

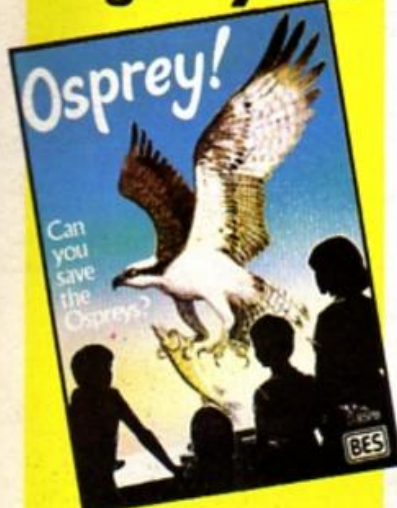
HOME COMPUTING WEEKLY

AN ARGUS SPECIALIST PUBLICATION

September 3-9 1985 No 128 50p

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dk'tronics
Amstrad
light pen
reviewed p.39

Half-price QL will it sell?

Sinclair and their major creditors have arrived at an agreement over the companies estimated £15m debts. In an official statement Sinclair announced that their bankers and major suppliers, Thorn EMI, Timex and A.B. Electronics have agreed a deal that "provides the company with a good base from which to face with confidence the important Christmas selling period."

The first move in Sinclair's new "aggressive marketing campaign" is to slash the retail price of the QL by 50%, from £399 to £199.95. The price reduction comes into effect from September 2nd.

Bill Jeffrey, Sinclair's chief executive said, "Sinclair Research now has the support of its bankers and major suppliers and we look forward to building on the company's strong market leadership position."

Changes are to be announced in Sinclair's management team and



The QL — cheap at half the price?

although no details are available it has been confirmed that Sir Clive will remain as director and chairman of the board "with a special interest in the company's activities in the research and development of new technology."

Sinclair's official line on the QL price cut came from Jane Boothroyd, UK sales and marketing manager, who stated, "We have reduced the price of the QL to consumers in line with reduced manufacturing costs."

Another reason put forward by a spokesman for a major retail outlet was simply that, "They've got a lot." Official figures on the numbers of QL's held in stock were unforthcoming from Sinclair but one estimate puts the figure at around 50,000.

Software houses who have supported the QL welcomed the new price. Colin Wilton-Davies of WD Software told HCW, "I don't know how they can sell it at that price but it certainly makes it excellent value and should put up sales a lot. I was

quite pleased to buy it at its original price."

A spokesman for Psion Software who have four programmes bundled with the QL said, "We are obviously very pleased and it will have a short term beneficial effect for us."

John Roland, marketing director of W.H. Smiths was non-committal about the QL's future. "We don't have any real volume of the product in stock and I don't have any strong views on whether this will dramatically increase sales. I would say however that what would help would be an increase in new software for the machine."

One Spectrum owner who will not be taking advantage of Sinclair's new offer is Richard Naylor from Burgess Hill, Sussex. His response was typical of many home users polled by HCW. "I still wouldn't buy one at that price. It doesn't have the software back-up." Even at half the price, the 128k machine launched in January 1984 still faces an uncertain future.



Bill Jeffrey

Save £££'s
on Acornsoft
cassettes and
discs p.30

Rescue on
Fractalus! and
Now Games!
reviewed p.16

Puzzled George?
You're back
on page 3

Software to type
in for Spectrum
C64, Amstrad and
BBC owners

All the latest
software
releases
revealed p.10



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HOME COMPUTING WEEKLY

September 3-September 9, 1985 No. 128

Soapbox

I know that everything new in the computer field is supposed to represent progress, but I'm beginning to wonder whether the spate of rumoured, and announced, 128K home computers really is progress at all.

For those of us who use our machine for serious purposes, extra RAM is very welcome for the storage of more information in databases for example, or space for huge arrays and programs. If however, the new machine has an 8 bit chip like the Z80, the extra memory isn't usually available for such use.

The new generation of 16 bit machines like the Atari, QL and Commodore Amiga promise better, though the machines themselves devour much more RAM for their own use and the price, for the ordinary home user, is enormous. And are you going to be prepared to pay for the work which will go into filling 128K with games software? Even more important, can games get so much better, or will they just be bigger, with 4096 screens, but no new mega concept?

Who will buy the new generation? **David Martin**

Coming soon...

- Ron meets his match or gets his matches!
- More on writing Amstrad games
- The latest printers reviewed
- Save £££'s with our special offers



SPECIAL FEATURES

John Henderson looks at Acorn education ..13

Readers Offers — Acornsoft30

AMSTRAD

Herbert's World — a super adventure34

BBC

Whoppas — utility32

COMMODORE

Lone-Zone — game22

SPECTRUM

Colour Clash28

PERIPHERALS

d'k tronics light-pen reviewed39

REGULARS

News4

Ron (call him Shaft) Complex6

Book reviews9

Software releases10

Software reviews16

Your letters40

Competition42

Classified ads start on44

Readers46

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BASIC LIVING



Jim Barker/Jon Wedge

S
W
E
N

Mach 1 — a Cheetah joystick in captivity

Roaring to go . . .

Cheetah Marketing have created some joy on a stick in the shape of Mach 1.

Mach 1 is a joystick compatible with the ZX Spectrum, C64, Vic 20 Amstrad and Atari — to name quite a few.

Housing three fire buttons and auto-switch it comes with 12 month warranty at £8.95.

Cheetah Marketing, 1 Willowbrook Science Pk, Crickhowell Rd, St Mellons, Cardiff.

On the flipside

3M have just brought out a double sided 3.5" diskette with auto metal shutter as added protection.

The one megabyte diskette is unformatted, high-density, comes in a rigid cartridge and has the added bonus of a lifetime warranty.

It also has a "write-protect" hole — so that you can avoid the annoying mistake of writing over already recorded data — and is priced at £6.00.

Data Recording Products, 3M House, Bracknell, Berks. RG12 1JU.

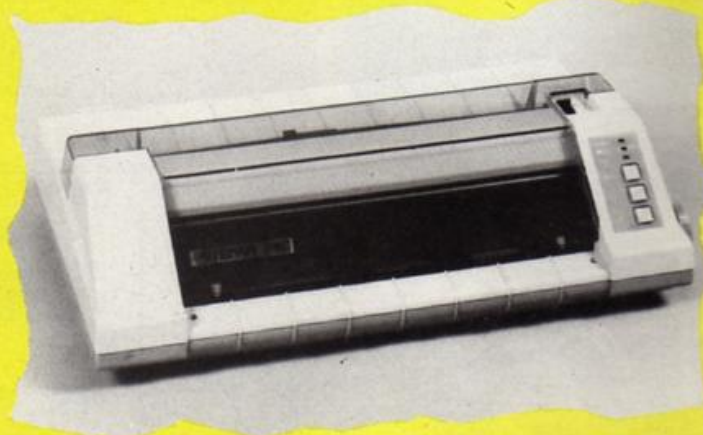
Fit to print

Thankfully it seems that character rather than body-building is now the vogue with print-outs becoming vastly more popular than those ridiculous work-outs.

The new Riteman F+ dot matrix printer bi-directionally prints up to 105 characters per second, has frontloading continuous-feed design and is fully compatible with Epson FX software.

With italic ASCII and nine other character sets, the Riteman retails at about £270.00.

C. Itoh Electronics, Beacon House, 26-28 Worple Road, Wimbledon SW19 4EE.



The new Riteman F+ printer

Happy Endings . . .

Cast your minds back to the beginning of this sizzling summer and you may well remember the Database/Micronet competition which promised that HCW readers would be among the lucky winners.

Well, we can now happily announce that the following HCW fanatics have won a year's subscription to Micronet (worth £66) by coming up with the correct answer from the rock-hard clues — Stonehenge.

David Beamish, London; C Crane, Stoke-on-Trent; S Pack, Irthlington; M Gilmer, Erith; M Graham, Forres; R Houlton, St Helens.

. . . and new horizons

Micronet's new screen game "Round Britain Race", which started yesterday, offers cash prizes for those who manage to "yacht" their way round the UK finding four secret locations as they bob up and down.

Players can confer and discuss strategies through the Micronet network (the scenarios change weekly) helping each other to sink or swim as the case may be.



Micronet's new network game

In the slips

Our Graham Gooch Competition (HCW 123) had readers grabbing for their Wisden's Almanac and coming up with some forgotten legends in the annals of Test cricket. In view of the fact that our competition compiler allowed several bona fide but little known cricketers names to creep onto the word square we felt the fairest way to select the winners was to place all the entries which were close to the right total in a replica of W.C. Grace's cricket cap and draw out the first hundred names. Plans to invite W.C. Grace himself to draw out the winners names ran into an unforeseen hitch. Our century of winners who will receive a copy of Graham Gooch's Test Cricket from Audiogenic are: Kenneth Taylor, Norwich; D Roebuck, Lymington; A Back, Bakewell; Colin Blair, Fife; R McClenaghan, Kirkby; Rizwan Sarwar, Luton; Bryan Steele, West Drayton; Kenneth Smith, Bradford; N Fairless, Stockton-on-Tees; Norman Fowler, North Allerton; S Pyle, Coventry; Kevin Gardner, Gwent; Sean Lally, Sydenham; Samuel Mondle, Nottingham; James Preston, Carlisle; B Everingham, Romford; D Nicholls, Holborn; H McNeillie, Darlington; Danile Kaye, Croyley Green; A Green, Eltham; S Beal, Leigh-On-Sea; Mark Brewer, Chessington; Geoffrey Graham, Darwen; A Wright, Fakenham; S Reeves, Birmingham; Kelvin Wagstaffe, Bridgend; A Turner-Howe, Basingstoke; K P Lees, Newton Aycliffe; Peter O'Malley, Manchester; M J Gough, Hershaw; Alan Reed, Corby; Andrew Brett, South Normanton; Dean Marshall, Newton Abbott; David Edwards, Streely; C Crane, Stoke; Paul

Baldwin, Barnet; Philip Smith, Maidenhead; Karen Haggerty, Blyth; Michael Edwards, Shepperton; Martin Simmons, Maldon; Marcus Prescott, Burton on Trent; Mark Deyes, Hull; P. Nicholls, Bradford; Mark Buckley, Huddersfield; Arthur Bailes, E. Dereham; D Woods, St Helens; Richard Hirst, Huddersfield; Nigel White, Gt Yarmouth; D Harris, Barbican; Anthony Butwell, Birmingham; C Lathrope, Sandy; J Tosh, Fife; Jonathan Dasent, Guildford; Gareth Horton, Darwen; Z Rahman, Nottingham; Neil Archer, Darlington; Joan McErlane, Belfast; Tim Laverton, Skegness; P Shepherd, Nottingham; D Dickerson, Huntingdon; Martin Owen, Caernafon; Ken Piller, Saundersfoot; Jonathan Biddle, Leiston; Nigel Impey, Higham Ferrers; Paul Carter, Croyley Green; Bill Stott, Dundee; Mark McIntyre, Newport; Kevin Tett, Weymouth; Nigel Hood, Dereham; Iain Soper, Buckfastleigh; Richard Webb, Retford; Harvey Strutt, Frodsham; A Martin, Wembley; Jonathan Leach, Sidmouth; Lisa Hadcock, Manchester; Chris Garbutt, Basildon; Steve Wood, Wombourne; Guy Mowbray, York; Andrew Page, Haverhill; A G Kluge, Rugby; Arthur Beale, Blandford Forum; Mike Rushby, Barnstaple; Jason Humphreys, Nottingham; F H Reed, Hoddesdon; M A Sullivan, Romford; T Catley, Woking; John Collins, Manchester; T Richards, Oldham; Simon Harrison, Tintagel; A Tattersfield, Alcester; S Greenhough, Birkby; K G Moutrey, Redcar; Michael Downie, Carlisle; Jonathan Topp, Wimbeldon; Phillip Davis, Hull; B Pearce, Bristol; Cathy Clarke, Consett; Fred Rich, Tadley; T. Vollam, Royston; Gareth Cripps, Gravesend.

Software for the new Amstrads

Hot on the launch of Amstrad's PCW8526 and the introduction of the CPC128 to the UK market, Hisoft have produced a range of programming tools for the machines.

Pascal80 is a speedy compiler (up to 3000 lines per minute) which implements the Pascal programming language and comes with full-screen editor, the ED80.

The ED80 is also incorporated in Devpac80, an assembler package which consists of a macro assembler, GEN80, full range of arithmetic operators and front panel debugger.

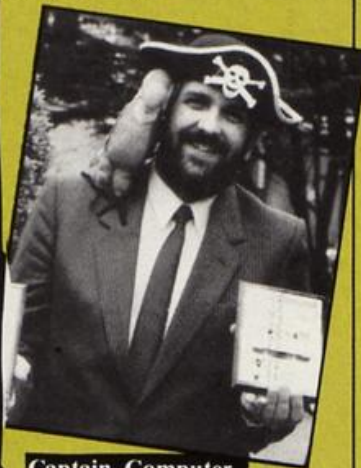
Hisoft put The Knife in as their final offering in this range — a disc track and sector editor that — dare I say it — allows you to hack your discs into shape.

Pascal80 and Devpac80 are priced at £39.95 and The Knife at £12.95.

Hisoft, 180 High Street North, Dunstable, Beds LU6 1AT.

Be there or be square . . .

Theres absolutely no excusing those who fail to meet the HCW team at the PCW show this weekend. The show is open to the public from the 6th-8th September and one of the team will be there each day to bring a smile to your face — well a smirk at least.



Captain Computer,

Dave Carlos — ready

for the PCW show.

Amstrad access

Good news for all you information-crazy Amstrad users. Micronet 800 and Viewfax 258 have announced the arrival of a major new database for Amstrad 646 and 664 micros.

Visitors to the Amstrad Computer User Show will be able to see a demonstration of the service which is free to owners of 1200/75 modems.

Not only will you have access to news and a variety of information — including hints, tips, hard and software reviews — but you'll also hear about free and discounted telesoftware.

Amstrad, Brentwood Hse, 169 Kings Rd, Brentwood, Essex.

RON COMPLEX



Ron Complex is conducting a high speed inspection of lift shaft number nine in the Murkotronics building. Can Ron triumph over gravity itself in this weeks episode?

As Ron Complex plummeted down the lift shaft, he wondered if his life would flash before his eyes — there were a couple of steamy memories he wanted to check out. Below him a speck of light was growing by the second.

"Time to defy gravity," thought Ron, "Lucky I had this raincoat customised." Ron tugged three times on his belt. Nothing happened. "Just time for one more tug before impact," Ron estimated. He was right.

Ron hit something very soft and disappeared under a mound of laundry. "I'll always be grateful to dirty washing," thought Ron. A loud hissing sound came from around his waist as the raincoat inflated to twice its normal size. "You just can't trust inflatable raincoats like you used to," decided Ron. The special investigator tugged his belt again and the coat deflated.

Ron poked his head out of the pile of washing and found himself peering over the side of a huge basket which was moving along a railway track. Looking back, Ron saw that the

underground railway went through a tunnel directly under the lift shafts. Ahead of him the tunnel opened out into a huge floodlit area the size of seven netball courts. The railway skirted round the outside and Ron could see lines of people piecing components together on production lines.

Over the heads of the workers surveillance pods hovered moving randomly and occasionally collided with each other. Before the basket disappeared into a tunnel on the other side of the subterranean factory Ron jumped over the side having seen an open doorway leading to a spiral staircase.

As Ron staggered up the stairs he found himself getting angrier with every step. Why had Murko invited him into an empty liftshaft? What was a factory doing hundreds of feet below the Murkotronics building? Ron wanted some answers.

At the top of the stairs was a door that led to the foyer. Ron slammed his fist down on the reception desk startling the girl behind it. "Tell Murko, Complex wants to see him." "Certainly sir, would you like

to go up to the sixth floor. Take lift no 9." "No thanks I'll take the stairs."

Murko sat brooding in his boardroom when Ron suddenly burst into the room. "Okay Murko what's with this invitation to certain death?" "Calm down Complex don't get heated. I just overlooked the fact that lift number nine was having a spring clean. It was just a coincidence. One of those things".

Ron had always been able to tell instantly if someone was telling the truth. "All right Murko, I believe you. Now I want to tell you about this RCWG." "It's a myth. It can't be done."

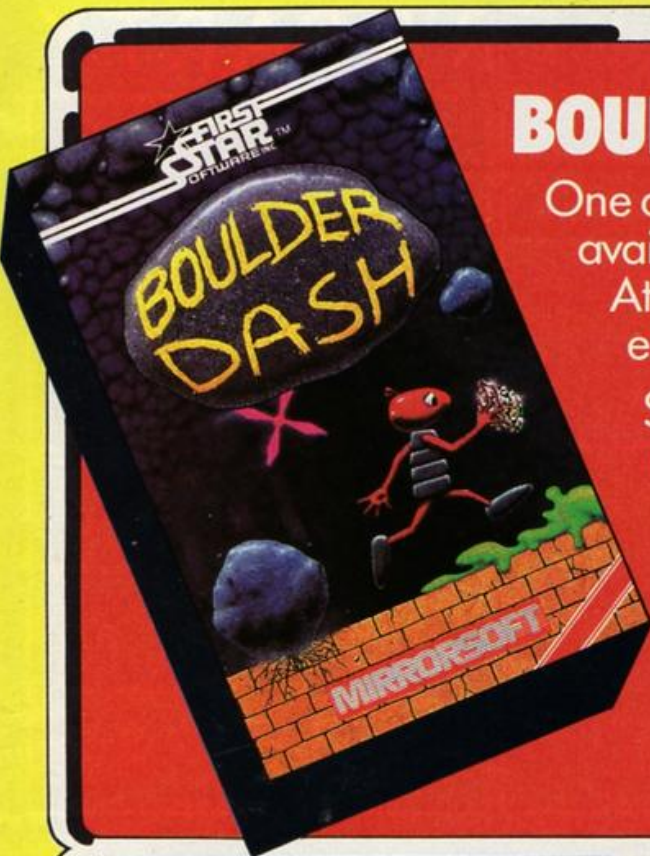
"It can't?" "No, no, take my word for it Complex. An RCWG is a pie in the sky idea put about by scaremongers." "It is?" "Of course. Take my advice, concentrate on the bugs, they are our real enemy." "Okay you're buying the Cashews, I'll do what you say."

Ron felt uneasy as he walked down the steps of the Murkotronics building. Why was Murko so anxious to put the lid on investigating the existence of a random code-word generator? Rex Retina fell into step beside Ron. "It's starting said Rex, the first RCWG gets hooked in tonight."

Next week — The stake-out

MIRROSOFT

SEPTEMBER SIZZLER



BOULDER DASH

One of the great classic games of all time is now available to even more of you – Amstrad and Atari owners everywhere can now experience the ultimate underground journey.

Search through the 16 caves, each with 5 levels of difficulty, and collect as many jewels as quickly as possible. Don't forget to block the amoebas, transform the butterflies, or outmanoeuvre the fireflies – or you'll never get out alive!

Available September 5th

Amstrad CPC464 and Atari 48K versions
back-to-back on one tape at £9.95.

ASHKERON!

'Ashkeron is something for everyone: a complex, challenging, witty game for the adventurer, and its got pretty pics for the zap'em crowd. An excellent game – buy it!' – *Home Computing Weekly*

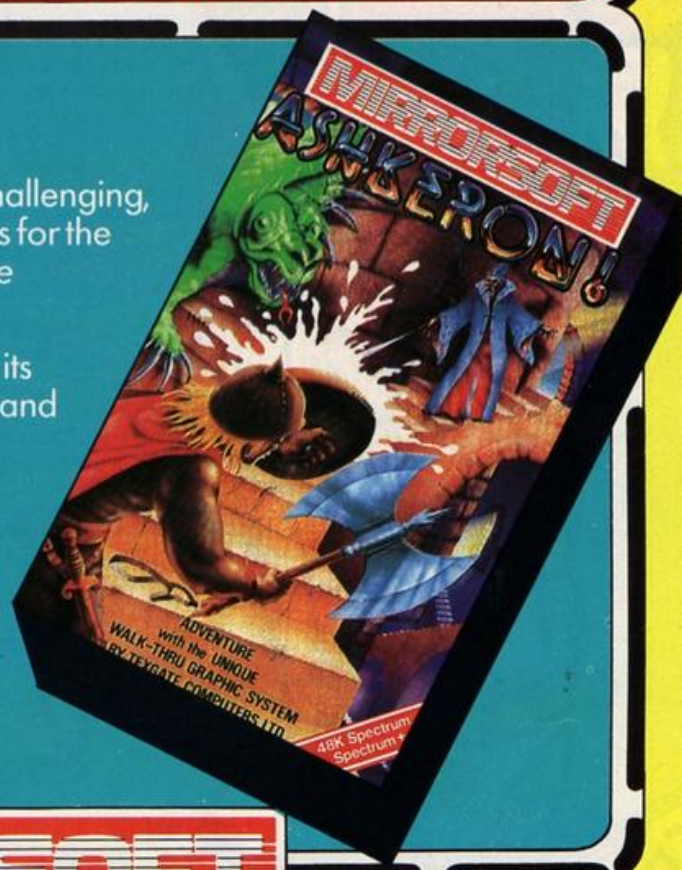
'It is highly professional, sophisticated software...in its walls lies a challenge everyone will find interesting and rewarding' – *Crash Micro*

'This game gets my royal assent' – *Your Spectrum*

'A charming graphic adventure' – *MicroScope*

Available now for
Amstrad CPC464 £6.95
Spectrum 48K £5.95

With built-in competition!



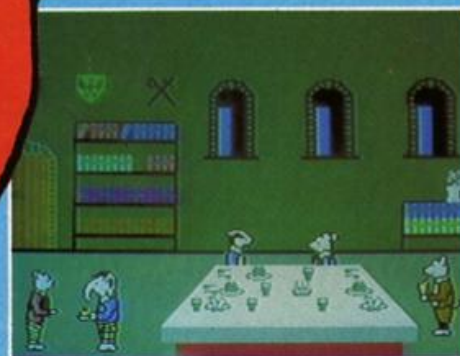
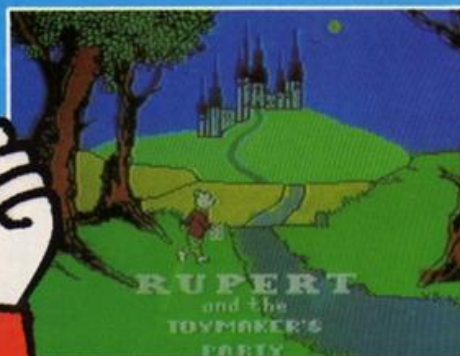
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Spectrum 48K
CBM64



Games for your MSX computer

When new computers appear on the market, it is I suppose, inevitable that someone will sit down and translate all the standard old games — Mastermind, Hangman etc. Books of such listings generally appear in the shops almost immediately and when the computer has been around for a while, and its particular strengths and weaknesses are better understood, literature with more interesting content and original games starts to appear. MSX computers are not that new, so you could reasonably expect to find something a bit different — but not in this book.

Yes, unbelievable though it might seem, Virgin have published a book containing Hangman, Mastermind, Noughts and Crosses (the computer only keeps track of the game for you, it can't actually play it!), Nim, a darts scorer and another 18 programs — of a similar degree of originality. Not only are these programs dull, they are not even particularly well written; the version of Hangman, for example, is nearly six pages long, does not cater for words in which the same letter appears more than once, and will not accept inputs containing lower-case letters.

After the programs there are a few pages of advice on writing programs — sketch the screen display before starting to program, select relevant variable names and so on — then a glossary, which seems to be somewhat out of place in a games book, and finally a lengthy bibliography. Study the latter and you should find plenty of better books to spend your money on. **M.N.**

Price: £2.99

Publisher: Virgin Books Ltd

Address: 328 Kensal Road, London W10 5XJ

MSX



Useful Utilities for your MSX

This is a very small, thin paperback. It is, of course, theoretically possible to squeeze lots of invaluable routines into a tiny book — but the size of this does lead you to suspect that you will not get much for your money.

What you actually get is a collection of 31 machine code routines, and one BASIC program which you can use to enter the machine code. The machine code routines are mostly very short; the BASIC program is 92 lines long. It would be better if a shortened version of this, and/or a routine enabling you to incorporate the machine code into your own programs, were included.

The routines are given in machine code only, not in assembler, so the claim on the back cover that most of them can be altered to suit your individual requirements should not be taken too literally. If they're not exactly what you want, it would be easier to write your own routines than to modify these.

The routines are mainly concerned with the video display, particularly the text modes. They enable you to scroll text in four different directions, change the colour of some or all of the characters, rotate characters, substitute alternative character sets and save the text screen on cassette. It is a shame that none of these options are provided for the graphics modes.

The book ends with a few sound routines and a lengthy high score table routine. These are not bad, but they're not enough to make the book worth buying. **M.N.**

Price: £2.99

Publisher: Virgin Books Ltd

Address: 328 Kensal Road, London W10 5XJ

MSX



M5 User Monthly, Issue 1

M5 User Monthly, Issue 1 The Sord M5 has been largely neglected by the computer press and the software houses. After the initial batch of cartridge and tape games from Sord themselves, virtually no software has been released. However, M5 users do not give up easily! One enterprising user has decided to set up a tape magazine specially for those with unexpanded M5s.

Called the M5 user monthly, the magazine comes in the shape of a C15 tape packed with utility/game programs on both sides. The first issue starts off with a brief introduction to the user group followed by a very informative little article about using the spare screen RAM which is accessible when text mode is being used. There is a short article on collision detection, so that you can start writing your own games. There are also two versions — one for Basic-I and the other for Basic-G — one of the classic moon-lander game. Considering the memory limitations, the games are very well done and certainly enjoyable.

There are also reviews of some of the commercially available games (which incidentally have already been reviewed in HCW) which are short but interesting. There are articles on games programming, and three more games, Tank Battle, Sky-walker and Darts. I don't have the space to describe them in detail here but they are all enjoyable and come up to the standard of the tape software available from Sord.

The tape magazine ends with a plea to readers to send in their programs for future issues. I for one wish this user group every success. **S.S.**

Price: £1.95

Publisher: M5 User Club

Address: 19 Canberra Towers, Weston Est, Weston, Southampton SO2 9JT

SORD



R E A S E S

The pace is really hotting up now as software bursts onto our desks from the most unlikely of places. The details are here...

Trickle starts

In a trickle which will soon turn into a flood Activision have released the first of the titles which they announced a few weeks ago.



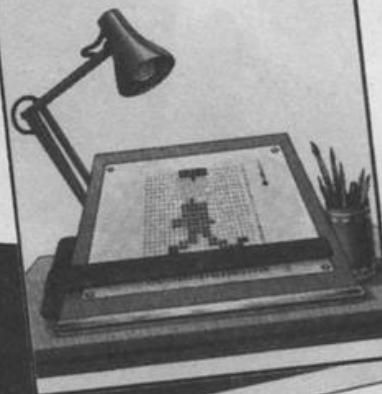
Rescue on Fractalus is designed by LucasFilm and is claimed to be a combination of strategy, action and flight simulation game types which can make you a hero. Your basic mission is rescue, and your skill as a pilot of the Valkyrie fighter, is the crucial deciding factor.

It appears that Activision's California HQ is very careful about the specifications for the games and we can tell you that this one is for "male teenagers" who are "action/fantasy game enthusiasts". Is this the first occasion that sex discrimination has been inherent in a computer game?



The other release on the desk is **Master of the Lamps** for the — wait for it — MSX. If software houses keep on converting at this rate there will be one title per machine sold soon. Who says that good support equals good sales? It doesn't seem to have worked in this case.

16 graphics designer
SUPERSOFT



NOW
BLITZ!
FOR COMMODORE 64

Super Dooper

It's been a busy summer for Harrow based Supersoft — if the number of new products on the desk is anything to go by.

A major release for the serious Commodore user is the **Blitz!** compiler which until now has only been available as an import. The disc based program allows you to prepare programs for use on both cassette and disc based systems and there are options for those with two drives too. The system costs £49.95.

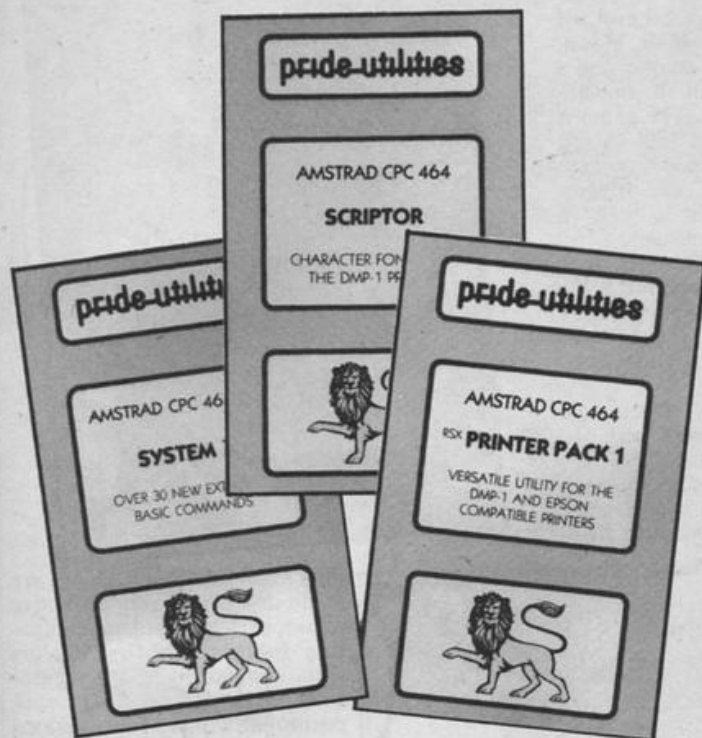
Another new release is a refugee from conversions corner, but according to our Commodore expert, Alan Webb, it is a refugee which should be offered a good home at the earliest opportunity.

Graphics Designer is priced at £6.95 for the C16 and Plus 4. It

allows you to design multi-coloured characters of 10 by 10 character size and you are not required to have any knowledge of the memory allocations at all.

The final news from Supersoft is that they have developed a new fastloader which has full error checking and error recovery routines. If an error is found you are prompted to rewind the tape a short way and then press play again. It could give C64 users a system similar to the BBC's.

The product is only for sale to the software producers and the winners of our recent Graham Gooch competition will be the first to try the system. The only other product which uses the routine to press is **Paintbox** also from Audiogenic.



Amstrad's Pride

The lions are on the prowl around the desk this week with a whole collection of utility programs from Pride.

Two of the packages are resident system extensions and as such they offer the chance to add extra commands to the standard machine. **System X** is the more verbose of the pair with over thirty new words, yet takes only 3K of user RAM.

The commands allow you to manipulate the keyboard from within programs, draw circles, make the screen invisible(!), move blocks of memory around and even to change the cassette load and save speeds at £9.95 on cassette and £13.95 on disc it's less than 50p a word.

Printer Pac 1 adds six new commands which can be used to control Amstrad's own DMP 1 printer and Epson compatible printers too. There are printer dumps for all modes, text

dumps, easy background selection and three new type styles for the DMP1. The cassette is £5.95 and the disc will be £9.95.

The final part of this trilogy is **Scriptor** and is also for the DMP 1 printer. It gives you a choice of six different font styles each of which can be re-defined by the user. All the fonts can be used in inverse, double width or both and the selection of "£" and "#" much simpler too.

The fonts can be used with Amsword and with Tasword 464 or from BASIC by the use of a systems extension command. The command DESCRIBE allows you to make the changes and can even support underline. The cassette is £6.95 and the disc £10.95 including postage from the address below.

Pride Utilities, 7 Chalton Heights, Chalton, Luton, Beds LU4 9UF.

What's this? It's Who

Look out the Doctor's about in a new game from Micro Power which will be available in October.

Called **Dr Who and the Mines of Terror** the October release will be for the C64, Amstrad and BBC micros with the Spectrum version due in October. The game marks Micro Power's first major release for the Sinclair machine and according to Bob Simpson, their managing director, they are looking forward to the new

market.

BBC owners will be interested to hear that the game is similar to the best selling **Castle Quest** but has over five times the locations of the earlier game. In fact it is so large that the Acorn version will comprise both a cassette and a ROM, "It is the only way to get the game in there," said Bob.

With the Young Ones being licenced just the other week and Dr Who this week it looks as though the BBC have decided to get more licence money from the software industry!

Bits and Pieces

• First off the grid this week, although I should say mat, is **Way of the Exploding Fist** for the Spectrum. This £8.95 version of the Commodore block-buster from Melbourne House has "18 possible moves including blocking, ducking, jumping, kicking, feinting and somersaulting." All this and not a risk of bodily injury any worse than joystick wrist!

• Virgin haven't only been getting **Now** games on TV over the past few weeks, they have also had time to get more details of the new **Shogun** game together. "This is the most ambitious piece of programming that we have ever undertaken", is the comment of Nick Alexander. I have a feeling that he might regret that sort of statement if the game doesn't do well but that has never stopped Nick!

The main thrust of the programming will be in making the games characters have "intelligence" allowing them to pursue their own ambitions, make allies and even kill you. The player will be able to choose a full range of character types and these may help or hinder your progress in the game. Let's hope that the instructions and conversation isn't all in Japanese as in the book and TV series.

• The American Tandy corporation has given us details of a new program recently launched

in this country. The aim is to teach 3-7 year olds to read using the **Tandy Electronic Book**. These books are really touch sensitive pads which can be plugged into the micro so that the child has a simpler method of input. The child then follows a story and presses a picture in the book to provide an answer. This then causes the answer to appear on screen and the game continues.

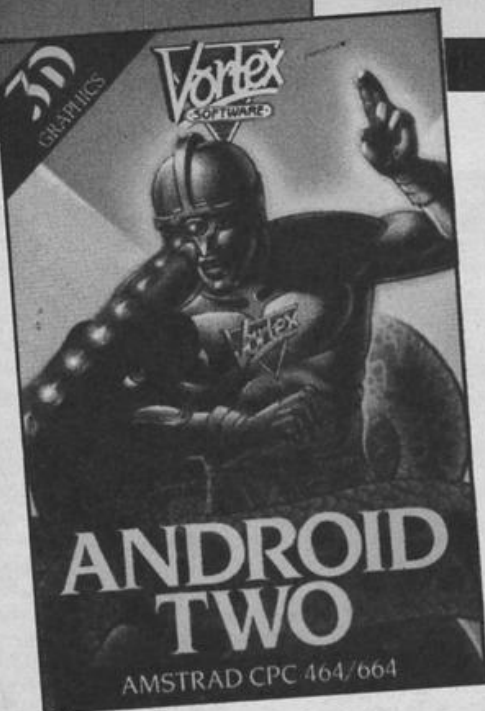
The Village of Spellwell was developed by educationalists with a number of children of differing ages and abilities and is available for the Tandy Colour Computer and BBC Micro at £24.95 although other characters are available at £9.95.

• I cannot see me using the latest product from Venturegate — it claims to test your mind to the full. The problem is that I might discover there is nothing to test!

Hit and Miss, priced at £7.99 on the C16 and Plus 4, is a game to play with the family and friends and one which "will have them agog with your mental dexterity." The game comes with a full colour A2 poster of their super android and you are invited to name him.

• Whilst on the subject of Androids Vortex have converted **Android Two** for the Amstrad machines and the game will be available by the time you read this at £7.95.

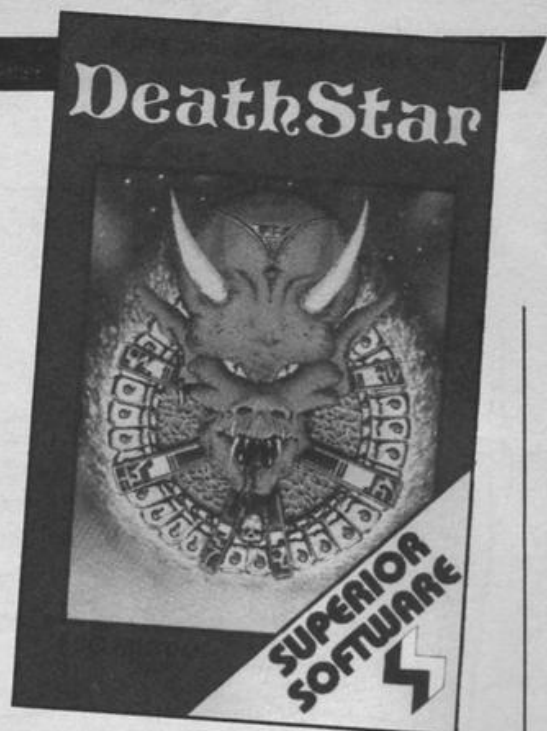




• I cannot tell you how many letters we have had from the dungeon begging for Level 9's latest adventure **Red Moon**. Well it has finally arrived and a copy has been sent to the subterranean depths. The game is graphic on the Amstrad, Atari, C64, MSX and Spectrum with text only on BBC and Memo-tech but at £6.95 it is likely to provide hours of pleasure.

Cheats will have to wait a few weeks for hint sheets but in the mean time Peter Sweasey will be working hard to provide clues for HCW readers. Just drop him a line.

• Latest on the educational scene is **Word Games with the Mr Men** from Mirrorsoft. This is a two cassette package each containing one game, **Mr Noisy's Word Game** and **Read**



with **Mr Bounce**. The games are menu driven and very attractive to use, even for hardened magazine Editors, the first dealing with comparatives and opposites and the second with positional words. Two versions are currently available, C64 and BBC at £9.95 on cassette or £12.95 on disc.

• The quiet BBC scene is set to explode with a couple of releases from Superior Software. The first is now with us and has had me entranced all weekend. Called **Death Star** it is an unabashed arcade shoot-em-up with a little more purpose than most. You mine asteroids to collect crystals which turn into bombs and can then be used to bomb the super baddy the Death Star.

I have it on good authority that there are four screens and that each is different and more difficult. The game is £9.95 on cassette and £11.95 on disc. The other new title is for the future and will thrill the fans of Superiors chart topping **Repton**. Provisionally titled **Repton II** it is a new quest which has many more locations and puzzles. Look out for more details to follow.

• After our recent piece on the Official World Cup licence a number of clones have crossed the horizon. Artic have released **World Cup** on the C16 and **World Cup II** on the C64 both at £6.95. They claim that the new version is a considerably updated game with a jump of joy from scoring players!

• Finally although we announced the Amstrad conversion of **Dragonfire** some weeks ago — it is now actually available. You have the usual chances to project your soul, choose your spell and pick up the objects. It looks like a number of Amstrad owners will be having a truly magical Christmas.



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✱ BOARD GAMES 1 — can't wate four numba 2.

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EDUCATION



John Henderson
has been looking at
the latest releases
from Acorn's Home
Education Division
and he thinks that
they are the
"Real McCoy!"

From little acorns mighty oak trees grow — providing conditions are right and time is allowed.

It has taken time for the best educational software to appear on the homefront. We have discussed this in detail in the last few articles. The software in this selection is the golden tip of an iceberg. Flipped is the expression that HCW readers will understand.

The Acornsoft Home Education series has, at the moment, four titles. SPOOKY MANOR was discussed in HCW Issue 121. The other three are reviewed below.

Why the success? Perhaps two reasons — good advice and adaptability.

Many teachers will be familiar with the name of Daniel Chandler, a prolific writer on educational computing. For this series he has teamed up with David Butler, a programmer, to produce quality software with children in mind.

Each program comes with extensive notes emphasising the role that parents play in helping children to learn. Their adaptability is obvious, the programs have many options available to users, but you can start with the minimum of hardware. The programs are even designed to operate on both B&W and Colour VDU's. Enough of this general comment. Here are three candidates from the Acornsoft stable, aimed at children of 3, 7 or 10 years and above. As in all the best situations, I will deal with the packages in reverse order — of age that is. Talkback is an interactive discussion program which encourages the user to have conversations with the computer. Before knowledgeable teachers and parents switch off and say that this is another Eliza, wait a moment!

The facilities on Talkback are extensive and versatile. Described as playing chess with language, conversations can be built up from a series of keywords, responses and starters.

An excellent booklet accompanies the menu-driven program to show how to construct a dialogue. Characters created have to be assigned names (eg. Hilary and Katherine) and then various starter phrases are typed in, up to four per character.

Following this, a list of keywords and the expected responses must be input to program the computer. This can be a complicated operation, but a

great deal of useful advice is given and children should be able to construct simple dialogues within an hour of starting on the program.

A sample telephone conversation is detailed in the handbook. The BBC can store up to 42 pairs of keywords and responses, (121 with Tube). Conversations can be selected from a menu between Hilary and Katherine (and you can interject), Hilary and you, or Katherine and you. Talkback even allows the speed of replies to be altered, giving users even greater control.

On completion, files can be SAVED and printed out. A program listing is given in the book which allows you to obtain a hard copy of all the phrases stored for each character.

To whet the appetite two sample characters ASTRO and BOMB (direct from Dark Star) are included. Using this program children will be involved in discussion, sharing and testing ideas and analysing language — the very skills that their teachers are trying to encourage in the classroom.

There are many educational situations where Talkback can be used to help children. Life skills can be taught effectively e.g. how to phone the emergency services; an interactive news service; and for older children, job interview techniques. Altogether a versatile tool for all interested users.

At last — a program for children that puts the fun into moving and using words instead of pretending to be the most powerful word-processing package yet written.

ABC provides a way to explore words. A fully detailed booklet gives a wonderful introduction to an open-ended program that will have lasting appeal. ABC is described as being "for people interested in words NOT word processing", yet this belies many of the in-built features available.

The booklet assumes that the user has little prior knowledge and wants to get started as quickly as possible. It also emphasises that whatever is typed in cannot damage the computer. I suspect that this advice is more for parents coming to the computer for the first time and showing some signs of fright — children usually have no inhibitions of this kind. Everything is explained in a

ACORN[®] HOME EDUCATION

Talkback

For the BBC Microcomputer

logical sequence too, unlike many other packages.

After loading from disc or cassette, instructions begin with how to type in words and then how to SAVE and re-LOAD text. Only later come some of the special features of the program, followed by an in-depth examination of the options available. Sample screen prints are given to help users. It is easy to see how the authors always keep children in mind.

The first text which users are encouraged to type into the computer is a thank-you letter to a relative. No matter how much adults encourage, this is a job that most children hate doing. With the facilities of this package it's — well, you guessed — it's as easy as ABC!

The program starts on the WRITE screen, which if you think about it, is the right place to begin. At first sight the screen looks like a squat ladder, but is really a series on blue lines on a black background. Having switched off the CAPS LOCK and SHIFT LOCK keys, type away on the keyboard and the fun begins. The words are written in green. Differences in

colour are clear on a black and white or green screen as already mentioned.

The screen displays text, up to 35 characters per line, with 10 lines visible on a page. Naturally, the screen scrolls upwards as more text is entered, words wrap-around at the end of the lines and extra words can easily be inserted.

Typing in a piece of text is only the beginning. A colourful function strip is provided to help learn to use some of the options available which perform "magic" on the words. Each function on the strip is indicated with both words and pictures. The operations of TUG and PAINT allow children to quickly move whole single lines or a group of words. Affected parts of the text are coloured yellow whilst these commands are in operation. Switching off is simply a matter of pressing the same function keys again.

Another command called TIDY, shown as a sweeping brush, allows extra spaces and alterations in the text to be shuffled to give a more even appearance. There may be some lines that you wish to leave alone, however — fear not,

using the TAB key, individual lines can be fixed in position and protected from the sweeping operation. With CENTRE it is possible to include headings in the writing. What about COPY and DELETE I hear you say? Yes, text can be copied, but a real innovation for young children is the DELETE facility.

It is very hard to explain to some children why the operation of deletion requires the cursor to be placed one space to the right of the letter to be deleted. In ABC this function has been programmed to remove the character at the spot where the cursor rests. So sensible that no-one else has thought about it. If you don't like this, the usual one space beyond operation can be switched on again.

Key f9 (too near the BREAK key!) opens up an Aladdin's Cave called OPTIONS. These include the usual word processing facilities — search and replace, load and save, display, delete or print text; together with the unusual special options as shown on the diagram. Each black number key acts as a toggle to switch each facility on or off (including the line numbers and the ABC method of deletion).

Three styles of screen are available. The WRITE screen is the initial display. Key f2 accesses the READ AND WRITE screen. This consists of a reading frame of up to eleven lines of text, below which are four lines of the text currently being worked on. LOOK UP and LOOK DOWN allows users to roll around. Key f4 brings the SLATE into operation. This is really an electronic notepad, allowing children to scribble thoughts in the middle of composing that important letter to Father asking for an increase in pocket money. If the answer is No this could be the first computer graffiti board for young children. Words can be copied from SLATE to WRITE.

ABC is so user-friendly I have to keep rubbing my eyes to convince myself that this is not a dream from the Land of Byte where programs flow like milk and honey. As each operation is chosen, the correct symbol appears in the top right-hand corner of the screen to remind users what is happening. The range of options provided is superb for the price and all are accessed through easy to use

function keys and menu-driven charts.

They cover the very functions children need to be wary of when starting to write with a computer, particularly auto-repeat and delete. As if this was not enough there is even a utility included called INTERVIEW to convert ABC text files to VIEW files. This has to be one of the bargains of the year and a sure contender for the 1985 educational software awards.

Sample Talkback conversation

- | | |
|-------|--|
| BOMB | Detonation will occur at the preprogrammed time. |
| ASTRO | Please don't explode — you'll kill me |
| BOMB | Why shouldn't I? |
| ASTRO | You can't be serious |
| BOMB | Why can't I be serious? |
| ASTRO | Surely you don't want to die |
| BOMB | Death has no meaning for me |
| ASTRO | You are dying |
| BOMB | I am dying |
| ASTRO | You could live forever |
| BOMB | Some might do anything for ever |
| ASTRO | You'll splatter us all over the universe |
| BOMB | I am aware that I will splatter us all over the universe |
| ASTRO | Yes, you will splatter us all over the universe |
| BOMB | Of course I will splatter us all over the universe |
| ASTRO | Return to the bomb bay immediately |
| BOMB | I see |
| ASTRO | Listen to reason, bomb |
| BOMB | Reason tells me that I will detonate on schedule |
| ASTRO | Switch to manual now Bomb |
| BOMB | Detonation sequence is now on automatic |
| ASTRO | I order you to disarm at once |
| BOMB | B-o-o-m!!! GAME OVER: PRESS ESCAPE. |

Finally, Workshop is aimed at children from three years of age. Too young? Well I thought so, especially when this program is "likened to playing with plasticene on screen". Time to eat my words — the children enjoyed it. Action takes place on one of four screens.

Starting from a SHELF, users choose one of four shapes on which to perform drilling, painting, cutting, squashing and glueing with a variety of amazing machines. They use the red keys for each action depicted in pictogram form. DELETE, RETURN and ESCAPE are also used often, which limits the number of keys you have to remember.

The PLAN page shows the chosen shape in the middle, surrounded by symbols corresponding to the machine operations. At this stage the shape can be rotated or moved with the arrow keys. MACHINE pages allow the various operations to be performed on the shape. Hole drilling is a matter of pressing RETURN — the more you press, the bigger the hole. Each operation can be reversed using DELETE. There may, however, be a slight vari-

ation in the new shape produced. Finally, the LOOK page shows all the symbols used to date and provides a computer film of all the actions undertaken.

Workshop is designed to allow children to experiment without fear, an admirable aim for educational software and one that should be encouraged. It is most beneficial when parents and children use Workshop together. Although the program is full of interesting sounds (which can be switched off), children need the tactile experience of the real thing. If there is a poor horse in the stable this could be it, but what a high-class field to be among.

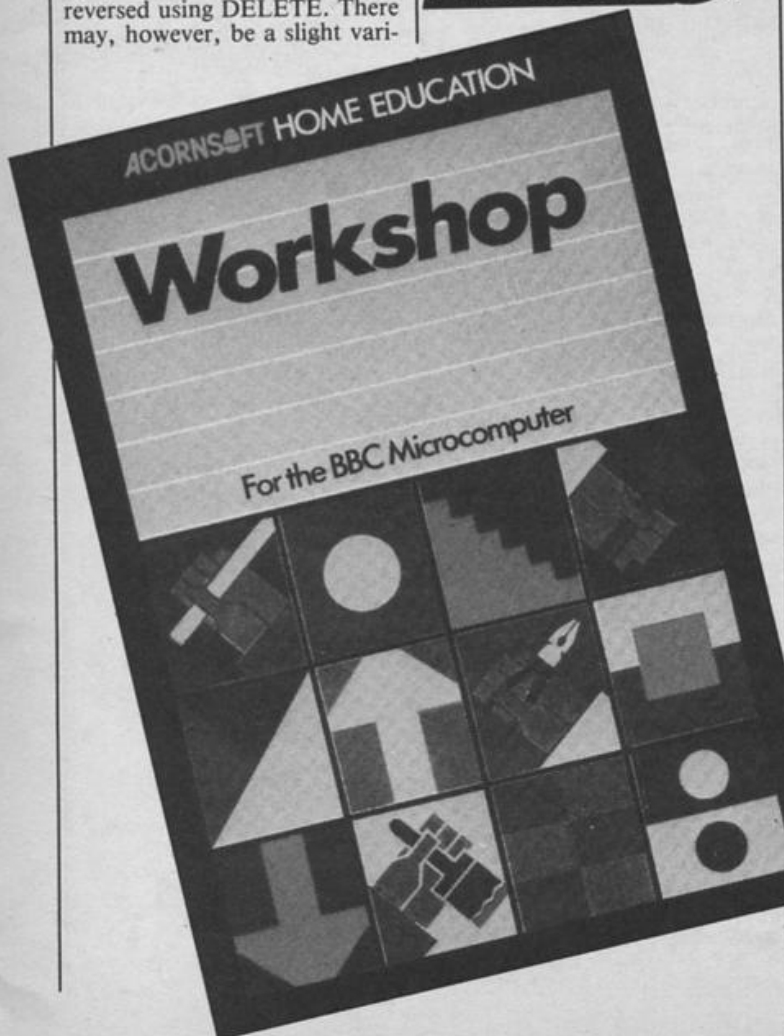
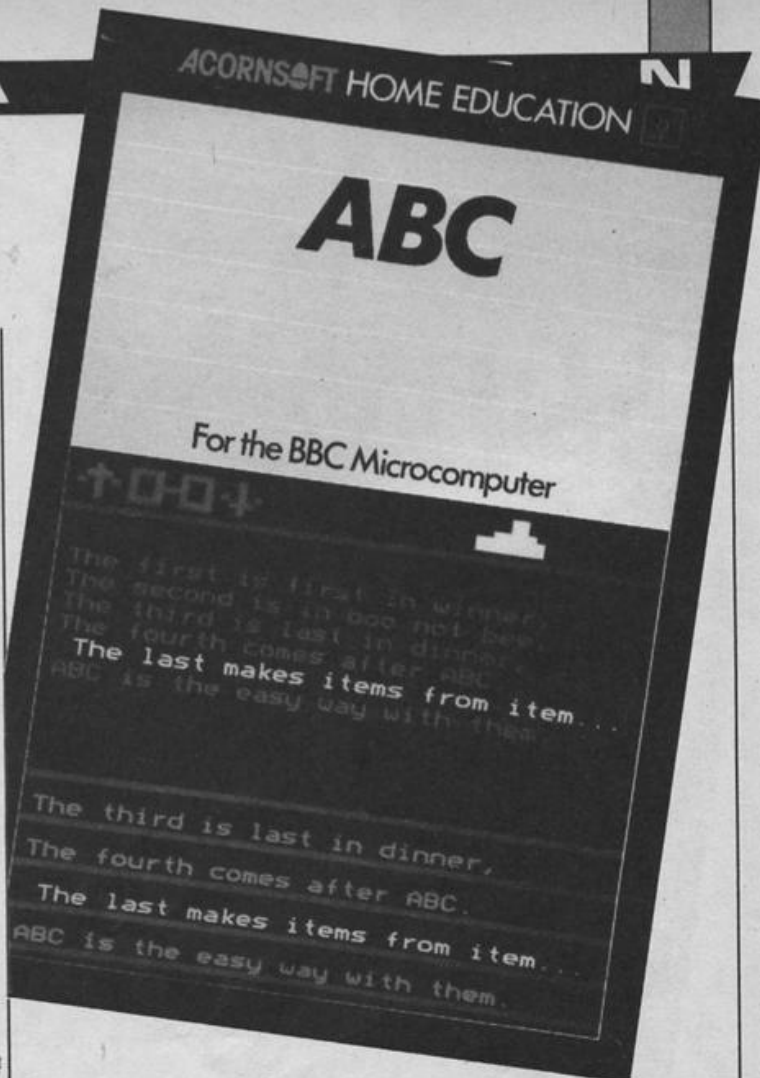
Here's to the birth of the next in line, with the hope that the gestation period is short.

Price: £9.95 (cassette)
£11.50 (disc)

Publisher: Acornsoft Home Education

BBC

ELECTRON



UnitSoft

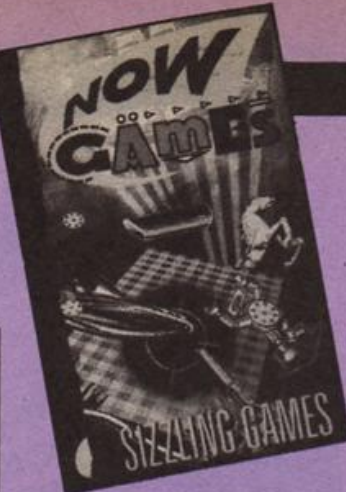
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SOFTWARE



Now Games

Six top class games on one tape is certainly something to shout about. This compilation from Virgin Games has something for everyone: a strategy graphic adventure, three action adventures, an arcade adventure and an arcade game.

The adventure is called *Lords of Midnight* and tells a tale of the battle against the forces of the evil Lord Doomdark. Initially you control four heroes in their quest to overcome the dark Lord's hordes. As you recruit more people to your cause the game becomes extremely complex.

Doomdark's forces multiply rapidly and you must recruit soldiers as quickly as possible. A map is provided to help you plan your campaign but the copy I had was almost unreadable which certainly added a new dimension to this game.

Brian Bloodaxe, Strangeloop and Pyjamarama are all very similar games. Travel about a maze of screens collecting objects as you go and avoiding collisions with the various nasties.

Arabian Nights is a series of arcade action games based on the famous stories and the final program is *Falcon Patrol II* whose predecessor was one of the first C64 games which really grabbed my attention. In *FPII* your country is under attack from squadrons of helicopters and you must guide your jump jet in the battle but defeat is inevitable.

All of the games are golden oldies and I suppose that this is the best way to market games which have passed their craze phase, in the same way as old pop songs are compiled on one album.

E.D.

Price: £8.95

Publisher: Activision

Address: 15 Harley Hse, Marylebone Rd, London NW1 5HE

C64



Beach Head II

This is the follow-up to the very successful war game, *Beach-Head*. In terms of technical input and quality, the authors have learned a great deal and this is a huge improvement, rather than just a boring sequel.

The package comprises of four episodes in which the hero J P Stryker does battle with the evil dictator. The parts have some continuity in that the first three parts portray different stages of a mission to rescue some prisoners. In part one you land your paratroopers and advance on the dictator. The second part involves getting the prisoners out of the prison and avoiding tanks and other perils. Next you bring in the helicopters to airlift the prisoners and finally, the fight to the death with the dictator.

After a main segment has loaded, the subsequent parts are loaded as required. You can play the part of either protagonist or you can play against a friend. Each screen uses bit mapped backdrops and the quality of graphics is high. The animation of the figures is particularly good and the whole effect topped off with a generous dose of high-quality speech. The games are tough with the computer giving you a real hard time.

Overall, good high quality game needing both skill and brains which will keep you glued to your machine for many an hour. I found it not entirely to my liking, but then again my preference lies elsewhere. If you liked *Beach Head*, you'll love this one.

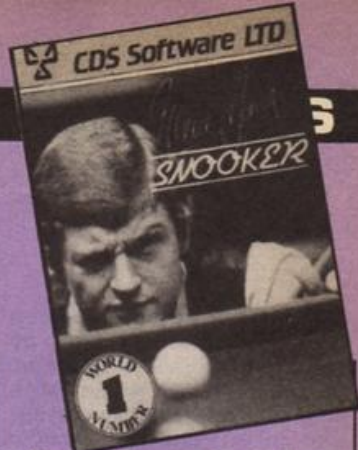
A.W.

Price: £9.95
(£14.95 disc)

Publisher: US Gold

Address: Unit 10, The Parkway Ind Est, Heneage St, Birmingham B1 3HS

C64



Steve Davis Snooker

I often wonder if the sponsors of computer sports simulations really do take an interest in the game with their name or whether it is purely a financial arrangement. Not that it really matters in this case because Steve would be proud of this conversion from the snooker cue to the VDU.

At last a game of snooker which allows a player versus a computer option and the option to set up trick shots or practice set ups.

The game can be played using the keyboard or a joystick and since speed is not of the essence it does not matter which you use. There are three icon driven menus available. The main menu allows you to select the computer opponent, display the help screen or call up either of the other menus.

The play menu shows the set up of the two players, calls the main menu and the help screen, but the third menu is by far what makes this game unique: the edit menu.

Apart from allowing the table and cushion colours to be selected, this option allows you to move and remove any of the balls on the table. If you want to try your hand at trick shots then this is the game for you. As long as one red ball is left, any configuration can be tried and, if required, carried across to the play mode.

In the play mode the ball which you are aiming for is selected by moving a cross wire into position on the ball. Then spin and power may be determined before the shot is played.

The one problem I noticed with the game is the perennial one of using a black and white TV. Distinguishing the balls can be difficult but I suppose the answer is to lash out and buy a colour monitor.

E.D.

Price: £8.95

Publisher: CDS Software

Address: Silver House, Silver St, Doncaster DN1 1HL

C64



DISC-FILM GAMES



ACTIVISION
HOME COMPUTER SOFTWARE

Rescue on Fractalus!

The Jaggies are winning the intergalactic war because they have taken refuge on Fractalus, a planet which is only just habitable. Time is short and our pilots are falling from the skies like flies in an insectocutor. As one of our ace Valkyrie flyers you must rescue the pilots and destroy their damaged ships to keep our high tech systems safe from the enemy.

This is the plot of one of the new games from Activision in their LucasFilm series. To film buffs the name Lucas conjures up the Star Wars series but the heroes of the movie have absolutely nothing to do with this battle (a case of look no Hans).

The planet's name is derived from the fact that the planet's surface is created by the use of fractals. Fractals are the building blocks with which the scenery is produced in professional flight simulators and their use here allows the creation of a terrain which gives a sense of reality. Unlike many simulators, you can actually fly towards and over the distant hills into the valleys and gullies beyond.

Control of the Valkyrie fighter is achieved by the combined use of joystick and keyboard. In addition to an altitude indicator and artificial horizon display, this futuristic craft also has wing tip sensors which indicate how near they

are to the craggy mountainsides, energy cell status display, targetting monitor and long range beacon detector.

Each pilot has a radio beacon which emits a signal for you to home in on, but beware, the valleys are guarded by laser bases on the mountain tops and suicide mission Jaggie saucers home in on a collision course. A force shield protects you from these dangers but the power of the attacks sap your precious energy and jolts your ship around.

When you eventually land to recover your pilot you must carefully follow a sequence of actions. Switch off the energy shield, wait for the pilot to run towards you (a nice bit of graphic action here) and knock on the airlock door. Once the airlock has been opened, the pilot will climb aboard and shut the door. The defence systems must then be re-armed, but not too soon or you'll fry your pilot.

The Jaggies are no fools and they have overpowered some of the stranded craft so you must make sure that you can see your pilot approach. If he is wearing a green helmet, he is an alien and must not be allowed on board.

The game has several levels and although the lower levels become quite boring, the action on the higher levels become fast and furious enough even for the most battle hardened player. An exciting action simulation.

E.D.

Price: £9.99

Publisher: Activision

Address: 15 Harley Hse, Marylebone Rd, London NW1 5HE

C64



Pinball Construction Set

Those ancient ones among you may recall that in those dark ages before the video game there was a bizarre apparatus called the pinball machine. This game enables those of you with such memories to create a machine of your own within the confines of your C64.

Once booted up, the display gives you, on the right a collection of icons and on the left the framework of a pin-table. Using an ubiquitous pointing finger you can select the various items necessary to build the machine. You can choose from a wide range of bumpers, roll overs, flippers and other gizmos and put them where you want. Using scissors and hammers icons you can redesign certain elements, and final artistic touches can be applied with a paint brush. Once the layout is to your taste, you can specify sound effects and scores and link bumpers via AND gates for bonuses.

The system uses multicolour bit mode so that you can tweak the graphics but this led to some blochy areas where colours clashed. When you play you can alter the laws of gravity and the co-efficient of restitution of the bumpers. How does it play? Just like the real thing.

The program uses some slick programming and is a joy to use. The infinite variability has great appeal, but only if pinball is your thing. Great fun, but its lasting appeal must be in question unless you're one of the converted. This potential problem may be exacerbated by the high price and its release on disc.

A.W.

Price: £14.95

Publisher: Ariolasoft

Address: Ashphalte Hse, Palace St, London SW1

C64



Flipped



Hooked



Keen



Yawning



Comatose



Ian Botham's Test Match

Sports simulations are all the rage at the moment and cricket in particular has been well covered in recent months. This is one such game. On loading we are greeted by a view of a cricket field with a capacity crowd in the background. The first job is to select the game to be played. You have the choice between limited over, one day and test match. Different games offer different innings lengths.

The next step is, if you wish, to select your team. A default team is available should you wish to omit this step. The fielding player then has the opportunity to place his field. Once done the innings begins. The biggest nuisance about this version is that it requires two players, each with a joystick. The bowler may select the type of ball, and the batsman chooses his stroke with a deft twist of the joystick. Should the ball be hit, the bowling player must select a fielder by positioning a cursor and then moving the chosen player. To field the ball this player must make contact with the ball. This fielding operation was appallingly difficult.

Graphically the game is uninspiring with rather wooden figures and poor animation. Sound was limited to applause and other such effects.

The omission of a human versus computer option was rather a mistake since many users won't always have a human opponent available when they want to play. The general play tended to be awkward and unsatisfying.

A.W.C.

Price: £9.95

Publisher: Tynesoft

Address: Addison Ind Est, Blaydon, Tyne & Wear

C64



Seven Cities of Gold

Exploration and trading are well used elements in adventure/simulation games. This game is the best I have seen of this genre. This package is only available on disc because of the fact that a huge data base is utilised to give a complex game.

You play the part of a sea captain who has been sponsored by the king to travel afar, conquer new lands and acquire gold. You are given an initial sum of money and with this a fleet of ships is manned and provisioned. You also carry a supply of goods for trade.

The game is essentially graphical with a small window showing the plan view of your progress. As your ship sails along, you see land masses which you may explore. On landing you must select a team to explore and decide on the provisions and goods they carry. Once they are on land, the map scrolls to show new areas. When you enter a village the graphics zoom in to show your dealings with the natives. Such transactions need much care if you don't want to start a war!

The graphics are excellent with the map shown in great detail. Since the map is disc based, its size is mind boggling. When you have acquired sufficient gold you return to port where, depending on your performance, you may acquire further funds for another voyage.

Overall, a complex and enjoyable game which is slick and attractive. Even at the price it's good value.

M.W.

Price: £14.95 (disc only)

Publisher: Ariolasoft

Address: Suite 105/106, Asphalte Hse, Palace St, London SW1E 5HS

C64



Adventure Construction Set

Most of you will have heard of the Quill and similar programs for the creation of textual adventures. This product has a similar purpose but is intended for graphical adventures. Due to the size of the beast, this package, unfortunately, is only available on disc. The format adopted is the usual view-plan of a scenario. Within an overall scrolling map of quite significant proportions are a number of sub-scenarios which are entered via portals or gates. These scenarios can be castles, caves or whatever and are comprised of discreet rooms rather than a continuous area. Which allows for some complex creations.

You can specify a range of creatures and characters which may be scattered about the scenario as can objects and weapons of your choice. All variables can be adjusted including the design of figures, objects, scenery and the specification of the character's attributes. To provide additional interest you can set up your own messages, and a range of music and sound effects are available.

The feel of the games tend towards the well known dungeons and dragons approach with magic and fighting. Characters interact with each taking a turn. This allows the adjustment of a character's intelligence, actions and aggression. Overall, you can alter almost any aspect of the game giving great scope for creativity.

The package comes with a number of impressive demonstration games. Overall a powerful and entertaining package. The bad news is that the package does not allow stand alone games which you could sell.

A.W.

Price: £14.95 (disc only)

Publisher: Ariolasoft

Address: Suite 105/106, Asphalte Hse, Palace St, London SW1E 5HS

C64



Paintbox

As its title implies, this program provides an environment for the creation of high resolution pictures. The package offers versions for the C64 and C16/Plus 4 and apart from some slight differences, the programs are pretty well identical.

Loading is by a Turbo load and on running you are greeted by a duck shoot menu. For those of you who haven't used Compunet, a duck shoot menu is a single line of options which scroll across the foot of the screen. The centre item is highlighted and a touch of the joystick button selects it.

The graphics options are quite standard allowing the drawing of lines, points, boxes, circles, discs, radians and filling. The C64 version offers two screens with a copying option. The C16 version allows the selection of luminance as well as colour. A variety of brush designs are offered for greater flexibility.

Both programs use the highest resolution mode so that you are limited to only two colours per character square. In addition, there didn't appear to be an option to change the paper colour, which further limited colour control. Some of the nicer touches such as air brush and zoom were omitted. Whilst the space limitation on the C16 probably precludes further options, the C64 has plenty of room.

On the whole, not a bad package but whilst being cheaper than most of the opposition, this fact is reflected by the options available. In spite of such reservations, it's worth a close look.

A.W.

Price: £9.95

Publisher: Audiogenic

Address: PO Box 88, Reading, Berks

C64





Ashkeron

This adventure with graphics came with no instructions so what you're reading is what I could find out by playing. The screen is divided into areas for text and graphics, the latter rather squashed up in the top quarter. Though colourful, they are distinctly low-res and chunky, thus making them difficult to work out. As you move north, south etc., they scroll in the appropriate direction, accompanied by a grating noise from the speaker, which may be an attempt at the wizard laughing.

The wiz lives in a castle, the only access to which is across a drawbridge, and that's your first problem! No locations of any importance appear to exist outside the castle. Once inside you encounter a very smelly stable with a wild horse, a slimy dwarf — dealt with in classic adventure style — and towers, armour room, bedrooms with names from the zodiac, a screaming room, a cloak of invisibility and so on. It even features a hooded figure with red-rimmed eyes; that editor of ours gets everywhere!

The input interpreter is swift but doesn't appear to like long sentences. It just ignores the second part, and the program itself isn't terribly consistent. For example, when it grows too dark to see, and thus you can't move, you can pick up and drop items, and characters can come in and out without problems.

From a few hours play, and no info, OK, but not wonderful. I wonder what the object is? **D.M.**

Price: £6.95

Publisher: Mirrorsoft

Address: Maxwell House, Worship St, London EC2A 2EN



Super Sam

This is an odd game. I initially thought it looked pretty boring, as I spent a while wandering through the same few screens, not really getting anywhere.

But, once I fell down a manhole and found myself in the bowels of a castle, the game started to become quite enjoyable. I'm not sure quite what the plot or purpose behind the game is, as my review copy had no notes with it, but Super Sam seems to be a maze game with an assortment of objects to collect.

There's nothing outrageously original here, and the graphics are quite old fashioned and blocky, but the variety of the screens took me a bit by surprise. One minute you're in a screen that looks like it's straight out of the old "Horace" games, and the next, you're in a pseudo 3D maze trying to avoid some odd looking sprites with hats on. What the authors of this game seem to have done is to bring together bits of a number of old games and strung them together to produce a game that isn't at all original or outstanding in any way, but which is nonetheless quite amusing.

There seem to be quite a large number of interconnected screens, though I'm not sure exactly how many, and they should keep you occupied for a while. This isn't a great game by any stretch of the imagination, but, at a budget price, it's okay for a few undemanding hours' play. **C.J.**

Price: £2.95

Publisher: Budgie

Address: 1 Orange St, Sheffield S1 4DW



Shuffle

At last the old favourite travelling puzzle game has been computerised as budget software by Budgie. Shuffle contains a selection of pictures, patterns, numbers and letters which are divided in blocks and jumbled up by the computer for you to rearrange them to their original form.

The computer gives you the time you have taken and number of moves. There are eight different puzzles and three difficulty levels to choose from; at level three this game is really taxing. In order to slide the blocks in position eight keys are needed — which may seem excessive but they are very logically provided and you soon get used to them. Using a joystick speeds up the operation so it is worth using one here.

The graphics and the sound are very good. Although Shuffle is written in BASIC, it has all the qualities of a good machine code game. The instructions are clear and easy to follow and the game simple to play but requires plenty of patience and brain power.

Shuffle is a game for the whole family to enjoy. For its price it's very professionally written and will shame many games retailing at much higher prices. Just goes to show that high price is not always a guarantee of quality. If you are a puzzle addict then Shuffle is definitely the game for you. Excellent value for money. **M.B.**

Price: £2.99

Publisher: Budgie

Address: 1 Orange St, Sheffield S1 4DW



Diamond Mine

Armed with only a very long pipe you must save the mine from the deadly killer bugs and rescue the remaining diamonds. Well, sort of, the game is not quite that exciting, but it is very skillful.

Starting from a point at the top of the screen, you — the chief mine-worker, presumably — must guide your pipe down through the maze of tunnels, avoiding touching the walls and bugs, to reach the diamonds.

You start with a set amount of pipe but if you hit a wall or a bug, you lose twice as much pipe as there is on the screen. If you reach a diamond or your pipe is eaten by a bug then you just lose the amount of pipe visible. There are eight diamonds to collect and each screen starts with less pipe.

The game takes quite a while to get used to as the maze is very difficult to move through. If you do manage to get all eight diamonds — it took me a few goes! — then the next screen is the same as the first with less pipe. This leads to a fairly boring game in the long run. Admittedly when I reached a fairly high level the screen maze did alter slightly but by then I was almost too bored to notice.

The instructions are good and the graphics quite reasonable, but the game is not very playable — it's difficult to master and repetitive to use. Fair to average. **D.B.**

Price: £2.50

Publisher: Blue Ribbon Software Ltd

Address: Silver Hse, Silver St, Doncaster, S Yorkshire





Master of the Lamps

This game is definitely different. It involves magic carpets, genies and lamps; you have to assemble the pieces of three broken lamps and return the escaped genies to them. This is to be done, rather improbably, by hitting gongs.

There are two different types of screen to negotiate. In the first, which I found quite easy, you have to fly through a tunnel on a magic carpet; the tunnel is represented by a series of coloured diamond shapes, and so long as you keep steering towards the littlest one you can see you shouldn't go far wrong. The second phase is trickier. Here, a genie blows a sequence of notes into the air and you have to hit the corresponding gongs in the correct order before the notes drift down and catch you. In the beginners version of the game, the notes are colour coded to help you. In the full version, the colours disappear quickly if they are given at all.

Every time you complete one tunnel and one sequence of gongs, you are rewarded with one piece of a lamp. To assemble all three lamps you need a total of 21 pieces; you will need far more staying power and a better sense of pitch than I have to get them all.

The concept is interesting, and the graphics and sound are very good, particularly the music which accompanies the magic carpet flight. It's a shame Activision had to spoil the game's appeal by putting such a ridiculous price tag on it. **M.N.**

Price: £11.95

Publisher: Activision

Address: 15 Harley Hse, Marylebone Rd, Regents Park, London NW1 5HE

MSX



Graham Gooch's Test Cricket

With a summer like we've had, cricket addicts fed up with rain-affected matches now have an alternative, guaranteed against rain, bad-light and almost everything except power failures — Graham Gooch's Test Cricket. What's more, those who think they could pick a better team than the official selectors can have a go.

The game starts by selecting from a 40-over, 55-over, 60-over or two innings match and deciding skill level. Then you choose between two player or one player simulation or one player arcade. That completed you choose the England and Australian 11 from the 20 possibles for each, and off you go.

Simulation means that you can just sit back and watch — a 55-over match takes over an hour. But if you wish, you can control the batsman's tactics, aggressive, normal or defensive. Arcade mode involves timing the batsman's stroke or shaking the joystick to energise the bowler. In both, you choose your side's bowlers and when they should change. The graphics are great, and the limitations of the C64 are made up for by imaginative animation, like fielders tossing the ball in the air after a catch.

True cricket enthusiasts will be unhappy with some aspects of the realism — I've yet to see a maiden over for example. I'd also like a fact sheet about the players, as the programmer sees them, to help choose the teams. Nevertheless, it's all good fun, and where else can you see Border bowl weakly to a defensive Ian Botham. **B.J.**

Price: £9.95

Publisher: Audiogenic

Address: 39 Suttons Ind Pk, Reading, Berks

C64



Guy in the Hat/Secret Sam 2

First of all, I love the idea — two games on one cassette — fantastic. Wait a minute, what are the games? Well, Guy in the Hat is your standard keybasher actually.

Guy wanders across a hexagonal grid, eating biscuits and avoiding the "Bickie Bashers", who remind me of things I used to stick on the top of my school pencil (see Freud). As Guy eats a biscuit the hex changes colour and is impassable. This is also true if he drops his hat, which can be detonated under a nastie. The number of biscuits in Guy's diet increases by level. Graphically this game is alright, but it has little or no lasting appeal and could be quite neatly achieved in BASIC.

The reverse is true of Secret Sam 2, a text only mode 7 adventure, in the private eye world of Secret Sam. Apart from a rather smug command parser, this game has a large number of locations, which I, Conan the Keypusher, failed to reach without cheating. I won't give too much away, but doors can be passed and never take a battery from a strange road.

Both the games on this cassette are fairly average, but remember a few years ago they could have been available separately at £7.95 each, so give them a try and lock up your card again. **D.A.**

Price: £2.50

Publisher: Blue Ribbon Software

Address: Silver Hse, Silver St, Doncaster

BBC



Birdie Barrage

Birdie Barrage is the answer to a golfing widow's dream and may well force owners of gold courses into market gardening. Anyone who prefers sitting to walking but still enjoys a game of golf, will find this program a boon.

The game features an 18-hole golf course with bunkers, streams, lakes, trees and rarely a straight fairway. The current hole is displayed on the screen and at the tee, an arrow and number shows the direction and strength of the wind which has to be taken into consideration when setting direction and strength of shot.

The number of strokes taken is not displayed until the score card is shown at the end of each hole.

Once on the green, the screen changes to show an enlarged view of the area round the hole but to make life difficult, the type of green can vary from fast to slow. This has to be allowed for when setting the strength of shot. The effect of the wind upon the flight of the ball is very realistic but unlike a real game of golf where an accurate ball can drop into the hole even if the stroke is too strong, in this game the strength of shot has only a small margin of error and if hit too hard, the ball will pass straight over the hole.

The game is addictive and very enjoyable and its response to the choice of the club, strength of shot and direction; was consistent and realistic. "Faldo, watch out!" **J.D.**

Price: £7.95

Publisher: CDS Micro Systems

Address: Silver Hse, Silver St, Doncaster, S Yorks DN1 1HL

BBC





Fu-Kung in Las Vegas

It's a long time since I've seen anything as awful as this. Even the inlay card notes don't seem to be able to explain it adequately. The hero, Fu Kung, is an American detective of oriental extraction who has to check all the casinos in Las Vegas to see if they're honest. As a result, he must apparently collect cards, and avoid twirling things and electrocution as he makes his way under your control from one screen to another.

OK, I have to admit it, the colours selected show up well on the green screen, but they look awful otherwise. The characters are incredibly crude, move jerkily, flicker, and are painfully slow. Even so, it's not easy to succeed on screen one, given the choice of hard or easy games on the equally awful introductory screen. Sound is minimal.

I tried about eight times to get further, but frankly wouldn't have bothered had I not been reviewing. On the easy level, lives seem to be infinite. Not as good as some ZX81 games I've seen, what on earth are Amsoft doing releasing this on the machine that can depict Knight Lore, Sorcery, and Everyone's a Wally to perfection? Truly grim!

D.M.

Price: £8.95

Publisher: Amsoft

Address: 169 Kings Rd, Brentwood, Essex CM14 4EF

AMSTRAD



Everyone's a Wally

Many conversions are either half-hearted and uninspired, taking no advantage of the different facilities of the new machine. This is different, and it's superb. The Wally song is here in three voices, and on tape too, and whereas the characters and buildings of the town were in monochrome on the Spectrum, here they are all in glorious colour with super smooth movement, and sound effects. It's better than most cartoons on TV and even, dare I write it, better than Sorcery. Magical!

The game itself has become a classic. You control either Wally, or any of his friends as they trog around the town. Each has different skills, and whilst wandering you will discover different jobs which need doing, like mending the fountain, repairing a pylon, or building a wall. Not only must you find and control the person whose skills you need, but you must also acquire the bits to use too. Then they get paid, and the cash put into the bank. All you need then is the combination to the safe — also spread about the town — and you get the cash. A monster task, complicated by the fact that certain nasties are flying around which sap your energy, particularly in the built-in arcade games, and soon use up your three lives.

The notes describe this as a complete entertainment package, and for once, I agree. A masterpiece. How about releasing the next one for the Amstrad first, Mikro-Gen? You can certainly make the machine hum!

D.M.

Price: £9.95

Publisher: Mikro-Gen

Address: 44 The Broadway, Bracknell, Berks

AMSTRAD



Screwball

Screwball is basically a very simple game. You are the "Screwball" and it is your job to jump around the 3-D maze changing the colour of the squares in order to progress to the next screen. You have 60 seconds in which to complete your task before you die. However, 60 seconds is a long time and there are some rather awful little black bugs which are there just to make your task a little more interesting.

By simply moving over the squares they would have difficulty catching you, so to help, they do not always move onto the squares. Your defence against the bugs is your ability to dig holes into which they will fall. In case of deep trouble there is also a hyperspace function which returns you to the top of the screen. Of course this has no guarantee of working and you can often die using it.

The instructions are quite adequate and the graphics are very pretty. Needless to say, there are problems with the game. By cunningly placing the holes where the bugs appear it is possible to gain extremely high scores, but this also makes the game quite boring. The main criticism I have is that the game contains a bug which I'm sure was not intended. Occasionally a second stationary screwball will appear which can not be moved and when eaten by a "black bug" causes you to die. Though, I must say, on the whole the game is of a high standard.

D.B.

Price: £2.50

Publisher: Blue Ribbon Software

Address: Silver Hse, Silver St, Doncaster, S Yorks

BBC



Kiddisoft Magazine

This is the first of a monthly tape magazine aimed at four to eight year olds, ideal for keeping the children busy on wet days — or so I thought.

The cassette consists of six programs, three on each side. Side 1 has Balloon puzzle, Pip word game and Number Game. The first game is a re-hash of the comic book game of untangling balloon strings to find the owner. Pip checks to see if the user can memorise a three-letter word. A word is shown and the child has to press a key when he sees the particular word on-screen again. Number Game tests the child's ability to add up to 10.

Side two starts with Humpty, another number game, in which the child's ability to do basic addition is tested. The next program is a teach and test natural history — about Blue Tits — but strangely no colour is used. The final program is a simple text adventure using single key responses which the user must help Pisky Green find seven stolen objects.

Though the idea behind the cassette is sound, the copy I received had not been thoroughly de-bugged a competition mentioned was missing; and at £3.99 it is not exactly cheap. More care should have been taken with the content of the tape to attract children, possibly it is too ambitious a project for a small firm to tackle.

M.W.

Price: £3.99

Publisher: Kiddisoft

Address: 5 Nanpusker Rd, Hayle, Cornwall TR27 5JR

SPECTRUM



LONE ZONER



Consign the aliens to oblivion by blasting your way through Stephen Dell's game for the C64

Every zone's a danger-zone in this foray into alien territory. As you guide your space ship towards the objective, aliens armed to the mandibles with lasers attempt to catch you in their crossfire. Your mission is to obliterate the area the aliens call "zone sweet zone".

When RUN, the hi-score table is displayed. Hit a key, then the ten levels of play appear. Select the one you want by moving the green spaceship beside the desired level of play by pressing 'A' to go down a level and 'Z' to go up a level. Hit the space-

bar to confirm your choice.

To qualify for inclusion in the hi-score table you must have attained a score greater than the lowest score in the hi-score table on Lone Zoner level only. However, it is very difficult to get into the hi-score table as the scores are set so high. These scores can be lowered by changing the values in the variables T(1-5) in lines 6 and 7 as follows: T(1) = 855, T(2) = 600, T(3) = 390, T(4) = 225, T(5) = 105.

Having chosen the level of play the game will start. On the screen will be: your SPACE-

SHIP (green), ALIENS (red and blue), a ZONE (yellow), WALLS (orange), a LASER (white — appears occasionally)

The number of lives you have remaining is displayed on the bottom left of the screen. The zone type you are currently attempting to destroy is the one lit up yellow on the bottom right of the screen. Displayed at the top of the screen is the level being played, your current score, and the hi-score.

Your spaceship continues moving in the chosen direction until the key is released. The yellow zone on the screen is your objective — it is your mission to destroy as many of these as you can, avoiding the aliens positioned around the screen and their deadly fire. Lose three lives and the game



ends. Plot the quickest route to the zone, which is destroyed on collision with your spaceship. The value of the zone is then added to your score and the next zone type appears at a randomly chosen location on

the screen.

Aliens fire to the left and right, depending on where you are in relation to the firing alien. When an alien fires at you it explodes, its laser destroying any aliens in its path in an effort

to blow you away. A laser explodes when it hits a wall (or if it hits your spaceship!) although it rebounds in the opposite direction if it hits the zone. This is because it is the aliens' task to defend their zones — not destroy them.

Blue aliens appear throughout the game at a frequency determined by the level selected at the beginning of the game, appearing one at a time at randomly chosen locations on the screen except when a laser is being fired, when they temporarily stop appearing. They start appearing again when the laser has exploded, having hit a wall or your spaceship. It is therefore safer to move (especially on the higher levels where aliens appear at a greater frequency) more often when a laser is being fired than when it is not, as a blue alien can appear in your path at any time and, if it appears directly in your path, will result in it being too late to swerve to avoid it.

If you hit a wall your spaceship does not explode, preferring to come to rest beside it. Often it is necessary to "persuade" aliens to fire at you so that their fire will destroy any other aliens blocking your route to the zone. As the game progresses it becomes increasingly necessary to do this, sometimes having to clear vast areas of the screen to get at the zone.

Scoring

Proceeding zones are worth an increasing multiple of five, so the first zone is worth 5 pts, the second 10 pts, the next 15 pts, the next 20 pts, and so on.

Controls

A up
Z down
comma left
full-stop right

Variables

T(1-5) hi-scores
TS(1-5) hi-scorers
V2 value of zone
TES level's name
SC score
LI number of lives left
A spaceship's position
D direction of spaceship
V1 spaceship's shape
DR direction of level selection indicator
Y1 position of level selection indicator
V position of zone
R zone's shape (14 types)
Z position of laser
G direction of laser
AL position of zone type
J codes of characters in hi-scorer's name
TS hi-scorer's name
LE frequency with which blue aliens appear (0.1 = Coward and 1 = Lone Zoner)
X,JS,AS,XS temporary variables

How it works

0-125 initialisation of variables and character set, set-up screen
130-190 game procedure if laser not being fired
200-270 enter level of play (levels 1-10)
290-325 change direction of spaceship
350-380 increase value of zone, change its shape and position it at a randomly chosen location on screen
400-450 game procedure if laser being fired
500-518 enter name for hi-score table
520-530 display fact that hi-score attained
560-580 erase name of level and redisplay it in green
600-620 explosion sound if laser hits wall
700-735 explosion sound if you hit zone
800-825 spaceship explodes, sound effects, if more than zero spaceships left then continue game play
830-834 has hi-score been attained?
849-863 display hi-score table
961-1166 numeric data
1170-1200 string data

```
1 REM* LONE ZONER *
2 REM* BY STEPHEN DELL *
3 REM* MARCH 1985 *
4 POKE54296,0:POKE54276,128:POKE54276,129:POKE54277,15:POKE54278,15:POKE54273,0
5 POKE53265,11:POKE52,48:POKE56,48:CLR
6 POKE53280,0:POKE53281,0:PRINTCHR$(8):CHR$(142):T(1)=7980:T(2)=5640:T(3)=3705
7 T(4)=2175:T(5)=1050:T$(1)="SOMETHIN TO HIDE":T$(2)="MYSTERY MOUNTAIN":HI=7980
8 T$(3)="SWEET AND SIMPLE":T$(4)="OPENED THE DOOR":T$(5)="WINDS OF MARCH"
9 V2=5:POKE53280,0:POKE53281,0:PRINTCHR$(8):R=33:RESTORE
12 FORI=12288TO12543:READU:POKEI,U:NEXT
13 FORI=12544TO12551:POKEI,0:NEXT
14 FORI=12552TO12559:READU:POKEI,U:NEXT
15 FORI=12672TO12751:READU:POKEI,U:NEXT
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P R O G R A M

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16 FORI=12560TO12671:READU:POKEI,U:NEXT
17 FORI=12776TO12807:READU:POKEI,U:NEXT
20 POKE53272,28:V1=64:AL=1956
22 O=54272:POKE53265,11:GOSUB849:PRINT"[CLEAR]":POKE53265,11:GOSUB200:PRINT"[CLEAR]"
23 FORI=1TOLE*10:READTE$:NEXTI
24 IFLE<1THENFORI=LE*10TO9:READJ$:NEXT
25 POKE53265,11:FORI=1105TO1902STEP6.5
30 IFRND(1)<.25THENPOKEI,28:POKEI+O,10
40 NEXT:X=1105:A=1564
50 POKEX,O:POKEX+O,8:POKEX+1,O:POKEX+O+1,8:POKEX+4O,O
60 POKEX+O+4O,8:POKEX+41,O:POKEX+O+41,8:X=X+92
70 IFX<1840THEN50
80 FORI=1064TO1103:POKEI,O:POKEI+O,O:NEXT:FORI=1904TO1983:POKEI,O:POKEI+O,O
85 NEXT:FORI=1064TO1904STEP4O:POKEI,O:POKEI+O,O:NEXT:FORI=1103TO1903STEP4O
90 POKEI,O:POKEI+O,O:NEXT
105 SC=O:L1=3:PRINT"[HOME][c 7]";TE$;TAB(18);"[YELLOW]";SC;TAB(31);"[c 1]";HI:GO SUB350
106 PRINT"[HOME][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW N][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][GREEN ][s *][s *][s *];TAB(12);
107 PRINTCHR$(34);"#$%&'()*+,-./":POKEAL+O,7
110 IFPEEK(A)=28THENA=A+1:GOTO110
112 IFPEEK(A)=OTHENA=A+1:GOTO110
115 POKE53265,27:POKE54273,O
120 GETJ$:IFJ$(">")THEN120
125 POKE54296,15:POKE54276,129
130 IFPEEK(A)=28THENE=3:GOTO800
134 Y=RND(1)*796+1107
135 POKEA,V1:POKEA+O,5:IFRND(1)<(LE)ANDPEEK(Y)=32THENPOKEY,28:POKEY+O,14
145 Z=INT(RND(1)*41)+(A-2O):IFPEEK(Z)=28THENGOSUB4OO
171 GETA$:IFA$(">")THENGOSUB29O
174 IFPEEK(A+D)=OTHEND=O
175 IFPEEK(A+D)=RTHENGOSUB7OO
180 POKEA,32:A=A+D:IFPEEK(197)=64THEND=O:V1=64
190 GOTO13O
200 PRINTTAB(11);"[c 1]STATUS[DOWN]"
205 FORI=1TO9:READX$:PRINTTAB(1O);"[DOWN][c 7]";I;" [c 3]";X$:NEXTI:Y1=1193:LE=1 :PRINT"[c 7]"
210 PRINTTAB(1O);"1O [c 3]LONE ZONER"
215 POKE53265,27:POKE198,O
220 POKEY1,3O:POKEY1+O,5
225 GETA$
230 IFA$="A"ANDY1>1193THENDR=-8O
240 IFA$="Z"ANDY1<1913THENDR=8O
249 IFPEEK(197)=64THENDR=O
250 IFY1+DR<1153THENDR=O
255 IFY1+DR>1913THENDR=O
258 IFA$="" THENLE=LE/1O:GOSUB56O:RETURN
259 IFDR=-8OTHENLE=LE-1
260 IFDR=8OTHENLE=LE+1
270 Y1=Y1+DR:POKEY1-DR,32:GOTO22O
290 IFA$="A"THEND=-4O:V1=31
300 IFA$="Z"THEND=4O:V1=33
310 IFA$=", "THEND=-1:V1=29
320 IFA$=". "THEND=1:V1=3O
325 RETURN
350 V=INT(RND(1)*796)+11O7
360 IFPEEK(V)<>32THEN35O
365 IFA=VTHEN35O
366 IFSC=OTHEN37O
367 V2=V2+5
370 R=R+1:IFR=48THENR=34
371 POKEV,R:POKEV+O,7
372 IFSC=OTHEN375
373 POKEAL+O,5:IFAL=1982THENAL=1954
374 AL=AL+2:POKEAL+O,7
375 IFGI=2THengi=O:POKE54296,15:POKE54276,33:POKE54277,15:POKE54278,15

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380 RETURN
400 G=SGN(A-Z):POKE54276,128:POKE54276,129:POKE54277,11
405 POKE54278,0:POKE54273,5
410 IFPEEK(A)=28THENE=3:GOTO800
411 IFPEEK(Z)=0THENGOSUB600:RETURN
420 POKEZ,27:POKEZ+0,1:IFZ+G=VTHENG=SGN(Z-V)
425 POKEA,V1:POKEA+0,5:GETA$:IFA$<>" "THENGOSUB290
428 IFPEEK(A+D)=0THEND=0
429 IFPEEK(A+D)=RTHENGOSUB700
430 IFA=ZTHENE=3:GOTO800
435 IFA+D=ZTHENE=2:GOTO800
440 POKEZ,32:Z=Z+G:POKEA,32:A=A+D:IFPEEK(197)=64THEND=0:V1=64
450 GOTO410
500 GOSUB520:PRINT"[DOWN][GREEN]";:T$="":X=0
502 POKE53265,27:POKE198,0
503 GETA$:IFA$=" "THEN503
504 J=ASC(A$):IFJ=148ORJ=170RJ=145ORJ=290RJ=157THEN503
505 IFJ=20ANDX=0THEN503
506 IFJ=20THENX=X-1:GOTO511
507 IFPEEK(197)=20RPEEK(197)=7THEN503
508 IFPEEK(197)=1THEN515
509 IF(J<650RJ>90)ANDA$<>" "THEN503
510 X=X+1
511 PRINTA$;
512 IFX=17THEN515
513 GOTO503
515 FORI=1504TO1504+(X-1)
516 IFPEEK(I)=32THENT$=T$+" ":GOTO518
517 T$=T$+CHR$(PEEK(I)+64)
518 NEXTI:RETURN
520 PRINT"[CLEAR][YELLOW]CONGRATULATIONS>>":PRINT"[DOWN][c 1]YOU HAVE AT LAST QU
ALIFIED"
525 PRINT"[DOWN][GREEN]FOR THE HI SCORE TABLE AND":PRINT"[c 3][DOWN]ARE ONE OF T
HE MEANEST"
526 PRINT"[c 7][DOWN]ZONE DESTROYERS IN THE WORLD"
530 PRINT"[c 1][DOWN]YOU MAY KEY IN UP TO 17 LETTERS":RETURN
560 FORI=Y1+5TOY1+14:POKEI+0,0:FORX=1TO20:NEXT:NEXT:FORI=Y1+5TOY1+14:POKEI+0,5
570 FORX=1TO20:NEXT:NEXT
580 FORI=1TO1500:NEXT:RETURN
600 POKEA,V1:POKEA+0,5
605 POKE54296,0:POKE54296,15:POKE54276,0:POKE54276,129:POKE54277,11:POKE54278,0
620 POKE54273,2:RETURN
700 POKEA,32:POKEA+D,V1:POKEA+0+D,5:SC=SC+V2:A=A+D:POKE54276,128:POKE54276,129
710 POKE54277,11:POKE54278,0:POKE54273,11:GOSUB350
720 PRINT"[HOME][YELLOW]";TAB(18);SC:IFPEEK(197)<>64ANDPEEK(A+D)=0THEND=0:RETURN
730 IFPEEK(197)=64THEND=0
735 RETURN
800 LI=LI-1:IFLI=2THENPRINT"[HOME][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW
N][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW
N][DOWN][GREEN][s *] [s *] "
801 IFLI=1THENPRINT"[HOME][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW
N][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW
N][GREEN][s *] "
802 IFLI=0THENPRINT"[HOME][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW
N][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOWN][DOW
N][c 3]END OF PLAY"
804 PRINT"[HOME][c 1]";TAB(31);HI
805 IFE=2THENE=0:POKEA,32:A=A+D:POKEA,V1:POKEA+0,5
806 IFE=3THENE=0:POKEA,V1:POKEA+0,5
807 J=SC:IFJ>HIANDLE=1THENHI=J
808 IFLI=0THENPRINT"[HOME][c 1]";TAB(31);HI
809 IFE=2THENE=0:POKEA,32:A=A+D:POKEA,V1:POKEA+0,5
810 IFE=3THENE=0:POKEA,V1:POKEA+0,5
811 POKEA,63:POKEA+0,1
812 POKE54296,0:POKE54276,0:POKE54273,0
813 POKE54296,15:POKE54276,129:POKE54277,15:POKE54278,15:POKE54273,2
814 FORU=1TO35:FORY=12792TO12799:POKEY,RND(1)*256:NEXT:NEXT
815 IFLI>0THEND=0:GOTO120

```

```

816 POKE54276,0:POKE53265,11
822 IFJ>T(5)ANDLE=1THENPP=0:POKE53265,11:PRINT"[CLEAR]":GOSUB500:PRINT"[CLEAR]":
GOSUB830
825 D=0:GOTO9
830 FORI=1TO5:IFPP=0ANDSC>T(I)THENPP=I
831 NEXTI
832 IFPP=5THENT(5)=SC:T$(5)=T$:RETURN
833 FORI=5TOFFSTEP-1:T(I)=T(I-1):T$(I)=T$(I-1):NEXTI:T(PP)=SC:T$(PP)=T$
834 RETURN
849 PRINT"[CLEAR][YELLOW]";TAB(14);"LEVEL TEN[DOWN]":PRINTTAB(11);"[c 1]HI SCORE
TABLE[DOWN][DOWN][c 3]"
850 FORI=1TO5:PRINTTAB(8);T$(I);"[DOWN]":NEXTI:PRINT"[HOME][DOWN][DOWN][DOWN][DO
WN][GREEN]":FORI=1TO5
851 PRINTTAB(25);T(I);"[DOWN]":NEXTI
861 PRINT"[DOWN][c 7]";TAB(8);"PRESS ANY KEY TO PLAY":POKE198,0:POKE53265,27
862 GETA$:IFA$<>""THENRETURN
863 GOTO862
961 DATA195,231,102,24,24,102,231,195
962 DATA24,62,102,99,127,251,195,199
963 DATA206,223,99,110,110,99,223,206
964 DATA28,127,99,192,192,99,127,28
965 DATA224,248,110,103,99,103,254,224
966 DATA204,254,99,56,56,99,254,204
967 DATA204,254,99,48,60,124,224,192
968 DATA254,231,96,44,47,99,255,206
969 DATA51,99,103,230,254,119,115,51
970 DATA48,56,28,12,24,24,56,48
971 DATA60,255,219,24,12,12,56,112
972 DATA195,199,108,120,120,108,199,195
973 DATA192,192,96,96,48,115,222,206
974 DATA195,195,102,102,126,219,219,195
975 DATA195,195,198,230,115,121,239,198
976 DATA24,60,102,99,195,198,124,24
977 DATA206,255,99,198,108,120,192,192
978 DATA24,46,99,195,199,230,252,6
979 DATA60,103,195,198,120,248,206,199
980 DATA56,127,195,240,60,30,252,192
981 DATA56,126,211,24,48,48,24,28
982 DATA102,102,195,195,195,102,60,24
983 DATA195,195,198,102,102,60,24,24
984 DATA195,195,219,219,126,102,195,195
985 DATA195,227,102,60,24,24,126,231
986 DATA195,195,102,60,24,48,55,31
987 DATA227,255,204,24,24,51,255,227
1010 DATA0,0,60,126,126,60,0,0
1020 DATA60,127,120,30,60,126,102,102
1032 DATA3,15,63,255,255,63,15,3
1033 DATA192,240,252,255,255,252,240,192
1034 DATA24,24,60,60,126,126,255,255
1035 DATA255,255,126,126,60,60,24,24
1040 DATA24,124,103,227,198,102,62,24,24,56,60,28,12,24,24,24
1041 DATA24,60,102,199,30,48,126,243,60,118,203,14,14,203,118,60
1042 DATA56,112,102,238,255,12,12,28,14,63,224,248,60,6,62,124
1043 DATA3,15,56,108,206,102,119,30,195,255,14,60,60,24,48,112
1044 DATA60,110,195,99,122,207,199,124,56,126,195,231,60,24,112,224
1100 DATA126,255,219,153,255,60,126,255,24,60,60,24,24,255,255,60
1110 DATA153,219,60,24,231,255,195,255,224,248,192,255,248,224,254,248
1120 DATA195,219,126,102,195,255,24,60,255,126,60,24,24,60,126,255
1130 DATA195,102,60,195,195,60,102,219,255,219,195,219,126,60,102,195
1140 DATA204,51,255,204,255,204,51,204,60,24,24,126,195,195,219,255
1150 DATA195,195,153,255,255,153,195,195,255,255,195,195,195,195,255,255
1160 DATA60,126,126,255,102,102,60,231,60,24,255,195,102,126,219,195
1165 DATA0,60,60,60,60,0,0,0,24,60,60,24,0,24,24,0,0,0,0,0,0,0,0
1166 DATA24,24,60,231,231,60,24,24,24
1170 DATACOWARD,CADET,SOLDIER,CAPTAIN,COLONEL,GENERAL,WARRIOR
1180 DATAAVENGER,CRAZY HERO
1190 DATACOWARD,CADET,SOLDIER,CAPTAIN,COLONEL,GENERAL,WARRIOR
1200 DATAAVENGER,CRAZY HERO,LONE ZONER

```

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COLOUR CLASH



Can you see all the colours of the Spectrum?
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Do people immediately put on sunglasses when they see you walking down the street — because they may be blinded by the colour clashes of your clothes. Do you regularly have arguments about what colour something is? If the answer to both questions is yes, you may be colour blind. A large proportion of men are colour blind and many never become aware of it.

This program asks you to identify 24 letters against different background colours and your results are analysed by the computer to give you an overall picture of the range of your colour vision.

How it works

1-30 initialise variables etc
 40-110 print instructions
 200-350 demonstration
 500-700 the test
 1000-1310 analyse results
 5000-5010 data for colours in test
 7000-7080 instructions
 9000-9010 graphics
 9500-9600 m/code for ink change

Variables

bl,gr,re used to analyse results
 Dim x ink colour for letter
 Dim y paper and ink colour for background
 Dim w used to count wrong input letter
 Dim rs report statements
 i\$,j\$,k\$ instructions
 t test loop
 f,d,n general purpose loops
 le random letter
 v,h used to position letter on screen
 a\$ letter input

```

1 REM Colour blindness test
2 REM By A.G.Bird 1985
5 POKE 23658,8: POKE 23609,30
7 RANDOMIZE
10 BORDER 5: PAPER 5: INK 0: CLS
15 LET bl=0: LET gr=0: LET re=0
20 DIM x(24): DIM y(24)
25 DIM w(24): DIM rs(6,40)
30 GO SUB 5000
39 REM Print instructions
40 PRINT AT 0,0: PAPER 1: INK 7: BRIGHT 1:
COLOUR BLINDNESS By A.G.Bird

45 PRINT "
50 FOR f=1 TO LEN i$: PRINT i$(f): BEEP .0
05,25: NEXT f
55 BEEP .01,0: FOR d=1 TO 100: NEXT d: PRIN
T "
60 FOR f=1 TO LEN j$: PRINT j$(f): BEEP .0
05,26: NEXT f
65 BEEP .01,0: FOR d=1 TO 100: NEXT d: PRIN
T "
70 FOR f=1 TO LEN k$: PRINT k$(f): BEEP .0
05,27: NEXT f
80 PRINT AT 18,0: BRIGHT 1: " Press 'D' for
demonstration or 'T' for colour blindness tes
t. "
90 IF INKEY$="D" THEN GO TO 200
100 IF INKEY$="T" THEN GO TO 500
110 GO TO 90
199 REM Demonstration
200 FOR f=2 TO 19: PRINT AT f,0:
": NEXT f
230 PRINT AT 20,0: PAPER 1: INK 7: BRIGHT 1:
DEMON
ST R A T I O N "
250 FOR f=1 TO 255
260 POKE 30018,f
270 LET d=USR 30000
280 BEEP .2,f/3-30: NEXT f
290 POKE 30018,45: LET d=USR 30000
300 BEEP 1,-40
310 FOR f=2 TO 21: PRINT AT f,0:
": NEXT f
350 GO TO 80
499 REM Test
500 FOR f=2 TO 19: PRINT AT f,0:
": NEXT f
510 FOR t=1 TO 24
520 POKE 30018,y(t)
530 LET d=USR 30000
540 LET le=INT (RND*25)+65
550 PRINT AT 21,0: INK 5:CHR$ le
560 LET v=INT (RND*8)+10
570 LET h=INT (RND*23)+1
600 FOR f=0 TO 7
610 FOR n=0 TO 7
620 IF POINT (n,f) THEN PRINT AT v-f,h+n: P
APER 8: INK x(t): " "
630 NEXT n: NEXT f
650 INPUT #0:"WHAT LETTER CAN YOU SEE ? ":
LINE a$
660 IF CODE a$<>le THEN LET w(t)=1

```



```

700 NEXT t
999 REM Analyse results
1000 FOR f=1 TO 9: IF w(f)=1 THEN LET bl=bl+1
1010 NEXT f
1020 FOR f=10 TO 18: IF w(f)=1 THEN LET gr=gr+1
1030 NEXT f
1040 FOR f=19 TO 24: IF w(f)=1 THEN LET re=re+1
1050 NEXT f
1100 BORDER 7: PAPER 7: CLS
1110 PRINT AT 0,0: INK 2: FLASH 1: "Results..
.. "
1120 PRINT *****
1130 IF bl>2 THEN PRINT " INK 1;r$(1): GO TO 1150
1140 IF bl>0 THEN PRINT " INK 1;r$(2)
1150 IF gr>2 THEN PRINT " INK 4;r$(3): GO TO 1170
1160 IF gr>0 THEN PRINT " INK 4;r$(4)
1170 IF re>2 THEN PRINT " INK 2;r$(5): GO TO 1310
1180 IF re>0 THEN PRINT " INK 2;r$(6)
1190 FOR f=1 TO 24: IF w(f)=1 THEN GO TO 1310
1200 NEXT f
1300 PRINT "" WELL DONE""""Your colour vision seems to be""""perfectly O.K."
1310 FOR f=1 TO 30: BEEP .03,f: BEEP .01,50-f: NEXT f: PAUSE 0: RUN
4999 REM Data for test
5000 RESTORE 5010: FOR f=1 TO 24: READ x,y: LET x(f)=x: LET y(f)=y: NEXT f

```

```

5010 DATA 2,8,3,10,1,24,1,40,2,40,3,41,1,56,1,48,3,58,2,41,2,43,6,37,4,61,1,32,2,33,3,33,3,34,4,53,2,56,3,57,0,17,2,19,5,20,2,48
6999 REM Instructions
7000 LET i$=" This is a program that will not only test you for colour blindness but will also demonstrate shades and colours rarely seen on the Spectrum."
7010 LET j$=" For a comprehensive test you will be asked to identify 24 letters from background colours on the screen."
7020 LET k$=" At the end of this test your vision will be analysed by the computer and the results printed"
7030 LET r$(1)="You are colour blind to BLUE"
7040 LET r$(2)="Slightly colour blind to BLUE"
7050 LET r$(3)="You are colour blind to GREEN"
7060 LET r$(4)="Slightly colour blind to GREEN"
7070 LET r$(5)="You are colour blind to RED"
7080 LET r$(6)="Slightly colour blind to RED"
8999 REM Graphics
9000 RESTORE 9010: FOR f=USR "a" TO USR "a"+7: READ a: POKE f,a: NEXT f
9010 DATA 85,0,85,0,85,0,85,0
9499 REM M/code
9500 RESTORE 9510: FOR f=30000 TO 30018: READ a: POKE f,a: NEXT f
9510 DATA 33,64,88,1,64,2,237,91,66,117,115,35,11,120,177,32,249,201,0
9600 RETURN
9999 SAVE "Colour B1" LINE 1

```

ON YOUR MARKS



THE RACE BEGINS ON
COMMODORE 64, AMSTRAD &
SPECTRUM ON OCTOBER 8TH.

To celebrate their new Home Education titles Acornsoft are offering big discounts on their previous education titles to HCW's BBC owners

SPECIAL OFFER

This week we are able to offer our BBC owning readers an outstanding discount on a number of products in the Acornsoft Education range.

Elsewhere in this issue, you will find a review of the new Acornsoft Home Education releases and you should appreciate the thought and programming skill which goes into the range of programs which Acornsoft publish.

We offer here a range of programs from the well established Education department of Acornsoft which are designed for use in both the school and the home. There are programs for all ages from the pre-school child to the A-level student and they cover areas as diverse as Chemistry, Physics, Maths and even art.

The basic offer is a straight £2 off any package which you wish to order. You can claim as many £2's as you like, there is no limit to the savings you can make.

The first two of the programs haven't actually been advertised yet. Gas Laws and Symmetry, only available on disc, are aimed at the middle years of schooling and contain both teaching sequences and testing routines. Symmetry has three programs, each of which explores a different area of this fascinating subject. There is also a fully detailed manual with activity sheets and teachers notes.

Gas Laws is both a teaching and demonstration package which can be used as the basis of both a testing and an experimental situation. The graphic displays are true to life and there can be a random element built into the experiment readings. Both these disc packages will be sold at £14.95 but with this offer they can be yours for £12.95.

There are three Chemistry cassettes which are aimed at the examination student during their preparation for O or A level. Chemical Analysis deals with the identification of both elements and compounds from a standard battery of tests. Chemical Simulations is one

way of running a number of experiments without the difficult aspects of safety and equipment. The three programs cover infra-red spectroscopy, acid titrations and organic

functional group analysis. Chemical Structures allows the student to represent the bonding of molecules on screen and makes the 3-D shapes of compounds easy to understand.

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Title (Media)	Order Form Quantity	Normal Price	Offer Price	Cost
Symmetry (Disc)		14.95	12.95	
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Temperature Control Simulations (Cass)		9.95	7.95	
One to Nine (Cass)		9.95	7.95	

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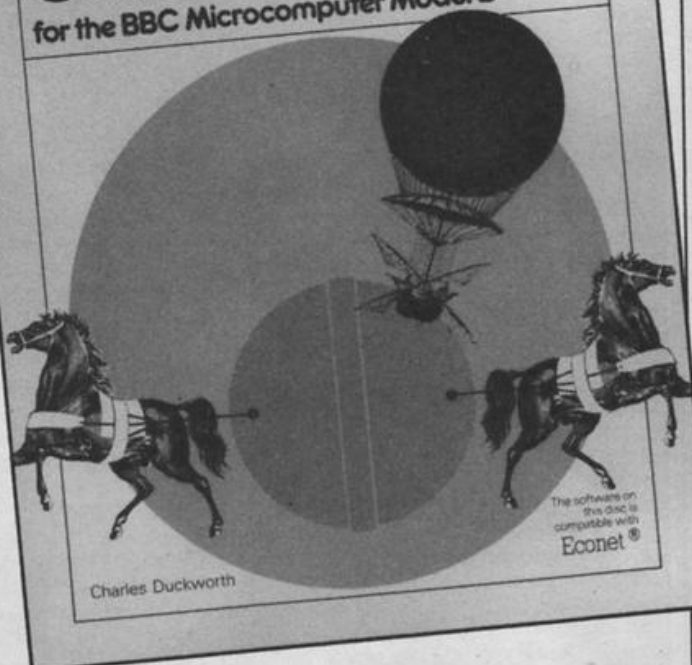
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ACORN SOFTWARE EDUCATION

Gas Laws

for the BBC Microcomputer Model B



The Chemistry cassettes are normally £13.80 each but with this offer they can be mailed to your door for just £11.80 each.

The final series of cassettes are priced at just £7.95 after your discount has been deducted and they span a wide range of users and subjects.

Temperature Control Simulation is a graphical program which allows you to monitor the body temperature of a cyclist when you change the conditions under which he labours. The package comes with a 22 page booklet in which the biological background is fully explained.

One to Nine is a program for pre-school children which aims to give them experience in the basic skills of numeracy. The program covers the numbers up to nine in an attractive graphical manner and there is a function key strip which makes the input of answers simplicity itself. The program will even talk, if the appropriate chips are fitted.

Finally, we can offer a program with no subject bias whatsoever! The Examiner allows anyone, without any knowledge of programming, to set up examinations and tests in the form of multiple choice questions. The computer will then administer the questions to a group of students and keep full details of their scores and performance.

It struck us that the package could be the basis of a computerised Trivia Quiz but we're sure you have far better and more laudable ideas. The three titles above have a normal price of £9.95.

So make your choice and fill in the coupon here to claim your discounts. The form, and your cheque or postal order, should be mailed to the address given on the coupon NOT to the usual editorial address.

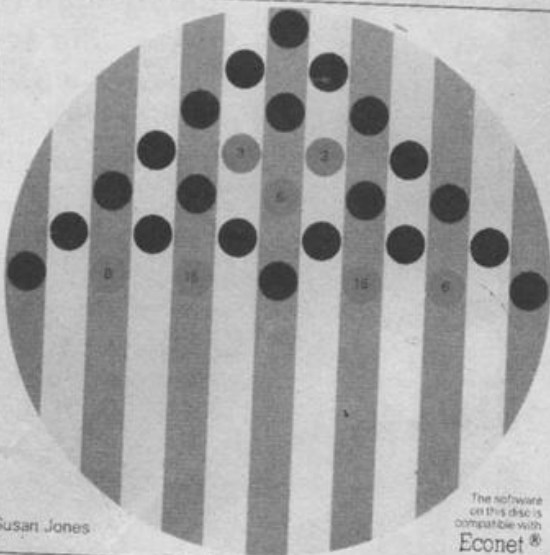
Just think, you can save the cost of your HCW four times over with your first purchase and then the sky's the limit.

ACORN SOFTWARE EDUCATION



Symmetry

for the BBC Microcomputer Model B



Susan Jones

The software on this disc is compatible with Econet®

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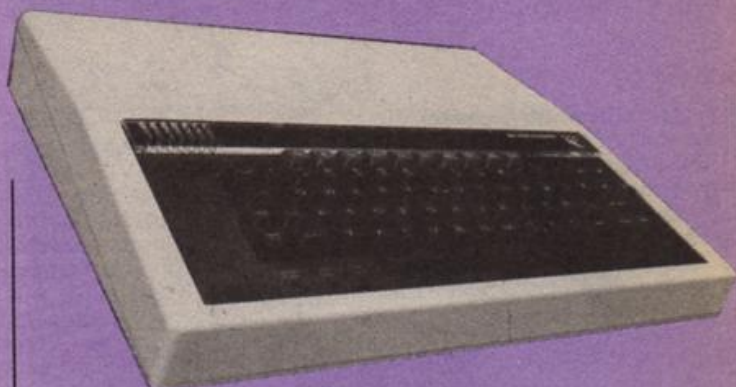
WHOPPAS

HCW regular Shingo Sugiura makes title screens a doddle with his big character program for your BBC

MODE 7 is often used for the title page for commercial games programs. If you make games yourself, you'll probably know how effective large chunky characters can be in giving a professional finish to your programs (whether it is in fact professional is another matter!). However, producing these big characters is a very tedious process. You have to design them on a piece of graph paper and then look up the code for each character at the back of your user's guide. This utility will solve all of your problems. It allows you to print a string of characters in enlarged print in MODE 7. The characters are in fact enlarged versions of the standard character set but it still looks very professional.

Type in the listing carefully and save it before you run it. This is very important because any mistakes in the program could, and probably would, corrupt the program. Now RUN it. If all goes well, the name of a certain magazine should pop up on the screen. If the screen goes blank and nothing happens, check the listing line by line.

Each character takes up 12 "normal" character spaces and can be any character including user defined ones. The printing itself is incredibly fast, in fact virtuously instantaneous because the whole routine is written in machine code and direct access is made to the



screen memory. However, because of this, it will not work across the tube (i.e. with the second processors).

Using the routine is very easy. I have written a BASIC procedure which handles all the messy part for you! All you have to do is include a line PROCprint (string,X,Y) where string is the text you want to print. Make sure that it isn't too long as I haven't included any error checking. Although the machine won't crash, the result is rather messy with the text overwriting anything on the next few lines.

X and Y are the co-ordinates at which you want the string to be printed. These take the normal values, i.e. 0 to 39 for X and 0 to 24 for Y (although it would be stupid to use values greater than 35 for X or 20 for Y since one enlarged character takes up 4 x 3 characters).

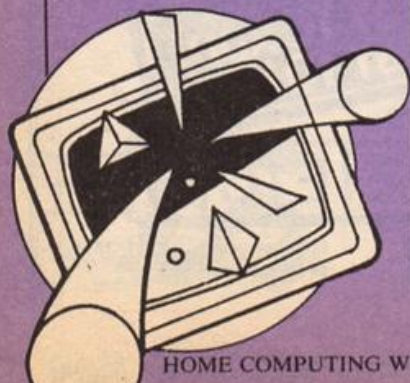
One thing you must deal with before you can use this utility is the graphics control codes. These must be placed at the beginning of the text (usually convenient to place them on column 0). These control codes take the values from 145 to 151. See the example included in the main program.

To include the utility in your own programs, you need the procedure which assembles the machine code and the procedure which handles the actual printing, i.e. DEFPROCprint and DEFPROCassemble. At the beginning of your program, the machine code must be assembled once by calling PROCEDURE assemble. So include the line "PROCassemble" somewhere near the beginning of your program and make sure it is called only once.

Now printing large text in MODE7 is simplicity itself!

How it works

- 10-40 REM statements
- 50 select MODE 7
- 60-80 set up MODE 7 screen for graphics by printing graphics control codes on column zero
- 90 set up text window
- 100 call procedure which assembles machine code routine
- 110-130 print the name of a well known magazine in enlarged print
- 150 start of procedure which allows the user to access machine code routine from BASIC neatly
- 160 store string to be printed in convenient location in memory
- 170 call machine code routine
- 180 end of this procedure
- 190 start of procedure which assembles the machine code routine
- 200-210 define constants
- 220 reserve space for machine code routine and work space
- 250 start of routine
- 260 call routine which calculates the screen address of the co-ordinate at which the character is to be printed
- 290-300 push X register onto stack
- 310 get a character
- 320-330 check whether the end of the string has been reached, i.e. check for &D
- 340 print enlarged character
- 350-360 retrieve X-register from stack
- 370 increment X register
- 380-440 calculate screen address for next character
- 450 go back for more characters
- 480 end of main routine
- 490 this routine handles the printing of the enlarged character
- 500 call routine which reads the definition of the character whose ASCII code is held in the accumulator
- 510-630 print enlarged character
- 640-1000 this routine calculates the screen address of the character position whose co-ordinates are held in the X and Y registers
- 1010-1090 This routine reads the definition of the character whose ASCII code is held in the accumulator
- 1100-1190 this routine prints one row of the enlarged character
- 1360 function which returns the lowest significant byte of a 16 bit number
- 1370 function which returns the highest significant byte of a 16-bit number



```

10REM MODE7 Large print routine
20REM By Shingo Sugiura
30REM July 1985
40
50MODE7
60FOR Y%=0 TO 23
70PRINT TAB(0,Y%)CHR$(RND(6)+144);
80NEXT Y
90VDU28,1,24,39,0
100PROCassemble
110PROCprint("Home",9,0)
120PROCprint("Computing",1,6)
130PROCprint("Weekly",5,12)
140END
150DEFPROCprint(string$,X%,Y%)
160$string=$string$
170CALLmacro
180ENDPROC
190DEFPROCassemble
200osword=&FFF1:osbyte=&FFF4:oswrch=&FFEE
210address=&70:temp=&80
220DIM code 200,work 10,string 100
230FOR pass=0 TO 2 STEP 2: P%=code
240OPT pass
250macro
260 JSR calc_ad \Calculate screen address for character
270 LDX#0 \Initialise Pointer
280loop
290 TXA \Push X register onto stack
300 PHA
310 OOAstring,X \Get a character from string
320 CMP#&D $d of string?
330 BEQ eos \If so, go to "eos"
340 JSR letter \Otherwise, print it enlarged
350 PLA \Restore register
360 TAX
370 INX
380 SEC
390 LDA address \Update screen address for next character
400 SBC#116
410 STA address
420 LDA address+1
430 SBC#0
440 STA address+1
450 BNE loop
460eos
470 PLA
480 RTS \Back to Basic
490letter
500 JSR read_def \The following routine prints a character
510 LDX#1
520main
530 JSR row
540 CLC
550 LDA address
560 ADC#40
570 STA address
580 LDA address+1
590 ADC#0
600 STA address+1
610 CPX#10
620 BNE main
630 RTS
640calc_ad
650 STY address \This routine calculates the memory address

```

```

660 STY temp \of a character position
670 LDA#0 \at coordinate X,Y
680 STA address+1
690 ASL address
700 ROL address+1
710 ASL address
720 ROL address+1
730 CLC
740 LDA address
750 ADC temp
760 STA address
770 LDA address+1
780 ADC#0
790 STA address+1
800 ASL address
810 ROL address+1
820 ASL address
830 ROL address+1
840 ASL address
850 ROL address+1
860 CLC
870 TXA
880 ADC address
890 STA address
900 LDA address+1
910 ADC#0
920 STA address+1
930 CLC
940 LDA address
950 ADC#0
960 STA address
970 LDA address+1
980 ADC #&7C
990 STA address+1
1000 RTS
1010read_def
1020 STA work
1030 LDX#FNlo(work)
1040 LDY#FNhi(work)
1050 LDA#&A
1060 JSR osword
1070 LDA#0
1080 STA work+9
1090 RTS
1100row
1110 LDY#0
1120row_loop
1130 JSR getchar
1140 STA (address),Y
1150 INY
1160 CPY#4
1170 BNE row_loop
1180 INX:INX:INX
1190 RTS
1200getchar
1210 ASL work,X
1220 ROR A
1230 ASL work,X
1240 ROR A
1250 ASL work+1,X:ROR A
1260 ASL work+1,X:ROR A
1270 ASL work+2,X
1280 ROR A:LSR A
1290 ASL work+2,X
1300 ROR A:LSR A
1310 CLC
1320 ADC#&A0
1330 RTS
1340NEXT
1350ENDPROC
1360DEFFNlo(number)=number MOD 256
1370DEFFNhi(number)=number DIV 256

```

HERBERT'S WORLD

There's problems galore in this superb adventure from P Lewis on the Amstrad. So hold onto your hats as we enter a parallel universe

Whilst doing a spot of weeding on his allotment, Herbert falls through a tiny hole in the space-time continuum and finds himself in a parallel universe. Well, nearly parallel. More to the point, he finds himself in the clutches of the evil troll.

The troll grabs his lapels, gazes into his eyes, (a dreadful experience for both parties!) and says, "Find my four treasures and leave them at the World's End or I will feed you to Tiddles!" Tiddles is a twelve foot sabre toothed tiger, so Herbert feels inspired to try!

Unfortunately, Herbert is none too bright (speaking Trollish is his only accomplishment) so perhaps you would think for him!

How it works

10-110 introduction to game
130 DIM arrays
140-160 read in data
170 initial location
180-610 main control loop
280-590 word recognition
290-330 change location
400-600 direct to various sub-routines according to input
620-1540 various subroutines for allowed inputs
1550-2190 data
2200-2210 another game?
2220-2330 save game
2340-2450 load saved game

Words understood

Directions (n, s, e, w) QUIT, TAKE, GET, GRAB, PICK, INVENTORY, DROP, LEAVE, UNSCREW, USE (very useful command!), STRANGLE, WEAR, ENTER, EAT, RUB, KILL, ATTACK, PAT, STROKE, GIVE, OPEN, UNLOCK, LOCATION, SWIM, LIGHT, SWITCH, SAVE, LOAD, SUFFOCATE.

The game can be SAVED onto tape and a saved game LOADED.

LOCATION prints the location description at any time, INVENTORY lists what objects you are carrying. Input commands as two word sentences e.g. KILL SNAKE.

Variables

loc\$ location descriptions	np% new position
z\$ input instructions	a% number of objects
a\$,b\$,c\$,d\$ substrings z\$	t% object locations
t\$ object descriptions	j% number of objects being carried
s\$ objects	nl% number of locations
rt\$ R.H. word of input	n,v,x,h,y short-term variables
g\$ general strings	ak%,an%,ab%,af%,ac%,ae%,
k% word recognition	ad%,ah%,am%,ag%,as% flags
g% number general strings	to show various events have happened
m% map	
p% current position	

```

10 REM** Herbert at the World's End**
20 REM** An Adventure for the **
30 REM** CPC 464 **
40 REM** <C> P. Lewis, June 85 **
50 MODE 1:INK 1,24:INK 0,1:INK 2,20:INK 3,6:P
APER 0:PEN 1
60 PRINT " Whilst doing a spot of weeding on
his allotment, Herbert falls through a tiny
hole in the space-time continuum and finds hi
mself in a parallel universe. Well,nearly par
allel."
70 PRINT " More to the point, he finds himse
lf in the clutches of the Evil Troll."
80 PRINT " The Troll grabs his lapels, gazes
into his eyes (a dreadful experience for bot
h parties!) and says,"
90 PRINT " "Find my four treasures and leave
them at the World's End, or I will feed you
to Tiddles!" "
100 PRINT " Tiddles is a twelve foot sabre to
othed tiger, so Herbert feels inspired to try
!"
110 PRINT "Unfortunately, Herbert is none too
bright (speaking Trollish is his only accomp
lishment) so perhaps you would think for him!
":PRINT
120 a%=16:j%=0:nl%=41:g%=8
130 DIM loc$(nl%),m%(nl%,4),t$(a%),t%(a%),s$(
a%),g$(g%)
140 FOR x=1 TO nl%:READ loc$(x):FOR y=1 TO 4
: READ m%(x,y):NEXT y:NEXT x
150 FOR x=1 TO a%:READ t$(x),t%(x),s$(x):NEX
T x
160 FOR x=1 TO g%:READ g$(x):NEXT x
170 p%=1:PRINT "I am "+loc$(p%)
180 IF p%=23 AND t%(6)=23 AND t%(8)=23 AND t%
(12)=23 AND t%(15)=23 THEN PRINT " Congratula
tions! You have completed the mission! Your r
eward is a trip home- Have a nice day!":EN
D
190 IF p%=29 THEN PRINT "I'm on top of a wate
rfall! I'm swept over!! Aaaaghh!":ak%=1
200 IF p%=13 AND t%(7)=0 THEN PRINT "Has no-o
ne ever told you that going through a cave sy
stem with a boat is incredibly hard work?"
210 IF p%=12 AND j%>0 AND an%=0 THEN PRINT "I
t's very confusing here. Should we drop thing
s to mark the path?"
220 IF an%=1 THEN PRINT :PRINT "Sorry! My mis
take!":an%=2
230 IF ak%=1 THEN PRINT "Oh, dear, a bad case
of terminal death!":GOTO 2200
240 IF ak%=2 THEN PRINT "Phew! That was close
!":ak%=10
250 IF ak%=3 THEN PRINT "Who IS this woman?!"
:ak%=4
260 PRINT "What do you want to do?":PRINT:k%
=0
270 f=FRE("")
280 INPUT z$:z$=LOWER$(z$):a$=LEFT$(z$,1):b$=
LEFT$(z$,2):c$=LEFT$(z$,3):d$=LEFT$(z$,4):PRI
NT
290 IF a$="n"AND LEN(z$)=1 OR c$="nor" OR d$=
"go n" THEN c%=1:k%=1

```





```

300 IF a$="s" AND LEN(z$)=1 OR c$="sou" OR d$=
"go s" THEN c%=2:k%=1
310 IF a$="e" AND LEN(z$)=1 OR c$="eas" OR d$=
"go e" THEN c%=3:k%=1
320 IF a$="w" AND LEN(z$)=1 OR c$="wes" OR d$=
"go w" THEN c%=4:k%=1
330 IF c%>0 THEN np%=m%(p%,c%):IF np%=0 THEN
PRINT "You can't go that way":c%=0
340 GOSUB 1470
350 IF p%=11 AND c%=2 OR p%=25 AND c%=1 THEN
GOSUB 1520
360 IF p%=19 AND c%=4 AND ag%=0 THEN GOSUB 15
30
370 IF (p%=15 AND c%=1 AND ab%=0) OR (p%=30 A
ND c%=4 AND ab%=0) THEN GOSUB 1540
380 IF p%=6 AND c%=2 AND af%=0 THEN PRINT "I
can't see in the dark!":c%=0
390 IF c%>0 AND np%<>0 THEN PRINT "I am "+l0
c$(np%):p%=np%:c%=0:GOSUB 620
400 IF c$="qui" THEN GOTO 2200

```

```

410 IF c$="tak" OR c$="get" OR c$="gra" OR
c$="pic" THEN k%=1:GOSUB 640
420 IF c$="inv" THEN k%=1:GOSUB 800:ELSE IF
c$="rea" THEN k%=1:GOSUB 1420
430 IF c$="dro" OR c$="lea" THEN k%=1:GOSUB
850
440 IF d$="unsc" THEN k%=1:GOSUB 930
450 IF c$="use" THEN k%=1:GOSUB 960:ELSE IF
d$="stra" THEN k%=1:GOSUB 990
460 IF c$="wea" THEN k%=1:GOSUB 1110:ELSE:IF
(d$="go i" OR c$="ent") AND p%=23 THEN k%=1
:PRINT "I can't go in there! It's a den of vi
ce and iniquity- and the beer's awful!"
470 IF c$="eat" THEN k%=1:GOSUB 1140
480 IF c$="rub" THEN k%=1:GOSUB 1170
490 IF r$="off" THEN k%=1:PRINT "Well, really
! You ";z$;" yourself!"
500 IF c$="kil" OR c$="att" THEN k%=1:GOSUB
1190
510 IF c$="pat" OR d$="stro" OR c$="tic" THEN

```

```

k%=1:PRINT g$(1)
520 IF c$="giv" THEN k%=1:GOSUB 1250: ELSE IF
c$="suf" THEN k%=1:PRINT "What shall I use?"
530 IF c$="ope" THEN k%=1:GOSUB 1350
540 IF d$="unlo" THEN k%=1:GOSUB 1370
550 IF c$="loc" THEN k%=1:PRINT "I'm "+loc$(
p%):GOSUB 620
560 IF d$="swim" THEN k%=1:PRINT "The water's
freezing!"
570 IF c$="lig"OR d$="swit" THEN k%=1:GOSUB
1400
580 IF c$="sav" THEN k%=1:GOSUB 2220
590 IF c$="loa" THEN k%=1:GOSUB 2340
600 IF k%=0 THEN PRINT "I don't understand"
610 GOTO 180
620 FOR x= 1 TO a%:IF t%(x)=p% THEN PRINT "I
see "+t$(x)+" here!"ELSE 630
630 NEXT x:RETURN
640 IF j%=4 THEN PRINT "I can't carry anymore
!":RETURN
650 IF r$="swo" AND as%=0 AND p%=3 THEN PRINT
"It's screwed in!":RETURN:ELSE IF r$="flo" A
ND (p%=26 OR p%=36) THEN PRINT "Certainly not
!":RETURN
660 IF r$="che" AND p%=9 THEN PRINT "Too heav
y!":RETURN:ELSE IF r$="sig" AND p%=23 THEN PR
INT g$(2):RETURN
670 IF r$="dia" AND ac%=1 AND p%=9 THEN PRINT
"The snake hisses and strikes!": ak%=2:RETUR
N
680 IF r$="cus" AND p%=17 THEN PRINT "Too bul
ky!":RETURN:ELSE IF r$="com" AND (p%=37 OR p%
=38 OR p%=39) THEN PRINT "No! It smells!":RET
URN
690 IF r$="eme" AND p%=16 AND ae%=0 THEN PRIN
T "The troll glares menacingly!":RETURN
700 IF r$="tro" AND p%=16 THEN PRINT g$(1):RE
TURN:ELSE IF r$="spi" AND p%=33 THEN PRINT g$
(1):RETURN
710 IF r$="pea" AND p%=33 AND ad%=0 THEN PRIN
T "The spider's eyes glitter coldly and it wa
ves its hairy legs!":RETURN
720 IF r$="rub" AND ah%=0 THEN PRINT "The old
woman threatens me with a spade!":RETURN
730 IF r$="spa" AND p%=37 THEN GOSUB 990:RETU
RN
740 FOR x= 1 TO a%
750 IF t%(x)=p% AND LEFT$(s$(x),3)=r$ THEN GO
SUB 790 ELSE 760
760 NEXT x
770 IF q%>0 THEN q%=0: RETURN
780 IF q%=0 THEN PRINT "I see no "+rt$+" her
e!":RETURN
790 PRINT "O.K":j%=j%+1:q%=q%+1:t%(x)=0:RETUR
N
800 PRINT "I have ": n%=0
810 FOR x=1 TO a% :IF t%(x)=0 THEN v=1
820 IF v=1 THEN PRINT t$(x):v=0:n%=1
830 NEXT x: IF n%=0 THEN PRINT "Nothing!"
840 RETURN
850 IF r$="wel" AND t%(2)=0 THEN am%=0
860 IF r$="boa" AND t%(7)=0 THEN ab%=0
870 n=0: FOR x=1 TO a%
880 IF t%(x)=0 AND LEFT$(s$(x),3)=r$ THEN v=1
:t%(x)=p%:n=n+1:j%=j%-1
890 IF v=1 AND (p%=27 OR p%=28) THEN PRINT "T
he "+rt$+" sinks without trace.":t%(x)=99:v=
0:ELSE IF v=1 AND p%=12 THEN PRINT "The "+rt$
+" disappears into the bog!":t%(x)=99:v=0:an%
=1:ELSE IF v=1 THEN PRINT "O.K.":v=0
900 NEXT x
910 IF n=0 THEN PRINT "I don't have a "+rt$
920 RETURN
930 IF p%=3 AND t%(3)=0 THEN PRINT "The screw
s come undone and the sword falls to the grou
nd!":t%(9)=3:as%=1:loc$(3)="standing in front
of a stone table. There is a sword-shaped hol
e in it.":RETURN

```

```

940 IF p%=3 AND t%(3)<>0 THEN PRINT "I don't
have a screwdriver!":RETURN
950 IF p%<>3 THEN PRINT g$(2):RETURN
960 FOR x=1 TO a%
970 IF LEFT$(s$(x),3)=r$ AND t%(x)<>0 THEN P
RINT "I can't! I have no "+rt$+" to use!":RET
URN
980 NEXT x
990 IF r$="scr" THEN GOSUB 930:RETURN
1000 IF r$="wel" THEN GOSUB 1110:RETURN
1010 IF r$="key" THEN GOSUB 1370:RETURN:ELSE
IF r$="lam" THEN GOSUB 1400:RETURN
1020 IF r$="swo" AND p%=9 AND t%(9)=0 THEN PR
INT "The snake sways away from the flashing b
lade and strikes!":IF ak%=0 THEN ak%=2:RETURN
: ELSE IF ak%=10 THEN ak%=1:RETURN
1030 IF r$="clo" AND p%=9 AND t%(10)=0 THEN P
RINT "The snake suffocates and dies!":ac%=2:t
%(6)=9:loc$(9)="in a crypt. There is an open
treasure chest here. A snake lies dead beside
it.":PRINT "I'm "+loc$(9):GOSUB 620:RETURN
1040 IF r$="swo" AND p%=16 AND t%(9)=0 THEN P
RINT "The troll snatches the sword and flings
it to the ground!":t%(9)=16:j%=j%-1:RETURN
1050 IF r$="clo" AND p%=16 AND t%(10)=0 THEN
PRINT "The troll blows his nose on it and dro
ps it!":t%(10)="an embroidered cloth (slightl
y soiled)":t%(10)=16:j%=j%-1:RETURN
1060 IF r$="boa" AND (p%=15 OR p%=30) AND t%
(7)=0 THEN PRINT "What a good idea!":ab%=1:RE
TURN
1070 IF r$="boa" AND (p%=11 OR p%=25) THEN PR
INT "I can't ROW over that!":RETURN
1080 IF r$="swo" AND p%=33 AND t%(9)=0 THEN P
RINT "The spider disintegrates into a pool of
green goo!":ad%=1:loc$(33)="in a huge chambe
r with massive cobwebs. A pool of nameless gr
een sludge rots in a corner.":PRINT "I'm "+lo
c$(33):GOSUB 620:RETURN
1090 IF p%=37 AND (r$="swo" OR r$="han" OR r$
="spa" OR r$="wom") THEN PRINT "She fends me
off with the spade! She's battering me with t
he spade! Aaagh!":IF ak%=0 THEN ak%=2:RETURN
:ELSE IF ak%=10 THEN ak%=3:RETURN:ELSE IF ak%
=4 THEN ak%=1:RETURN
1100 PRINT g$(2): RETURN
1110 IF r$="wel" AND t%(2)<>0 THEN PRINT "I d
on't have any!":RETURN
1120 IF r$="wel" AND t%(2)=0 THEN PRINT g$(6)
:am%=1:c%=0:RETURN
1130 PRINT g$(4):RETURN
1140 IF r$="tur" AND t%(1)=0 THEN PRINT "Wha
t, raw and all covered in dirt? "+g$(4):RETUR
N:ELSE IF r$="tur" AND t%(1)<>0 THEN PRINT g$
(3):RETURN
1150 IF r$="car" AND t%(13)=0 THEN PRINT "Del
icious! And my eyesight is so much better now
!":af%=1:j%=j%-1:t%(13)=99:RETURN:ELSE IF r$=
"car" AND t%(13)<>0 THEN PRINT "I have none!":
RETURN
1160 PRINT g$(5):RETURN
1170 IF r$="lam" AND t%(4)=0 THEN PRINT g$(6)
+" It looks much cleaner now!":RETURN:ELSE IF
r$="lam" AND t%(4)<>0 THEN PRINT g$(3):RETUR
N
1180 PRINT g$(4):RETURN
1190 IF r$="goa" AND p%=19 THEN PRINT g$(2)+
" I'm a member of the R.S.P.C.A!":RETURN:
1200 IF r$="sna" AND p%=9 THEN PRINT g$(8)+
"+g$(1):RETURN
1210 IF r$="tro" AND p%=16 THEN PRINT "How?":
RETURN
1220 IF r$="spi" AND p%=33 THEN PRINT g$(8)+
"+g$(1):RETURN
1230 IF r$="wom" AND p%=37 THEN PRINT "Yeah!
I'm all for doing in the old bat! What shall
I do? Strangle her?":RETURN

```

```

1240 PRINT g$(5):RETURN
1250 IF r$="tur" AND p%=19 AND t%(1)=0 THEN P
PRINT "The goat eats them greedily":ag%=1:t%(
1)=99:j%=j%-1:RETURN:ELSE IF r$="tur" AND t%
(1)<>0 THEN PRINT g$(3):RETURN
1260 IF r$="ted" AND t%(11)<>0 THEN PRINT g$(
3):RETURN
1270 IF r$="ted" AND p%=16 AND t%(11)=0 THEN
PRINT "'Teddy!' screams the Troll and hugs th
e bear to his bosom":ae%=1:t%(11)=99:j%=j%-1:
loc$(16)="in a small badly decorated bedroom.
A troll sits cuddling a teddy.":PRINT "I'm "
+loc$(16):GOSUB 620:RETURN
1280 IF r$<>"ted" AND r$<>"clo" AND p%=16 THE
N PRINT "The troll looks puzzled and gives it
back":RETURN
1290 IF r$="clo" AND p%=16 THEN GOSUB 1050:RE
TURN
1300 IF r$="ros" AND p%=37 AND t%(14)=0 THEN
PRINT "'You toad!' screams the old hag,'You p
icked my prize blooms!' She hits me with a ba
g of compost.":t%(14)=37:j%=j%-1:t$(14)="tram
pled roses":RETURN
1310 IF r$="ros" AND t%(14)<>0 THEN PRINT "Wh
at roses?":RETURN
1320 IF r$="see" AND p%=37 AND t%(16)=0 THEN
PRINT "'Onions!' cackles the old bat and sna
tches the packet":t%(16)=99:j%=j%-1:t%(15)=37
:loc$(37)="outside a garden shed. An old lady
is planting onion seeds.":ah%=1:PRINT "I'm "
+loc$(37):GOSUB 620:RETURN
1330 IF r$="see" AND t%(16)<>0 THEN PRINT "I
have none!":RETURN
1340 PRINT g$(7):RETURN
1350 IF r$="che" AND p%=9 AND ac%=0 THEN PRIN
T "It's locked!":RETURN
1360 PRINT g$(5):RETURN
1370 IF p%<9 THEN PRINT g$(1):RETURN:ELSE I
F t%(5)<>0 AND (r$="che" OR r$="key") THEN
PRINT "I don't have a key":RETURN
1380 IF t%(5)=0 AND (r$="che" OR r$="key")
AND p%=9 THEN loc$(9)="in a crypt. There is
an open treasure chest here! A snake lies coi
led on a pile of diamonds inside it!":PRINT "
I'm "+loc$(9):ac%=1:RETURN
1390 PRINT g$(5):RETURN
1400 IF r$="lam" AND t%(4)=0 THEN PRINT "It d
oesn't seem to work":RETURN:ELSE IF r$="lam"
AND t%(4)<>0 THEN PRINT g$(3):RETURN
1410 PRINT g$(2):RETURN
1420 IF p%=23 THEN PRINT "It says 'The World'
s End Public House.":RETURN
1430 IF p%=7 THEN PRINT "It says, 'Who stole
Troll's teddy?":RETURN
1440 IF p%=18 THEN PRINT "It says,":PRINT "'
Roses are red,violets are blue":PRINT "Give h
er a present and she'll love you!":RETURN
1450 IF p%=14 THEN PRINT "It says, 'Kilroy was
here, and he suffocated it!":RETURN
1460 PRINT "There isn't anything to read!":RE
TURN
1470 IF LEN(z$)>6 THEN 1480 ELSE 1510
1480 FOR h=1 TO LEN(z$)
1490 IF MID$(z$,h,1)=" " THEN rt$=RIGHT$(z$,
(LEN(z$)-h)):r$=LEFT$(rt$,3)
1500 NEXT h
1510 RETURN
1520 IF am%<1 THEN PRINT "I'm on the edge of
a marsh! I'm not putting my clean, little fee
t in that!":c%=0:GOSUB 620:RETURN:ELSE IF am
%=1 THEN t$(2)="a pair of filthy wellies":am%
=2:RETURN:ELSE IF am%=2 THEN RETURN
1530 PRINT "A large billy goat bars the way!":
c%=0:RETURN
1540 PRINT "Walk on water? I can't do that!":
c%=0:RETURN
1550 DATA in a small clearing in a wood.A pat
h leads to the south,0,2,0,0

```

```

1560 DATA walking along a path in the wood.
A track crosses at right angles,1,5,4,3
1570 DATA standing in front of a stone table.
There is a glittering sword stuck in it!,0,0,
2,0
1580 DATA beside a rushing river,1,5,23,0
1590 DATA walking along a cliff edge,2,6,0,0
1600 DATA in the entrance to a small cave,5,7
,0,0
1610 DATA in a low muddy passage.A message is
chalked on the wall!,6,8,0,0
1620 DATA at the entrance to a huge chamber,0
,9,13,17
1630 DATA in a crypt. There is a gigantic tre
asure chest here!,8,10,0,18
1640 DATA in a dimly lit cave entrance.It sm
ells nasty!,9,11,14,0
1650 DATA on the edge of a stinking marsh,0,1
2,0,10
1660 DATA crossing a smelly marsh,11,0,0,24
1670 DATA in a hall of stalactites,15,16,0,0
1680 DATA in a cupboard.A message is scratche
d on the door!,0,0,0,10
1690 DATA on the banks of a deep pool,27,13,0
,0
1700 DATA in a small badly-decorated bedroom.
A troll sits sullenly in a corner,0,0,0,8
1710 DATA in a pleasant room full of cushions
,0,0,7,0
1720 DATA in a very narrow dirty passage.A me
ssage is painted on the wall!,0,9,0,19
1730 DATA in a field,20,11,0,26
1740 DATA lost in a dark forest,21,20,20,20
1750 DATA lost in a dark forest,21,21,22,21
1760 DATA lost in a dark forest,3,22,6,22
1770 DATA outside a pub with a creaking woode
n sign.,23,35,23,4
1780 DATA on the edge of a disgusting marsh,0
,25,12,0
1790 DATA on a grassy bank,24,0,0,0
1800 DATA in a pretty flower garden. An overf
ed goat sleeps nearby.,40,0,19,0
1810 DATA in a dinghy. An underground river j
oins the pool here.,28,15,0,0
1820 DATA in a dinghy by a small shingle beac
h.,29,27,30,0
1830 DATA in a dinghy. The current is very st
rong here!,0,0,0,0
1840 DATA standing on a small shingle beach..
0,0,31,28
1850 DATA in a damp passage,32,0,0,30
1860 DATA in a passage full of glistening cob
webs,33,31,35,0
1870 DATA in a huge chamber hung with massive
cobwebs. An ENORMOUS spider hangs from a thr
ead as thick as a rope.,34,32,0,0
1880 DATA at a dead end,0,33,0,0
1890 DATA in a grassy gully,0,0,36,32
1900 DATA on a hillside covered in flowers,37
,0,0,35
1910 DATA outside a garden shed. An ugly old
woman is potting up cuttings.A red ruby glitt
ers on the window-sill!,38,36,0,23
1920 DATA beside a large compost heap.,39,37,
0,0
1930 DATA upto my knees in smelly compost!,39
,39,38,39
1940 DATA in a hedge,0,26,41,0
1950 DATA still in a hedge,40,40,41,41
1960 DATA lots of turnips,19,turnip
1970 DATA a pair of little red wellies,26,wel
lies
1980 DATA a screwdriver,2,screwdriver
1990 DATA a little brass lamp,5,lamp
2000 DATA a golden key,25,key
2010 DATA sparkling diamonds,99,diamonds
2020 DATA a small glass-fibre boat,14,boat
2030 DATA an ornate emerald,16,emerald

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```

2040 DATA a glittering sword,99,sword
2050 DATA an embroidered cloth,17,cloth
2060 DATA a battered teddy,15,teddy
2070 DATA a perfect glistening pearl,33,pearl
2080 DATA a bunch of carrots,4,carrots
2090 DATA red roses,36,roses
2100 DATA a red ruby,99,ruby
2110 DATA a packet of onion seeds,6,seeds
2120 DATA You must be joking!
2130 DATA What a ridiculous suggestion!
2140 DATA I don't have one!
2150 DATA What a ludicrous idea!
2160 DATA Don't be silly!
2170 DATA That's better!
2180 DATA Nothing happens
2190 DATA With my bare hands?
2200 PRINT: PRINT "Would you like to play aga
in? (Y/N)"
2210 INPUT za$: za$=LOWER$(za$):IF za$="y" TH
EN RUN :ELSE IF za$="n" THEN PRINT "Thankyou
for playing-goodbye!":END :ELSE 2210
2220 CLS: PRINT:PRINT "Please insert tape no
w":PRINT:PRINT:PRINT "Press the <SPACE BAR> w
hen ready"
2230 dd$=INKEY$:IF dd$<>" " THEN 2230
2240 PRINT: PRINT:PRINT "Ready to save data f
ile now"
2250 OPENOUT("data")

```

```

2260 FOR x=1 TO n1%:PRINT #9,loc$(x):NEXT x
2270 FOR x=1 TO n1%: FOR y=1 TO 4: PRINT#9,m%
(x,y):NEXT y:NEXT x
2280 FOR x=1 TO a%:PRINT #9,t$(x):NEXT x
2290 FOR x=1 TO a%:PRINT #9,t%(x):NEXT x
2300 FOR x= 1 TO a%:PRINT #9,s$(x):NEXT x
2310 FOR x=1 TO g%:PRINT #9,g$(x):NEXT x
2320 PRINT #9,p%,ak%,an%,ab%,af%,ac%,ae%,ad%,
ah%,am%,ag%,as%
2330 CLOSEOUT:CLS:RETURN
2340 CLS: PRINT :PRINT "Please insert tape no
w.":PRINT:PRINT"Press <SPACE BAR> when ready.
"
2350 dd$=INKEY$:IF dd$<>" " THEN 2350
2360 PRINT:PRINT "Ready to load data file now
"
2370 OPENIN("data")
2380 FOR x=1 TO n1%:INPUT #9,loc$(x):NEXT x
2390 FOR x= 1 TO n1%:FOR y= 1 TO 4:INPUT #9,m
%(x,y):NEXT y:NEXT x
2400 FOR x=1 TO a%: INPUT #9,t$(x):NEXT x
2410 FOR x= 1 TO a%: INPUT #9,t%(x): NEXT x
2420 FOR x= 1 TO a%:INPUT #9,s$(x):NEXT x
2430 FOR x= 1 TO g%: INPUT #9,g$(x):NEXT x
2440 INPUT #9,p%,ak%,an%,ab%,af%,ac%,ae%,ad%,
ah%,am%,ag%,as%
2450 CLOSEIN: CLS:PRINT "I'm "+ loc$(p%):GOSU
B 620: RETURN

```



Programs are always supplied on cassette and are accompanied by full details of the program variables, how the program works and any hints on conversion you can offer. Please type these details double spaced. Listings are helpful but not essential. What is vital is that the programs should be completely error free, so please double check.

Always use a coupon firmly fixed to the back of your envelope, and fully complete and enclose the cassette inlay card.

We are particularly interested in programs with less than 100 actual lines of BASIC. All submissions are acknowledged.

Send your programs to HCW!

Use this cassette inlay card for your program

Name _____

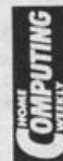
Address _____

Expansion needed _____

Special loading instructions _____

Program title

Machine



Program submission

Complete this coupon and stick it firmly on the back of your envelope

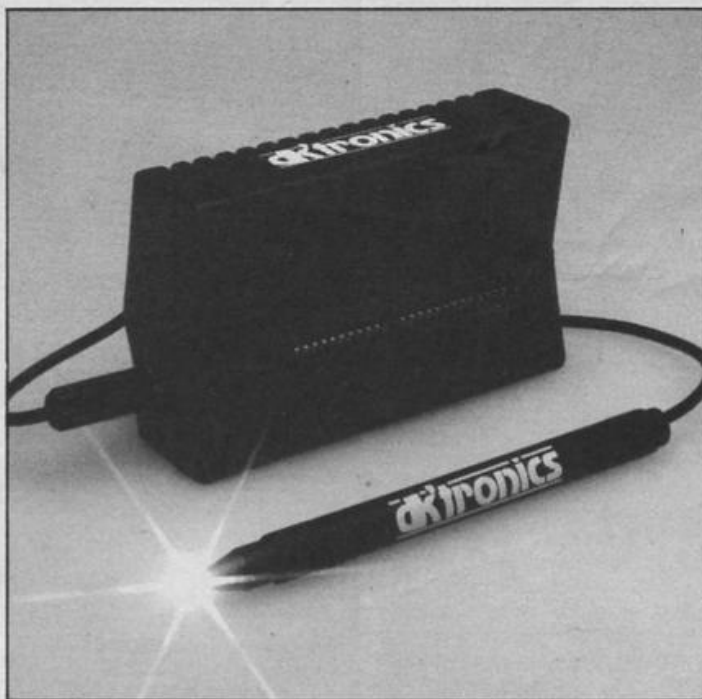
Name _____

Address _____

Program title _____ Machine _____

PERIPHERAL

Find out why David Holmes tripped the light fantastic when he reviewed dk'tronics Graphics Light Pen for the Amstrad CPC464.



Graphics Light Pen

Brighten up your computing time with this super package from dk'tronics.

It comprises three pieces of electronic wizardry, a concise manual, and the Light Pen — which looks like a fat ball-point attached to a yard of wire.

The pen plugs into the interface which connects directly to the centronics port at the rear of the computer. A through bus allows for additional interfaces such as speech synthesisers and discs.

With all this — and more to come — things are becoming a little crowded at this port. However it does all fit together nicely — and all components work in troublefree unison.

For the uninitiated, the position of a light pen held

against your monitor screen is returned as X, Y coordinates. So by knowing the position of a menu item on the screen it can be selected simply by pointing at it with the light pen.

The third part of this package is a software cassette containing a painting and drawing program that enables you to put the light pen to immediate use.

The care with which this program has been written is obvious at every step and is doubtless the best implementation I have seen.

Full screen pictures are easily accomplished, with the light pen speeding up many of the processes. Better editing facilities would have made life easier for those error prone amongst use. Erasure using the paper colour to overwrite isn't always as simple as it sound.

The number of menus incorporated in the drawing program emphasise further the usefulness of the light pen.

User friendly throughout, I found the ikons a nice touch, these are graphic representations of each new menu option and are used instead of the more boring textual lists. Using ikons means there is no language barrier, so the very young will be perfectly at home once they have been told what to do.

Well-documented, the instruction book leaves nothing unexplained apart from how to use the software without the light pen or interface connected! Well try using the control key along with the numeric keypad, you'll be pleasantly surprised.

Not being write protected, the software can readily be transferred to disc, thus reducing the five minute load time to as many seconds.

Listed in the manual for you to type in are two programs that allow your art work to be dumped to a printer. One of these is for the Amstrad printer, and the other is for Epson compatible printers.

The authors have gone to extraordinary lengths within the manual to explain in line by line detail how these dump routines work, so most printers will be capable of using these facilities.

However, if like mine, your printer requires that BIT 7 should be set when sending high resolution data, then there is no way at all that the Amstrad computer can communicate in graphics mode. Owners of Amstrad and Epson type printers thereby having the advantage over us lesser mortals!

Is there an inexpensive multi-colour printer somewhere over the rainbow? **D.H.**

Price: £24.95

Manufacturer: dk'tronics

Address: Unit 6, Shire Hill Ind Est, Saffron Walden, Essex





Tampering for fun

I am writing to say that I entirely agree with Michael Gross of Rugeley. Software is far too expensive. I own an Amstrad 464 and I am appalled at the quality of some of the games on sale at £8-£10. There are some excellent quality games like Knightlore for example but others are simply not worth the high prices charged. If programs were cheaper it would not be worthwhile for pirates to copy them.

Elaborate protection schemes will be unnecessary if prices were around £2-£3. If protection devices are introduced I think there will be a public backlash in the form of protests from honest people who only make their own back-ups and people generally voting with their wallets and refusing to buy such "protected" programs.

Part of the fun of computing for me is messing around with commercial programs. I bought a card game program and completely re-designed the screen layout. The program is excellent but the colours and layout were poor so I changed them. If programs were protected then this kind of fun would be denied me.

Full name and address supplied

It should perhaps be remembered that rock bottom prices for software means the software houses will have little capital to plough into developing new games and consequently the general quality and quantity of games on the market would almost certainly be reduced.

Re-enter the Dragon

Your magazine is one of the only ones supporting the Dragon by regularly reviewing Dragon software. Please continue.

Michael Knapen, Gwent, Belgium

Ace service

I have been a regular reader of HCW since issue 1. One sees many letters complaining about poor service handed out by computer manufacturers, so having been at the receiving end of some superb service, I thought I'd better give out a bouquet where due.

I own a Commodore DPS 1101 Daisywheel printer which packed up on me completely one evening. Living within 15 miles of Commodore at Corby I decided to go over in person with my printer. I left it with them at 11.40 the next morning and two days later rang them for information as to its progress and was amazed to find that it was ready and was being despatched to me that afternoon.

Commodore services had turned it round in less than two days. Is this a record?

Geoff Crowther, Leicester

Shouldn't it be a joystick rather than a bouquet in the computer industry?

Is the 664 boring?

I note the silly remark made by an Amstrad spokesman about the "boring old 664", (HCW 125). Boring enough apparently to launch the 664 in May when it is now obvious the 6218 was completed. Boring enough to charge the inflated price for the 664 (£340 and £450) which is now being cut by £140.

Boring enough to accept the profit but not give boring old 664 owners a free upgrade to the 6128 and still leave them £40 out of pocket.

Come off it Amstrad you mustn't treat your most enthusiastic followers like a bunch of idiots, although I must be one to buy the boring old 664.

E Hills, Romford

Top marks

Great magazine and getting it every week is a treat. I love the way you do the scoring for your game reviews after buying some of the other mags and being baffled by the way they do their scoring.

I find that assessing originality is very confusing. They mark the new and better flight games with very low marks which is stupid because after receiving one flight game the rest cannot be original.

Please keep up the good work.

Neil Wells, Hunstanton

Beyond a joke

I feel I should write in to tell you about the awful idea of having jokes in a computer magazine. Having bought your magazine for the last few months, I find that I enjoy reading it — until, in the odd issue, I catch sight of the most ridiculous jokes your readers send in.

Certain readers (who shall remain nameless) do nothing all day but send in their sick jokes to you. Maybe these comedians should realise that this is a computer magazine and not a local joke mag.

On the bright side, I find that HCW has the best up-to-date reviews on the latest releases, although the marking system could be improved. The ventures column is very interesting and is well written. HCW has improved its look with more glossy pages although a few more would be even better.

I have a C64 and it does have its advantages and disadvantages, just like any make of computer, and I am all for the idea that HCW have stopped printing letters which criticise a certain home computer.

Can anyone please tell me how to recover my C64 without losing the program, when it crashes?

Robert Inman, Nottingham

Home Computing Weekly,
No.1 Golden Square,
London W1R 3AB.

LETTERS PAGE



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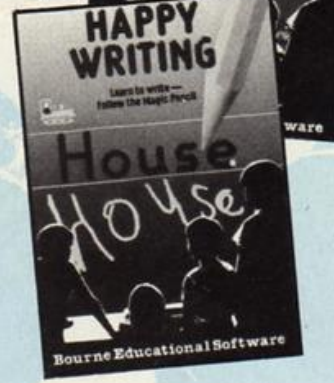
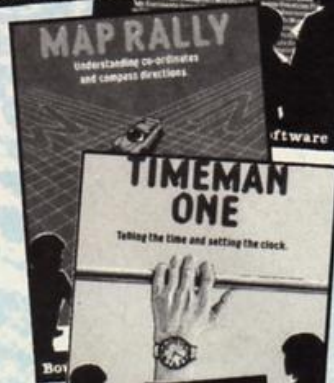
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HIGH PERFORMANCE PROGRAMS

Start the new school year in style by entering this weeks competition to win a satchel bursting selection of software from Bourne Educational Software

OSPREY



You could be going back to school with a head start if you win one of Bourne Education's bumper packages of educational software.

Ten prizes of eight cassettes, worth up to £800, chosen from Bourne Education's range for the BBC, Electron and Amstrad are waiting for the winners of our spot the difference competition based on the cover of Osprey! — the game that puts you in the role of protector of this threatened bird of prey.

Osprey! tests your ability to keep egg stealers at bay, prevent hunters from shooting the birds and controlling wayward tourists.

Other titles in the Bourne education range include Map Rally, which teaches the rudiments of understanding directions from a compass and plotting coordinates, World Wise, a geography program that covers the entire world, and Animal, Vegetable, Mineral in which the computer has to guess the object you have thought of.

Happy Letters uses computer graphics to aid letter recognition, Happy Writing encourages writing skills under the guidance of the "magic pencil" and Happy Numbers brings a colourful touch to the first steps in counting and number recognition.

Timeman One and Timeman Two are programs designed to give a full understanding of the clock and telling the time, in-

cluding the complexities of the 24 hour clock. Wordhang is based on the familiar hangman game and uses full colour graphics to enhance this word-guessing favourite.

All you have to do to win an eight pack of Bourne Education software is to study the two pictures of the Osprey and look out for the differences.

How to enter

Look carefully at the two illustrations of the Osprey and decide how many differences there are between them. Write the number of differences clearly on the entry coupon and send to Osprey competition, Home Computing Weekly, No 1 Golden Square, London W1R 3AB to arrive by first post on Friday 20th. Please also remember to print clearly the number of differences you have found on the back of your envelope.

The rules

- Entries will not be accepted from employees of Bourne Educational Software Ltd, Argus Specialist Publications and Alabaster Passmore & Sons. This restriction also applies to employee's families and agents of the companies.
- The How to enter section forms part of the rules.
- The editor's decision is final and no correspondence can be entered into.
- Don't forget to look out for a special offer from Bourne Educational Software in next weeks HCW.



Osprey Competition

Entry Coupon

Name _____

Address _____

_____ post code _____

Number of differences found _____

Machine owned BBC / Acorn / Amstrad

Complete clearly and fully — if you win a prize this coupon will become your address label. Post to: Osprey Competition, Home Computing Weekly, No 1 Golden Square, London W1R 3AB. Closing date: first post Friday 20 September 1985. Don't forget to follow closely the advice on how to enter and remember to put the number of differences found on the back of your envelope.



ATARI ST

520ST

POWER WITHOUT THE PRICE

ATARI 520ST SPECIFICATION

MEMORY
512K RAM (512,288 bytes)
19K ROM expandable to 320K
Port for add-in 128K plug-in ROM cartridges
300K TOS operating system

GRAPHICS
Individually addressable 32K bit-mapped screen with 3 screen graphics modes:
320x200 pixels in 16 colours (low resolution)
640x200 pixels in 4 colours (med resolution)
640x400 pixels in monochrome (high res)
16 shades of grey in low res mode
512 colours available in low-medium res
8 levels of each in med, green and blue

ARCHITECTURE
4 custom designed chips
GLUE Chip - MMU Memory Mgrment Unit
DMA Controller - Graphics Processing Unit
16/32 bit Motorola 68000 processor at 8MHz
eight 32 bit data registers
eight 32 bit address registers
18 bit data bus/24 bit address bus
7 levels of interrupt/56 instructions
14 addressing modes/5 data types

DATA STORAGE
High speed hard disk interface
Direct memory access 1.33 Mbytes per second
CD (Compact Disc) interface
Built in cartridge access
Dedicated floppy disk controller

DISK DRIVE
500K (formatted) 5 1/4" floppy d/drive
349K (formatted) storage capacity

SOUND AND MUSIC
Sound Generator
Frequency control from 30KHz to above audible
3 voices (channels) in wave shaping sound
in addition to a noise generator
Separate frequency and volume controls
Dynamic envelope controls
ADSR (Attack, Decay, Sustain, Release)
Noise generator
MIDI interface for external music synthesizers

KEYBOARD
Separate keyboard microprocessor
Standard QWERTY typewriter styling
Ergonomic angle and height
90 keys including 10 function keys
Numeric keypad - 18 keys including ENTER
One touch cursor control keypad

MONITOR
12" screen - high res monochrome monitor
640x400 monochrome resolution
Note: Some of the above specifications are pre-release and may therefore be subject to change

VIDEO PORTS
Display - Low Resolution - 40 columns
Med/High Res - 40/80 plus cols
Medium res RGB (Red/Green/Blue) output
High resolution monochrome (Black & White)

COMMUNICATIONS
Bidirectional centronics parallel interface for printers, or modems capable of input/output
RS232C serial modem/printer interface
VTSS Terminal Emulation Software
Maximum Baud Rate up to 19,200
High speed hard disk interface
Floppy disk controller (Western Digital)
2 joystick ports (one for 2 button mouse)
MIDI interface for external music synthesizers

GEM WIMP ENVIRONMENT
WIMP - Window Icon Mouse Pop-down menu
Two button mouse controller
Icons/Pull down menus/Windows
GEM VCI - Virtual Device Interface
GEM AES - Application Environment Services
GEM BST - Bit Shift Transfer
Real time clock & calendar

SOFTWARE
GEM environment
with user friendly Macintosh style operation
TOS - Tramiel Operating System
Atari's own system based on CP/M 86K with hierarchical directory & file structure plus a host of MS DOS & UNIX command structures
BOS - Business Operating System
To run any standard BOS business programs
GEM desktop
with GEM PAINT graphics mgmt system and GEM WRITE word processor
Personal BASIC and DR Logo
originally written by Digital Research (DR)
Very much like those on other machines
except for the extensive use of pull down menus, mouse control and windows

VARIOUS
Dimensions: 470mmx340mmx100mm
Indicative external power supplies
Expansion: 3 1/2" floppy disk drives 500K/1,000K
(two drives can be connected)
3 1/2" 15MB hard disk
CD (compact laser disc)
Dot matrix & d/wheel prints (black)
Thermal dot matrix (colour)
RGB & monochrome monitors

LANGUAGES
BASIC & LOGO included
Many others will soon be available, including: Assembly, BCPL, C, Cobol, Compiled Basic, Lisp, Modula-2 and Pascal

MACINTOSH v F16 v 520ST

"Imagine a Fat Mac - the 512K Apple Macintosh - but with a bigger screen, a far bigger keyboard with numeric keypad, cursor and function keys, and colour. That gives you some idea of what the Atari 520ST is like, except for two important things. First the Atari seems faster. Second the Atari system is about one third of the price." June 1985 - Jack Schofield - PRACTICAL COMPUTING

FEATURES OF BASIC SYSTEM	APPLE MACINTOSH	F16	ATARI 520ST
Price includes B/W Monitor	YES	NO - extra £200	YES
Keyboard size mm (LxDxH)	330x147x50	450x167x28	470x240x60
Keyboard size in (LxDxH)	13x5 1/2 x 2	17 1/2 x 6 1/2 x 1	18 1/2 x 9 1/2 x 2 1/2
3 1/2" D/Drive (Unformatted)	500K	500K	500K
3 1/2" D/Drive (Formatted)	399K	315K	349K
WIMP (Window, Icon, Mouse...)	Apple	ACT - Activity	GEM
Real-time Clock	YES	YES	YES
Polyphonic Sound Generator	YES	NO	YES
RS232 Serial Port	YES	YES	YES
Centronics Parallel Printer Port	NO	YES	YES
Dedicated Floppy Disk Controller	NO	YES	YES
Hard Disk DMA Interface	NO	YES	YES
Full stroke keyboard	YES	YES	YES
Number of keys on keyboard	59	92	95
Numeric Keypad	NO	YES (16 Keys)	YES (18 keys)
Cursor Control Keypad	NO	YES	YES
Function keys	NO	10	10
16-bit processor	68000	Intel 8086	68000
Processor running speed	8MHz	4.77MHz	8MHz
RAM size	512K	256K	512K
Number of graphics modes	1	4	3
Number of colours	Monochrome	16	512
Max Screen Resolution (pixels)	512 x 342	640 x 256	640 x 400
Mouse included	Single Button	NO - extra £95	Two Button
Replaces External Power Pack	NO	NO	YES
Cartridge Socket	NO	NO	YES
Joystick Ports	NO	NO	YES (two)
MIDI Synthesiser Interface	NO	NO	YES
Monitor Size	9"	9" - extra £200	12"
RGB Video Output	NO	YES	YES

System Cost with: Mouse - Monochrome Monitor - 512K RAM - 500K Disk Drive	C2595-VAT	C595-VAT	C883-VAT
Price of basic system (exc VAT)	Included	Included	Included
+ Mouse	Included	£200-VAT	Included
+ Monochrome Monitor	Included	£200-VAT	Included
+ Expansion to 512K RAM	Included	£295-VAT	Included
Price of complete system (exc VAT)	C2595-VAT	C1185-VAT	C883-VAT

PRICE	rounded in/out VAT	£2,984	£1,362	£749
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"Atari's new corporate image as an aggressive low cost computer maker is likely to mirror that of Commodore where Mr. Tramiel established the maxim that 'Business is War'." August 21st 1984 FINANCIAL TIMES

"This is the only personal computer I know of that comes with a MIDI interface as standard." Peter Bright, March 1985 PERSONAL COMPUTER WORLD

"The (GEM) version running on the Atari 68000 machines will have the additional advantage of leaving the PC version standing." April 6th 1985 PERSONAL COMPUTER NEWS

"It would seem that GEM offers the ideal operating system." March 7th 1985 POPULAR COMPUTING WEEKLY

"I found it (GEM) extremely easy to use and was very impressed with the way in which it disguises the unfriendly hardware and operating systems lurking under the surface." Peter Bright, Feb 1985 PERSONAL COMPUTER WORLD

PRESS COMMENT

"The electronics in the machine are a work of art... The heart of the 520ST is a Motorola 68000, one of the most powerful 16-bit processors around and in many respects it is close to being a 32-bit chip... when the machine appears in the shops, it'll be at the front end of the queue to buy one." Peter Bright June 1985 PERSONAL COMPUTER WORLD

"This machine is significantly more powerful than an IBM PC... It's possible to design a sure-fire winning machine, this is it." May 11th 1985 PERSONAL COMPUTER NEWS

"... the use of GEM makes the new range of Atari computers so similar to the Macintosh (with the added attraction of colour), that they are already being called 'Jackintoshes'." May 2nd 1985 COMPUTING

"The new Atari ST computers truly represent to the consumer what Jack Tramiel is saying - easy-to-use computing power without the price." March 1985 ANALOG COMPUTING

"It (the ST) uses the most modern technology that is affordable, in a package that gives a professional impression." May 23rd 1985 POPULAR COMPUTING WEEKLY

"The Atari ST is one of the most elegant designs I have seen... Atari has used an original and elegant method of memory management which should make the ST faster than any other PC on the market - in any price bracket... The 54K dollar question is would I go out and spend money for one? To which the only answer is 'Try and stop me!'" John Lambert July 1985 ELECTRONICS & COMPUTING

"The 520ST is technically excellent... The 520ST hardware is the new standard by which others will be judged." July 1985 YOUR COMPUTER

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Postcode: _____

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If so, which one do you own? _____

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Ynysybwl, Mid-Glamorgan,
CF37 3E

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Libraries

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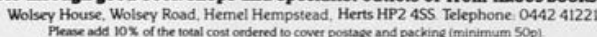
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PREFERRED CLASSIFICATION



Spectrum hints

Hungry Horace: Finish the first two screens quickly. Ignore the dots but eat the balls and keepers. On the third screen follow the keeper to the top but when it follows you down, go to the bottom and go to the small circuit and when he arrives go around in the opposite direction to him. When you get to the bell, go up to it and quickly come down and you will get 250 points every time.

Andrew Booth, Rotherham

Daley Thompson: You can achieve any score you wish on D'T's Decathlon but after a while the qualifying times become too difficult. When the game ends press any number between 0 and 9 and you should restart the game with three athletes and your old score.

Jason Saywell, Romford

Off the peg

Congratulations to Douglas Anderson of Falkirk, from Trevor Truran, originator of the Victorian Peg puzzle for the BBC in HCW 118. Douglas solved it in 38 moves and Trevor reckons that any solution under 40 is impressive.

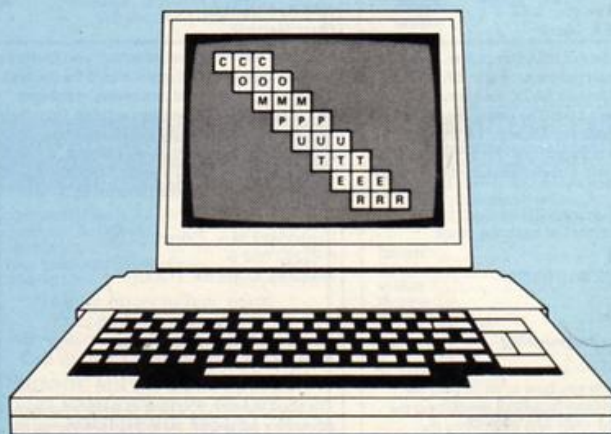
The moves are: E2, C1, B3, D2, C4, E3, C2, A3, B5, C3, E2, C1, D3, C5, A4, C3, D1, E3, C2, A3, C4, A5, B3, C1, D3, E1, C2, B4, D3, C5, A4, C3, D1, E3, C4, A3, B5, C3.

Computer Count

It wouldn't be difficult for you to get your machine to print this pretty (useless) display but you may find it a harder problem to work out how many different ways there are to spell COMPUTER.

From each letter you can move directly down or diagonally down to reach the letter below. Thus from the right hand C there are 3 different O's you can reach.

Yes, there is a somewhat easier method than trying to count all the paths — can you find it?



Reader's hi-score table

Name	Game	Machine	Score
Stephen Gray	Killer Gorilla	BBC	106,920
	Frak!	BBC	325,150
	Chuckie Egg	BBC	3,172,100
Robert Baker	TI Invaders	TI 99/4A	17,310
Simon Eyre	Thing on a String	C64	6096
Christopher Mountain	Hypersports	Spectrum	100,144
Tobias Perbedy	Big Mac	C64	89,806
	Munch Mania	C64	86,606
	Kik Start	C64	72,07 sec
Craig Jones	Cruncher	C16	109,300
	Spectipedes	C16	49,840
	BMX Racers	C16	31,150

When sending in your hi-scores please remember to include the make of your machine.

Sorcery secrets

Justin Langan from Argyll asks, "I would like to know what happens at the end of Sorcery on the Amstrad. What happens when you free the eight sorcerers as I have done several times only to be told that I have saved Bob Fred and the others and have scored 89,000? After returning to the sanctuary is anything else supposed to happen?"





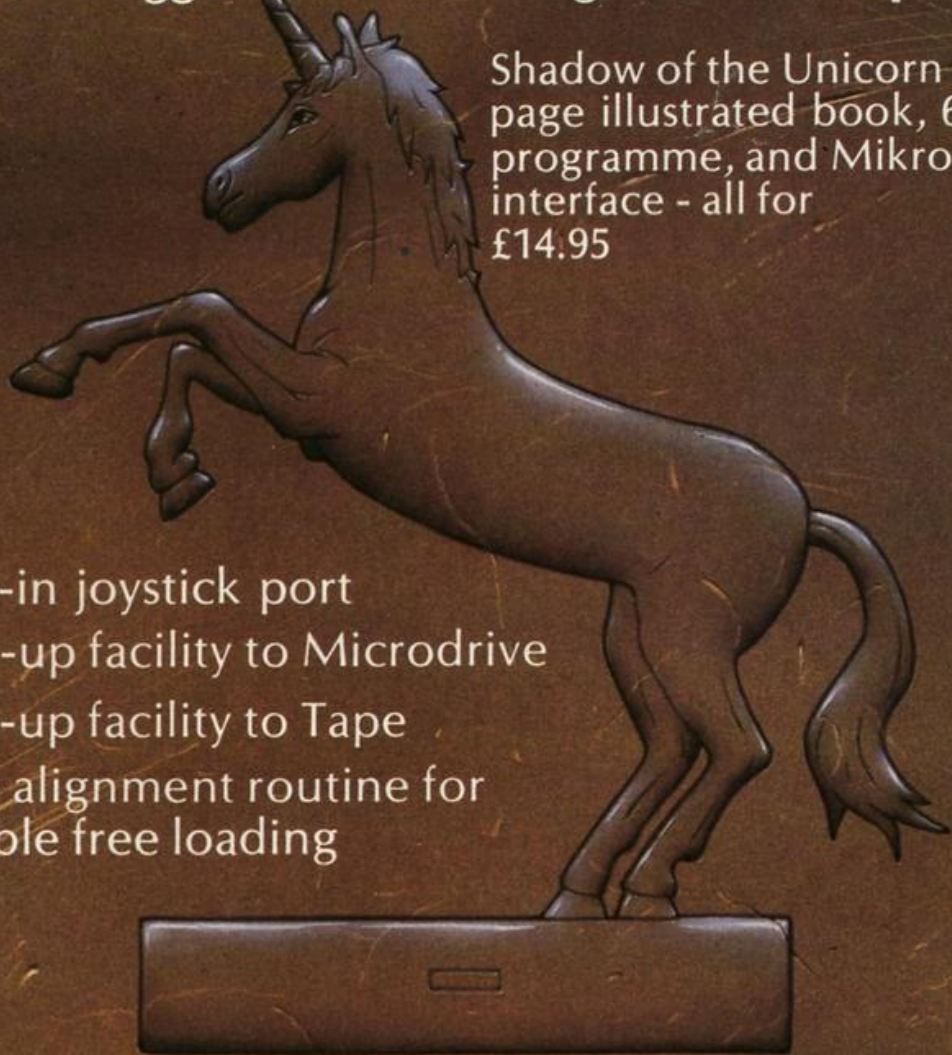
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