

Home Computing WEEKLY

Every week: more software reviews than any other magazine

An Argus Specialist Publication

No. 32
Oct 11-17, 1983

38p

SOFTWARE REVIEWS FOR:

Commodore 64, Spectrum, Atari, TI-99/4A, Oric, BBC, Dragon

GREAT GAMES TO TYPE IN FOR:

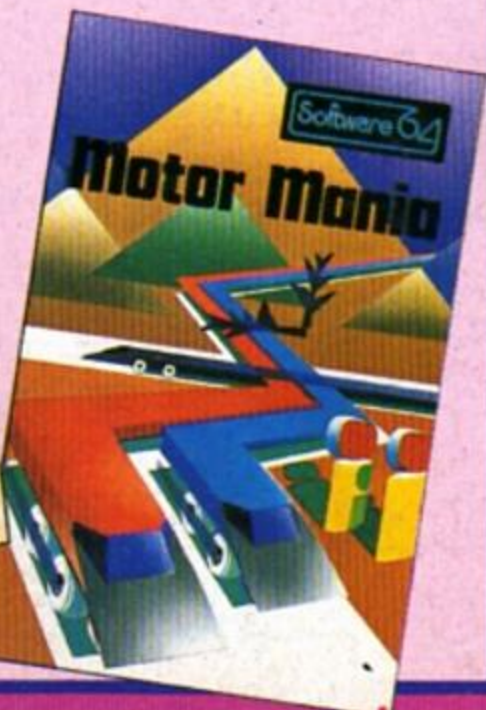
VIC-20, Atari, Spectrum, TI-99/4A, ZX81 and Dragon

FIRST REVIEW:

Our verdict on Sinclair's Interface 2 for the Spectrum

THE BIG SHOW:
Read the first full report

PLUS:
U.S. scene, software charts for VIC-20, Spectrum, ZX81 and Dragon, your letters... and much more



Oric changes on the way

Oric is planning changes to its computer to add new BASIC commands and improve reliability.

Two sources close to the company say the new ROM will make cassette handling and the TAB command more reliable. And the new commands include VERIFY and MERGE.

Managing director Barry Muncaster would only say no decision had been made on when or whether to introduce it.

Home Computing Weekly has been told, however, that the company was only waiting until enough stocks had been built up.

Our source added: "Oric are keeping quiet about the whole thing so that when they introduce

continued on page 5

Magazines go into micros

Good Housekeeping magazine is putting its name to a new range of early learning programs being launched by Ebury Software.

First in the range are six programs aimed at three to six year olds, and running on the BBC B, Spectrum, Dragon and Commodore 64. They will cost £12.95.

The launch marks the latest in a series of moves by major magazine and book publishers into the software business.

Ebury Software is an offshoot of book publisher Ebury Press,

continued on page 5

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Briefly

Terminal Software has brought out a Commodore 64 game that two can play. Called Super Dogfight, it's a version of the arcade game where you take part in a duel between two World War I air aces, and features a wraparound screen.

Terminal Software, 28 Church Lane, Prestwich, Manchester M25 5AJ

□ □ □

Seven Stars Publishing says its Gener-80 is one of the fastest assemblers running on a Z80 system. Now available for the Nascom range, the company says it runs at about 500 lines a second at 4MHz. It has a full-screen editor which checks lines for syntax and label-definition errors as they are typed in and generates semi-assembled source code. Tape and manual cost £9.95 including post.

Seven Stars Publishing, 15 Gloucester Ave, London NW1 7AU

□ □ □

Thorn EMI's October software releases include two cartridges for the VIC-20 and two for the Atari 400/800. For the VIC, there's Tank Commander and Mine Madness, which will sell for around £19.95. And for the Atari, Carnival Massacre and Killer Climb will cost around £24.95.

Thorn EMI, Upper Saint Martin's Lane, London WC2

□ □ □

B & R's Power Cleaner surge suppressor plug is claimed to protect your computer equipment from 99% of mains power surges, and to reduce the interference from household equipment such as vacuum cleaners. Costing £10, it can be fitted instead of an ordinary mains plug.

B & R, Temple Fields, Harlow, Essex CM20 2RG

□ □ □

Mikrogen is about to launch a bumper batch of 14 new action games for the Spectrum. They will include wargames, a graphics adventure called SAS Assault, and some family games including Darts and Knockout, a complex version of Shove Halfpenny. The 16K games will cost £5.95 and the 48K games £6.95.

Mikrogen, 1 Devonshire Cottages, London Road, Bracknell, Berks RG12 2TG

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Why is he looking so pleased?
Find out in our show report on
pages 10 and 11



Just a few weeks after the
Microdrive, Sinclair launches the
Spectrum Interface 2. Our de-
tailed review is on page 42



Tansoft: Meet the man behind
the name on page 18

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from front page



Peter Harding, Oric's sales boss

it they have got enough stock to meet demand. Basically it's a tidying-up operation."

Mr Muncaster said two or three software houses had seen samples because Oric was endeavouring to ensure existing software would not be affected.

He said: "We don't want to give anyone any nasty surprises like Sir Clive did."

This was a reference to series three Spectrums which affected a few machine code programs rely-

ing on unpublished features of the computer.

Oric's sales boss Peter Harding said the company would be launching a new computer in late spring. It would have a typewriter-style keyboard and 64K of RAM, 37K useable in high-resolution mode and 47K in standard mode.

He said: "It's going to be the Electron-Commodore 64 basher."

Oric's modem, costing £50-£70, was nearly finished and its 3in disc drive would follow at about £200.

He believes that, following games, the next phase of computer sales in large numbers would be for uses like home banking, electronic mail, telesoftware and teleshopping.

Tansoft has now taken over Oric's mail order operation.

● Oric has been voted best home computer by a panel of 25 journalists in France — 35,000 have been sold there. The Spectrum needs an add-on to work on the French TV system; the Oric does not. More than 70 per cent of Oric sales are overseas.

Oric Products International, Coworth Park, London Rd, Ascot, Berks SL5 7SE

Bungled burglary

The bad news is that Micromega was burgled the other week — the good news is that the burglars didn't know what they were doing.

Manager Neil Hooper said: "They came in through an upstairs window. They ignored our expensive software development system — and picked up a 48K Spectrum, leaving behind the power supply.

"The police think they probably kids, but they can't have been computing kids or they'd have known what to take. If they'd had any taste, they'd have taken some copies of our latest program, Luna Crabs."

Micromega has now called in the security experts to make sure they don't have a second break-in.

Meanwhile, if you should come across a 48K Series 2 Spectrum, serial number 001-106604, minus a power supply, the Lavender Hill police would like to hear from you.

"The police think they were probably kids, but they can't

have been computing kids or they'd have known what to take. If they'd had any taste, they'd have taken some copies of our latest program, Luna Crabs.

Seeing red and green

Silly Software is making its market debut with a Dragon program that has what is probably the first ever 3D packaging.

Nestling in every cassette box is a pair of those red and green goggles, which cinema fans may remember from such films as *They Came From Outer Space*. Put the glasses on, and you should be able to see the cassette insert in three dimensions.

The program itself is called *Movie Producer*.

First you have to sell your script — and then the fun really begins.

Movie Producer has music, graphics, and according to Silly Software, "a theoretical 25 billion levels of play."

All this for only £7.95. *Silly Software, 61 Thornhill, North Weald, Epping, Essex*

Micro project wins award

A computerised golf driving system based around the BBC micro has won 16-year-old Richard Mackman a prize in this year's Young Engineer for Britain competition.

As winner of the 16-17 year age group, Richard receives £150 and a trip to Europe to see computers being used in industry.

Richard, who is a student at Garforth Comprehensive, Leeds, started the project last summer as

part of his O-level Technology course.

He said: "Because the project was going to last a year, I wanted to do something that interested me. My two hobbies are golf and computers, so I thought of an idea that brought them both together."

"I was really thrilled and surprised to win, because the other projects were so good."

Using a network of sensors linked up to the BBC micro, Richard's system times the flight of a golf ball from the tee into a practice net, and then calculates how far the ball went, the angle of the shot and the ball's initial velocity.

He wrote the entire control program himself, and did most of the design. Teachers helped him to construct the special circuits and computer interface.

Now he's proved that the basic idea of using a computer to calculate a golfball's trajectory can work, Richard hopes that a commercial company will develop the system further so that it could be used in golf training.

Richard himself will be kept pretty busy from now on doing five A-levels — in maths, further maths, physics, chemistry and general studies.

Eventually he hopes to either go into computing, or become a pilot.

From front page

and *Good Housekeeping* is part of the National Magazine Company which also publishes *Cosmopolitan*, *Company*, *Harpers & Queen* and *She*.

Roger Barrett, who is publishing director of *Ebury Software* as well as a director of *National Magazine*, said: "There are more microcomputers in homes in the UK than anywhere else in the world."

"We believe that there is a big demand for quality software, and that's why the National Magazine Company has decided to move into the software market."

"Later programs will cover a wide range of subjects, and will be linked to our major publications."

National Magazine Company, 72 Broadwick Street, London W1V 2BP

You could be on our pages

We welcome programs articles and tips from our readers.

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

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

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

Competitive rates are paid.

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

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

Laser Tank TI-99/4A (Extended BASIC) £10

Not Polyoptics, from Stainless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

Laser Tank provides a futuristic simulation of warfare as it would be seen from the turret of a CIREV — coherent infra-red equipped vehicle.

You have three such vehicles with which to destroy another three controlled by the computer.

Each is located by adjusting the attitude and position of your tank with respect to readings from radar and video screens, and a bearing marker.

Once on video, the tank is

manoeuvred until your adversary is within range. Hopefully, when you open fire, the enemy will be destroyed, but pause to think about it and he may well attack first.

There are three levels of difficulty. The score given at the end of the game is based upon the skill level played, the number of tanks left in your command and the time taken to destroy the enemy.

Movements are controlled by either keyboard or joystick, the former being the more formidable as it allows left and right tracks to be steered separately.

J.W.

instructions	100%
playability	70%
graphics	70%
value for money	65%



Alien activity on your micro

Read on for a rundown of some action games set in space

Zap TI-99/4A (Extended BASIC) £7.95

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

As its title suggests, this is an arcade type game in which you zap aliens in order to survive.

The cursor keys control movement of sights which must be positioned on the aliens that flit across the screen. The space bar is used to open fire.

The object is to destroy as many aliens as you can, before your ship's fuel runs out. The fuel reserve is displayed at the top of the screen and rapidly diminishes as the game progresses.

To completely destroy an alien the head must be hit, but hitting the body gains extra fuel.

Adding to the difficulty of this, however, the aliens appear in pairs, one of which will act as a decoy as it cannot be destroyed. At the end of each game you are reminded of the score, but no best score is given.

The action is extremely fast, and unless you're a whizz kid of the keyboard each game ends within a few minutes. If a selection of skill levels were incorporated into the program I would definitely find it more playable.

J.W.

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



Android Attack Atari 400/800 plus joystick £6.95

Blaby, Crossways House, Lutterworth Road, Blaby, Leicester

Arcade-style action games need to be written in machine code for smooth exciting graphics. This game is no exception. Written mostly in BASIC with some machine code (not enough) the results are jerkily apparent on screen.

Android Attack has five levels. All involve preventing a nuclear reactor from going critical. The reactor lies at the heart of a chamber guarded within by androids. You are armed with a laser.

Your mission? To blast your way down to the chamber floor, blast a hole in the floor allowing water to flood in and cool the reactor, then blast your way out of the blasted place.

Points are awarded for destroying androids, every one of which must be despatched before going to the next level. Unsurprisingly, the higher the level the greater the peril. Androids multiply and shoot back and walls become electrified.

Android Attack fails to improve upon an already hackneyed idea.

T.A.

instructions	65%
playability	25%
graphics	40%
value for money	60%



Cyclons Commodore 64 plus joystick £5.99

Rabbit Software, 380 Station Road, Harrow, Middx HA1 2DE

For me, the most impressive thing about Cyclons was its superb title sequence, complete and moving letters.

The whole package had a professional and smooth presentation to it, which was not really matched by its play value. 'You' are a round green spaceship, armed with a bullet cannon, and the idea is to shoot down the purple saucers and red spinners without being caught in the ensuing explosions or crashing into the terrain below.

Several options are available, including ricochet bullets, terrain below, score rankings and five skill levels.

Graphically impressive, the game suffers a little from lack of variety and as such I can only recommend it to dedicated games players.

D.A.

instructions	50%
playability	50%
graphics	85%
value for money	55%



Astro Chase Atari 400/800 32K £20

From most Atari mail order companies

An original idea for a space game? Yes. The earth is under attack again, this time from megamines closing in slowly.

If one touches the earth, the planet explodes with surprising ferocity and graphic subtleness.

Your ship patrols the galaxy hunting out megamines and avoiding or destroying the eight types of alien craft that harass you.

The screen is used as a window on to the play area, and you have to keep running back just to check a mine hasn't slipped through the net.

The galaxy background is stunning to say the least, the earth too — with America shown mainly.

There are graphical interludes after clearing several sheets of megamines, which show our triumphant hero returning to base — again some more brilliant graphics.

There are 32 levels which is quite enough. A good game.

M.F.

instructions	90%
playability	85%
graphics	95%
value for money	80%



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New games, new add-ons at the big show

Teenager Paul Holmes, who started computing two years ago with a ZX81, made his debut as Timescape.

He showed his first — and, so far, only — product, a shoot-'em-up game called Wild West Hero, priced at £5.90 for the 48K Spectrum.

But Paul, 16 and author of Spectrum Machine Code Made Easy, plans to bring out a new tape every three weeks.

Spanish company Indesco showed its range of add-ons for Sinclair computers, all housed in glossy black boxes.

They include typewriter-style keyboards for the Spectrum and ZX81 at £42.95 and £39.95, RAMpacks and interfaces. The Domestic Controller (£37.75) for the Spectrum has four outputs and inputs to control alarms, lights, heating and so on.

Two new speech units chattered away to visitors.

Currah's Microspeech, at £29.95 for the Spectrum with a free tape, works through the TV speaker, voices all the keys — so B says "bee", ENTER says "enter" — and uses allophones. This means "hello" is typed in as "he(11)(oo)". Intonation is created by mixing upper and lowercase letters.

Type 'n' Talk, priced at £171.35 by Namal, connects to the RS-232 or RS432 printer port of any computer, although it was demonstrated on a BBC. It speaks any text using ASCII characters and delay, inflation and volume can be controlled.

Inside is a Votrax SCIOA speech chip, Z80 processor, an 8K EPROM and 2K of RAM.

Bug-Byte showed Old Father Time, a graphic adventure for the 32K BBC due out soon.

And Bubble Bus had a table football game for the Commodore 64, written by Nick Strange, 24, author of its pool program. It's called Kick Off, priced at £5.95 and uses two joysticks.

Several games for the IBM Ashton and from America by Audiogenic and should be here in three weeks. Four games for the Commodore 64 and one for the VIC-20 — called Teddy — are also due out soon.

Sinclair add-on specialist Basicare has produced Pericon B (£30.15), a unit for the Spectrum with 24-line output to drive relays.

With 28 more titles out, or due soon, Romik has programs for a total of 10 home computers, in-

Once more HCW brings you a comprehensive show report. Paul Liptrot talked to the exhibitors and examined the new products at the PCW show

cluding newcomers like the Electron and the Commodore 64.

Richard Paul Turner's **Interceptor Micros** had four new Commodore 64 programs, with another this week, all priced at £7. There is also one each for the VIC-20 and Lynx and his first, Cuddly Cubert, for the Spectrum. Price: £5.

Publishers were at the show in strength. **Interface** has 14 new titles, **John Wiley** showed a new range and **Heinemann** had four new software titles for education.

Melbourne House launched its High resolution User-friendly Real-time Games designer — thankfully abbreviated to HURG

— which is due on sale at £14.95 for the Spectrum, from the beginning of next month.

It was to be called the Games Designer, until **Quicksilver** brought out a program with that name (same price, too).

Gerry Rose, who parted with Romik and set up **Phoenix**, said his twin-pack games gave top value at £9.99. Each pack is the size of a video cassette and contains two tapes, an arcade game and an adventure. The arcade game has to be cracked before you can play the adventure. The first, **Death Mines of Sirus**, for the Dragon, is out now and more follow in the next few weeks for the 64, VIC-20 and Spectrum.

Microstation is a new £7.50 product from **Kelwood Computer Cases** designed to hold a ZX81 or Spectrum, along with cassette recorder, Microdrive and printer.

Kingsley TV says its modified Grundig sets give high definition for computers as well as switching back easily to programme viewing. A 14 in colour TV costs £261 or your own TV can be converted for £50, plus return carriage.

Virgin is adding 12 new games next month, bringing its total to 36. The new titles are for the Spectrum, Commodore 64 and TI-99/4A.

Acorn Computers played the Brandenburg concerto through nine BBC micros — each with three musical voices — to demonstrate its Econet network. The Electron was also on show.

A console for the Oric holds the computer along with a notepad, cassette recorder, pens and cassettes with space for a TV. It's by **Express Computers (Rugby)**.

Crystal's three new games for the Spectrum include a tank battle called **Rommel's Revenge** (£6.50) and **Anirog** also brought out three titles, two for the 64, and one for the VIC-20, plus 16K, called **Skramble**, similar to the 64 version (£7.95).

Microdeal brought out the second and third in its Dragon series featuring the Cuthbert character (£8 each).

Pinball Arcade, at £10.35 for the BBC from **Kansas**, has six different tables from which to choose, "flippers" and control over the ball firing spring.

Micro-Aid's French **Abroad** for the BBC (£7.95) teaches and tests on one side of the tape and speaks the language on the other side. It includes an exchange rate section and sample letters. Other languages are to follow.

As well as bringing out new titles, **Abrasco** previewed **Super Catcha Troopa**, a Commodore 64 arcade game for £7.50, an enhanced version of its VIC-20 game. Also for the 64: **Home Manager** (tape £12.50, disc £15) and a spreadsheet called **AbraCalc** (tape £25, disc £27.50).

Also from **Melbourne House**: five new books — including one on the Spectrum Microdrive — and **The Hobbit** for the BBC and Commodore 64, with the Oric to follow soon from **Tansoft**. And the company says its **Horace** series for the Spectrum will soon be available for the Commodore 64, Dragon and VIC-20. Spec-



Paul Holmes

Spanish Spectrum — Valle Carmona, a secretary at Madrid-based Indesco, with her company's glossy black add-on keyboard

SHOW REPORT

trum Computer Bridge (£8.95) is due in mid-November.

Llamasoft's Jeff Minter showed his latest VIC-20 game, Metagalactic Llamas Battle at the Edge of Time. The game, including its lengthy title, fits into the VIC-20's standard 3½K. And there was a demonstration of Revenge of the Mutant Camels, for the Commodore 64 and planned for December release.

Fuller, whose FDS Keyboard is now available for the Spectrum, ZX81, Oric and Jupiter Ace, has the Laser 2000 computer on sale for £39.95 until November 1. The company's Amp-stick has speaker, amplifier and joystick controller in one unit for the Spectrum (£19.95).

Ten games for the Sharp 700 were launched by **Kuma**.

From **Shards** comes a 90K graphic adventure — it loads in three parts — called Pettigrew's Diary. It costs £7.95 and runs on the Dragon. Shards had three more new Dragon titles and one for the BBC to teach maths.

CDS, with new titles due for Spectrum and Oric later this month, previewed the first of its educational range for the 48K Spectrum, language programs to help with French and German at £5.95. Maths follows next month.

A 23-year-old RAF technician, Corporal Chris Lancaster, wrote **Imagine's** latest VIC-20 game, Bewitched (£5.50). The company's Arcadia title is being launched shortly for the Commodore 64.

Softek added to its range for the Oric and Spectrum and plans releases for the Electron and the Commodore 64. Its new IS Compiler and FP Compiler, both for the Spectrum, are £9.95 and £19.95 respectively.

The first six of a range of educational programs — for the BBC, Spectrum and 64 — is to be launched by **Pilot Software City** early next year. Managing director Kelvin Robinson said they would be for six-11-year-olds with the emphasis on involvement.

Oric software specialists **Tansoft** brought out two new games, including Rat Splat (£7.95) in which you have to chase a rat and thump it. Until Christmas Tansoft is selling the 16K Oric by mail order at a cut-price £79.95.

Dragon said that there were 26 new software titles for its computer and that the 64K model would be out in mid-November. **Microcomputer Resources** has a Prestel interface for the Dragon 32 to display green and black or white and black. A Viewdata colour card is promised soon.

New titles from **Softspot** for the BBC include a Christmas game called Beebaclus (£6.95).

BBC Publications and Atari showed their new titles, including Atari's race game cartridge, Pole Position (£29.99).

Where to find them

Timescape, 8A Digby Rd, Sutton Coldfield, West Midlands
Indescomp, P. Castellana, 179, 1. Madrid 16 (phone for UK stockists: (279 31 05))
Currah, Graythorp Industrial Estate, Hartlepool, Cleveland TS25 2DF

Namal, 153-154 East Rd, Cambridge

Bug-Byte, Canning Place, Liverpool L1 8JB

Bubble Bus, 87 High St. Tonbridge, Kent

Audiogenic, P.O. Box 88, Reading, Berks

Basicare, 12 Rickett St, London SW6 1RU

Romik, 24 Church St, Slough, Berks SL1 1PT

Interceptor, Lindon House, The Green, Tadley, Hants

Interface, 44-46 Earls Ct Rd, London W8 6EJ

John Wiley, Baffins La, Chichester, W. Sussex

Melbourne House, 224 Stanley Rd, Teddington, Middx

Quicksilver, 13 Palmerston Rd, Southampton, Hants SO1 1LL

Llamasoft, 49 Mount Pleasant, Tadley, Hants

Fuller, 17 Sweeting St, Liverpool 2

Kuma, 11 York Rd, Maidenhead, Berks

Shards, 189 Eton Rd, Ilford, Essex IG1 2UQ

CDS, 10 Westfield Ct, Tickhill, Doncaster, S. Yorks DN11 9LA

Imagine, 5 Sir Thomas St, Liverpool L1 6BW

Softek, 329 Croxted Rd, London SE24

Pilot, 32 Rathbone Pl, London W1P 1AD

Tansoft, 3 Club Mews, Ely, Cambs CB7 4NW

Dragon, Kenfig Industrial Estate, Margan, Port Talbot, W. Glam SA13 2PE

Microcomputer Resources, 1 Branch Rd, Park St Village, St Albans, Herts

Softspot, 29 South Cres, Prittlewell, Southend, Essex SS2 6TB

BBC Publications, 35 Marylebone High St, London W1

Atari, Railway Terrace, Slough, Berks SL2 5BZ

Phoenix Software, 116 Marsh Rd, Pinner, Middx

Kelwood, Downs Row, Moorgate, Rotherham S60 2HD

Kingsley TV, 40-42 Shields Rd, Newcastle-upon-Tyne

Virgin, 61-63 Portobello Rd, London W11 3DD

Acorn, Fulbourne Rd, Cherry Hinton, Cambridge CB1 4JN

Express, 83 High St, Hillmorton, Rugby, Warwick CV21 4HD

Crystal, 2 Ashton Wy, Sunderland SR13 3RX

Anirog, 29 West H1, Dartford, Kent DA1 2EL

Microdeal, 41 Truro Rd, St Austell, Cornwall PL25 5JE

Kansas, Unit 3, Sutton Springs Wd, Chesterfield, Derbys

Micro-Aid, 25 Fore St, Praze, Camborne, Cornwall TR14 0JX

Abrasco, The Grange Barn, Pikes End, Eastcote, Middx HA5 2EX

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Author - Tony Churcher
Spectrum 48K - £4.95.



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Grail You have been chosen to seek and recover the Holy Grail from the Castle Perilous. Throughout the course of your task you will have to use your skill, intelligence and logic (along with a little luck) as you encounter many foes. You will have the opportunity to gather weapons and armour to fight with, but if you are wounded your strength will drain away - jewels etc.
Author - Mike Howard
Oric 48K - £6.95.



Dinky Kong Attempt to rescue your lovely girlfriend who is held captive by the angry gorilla. As you climb the connecting ladders and move along the gangways, the gorilla will be throwing barrels and fireballs at you. The only way to reach her is to leap over these obstacles and progress to the top. Micode action with sound effects, full colour action graphics, skill levels etc.
Author - Adrian Sheppard
Oric 48K - £6.95



Oricade A combined assembler/disassembler and editor for the Oric. * Handles full 6502 Mnemonics * Features Save and Reload M/C * Assembles and disassembles at any address. * An essential tool for any serious programmer.
Author - Adrian Sheppard
Oric 48K - £8.50.

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Author - Mike Howard
Oric 48K - £6.95 Spectrum 16/48K - £4.95.

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Your last chance to escape from the haunted mansion

This is the last part of Hallowe'en and is similar to parts two and three in that there are 10 rooms. But this time there aren't any stairs to find — you must just get out of the mansion.

Even if you missed the earlier parts, this listing will work without the others.

Hallowe'en is a text adventure for the VIC-20 with an extra 3K of RAM. You have several commands:

Examine
Look
Go
Get
Drop
Shoot
Feed

The information on where you are in the mansion is set out like this:

HALLOWEEN

You are in a dark room

VISIBLE EXITS: N W

You can see
Cat
Dog

What now?

You then enter what you want to do next. For example, you could type "Examine dog". If

How it works

20-135 print information about room

200-300 check for examine

300-400 check for N E S or W

400-500 check for Look

500-600 check for Get

600-700 check for Drop

800-900 check for other commands

9000-9070 print Don't understand etc

9400-9490 press any key

9500-9585 print well done etc

10000-10090 search for AS

40000-40280 initialise

Variables

I J & R FOR loops

AS all GETs

NMS your command

F(1 to 10) flags

C(1 to 10) what you are carrying

I(1 to 20) where the things are

IS(1 to 20) what items there are

NO the number of items

RO the room you are in

Concluding our text adventure for the VIC-20, plus 3K of extra RAM. Alan Blackham, who wrote Hallowe'en, has made sure you can play this part even if you missed the last two issues of Home Computing Weekly

```

1 REM *****
2 REM * ALAN BLACKHAM'S *
3 REM * HALLOWEEN *
4 REM * PART 4 *
5 REM * (25/08/83) *
7 REM *****
10 POKE 36879,8:POKE 36878,15
12 PRINT "I"
15 GOSUB 40000
20 REM ***** PRINT WHERE YOU ARE *****
22 PRINT "H H A L L O W E E N !"
25 PRINT "-----"
30 PRINT " YOU ARE IN A"
35 PRINT " "
40 RESTORE
41 FOR I=1 TO 10
42 READ R$,N,E,S,W
45 NEXT I
50 PRINT R$
55 PRINT "-----";
60 PRINT "VISIBLE EXITS:";
62 IF N=0 THEN PRINT "N";
64 IF E=0 THEN PRINT "E";
66 IF S=0 THEN PRINT "S";
68 IF W=0 THEN PRINT "W";
70 PRINT "-----";
75 PRINT " YOU CAN SEE "I"
80 FOR I=1 TO NO
82 IF I(1) OR C(1)=1 THEN 95
85 FOR J=1 TO 99
87 IF MID$(I$(1),J,1) <> " THEN NEXT J
90 PRINT " ";MID$(I$(1),2,J-2)
95 NEXT I
97 PRINT "-----";
100 PRINT " WHAT NOW ?"
110 POKE 198,0
120 INPUT NMS
130 POKE 36876,220
132 FOR R=1 TO 99:NEXT R
135 POKE 36876,0
200 REM ***** CHECK FOR EXAMINE *****
205 IF MID$(NMS,1,7) <> "EXAMINE" THEN 300
210 E=MID$(NMS,9,20)
215 FOR I=1 TO NO
220 IF I(1) OR THEN 240
225 FOR J=1 TO 99
227 IF MID$(I$(1),J,1) <> " THEN NEXT J
230 O=MID$(I$(1),2,J-2)
235 IF O=E THEN 250
240 NEXT I
245 PRINT " YOU CAN'T SEE IT!" :GOSUB 9020:GOTO 20
250 PRINT "-----"
255 PRINT "ITHE " ;
260 PRINT " "
265 PRINT " IS " ;MID$(I$(1),J,1,20)
270 GOSUB 9400:GOTO 20
300 REM ***** CHECK FOR N E S OR W *****
310 IF NMS <> "N" THEN 320
312 IF N=0 THEN 300
316 RO=N:GOTO 20
320 IF NMS <> "E" THEN 330
322 IF E=0 THEN 300
326 RO=E:GOTO 20
330 IF NMS <> "S" THEN 340
332 IF S=0 THEN 300
336 RO=S:GOTO 20
340 IF NMS <> "W" THEN 400
342 IF W=0 THEN 300

```

```

346 RO=W:GOTO 20
380 PRINT "I CAN'T GO "NMS
385 GOSUB 9020:GOTO 20
400 REM ***** CHECK FOR LOOK *****
410 IF MID$(NMS,1,5) <> "LOOK" THEN 500
415 PRINT "-----"
417 PRINT " YOU ARE CARRYING "I"
420 FOR I=1 TO NO
430 IF C(I)=0 THEN 450
432 FOR J=1 TO 99
435 IF MID$(I$(1),J,1) <> " THEN NEXT J
437 PRINT " A "MID$(I$(1),2,J-2)
450 NEXT I
460 GOSUB 9400:GOTO 20
500 REM ***** CHECK FOR GET *****
505 IF MID$(NMS,1,3) <> "GET" THEN 600
510 E=MID$(NMS,5,20)
520 FOR I=1 TO NO
530 IF I(1) OR THEN 550
535 FOR J=1 TO 99
540 IF MID$(I$(1),J,1) <> " THEN NEXT J
545 O=MID$(I$(1),2,J-2)
547 IF O=E THEN 560
550 NEXT I
555 PRINT " YOU DON'T SEE IT!" :GOSUB 9020:GOTO 800
560 IF MID$(I$(1),1,1) <> " THEN PRINT " YOU CAN'T CARRY
IT " :GOSUB 9020:GOTO 20
565 ON ON+1:IF ON<4 THEN 590
570 ON=3:PRINT " YOU CAN'T CARRY ANY MORE "
575 GOSUB 9020:GOTO 20
580 C(1)=1:GOTO 800
600 REM ***** CHECK FOR DROP *****
610 IF MID$(NMS,1,4) <> "DROP" THEN 800
620 FOR I=1 TO NO
625 IF C(I)=0 THEN 650
630 FOR J=1 TO 99
632 IF MID$(I$(1),J,1) <> " THEN NEXT J
640 O=MID$(I$(1),2,J-2)
645 IF O=MID$(NMS,6,20) THEN 660
650 NEXT I
652 PRINT " YOU HAVN'T GOT IT!" :GOSUB 9020:GOTO 20
660 ON ON+1:C(1)=0:I(1)=RO:GOTO 20
800 REM ***** CHECK FOR OTHER THINGS *****
805 IF NMS <> "GET BOX" THEN 820
810 IF RO <> THEN GOSUB 9000:GOTO 20
811 IF F(1) <> THEN 20
812 PRINT " THERE IS A KEY UNDER THE BOX!" :GOSUB 9400
814 NO=NO+1:F(1)=NO
817 I$(NO)="IKEY/DOOR KEY":I(NO)=9
818 GOTO 20
820 IF NMS <> "GET PICTURE" THEN 830
822 IF RO <> THEN 830
823 IF F(2) <> THEN 20
824 PRINT " THE GUN FALLS FROM
BEHIND THE PICTURE!" :GOSUB 9400
825 NO=NO+1:F(2)=NO
826 I(NO)="I#(NO)""IGUN/LOADED"
828 GOTO 20
830 IF NMS <> "OPEN DOOR" THEN 840
832 IF RO <> THEN 840
833 F=0:R="KEY":GOSUB 10000
834 IF F=0 OR F(5)=0 THEN PRINT " YOU
CAN'T YET!" :GOSUB 9020:GOTO 20

```

you wanted to go north you would type "N" and to find out what you are carrying enter "Look."

It's a good idea to get a friend to type in lines 800-900 or you will learn how to escape.

Hints on conversion

This program should work on any micro with just a few alterations. The POKEs are:
POKE 36879,X change screen colour
POKE 36878,1 to 15 set volume
POKE 36874 to 36877 sound channels
POKE 198,0 clear keyboard buffer
SYS 64802 reset computer

Amazing games

Our reviewers found their way round a selection of maze games

Magic Worm Spectrum £4.95

Lyndenhurst, 38 Ashley Road, London N19 3AS

You're a worm moving around the screen, leaving a trail as you go. The object is to catch targets as you move to gain bonus points, or to go straight to the flashing blue bottle to move on to the next stage.

Here there are lots of blue flowers to be eaten for points, but don't touch the white rocks or cross your own trail, or you'll lose one of your three lives.

The next stage is a maze, and guess what's in there? More blue flowers. If you manage this part, the end is in sight. Press A to jump, let go, and you fall into a

bottomless pit. What happens then I can't say, not having got this far.

At first, because nothing was whizzing around the screen, I thought I wasn't going to enjoy the game. Wrong — it became a challenge, and the only thing that really got me down was the annoying tune that played when scores and lives left were displayed.

One problem — twice while using the tape an out-of-memory message appeared, which of course meant reloading the tape and starting again. **C.MeL.**

instructions	90%
playability	75%
graphics	50%
value for money	70%



Amazing TI-99/4A £14.95

From TI dealers

This is a maze chasing game, but it's not quite that simple as there are a great number of options, functions, and different mazes available to the user.

The object you have to guide around the maze is a mouse, controlled by keyboard or joystick. There is a two player option.

You can also collect cheese from the maze as you travel around it and you may only exit from the maze when all the cheese has been collected. On the two player option the hunt for cheese can be either competitive or cooperative.

There are two types of maze, simple and complex, and the

maze can be visible or invisible. The maze can have mouse holes, where only the mouse can travel cat, and the mice can have two speeds.

Cats are available that chase the mice through the maze trying to eat them. You can have up to three cats, there are four speed and two intelligence options, and the cats can pounce.

There are a number of options when the game is running, including a dump of the maze to the TI thermal printer.

The instructions are straightforward and informative, the graphics and sound are good, and the whole operation is user friendly.

instructions	100%
playability	95%
graphics	90%
value for money	60%



3D Haunted Hedges Spectrum £6.95

Micromega, 230-236 Lavender Hill, London SW11 1LE

Another Pacman style game, but none the less still very exciting. The maze appearing to be 3D and glowing around the edges.

Your aim is to pick up the gold coins and treasure that appear around the screen. On the way you meet guardians whose job it is to protect their domain from intruders.

You have three lives. You also have a means of defence. In each corner of the maze lies an ice-axe — if you reach this while the guardians are in pursuit they will

turn white and run. Catching them at this time adds bonus points, and you force them back to the centre of the maze to rematerialize.

There is a time limit here because your axe being ice will melt, so move fast. The guardians now return to their normal being.

There are five levels of choice which enable you to decide the speed at which the guardians move. You may hold the game at any stage and even change the keys of movement.

A very good arcade style game that has every indication of becoming addictive. **C.MeL.**

instructions	95%
playability	80%
graphics	80%
value for money	90%



Munch Man TI-99/4A £29.95

From TI dealers

Without beating around the bush, and at the risk of a law suit by Atari, this is a straight Pacman copy with enough differences to keep Atari's lawyers away.

The main difference is that instead of eating up dots you have Joysticks or keyboard can be used, control is awkward, and it's sometimes easy to miss a turn off with dire consequences.

The proverbial ghosts and power pills remain, although they are flashing TI logos, along with the tunnels.

The maze is simpler and the graphics leave something to be desired. The fruits that appear in

normal Pacman are also absent. The instructions are fairly concise, although their clarity is clouded by being written in six languages, and you must dig out the British version.

Sound is included and although adequate, could be improved.

Overall, this is a reasonable Pacman reproduction — the only differences are detrimental to the game. I would only recommend man addicts with lots of spare money to fling around.

instructions	85%
playability	70%
graphics	70%
value for money	20%



Escape MCP Spectrum £5.99

Rabbit, 380 Station Road, Harrow HA1 2DE

You're in a Silicon maze patrolled by the ever-hungry MCP (answers on a postcard please!). You have five lives to outfox the MCP and unlock the doors to the higher levels. Grab the floppy disks on the way and you earn a points bonus.

The instructions are fine but they are flashed on the screen too briefly. An excellent feature is the option to define your own control keys.

Effective use is made of colour and the graphics are very good — especially the running figure. It's easy to play even though it's very difficult to reach the higher levels

— but this only spurs you on. Despite the glut of maze games, this one is worth your money. **C.C.**

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



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TANSOFT

Unit 1 & 2, Techno Park, Newmarket Road, Cambridge

DRAGON PROGRAM

Anyone for tennis? Just type in and serve . . .

Step out onto the Centre Court with my tennis game for the Dragon.

Scores for both players are displayed and the first to reach 15 points is the winner.

There is a choice of two speeds, fast and normal, obtained by POKE commands, so remember to turn the computer off to clear the memory.

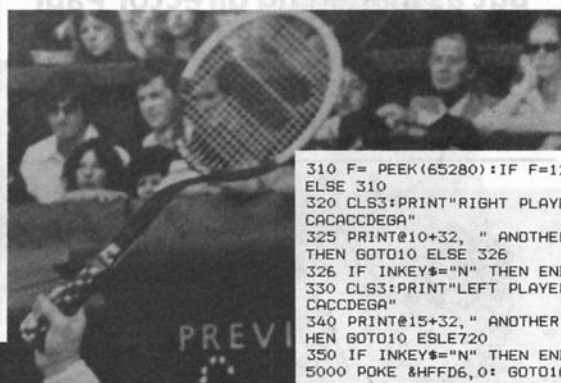
Each time a point is scored the game halts until you press the right joystick button to serve.

To make the game more challenging, you could add a RND element to the ball-bounce routine or have bats of different sizes. And the number of points needed to win could be increased for a longer game.

Hints on conversion

Dragon BASIC is close to the Microsoft standard so Tennis is very easy to convert for other computers.

Your joystick is the racquet when you play this tennis game written for the Dragon by 14-year-old John Williams



How it works
 10-14 request and set speed
 20-30 set score variables
 40-70 set up screen
 80-100 set racquet, ball variables
 110 draw right player's racquet
 120 print scores
 130-140 move and bounce ball
 150 draw left player's racquet
 160 joystick variables
 170-180 if point scored GOTO serve routine
 190-200 check for win
 220-250 check bats movement
 260 draws ball
 270-290 reset players' positions
 300-310 serve routine
 320-326/330-350 routines for win by right/left player

```
310 F= PEEK(65280):IF F=126 OR F=254 THEN GOTO 40
ELSE 310
320 CLS3:PRINT"RIGHT PLAYER WON!!!":PLAY"03L6V31A
CACACDEGA"
325 PRINT@10+32, " ANOTHER GO(Y/N)":IF INKEY$="Y"
THEN GOTO10 ELSE 326
326 IF INKEY$="N" THEN END ELSE325
330 CLS3:PRINT"LEFT PLAYER WON!!!": PLAY"03L6V31A
CACACDEGA"
340 PRINT@15+32, " ANOTHER GO(Y/N)":IF INKEY$="Y" T
HEN GOTO10 ELSE720
350 IF INKEY$="N" THEN END ELSE 340
5000 POKE &HFFD6,0: GOTO16
```

Variables

X1,Y1/X2, Y2 old/new positions of ball
 E, R/S, D positions of right/left players
 Z/SCL score for right/left players

```
10 CLS4:PRINT @13+32, "TENNIS";
11 PRINT@10+96, "BY J.WILLIAM S";
12 PRINT@8+128, "FAST OR NORMAL (F/N)";
13 IF INKEY$="F" THEN POKE &HFFD7,0
14 IF INKEY$="N" THEN GOTO5000
15 IF INKEY$="M" THEN GOTO12ELSE 16
16 PRINT@8+288, "PRESS (S) TO START";
17 IF INKEY$="S" THEN GOTO20 ELSE GOTO17
20 SCR=0
30 Z=0
40 CLS0:FORD=2 TO 30 :SET (63,0,2):SET (0,0,2):NEXTD
50 PRINT@13+0, "tennis";
60 FOR R=0TO 63
70 SET (R,2,2):SET (R,30,2):NEXTR
80 E=16:R=59
90 S=3:D=14
100 X1= 4:Y1=6:X1=2:Y1=2
110 SET (R, E, 5):SET (R, E+1, 5):SET (R, E+2, 5)
120 PRINT@2+0, :SCR;:PRINT@27+0, :Z;
130 Y2=Y1+Y1:IF Y2=2 OR Y2=30 THEN Y1= -Y1:PLAY"L1
500AV20GGG":GOTO130
140 X2=X1+X1:IF X2=58 AND Y2=E OR X2=58 AND Y2=E+
1 OR X2=58 AND Y2=E+2 OR X2=4 AND Y2=D OR X2=4 AND
Y2=D+1 OR X2=4 AND Y2=D+2THEN X1=-X1:PLAY"05L150V3
1AAA"
150 SET (S, D, 2):SET (S, D+1, 2):SET (S, D+2, 2)
160 JY=JOYSTK(0):JK=JOYSTK(1):JF=JOYSTK(3)
170 IF X2)62 THEN SCL=SCLZ+1 :GOTO300
180 IF X2(2THEN Z=Z+1 :GOTO300
190 IF SCR=15 THEN GOTO 330
200 IF Z=15 THEN GOTO320
210 GOSUB270
220 E=JK:IF E(4THEN E=3
230 D=JF:IF D(3 THEN D=3
240 IF D)27 THEN D=27
250 IF E)28 THEN E=27
260 SET (X2, Y2, 8):RESET (X1, Y1):X1=X2:Y1=Y2:GOTO110
270 RESET (R, E):RESET (R, E+1):RESET (R, E+2)
280 RESET (S, D):RESET (S, D+2):RESET (S, D+1)
290 RETURN
300 PLAY"03L6V31ABGFEDC"
```

Tansoft: forging its own identity

Tansoft and Oric grew out of the same company, Tangerine, and still work closely together. But as managing director Paul Kaufman explained to Candice Goodwin, the two are becoming increasingly independent

Throughout its short life, the Oric has been cursed by constant comparisons with the Spectrum. So it's inevitable that Tansoft should find itself labelled as Oric's answer to Psion, the software house that has worked closely with Sinclair.

Though Tansoft and Oric Products are two completely separate companies, Oric Products used to distribute all Tansoft's programs, like Sinclair distributes Psion's. Tansoft wrote the demo program that goes out with every Oric machine, as Psion wrote the Horizons tape for the Spectrum.

Paul Kaufman, Tansoft's managing director, is quite happy for such comparisons to be made and freely admits that Tansoft is trying to fulfill Psion's role in the Oric market. Indeed, the ideas for some of its forthcoming software releases come from Psion's software for the Spectrum.

But it should be said that Tansoft and Oric are starting to assert their separate identities. Tansoft



Cathie Burrell (left) and Paul Kaufman with Carolyn Groeneveld, Tansoft's graphic designer

is increasingly taking over the distribution of its software, leaving Oric to concentrate on hardware. And according to Paul, there's no question of Oric telling Tansoft what to do.

"There has to be give and take. Oric makes suggestions about the kind of software it would like to see; for example, they've just released a printer, and they approached us to do a demo tape for that.

"And we always listen to their opinion on our software, though we don't always take any notice — after all, they're hardware, not software specialists. For example, Oric thought our flight game was terrible because it wasn't like Psion's. But it's our best seller."

Tansoft originally grew out of the Tansoft Gazette, a magazine for Tangerine machine users set up by Paul. Tangerine, of course, was the company that first developed the Oric.

The magazine itself was started

as part of the Tangerine customer services department which Paul joined the company to set up.

"Prior to that", he said, "I was a programmer at Shell for three years — I just bought a Microtan computer from Tangerine as a hobby. One day I went to a computer fair and met someone from Tangerine — I told them their customer support was appalling. A few weeks later, they rang me up and offered me a job."

The first programs Tansoft produced were for the Microtan. Then when the Oric came out, they started to concentrate on Oric software, as well as bringing out Oric Owner magazine which now incorporates the old Tansoft Gazette.

When Tansoft separated from Tangerine and became a company in its own right, there was an election to decide who the directors should be. "It was very democratic", said Paul. He

became one of the directors, and the other is Cathie Burrell, who is in charge of administration and dealer contacts.

The company currently has eight titles available. By the end of the year, Paul hopes to have 25. Ultimately, his aim is to sell 40 per cent games, 40 per cent utilities and languages, and 20 per cent business software.

A whole batch of new releases is planned for October. Among them are OricCalc, a spreadsheet program, Author, a word processor, a BASIC compiler and a version of the Pascal language. Among the games is Rat Splat, which could be one of the most tasteless pieces of software yet developed.

Says Paul: "You have a little man down a sewer, and he has to kill rats by hitting them with a hammer or poisoning them with an aerosol of poison gas.

"But there's also a lot of cheese

down the sewer for the rats to eat, and the cheese fumes can build up and kill the man. There are also monsters lurking in the tunnels. It's a really good game, with lots of sound effects."

Sounds lovely. Paul is also keen to get into adventure games: "I think they're getting more popular, especially with older people." One result of this is that Tansoft is now selling an Oric version of the best-selling Spectrum adventure game *The Hobbit*, specially written for the company by Melbourne House.

Tansoft has also found a lot of interest in adventures from the Australian market. "We keep meaning to write an adventure game with kangaroos in it, just for them", said Paul.

"We'd also love to go into the educational market firstly when we understand it better ourselves and secondly when we have some good programs to sell." Tansoft's first educational offerings, also due out in October, are a series of language-teaching programs developed by a doctor of psychology at Swansea university.

Though it won't be ready for the autumn, one of Tansoft's programmers is also working on a 3D graphics program called OricCAD, which according to Paul will be "our answer to Psion's VU-3D".

A lot of Tansoft's early programs were written by Paul, who also helped to develop the Oric itself — he worked on the sound commands which are one of the machine's strong points in its battle with the Spectrum. But the rapid expansion of Tansoft's business through the increasing demand for Oric software ("just this month we've sold 100,000 programs") leaves him little time for programming now.

Tansoft uses about five freelance programmers, not all of whom are teenage, though Paul admits to poaching 17-year-old Andy Green from Quicksilver and 17-year-old John Marshall from PSS.

Occasionally the company also uses submitted software, but as Paul says, "We get at least half a dozen tapes a day, most of which are rubbish or unusable. We get no end of copies of Mastermind and Centipede and Space Invaders. Some people even type in listings from magazines and say they're their own — I wouldn't mind so much, but sometimes they're from our own magazine."

"But we're now turning down a lot of software we might have accepted a few months ago. We're trying to raise our standards all the time. If people buy software and it's no good, they won't come back again."

SPECTRUM PROGRAM

```

229,205,181,3,225,17,16,0,167,23
7,82,32,240,193,16,233,201,0,0,0
,0,0,0
203 DATA 6,1,197,33,15,0,17,40,
20,229,205,181,3,225,17,16,0,167,
207,90,125,254,255,32,237,193,16
,230,201,0,0,0,0
24 DATA 17,10,0,33,10,0,6,10,1
97,213,229,205,181,3,1,100,0,225
,237,74,209,193,16,240,201
30 LET HI=0
40 LET SC=0: LET L=3: LET GAME
=0
45 LET BON=0: LET R=.98
55 LET A$="": LET B$="o"
60 LET L$="qqqq": LET E$="e"
65 LET G$="": LET X1=20: LET
X2=20: LET Y1=2: LET Y2=19
70 DIM C$(21,20)
72 RESTORE 90000: FOR A=1 TO 21
75 READ D$: LET C$(A)=D$
80 NEXT A
85 LET F$="svtsvtuu"
90 LET I$="44244266": LET F=0
95 LET X=18: LET Y=11: LET P=0
98 LET Z$=""
100 BORDER 0: PAPER 0: INK 7
101 BRIGHT 1: CLS
105 IF GAME>0 THEN GO TO 120
106 LET J$="MUNCHIE & THE HOONO
S": LET J=LEN J$: FOR A=1 TO J:
PRINT AT 10,5;J$(A);AT 10,4+
(21-A);J$(21-A) TO : IF A<=10
THEN RANDOMIZE USR "I"
107 NEXT A
120 FOR A=1 TO 20: RANDOMIZE US
R USR "A": NEXT A
130 INK 5: CLS
135 FOR A=1 TO 21: PRINT AT A,1
;C$(A): NEXT A
140 PRINT AT 1,22;"LIVES";AT 9,
22;"SCORE";AT 17,22;"HI"
145 PRINT AT 3,22;L$(TO L);AT
11,22;"00000"(TO 5-LEN STR$(SC
+BON));SC+BON;AT 19,22;"00000"(
TO 5-LEN STR$ HI);HI
148 LET GAME=GAME+1
150 FOR Z=1 TO 20
200 LET C$(X,Y)="

```

```

310 LET X1=X1+(C$(X1+1,Y1)<>"f"
AND X>X1)-(C$(X1-1,Y1)<>"f" AND
X<X1)
315 LET X2=X2+(C$(X2+1,Y2)<>"f"
AND X>X2)-(C$(X2-1,Y2)<>"f" AND
X<X2)
320 LET Y2=Y2+(C$(X2,Y2+1)<>"f"
AND Y2<19 AND Y2<Y)-(C$(X2,Y2-1
)<>"f" AND Y2>2 AND Y2>Y)
325 LET Y1=Y1+(C$(X1,Y1+1)<>"f"
AND Y1<19 AND Y1<Y)-(C$(X1,Y1-1
)<>"f" AND Y1>2 AND Y1>Y)
328 PRINT AT X,Y: INK 6;B$
329 IF (Y1=Y2 AND X2=X1) THEN G
O SUB 2000
330 PRINT AT X1,Y1: INK 1+(2 AN
D P=0);E$;AT X2,Y2: INK 1+(3 AND
P=0);G$
335 IF (X1=X AND Y1=Y) OR (X2=X
AND Y2=Y) THEN GO SUB 1000+(100
*P)
340 IF P=1 THEN NEXT Z
350 IF Z=21 THEN LET P=0: LET E
$="e": LET G$="e": LET Z=1: GO T
O 200
355 GO TO 200
400 PRINT AT 16,11;Z$: FOR A=1
TO 2: RANDOMIZE USR "E": NEX
T A: LET C$(16,11)="": PRINT AT
16,11;B$: LET Z$="": RETURN
500 IF RND>=.75 THEN GO TO 600
505 IF C$(16,11)<>" " THEN RETU
RN
510 IF F>=6 THEN RETURN
512 LET F=F+1
515 PRINT AT 16,11: INK VAL I$(
F);F$(F): LET C$(16,11)=F$(F)
520 RETURN
600 IF RND>.5 AND C$(X1,Y1)=" "
THEN PRINT AT X1,Y1: INK 2;"w":
LET C$(X1,Y1)="w": RETURN
610 IF C$(X2,Y2)=" " THEN PRINT
AT X2,Y2: INK 2;"w": LET C$(X2,
Y2)="w": RETURN
620 RETURN
1000 PAUSE 50: FOR A=1 TO 6: PRI
NT INK A;AT X,Y;"a": RANDOMIZE U
SR USR "A": NEXT A: FOR A=1 TO 4

```

```

201 PRINT AT X,Y;C$(X,Y)
203 PRINT AT 11,22;"00000"(TO
5-LEN STR$(SC+BON));SC+BON
204 IF SC/GAME=2210 THEN GO TO
60
205 IF INKEY$<"5" OR INKEY$="0"
THEN GO TO 250
210 IF INKEY$="5" AND C$(X,Y-1)
<>"f" THEN LET Y=Y-1: LET B$="n"
215 IF INKEY$="8" AND C$(X,Y+1)
<>"f" THEN LET Y=Y+1: LET B$="p"
220 IF INKEY$="6" AND C$(X+1,Y)
<>"f" THEN LET X=X+1: LET B$="q"
225 IF INKEY$="7" AND C$(X-1,Y)
<>"f" THEN LET X=X-1: LET B$="o"
230 IF C$(X,Y)="r" THEN BEEP .0
5,-.5: LET SC=SC+10: LET R=R-.00
1
232 IF RND>R THEN GO SUB 500
235 IF C$(X,Y)="k" THEN LET P=1
: RANDOMIZE USR "A": LET E$="
e": LET G$="g": GO TO 150
238 IF C$(X,Y)="g" THEN LET C$(
X,Y)="": GO SUB 1000
240 IF X<>16 THEN GO TO 250
241 IF C$(X,Y)="s" THEN LET BON
=BON+100: LET Z$="g"
242 IF C$(X,Y)="v" THEN LET BON
=BON+100: LET Z$="g"
243 IF C$(X,Y)="t" THEN LET BON
=BON+200: LET Z$="h"
244 IF C$(X,Y)="u" THEN LET BON
=BON+300: LET Z$="j"
245 IF Z$<>" " THEN GO SUB 400
250 PRINT AT X2,Y2;C$(X1,Y1);AT
X2,Y2;C$(X2,Y2)
280 IF Y=1 THEN LET Y=19
285 IF Y=20 THEN LET Y=2
290 PRINT AT X,Y: INK 5;A$
295 IF (X1=X AND Y1=Y) OR (X2=X
AND Y2=Y) THEN GO SUB 1000+(P#1
00)

```



```

: PRINT AT X,Y;"abc"(A): PAUSE
25: NEXT A: PRINT AT X,Y;"l": BE
EP .1,40: PRINT AT X,Y;" "
1010 LET L=L-1: IF L=0 THEN GO T
O 5000
1015 PRINT AT 3,22;L$(TO L);" "
1020 LET X=18: LET Y=11: RETURN
1100 PRINT AT X,Y;"J": FOR A=1 T
O 2: RANDOMIZE USR "I": NEXT
A: LET BON=BON+500
1110 IF X=X1 AND Y=Y1 THEN LET Y
1=11: LET X1=13: RETURN
1115 LET X2=13: LET Y2=11: RETUR
N
2000 LET X1=INT (RND#18)+2
2002 LET Y1=INT (RND#18)+2
2005 IF C$(X1,Y1)<>"f" THEN RETU
RN

```


Kitten Kong, a 10-foot-high mutant tabby, is playing cat-and-mouse with a distressed damsel.

You must go to the rescue by running along girders and up ladders, jumping over the gaps. If you miss your footing or run off the end of a girder, you plunge to your death.

You move left and right using the S and D keys. Use E to go up a ladder or jump, depending on whether a ladder is above you or not. And use X to go down a ladder or stay still, depending on whether there's a ladder.

You get 10 points for reaching the damsel, and may gain extra points if you jump and reach the 1s.

From time to time Kong leaps into the air to scare you, and if you are on one of the top two levels of girder then you will fall off.

If you manage to rescue the damsel this time then there's another level waiting for you — with one piece of girder missing.

Fend off the ferocious feline

When a cuddly kitten turns into a marauding monster, you can't just stand there and let a damsel in distress be turned into cat food. Paul Edwards explains the rescue plan for his strangely familiar game, written for the TI-99/4A plus Extended BASIC

How it works

100-270 sets colour and characters
 280-540 sets screen
 550 sets variables
 570-620 Kong jumps
 650-670 damsel moves
 680-790 you move
 820-900 you jump
 910-950 up ladder
 960-1010 down ladder
 1020-1070 you fall
 1080-1160 sets up next level
 1170-1180 you lose
 1190-1230 play again or end



Hints on conversion

Here are explanations of some commands in TI BASIC, all prefaced by the word CALL.

SPRITE sets up a sprite of number x, ASCII code y, colour z, row r, column c, row velocity rv and column velocity cv

PATTERN makes sprite number x ASCII code y

DELSprite deletes sprite number x

MOTION sets sprite number x in motion with row velocity rv and column velocity cv

Variables

R player's row
 C player's column
 PR player's previous row
 PC player's previous column
 MI, MZ two characters for walking man
 DC damsel in distress's column
 DD damsel in distress's direction
 CH character of position player is about to move on to
 CCH the last character covered — printed offer player has passed
 SC score
 K ASCII code from CALL KEY
 D,E characters from CALL GCHAR

```
100 CALL CLEAR :: CALL SCREEN(2)
110 FOR Q=0 TO 8 :: CALL COLOR(Q,16,1):: NEXT Q
120 RANDOMIZE
130 CALL CHAR(96,"181808181C180818")
140 CALL CHAR(97,"181808181C185422")
150 CALL CHAR(98,"1818101838181018")
160 CALL CHAR(99,"1818101838182A44")
170 CALL CHAR(100,"1C1C083E081C1436")
180 CALL CHAR(101,"000000000000BFF")
190 CALL CHAR(104,"243C243C243C243C")
200 CALL CHAR(124,"AA55AA55")
210 CALL CHAR(128,"01030303070F1F3B")
220 CALL CHAR(129,"80C0C0C0E0E0F0F8DC")
```

```
230 CALL CHAR(130,"373F1F070E0E060E")
240 CALL CHAR(131,"ECFCF8F07070607")
250 CALL CHAR(136,"1C1C087F1C1C3E14")
260 CALL CHAR(137,"08180808")
270 CALL COLOR(9,12,1,10,13,1,12,5,1,13,14,1,14,8,1)
280 CALL HCHAR(22,1,124,32)
290 DISPLAY AT(4,13):"IIII"
300 DISPLAY AT(7,11):"IIIIIIII"
310 DISPLAY AT(10,7):"I III III IIIII"
320 DISPLAY AT(13,4):"III I III III IIIII"
330 DISPLAY AT(16,1):"IIIIII III IIIII III IIIII"
340 DISPLAY AT(19,4):"IIIIII III III IIIIIII"
350 CALL VCHAR(4,14,104,3)
360 CALL VCHAR(4,19,104,3)
370 CALL VCHAR(7,12,104,3)
380 CALL VCHAR(7,21,104,3)
390 CALL VCHAR(10,8,104,3)
400 CALL VCHAR(10,14,104,3)
410 CALL VCHAR(10,19,104,3)
420 CALL VCHAR(10,26,104,3)
430 CALL VCHAR(13,5,104,3)
440 CALL VCHAR(13,12,104,3)
```

TI-99/4A PROGRAM

```

450 CALL VCHAR(13,17,104,3)
460 CALL VCHAR(13,29,104,3)
470 CALL VCHAR(16,9,104,3)
480 CALL VCHAR(16,21,104,3)
490 CALL VCHAR(19,15,104,3)
500 CALL VCHAR(19,26,104,3)
510 CALL HCHAR(5,16,128):: CALL
HCHAR(5,17,129):: CALL HCHAR(6,1
6,130):: CALL HCHAR(6,17,131)
520 CALL HCHAR(8,14,137):: CALL
HCHAR(8,20,137):: CALL HCHAR(11,
13,137):: CALL HCHAR(11,22,137)
530 CALL HCHAR(14,8,137):: CALL
HCHAR(14,25,137):: CALL HCHAR(17
,12,137):: CALL HCHAR(17,18,137)
540 CALL HCHAR(20,10,137):: CALL
HCHAR(20,23,137)
550 PR=R=21 :: PC=C=1 :: M1=98 :
: M2=99 :: DC=15 :: DD=1 :: CCH=
0
560 IF RND>.05 THEN 640
570 CALL HCHAR(5,16,32,2):: CALL
HCHAR(6,16,32,2)
580 CALL HCHAR(4,16,128):: CALL
HCHAR(4,17,129):: CALL HCHAR(5,1
6,130):: CALL HCHAR(5,17,131)
590 CALL HCHAR(4,16,32,2):: CALL
HCHAR(5,16,32,2)
600 CALL HCHAR(5,16,128):: CALL
HCHAR(5,17,129):: CALL HCHAR(6,1
6,130):: CALL HCHAR(6,17,131)
610 CALL SOUND(500,-5,0,110,0)
620 CALL HCHAR(4,16,124,2)
630 IF R=6 OR R=3 THEN 1020
640 CALL HCHAR(R,C,M1):: DISPLAY
AT(1,1):"SCORE :-";SC
650 CALL HCHAR(3,DC,32)
660 DC=DC+DD :: IF DC=15 OR DC=1
8 THEN DD=-DD
670 CALL HCHAR(3,DC,136)
680 PR=R :: PC=C
690 CALL KEY(0,K,S)
700 IF K=83 THEN C=C-1 :: M1=96
:: M2=97
710 IF K=68 THEN C=C+1 :: M1=98
:: M2=99
720 IF PR=R AND PC=C AND K<>69 A
ND K<>88 THEN IF M1=96 THEN C=C-
1 ELSE IF M1=98 THEN C=C+1
730 IF C=0 THEN C=32 ELSE IF C=3
3 THEN C=1
740 CALL GCHAR(R,C,CH)
750 IF CH=136 THEN 1080 ELSE IF
CH>127 AND CH<132 THEN C=PC :: G
OTO 1170
760 CALL HCHAR(PR,PC,CCH)

```

```

770 CCH=CH :: CALL HCHAR(R,C,M2)
780 CALL GCHAR(R+1,C,D):: IF D=3
2 THEN 1020
790 IF K=69 THEN 800 ELSE IF K=8
8 THEN 960 ELSE 560
800 CALL GCHAR(R-1,C,D):: IF D=1
04 THEN 910
810 IF C<3 OR C>29 THEN CCH=32 :
: GOTO 560
820 CALL GCHAR(R-1,C-1,D)
830 IF D=137 THEN SC=SC+1 :: CAL
L SOUND(100,800,0):: D=32
840 IF M1=96 THEN CALL GCHAR(R,C
-2,E):: CALL HCHAR(R,C,32):: CAL
L HCHAR(R-1,C-1,M2):: CALL HCHAR
(R-1,C-1,D):: CALL HCHAR(R,C-2,M
1):: C=C-2
850 CALL GCHAR(R-1,C+1,D)
860 IF D=137 THEN SC=SC+1 :: CAL

```



```

L SOUND(100,800,0):: D=32
870 IF M1=98 THEN CALL GCHAR(R,C
+2,E):: CALL HCHAR(R,C,32):: CAL
L HCHAR(R-1,C+1,M2):: CALL HCHAR
(R-1,C+1,D):: CALL HCHAR(R,C+2,M
2):: C=C+2
880 CCH=E
890 CALL GCHAR(R+1,C,D):: IF D=3
2 THEN 1020
900 GOTO 560
910 FOR RR=R TO R-2 STEP -1
920 CALL HCHAR(RR,C,104):: CALL
HCHAR(RR-1,C,100)
930 NEXT RR
940 R=R-3 :: CCH=32
950 GOTO 560
960 CALL GCHAR(R+1,C,D)
970 IF D<>104 THEN CCH=32 :: GOT

```

TI-99/4A PROGRAM

```

D 560
990 CALL HCHAR(R,C,32)
990 FOR RR=R+1 TO R+3 :: CALL HC
HAR(RR,C,100):: CALL HCHAR(RR,C,
104):: NEXT RR
1000 R=R+3 :: CCH=104
1010 GOTO 560
1020 CALL HCHAR(R,C,32)
1030 CALL SPRITE(#1,M1,12,R*8,C*
8-8,10,0)
1040 CALL POSITION(#1,Y,X):: IF
Y<160 THEN 1040
1050 CALL MOTION(#1,0,0):: CALL
PATTERN(#1,101)
1060 FOR Q=400 TO 200 STEP -10 :
: CALL SOUND(-100,Q,0):: NEXT Q
1070 GOTO 1190
1080 FOR Q=200 TO 400 STEP 10 ::
CALL SOUND(-100,Q,0):: NEXT Q
1090 SC=SC+10
1100 Y=INT(RND*13)+9 :: X=INT(RN

```

```

D*32)+1 :: CALL GCHAR(Y,X,D):: I
F D<124 THEN 1100
1110 CALL HCHAR(Y,X,32)
1120 FOR Q=1 TO 500 :: NEXT Q
1130 CALL HCHAR(R,PC,32)
1140 CCH=32
1150 CALL DELSPRITE(#1)
1160 GOTO 520
1170 FOR Q=400 TO 200 STEP -10 :
: CALL SOUND(-100,Q,0):: NEXT Q
1180 DISPLAY AT(2,1):"HARD LUCK
YOU LOSE !!!"
1190 DISPLAY AT(24,1):"PLAY AGAI
N ? (Y/N)"
1200 CALL KEY(0,K,S)
1210 IF K=89 THEN SC=0 :: CALL D
ELSPRITE(#1):: CALL CLEAR :: GOT
D 280 ELSE IF K=78 THEN 1220 EL
E 1200
1220 CALL CLEAR :: END

```

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The chart-hitting

Mad Martha



Poor little Henry is the hen-pecked hero of this domestic tale. One night Henry can take no more. He steals his wages from his wife's purse, and sneaks out of the house being careful not to wake the baby or trip over the cat, and heads for the bright lights to have some fun. Trouble is he runs out of money. His only way to raise some cash is to gamble his few remaining pounds on the spinning wheel of the roulette table.

Just as Henry is getting in to his evening at the tables his wife - Mad Martha - has noticed his absence. Realising Henry has absconded with the housekeeping she sets out after him with an axe.

Guess what part you play in this happy tale? That's right, you're Henry. Watch out for that axe!



A game to invest in... funny, genuinely original, and the graphics are great... hit the key to begin, the Spectrum plays a real Hollywood-style movie theme tune, and the hunt is on!
Personal Computer News

Marvelous adventure, really dotty... a refreshing change from some of the doomladen programs encountered nowadays... a game where you won't get to the next stage without solving the present conundrum.
Popular Computing Weekly

And now -

Mad Martha II



Time for the annual holiday and Martha decides to visit her half-cousin Manuel, who is a waiter in a plush hotel in Barcelona.

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



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MIKRO-GEN, 1 Devonshire Cottages, London Rd, Bracknell RG12 2TQ

OR PHONE YOUR ACCESS/VISA NUMBER: (0344) 27317 (9am-6pm)

Light Cycle ORIC-1 £6.95

PSS, 452 Stoney Stanton Road,
Coventry CV6 5DG

The object of this game is to ride your laser cycle around the game grid, leaving in your wake a solid laser wall.

Your opponent, human or computer, also leaves a similar wall, and if either of you hit any object on the grid then you "De-rez", giving a very spectacular display.

The whole program is very well presented, giving that all important arcade quality.

There is plenty of sound, impressive graphics, a hall of fame and, most usefully, an adjustable volume control. This last feature is one I hope to see on all new Oric games, especially in

view of the Oric's rather loud sound!

Instructions are clear and concise, and the control keys (up, down, left, right and power boost) are well positioned for both players, or for player against computer.

The game itself has good graphics, and on the highest of its nine skill levels is very fast indeed. It is very addictive, and one of the few arcade action games that can be played by more than one person.

All in all, a game that offers very good, all round value for money.

M.C.

instructions	75%
playability	80%
graphics	85%
value for money	85%



On your light bike...

...Or your computerised car.
Our reviewers test-drive some
games on two wheels and four

Grid-Run and Pontoon 48K Spectrum £5.50

Arcade, Technology House, 32
Chislehurst Road, Orpington,
Kent BR6 0DG

No, Grid-Run is not a version of Gridrunner. The object is to avoid a racing car that is moving in the opposite direction to you.

You can change tracks at the gaps in the walls surrounding each lane, but it is impossible to reverse, so when there is no exit between your end and computer's car, death becomes inevitable.

Points are scored by running over dots, Pacman style.

Little skill is involved which makes this a very poor game.

Pontoon lacks challenge,

because so much depends on chance, but there is a good graphical representation of each card and colour is used throughout. A tally of the results is kept.

Phrases such as "are you trying to let me win?" add interest, but they soon become predictable.

The computer starts each time (someone will have to teach it some manners) and although its first two cards are hidden, any subsequent cards are displayed.

Neither game is good enough to make this cassette a good buy.

S.E.

instructions	70%
playability	40%
graphics	75%
value for money	45%



Roadrunner 32K BBC £7.95

Superior Software, 69 Leeds
Road, Bramhope, Leeds

One of the few car driving games for the BBC. You drive your car around a maze-like track, avoiding the computer's cars and the rocks, and trying to pass over the checkpoint flags for points.

A smokescreen can be dropped which causes computer cars which hit it to go into a spin, but this uses some of your limited fuel. Joystick or keyboard may be used.

The top quarter screen displays a radar scan of flag positions and cars, with the majority of the screen showing the racetrack — a clear, colourful representation.

The graphics are excellent and sound is used effectively. Key response is quick, movement is smooth and fast as only machine code can produce.

I enjoyed the game very much — it needed both quick reactions and tactics to avoid chasing cars (imagine Pacman meets British Leyland — but more efficient). Six skill levels are provided.

If you want to try the game, your local arcade may have a Roadrunner machine; this tape is almost identical. A high score chart is also provided.

R.E.

instructions	
playability	96%
graphics	92%
value for money	97%
	96%



Motor Mania Commodore 64 + joystick £8.95

Audiogenic, PO Box 88,
Reading, Berks

You can almost smell the burning rubber and the hissing radiator in Motor Mania, a fast, realistic and exciting race car game which combines good graphics and highly effective sound in a superb package.

On running, the display shows you instrument panel complete with speedometer, fuel gauge, battery charge, and spare tyre indicator. On the left, a graphic display of the road shows your car positioned at a garage, and a light touch of the joystick sends it off down the track.

The road is full of hazards

such as potholes, which cause you to skid, broken glass, which will puncture a tyre, logs which will pierce your radiator and cause overheating problems. You even have to contend with avalanches.

All these obstacles can be avoided with skilful driving, to amass as many miles on the mileometer as you can with five cars.

The detail in this game is amazing. Fuel can be replenished at one of the garages en route, as can spare tyres, radiator etc.

D.A.

instructions	80%
playability	90%
graphics	75%
value for money	85%



Lightcycles BBC B £6.95

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

One of the most commonly used clips from Tron is the scene with the lightcycles streaking across the screen. Well it's from that that this game takes its name.

It won't signal a new era in computer games, and in fact the real basis of the game is that old favourite — Wraptrap. Nevertheless, I'm sure lots of people will get lots of fun from it.

You control your lightcycle from the keyboard, left/right — left hand, up/down — right hand, which is much easier than the four keys close together scheme.

Meanwhile the pursuing cycles career around madly and at ran-

dom, often trapping themselves in their own vapour trail.

Indeed, whereas with the usual Wraptrap you try and out-manoeuvre the computer, here it's often best to just stay out of trouble and let the computer trap itself.

The opposing cycles increase up to five, then it's colour change and back to one again.

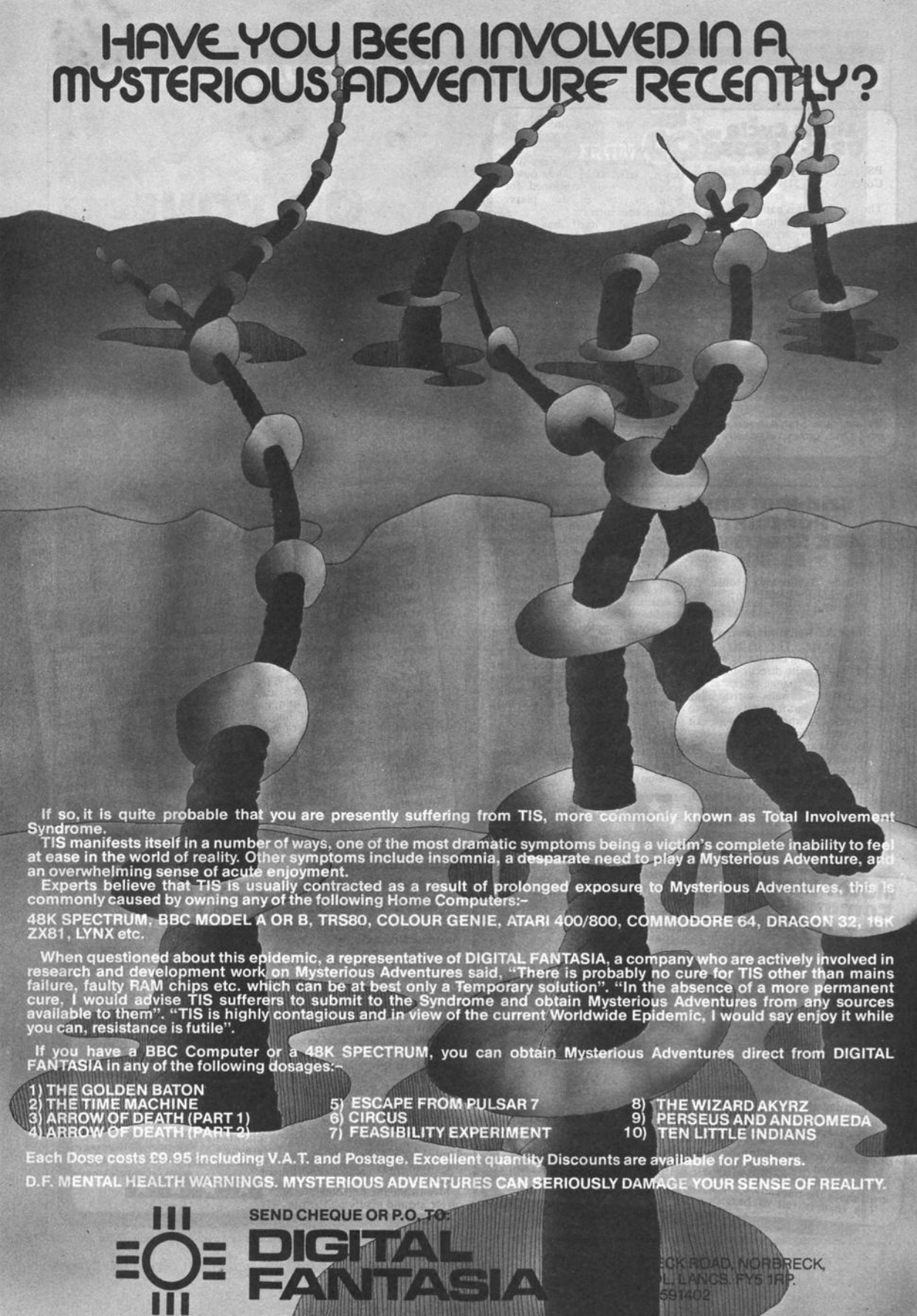
Perhaps it's because of the need to keep the speed of the action up, but the graphics are a little disappointing and the sound effects aren't special. However I liked the balance between skill and chance.

B.J.

instructions	80%
playability	92%
graphics	75%
value for money	80%



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If so, it is quite probable that you are presently suffering from TIS, more commonly known as Total Involvement Syndrome.

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Experts believe that TIS is usually contracted as a result of prolonged exposure to Mysterious Adventures, this is commonly caused by owning any of the following Home Computers:-

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When questioned about this epidemic, a representative of DIGITAL FANTASIA, a company who are actively involved in research and development work on Mysterious Adventures said, "There is probably no cure for TIS other than mains failure, faulty RAM chips etc. which can be at best only a Temporary solution". "In the absence of a more permanent cure, I would advise TIS sufferers to submit to the Syndrome and obtain Mysterious Adventures from any sources available to them". "TIS is highly contagious and in view of the current Worldwide Epidemic, I would say enjoy it while you can, resistance is futile".

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- 8) THE WIZARD AKYRZ
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You're on the trail of a damsel in distress

How it works

10-190 set up the variables and fill the array with all the necessary items
 192-299 display main screen
 300-490 move man routine
 500-599 man falls in a pit subroutine
 600-630 find damsel subroutine
 1300-1550 subroutine which allows user to choose game type
 3000-3720 spear throwing subroutine which also outputs necessary data to the main screen depending on what has been hit
 4000-4050 a beast has found the damsel
 4500-4540 the man was eaten by a beast
 5000-5520 move the damsel to follow the man and check for starvation of the damsel
 6000-6195 move the two beasts in the maze
 7000-7120 update the main screen display
 8000-8040 set-up the initial screen display
 9000-9520 introduction to Maze Adventure
 10000-10120 redefine the character set for the game
 Notes: Lines 1510,2000,2090,4000,4520,5500,8000,9090 and 9500 contain a clear screen character.
 Between quotes in the listing all lower case Js, hash signs and upper case Ks are in inverse.

In this game you play the role of a gallant knight with a mission to rescue a damsel who was imprisoned in a maze by a wizard.

Finding the damsel is only one of your problems. Along the way you must dodge two hideous, flesh eating beasts who will devour both you and the damsel if they can. Look out for their trails and keep out of their way — these beasts are indestructible until the damsel has been found.

Once you've found the damsel you must go back and kill the beasts, using a limited number of spears you have strapped to your back.

Hints on conversion

Some special Atari BASIC commands used in this program are listed below. Many computers have equivalent commands available.

GRAPHICS 2+16 changes the graphics mode (the screen size) to 12 down by 20 across
 POSITION puts the cursor at the specified place on the screen
 STICK (0) is a command to read the joystick port number in brackets

There are some nasty hazards to be overcome before you can save the damsel in David Ryan's game for the Atari 400 or 800, plus one joystick

```

5 GRAPHICS 2+16
7 GOSUB 10000
8 DIM A$(37*38),B$(17)
9 GOTO 9000
10 POSITION 0,0: ? #6; " PLEASE WAIT 50 SE
C. " : MG=0: S=30: BD=0: MF=0: B5=0: B6=0
15 FOR A=39 TO <37*37>-1: IF RND<0>>.95
THEN A$(A,A)="Q":NEXT A:GOTO 20
17 A$(A,A)=" " :NEXT A
20 FOR A=1 TO 37:A$(A,A)="!":A$(37*37+A,
37*37+A)="!":NEXT A:A$(38,38)="!":A$(37*
37,37*37)="!"
40 FOR A=1 TO 37:FOR R=1 TO 34 STEP 4:IF
INT(RND<0>)*4)+1=3 THEN NEXT R:NEXT A:GOTO
20
50 A$(37*A+R,37*A+R)="!":NEXT R:NEXT A
60 FOR A=1 TO 36:FOR R=1 TO 33 STEP 4:IF
INT(RND<0>)*4)+1=3 THEN NEXT R:NEXT A:GOTO
20
70 A$(R*37+A,R*37+A)="!":NEXT R:NEXT A
130 A=INT(RND<0>)*37*37)+37:IF A$(A,A)="
" THEN A$(A,A)="<":EP=A:GOTO 160
150 GOTO 130
160 A=INT(RND<0>)*37*37)+37:IF A$(A,A)="
" THEN M=A:GOTO 170
165 GOTO 160
170 A=INT(RND<0>)*37*37)+37:IF A$(A,A)="
" THEN A$(A,A)="J":B1=A:GOTO 175
171 GOTO 170
175 A=INT(RND<0>)*37*37)+37:IF A$(A,A)="
" THEN A$(A,A)="J":B2=A:GOTO 180
176 GOTO 175
180 A=INT(RND<0>)*37*37)+37:IF A$(A,A)="
" THEN A$(A,A)="K":DP=A:GOTO 192
190 GOTO 180
192 FOR Q=1 TO 2:FOR A=80 TO 0 STEP -1:S
OUND 0,A,10,10:NEXT A:NEXT Q
193 FOR A=200 TO 0 STEP -4:SOUND 0,A,10,
10:NEXT A
197 GOSUB 8000
199 COLOR 29:PL0T 9,4
200 SETCOLOR 0,3,6:SETCOLOR 1,10,10:SETC
OLOR 2,1,8:SETCOLOR 3,6,8
203 GOSUB 7000
206 GOTO 6000
207 SOUND 0,0,0,0
208 GOSUB 7000
210 POSITION 8,3: ? #6;A$(M-38,M-36)
220 POSITION 8,4: ? #6;A$(M-1,M-1):POSITI
ON 10,4: ? #6;A$(M+1,M+1)
230 POSITION 8,5: ? #6;A$(M+36,M+38)

```

Variables

B1,B2,B3,B4,B5,B6 beast positions in the string and flags for dead beasts
 M,M1 man positions in the string
 EP exit position
 DP damsel position
 DIR man direction
 S spears count
 BD count of dead beasts
 The following variables are used as flags for the program:
 MG maiden has been found
 MF maiden told to follow man to the exit

Note: To register the fact that the maiden has been found and that the maiden has been told to follow the man to the exit, you must 'bump' the man into her.

Only once both beasts are dead can you lead the damsel out of the maze. Your trail of coins will change to a chain of small crosses which she will follow — but you'll have to hurry, otherwise she may starve to death before you get there.

And that's not all. In the maze are pits you must avoid or you fall to your death. You can knock some of the maze walls down with your spear — but some are indestructible.

And though you're given information about your position in the maze relative to the damsel and the exit, this information is only approximate. As you get nearer your goal, the wizard changes the read-out so as to confuse you and throw you off the track.

The joystick plugs into port 1 (far left) at the front of the computer. It moves the man one space north, south, east or west each time.

To throw a spear, hit the fire button and wait for the man on the screen to go dark green. To aim a spear push the joystick in the direction required, as above. To cancel this option without throwing a spear hit the space bar.

For the more experienced player the option for the walls has been given. In this mode of play the game becomes very frustrating.



ATARI 400/800 PROGRAM

```

295 IF STRIG<0>=0 THEN SETCOLOR 1,10,6:G
OSUB 3000
297 SETCOLOR 1,10,10
298 IF S<<(2-BD) AND BD<>2 THEN 9500
299 FOR E=1 TO 20:NEXT E
300 JS=STICK<0>:IF JS=15 THEN 203
310 IF JS=11 THEN M1=M-1
320 IF JS=7 THEN M1=M+1
330 IF JS=14 THEN M1=M-37
340 IF JS=13 THEN M1=M+37
350 SOUND 0,200,10,10
360 IF A$(M1,M1)="!" THEN M1=M:GOTO 207
370 IF A$(M1,M1)="0" THEN 500
380 IF A$(M1,M1)="K" THEN 600
430 IF A$(M1,M1)="J" THEN 4500
440 IF A$(M1,M1)="<" THEN 1300
470 IF BD=2 THEN A$(M,M)="$":M=M1:GOSUB
5000:GOTO 490
480 A$(M,M)=">":M=M1:GOSUB 5000
490 A$(DP,DP)="K":GOTO 207
500 FOR A=1 TO 255 STEP 4:SOUND 0,A,10,8
:NEXT A:FOR R=15 TO 0 STEP -1:SOUND 0,10
0,10,R:NEXT R
530 POSITION 0,0
540 B$=" man fell in pit "
550 FOR A=0 TO 12:? #6;B$;NEXT A
599 FOR R=1 TO 200:NEXT R:GOTO 2000
600 FOR A=255 TO 1 STEP -3:SOUND 0,A,10,
10:SOUND 1,ABS(A-256),10,10:NEXT A:SOUND
0,0,0,0:SOUND 1,0,0,0:MF=1:M1=M
620 IF BD<>2 THEN MF=0:GOTO 200
630 MF=1:GOTO 200
1300 IF MF AND BD=2 THEN 1500
1310 M1=M:GOTO 207
1500 SOUND 0,0,0,0:SOUND 1,0,0,0
1510 POSITION 0,0:? #6;" "
1520 FOR K=1 TO 255:SOUND 0,K,10,10:SOUN
D 1,256-K,10,10:SOUND 2,K,8,10:SOUND 3,2
56-K,8,10
1530 POSITION 2,3:? #6;"congratulations"
1540 POSITION 8,6:? #6;"you":POSITION 2,
8:? #6;"have rescued the"
1550 POSITION 7,10:? #6;"damsel":NEXT K:
SOUND 0,0,0,0:SOUND 1,0,0,0:SOUND 2,0,0,
0:SOUND 3,0,0,0
2000 POSITION 0,0:? #6;""):J=6
2010 POSITION 1,2:? #6;"select' to choo
se":POSITION 1,3:? #6;"start' to begin"
2020 POSITION 1,6:? #6;" 1 - normal":POS
ITION 1,7:? #6;" 2 -invisible walls"
2030 IF PEEK(53279)>5 THEN J=J+1:IF J=8
THEN J=6
2040 POSITION 1,J:? #6;"E";CHR$(43+J);"J"
2050 FOR R=1 TO 30:NEXT R:IF PEEK(53279)
=6 THEN 2060
2055 GOTO 2020
2060 IF J=7 THEN 2080
2070 RESTORE :READ D:FOR R=8 TO 15:READ
D:POKE N+R,D:NEXT R:GOTO 2030
2080 FOR R=8 TO 15:POKE N+R,0:NEXT R
2090 POSITION 0,0:? #6;" "
2399 GOTO 10
3000 IF PEEK(764)=33 THEN POKE 764,255:R
RETURN
3020 JS=STICK<0>:IF JS=15 OR JS=10 OR JS
=6 OR JS=9 OR JS=5 THEN 3000
3025 S=S-1:IF S=-1 AND BD=2 THEN RETURN
3027 IF S<BD AND BD<>2 THEN 9500
3030 IF JS=13 THEN DIR=37

```

```

3040 IF JS=14 THEN DIR=-37
3050 IF JS=11 THEN DIR=-1
3060 IF JS=7 THEN DIR=1
3065 MIR=DIR
3070 FOR K=1 TO INT(RND<0>)*10)+27
3080 IF A$(M+MIR,M+MIR)="J" THEN 3500
3090 IF A$(M+MIR,M+MIR)="K" THEN 3600
3100 IF A$(M+MIR,M+MIR)="!" THEN 3700
3110 MIR=DIR+MIR:IF M+MIR>37*37 OR M+MIR
<40 THEN 3120
3115 NEXT K
3120 POSITION 2,10:? #6;"NOTHING WAS HIT
":FOR K=1 TO 500:NEXT K
3150 POSITION 2,10:? #6;"
":RETURN
3500 IF MG THEN 3530
3515 POSITION 2,10:? #6;"HIT A HIDEOUS
J":FOR K=1 TO 500:NEXT K
3520 POSITION 2,10:? #6;"
":RETURN
3530 POSITION 0,10:? #6;"HIT A DEADLY MO
NSTER":A$(M+MIR,M+MIR)=" "
3540 FOR K=1 TO 500:NEXT K:POSITION 0,10
:? #6;"
3550 IF RND<0><0.4 THEN 3563
3555 BD=BD+1
3556 POSITION 4,10:? #6;"beast is dead":
FOR K=1 TO 500:NEXT K:POSITION 4,10:? #6
;"
3557 F=INT(RND<0>)*ABS(EP-DP))+15
3558 IF M+MIR=B1 THEN B5=1:GOTO 3560
3559 B6=1
3560 POP :GOTO 200
3563 POSITION 1,10:? #6;"BEAST ONLY WOUN
DED"
3565 IF M+MIR=B1 THEN B1=INT(RND<0>)*37*3
7)+1:IF A$(B1,B1)<>" " THEN 3565
3570 IF M+MIR=B2 THEN B2=INT(RND<0>)*37*3
7)+1:IF A$(B2,B2)<>" " THEN 3570
3575 FOR K=1 TO 500:NEXT K:POSITION 0,10
:? #6;"
3590 POP :GOTO 200
3600 FOR A=1 TO 50:SOUND 0,100,12,10:FOR
E=1 TO 20:NEXT E
3630 POSITION 1,10:? #6;"YOU HIT THE MAI
DEN"
3650 POSITION 1,10:? #6;"you hit the mai
den"
3660 NEXT A:SOUND 0,0,0,0
3670 GOTO 2000
3700 IF (M+MIR<37*37)-1 OR M+MIR<40 THEN
3120
3710 A$(M+MIR,M+MIR)=" ":POSITION 5,10:?
#6;"HIT A WALL":FOR K=0 TO 15:SOUND 0,1
50-K,12,K:FOR E=1 TO 10:NEXT E
3720 SOUND 1,200+K,10,15-K:NEXT K:SOUND
0,0,0,0:POP :POSITION 5,10:? #6;"
":GOTO 200
4000 POSITION 0,0:? #6;" "
4010 FOR K=1 TO 35
4020 POSITION 6,3:? #6;"YUM YUM":SOUND
0,100,12,10:FOR E=1 TO 30:NEXT E
4030 SOUND 0,100,6,10:POSITION 6,3:? #6;
"yum yum":NEXT K
4040 SOUND 0,0,0,0:POSITION 0,5:? #6;"Da
mEls are TaStY":FOR R=1 TO 200:NEXT R
4050 POSITION 2,7:? #6;"a beast ate the"
:POSITION 7,8:? #6;"damsel":FOR R=1 TO 3
00:NEXT R:GOTO 2000
4500 FOR A=1 TO 20:POKE 755,4:SOUND 0,10

```

ATARI 400/800 PROGRAM

```

0,12,10:FOR E=1 TO 10:NEXT E:POKE 755,2:
SOUND 0,200,12,10:NEXT A
4510 A$(B1,B1)=" " :A$(B2,B2)=" " :M1=M:A$(
M1,M1)="J":SOUND 0,0,0,0
4520 POSITION 0,0:? #6;"}"
4530 POSITION 1,5:? #6;"the man was eate
n":POSITION 9,7:? #6;"by":POSITION 6,9:?
#6;"a beast"
4540 FOR R=1 TO 200:NEXT R:GOTO 2000
5000 IF BD<2 THEN RETURN
5003 F=F-1:IF F<=0 THEN 5500
5005 IF DP-37<38 OR DP+37>37*37 THEN 504
0
5010 IF A$(DP-37,DP-37)="$" THEN A$(DP,D
P)=" " :DP=DP-37:RETURN
5020 IF A$(DP+37,DP+37)="$" THEN A$(DP,D
P)=" " :DP=DP+37:RETURN
5040 IF A$(DP+1,DP+1)="$" THEN A$(DP,DP)
=" " :DP=DP+1:RETURN
5050 IF A$(DP-1,DP-1)="$" THEN A$(DP,DP)
=" " :DP=DP-1:RETURN
5060 F=F+1:RETURN
5500 POSITION 0,0:? #6;"}"
5510 FOR K=1 TO 150:POSITION 1,4:? #6;"t
he damsel died of":POSITION 7,6:? #6;"hu
nger"
5520 SOUND 0,K,10,10:FOR E=1 TO 10:NEXT
E:SOUND 0,K+55,10,10:NEXT K:SOUND 0,0,0,
0:GOTO 2000
6000 IF B5=1 THEN 6100
6010 X=INT(RND(0)*4)+1:ON X GOTO 6020,60
30,6040,6050
6020 B3=B1+37:GOTO 6060
6030 B3=B1-37:GOTO 6060
6040 B3=B1+1:GOTO 6060
6050 B3=B1-1
6060 IF A$(B3,B3)=">" OR A$(B3,B3)="#" O
R A$(B3,B3)=" " THEN A$(B1,B1)="#":B1=B3
:A$(B1,B1)="J":GOTO 6070
6065 GOTO 6080
6070 IF B3=M THEN 4500
6075 GOTO 6100
6080 IF A$(B3,B3)="K" THEN 4000
6095 B3=B1
6100 IF B6=1 THEN 210
6110 X=INT(RND(0)*4)+1:ON X GOTO 6120,61
30,6140,6150
6120 B4=B2+37:GOTO 6160
6130 B4=B2-37:GOTO 6160
6140 B4=B2+1:GOTO 6160
6150 B4=B2-1
6160 IF A$(B4,B4)=">" OR A$(B4,B4)="#" O
R A$(B4,B4)=" " THEN A$(B2,B2)="#":B2=B4
:A$(B2,B2)="J":GOTO 6170
6165 GOTO 6180
6170 IF B4=M THEN 4500
6175 GOTO 210
6180 IF A$(B4,B4)="K" THEN 4000
6195 B4=B2:GOTO 210
7000 POSITION 15,7:? #6;S; " :POSITION 1
5,8:IF M6 THEN ? #6;"yes":GOTO 7020
7015 ? #6;"no"
7020 POSITION 15,9:? #6;B0
7025 POSITION 1,4
7030 IF (DP-M)>38 THEN ? #6;"-SOUTH":GOT
0 7070
7040 IF (DP-M)<-38 THEN ? #6;"-NORTH":GO
TO 7070
7050 IF (DP-M)>-1 AND (DP-M)<38 THEN ? #
6;"-EAST " :GOTO 7070
7060 ? #6;"-WEST "

```



```

7070 POSITION 12,4
7080 IF (EP-M)>37 THEN ? #6;"-SOUTH":GOT
0 7120
7090 IF (EP-M)<-37 THEN ? #6;"-NORTH":GO
TO 7120
7100 IF (EP-M)>-1 AND (EP-M)<38 THEN ? #
6;"-EAST " :GOTO 7120
7110 ? #6;"-WEST "
7120 RETURN
8000 POSITION 0,1:? #6;"} MAZE ADVENTU
RE":POSITION 2,7:? #6;"spears left "
8020 POSITION 2,8:? #6;"damsel found ":P
OSITION 2,9:? #6;"beasts dead "
8030 POSITION 1,3:? #6;"DAMSEL":POSITION
12,3:? #6;"EXIT"
8040 RETURN
9000 POSITION 7,2:? #6;"welcome":POSITIO
N 9,4:? #6;"to":POSITION 3,6:? #6;"maze
adventure"
9020 POSITION 4,9:? #6;"PRESS START"
9030 IF PEEK(53279)<6 THEN 9030
9040 POSITION 0,0:? #6;"}":GOTO 2000
9500 POSITION 0,0:? #6;"}"
9510 POSITION 2,1:? #6;"you do not have"
:POSITION 7,3:? #6;"enough":POSITION 7,5
:? #6;"SPEARS"
9515 POSITION 4,7:? #6;"to complete":POS
ITION 2,9:? #6;"this adventure"
9520 FOR R=1 TO 500:NEXT R:GOTO 2000
10000 POKE 106,PEEK(106)-8:P=PEEK(106):N
=P*256:FOR M=0 TO 1023:POKE M+N,PEEK(573
44+M):NEXT M
10010 FOR A=1 TO 9:READ D:FOR F=0 TO 7:R
EAD R:POKE D*8+F+N,R:NEXT F:NEXT A:POKE
756,P:RETURN
10020 DATA 1,255,0,237,237,237,0,255,255
10030 DATA 49,0,126,129,129,129,129,126,
0
10040 DATA 43,28,28,8,62,8,28,28,62
10050 DATA 3,0,0,40,20,40,20,0,0
10060 DATA 4,0,0,0,8,28,8,0,0
10090 DATA 42,0,60,90,90,90,126,165,165
10100 DATA 30,0,0,0,0,8,0,0,0
10110 DATA 29,24,36,24,60,90,24,24,36
10120 DATA 28,64,64,96,80,72,68,255,255

```

Computerised classics

Our review panel takes a look at some traditional games that have had the computer treatment

Yahtzi/ Knight's Move Oric 1 £4.95

HTL Software, Lock Street, Savile Town, Dewsbury

These two well-written family games, retailing at less than £5, represent good value for Oric owners.

Both programs loaded rapidly and without any problems, but incorporated a novel load check facility just in case of difficulty.

Also impressive was the tuneless HTL logo at the start of both programs.

Yahtzi is the standard dice game for two to eight players, in which the aim is to be the first to achieve a set of die combinations.

The program does everything

for you; 'throws' the dice, scores, and provides you with an on-screen reminder of the combinations you need, and the possibilities in your throw.

Knight's Move is a board game for up to five players. The object is to swap two sets of knights of different colour using the chess knight movement of the pieces.

Not only is the number of moves taken important, but also the time taken.

It may require fast thinking, but once played a few times, you may find that the object is achieved relatively easily, and the appeal of the game is lost.

D.N.

instructions	70%
playability	60%
graphics	50%
value for money	90%



Pool Spectrum £5.95

CDS Micro Systems, PO Box 93, Doncaster, South Yorkshire DN4 5LX

CDS has produced a very restful game with this version of Pool. The program is a joy to use. You control a marker which moves around the cushion, position it correctly, press "enter" and the white cue ball will move towards the marker's position.

The strength of the shot can be adjusted on a scale of one to five. By striking a ball on the side it is tangent, as in real pool. A realistic sound accompanies each shot.

A number of changes have been made to this version. There are six balls, three red and three

blue, which can be potted in any order.

At the start of each game you play four turns. A turn is lost if you play three shots without potting a ball, if you pot the cue ball, or if you miss one of the coloured balls. If you pot a ball you are once more given three shots. A two player game is every turn — play alternates after

The score for each ball potted depends on its colour, the number of shots taken and the frame number.

The alterations made may disappoint the pool purist, but they make for an interesting game.

instructions	S.E.
playability	80%
graphics	100%
value for money	90%
	70%



Pinball/Cubits TI-99/4A (Extended BASIC) £6

Lizard Games, 14 Bridgewood, Brookside, Telford, Shropshire TF3 1LY

Pinball is an old arcade favourite, and this version is a faithful reproduction for the TI.

Three balls are provided for each game, the object being to better the current high score. For each 2,000 points scored, an extra ball is awarded.

My only real criticism is the choice of keys 1 and 0 to control left and right flipper. This sometimes led to accidental quitting of the program by players unfamiliar with the keyboard. I would have thought Q and P

would be a better choice. Cubits is a game for two players in which 10 rows of 15 covered dice are arranged across the screen. Each player in turn selects two dice to uncover with the purpose of matching the numbers.

If a match is made 10 points are awarded and the player has an extra turn. There are special star dice which earn 50 points. The game ends when all dice are matched, the winner being the player with the highest score.

The game is well error trapped and has good graphics but eventually becomes tedious to play. Could there not be options for a long or short game?

J.W.

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



Cricket/Darts 48K Spectrum £4.95

Cambridge Microcomputer Centre, 153-4 East Road, Cambridge

Neither of these games will tax the brains of anyone over the age of ten.

Cricket starts off with a brief description and explanation, and then invites you to name the two sides.

Pressing ENTER constitutes the 'toss', and one team is selected by the computer to bat

You can determine the speed of the ball delivery by entering 'm' or 'a', although any key will give a result. After the ball has been 'struck' keys 1 or 0 will move the fielder nearest the ball. Why, I'm not sure — the odd occasions when I managed 'to

manoeuvre the fielder into the path of the ball it went straight through him!

Appeals are made to a musical accompaniment with one of three results, 'NOT OUT', 'OUT' or 'OUT' coming from an invisible umpire.

One irksome feature is the number of times you have to press ENTER in order for the effects there are detract from, rather than enhance the game.

The other side of the cassette sports a darts game. The idea is that you are playing a game of 301 against the computer and you must finish on a double.

instructions	B.B.
playability	75%
graphics	50%
value for money	50%
	50%



Reversi Dragon £4.95

By Dragontree, from Coppice Software, 7 March Street, Kirton-in-Lindsey, Gainsborough, Lines DN21 4PH

Another implementation of that board game favourite, Reversi or Othello by any other name.

No instructions were supplied with the review copy. On loading — still no instructions — I was given the choice of being green or orange and of two levels of difficulty. I chose easy and to play against the computer.

Not being familiar with the game myself I had to contact a friend who is for the rules. I learnt that the object of the game is to "reverse" your opponent's colours by placing your pieces in appropriate squares.

This is a faithful representation of the game. It's well error trapped, and you are quickly informed of an invalid move if you attempt to move onto a wrong square.

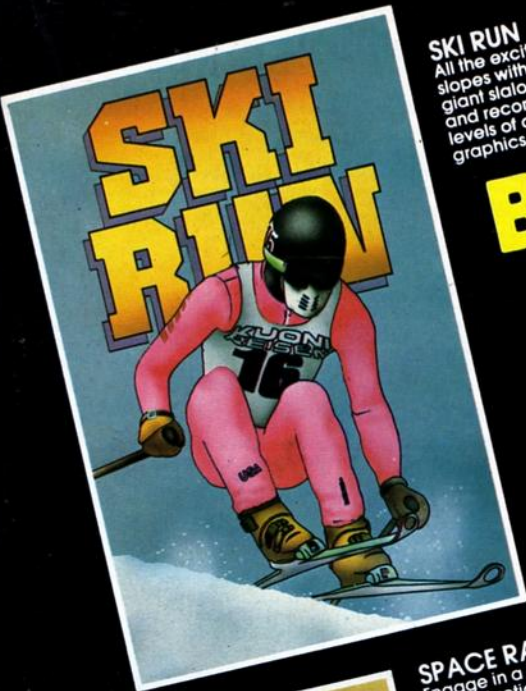
One thing that is not so fast is the computer's response in deciding its move. When the board starts filling up, even at the easy level it seems to think for periods long enough to get bored in.

Still, it makes a change from gobbling ghosts or zapping aliens, and at £4.95 you could do worse.

D.W.J.

instructions	0%
playability	55%
graphics	60%
value for money	65%

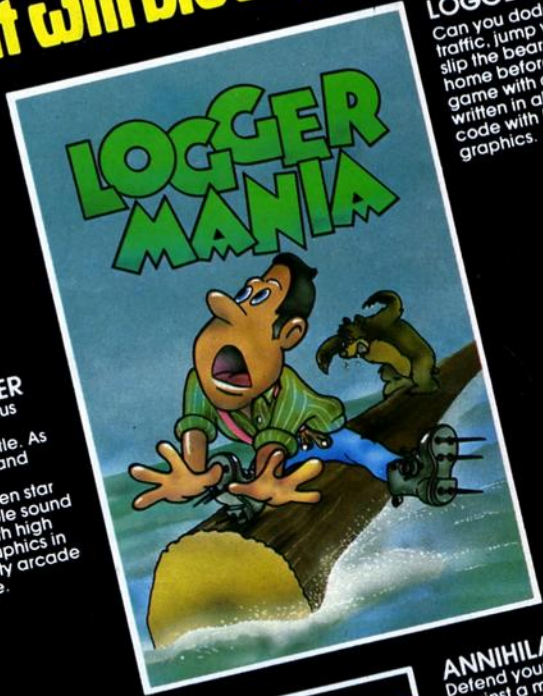




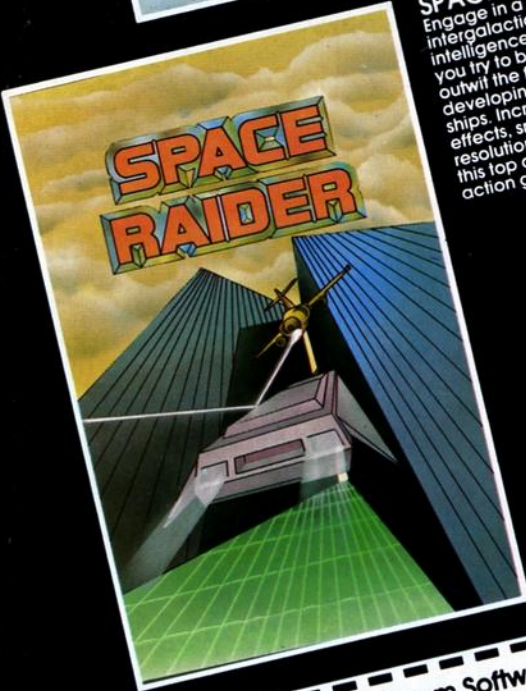
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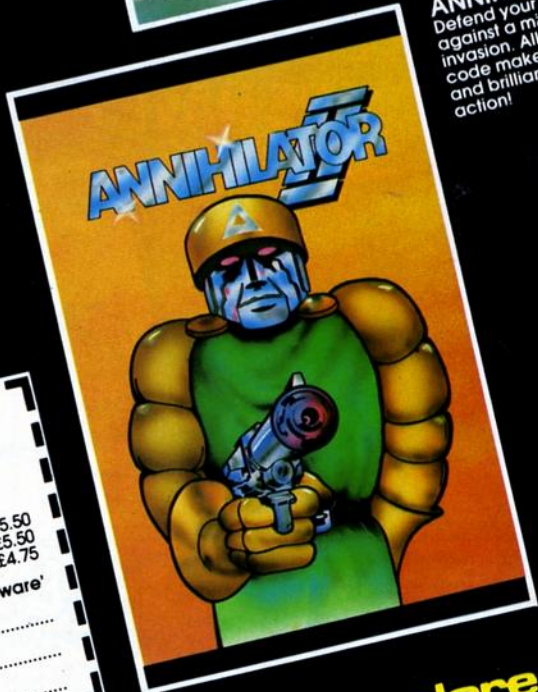
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VIC-20 GAMES & UTILITIES

JACKPOT

This is it, the ultimate Fruit Machine for the VIC with nudge, hold and respin 100% machine code. "Overall Jackpot is a beautifully written simulation giving superb graphics, animation and use of colour. In fact, this program makes Commodore's Fruit Machine cartridge look unbelievably cheap & nasty." Home Computing Weekly No. 20 19/7/83 £5.50

KWAZY KWAKS

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

PACMANIA

Choose your own game from the following options — difficulty 1-2, speed 1-3, size of maze 1-3, visible or invisible maze, still or moving power pills, define your own key controls, any combination, if this is your type of game, then this is the one for you, for the 3K expanded VIC only. (available Now). £5.50

SNAKE BYTE

Guide your ever hungry snake round the screen, eating the flies and wasps, to stay alive you must avoid the deadly mushrooms, quick reactions are required for this biting game, keyboard control, for the unexpanded VIC, (available NOW). £5.50

BUGSY (Joystick Only)

This is a Minefield with a difference as you step on the stones whilst collecting purple boxes which give you both time and points, they disappear from beneath your feet. DO NOT DESPAIR! "BUGSY" will randomly replace the stones but avoid bumping into him or its sudden death! An original compulsive and challenging game. £5.50

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Three great games of chance for the VIC, try to beat the computer, hours of fun, full colour, sound effects and tunes £5.50

COMMODORE 64 GAMES & UTILITIES

WESTMINSTER

A game for up to four players, can you lead the party of your choice and win the general election, you tour the 60 constituencies (seats) buying votes, when you can, (just like the real thing), this must be one of the first board type games specifically written for the computer. Why play on your own, have fun with your family and friends playing WESTMINSTER. £5.50 (available from the 15th Sept)

WHEELER DEALER

A game for two to twenty players, become a tycoon of the motor trade, you must obtain gearboxes, tyres and engines to produce cars for sale. Form syndicates, buy and exchange parts, buy dealerships, but be careful, you may become bankrupt and have to liquidate, find out what your made of, have you got what it takes to become a WHEELER DEALER. £5.50 (available from 1st Oct)

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Quizmaster 3 — Out soon.
ONLY £7.95 each which includes a £2.00 discount voucher for your next Quizmaster.
Further Quizmasters to follow.

SPECTRUM GOLF available from WHSMITH

ZX81 PROGRAM

My program displays a board and the moves for two people to play noughts and crosses. I have used the graphics of the ZX81 to produce large effective displays which makes the program interesting.

Special features of this program are:

- The use of the whole screen to draw the board.
- The coordinate decoding routine lines 253 and 254.
- The use of array A(3,3) to check valid moves.
- The use of flag G to determine which player goes. It is Line 270 which effectively changes G to 1 or 0 opposite to its present value.
- Line 260 which calculates the position by two simple formulae and prints X or O using Boolean logic. This saves two IF...THEN lines.

When you have entered this program type GOTO 2010 to SAVE it. It will then auto run on subsequent loadings.

Hints on conversion

This program can be converted easily for the Spectrum. In fact, the only line which needs changing is line 253 where the CODE of C\$(1) needs - 63 subtracted if the machine is in CAPS LOCK mode or minus the code number of the lower case Spectrum character "a" minus one.

Of course, using colour and sound will improve it even more.

Conversion to computers other than Sinclair may need altering on the Boolean logic and the flags, probably using -1 instead of 1. Apart from that the graphics and characters are fairly standard.

How to get cross with your ZX81

There are some neat programming techniques in this version of the old favourite, Noughts and Crosses, written for the ZX81, plus RAMPack, by Simon Matthews

PRESS ANY KEY FOR A GAME OF-

NOUGHTS

AND

CROSSES

BY S.P. MATTHEWS.

How the screen looks before the start of a game

How it works

2-4 set major variables
5-29 title
30-63 instructions
64-230 draw board
240-250 prompt and input move.
If end GOTO 693
251-252 check valid move
253-254 convert input to a co-ordinate number
255 check valid position
260 PRINT AT position X or O
270 change flag
280 make array = 1 to show position used
310 go back for next input
693-703 print score input
705-750 on input increase scores
800-980 display scores; wait for keypress, restart
1000-1060 get start character subroutine, set flag (G), return
2010-2020 auto run save routine

Variables

X number of wins by X
O number of wins by O
D number of draws
A(3,3) computer board to check valid moves
G flag, 1 = X turn, 0 = O turn
CS position input
A horizontal position of X or O
B vertical position of X or O
SS score input
GS start X or O input

Inverse characters are: line 1 STAGE ONE, INSTRUCTIONS AND FRILLS, 5-7 PRESS STOP ON YOUR TAPE RECORDER AND PRESS ANY KEY TO CONTINUE, 68 STAGE TWO, MAIN SCREEN DISPLAY, 245 STAGE THREE, MAIN PROGRAM (GUTS), 685 STAGE FOUR, SCORE BOARD AND BITS 'N' PIECES, 695 and 900 16 pairs of greater than and less than symbols each.

```

1 REM STAGE ONE
2 INSTRUCTIONS AND FRILLS.
3 LET X=0
4 LET O=0
5 LET D=0
6 PRINT "PRESS STOP ON YOUR TAPE RECORDER AND PRESS ANY KEY TO CONTINUE."
7 PRINT "PRESS ANY KEY TO CONTINUE."
8 IF INKEY$="" THEN GOTO 8
9 CLS
10 PRINT "PRESS ANY KEY FOR A GAME OF-"
11 PRINT "NOUGHTS AND CROSSES"
12 PRINT "A 3x3 BOARD TO CHECK VALID MOVES"
13 PRINT "G FLAG, 1 = X TURN, 0 = O TURN"
14 PRINT "CS POSITION INPUT"
15 PRINT "A HORIZONTAL POSITION OF X OR O"
16 PRINT "B VERTICAL POSITION OF X OR O"
17 PRINT "SS SCORE INPUT"
18 PRINT "GS START X OR O INPUT"
19 PRINT "AND"
20 PRINT "BY S.P. MATTHEWS."

```

Noughts and Crosses in action

```

0 ENTER CO-ORDINATES.
  A     B     C
1      X
2      |     X     O
3      X     O     O

```

```

21 PRINT "NOUGHTS AND CROSSES"
22 PRINT "A 3x3 BOARD TO CHECK VALID MOVES"
23 PRINT "G FLAG, 1 = X TURN, 0 = O TURN"
24 PRINT "CS POSITION INPUT"
25 PRINT "A HORIZONTAL POSITION OF X OR O"
26 PRINT "B VERTICAL POSITION OF X OR O"

```

ZX81 PROGRAM

```

27 PRINT AT 20,0;"BY S.P.MATTH
EWS."
28 PRINT

29 IF INKEY$="" THEN GOTO 29
30 CLS
31 PRINT " ENTER CO-ORDINATES,
LETTER FIRST THEN THE NUMBER SEPE
RATED WITH A COMMA,E.G."A,1"
OR "B,3"
32 PRINT " IF SOMEONE WINS OR I
T IS A DRAW TYPE IN "STOP" AND
THE GAME WILL END AND SCORE
S DISPLAYED."
33 PRINT
34 PRINT
35 PRINT "OK?"
36 PRINT
37 PRINT
38 PRINT
39 PRINT
40 PRINT
41 PRINT AT 20,0;"PRESS ANY KE
Y TO START"
42 IF INKEY$="" THEN GOTO 43
43 CLS
44 GOSUB 1000
45 DIM A(3,3)
46 REM BEEN SETTING
47 PRINT
48 PRINT " A B
C"
49 PRINT "
50 PRINT " 1
51 PRINT "
52 PRINT "
53 PRINT "
54 PRINT "
55 PRINT "
56 PRINT "
57 PRINT "
58 PRINT "
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234 PRINT "
235 PRINT "
236 PRINT "
237 PRINT "
238 PRINT "
239 PRINT "
240 PRINT "
241 PRINT "
242 PRINT "
243 PRINT "
244 PRINT "
245 REM STAGE THREE
246 MAIN PROGRAM SUBS
247 INPUT C$
248 IF C$="STOP" THEN GOTO 693
249 IF (C$(1)<"A" OR C$(1)>"C")
AND (C$(3)<"1" OR C$(3)>"3") TH
EN GOTO 240
250 LET A=CODE C$(1)-37
251 LET B=VAL C$(3)
252 IF A(B,A)<>0 THEN GOTO 240
253 PRINT AT B*6-2,A*6+2;"X" A
ND G)+( "O" AND NOT G)
254 LET G=1-G
255 LET A(B,A)=1
256 GOTO 240
257 REM STAGE FOUR
258 REM BEEN BOARD AND SETS IN PIECES.
259 CLS
260 FOR F=0 TO 21
261 PRINT AT F,0;"
262 NEXT F
263 PRINT AT 1,10;"QUESTIONNAIRE
"
264 PRINT AT 5,5;"WHO WON?"
265 PRINT AT 7,5;"A) NOUGHTS"
266 PRINT AT 9,5;"B) CROSSES"
267 PRINT AT 11,5;"C) A DRAW"
268 PRINT AT 20,1;"ENTER A,B OR
C."
269 INPUT S$
270 IF S$="A" THEN LET O=O+1
271 IF S$="B" THEN LET X=X+1
272 IF S$="C" THEN LET D=D+1
273 FOR F=0 TO 21
274 PRINT AT F,0;"
275 NEXT F

```

```

920 PRINT AT 1,11;"SCOREBOARD"
930 PRINT AT 5,1;"GAMES WON BY
NOUGHTS=";O
940 PRINT AT 7,1;"GAMES WON BY
CROSSES=";X
950 PRINT AT 9,1;"GAMES DRAWN="
;D
960 PRINT AT 20,1;"PRESS ANY KE
Y TO RESTART GAME"
970 IF INKEY$="" THEN GOTO 970
980 GOTO 64
1000 PRINT AT 4,0;"WHO WILL STAR
T - X OR O?"
1010 LET G$=INKEY$
1020 IF G$<>"X" AND G$<>"O" THEN
GOTO 1010
1030 LET G=0
1040 IF G$="X" THEN LET G=1
1050 CLS
1060 RETURN
2000 STOP
2010 SAVE "NOUGHTS"
2020 RUN

```



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Lord Harry and Lady Harriet

Lotus-Soft, 43 Maes Road, Llangennech, Llanelli, Dyfed SA14 8UH

One game, two characters: If you wish to control Lord Harry load side one or load side two for Lady Harriet.

The game is identical for both players. You are in a group of four gardens each connected by gates half way along the four sides of the screen.

Each garden is set up with impassable trees, lethal pools of water and edible mushrooms.

One of these mushrooms is poisonous and, after eating it, you only have 99 seconds to find the exit. Fortunately this mushroom also expands your mind and allows you to see it.

A nice layout of keys which give you some choice, responsive control, fast action and a challenging game which is made harder by the presence of two indestructible dogs which chase you. The cassette insert is nicely printed and contains full instructions.

What is special about this program is the character graphics. These attempt, fairly successfully, to represent humans. The effect is similar to the early line cartoon film characters, but nevertheless marks a step forward from alien creatures, robots, pacman and other indistinct beings.

R.E.

instructions	94%
playability	91%
graphics	89%
value for money	88%



Jungle Trouble £5.50

Durell Software, Castle Lodge, Castle Green, Taunton SOM TAI 4AB

Get axe, jump river on stepping-stones, cut down forest, swing over flaming pit, jump widening chasm and run for home.

Sounds simple but...if you don't get the run-up just right, in you go! With luck, you can run back to the bank, hungry crocodile jaws snapping at your bottom.

Chopping trees quickly blunts axes and it's back across the river for another.

And the 'blooming monkeys' keep stealing your axe. You can kill them with a sharp axe if you're quick — I only managed it once.

Falling trees can ruin your

health, swinging the pit needs judgement and hesitation thereafter makes clearing the chasm impossible.

The display is divided into four, Monkeys and Spare Men sit at the bottom, next comes the river, connected to the forest by a ladder, and another ladder connects the forest to the pit and final jump.

The graphics are fun. Three monkeys and three men parade with ceremony, and there are some nice touches of humour.

Four Speeds of Play — No. 1 confusingly being the fastest — movement by cursor keys — a running score is displayed and there is a hall of fame.

D.C.

instructions	90%
playability	75%
graphics	80%
value for money	90%



Barmy Burgers 48K £5.95

Blaby, Crossways House, Lutterworth Road, Blaby, Leicester

Barmy Burgers is an interesting and novel game. On each level there are parts of three hamburgers — the meat, cheese, lettuce, and the top of the bun.

By walking over each part, you knock them down to the next level until eventually there are three completed burgers at the bottom of the screen.

You are pursued by two frankfurters and a peculiar white object — but they often seem to be in a state of paralysis. You are armed only with a pepper pot — fire and your opponent die, but you only have enough pepper to last five attacks.

Once you have completed

three hamburgers you move onto a new stage with shorter ladders, faster action, and a new pepper pot.

The graphics are average — with the exception of the pinman you control who has legs only a contortionist would be proud of — but they are far from smooth. The sound is good though, and enhances the game considerably.

No instructions were provided with the review copy, but the cursor keys and 0 to fire are used. The game restarts automatically — an annoying feature.

S.E.

instructions	0%
playability	70%
graphics	45%
value for money	50%



Action comes in all shapes and sizes

If you thought that Spectrum action games meant space games, you'll have to think again

Phenix £5.50

Megadodo Software, 16 White Road, Sutton Coldfield, West Midlands B72 1ND

Apart from the gruesome spelling of the title, this is a very classy piece of machine-code programming, highly professional from start to finish.

Equipped with a laser-cannon and shield, you battle against bomb-dropping birds of various colours, eggs, which when hit reveal their score value eventually hatching out into even more birds, and finally the mother ship.

Programmed for both AGF and Kempston joysticks in addition to the keyboard, this program has everything. You are welcomed by an excellent title page; the attract/demo mode

shows what you can expect if you are good enough.

Having selected one of five skill levels, from easy to suicidal, your Spectrum plays classical music and reveals a star field. This can be dispensed with if it irritates you after a while.

Then the game starts! Even the skill levels are carefully arranged so that a beginner can achieve some satisfaction straight away, and this is important. Many much vaunted Spectrum games are so hard that young users are put off straight away.

Superb presentation, graphics and sound. Highly recommended.

D.M.

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



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First-aid for TI owners

As a TI owner, Mr Bates (HCW 29) has my deepest sympathies. I experienced the same problems in my area when I first bought my TI.

Luckily, I discovered Galaxy Video in Maidstone, who are the main stockists of nearly all the books published on the TI.

They also stock a wide selection of software both from Texas and independent sources. They have an owner's club, which produces a quarterly journal, and you can join for a modest fee.

They also produce a small mail order catalogue, and you can buy the 99er magazine through them.

Secondly I joined the International Users Group, which is based in Bethany, Oklahoma. They produce an extensive list of programs written by TI owners all over the world.

The only problem is, you could find yourself having to pay import duty and VAT if you buy them in any quantity. Alternatively, you can buy listings for self entry.

Mr Bates might also consider contacting Stainless Software, who are in his area. They produce a reasonable amount of TI software on tape.

To the industry as a whole, I would say it's high time you took the TI-99/4A seriously. It is far superior to the Spectrum and Dragon, and I'm sure that when the new TI-99/4A hits the shops, it will leave the British machines standing!

J.G. Manley, Rochester, Kent

We'll represent the Spectrum owner

We have noticed recently, in several of the computer magazines, letters claiming that there is a shortage of user groups for Sinclair users. Apparently these users are not aware of our own group which has members around the world.

ISUG was formed as a result of the demise of the former, well respected National ZX User Group.

We would like to dispel this nasty rumour that Sinclair users are without representation. All that is needed is a letter to us at the above address — a stamp for the reply would be appreciated, (not an S.A.E.) — this will bring full details plus an application form.

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



We welcome applications from both seasoned veterans and newcomers alike, so let's hear no more nasty talk about non-representation.

One major attraction for our members is a guaranteed 20% saving on a list of some 200 or so commercial programs.

P. Paton and V. Webber, ISUG, 176 Todmorden Road, Burnley, Lancs BB11 3EU

Minesweep by joystick

Here's an easy way to convert the controls for the VIC-20 Mine Sweeper game in HCW 25 to joystick control.

Remove lines 25 and 30, and replace them with the following:

```
21 POKE 37151, 0: PA = 37151: PB = 37152: RB:37154
```

```
22 A = PEEK(PA): POKE RB, 127: B = PEEK(PB): POKE RB, 255
```

```
24 IF (A AND 4) = 0 THEN D = D-1
```

```
25 IF (A AND 8) = 0 THEN D = D+1
```

Grant Bennett, Brighton, East Sussex

I'm a satisfied Oric customer

As a regular reader of your magazine since its inception, I have noticed a lot of letters throwing brickbats at micro manufacturers. And as an Oric owner, the letter from Keith Ollett (HCW 25) caught my attention particularly.

May I suggest Mr Ollett's approach to Oric may be at fault?

I received my first Oric in March. The machine suffered from the well-known early Oric problems (wobbly picture with sound, poor colours etc).

I received a replacement machine after only one letter to Oric — and not only a machine, but free software and a copy of Oric Owner, to

compensate for the inconvenience.

Unfortunately, after a time the replacement too developed a fault. On ringing Oric at Ascot, explaining the problem, I was promised a replacement. The new machine arrived three working days later, again with a little "extra" by way of compensation.

I have always been treated courteously and promptly by the staff at Oric, and would like through your columns to thank Oric and particularly Miss Nicola Hughes for an excellent service.

M. L. Emery, Rugby, Warwick

Chip on the shoulder?

I decided to write to you after reading about the new ULA chip Sinclair has put into the Series 3 Spectrums (HCW 29).

I own a series 2 Spectrum and a Grundig TV, and you can guess what my problem is — yes, you've got it, they're incompatible.

This is something that was rarely pointed out of potential purchasers. The only way I can get a colour screen display for my Spectrum is to go out and buy a new TV.

I think it would be fairer of Sinclair to offer Series 2 owners with this problem a new colour chip — I myself would even be prepared to pay a token amount.

Surely this problem could have been put right following the launch of Series 2. After all, were this the car industry, there would be a recall with no charge to the customer. Mind you, by Sinclair's delivery standards, that would take forever.

I'm unemployed, and cannot afford to go out and buy extra TVs at a cost of at least £110 each. To me, it seems like another case of take the money and run, and I would certainly like to nominate Sinclair for a computer cow pat!

Jim Wood, Kings Heath, Birmingham

Beat that!

O.K. you guys! So you think you're good! I challenge you to beat my friend David Willmer's score of 169,990 on Interceptor Micro's FROGGER.

Beat that if you can — it took him forty minutes using my Commodore 64. Is David the World Champion?

Julian Courtland-Smith, Hastings, East Sussex

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Top Ten programs for the Spectrum

- | | | |
|----|------------------------|----------------------|
| 1 | Scrabble | Psion (2) |
| 2 | The Hobbit | Melbourne House (3) |
| 3 | Jet Pac | Ultimate (1) |
| 4 | Flight Simulation | Psion (4) |
| 5 | Horace and the Spiders | Psion/M. House (6) |
| 6 | Tranz-Am | Ultimate (5) |
| 7 | Ah Diddums | Imagine (8) |
| 8 | Super Spy | Richard Shepherd (-) |
| 9 | Horace Goes Skiing | Psion/M. House (10) |
| 10 | 3D Desert Patrol | Computer Rentals (-) |

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

Top Ten programs for the ZX81

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

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

Top Ten programs for the Dragon

- | | | |
|----|--------------------|-----------------|
| 1 | Frogger | Microdeal (2) |
| 2 | The King | Microdeal (1) |
| 3 | Shuttle | Microdeal (-) |
| 4 | Android Attack | Microdeal (3) |
| 5 | Space War | Microdeal (4) |
| 6 | Ring of Darkness | Wintersoft (6) |
| 7 | Nightflight | Salamander (5) |
| 8 | Gridrunner | Salamander (-) |
| 9 | Morocco Grand Prix | Microdeal (9) |
| 10 | Dragon Trek | Wintersoft (10) |

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

Top Ten programs for the VIC-20

- | | | |
|----|----------------|----------------|
| 1 | Arcadia | Imagine (1) |
| 2 | Gridrunner | Llamosoft (7) |
| 3 | Wacky Waiters | Imagine (2) |
| 4 | Skyhawk | Quicksilva (3) |
| 5 | Panic | Bug Byte (10) |
| 6 | Matrix | Llamosoft (-) |
| 7 | Catcha Snatcha | Imagine (5) |
| 8 | Cosmic Crunch | Commodore (6) |
| 9 | Frantic | Imagine (9) |
| 10 | Asteroids | Bug Byte (-) |

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

U.S. SCENE

Zap 'em up while you learn typing

One of the best programs available that can be used to teach you how to type is called *Typing Tutor*, by Microsoft. When I got my Apple, I used it to teach myself typing — I could never be bothered with a conventional typewriter — and within a month or so reached 40 words per minute with high accuracy.

The nice thing about *Typing Tutor* is that it is customized for the particular machine on which the program runs. Unfortunately, this program is not available for most of the low cost micros currently on the market.

Now there is such a program. It is called *Master Type*, and is marketed by *Lightning Software*, of Palo Alto, California. Contrasted with *Typing Tutor*, which is basically a series of drills, *Master Type* is as much a video game as it is a learning exercise. It comes in the guise of a space trek/asteroids game. The program is very simple to use.

You must hit the correct keys to move your space craft, avoid its being hit, and to shoot at the asteroids. During the game, words and messages flash on the screen to help you learn the keyboard and improve your typing skills.

Although I suppose it could be used in the office as a tension reliever and skill improvement aid, its designers clearly meant kids to be the primary marketing target. The author is an ex-teacher who remembered how hard it was to get kids to pay attention in order to learn. In this tutorial, such attention getting is built-in.

Even though the first version was written for the Apple, the program is now available for the Atari 800 series, the IBM PC, and will soon be available in a version for the VIC-20 to be distributed through *Broderbund Software*, of San Rafael, California.

The program starts out in a conventional manner, teaching the "home" row keys, first for the left hand then the right. Once the student is highly successful, the game becomes more complex. Included in the program is a 50,000-word dictionary which allows the program to demonstrate and reinforce spelling concepts (e.g. the i before e rule). Overall though, the tutorial/game has one fundamental principle: hit the correct keys or lose the game.

When the typist becomes a master of the keyboard, the program begins to teach elements of programming in BASIC. The author of the program felt that since BASIC requires much more effort and concentration than "just" learning how to type, this was best left till last. Thus the program follows a very sound principle of education: proceeding from the simple to the complex.

Does it work? Apparently it does. Parents of children as young as five have written the company unsolicited testimonials reporting that their children have used the program successfully, even though the firm feels that a more typical starting age is likely to be seven or eight. The screen displays and documentation are designed so that parents need only spend a few minutes with their children to get them going.

The price has not been announced for the VIC-20 version. However, you should be able to find out through any firm that sells the *Broderbund* line. I am sure it will be well worth it.



Joint ventures in home computing software are becoming another significant factor in the marketplace.

For example, *Texas Instruments* and *Imagic* have agreed on a long term cooperative plan to develop educational and entertainment software for the TI-99/4A. This should result in at least seven new products the first year, including the popular *Demon Attack*, *Microsurgeon*, *Fathom*, and *Flap! A!* these games will use voice synthesis, developed by TI.

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

Bud Izen

Fairfield, California

With the launch of the latest Sinclair product, home video entertainment has turned a full circle. It started with the video games machine which threatened to turn many homes into games arcades.

Next came the home computer. Although mainly used for playing games, they could be justified as being educational, and having some 'serious' uses such as home finance control and keeping records.

But now you can buy the ZX Interface 2 which will turn your Spectrum computer into — a video games machine!

This interface provides your Spectrum with two extra facilities; a port for plug-in ROM cartridges, and sockets for two joysticks.

Joysticks are not included in

Interface 2: what price instant loading?

David Nowotnik tried out the latest addition to the Sinclair stable



Close up of the Interface 2 — that edge connector might cause trouble in the long run

the £19.95 price tag of the interface, so you will need to get two joysticks with the standard 9 pin D-plug (e.g. Atari) to complete the system.

The Interface 2 makes a most unattractive addition to your Spectrum. When the odd-shaped box is plugged into the user port of the Spectrum, or the expansion port of the ZX Interface 1, it protrudes from one side of the back of the computer spoiling the otherwise sleek lines of the Spectrum.

On top of the interface are the two D-sockets for your joysticks, and a hinged flap which hides the ROM cartridge port.

At the back of the interface is an edge connector to which only the ZX printer may be connected. All other peripheral devices must be connected between the Spectrum and the ZX Interface 2.

While joysticks should need no introduction to most games players, plug-in ROMs may be unfamiliar to many Spectrum owners. The idea is to allow pro-

grams to be 'instantly' loaded in to your computer.

All you have to do is plug the ROM cartridge containing the program into the socket at the top of the interface. This must be done with the power to the Spectrum disconnected otherwise the computer may be damaged. Once the Spectrum is powered-up, the program starts immediately.

There is one further advantage to 16K Spectrum owners. Using the interface, programs which were 48K only in the cassette version will run on the 16K Spectrum as the cartridge version.

One thing is apparent when the ZX Interface 2 is plugged into the back of the Spectrum; it suffers from the infamous 'Sinclair wobble' that afflicts the ZX81 plus RAMpack.

Unlike the ZX Interface 1, Interface 2 is not locked into position. The edge connector at the back of the Spectrum is the only thing keeping it in place, so the interface will wobble if knocked, or the Spectrum is moved.

In the interests of good reviewing, I lifted and gently shook the computer and interface while a program was in operation. There was no crash, and the program and joysticks continued to work.

However, I remember conducting a similar test on my ZX81 and RAMpack (which are connected in a similar way). When new, it also passed that test, but after a few months of use I had no end of troubles with 'white-outs' (a system crash resulting from an intermittent break in the connection between the computer and peripheral).

Will the ZX Interface 2 suffer from the same fate? Of course, time will tell, but the Spectrum edge connector is not much improved over that of the ZX81, so it might wear in the same way.

Sinclair Research is launching 10 plug-in games ROMs with the ZX Interface 2. These will cost £14.95 each; compare that with the £5-£8 price of the same games

on cassette and you'll realise that instant loading will be expensive.

Sinclair promises to expand the range quite quickly, with application programs (e.g. word processing) also joining the range.

One exciting prospect for micro enthusiasts is the introduction of alternative programming languages on plug-in cartridges. I understand that PASCAL and Forth may be available soon.

The ROM cartridges, in common with most Sinclair products, are quite small. They measure 2 in by 1 in by 3/4 in by 3/8 in and are black in colour. There is a red flexible band which protects the cartridge edge connector, and looks like the skirt of a hovercraft!

Plugging in the cartridge can be quite tricky. Even after some practice I found it still took several tries to get the cartridge edge connector in the right place over the socket.

However, once in place, the program worked perfectly every time.

The instructions are clear and concise, ensuring that the interface is easy to install and use. Advice is given to programmers who wish to incorporate routines for joysticks into their own programs.

While many games players will want this interface for its joystick facility, I expect the price of the ROMs, up to three times the cost of the same program on cassette, will deter many Spectrum owners. The prospective purchaser should also consider the likely reliability of the interface — never a strong point of brand new Sinclair products.



The Interface 2 plugged into the Interface 1. Nice sockets, shame about the shape

Spectrum gets down to business

Can you really use the Spectrum for business applications? Our reviewers tried out three programs that claim you can

All-sort S1 48K £18

Alan Firminger, 171 Herne Hill, London SE24 9LR

There is no reason why the Spectrum should not usefully appear in offices, shops and workshops, particularly when the Microdrives and interfaces for good quality printers become generally available.

In such settings, most applications will entail handling data such as stock details, invoicing information, mailing lists and so on.

Usually in such cases the records will have to be sorted to meet the needs of the user. Sorting by conventional BASIC methods is very slow, and this is where Allsort comes to the aid of

A demonstration program with the package sorts 1,200 records of 32 characters each in nine seconds, which is pretty impressive. A further demonstration sorted 20 records each with 16 fields in literally the blink of an eye.

It is a pity such an impressive program should be marred by a poor manual. It would have benefitted from the inclusion of a working example for the purchaser to follow, and a better cross referencing system between manual and the options appearing on screen at various stages.

The style is also a little odd, with phrases such as "The Spectrum must be in a condition as switched on".

Allsort is obviously aimed at the fairly experienced programmer, and despite the manual represents an almost essential addition to the tool-kit if work is to

the programmer.

It writes a machine code program to merge into your own quick program to enable very quick sorting of data held in BASIC arrays.

The package consists of a user manual, generator program and demonstration programs.

On loading, you are presented with a demonstration screen which you amend to suit your needs by pressing the relevant keys which are prompted.

You can then copy the screen definition to a printer. After this Allsort generates the sort program which is two lines of BASIC to be saved on tape for subsequent merger with your own data handling program.

There are two types of sort available. Single with one array, and multi to enable sorts on up to four arrays in parallel on up to

be done on business applications. Alan Firminger, Allsorts' producer, offers useful back-up in the way of a query answering service and a discount offer on future Allsorts developments. A commercial licence to sell Allsorts generated code produced by users is currently priced at £10 per annum.

As a bonus, purchasers of Allsorts receive on the tape a program "LI-PRX" which enables list processing of arrays in BASIC.

All in all a very highly recommended piece of software. D.J.

instructions ease of use display value for money

60%
70%
n/a
80%

★★★★

Stock Accounting and Control 48K Spectrum £10.95

Kemp, 43 Muswell Hill, London N10 3PN

A good program, providing reorder warnings, revaluation and period account printout, with error-trap. Allows maximum 250 'type of item' headings with two entries (purchase or sale) per period. The average is 100 headings/10 transactions. With a large number of stock items of transactions, you will have to split the records on to several cassettes.

The 15-page manual makes your brain hurt! The informa-

tion is all there, but the arrangement is not simple. A reference is included per transaction, which might have been useful to record supplier initials and invoice number, but permits only five characters.

I wish business programmers were not tempted by colour. Flashing red in bank programs does not improve a depressing situation and the green on black format here becomes tiring.

The date must be entered every transaction, even if it's the same as the previous entry, and the program is unforgiving of a " " typed instead of a " ".

instructions ease of use display value for money

D.C.
50%
70%
80%
75%

★★★★

Finance Manager 48K £8.95

Oxford Computer Publishing, PO Box 99, Oxford

This is a powerful, flexible and comprehensive financial application program. Although specified for the 48K Spectrum, a 16K version (with less storage space) is provided on the reverse of the cassette.

Data files are stored separately from the driver program, which takes about two minutes to load. It is written in machine code, and is well crash-proofed.

The program is quite easy to use as it incorporates full screen input and editing (in the style of a word processor) and is entirely menu driven.

The manual is highly detailed with screen displays for each action and a test file to practice on.

Standing orders can be applied, removed, described, amended, deleted, and even dummed for planning purposes.

Other features include data change, running totals, printing accounts from and to a specified date, or by pages, listing balances and control over fields. There are two keyboard modes which can be used to maximise the use of single key control, and a well protected return-to-basic option which resets the machine to switch-on status when you are finished.

An extensive expenditure analysis feature is available and hard copy can be obtained. A PLUS 80 version of the program will be available to operate an 80 column Centronics printer.

All in all an excellent piece of software, but don't take my word for it. Do what you should

A summary of the instructions is given at the back of the manual, together with an adhesive strip of cursor controls to stick to the machine.

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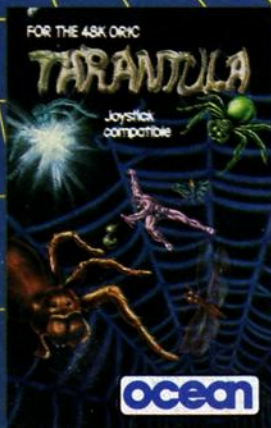
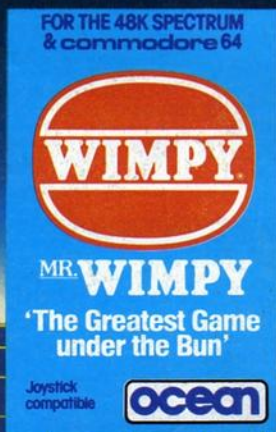
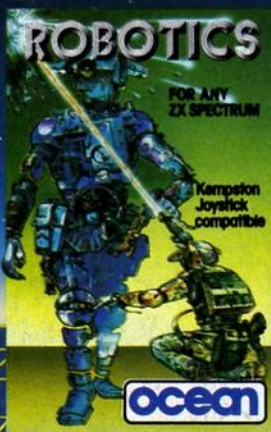
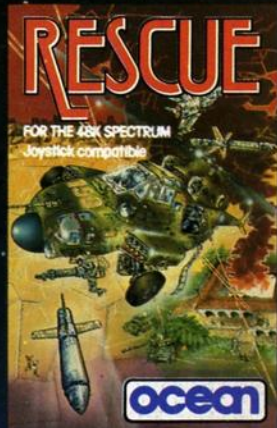
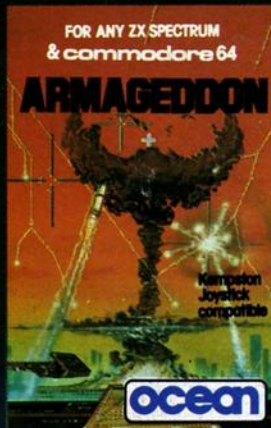
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