CLS
  3 CLS : PRINT AT 5,1;"DUNGEON
 DANNY BY A CARTWRIGHT":
  8: POKE 23607,60: PRINT AT 10
,0;"DATA BEING READ PLEASE WAIT
767": FOR X=0 TO 767: LET Y=PEEK
 (15616+X): POKE 64000+X,Y: PRIN
T AT 15,15;X: NEXT X
  10 FOR x=64264 TO 64407
  20 READ num: POKE x,num: NEXT
x
  25 DATA 56,252,60,92,252,28,12
0,60,126,110,239,223,60,110,102,
238
  30 DATA 255,17,255,68,255,0,0,
0,0,2,2,37,49,86,181,239,255,105
,146,255,0,0,0,0,255,146,105,255
,0,0,0,0,255,66,36,24,255,0,0,0,
255,24,36,66,255,0,0,0,255,126,6
0,0,60,0,60,0,32,32,32,24,28,14,
7,3
  35 DATA 28,63,60,58,63,56,30,6
0,126,118,247,251,60,118,102,119
  36 DATA 255,153,153,153,153,0,
0,0
  37 DATA 184,124,60,92,252,124,
60,126,118,247,239,60,24,24,56,0
,29,62,60,58,63,62,60,126,110,23
9,247,60,24,24,28,0
  38 DATA 8,28,42,127,42,28,8,0
  39 REM  VARIABLES
  45 LET J$="Q": LET L$="O": LET
R$="P"
  50 LET SCREEN=5000: LET SC=0:
LET LI=5: LET LEV=1
  110 CLS
  111 POKE 23607,249
  120 LET F$="CCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCC": PRINT AT 0,0; IN
K 0; PAPER 1;F$;AT 20,0;F$
  130 PRINT AT 19,1; INK 6;"DDDDD
DDDDDDDDDDDDDDDDDDDDD"
  140 FOR S=1 TO 21: PRINT AT S,0
: INK 0: PAPER 1;"C";AT S,31;"C"
: NEXT S: FOR S=1 TO 12: PRINT A
T S,2; INK 0; PAPER 1;"C": NEXT
S: PRINT AT 1,0;"(sp)";AT 2,0;"(
sp)";AT 3,1;"(sp)";AT 4,1;"(sp)"
;AT 5,1;"(sp)";AT 6,1;"(sp)"
  150 POKE 23607,60: PRINT AT 21,
1;"SC(5*sp)";"DYNAMITE(3*sp)";;"
(sp)LI(4*sp)";"LEV": POKE 23607,
249
  200: LET DI=0: LET A=3: LET B=2
9: POKE 23607,249
  240 GO TO 4500
  241 PRINT AT 1,0;"(2*sp)";AT 2,
0;"(2*sp)";AT 3,1;"(sp)";AT 4,1;
"(sp)"
  245 LET Z$="N": LET X$="O": LET
 A$="A": LET B$="B"
  246 LET JU=2518
  249 LET TI=0: LET E=0: LET DI=0
: LET A=3: LET B=29: POKE 23607,
249
  250 REM  MAIN LOOP

  260 LET A1=A: LET B1=B
  261 IF E>5 THEN  GO TO 4000
  270 IF INKEY$=L$ THEN  LET X$="
O": LET Z$="N": LET JU=2518: PRI
NT AT A1,B1;"(sp)";AT A1-1,B1;"(
sp)": LET B=B-1: LET A$="A": LET
 B$="B"
  275 IF INKEY$=R$ THEN  LET Z$="
P": LET X$="Q": LET JU=2500: PRI
NT AT A1,B1;"(sp)";AT A1-1,B1;"(
sp)": LET B=B+1: LET A$="K": LET
 B$="L"
  285 IF SCREEN$ (A+1,B)="I" THEN
  GO TO 1000
  287 IF SCREEN$ (A+1,B)="J" THEN
  LET DI=DI+1: LET SC=SC+5: BEEP
.002,60: PRINT AT A+1,B;"(sp)"
  289 IF SCREEN$ (A,B)="J" THEN
LET DI=DI+1: LET SC=SC+5: BEEP .
002,60: PRINT AT A,B;"(sp)"
  290 IF SCREEN$ (A,B)>CHR$ 32 TH
EN  LET B=B1:
```

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```
 291 IF SCREEN$ (A-1,B)>CHR$ 32
THEN  LET B=B1
 293 IF SCREEN$ (A+1,B)="(sp)" T
HEN  GO TO 2000
 300 IF SCREEN$ (A+1,B)="E" THEN
  GO TO 500
 302 IF SCREEN$ (A+1,B)="F" THEN
  GO TO 410
 305 IF SCREEN$ (A+1,B)="G" THEN
  GO TO 700
 307 IF SCREEN$ (A+1,B)="H" THEN
  GO TO 900
 320 IF INKEY$=J$ THEN  GO TO JU
 350 PRINT AT A,B;B$;AT A-1,B;A$
;
 392 POKE 23607,60: PRINT AT 21,
4;SC;AT 21,23;LI;AT 21,17;DI;"(s
p)";AT 21,30;LEV: POKE 23607,249
 393 IF DI>17 THEN  LET DI=0: PR
INT AT 6,2;"(sp)";AT 7,2;"(sp)"
 395 PRINT AT A,B;X$;AT A-1,B;Z$
 400 GO TO 260
 410 REM  LEFT SLIDER
 415 LET A1=A: LET B1=B
 420 IF SCREEN$ (A+1,B-1)="(sp)"
 THEN  LET B=B-1: GO TO 430
 425 PRINT AT A+1,B;"E": GO TO 3
00
 430 PRINT AT A,B+1;"(sp)";AT A-
1,B+1;"(sp)";AT A+1,B+1;"(sp)";A
T A,B;B$;AT A-1,B;A$;AT A+1,B; I
NK 3;"F": BEEP .001,68: PRINT AT
 A,B;X$;AT A-1,B;Z$
 440 IF INKEY$=J$ THEN  GO TO JU
 441 IF INKEY$=L$ THEN  PRINT AT
 A,B;"(sp)";AT A-1,B;"(sp)": GO
TO 270
 442 IF INKEY$=R$ THEN  PRINT AT
 A,B;"(sp)";AT A-1,B;"(sp)": GO
TO 270
```

```
B;"(sp)": LET A=A+1
 920 PRINT AT A,B;B$;AT A-1,B;A$
;AT A+1,B; INK 4;"H": BEEP .002,
30
 925 IF INKEY$=J$ THEN  GO TO JU
 926 IF INKEY$=L$ THEN  GO TO 26
0
 927 IF INKEY$=R$ THEN  GO TO 26
0
 930 GO TO 910
1000 REM  SPRINGERS

1001 LET A=A-1: PRINT AT A,B;"B"
;AT A-1,B;"A": BEEP .002,10: PRI
NT AT A,B;"O";AT A-1,B;"N"
1002 LET A$="A": LET B$="B"
1003 PRINT AT A+1,B;"(sp)"
1005 IF E>5 THEN  GO TO 4000:
1006 LET E=0
1030 FOR T=0 TO 3
1035 LET A1=A: LET B1=B
1040 IF INKEY$=L$ THEN  LET B=B-
1:
1042 BEEP .002,10
1045 PRINT AT A,B+1;"(sp)";AT A1
-1,B+1;"(sp)":
1046 PRINT AT A,B;"B";AT A-1,B;"
A":: PRINT AT A,B;"O";AT A-1,B;"
N"
1052 NEXT T
1060 GO TO 250
1999 REM  FALLING ROUTINE

2000 LET E=0: FOR D=0 TO 20:
2011 LET E=E+1
2042 IF SCREEN$ (A+1,B)="J" THEN
  LET SC=SC+5: BEEP .03,60: LET
DI=DI+1: PRINT AT A+1,B;"(sp)"
2043 IF SCREEN$ (A+1,B)="D" THEN
  GO TO 4000
```

```
THEN  LET A=A1: LET B=B1: GO TO
276
2550 PRINT AT A1,B1;"(sp)";AT A1
-1,B1;"(sp)";AT A,B;X$;AT A-1,B;
Z$
2555 NEXT J: GO TO 250
4000 REM  DEATH ROUTINE

4001 LET LI=LI-1: FOR I=7 TO 0 S
TEP -1: PRINT AT A,B; INK I;B$;A
T A-1,B;A$: BEEP .002,I: NEXT I:
4002 IF LI<0 THEN  GO TO 8000
4003 GO TO 200
4500 REM  CLEAR SCREEN

4510 FOR S=1 TO 13: PRINT AT S,3
;"(28*sp)": NEXT S: FOR S=14 TO
18: PRINT AT S,1;"(30*sp)": NEXT
 S
4520 PRINT AT 1,0;"(2*sp)";AT 2,
0;"(2*sp)";AT 3,1;"(sp)";AT 4,1;
"(sp)"
4525 PRINT AT 6,2; INK 0; PAPER
1;"C";AT 7,2;"C"
4530 GO TO SCREEN
5000 REM  SCREEN 1

5001 LET SCREEN=5000
5010 PRINT AT 4,3; INK 2; PAPER
0;"CC CCC";AT 9,4;"C";AT 9,12;"C
";AT 8,19;"C";AT 5,25;"C";AT 7,1
9;"C";AT 4,25;"CCC CC";AT 8,3;"C
C";AT 8,12;"C";AT 8,29;"CC";AT 1
0,7;"C";AT 11,18;"CC";AT 12,4;"C
";AT 12,26;"CC";AT 13,1;"CC";AT
13,12;"C";AT 13,29;"CC";AT 14,9;
"C";AT 15,6;"C";AT 16,2;"CC";AT
17,15;"C";AT 17,20;"C";AT 17,24;
"C"
5020 PRINT AT 3,3; INK 3; PAPER
```

Dungeon Danny

```
 450 GO TO 410
 500 REM  RIGHT SLIDER
 505 LET A1=A: LET B1=B
 510 IF SCREEN$ (A+1,B+1)="(sp)"
 THEN  LET B=B+1: GO TO 520
 515 PRINT AT A+1,B;"F": GO TO 3
02
 540 PRINT AT A,B-1;"(sp)";AT A-
1,B-1;"(sp)";AT A+1,B-1;"(sp)";A
T A,B;B$;AT A-1,B;A$;AT A+1,B; I
NK 3;"E": BEEP .001,68: PRINT AT
 A,B; INK 7;X$;AT A-1,B;Z$
 550 IF INKEY$=J$ THEN  GO TO JU
 551 IF INKEY$=L$ THEN  PRINT AT
 A,B;"(sp)";AT A-1,B;"(sp)": GO
TO 270
 552 IF INKEY$=R$ THEN  PRINT AT
 A,B;"(sp)";AT A-1,B;"(sp)": GO
TO 270
 555 GO TO 505
 700 REM  UP LIFT
 710 IF SCREEN$ (A-2,B)="(sp)" T
HEN  PRINT AT A,B;"(sp)";AT A-1,
B;"(sp)": LET A=A-1:
 715 IF A=2 AND B=1 THEN  GO TO
5401
 720 PRINT AT A,B;B$;AT A-1,B;A$
;AT A+1,B; INK 4;"G";AT A+2,B;"(
sp)": BEEP .002,30
 725 IF INKEY$=J$ THEN  GO TO JU
 726 IF INKEY$=R$ THEN  GO TO 26
0
 727 IF INKEY$=L$ THEN  GO TO 26
0
 730 GO TO 710
 900 REM  DOWN LIFT

 910 IF SCREEN$ (A+2,B)="(sp)" T
HEN  PRINT AT A,B;"(sp)";AT A-1,
```

```
2044 IF SCREEN$ (A+1,B)>CHR$ 32
THEN  GO TO 320
2045 LET A=A+1
2046 PRINT AT A-2,B;"(sp)"
2050 PRINT AT A,B;B$;AT A-1,B;A$
2051 BEEP .0001,69: PRINT AT A,B
;X$;AT A-1,B;Z$
2060 NEXT D
2500 REM  RIGHT JUMP

2501 LET V=0
2503 IF E>5 THEN  GO TO 4000
2504 IF SCREEN$ (A-2,B)="(sp)" T
HEN  LET A=A-1: LET V=1
2505 PRINT AT A,B;X$;AT A-1,B;Z$
2506 IF V=1 THEN  PRINT AT A+1,B
;"(sp)"
2511 FOR J=0 TO 2
2515 LET A1=A: LET B1=B
2516 LET B=B+1
2517 GO TO 2529
2518 REM  LEFT JUMP
2519 LET V=0
2520 IF E>5 THEN  GO TO 4000
2523 IF SCREEN$ (A-2,B)="(sp)" T
HEN  LET A=A-1: LET V=1
2524 PRINT AT A,B;X$;AT A-1,B;Z$
2525 IF V=1 THEN  PRINT AT A+1,B
;"(sp)"
2526 FOR J=0 TO 2
2527 LET A1=A: LET B1=B
2528 LET B=B-1
2540 IF SCREEN$ (A,B)="J" THEN
LET DI=DI+1: LET SC=SC+5: BEEP .
003,60: PRINT AT A,B;"(sp)"
2541 IF SCREEN$ (A-1,B)="J" THEN
  LET DI=DI+1: LET SC=SC+5: BEEP
 .003,60: PRINT AT A-1,B;"(sp)"
2542 IF SCREEN$ (A,B)>CHR$ 32 TH
EN  LET A=A1: LET B=B1: GO TO 27
6
2543 IF SCREEN$ (A-1,B)>CHR$ 32
```

```
0;;"J";AT 3,26;"J";AT 3,30;"J";A
T 6,19;"J";AT 7,3;"J";AT 7,12;"J
";AT 7,30;"J";AT 9,7;"J";AT 11,4
;"J";AT 11,26;"J";AT 12,12;"J";A
T 12,30;"J";AT 13,9;"J";AT 14,6;
"J";AT 15,2;"J";AT 16,15;"J";AT
16,20;"J";AT 16,24;"J"
5025 PRINT AT 17,14; INK 5;"I";A
T 17,19;"I";AT 17,25;"I";AT 17,2
8; INK 2; PAPER 0;"C"
5030 PRINT AT 4,5; INK 4;"H";AT
4,28;"H"
5031 PRINT AT 17,6; INK 2; PAPER
 0;"C";AT 17,7; INK 4;"G"
5035 PRINT AT 8,20; INK 3;"E";AT
 4,24;"F";AT 9,11;"F";AT 17,11;"
F";AT 12,1; INK 4;"G";AT 12,15;"
G";AT 15,5;"G"
5037 PRINT AT A,B;"B";AT A-1,B;"
A"
5050 GO TO 245
5400 REM  PRINT WELL DONE

5401 POKE 23607,60: PRINT AT 10,
5;"WELL DONE YOU ESCAPED THE";AT
 11,10;"DREADED DUNGEON": FOR R=
0 TO 5: BEEP .05,10: BEEP .05,10
: BEEP .05,12: BEEP .05,10: BEEP
 .05,12: NEXT R:: PRINT #0;"(5*s
p)ANOTHER GO (Y/N)"
5402 PRINT #0;"(7*sp)ANOTHER GO
( Y/N )"
5403 IF INKEY$="Y" THEN  GO TO 3
0
5404 IF INKEY$="N" THEN  GO TO 9
999:
5405 GO TO 5403
8000 POKE 23607,60: CLS : PRINT
AT 10,0;"YOU COULD NOT SURVIVE T
HE PERILSOF THE DUNGEON..... "
8002 GO TO 5402
9999 POKE 23607,60
```

TAU-CETI

Chris Bourne, with invaluable help from CRL, learns to negotiate the cities of Tau Ceti and combat their defences

JUST WHEN you think you're the hottest cat in space, someone comes along to prove you're wrong.

There I am, happily bouncing around the galaxies of *Elite* with a cargo of attractive amphibian slaves and a dirty great military laser sticking out of my front end, when *Tau Ceti* lands on my desk. "Easy," says I, hero of a thousand wireframe dogfights. "A man who can fly *Tomahawk* backwards through mountains has nothing to fear from CRL".

I was wrong.

In *Tau Ceti*, for those of you who don't already know, you have to shut down the automatic defences of an entire planet. You get one life, and there're 30 cities to penetrate, containing 40 broken nuclear rods which must be found, assembled, and stuffed into the main reactor.

I managed a grand total of one and a half cities explored. Time for a training session with the evil genius responsible for the whole thing, Pete Cooke.

We start off at the Gal-Corp Lander at Reema, which Pete says is a fairly innocuous city. How does he know? Well, when your skimmer is landed, you can type in various commands which give you access either to the building in which you have docked, or the onboard facilities of the skimmer. MAP gets you a map of the planet, which you can pan across and magnify, showing the various cities and the links between them.

Siting a cursor over Reema gets information about the place. Defences are said to be medium, and the main industry used to be hydroponics. "You can get an idea of the sort of buildings you're likely to find from that," says Pete. What does a hydroponics factory look like, anyway? We're looking for action, not watercress.

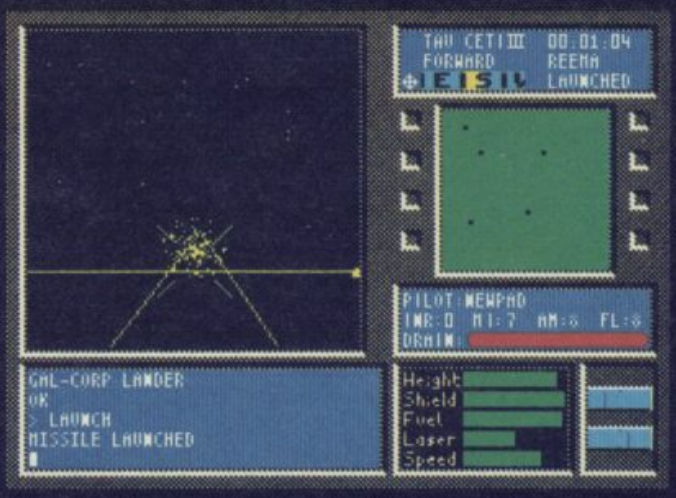
Pete suggests trying to find a nuclear sub-reactor, which may contain some of the cooling rods I need. Keying in LAUNCH catapults us straight into the city, with strange branching buildings shaded in yellow, a star filled sky and . . . Pete suggests cutting the speed to zero if I want to admire the landscape.

Right. Let's slowly rotate and see if anything's coming after us. The cities are defended by fixed installations and also mobile saucers, spheres, guardian crawlers, droids and the like.

Meanwhile, I'm being attacked by a flying saucer. No sooner is it destroyed then another turns up. Zap, zap, bang, bang — this is the life. How many saucers are there, Pete?

"They come in threes," he says. "The defences are different for each city. If you destroy moving objects they stay dead until you leave the city, but reappear when you come back. Buildings stay destroyed for ever."

So you can clear all the defensive buildings of a city away, and use it as a safe haven — only dealing with the saucers and their allies when you return. Pete agrees, but points out that the smaller nasties don't attack unless you shoot at a building. He advises taking out the radar towers first, since if you shoot at a building they track you, and the defence systems become more accurate.



I reach for the instructions. "Ah, well, they're not in the instructions," says Pete. For the record, radar towers are long thin poles with circles on top.

Now we're skimming around, using the radar scanner and visual display to navigate. At the bottom right of the screen are two bar displays which indicate the direction of the Gal-Corp Lander and the direction of the centre of the city. The map information tells you where the jump points for other cities are located in terms of the city centre.

I find the centre with little trouble and, behold, there's the nuclear sub-station in the distance. Entering that is easy — just remember to slow down when you see the door opening or you will . . . PETE!!! What's happened to the door?

We emerge from the wreckage of a crashed skimmer and look at each other. "If you shoot at a permanent building," says Pete, gingerly testing his clothes for harmful radiation, "it closes its doors to you." I trudge back to the Gal-Corp Lander in sullen silence. That wasn't in the instructions either.

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Our second effort is easier, and we make it to the sub-station with no trouble. Once there we find a cooling rod. Typing RODS gets a screen which allows you to manipulate them.

Each rod is split into two halves, with a pattern of claw teeth which have to be matched up with the other half to form a circle. There are 40 halves in all, drawn from 8000 possible combinations. Don't worry about trying to find them together until you have at least ten or so — it's a waste of time.

Once out of the sub-reactor it's time to find a supply centre — civilian or military — at which to repair shields and stock up with fuel. Military centres are the only ones where you can get more missiles and anti-missile devices. The latter obliterate all missiles in the vicinity, including your own.

While searching for a supply centre I am initiated into the delights of the sphere. It fires rapidly, so you should try to destroy them at long range. You can replenish your shields by simply sitting around but you must find a safe place to do it in.

Time to jump. You can go to two cities from Reema — Hame or Centralis. Centralis' defences are very high, because it's the site of the main reactor where you must put the cooling rods. Pete suggests we try Hame.

We find the Hame jump-pad easily — it's west of the centre of Reema, and although jump pads look just like craters, they always have a pole sticking up.

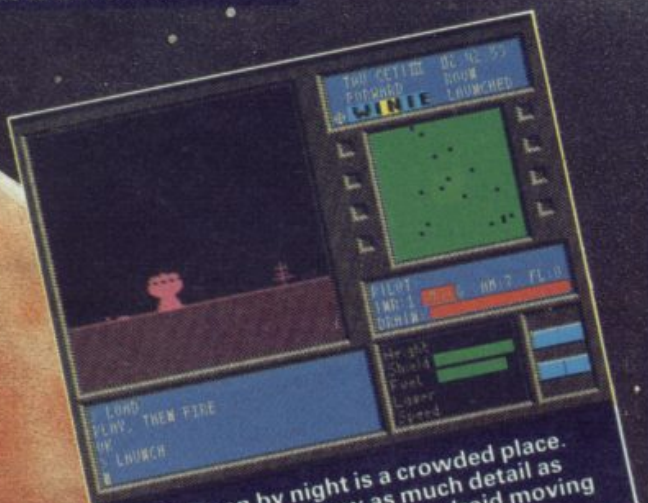
Once in Hame, Pete advises creeping up slowly on the edge of the city, but I'm feeling full of confidence and go charging in at top speed. Suddenly, I'm face to face with two fortresses — one is stuck behind the reactor where I can't hit it — and a sphere rolling ominously towards me. The fortresses are the most vicious of the fixed defences, and you must dive towards them at top speed and fire from close range.

I zap one fortress, but there's a saucer coming up behind me now and no chance of getting to the reactor in time. It's curtains again for Chris — and time to talk tactics.

LEESTRA. The reactor is protected by fortresses. Move towards them when they start firing and when you destroy one, turn and run so as to build up your shields.

TAU CETI TACTICS

TAU CETI is an extremely dangerous place. After a long session with Pete Cooke discussing appropriate tactics, I began my second quest for glory. Here are some of the highlights of the trip . . .



ROON. Roon by night is a crowded place. Infra red doesn't show as much detail as sunlight, but you can see the droid moving up to take a closer look at me.

QUILBA. By the time I reached Quilba I had collected several split rods. You can position them on the grid — when you match up two halves the complete rod disappears.

About the programmer

PETE COOKE is not the best-known name in programming but I bet you've heard of his games.

He started as an adventure programmer with Richard Shepherd Software, where he wrote **Invincible Island, Inferno** *and the classic tale of deprivation and despair,* **Urban Upstart.**

That was the first adventure game with a completely realistic, contemporary setting and paved the way for games such as **Hampstead** *and* **Valkyrie 17.** *Gordo Greatbelly still entertains numerous adventurers seeking advice on the program.*

"The last adventure I wrote was **Up a Gum Tree** *for the Commodore 64," he says. "It took six months and I only got about £500 for it, so I reckoned it was time to move on."*

Pete's recent software for CRL includes **Juggernaut,** *a simulation of driving an articulated truck around a delivery route. That proved a little too esoteric for the general public, although Pete still thinks it's a good game.*

With **Tau Ceti** *he's hit the jackpot, and is currently working on a disc version for the Amstrad which includes*

HEYROL. Why is the shield up while the scanner's out? Because I found a reserve shield at Preema . . . the chain of beacons on Heyrol leads to a jump pad.

MOVIA. Time to look at the map. Pete tells me there's a special bomb in Kzinti but that's miles away. It's much easier to approach Movia from Heyrol than from Hame.

RUBIYA. Here we are coming to dock at a military supply centre. Military buildings have spikes on top. The two dots at the bottom are a landing pad and its rod.

ERMA. After the detour to Rubiya I returned to Scarth and on to Erma. A saucer is attacking. The red square beside the compass means I am being tracked by a rader tower.

additional features such as a library with text files on the history of the galaxy, which will include a few clues to the game, and a Timelock puzzle for several of the buildings. If the game is expanded in a Spectrum 128K version, some of those features would be included, but so far no firm decision has been taken.

"I write games for myself," he says, "so I suppose they really appeal to an older audience." He's particularly pleased by the way **Tau Ceti** *allowed him to construct a whole world and historical background to go with it — future Cooke games may well draw off that 'future history'. But in spite of his obvious talent as a programmer, with everybody else at CRL wandering around muttering 'brilliant, brilliant' whenever he passes by, he doesn't see it that way himself.*

"The cult of the brilliant programmer is not really on," he demurs. "You can sit down to optimise your own routines and end up with exactly the same ones as in some book. Once you're at that stage the real barrier is how to implement the techniques. That's not brilliant programming. You may have to have fancy graphics at the front, but the gameplay is the important thing."

About the company

CRL WAS FOUNDED by Clement Chambers, then a teenager, just after the Spectrum was launched in 1982. "We've grown at a slow pace," he says. "We've always been in the top third of companies but never too high to blow our brains out."

Clement began his computing life with a kit-built ZX80, and by the time he released such games as **Derby Day, Rescue** *and* **Jackpot** *was in love with Sinclair machines. After initial success the company went through lean times until the appointment of Ian Ellery as software director. Great CRL flops from that period include* **War of the Worlds,** *a much-hyped version of the classic novel which bombed in the charts.*

Post-Ellery games have been more successful. **Rocky Horror Show** *was what immediately attracted Ian to the company when he learned CRL had acquired the rights — it's soon to reappear as a Spectrum 128 game. Clement explains that it was necessary to have someone concerned 100 per cent with software, whereas he had been dividing his time between programs and finance.*

Ian is renowned at CRL for seeing the potential in games long before anybody else does. "Nobody liked **Formula One** *when it was first shown to us except me. I felt very alone, but it's become a very good seller." The racing car simulation was awarded the first* **Sinclair User Classic.**

With **Tau Ceti,** *Ellery went bananas. "He got very excited," says Clement, "and whatever he wanted he got. Even the box was his idea — it's a pity it doesn't stay in one piece."*

Ian's obsessive commitment to **Tau Ceti** *led Pete Cooke, the programmer, to pay homage at the beginning of the program — when you load it up, you'll find that the very first program file is called 'Ian's Baby'. The point about the box, by the way, is that it's a peculiar trapezoidal shape, designed to be the same height but twice the width of ordinary cassette boxes.*

New plans include **Id,** *designed by* **Deus Ex Machina** *author Mel Croucher, a weird text adventure of which more elsewhere in this issue. Ian himself differs from Clement in that Clement remains strongly addicted to classic Atari VCS style arcade games, whereas Ian is more concerned with the motivation and plots behind games. As Clement says, "Nobody ever agrees about what's going on, but we do have a common purpose."*

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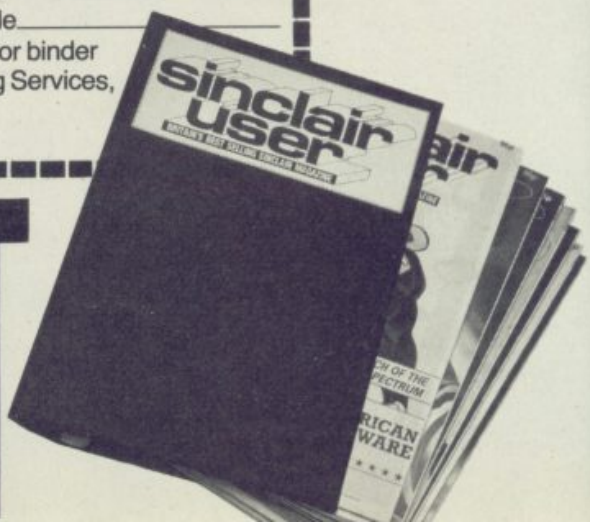

COMPETITION WINNERS

Lord of The Rings

FIFTY copies of the Lord of the Rings **were up for grabs in the January issue's competition. The answers to the scrambled runes are: Sauron, Frodo, Tolkien, Hobbit, Mitchell. In addition, a special prize of the *Encyclopaedia of Middle Earth* went to Paul Fulford of Woodley, Reading for naming Beren, Tuor and Aragorn, the three who married elvish wives. The remaining 49 winners are:**
David Vincent, King's Langley, Herts; Kevin Fleming, Co Galway, Ireland; David Brigham, Harpenden, Herts; D Patrick, Cumnock, Ayrshire; Andrew Lapsley, Port Glasgow, Renfrewshire; J E Rew, London E13; Geoffrey Bowley, Gedling, Nottingham; David Lealan, Rayleigh, Essex; Julian Dawson, Holmfirth, Yorkshire; S R Barfield, Mosley, Birmingham; P L Owen, Haverfordwest, Pembrokshire; Felix Badia, Spain; A W Langmead, Teignmouth, Devon; D L Pidcock, Markfield, Leics; S C Denny, Leigh, Surrey; C Corbett, Pontyclun, Mid Glamorgan; Dominic Penfold, Birkenhead, Mersey; Paul Burrows, Nr Barry, South Glamorgan; John Parsons, Aberdeen, Scotland; Jason Horrex, Stowmarket, Suffolk; Peter Evans, London E17; Stuart Richards, Aylesbury, Bucks; M Cunliffe, Pendlebury, Manchester; Lars Maehle, Norway; J Richardson, Morayshire, Scotland; D Barnfield, Kidderminster, Worcs; Matthew Ablott, Scunthorpe, South Humberside; Michael Haynes, Coggerswall, Essex; Adrian Bhagat, Peterborough, Cambs; Colin Weir, Blandford, Dorset; Gurhan Bayir, Turkey; Finlay MacKay, Newton-Mearns, Glasgow; C Bayliss, Solihull, West Midlands; Darren Halfpenny, Bromsgrove, Worcs; Kurt Eriksson, Sweden; Lea Ashfield, Nuneaton, Warwickshire; Andrew Rourke, Thetford, Norfolk; A Oliver, Banbury, Oxfordshire; Stuart Johnson, Sunderland, Tyne & Wear; S Bannister, Woking, Surrey; Matthew Sutton, Eastbourne, Sussex; G P Emery, Nr Darlington, Co Durham; David Brewer, Farnham, Surrey; Simon Proudman, Brislington, Bristol; A S Brock, RAF Guterslow, BFPO 47; Mark Vanson, London SE28; G Gould, Loughton Essex; Harpal Basi, Stoke, Coventry; Philip Corbett, Wymondham, Norfolk.

Asterix Winners

THE CORRECT answer to the Asterix **competition in the January issue of *Sinclair User* is 1C, 2D, 3E, 4F, 5B, 6A, and the 100 lucky winners are:**
Paul Bowley, Hayes, Middlesex; Anthony Richardson, Windsor, Berkshire; I S Degg, Surbiton, Surrey; M Edwards, Shepperton, Middlesex; Peter Lang, Mapperley Park, Nottingham; Paul Nixon, St Helens, Merseyside; J A Davies, London W14; Philip Shimmin, Wirral, Merseyside; R O Hazell, Oxford; Russell Burt, Christchurch, Dorset; D Callow, South Africa; A Hooper, Taunton, Somerset; Timothy Band, Croydon, Surrey; Simon Lea, Chatham, Kent; Mark Webb, Chadderton; Nicholas de Bunsen, London N5; S R Mohamed, Saltley, Birmingham; Freddie Bond, Carrickfergus, Co Antrim; R Davies, Middlesbrough, Cleveland; A Lambert, Polegate, Sussex; Stephen Pantry, Newport, Gwent; Paul Newsome, Bramhall, Cheshire; B D Edgell, Basildon, Essex; Zaid Mohammed, Kingston, Surrey; J Miles, Street, Somerset; W Gould, Powys, Wales; Mark Oswin, Sileby, Loughborough; B Longland, Lordswood, Southampton; Robert Wimble, Seaford, Sussex; Duncan Cronin, Melton Mowbray, Leicester; Gavin King, Bures, Suffolk; Brian Sherry; Laindon, Essex; Philip Hodlin, Castleford, Yorkshire; Michael Marshall, Cassington, Oxford; Finn Neilson, Denmark; Chris Stanyon, Sleaford, Lincs; Stephen Mann, Little Eversden, Cambridgeshire; Barry Brown, Biggar, Lanarkshire; G Ifould, Bognor Regis, Sussex; Malcolm Lagden, Cleveland, Avon; Jeremy Foskett, Mayfield, Sussex; Sacha Mahon, Dublin, Ireland; Daniel Goodchild, King's Langley, Herts; Brian Taylor, Linwood, Renfrewshire; Jocelyn Bundy, London E3; Glen Carulle, West Germany; Julian Coleman, Mosley, Birmingham; David Wesring, Swanley, Kent; Max Channon, Penzance, Cornwall; Kam Tsang, Ballymena, Co Antrim; M Davis, Australia; Graeme Stewart, Charfield, Gloucester; Nick Almond, Coundon, Coventry; Matthew Jessop, Bexley, Kent; Andrew Lindsay, Dublin, Ireland; Mark Shepherd, 22 Regt RA, BFPO 20; E Flude, Totley, Sheffield; David Taylor, Ashton-Under-Lyne, Lancs; Thomas Brettell, Dudley, West Midlands; B Shah, Stoke, Coventry; Ben Tanner, Yate, Bristol; Simon Palmer, Melksham, Wilts; Matthew Lang, Coventry; Aled Towyn Rees, Cardigan, Dyfed; Richard Harrad, Stockport, Cheshire; Lee Morris, Co Durham; Simon Brown, Portsmouth, Hants; Tim Harris, Devizes, Wilts; Grant Pollock, Croftfoot, Glasgow; Matthew Balynzi, London NW6; Peter McGarry, Ashton-Under-Lyne, Lancs; Sam Zubeidi, Weybridge, Surrey; David Elliner, Roydon, Norfolk; Andrew Murphy, Edinburgh; Timo Reinikka, Finland; Simon Houghton, Bovey Tracey, Devon; Hans Karlstyd, Sweden; Sara Baxter, Co Durham; Ben Leefe, Bramhope, Leeds; Iain McMurdo, Brant Road, Lincoln; Darren Stanley, Worthing, Sussex; Shaun Gynn, Nottingham; Henry Skelton, Faringdon, Oxfordshire; D Curtis, Newark, Notts; Andrew Halliday, Emswood, Hants; G Geven, The Netherlands; Stuart McMenamin, Ayrshire, Scotland; P Chapman, Bromley, Kent; Andrew Broughton, Long Hanborough, Oxford; Kevin Noyce, Hedge End, Southampton; D Barlow, Ward End, Birmingham; M Kelly, St Albans, Herts; David Cliffe, Co Waterford, Eire; Emma Martin, Harefield, Southampton; Christoper Starbuck, Oadby, Leicester; E Curtis, Norwich, Norfork; Ramsay Clark, Argyll, Scotland; Ben Woodhart, Staines, Middlesex; T Farrow, Whalley Range, Manchester; Andrew Smith, Drumchapel, Glasgow.

Dr Who

IN THE Dr Who **competition held in the December issue of *Sinclair User*, you had to answer six questions and solve an anagram to arrive at K9. The 100 winners are:** Matthew Bentley, Perth, Tayside; B Archer, St Ives, Cambs; Jon Rose, Rusholme, Manchester; Anthony Gibbons, Apples Bridge, Wigan; D Hayes, Nuneaton, Warwicks; Richard Gregory, Aylesbury, Bucks; Keith Hamilton, Clarkston, Glasgow; B Abercrombie, Westbourne, Emsworth; Jeffrey Hare, Cheshunt, Herts; Ian Fielding, Tupsley; Paul McMullen, Doncaster, Yorkshire; Ivan Wormley, Whittington, Near Lichfield; Mark Bowen, Selby, Yorkshire; Catherine Hurst, Kippax, Leeds; Adrian Walker, Dublin, Eire; R Davies, Mold, Clwyd; Nick Turton, Tamworth, Staffs; Roger Wylde, Claines, Worcester; G Letby, Welwyn, Herts; David Abrahall, Basildon, Essex; K Mather, Leyland, Lancs; Simon Foulds, Bramcote, Nottingham; C Lane, Waun Wen, Swansea; D Skidmore, Doncaster; G Jones, Basildon, Essex; Wayne Heaton, Burnley, Lancs; Lynda Crush, Near Dunmow, Essex; W Meagher, Blackley, Manchester; Harold Haywood, Whitby, Yorkshire; Christopher Martin, Kenley, Surrey; B Fisher, London SW18; Richard Carver, Sheffield, Yorkshire; Ian Stennett, Gainsborough, Lincs; Sam Freke, Montacute, Somerset; P Blackwell, Chesterfield, Derbyshire; Peter Bough, Canterbury, Kent; Mark Doggett, Cambridge; K J Simpson, Whitfield, Kent; P Tory, Kempston, Beds; I Shanks, Cumbernauld, Glasgow; Mark Edgington, Canvey Island, Essex; Kunmi Sonubi, Derby; Colin Buick, Dundee; J Shah, The Chorister School, Durham; Nicholas Duncalf, Nantwich, Cheshire; C Johnson, Stourbridge, West Midlands; Darrel Manuel, Rhondda, Mid Glamorgan; P Rodgers, Chesterfield, Derbyshire; David Bickerstaff, Doncaster, Yorkshire; Ian Scott, Painswick, Gloucestershire; David Forward, Lincoln; M Reynolds, Bryn, Wigan; M Hiam, Tamworth, Staffs; Michael Robbins, Middlesbrough, Cleveland; David Williams, Yatton, Avon; Tim Blacklock, Ecclesall, Sheffield; Miss Godden, Whitstable, Kent; Peter Harness, Hornsea, North Humberside; Robert Fear, Swindon, Wilts; Tim Foster, Forres, Moray; John Firth, Exmouth, Devon; David Self, Dartford, Kent; Ian Butterfield, Stockport; P Kebbell, Chilworth, Guildford; Mike Donovan, Andover, Hampshire; J Edwards, Exmouth, Devon; Scott Harborow, Stanmore, Middlesex; Richard Huss, Lisburn, County Antrim; Gillian Cooper, Milngavie, Glasgow; Robert Lannigan, Wishaw, Lanarkshire; Andy Powell, Paignton, Devon; Ajoy Sarkar, Wordsley, West Midlands; Jonathan Tan, Lymm, Cheshire; Heather Sword, Watford, Herts; Martyn Brookes, Chippenham, Wilts; J Clark, London E4; Andrew Morris, Worcester; Gordon Virgo, Royston, Herts; Howard Fairhead, Horsham, Sussex; David Hands, Tipton, West Midlands; Simon Rutter, Ashington, Northumberland; Joey Julien, London NW6; David Woodward, London SE1; L R Perkins, St Leonards-on-Sea, Sussex; Jackie Turton, Tamworth, Staffs; Tim Rymer, Pudsey, Yorkshire; Alex Weeks, Llanrumney, Cardiff; Laim Campbell, Stockport, Cheshire; Kathryn Fox, Matlock, Derbyshire; John Tabraham, Prescott, Merseyside; Habib Bewley, Norwich; Brian Dawber, Skegness, Lincs; Peter White, High Wycombe, Bucks; Ian Mcuicar, Littleholm, Clydebank; James Carruthers, Leeds; John Richardson, Port Talbot, West Glamorgan; Hugh McGarnie, Milford Haven, Dyfed; P Mitchell, Southampton, Hampshire; Cristopher Groves, High Wycombe, Bucks; Alex Henry, Calne, Wilts.

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Masters of the Megaprize

THE MOST successful competition ever was January's Megaprize competition with masses of prizes to be won. The lucky winner is Benjamin Grindley of Leigh-on-Sea, Essex, and the 100 runners up are:
Simon McGregor, Stockton-on-Tees, Cleveland; Alan Brown, Gavinton Duns, Berwickshire; John Jackson, Mottram St Andrew, Cheshire; Aaron Lewis, Amlwch, Gwynedd; Mark Smith, Stoke-on-Trent, Staffs; Simon Rushton, Annfield Plain, Stanley; Anthony Riley, Hyde, Cheshire; Ian Marsh, Little Bispham, Blackpool; Timothy Parker, Nailsea, Bristol; Jeremy Mitchell, High Wycombe, Bucks; Nichola Jackson, Sutton Park, Hull; Tony Kenyon, Orpington, Kent; R D Green, London W10; M J Bristow, Sutton, Surrey; R Nuttall, Stafford; Michael Blood, Tunstall, Stoke-on-Trent; M J Martindale, Newcastle, Staffs; Adrian Robinson, Maddle Bridge, Stockport; J Chown, Maidenhead, Berks; Martin Wallis, Wettleham, Lincoln; D Parry, Cannock, Staffs; David Self, Aylesbury, Bucks; Stephen Turney, Cambridge; Scot Gordon, Bishopton, Renfrewshire; Adrian Cooper, Cannock, Staffs; Adrian Davoll, Ilford, Essex; Alex Wardle, Leeds; David Luckhurst, Beckenham, Kent; David Hughes, Bridgend, Mid Glamorgan; Jonathan Marsh, Cardiff, Glamorgan; Mr Rawlings, Hornchurch, Essex; Michael Kelly, Royton, Oldham; Michael Whitworth, Rochdale, Lancs; Ferkovic Sanjin, Yugoslavia; A Chapman, Shirly; Erik Kijk, The Netherlands; Anne Cassidy, Co Wicklow, Eire; M B Tennant, Rugby, Warwicks; R Hogeueen, Holland; E Stovell, West Ewell, Surrey; Stuart Gardiner, Henbury, Bristol; Linda Roberts, Liverpool; Tim Matthews, Cambridge; J Coleman, Fleetwood, Lancs; Christine Moore, Blackpool; R Franey, Blackburn, Lancs; Katy Galloway, Basingstoke, Hants; Steve Carter, Chelmsford, Essex; M Todd, Cleadon, Sunderland; Julie Edwards, Lincoln; Paul Lucas, Chastetown, West Midlands; Michael Saunders, Lanark; Dan Rasmussen, Aldershot, Hants; Pete Calvert, Worcester; M T Peak, Church Hill North, Redditch; Grant Taylor, Bude, Cornwall; Marc Sims, South Benfleet, Essex; Mark Bagley, Fratton, Portsmouth; N E Glover, Haddington, East Lothian; Paul Nuttall, Darwen, Lancs; I Hickman, Worthing, Sussex; Michael Madden, Norwich, Norfolk; Daniel Tullett, Hove, Sussex; D R Brown, Gorton, Manchester; David Wright, Gateacre, Liverpool; C Aguda, Clacton-on-Sea, Essex; L Clasby, Lymington, Hants; Frederick Green, Rainham, Kent; Leslie Taylor, Southend-on-Sea, Essex; Asbjorn Dankertsen, Norway; Aaron Turner, Co Dublin, Eire; R Shoebridge, Downend, Bristol; Marcel de Man, The Netherlands; Henry Wellestey, Dublin, Ireland; Simon Penn, Burley-in-Wharfedale, West Yorkshire; Stephen Rigby, Darlington, Co Durham; M O'Callaghan, Redhill, Surrey; Josephine Francis, The Netherlands; Andrew Childs, London NW2; H Henley, Norwich, Norfolk; Steinar Bloch, Norway; D A Lee-Keow, Coventry; Kevin Biddulph, Witney, Oxfordshire; Graham Codd, Bracknell, Berks; John Bruce, Dundee, Scotland; Scott Peasland, Daventry, Northants; Paul West, Leamington Spa; Mark Lawrence, Nuneaton, Warwicks; Barry Thomas, London NW8; Hans Schepers, The Netherlands; Michael Moseley, Leicester; Kari Perttula, Finland; Paolo Perrotta, Italy; Richard Huggins, London SE13; Mary Langton, Wakefield, West Yorkshire; Paul Fisher, Hardwick Estate, Stockton; Trygve Brataas, Norway; Steven Whitehead, Snaith Goole, North Humberside; James Grimes, Dublin, Eire; M Hansford, Barnes, Sunderland.

Gremlin's Xmas Bash

WELL, WE MADE IT. A definitive list of everyone at Gremlin's Xmas Bash was delivered on time to Incorruptible Scolding just in time for the New Year 'divvying up the profits' *Sinclair User* AGM. Gremlin got his share of the debts, and thanks all of you who tried to help him out by sending in your lists.

Paul Sharpe of Shrewsbury reckoned all the characters were Clive Sinclair, except for Clive himself, whom he called Bill Scolding. Only his corduroys are bald, Paul. The family Whittrock from Denmark sent four identical entries, but also alas, failed to win.

Which leaves us with the undisputed winner, the only one to get everything correct, G Nolan of Dublin in Eire. Congratulations, Nolan — are you related to those rather interesting sisters and if so, can Gremlin have a date?

Anywhere, here are the full answers and the names of the games attached, which lucky old Nolan will be winning. They include the *Sinclair User* team's own favourites.

1 White Spy/**Spy vs Spy** 2 Sabre Man/**Nightshade** 3 John Gilbert/**The Rats** 4 Pi-Man/**Pimania** 5 **Spiderman** 6 Monty Mole/**Monty on the Run** 7 Sir Clive/**A Day in the Life** 8 Robert Maxwell 9 Bill Scolding/**Fourth Protocol** 10 Clumsy Colin/**Action Biker** 11 Cuchulainn/**Dun Darach** 12 Clare Edgeley/**Thunderbirds** 13 Paul McCartney/**Give My Regards To Broad Street** 14 Sevrina/**Enigma Force** 15 Arthur Daley/**Minder** 16 Raquel Welch/**Fantastic Voyage** 17 Gordo Greatbelly/**Lord of the Rings** 18 **Popeye** 19 **Rambo** 20 Jack Charlton/**Match Fishing** 21 Roland Rat/**Roland Rat's Race** 22 Miner Willy/**Jet Set Willy II** 23 **Superman** 24 **The Hulk** 25 **Deus Ex Machina** 26 **Dambusters** 27 **Robin of Sherwood** 28 **Sherlock** 29 Gremlin/**Elite** 30 **Frank Bruno** 31 Wally Week/**Three Weeks in Paradise.**

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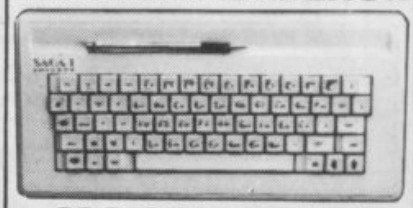

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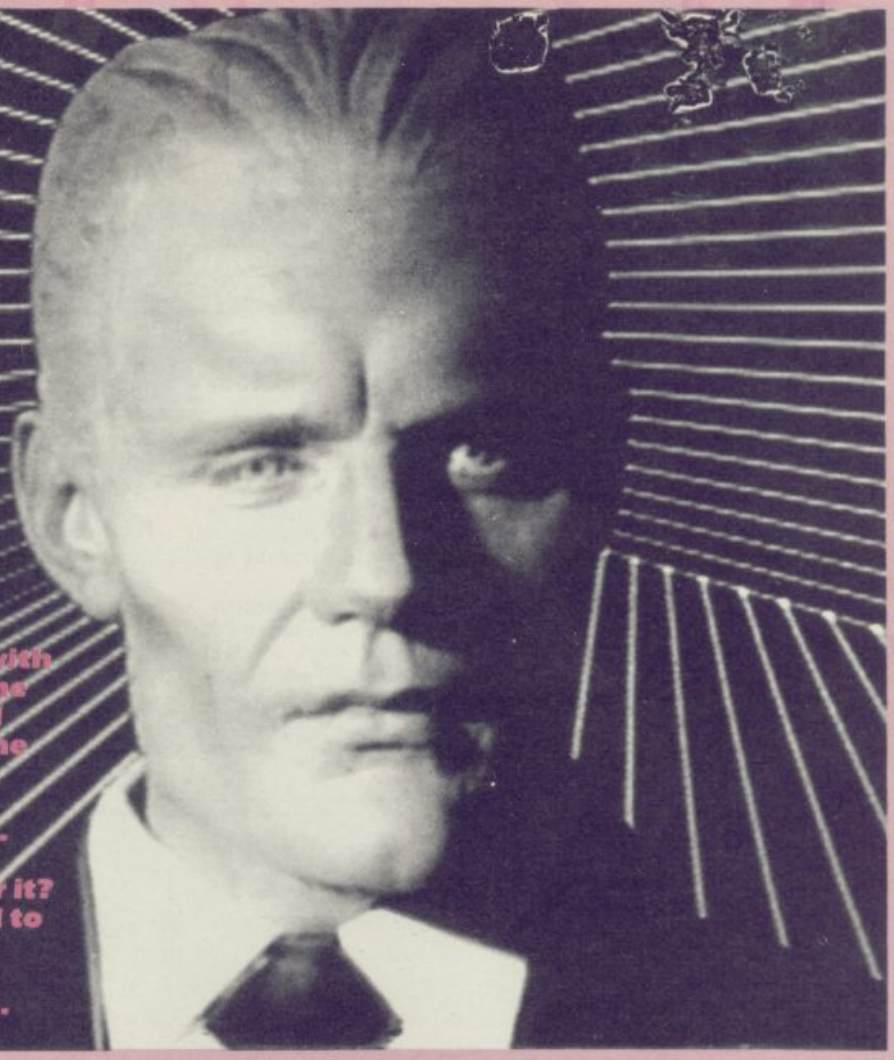

Letting any stranger loose on your computer is dangerous, but Max Headroom, the ultimate celebrity himself? Max has his own computer game now — and we'll be telling you all about it in next month's issue.

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Gremlin

DOMARK, the software house which thinks style is what you sit on in a country field, has withdrawn its gross ad for **Friday the 13th**. Not, alas, because it's had a sudden and uncharacteristic surge of guilty conscience, but because hordes of mums and dads think it's nasty, violent dreck.

The pic on the cassette inlay will also be changed, according to **Mark** and **Dominic**, Domark's revolting owners — Gremlin, February. Pity. At least the original artwork put people off buying the game . . .

Page Three Girls

Meanwhile a new tasteless ad arrives in the form of **US Gold's Legend of the Amazon Women.** Never in the history of hype has such an ill-proportioned bundle of breasts, thighs, buttocks and rampant molars appeared on page three of a reputable computer magazine.

Is this a new trend in advertising — producing offensive pictures in order to cancel them in a blaze of publicity when folks complain? Or has **US Drool** spent so much on advertising games which it never produces that it can't afford decent artists any more? Gremlin thinks **V** should be told.

Talent has guts

Many thanks to mad Glaswegian software house **Talent** who sent us all a haggis with which to celebrate Burns Night. Opinion differed on how to cook the reeking beast. Ad manager **Louise** 'WPC' **Fanthorpe** removed the outer skin, fried half, grilled half and consumed it with chutney. **John** 'disgusting' **Gilbert** bunged the whole thing into a frying pan and ate it "like a hamburger, with fried eggs on the side". *(Some of us didn't get one at all! Ed)*

This is no more than you'd expect from Gilbo, who thinks James Herbert is a writer and believes the sun shines out of Alan Sugar's three-inch disc drives . . .

Old Bill's Freebie

Incorruptible **Bill Scolding** hasn't entirely missed out on freebies, though. He's currently sporting a rather natty black plastic bobbie's helmet and running around shouting "You're nicked, sonny" at innocent visitors.

The helmet is not entirely unconnected to a new **Mirrorsoft** game, **The Force.** This is a strategy game about policing the inner cities and has the seal of approval of the **Met** itself.

Apparently if you maintain too high a profile — ie send hordes of killer dogs into large housing estates — you lose respect. If you do nothing at all, though, the crime rate mounts. All very educational. It sounds a riot, muses Gremlin . . .

clothes off and then leave the room. "It's not up to me what people do outside the room", says Ian. Gremlin remains unimpressed but supposes it beats throwing the car keys onto the Burgundy Axeminster and diving in.

Anyway, it's not the first naughty computer game. Gremlin well remembers **Soho Sex Quest** from educational software house **Malan.** But there must be older stuff around. A particularly grubby fiver to the reader who can shed light on the earliest known smutty computer game . . .

Kiss and tell

Talking of which, congrats to **John Gledhill** who sends copious extracts from the thoughts of Chairman **Fergus** as encoded into **Bored of the Rings.** Fergus' message to the world was in fact "Death to the world doom and gloom be happy if you can" — Gremlin, January. John also includes

The infamous Clive print awarded to *Sinclair User* for the Biggest Official Litigious Lawsuit involving Computer Known Subjects. Incorruptible Scolding has waited years for this, and would like to thank *Crash* magazine for making it all possible.

Round the horn

Oh dear. Nearly halfway through the column and it's still all so sordid. **Brazen Backslappers of the Month Award** goes to a coy piece of drivel about **Posthorn,** a new release from **Satyr Software,** and no, Gremlin ain't saying where you can buy it. According to designer **Ian Paterson** it's the 'first ever naughty computer game', combining 'the excitement of Strip Poker with the fun of Postman's Knock'.

Ian says the Spectrum persuades players to take their various coded protestations of love to various women called **Trevor** and **Derek.** Delicacy forbids delving further . . .

Hot on the heels of John's grubby fiver flies a crumpled rubber cheque to **H J Gallacher,** who has solved the mystery of the first computer-generated screen kiss — Gremlin, February. He tells a tale from prehistory of the Atari game console and a production called **Superman.** It seems Superman has to kiss Lois Lane in order to regain his powers after tripping over some kryptonite. Yecchh . . .

Beyond praise

Meanwhile Gremlin wonders what **Beyond** thinks of it all, given it has the UK rights to the musclebound hunk. Not that it should affect Spectrum owners. According to weekly trade paper *Microscope* the Spectrum version isn't worth bothering about because "It's atrocious". Who told the energetic hacks? Why, Beyond itself, of course . . .

Scooby awards

Which brings us to the coveted **Scooby** awards — Gremlin February. Readers will recall that these go to games which are "beyond criticism of any kind since nobody's actually seen them except in advertisements". D W May of Chiswick in London writes in to nominate three **US Gold** games — **Fort Apocalypse, Up 'n' Down** and **F 15 Strike Eagle.** Those were all advertised in January 1985 and have never been heard of since.

Between them, **US Gold** and **Ocean** appear to be cornering the market in the handsomely mounted gold-finished fake doggy-doo trophies. And the stream continues. Watch out — or not, as the case may be — for **Superbowl,** again from Ocean. This American football game was advertised last month for release on January 14.

Gremlin discovers that the programmers wanted to watch the actual match before they finished the game. To learn the rules, perhaps . . .?

Cosmic yawn

Finally, you'll have seen **Chris** 'lunchbreaks' **Bourne** getting all arty-farty about **iD** elsewhere in the magazine. **ID**'s the first release on **CRL**'s Nu Wave Label, specially formed for what **Clement** 'sex symbol' **Chambers** calls punk and **Ian** 'Rambo' **Ellery** calls "something quite revolutionary, never been burble, burble etc."

Gremlin went straight to the forked tongue of designer **Mel Croucher,** loony co-creator of the **Piman.** The ageing architect says he's doing a new Commodore game as well, called **Darkness at Dawn,** an adventure with no text and no graphics. Apparently the entire thing is based on sound effects.

Commode users love this sort of thing. It fortifies their belief that you don't have to be able to read or write to feel moderately successful. Educated Spectrum buffs may scoff, but there's many a poor underprivileged cretin out there needing comfort. Next month — the loneliness of the cut-price Electron owner . . .

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BY D.K.MARSHALL

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