



**THE HIGHLY COMICAL  
APPLE MacINTOSH... 85p**

**STICKS MAY BREAK...  
Controller Review p.34**

**SABRE WOLF MAP!  
All 256 locations laid bare**

**Plus Amstrad Review/  
Letterbase/Dorkslayer  
Arcade Punch-out**

**No6  
SEPT**

**GAMES, UTILITIES  
BODGES & DODGES  
for COMMODORE 64,  
ORIC, SPECTRUM,  
VIC, and BBC 'B'!**



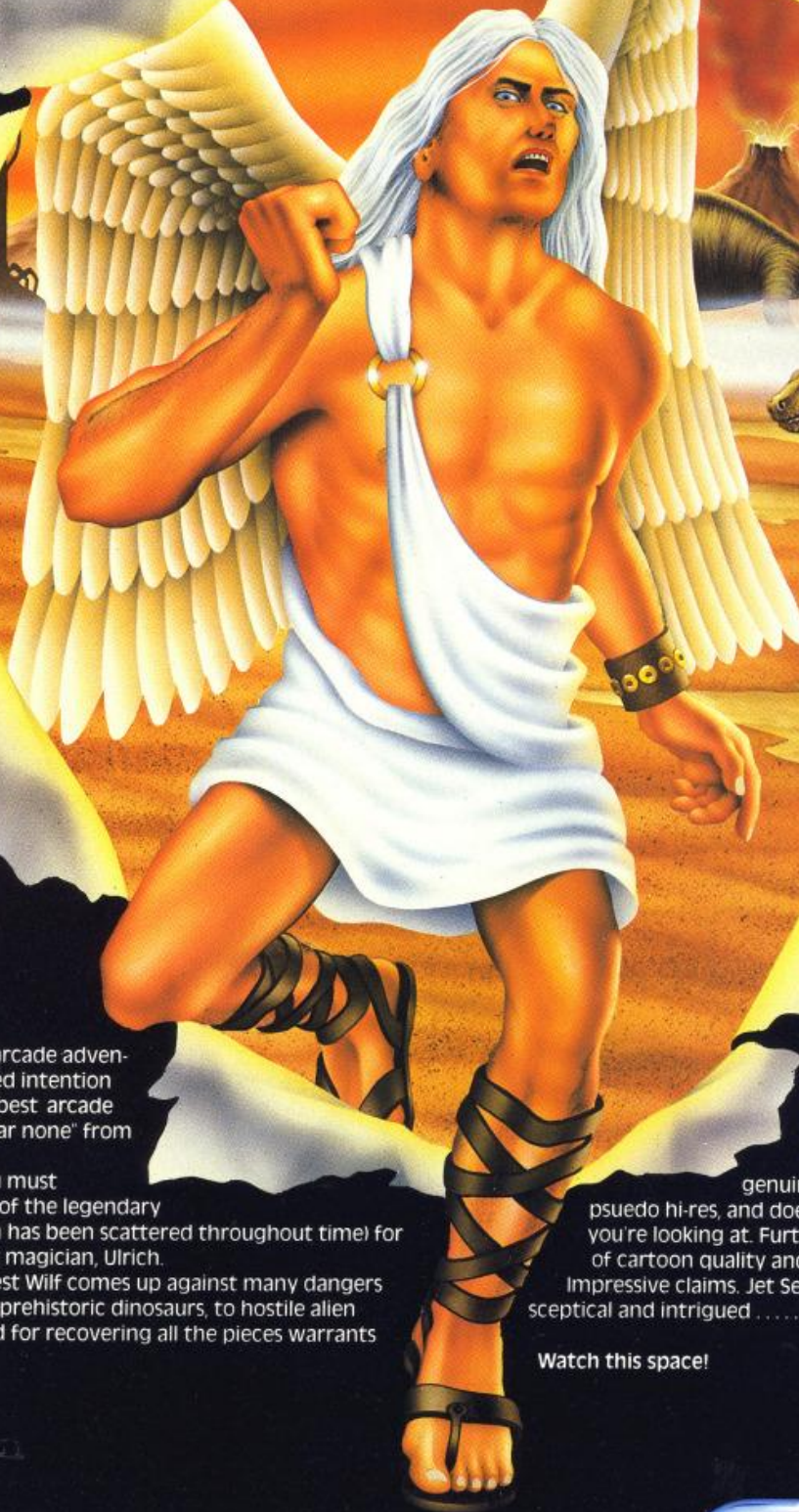
**AFTER THE CRASH**

**Atari & Imagine**

**— The End of an Era?**



# KOKOTONI WILF



'Kokotoni Wilf is an arcade adventure whose undisguised intention is to steal the title of "best arcade adventure program bar none" from Jet Set Willy.'

As Kokotoni Wilf you must recover all the pieces of the legendary Dragon Amulet (which has been scattered throughout time) for your master the great magician, Ulrich.

Throughout the quest Wilf comes up against many dangers from huge lumbering prehistoric dinosaurs, to hostile alien robots, but the reward for recovering all the pieces warrants the risk.

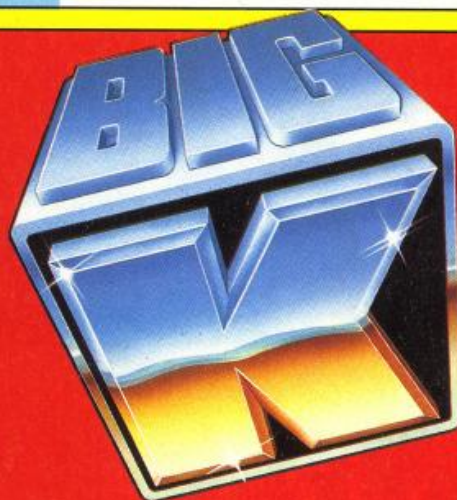
The 48K program features a number of major advances over Jet Set Willy. The games designer, Elite, stresses that each of the games 60 plus screen settings is genuinely high resolution, as opposed to pseudo hi-res, and doesn't require a title to explain what you're looking at. Furthermore, the sprite characters are of cartoon quality and exhibit their own personalities. Impressive claims. Jet Set Willy fans will no doubt feel both sceptical and intrigued . . . . .

Watch this space!

48K Spectrum and Commodore 64  
available Sat. 15th September.

# elite





Editorial Address: BIG K  
IPC Magazines Ltd., Kings Reach Tower,  
Stamford Street, LONDON SE1 9LS.  
Telephone: 01-261 5818/6249  
Advertising: 01-261 5660

## THE END IS NOT NIGH

You may have noticed that we're a bit late this month. Our apologies. The reason was a reappearance of that perennial Bug in The Great British Operating System — an Industrial Dispute. This caused a wholesale crash within the IPC mega-network, and affected hundreds of magazines, not just BIG K. However, by dint of late nights and unbelievable amounts of tepid coffee we got it together — our largest issue yet.

If you find a bug or two . . . don't call us. We already know about it.

We've also cleaned up (by popular demand) our Reviews Ratings system (see page 18-30). We hope you'll approve.

This month's Cover Story concerns the long-predicted disaster that's overtaken two archetypal computer/games companies — one American, one British (see page 43). In America some pessimists are saying It's All Over. We don't think so — though it is clear that we're going through the end of the First (or is it Second?) Age of Personal Computing. On reflection, it was probably necessary to shake out some of the old assumptions, so that the survivors can clean up their acts.

A great example of what lies just around the corner can be found on page 90. In our view, this — and not just more games — holds a clue or two to the computer future. May it arrive sooner rather than later — and, one hopes, without any more tragedies and disasters.

TONY TYLER

## CONTENTS

### GAMES PROGRAMS

LASER DEFENCE for ORIC .....	38
COMMODORE OPEN for CBM 64 .....	48
HANG GLIDER for SPECTRUM .....	52
STORM for BBC .....	58
RIVER for ATARI .....	68
CROSS FIRE for VIC-20 .....	76

### UTILITY PROGRAM

ALARM CLOCK for BBC .....	60
---------------------------	----

### SOFTWARE REVIEWS

Pick of the Month .....	18
Review Pages .....	20-30
Empires .....	101

### HARDWARE

Amstrad Review .....	84
Ikon Ultradrive .....	85

### FEATURES

Computer Magic .....	11
Vive le Computing! .....	11
Interhack .....	12
Hands-on With the Maharaja .....	27
Joystick Round-up .....	34
Micros and Movies .....	37
After the Crash .....	43
A.I. is Coming to Get You .....	83
Back in the U.S.A. ....	88

### REGULARS

On-Line News .....	3
Arcade Alley .....	40
He Wrote One .....	62
Charts .....	71
Dorkslayer! .....	74
Zip Code .....	94
Taylor-Made Graphics .....	98
Classic Games of Our Time .....	100
68000 Assembler Part 3 .....	102
Letterbase .....	108

BIG K in the land of J.R. and computer comics. p.88.



From hang  
gliding to  
meteor  
bashing, BIG  
K games  
listing, p.52  
& 42.





# SABRE WOLF

**ULTIMATE**  
**PLAY THE GAME**

48K SINCLAIR ZX SPECTRUM  
**£9.95**



## Auntie/Acorn Love Affair Smoulders On

THE BBC has renewed its contract with Acorn Computers. This puts an end to speculation that Auntie Beeb might make a new partner of Uncle Clive, or even (long shot) Cousin Commodore. The BBC micro, as we know it, stays for another four years.

The Corporation also has plans for a new TV computer series, as well

as new books and software. Although Commodore have been selling hardware like hotcakes in schools, of late, they've still a long way to go to catch up with the mighty Beeb, which claimed three-quarters of the total computers bought by schools last year.

Nice to have friends in high places.

## Subtitles are on page 94 of your Spectrum

TURNED ON by Teletext? No? Pity. Because if you were — and if you also happened to be a Spectrum owner — joy could be yours mucho pronto since OEL have now produced a Teletext adaptor for the Little Black Box From Cambridge.

Priced at a cool £145, the TTX 2000 plus all vital bits is available from OEL Ltd., North Point, Gilwilly Estate, Penrith, Cumbria. CA11 9BN.

Credibility Note: OEL are also the designers of the award-winning Prism VTX 5000 modem.

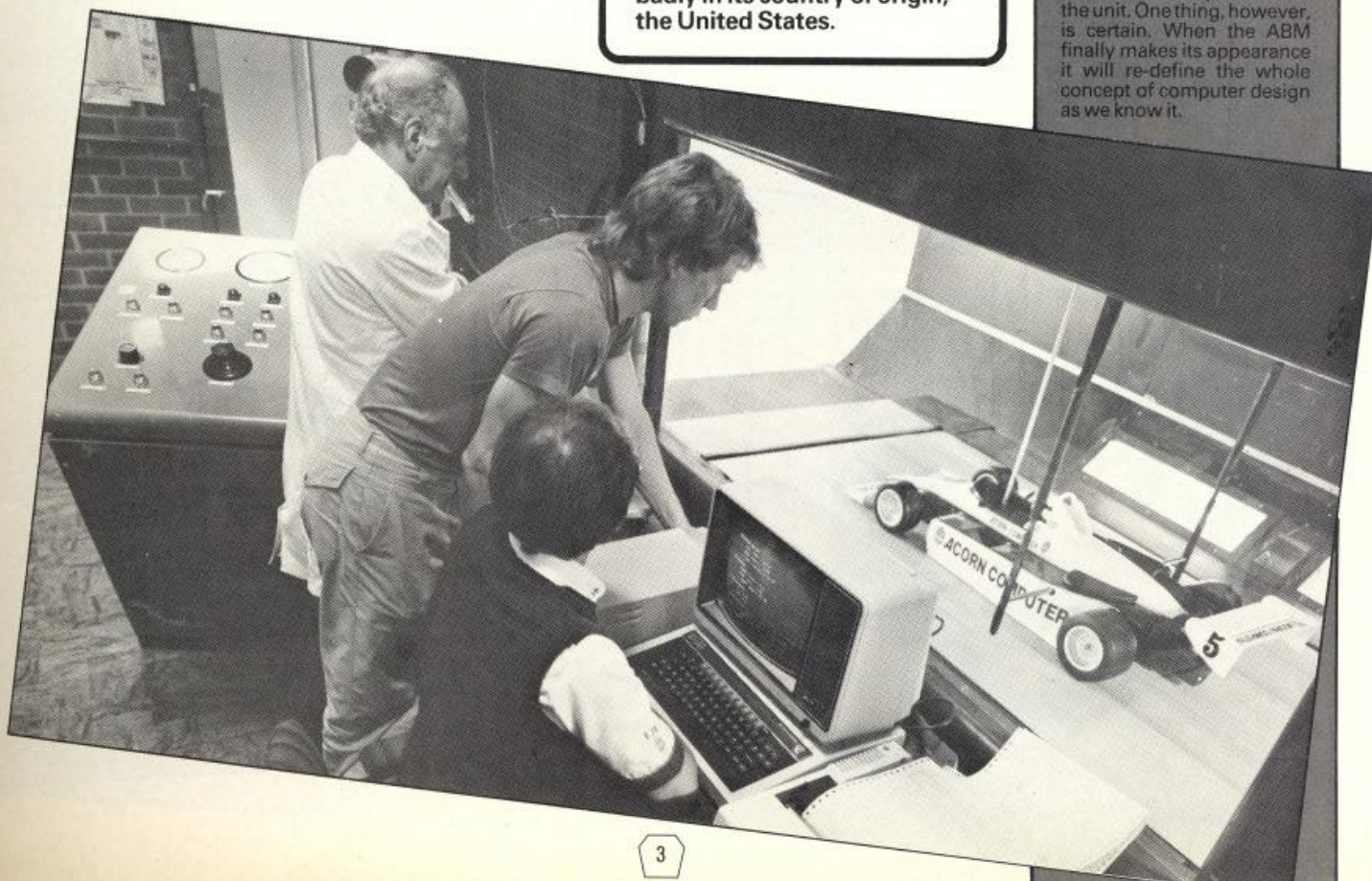
## BUG-BYTE SIGN ROBOT HAM

VETERAN SCOUSE software house Bug-Byte have successfully negotiated a deal to produce computer games based on TV's 'Automan' series. Currently being storyboarded, the first game in the series will be in the shops (Spectrum 48, CBM 64) early next month.

NB: Although a successful show in the UK, 'Automan' has reportedly bombed out badly in its country of origin, the United States.

## Acorn ABM — First Sighting

WITH RUMOURS of the long-awaited Acorn business micro growing stronger each day, BIG K believes it has uncovered photographic proof of the existence of the new wonder machine. The picture shows the ABM undergoing final evaluation at a top secret Acorn 'safe house' somewhere in England. Industry observers will be quick to note the revolutionary look of the ABM with its slick, executive styling which will undoubtedly ease transportation of the unit from one location to another. The most exciting features are the four massive disc drives, one on each corner of the unit. Obviously compatible with no other system currently on the market, the capacity of these drives can only be guessed at. Speculation surrounds the ABM's rearward configuration which some have said must be a massive heat sink, or more ominously, a possible dreaded Sinclair-type dongle which may be done away with at a later date. The ABM operator has a custom-designed work area built into the centre of the unit, between the side ROM and RAM packs. Unconfirmed reports indicate that limited protective clothing may be required to extract the full potential of the unit. One thing, however, is certain. When the ABM finally makes its appearance it will re-define the whole concept of computer design as we know it.







## ENTERPRISE BOOST

THE LONG-awaited Enterprise micro, now due for release next month, has had its market chances greatly enhanced by the news that the mighty Prism company are to distribute the machine in the UK.

Prism currently distribute 20% of all small computers sold in the UK.



"One eyeball's OK. The other looks like a  $9 \times 6$  grid."

The Count. Or possibly some other dork.



## GRANADA'S MICRO MOVE

WHEN NEXT renting a TV or video from Granada check out their range of home computers. Yup, the high street rental giant is moving micros into over 100 of their 450 stores as part of an "... Important and significant step in the company's development strategy."

Initially the micros (Spectrum, BBC, Electron, Commodore 64 and Vic 20) will be offered for sale only, although a company spokesman didn't rule out the possibility of a rental scheme, "... If the situation arises." That sort of move could lead to a massive boom in home com-

puter usage in Britain, already a market valued at around £400m in 1984.

Granada is backing up the micros with a wide range of software (games and educational) and peripherals with more being introduced all the time.

## GREAT VIDEO DISEASES OF OUR TIME — No 71

EYES CROSSED? Headache? Feeling generally lousy? Then start worrying — you're suffering from 'specular reflection' — in other words, eyestrain from continually focusing and re-focusing on, er, out-of-focus images on your screen. And it can cause permanent eye damage.

Luckily for civilisation as we know it, a Tyne & Wear company called Romag have come up with an eye-saving widget called CEAF, which is a laminated screen filter specially made to nullify all those harmful effects. CEAF is £20 — considerably less than American-made screens which have been selling (or not, as the case may be) for five times that figure. So if your right eye is looking straight at your left ear (and vice versa), contact them at Patterson St., Blaydon on Tyne, NE21 5SG, pronto.

Don't cry for K-Tel, it won't be seen on software any more. But look out for *Fronrunner*, the new name for all K-Tel games. The first two titles under the new banner will be *Storm Warrior*, a 12-screen arcade-adventure, and *Space Professor*, an educational game, both for the CBM 64.

## COUNT ON IT!

FED UP with continually being dumped back at the Starting Gate every time you lose a life in a computer game? Then relief is on the way, in the form of *Hercules*, a new 50-screen epic from a new programmer, a dude who handles himself The Count of Mantissa. On losing a life in *Hercules*, a random access routine is invoked whereby you are plunged into any one of the 50 sheets in the game.

This satisfying new lick comes to you courtesy of a new company Interdisc, financed by Island Records whose avowed aim it is to go for quality not quantity. Nice to hear of new companies still starting up.

## GARBAGE IN..

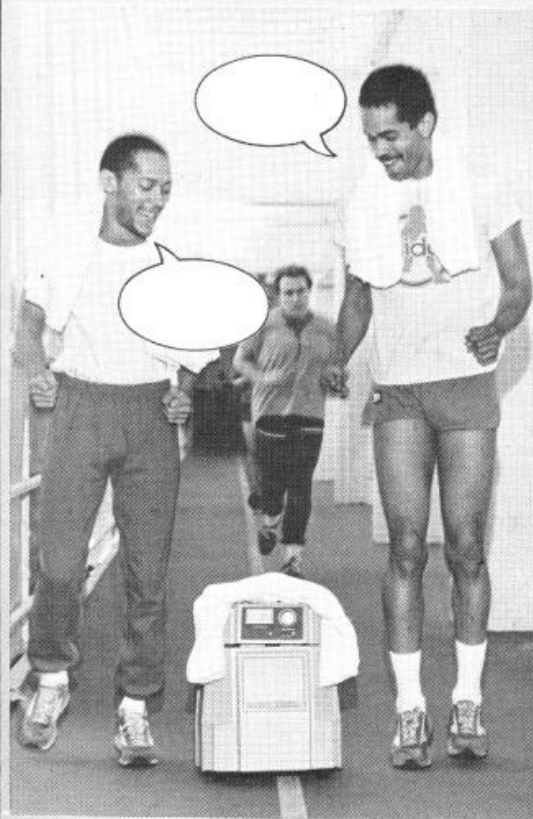
DATELINE LIVERPOOL, and stirring scenes as mobs of enraged creditors fight in the street outside *Guess Who's* former offices, colliding with each other and with bailiffs removing the flash furniture. Seems there's no decent wine left in city centre stores, since *Guess Who* had imbibed most of the choicer vintages in the last six months, leaving said stores with *Nicolas Rough Red* as the top end of their wares ... Also despondent: Wirral niterie *Atmospheres* (who wanted *Guess Who* to buy them out six months ago),



Join 1000 other players in *Starnet*, the new participation Galactic strategy game currently running on Micronet. Over 340 maps and 3000 stars, each with its own special function, give players a lot of room to move. Game object is to become Emperor and hold on to the title. A prize worth £150 goes to the despot who captures the Throne.

## ULTIMATE PLAY THE BEEB!

THE BEEB is the latest machine to benefit from Ultimate's original and top-selling game, *Jet Pac*. The BBC version will be available for the princely sum of £7.95. As in its Spectrum and Vic 20 incarnations the game features 16 waves of aliens and four different spaceships to assemble, each comprising three sections. As yet *Jet Pac* is the only one of Ultimate's range of Spectrum games to be converted to other machines. According to the company, although *Atic Atac* has sold better than *Jet Pac* it is *Jet Pac* which seems to be played and enjoyed more.



Fill in the speech bubbles with appropriately pungent (not to mention plangent) comments and send it to BIG K (Robot), 1038, IPC Magazines, Kings Reach, Stamford Street, London WC2 9LS... the winner will receive a super-fantastic prize from the BIG K MYSTERY SOFTWARE HOARD, so be sure to include details of any computer(s) you own...



## ...GARBAGE OUT

sadly missing the £1,000 *Guess Who* were wont to blow in a single merry evening... And on a final note, by eerie coincidence it seems that Atari were on the point of bailing *Guess Who* out — until the arrival of *Jack Schlemiel*, who nixed the takeover. Result: Atari went under and so did *Guess Who*... yes, it's an interlinked old world sure enough...

And now for something completely... similar. After the universe-shattering success of *War of the Worlds* by Jeff Wayne ("Who he?" asks reader H.G.W. of Tooting),

famed East End software house CRL have now acquired the rights to *The Magic Roundabout*; rumours to the effect that Richard Taylor will star as Dougal and Clem Chambers as Zebedee remain unconfirmed...

Waves of reaction: in *The Times* (you've heard of that) letters now appearing claiming that computers in schools are a menace: depersonalising, dehumanising and removing the vital "interpersonal relationship". Also from the popular press: mounting flak about the American game *Mission to*

by the Shadow

*Moscow*. "It encourages war", say writers to *The Standard* and other popular evening broadsheets. Sure it does; just as maze games enforce visits to Hampton Court, Kong games are anti-anthropoid, PacMan games encourage "kids" to raid medicine cabinets in search of power pills, and adventures pressure users thereof to don antique armour and leap about with swords beheading dumbo correspondents to silly national newspapers... You really must forgive *The Shadow*: he's had a bad month...

## SORD OF HONOUR

THE INTERESTING but largely overlooked CGL (Sord) M5 computer gets a boost this month with the release of eight new games for the machine. They are:

**Bomber Run; Devil Bird; Intrigue; Slots; Stranded; Wheels,** and two Triple Packs: **Simon, Granny and Spiders; and Squash, Lander and Raiders.**

All the single games are priced at £5.95, while the triple packs sell at £12.95 apiece.



## PROBABLY THE LARGEST RANGE OF DISCOUNT SOFTWARE CURRENTLY AVAILABLE — WITH THE LARGEST DISCOUNTS YOU'LL FIND

### SINCLAIR SPECTRUM

	RRP	Our Price
Sabre Wulf	9.95	7.45
Stop the Express	7.95	5.95
Psytron	7.95	5.95
Lords Midnight	9.95	7.45
Fighter Pilot	7.95	5.95
Night Gunner	6.95	5.45
Mugsy	6.95	5.45
TLL	5.95	4.45
Trashman	5.95	4.45
Antics	6.95	5.45
Cavern Fighter	5.95	4.45
Jack & Beanstalk	5.95	4.45
Ad Astra	5.95	4.45
Kosmic Kanga	5.95	4.45
Manic Miner	5.95	4.45
Jet Set Willy	5.95	4.45
Fred	6.95	5.45
Snowman	6.95	5.45
Bugaboo	6.95	5.45
Dragonsbane	6.95	5.45
Beaky & The Eggsatchers	5.50	4.00
Pyramid	5.50	4.50
Doomsday Castle	6.50	5.00
Automania	6.95	5.45
Cavelon	6.90	5.40
Hunchback	6.90	5.40
Football Manager	6.95	5.45
Blade Alley	5.95	4.45
Les Flics	6.95	5.45
Blue Thunder	5.95	4.45
War of the Worlds	5.95	4.45
World Cup	6.95	5.45
Hurg	14.94	11.95
Skull	6.95	5.45

M Coder II	9.95	7.45
Learn Basic	12.95	10.45
Tasword II	13.90	10.90
Full Throttle	6.95	5.45
Code Name Mat	6.95	5.45

### COMMODORE 64

	RRP	Our Price
Valhalla 64	14.95	11.95
Revenge Camels	7.50	5.50
Beach Head	9.95	7.45
Killerwatt	7.95	5.95
Blogger	7.95	5.95
Son Blogger	7.95	5.95
Space Pilot	7.95	5.95
737 Flight Path	7.95	5.95
Superpipeline	6.90	5.40
Gyropod	6.90	5.40
Sheep in Space	7.50	5.50
Loco	7.95	5.95
Star Trooper	6.95	5.45
Encounter	8.95	6.95
Solo Flight	14.95	11.95
Aztec Challenge	8.95	6.95
Hunchback	6.90	5.40
Chinese Juggler	6.90	5.45
China Miner	7.00	5.00
Olympic Skier	5.99	4.49
Cavelon	6.90	5.40
Heroes of Karn	7.00	5.00
Tales Arabian Nights	7.00	5.00
Twin Kingdom	9.50	7.00
Decathlon	9.95	7.45
Evil Dead	6.99	5.49
Manic Miner	7.95	5.95

Please ask about CBM 64 disk software.

### BBC MODEL B

	RRP	Our Price
Fortress	8.95	6.95
Spitfire	8.95	6.95
Football Manager	7.95	5.95
Overdrive	7.95	5.95
Aviator	14.95	11.95
Blogger	7.95	5.95
Eagles Wing	7.95	5.95
Planetoids	9.95	7.45
Twin Kingdom	9.50	7.00
Cashbook	59.95	41.95
Chuckie Egg	7.90	5.90

### ELECTRON

Guardian	7.95	5.95
Hulk	7.95	5.95
Arcadians	9.20	7.20

### VIC-20

Flight path 737	7.95	5.95
Jet Pac	5.50	4.40


### ATARI

Zaxxon	14.95	11.95
Rally Speedway	29.95	23.95
Curse Crowley	9.95	7.45

### ORIC - ATMOS

MARC	6.95	5.45
Hobbit	14.95	11.95

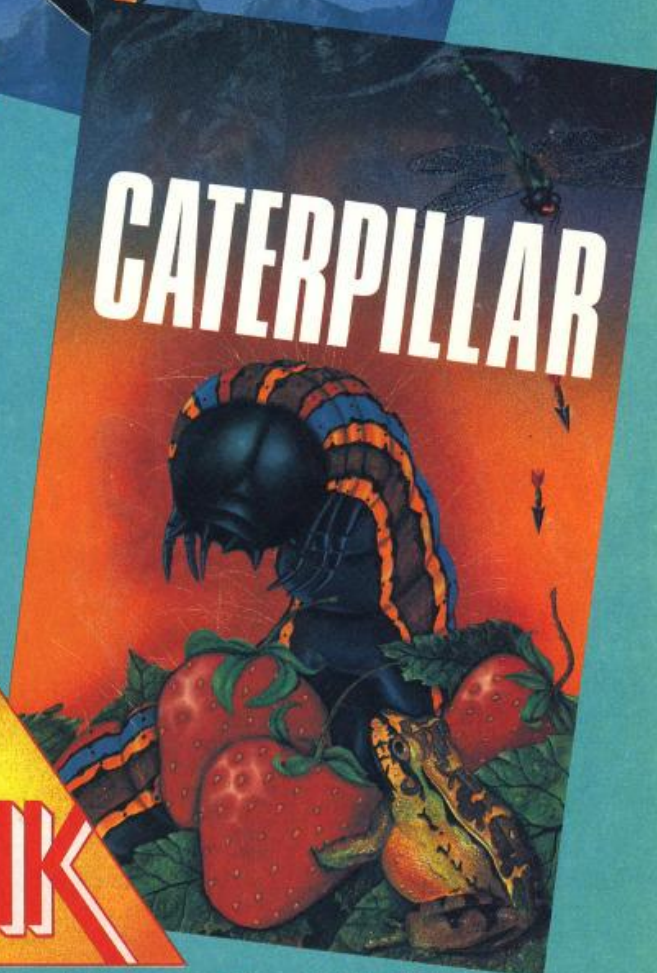
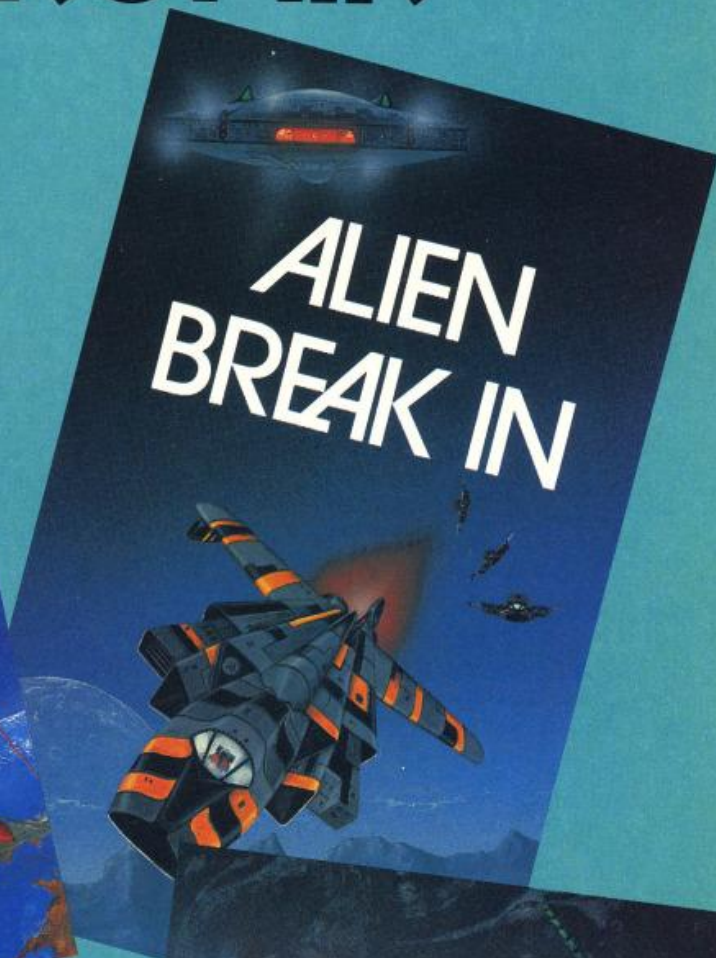
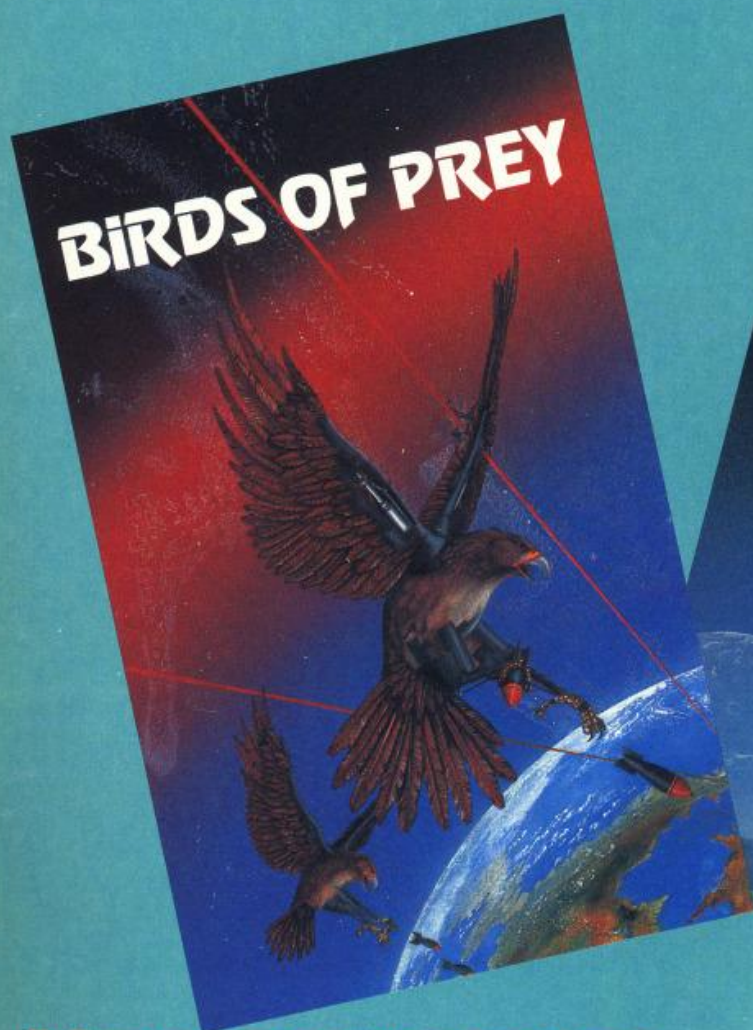
All tapes are guaranteed originals. Shown here is just a small part of our stock, if you require a price list please ring the above number.

Name .....	 <small>30 Roseacre Gardens - Chilworth - Guildford - Surrey GU4 8RQ Tel: Guildford 67799</small>
Address .....	
.....	
Tel No. ....	
Tapes required .....	
25p P&P .....	
Total Amount: .....	

If you would prefer not to cut up your magazine then write the required details on a piece of paper.  
Please make all cheques payable to: MLS Group Ltd.  
Please ring if you have not received your order within ten days of posting it.



# Three more challenges from ROMIK



**More great games  
for the BBC and  
Acorn Electron.**

**All keyboard or  
joystick compatible.**

**Just three from a range  
of over 70 games for  
11 computers.**

Available from selected branches  
of: Boots, Dixons, John Menzies,  
W.H. Smith, and all good  
computer stores.



Romik Limited, 272 Argyll Avenue, Slough SL1 4HE



# HOW TO MAKE A RED DEVIL SEE RED

with accurate control from Suncom



Compatible with  
Atari CX2600 Game System\*  
Atari Personal Computer Systems\*  
Commodore 64 & Vic 20 Computers\*,  
and most other Home Computers  
with suitable adaptor.

\*These are the registered Trade Marks of the individual companies concerned.

Beating the game requires positive response and fast accurate control.

That's why beating the game requires Suncom from Consumer Electronics.

A range of 3 quality joysticks all with arcade-style features plus Joy Sensor, the ultimate, with precision, touch-sensitive control.

No stick to move, no resistance to movement.

Together with a range of C.E.L. Adaptor leads, they're compatible to a wide range of machines.

Check them out at your dealer—they're sure fire winners.

For details of your nearest stockist contact—Consumer Electronics Limited, Failsworth, Manchester M35 0HS. Tel: 061-682 2339.

 **Suncom**  
from Consumer Electronics.

Range available from most branches of John Lewis Partnership, Spectrum and most good computer shops.  
Slik Stik is available from all branches of Argos and selected Woolworth stores.



# U.K. UNDER ATTACK

## "OVER-RATED, OVER-PRICED AND OVER HERE"?

### UNIQUE TWIN-PRONG ATTACK THREATENS BRIT. MICRO INDUSTRY

AMERICAN-ORIGINATED software is headed for British shores in ever-increasing numbers. U.K. companies are springing up specifically to bring over top-selling American games and, in some cases, convert them to British micros.

Probably the most well-known of these companies to date is U.S. Gold, who scored a No. 1 chart hit recently with *Beach Head* for the CBM 64. In existence only since April, U.S. Gold told BIG K that they had deals signed with many of the major Stateside software houses and planned to release 27 titles before Christmas. These include Datasoft's *The Dallas Quest* and Synapse's *Zaxxon* — the 'official' CBM 64 version. Prices tend to be on the heavy side (not unknown where U.S. software is concerned — the Americans are used

to paying around £30 for a game) at £14.95 per cassette. U.S. Gold believe that people won't mind paying such high prices for quality games.

Newcomer Statesoft was, naturally, born on the 4th of July this year and enjoys the backing of the large Spectrum (no relation) group of retail outlets. It has the rights to handle First Star releases for the good ol' 64 and the first two, *Astro Chase* and *Flip 'n' Flop*, should be out by now. A second pair, *Boulder Dash* and *Bristles*, are due out next month. Pricing wasn't confirmed when we talked to Statesoft but £8.95 for cassettes and £11.00 for discs

were given as ballpark figures. Statesoft have the rights for translating all First Star titles to the ZX Spectrum but will probably be licensing these to another software house.

Cheetahsoft, with two Spectrum titles already out, has announced that it has acquired the rights to market Imagic games in Britain. *Moonsweeper* and *Dragonfire* will form the first wave of Imagic/Cheetahsoft releases for the Spectrum, in cassette form at £7.95 each. Other machines may be targeted at a later date.

Meanwhile, from the Land of the Rising Sun the mighty MSX machines surge like a tidal wave of Datsuns toward our tiny isle. Among them familiar names like Sony, Hitachi, Sanyo, Toshiba, National, Yamaha and others. All have

one thing in common — MSX, the Microsoft-backed language that does away with incompatibility between microcomputers.

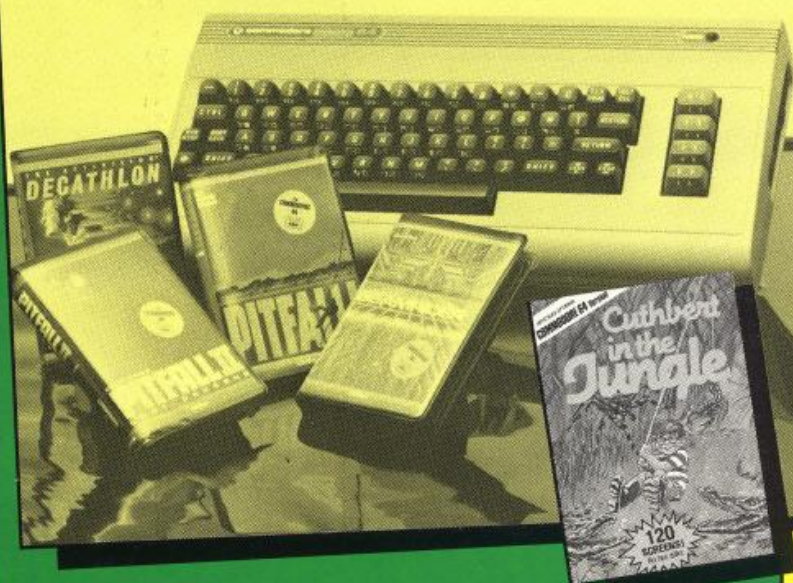
The roster of those who are planning MSX games looks like a who's who of the U.K. software industry: Quicksilver, Virgin Games, Artic, PSS, Bug-Byte, Silversoft, CDS, Ocean, Psion, Mastertronic, Mr Micro, Llamasoft, Salamander, Audiogenic and Kuma. Over 40 companies in all are interested so far.

Despite scepticism in some parts about the impact MSX will have on the U.K. scene the Japanese companies have a lot of money (around £50m) and a lot of patience to get their product established. "We're not looking so much at Christmas 1984," one spokesman told BIG K, "but at Christmas 1985 and 1986."

### MOGUL SOFTWARE

is claiming a unique "first" — in blagging the home computer rights to a major new US arcade game . . . before the latter has even hit the arcades!

The game? *Zeta 7*, a rotating shoot-'em-up in the grand tradition, written by US programmer Mike Wacker. By the time you read this Mogul's version for CBM 64 (cassette, with disc to follow) should be in the shops for a mere £7.95.



## 64 MARCHES ON

ACTIVISION, THE giant American indie software house, have now added the world's best-selling micro-computer — the Commodore 64 — to their list of target machines.

First games on CBM cassettes are: Beamrider; Decathlon; River Raid; Pitfall; Pitfall II; H.E.R.O.; Zenji, and

Toy Bizarre. All but the last two are conversions

The American company has also successfully sued Cornish outfit Microdeal, claiming that the latter's *Cuthbert In The Jungle* is a rip-off of Pitfall. Microdeal have given a High Court undertaking to shelve the *Cuthbert* game permanently.



# "I'll swap four of my tapes for your Activision."



"No way!"

You know the feeling. A couple of plays and the best you can hope for from so much of the software around, is swapping it for something better. Well, the something better has arrived. Activision.

One thing you can be sure of. Buy any Activision software and you'll find you're walking slap, bang into a totally new experience. One that lasts. See the first titles in your usual software store now.

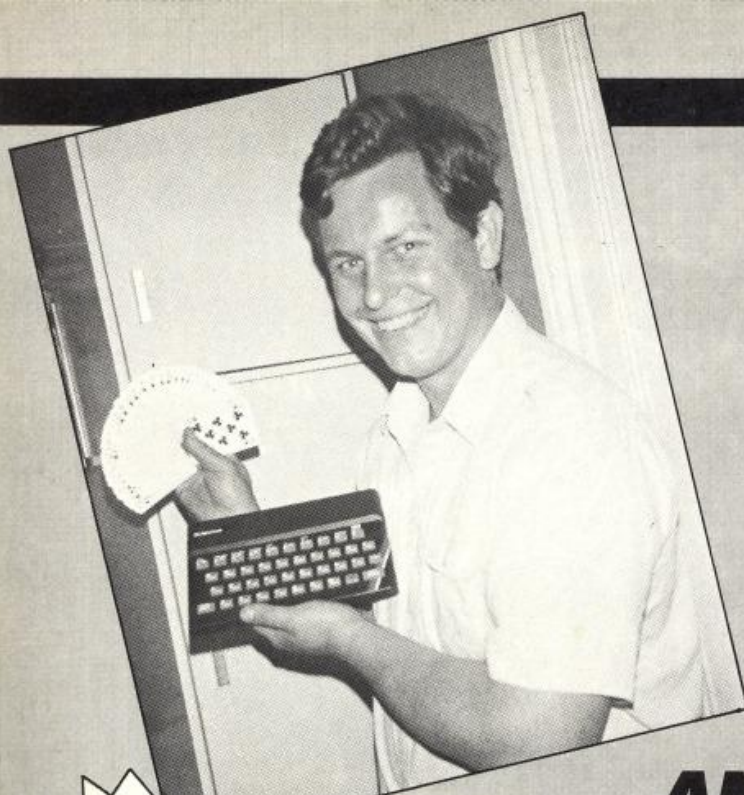
BEAMRIDER · DECATHLON · H.E.R.O · PITFALL · PITFALL II  
RIVER RAID · TOY BIZARRE · ZENJI



# ACTIVISION®

Your computer was made for us.





COMPUTER MAGIC with the ZX 81 costs £2.00, and is available directly from:

DAVID HAMBLY  
25 Knight's Way,  
Hainault, Ilford,  
Essex IG6 2RS.

On-screen graphics display three playing cards, face down. The computer 'tells' one to Find the Lady (The Queen). *Cherchez la Femme* — geddit? The old three-card trick.

One points a trembling digit at an appropriate key. Wrong! Every time! Hambly reverses the trick. This time one shuffles three real cards and lays them down to match — but not be visible to — the screen "cards". One instructs the patient micro to Find The Lady, dammit. One of the screen cards turns to show the Queen. One flips the corresponding real card and ... the bitch is there! Every, but every, time.

David Hambly's speciality is 'close-up' magic. That

micros suit his no-nonsense style of magic. Producing rabbits became frankly, old hat, (watch it — Ed.) and escapology just tied him down (you're fired — Ed.)

If you're (un)lucky you might come across the man and his micro performing near you one day. Run! No, check it out. David Hambly also likes to behead select audience members on stage. Well, who doesn't these days? ("It's great fun, you can play football afterwards!"). Failing that; if you own a ZX 81, you too can shrivel your friends into a humiliated pulp! David's simple booklet will teach you how to turn a micro-heist or two with cards and ESP. You'll need to spend some time practising, as — and here's the rub — ALL IS NOT AS IT SEEMS!

Meanwhile — I know

## AND NOW, FOR MY NEXT PROG . . .

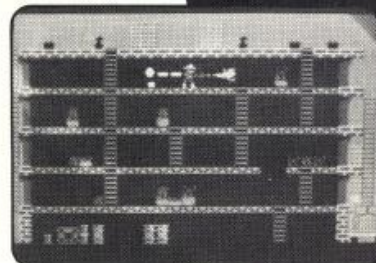
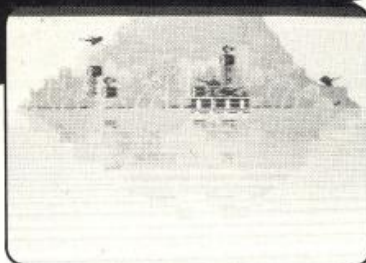
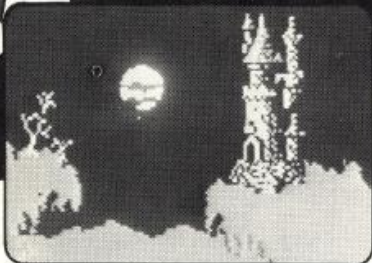
DAVID HAMBLY, member of the Magic Circle and micro-brat, has fused the two strings on his bow together to become nuncio to what may well prove to be a dread new breed — Computer Magician.

means that you can scrutinise his hands with a magnifying glass and still not suss how he makes you look a mug. (We'll tell you one day, Nicky — Ed.)

Hambly confides that

something you don't know. Yes, how it's done. And I can be bought.

NICKY XIKLUNA



Lousy French joke  
"Knock, knock!"  
— "Oo's there?"  
— "Hugo."  
— "Hugo qui?"  
— "Hugo buy an  
Oric . . . Moi, I'll  
save up for one of  
zose IBMs."



## FROGGY WENT A PROGGING

WHEN MATTEL went down recently, they left behind a team of 13 international software professionals, all ware professionals, all booted up, as it were, but with nothing to run. This team of folks from France, Britain and Germany, became the lucky coven indeed when they took the plunge, put their cash and heads together, and came up with 'Nice Ideas'.

Despite the name, in 18 months, they've successfully transcribed and written for their old machines Intellivision and Intelligent Games, and have just finished writing 10 original games for Colecovision.

Bernard (l'artiste) plots and pigments every pointilliste pixel on his giant Gauguin-esque graphs. He works

closely with programmers to get both optimum playability and aesthetic clout out of available kilobytes. Bernard explains why Mattel originally needed a base in Europe, and what it is that Euro-talent can offer.

"American artists have a different kind of talent. They can draw things — like houses and cars, but they can't draw a portrait or a tree. Europe has a massive artistic heritage — and has spent hundreds of years training art schools. You just have to look at the work to see."

If this is the dawn of the computer age, la Belle France has left getting-up until the crack of midi. There has been little home production, and the importation of foreign

machines has been hindered by France's ideosyncratic though efficient T.V. system, SECAM. Of the few that are sitting in homes (compared to GB), the Oric-1 and elderly Philips G7000 games machine seem to be the winners. Amazingly, computers are only now being introduced into schools.

Is there a danger of France missing out?  
"Ah non," ripostes Bernard, "Computers will be big here."

"The French have been prudent in first giving themselves time to think, study and get ideas before going in."

Would he care to re-phrase that?  
"Pardon?"

Rien du tout, pal.

NICKY XIKLUNA



# This Dish is a Dish...

**NICKY XIKLUNA**  
gets into  
Interhack  
Technology

British  
**TELECOM**

UNISAT 1, together with its back-ups 2 & 3, won't go aloft until 1988. When it finally does hang on in there, it'll be carrying 240 watts of British Telecom, and will be used for Direct Broadcasting (DBS). This'll eventually transform the legions of transmitters across the land into museum pieces. And absolutely no-one will have problems receiving Channel 4 ever again! In the meantime, other satellites are ahead, here, or rather there, and they'll be in use a lot sooner.

Spanning Stateside to Europe this year along the metasphere's busiest buzz-

route comes SATSTREAM. It'll comprise a massive amenity, mainly, for the multinationals, extending big business satellite links across North America. Britain's already set-up to catch this stuff with mammoth receiving dishes (up to 32 metres diameter) at Goonhilly Down and Madley.

Even as I monologue away, the world's store of 1,000 or so satellites are twinkling above me. VCS machines in Space.

Most are controlled by INTELSAT, representing 108 countries. INTELSAT 'dishes' out satellites to official signatories — that's British Telecom and Mercury so far in the UK.

So exactly when and how micro/modem users gain

access to satellite depends on who leases out a slice of the action from BT.

Indeed, software transmission has already been proposed by some candidates along the lines of software transmission by cable along the West Coast.

The technology exists. Every rooftop can be enhanced by its own monster gleaming receiver dish and antennae. Millions of menial and mediocre messages could go 22,300 miles in a vertical direction, bounce off the satellite in geostationary orbit, and so back down again to their earthly destinations. In half a second (give or take a nanosec or two).

Slipping into conjecture — what rich pickings are there

in all this for the well-seasoned hacker to lick his chops over?

Surely it is only right and fitting that alien dudes, whenever they should appear, ought to debut via the good offices of some diligent midnight intersat hacker! Hacker Sat! Hackelite? Hacknik?

Back to the real world: private business has stormed ahead of nationalised database networks. Meanwhile, B.T. carries on implementing its mysterious 'System X' — changing over exchanges from analogue to digital. Today, your call to the States has a 50% chance of going by satellite.

What next? You can buy your own dish right now from about £5,000 upwards (installed). Or you can buy a chunk of Satstream direct for a mere £50k per annum and rent bits to your pals. Failing that, you'll just have to wait for Andy Green's upcoming monster epic, 'Build a Receiving Dish from Cornflake Boxes'.

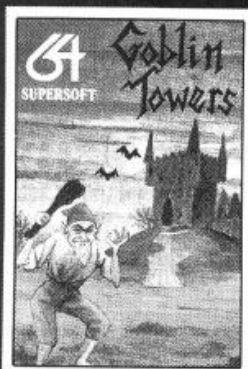
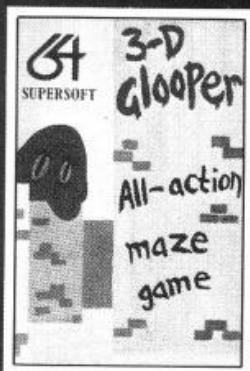
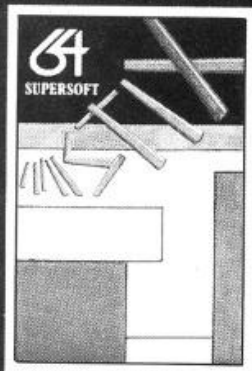


Trade enquiries welcome.



# CAN YOU BEAT OUR GREAT GAMES

We've got the biggest (and best) selection of games for the Commodore 64. We think they're unbeatable



## MORE THAN GAMES...

Our FREE catalogue lists dozens of programs for your Commodore 64 to help you run your business, write programs, or just enjoy yourself. We've been producing top quality software since 1978. So if you want the best, just remember our name...

# SUPERSOFT

SUPERSOFT, Winchester House, Canning Road, Wealdstone, Harrow, Middlesex, HA3 7SJ Telephone: 01-861 1166

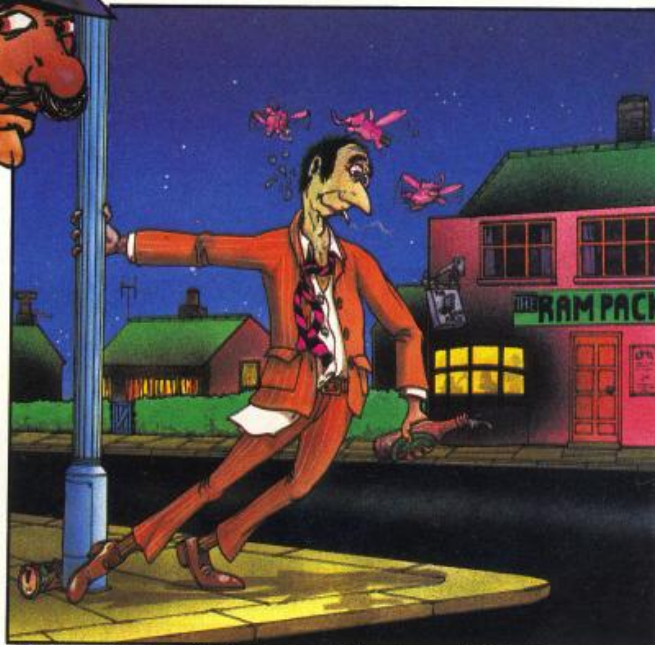
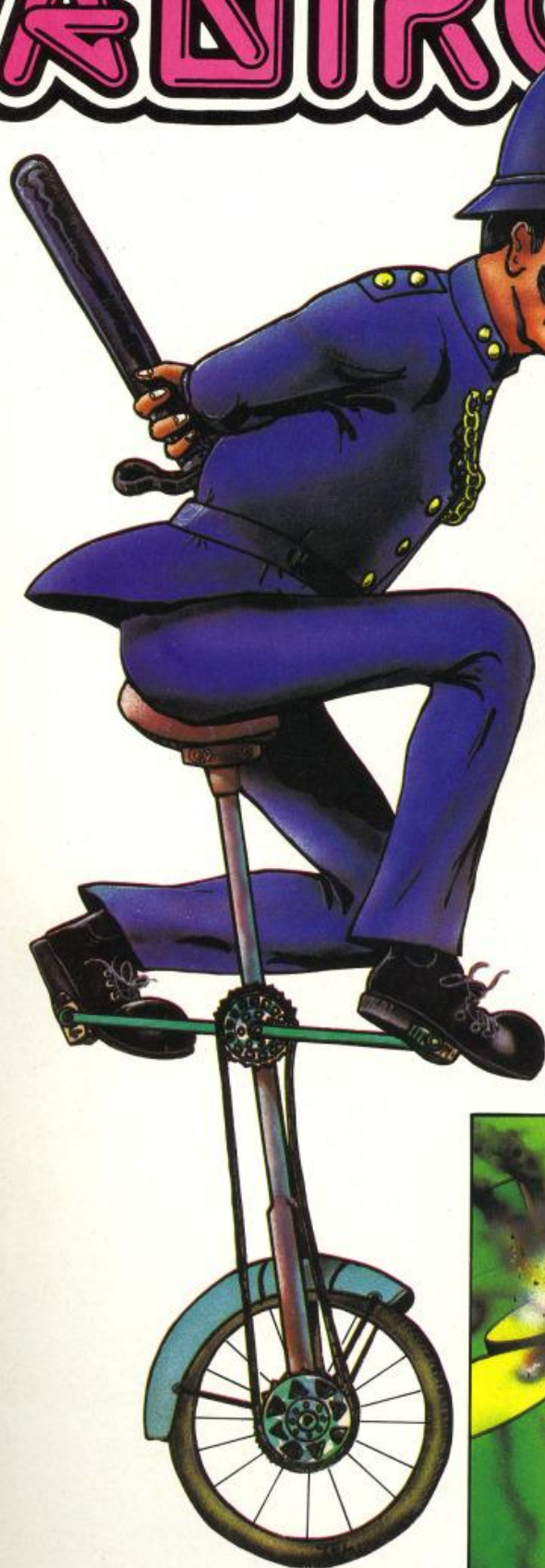
ARCADE GAMES (machine code)	
STIX	£8.95
CRAZY KONG	£8.95
KARTUS	£8.95
WILDFIRE	£8.95
3D GLOOPER	£6.95
MANGROVE	£8.95
TANK ATAK	£8.95
ADVENTURE GAMES	
STREETS OF LONDON	£9.95
GOBLIN TOWERS	£9.95
COSMIC CAPERS	£7.95
CRACKS OF FIRE	£7.95
FORESTLAND	£9.95
FANTASY GAMES	
HALLS OF DEATH	£8.95
LORD OF THE BALROGS	£6.95
These prices include VAT. Post free.	



# ANIROG

**NEW  
TURBO 64  
GAMES**

**P.C. FUZZ**

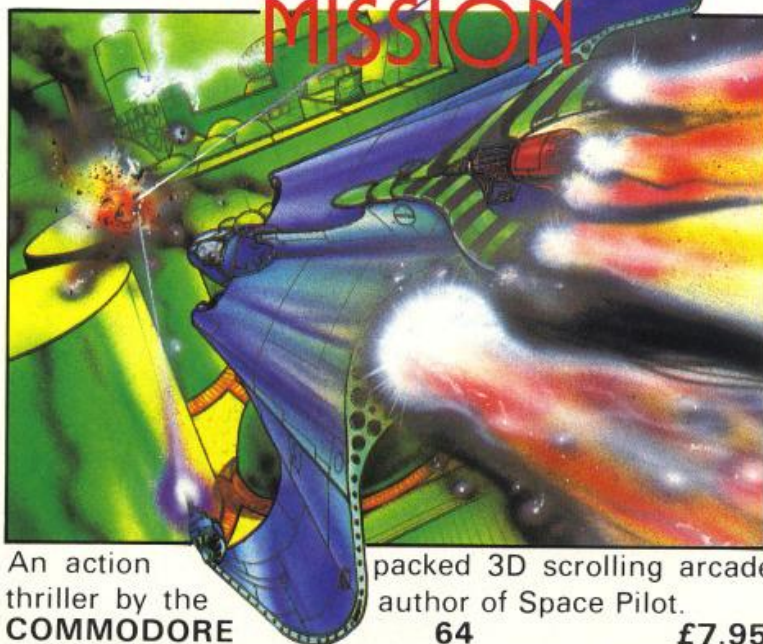


Aggro at closing time at the local. Getaway car screeches to a halt outside a bank. Ingenious methods employed by the Mafia to literally spirit away the loot from the High Street. Never fear - P.C. Fuzz is on patrol.

COMMODORE 64

£7.95

**ZARGA  
MISSION**



**Also available on  
Disk at £9.95**

An action  
thriller by the  
COMMODORE

64

£7.95

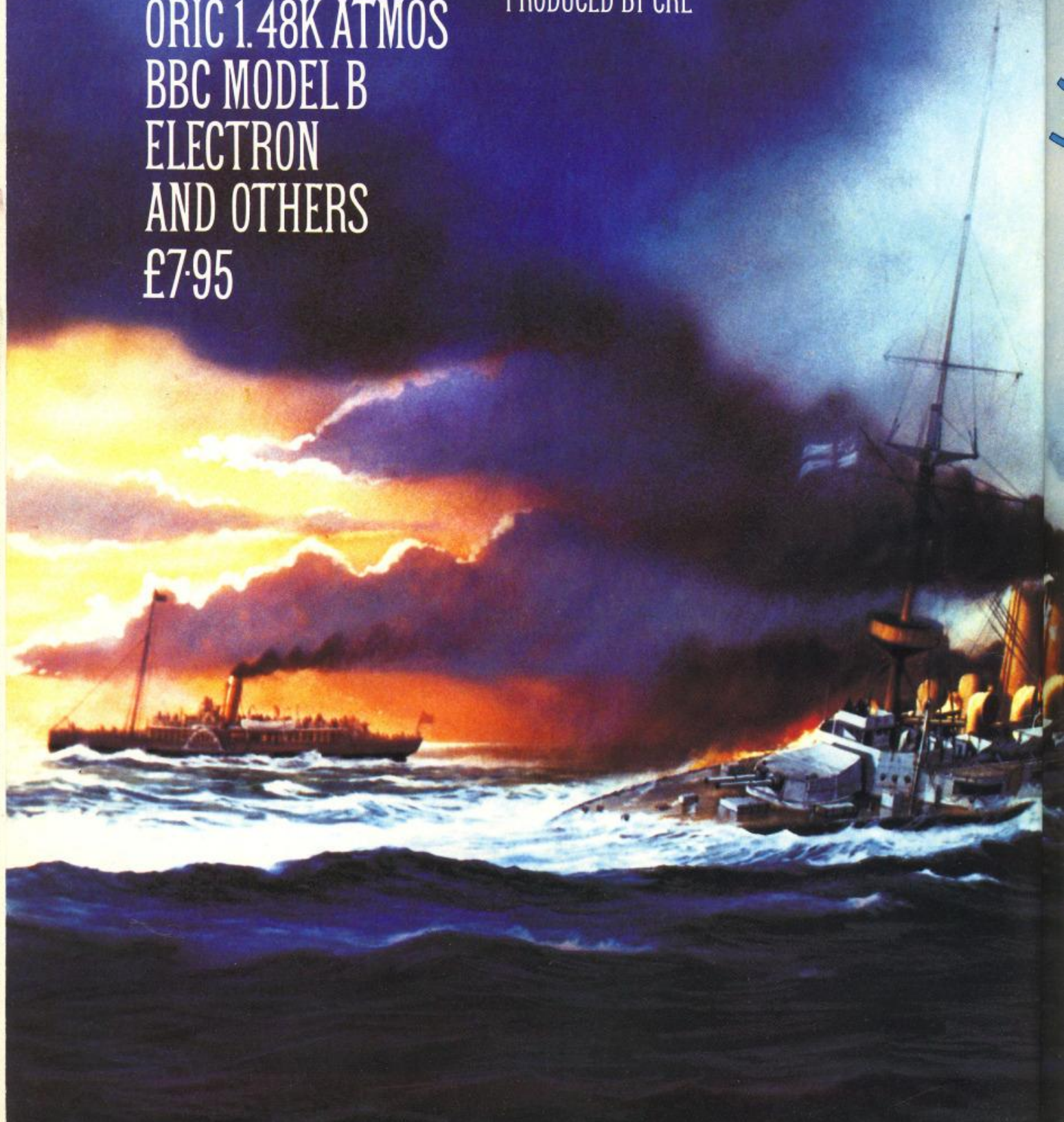
TRADE ENQUIRIES: ANIROG SOFTWARE LTD. 29 WEST HILL DARTFORD KENT (0322) 92513/8  
MAIL ORDER: 8 HIGH STREET HORLEY SURREY 24 HOUR CREDIT CARD SALES HORLEY (02934) 6083  
PAYMENT BY CHEQUE P.O. ACCESS/VISA 50p POSTAGE & PACKAGING



AVAILABLE FOR  
**ZX SPECTRUM 48K**  
TO BE CREATED FOR  
**COMMODORE 64**  
**ORIC 1.48K ATMOS**  
**BBC MODEL B**  
**ELECTRON**  
**AND OTHERS**  
**£7.95**

Following in the tradition of superb adaptations of the H. G. Wells classic: CRL in association with ORP proudly presents to the world of home computing the strategic arcade adventure '**The War of The Worlds**'. Based on Jeff Wayne's internationally successful double album.

PRODUCED BY CRL





JEFF WAYNE'S VIDEO GAME  
VERSION OF

# THE WAR OF THE WORLDS



**CRL**

**THE DREAM MAKERS**

Jeff Wayne's version of the 'The War of The Worlds' copyright Ollie Record Production, New York, 1984.

CRL House, 9 Kings Yard, Carpenters Road, London E15 2HD. Tel: 01-533 2918





● Lake    🏠 Hut    🏛 Temple    ..... Location of Sabre Wolf    🟡 Possible Amulet Site    🌸 Flower



PICK OF THE MONTH

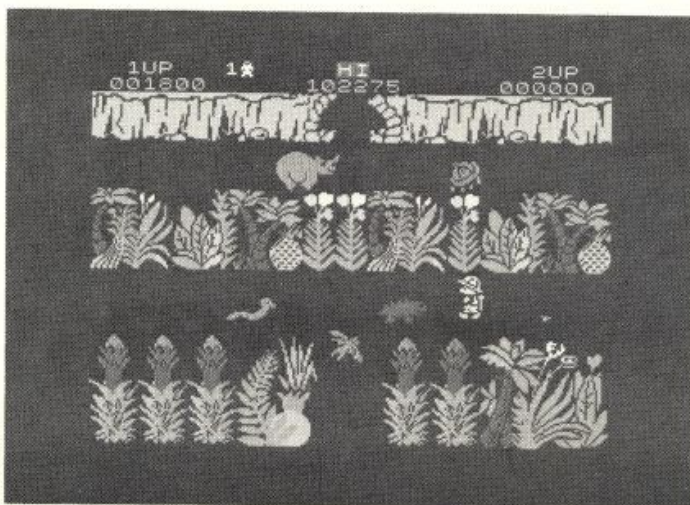
# WATCH YOUR STEP

*it's a real jungle out there!*

**Ultimate Play-the-Game's newest and lushest hit to date is *Sabre Wulf*, a mean, fast, brilliantly coloured jungle frenzy with all the puzzles and super-smooth coding now expected from its authors. Or is it nothing more than an over-priced retread of *Atic Atac*? RICHARD BURTON plays the game . . .**

"In the jungle, the mighty jungle,  
the lion sleeps tonight . . ."

So sang Tight Fit in 1982 (and so did Karl Denver, for those of us with longer memories). In a strange way the song seems more than appropriate to Ultimate's newest offering, *Sabre Wulf*, because the lion is about the only beast that does sleep — every other creature in this jungle is nauseatingly active and out to make life hell for you!



of the larger beasts, at least scare them off. Also the local plant life can aid or endanger any of your three lives.

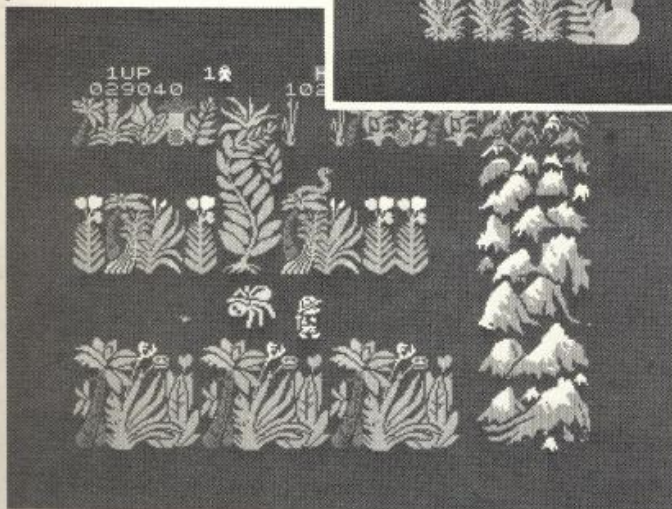
Many items appear in your path which can be picked up simply by crossing them. Unfortunately, *Sabre Wulf* doesn't feature *Atic Atac*'s on-screen display of what you're carrying. Again, it's up to you to find out what these items are and how they can benefit you.

*Sabre Wulf* is a safari of discovery, a Big Game hunt where you are the prey. It's the nearest yet that Ultimate have come to an adventure game (note the *Hobbit*-style 'percentage complete' indicator) and is sure to fuel the letters pages of the computer press for some time.

It's another high quality Ultimate product and value for money (just about), even at £9.95, a figure that Ultimate claim reflects "higher development and packaging costs".

Luckily it's not the sort of game that will lose its appeal quickly.

You have control of a tiny, sword-wielding (?) explorer in search of four parts of an amulet. Obstacles are constantly appearing in his path in the form of snakes, bugs, lizards, wart hogs, gorillas, hippos, rhinos, etc. There's a list of 14 of the critters in the instructions. A quick thrust with the sword will finish off most of these or, in the case



With just six games Ultimate have carved themselves out a heavy rep with the games punters to the extent that each new release is as eagerly anticipated as the next Michael Jackson Album. So far they have only once gone back to a previous game theme for a new release. *Lunar Jetman* was a souped-up version of *Jet-Pac*. With *Sabre Wulf* they have returned, justifiably, to many of the arcade-adventure elements that made *Atic Atac* such a chart success.

The word 'enigmatic' almost sums up the game. It comes in a plain black box with simple title stickers front and back. Inside a six-page fold-out leaflet contains cryptic comments in purple prose that are little or no help. Basically, you're on your own in discovering exactly what this game holds.

The scenario, as said, is a vast jungle maze, glossily rendered in colourful hi-res graphics. (See map opposite for crib.)

## HOW WE GOT OUR SABRE WULF MAP

*Sabre Wulf* had been out a couple of weeks when BIG K's office phone rang. "Would you like to see a complete map of *Sabre Wulf*?" asked a voice. We gulped an amazed "Sure" and the caller rang off. No more than two minutes later the phone rang again. "Interested in a map of *Sabre Wulf*?" said another voice. An even more surprised affirmative from our end and, a few days later, two brilliant maps were in our hands. They were both so good that we decided to combine them into one — the one you see here. So take a bow Alex Crabtree of Newcastle and John Cheal of Reigate — *Sabre Wulf* Champions both.

Got any tips about *Sabre Wulf*? Found out any sneaky tricks to beat the jungle? Send them to Letterbase. We'll use the best and bin the rest!





## WHACKO

FRENZY/BBC

*Breakout* goes whacko. You remember *Breakout*? No? Am I getting that old? *Breakout* is the game where you have to trap a bouncing ball in a box by moving a line around a screen. *Frenzy* is a variation of that.

The story goes thus — deadly sub-atomic particles (Leptars) are loose in a scientific laboratory and you have to trap them before the time runs out. Your tool in this mammoth task is a robot craft behind which is a green ion trail. This you use to draw ion lines which, hopefully, will ensnare the little devils. Trouble is, if you get hit by a

Leptar while you're on the draw, so to speak, you get clobbered. After a few screens things get nasty, you get more Leptars to deal with plus Chasers (they chase you).

This is a very simple game, easy to play but difficult to master, as they say. But, unlike many simple games it's very addictive. The kind of thing you spend all night thinking 'just one more game before bed' and then realise the sun is creeping over the top of the screen. — K.A.

**Maker:** MICRO POWER

**Format:** cassette

**Price:** £7.95

**Graphics:** KK

**Playability:** KK

**Addictiveness:** KKK

**Overall:** KK

## CUBEPAINTER

BLOCKBUSTER/BBC

So here we go again. *Q-Bert* does a quick change act. Master of disguise, he assaults us from the of games shelves as any number of characters.

In this particular variety he wears his rabbit cozy and calls himself Harvey. (All due respects to Jimmy Stewart.)

Micro Power, masters of the multicolour moving screen, never fail to live up to their rep. as quality games writers and this one is particularly nice. Young Harvey, so they tell us, is on a quest for the Elixir of Life (as supplied by your friendly neighbourhood Leprechaun). Of course something as valuable as The Elixir requires a little more than money and Harvey is given a task to complete. Paint a pyr-

amid? Well, nearly right. In fact it's the Giant's Causeway and Harvey approaches the task with considerable style. The bouncing ball is there, natch, but the snake has gone and we're left with a fox who leaves grubby footprints all over the nice shiny paintwork. The only way to get rid of him is to lure him over the edge of the causeway.

This is a good game. If you like *Q-Bert* then you'll like *Blockbuster* which is well up to Micro Power's usual standards. — K.A.

**Maker:** MICRO POWER

**Format:** cassette

**Price:** £7.95

**Graphics:** KK

**Playability:** KK

**Addictiveness:** KKK

**Overall:** KK



## CROAKER

FROG SHOOTER/SPECTRUM 48K

Fairly duff arcade shoot-out. You (looking more like a moth into military chic than any kind of frog — but let it pass) are stuck in an alley drawn with the most primitive and confusing kind of 3D technique. Along this low-res byway come bouncing various Kermits and giant eyeballs and so forth. Naturally, you must shoot them.

It's an uninspiring task, even though the red ball projectiles

that pop from your antennae when you press the fire button are one of the few neat things about this game. Another neat thing is the bouncing effect contrived for the objects in your path. The blue "mystery cannonballs" that come bowling along with quite monotonous regularity are almost too neat, and invariably blow my uniformed moth to smithereens.

Without a joystick, controls

are the clumsy IJLM (or WADX) keys that I always find particularly frustrating. But even were the manoeuvring easier, this would still be nothing more than a lifeless, boring game. — D.R.

**Maker:** KUMA/HUDSON SOFT

**Format:** cassette

**Price:** £6.95

**Graphics:** K

**Playability:** K

**Addictiveness:** None

**Overall:** K

## BINGO!

BONGO/VIC 20 + 16K, CBM 64

Probably one of the best ladders 'n' levels games available for the expanded Vic. Set in a riverbank cave it chronicles the attempts of Bongo the mouse to outwit the dank denizens of the clay caverns and win the heart of a lonely princess (splutter). You of course take the role of the lovelorn rodent and with the aid of a well oiled 'stick must guide him past nine sheets of adversaries. To move twixt these sheets you must collect a fistful of flashing diamonds, and that entails some pretty hairy manoeuvring I can tell you.

The sprite graphics are bright and suitably cute and hardened gamers will appreciate the wide variety of stratagems available. I kinda suspect that the key to lasting success is through the secret transporters hidden about the screen. These portals are unavailable to the mouse-hunting monsters on your tail and so become invaluable escape routes. Bonus points can also be racked up quickly by gobbling up the BONGO letters which float around the screen during the early stages. All in all it's a hectic

piece of work. I have yet to survive the gamut of screens and win the head of the princess, but I'll continue to plug away. I mean, shucks, a mouse and a princess? Bizarre notions keep me flailing away in the hope that all will soon be revealed. — S.K.

**Maker:** ANIROG

**Format:** cassette

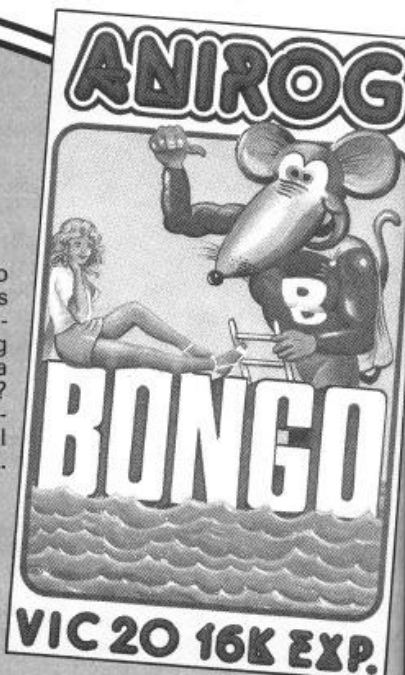
**Price:** £7.95 each

**Graphics:** KK

**Playability:** KKK

**Addictiveness:** KKK

**Overall:** KKK





# SEA HUNT

Maddening. I mean, an apparently uncomplicated and straightforward adventure with a limited vocabulary and graphics that, although unspectacular, are at least quick, clear and pleasingly functional. It is quite frankly an utter doddle to work your way through the first 20% of this thing.

Then what? Quite clearly there's some large treasure heard somewhere (though, actually, you're never told as much). Equally clearly, you're expected to explore underwater at some point. Try it, however, and you end up in a wooden box (though not, disappointingly, in Davy Jones' Locker).

## SEA QUEST/DRAGON

So where's the aqualung, then?

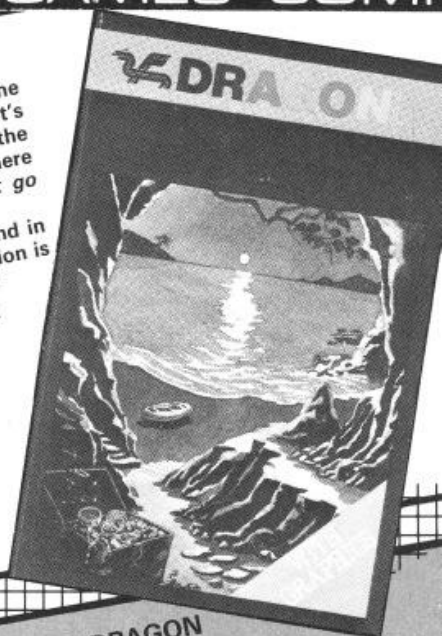
I've looked everywhere. Examined everything. Tried every conceivable combination of object and command in every location I can find. Not one single flicker of further possibility. All of which I'd put down to experience or my own lack of imagination were it not for one thing. It's either a howler of a bug or an extremely shoddy piece of writing but it's driving me mad.

At the initial location, there are two 'obvious directions' but the game will only let you go in one of them. As this is one of two directions along the beach

(from which all the rest of the adventure seems to flow) it's reasonable to assume that the things you need are down there somewhere. But you can't go that way!

Apart from running round in circles, the only other option is to drown yourself. — D.R.

**Maker:** DRAGON DATA  
**Format:** cassette  
**Price:** £10.95  
**Graphics:** K  
**Playability:** K  
**Addictiveness:** K  
**Overall:** K½



## REBEL WITHOUT APPLAUSE JOHNNY RED/DRAGON

An infernally dull strategy game set in the American Civil War. Or at least, so it says here. Anyone who can imagine any setting at all from the pathetic, squiggly figures that flicker their way about the most uninspiring low-res battlefield I've ever seen is a better strategist than I am. Indeed, it's hard enough telling the difference between infantry and cavalry, your men and the others (player two's or the computer's) without a severe case of eyestrain and a thumping headache, let alone conjuring up any sense of there being Yankees and Confederates, Mason-Dixon Lines and all that stuff.

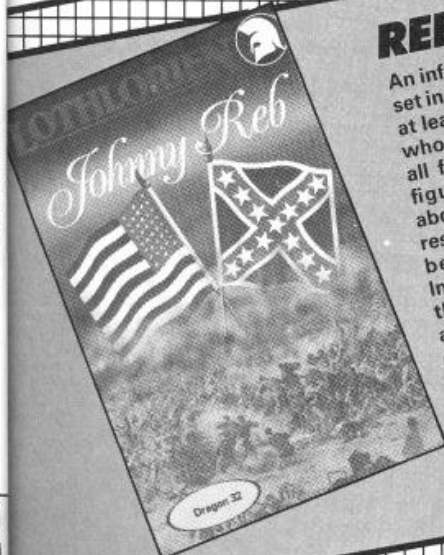
In fact the basic division between cavalry (move furthest, last longest), infantry (don't move so far or last so long) and artillery (shoot things) could come from any European or American battle from a span of about two centuries. Both the rules of engagement (basically attrition — each unit has strength points, which are knocked off alternatively until one wins) and the visual representation of it (opposing squiggly graphics flashing in turn) are tedious and unimaginative.

The thing is also fearfully slow. The computer seems

more concerned with boring you into submission than blasting your infantry. Everything takes hours. Even the final totting up of the score — performed before your very eyes — is carried out at a speed that would disgrace an innumerate five-year-old.

Very low-res. Very Basic. Very bad game to spend hard-earned money on. — D.R.

**Maker:** LOTHLORIEN  
**Format:** cassette  
**Price:** £6.95  
**Graphics:** None  
**Playability:** None  
**Addictiveness:** None  
**Overall:** None



## NIX-HIC-PIXIES SHENANIGANS/DRAGON

A reasonably amusing little adventure that would seem eventually to lead to the end of a rainbow and, of course, the pot of gold concealed thereabouts by cautious leprechauns. So the blurb would have it, anyway. Odd, then, that it begins in a city people with stropky landlords, vicious muggers and cops ever vigilant for cases of indecent exposure. (Be warned: once in jail, there is not only no way out, but also no way of QUITTING the game. If you haven't SAVED, you'll simply have to LOAD up again). Of Little People there is, how-

ever, no sign. Unless O'Malley the Irish barman is a leprechaun, that is. It seems unlikely.

Presumably all hinges on getting into the subway and what ever lies beyond. That feat has ever proved beyond the resources of this hardy adventurer, although in the process of trying I've drunk so many beers at the O'Malley pub that I'm surprised I can still move from one location to another in a straight line.

All good fun actually. Give me pubs and muggers over dungeons and goblins any day. A limited vocabulary and fairly

dull graphics don't spoil what turns out to be a pleasantly thorny game — D.R.

**Maker:** DRAGON DATA  
**Format:** cassette  
**Price:** £7.95  
**Graphics:** K  
**Playability:** KK  
**Addictiveness:** KK  
**Overall:** KK







## BLOCK WAR

RENEGADE ROBOTS/BBC

The only good robot is a dead robot and make the most of it because you can be sure as hell that the Commission for Robot Equality is only a spit into the future. Which brings us to *Renegade Robots*. This is a bit like a giant sliding block puzzle, added aggro coming by way of the now familiar group of vicious robots.

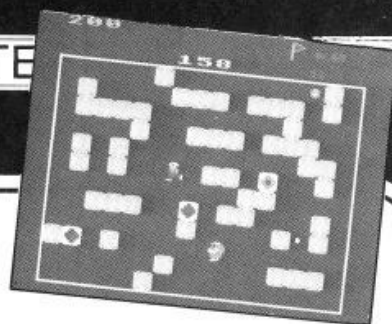
OK. The planet is under dire threat of invasion, but fear not, scientists have everything under control. Or they did have until a series of explosions wrecked the production of the secret weapon they were working on. Amongst other things the explosions caused the robots manning the production line to go berserk. The only way

to save the line is by aligning three key control cubes or destroying the renegade robots. Moving blocks means getting behind them, gritting your teeth and shoving like hell, whereupon the block careers across the screen, junking anything in a straight line between here and eternity. You know the *Pongo* lick.

Once the robots are sorted out some idiot scientist makes the same mistake and

you have to start all over again. A robo-hunter's job is never done.—K.A.

**Maker:** SENATOR SOFTWARE  
**Format:** cassette  
**Price:** £6.95 approx.  
**Graphics:** KK  
**Playability:** KK  
**Addictiveness:** KK  
**Overall:** KK



## SELLAFIELD SUNSET ATTACK ON WINDSCALE/CBM X64

Somebody wants Windscale, although what they're going to do with it heaven only knows. Maybe they've got a beach they don't like people swimming in.

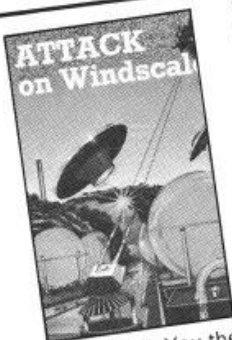
So what is *Attack on Windscale*, adventure or arcade? It's both. On two cassettes already. Part one is standard Space Invaders fare with a pretty background, but part two could be a Purple People Eater for all I know.

There's this problem, see. You don't get into the adventure without a password and the password is hidden somewhere in the bowels of screen four of the action game. We put our best men on it (some were never seen again) but no one got past the second screen. Result: no password/no adventure. All we know is that you have to find a quartz crystal which you use to stop the reactor

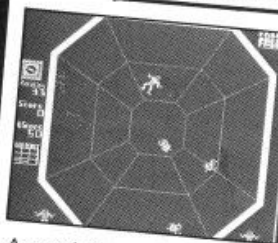
from going critical. You then have to find the nasties who started all the trouble and give them a seeing to.

If you're suddenly seized with an uncontrollable desire for an adventure with *Space Invaders* for dessert then you might save yourself with this offering.—K.A.

**Maker:** PHOENIX SOFTWARE  
**Format:** cassette  
**Price:** £6.99  
**Graphics:** K  
**Playability:** K  
**Addictiveness:** KK  
**Overall:** KK



## BILIOUS PARROT FREEFALL/BBC



A word of warning from one of my more informed sources — floating around in zero gravity makes you sick as — nay, sicker than — a parrot. Better to adopt a more sensible attitude and go for it in the Acornsoft way.

*Freefall* is as close as the likes of you and I are going to get to zero gravity, commercial space travel still waiting for its Branson-figure. The action takes place on board the deep space station *Coriolis* which has been attacked by Alphoids. These boys are all fun. They've injected the air supply with cyanide and only one crew member has reached his space suit in time.

It's not only Alphoids that the crewman has to contend with. The place is full of 'oids; Waspsoids, Craboids, Lobstoids — all do their bit towards making life very hairy.

The game simulates freefall conditions very nicely. You can move around either by using the suit's air jet or by pushing or kicking against walls. The beasties are disposed of by kicking, punching or catching and throwing one of the bombs that float around the station. It's not easy, though. If you don't have a joystick think seriously about having a few extra hands grafted on.—K.A.

**Maker:** ACORNSOFT  
**Format:** cassette  
**Price:** £9.95  
**Graphics:** KKK  
**Playability:** KK  
**Addictiveness:** KK  
**Overall:** KK

## TAKE THREE

3D LUNATTACK/DRAGON 32

The great Seiddab war rages on, this time across the pockmarked surface of the moon. In your bristling new Hover fighter you must breach the three defences of the ghostly alien Seiddab base and destroy their Command Bunker. The first defence zone is patrolled by some fairly mindless robotic tanks and so is (relatively) easy to pass — once you've mastered the complexities of prolonged Hover flight! Zone two is rather more difficult as you must fly across mountainous terrain through great clusters

of aerial Seiddab mines. I invariably met my demise here, thundering into the mines with all the flying skill of a shortsighted pigeon. I never managed to see the range of self activating missile silos beyond, nor the alien base itself.

The onscreen display is comprehensive and includes cockpit cross hairs for pin pointing the enemy, automatic radar, fuel monitor and temperature display. This is

particularly useful as direct hits and exploding mines cause the hull to overheat, which means pushy pilots will soon roast. Scrolling throughout the game is smooth and the bleak hi-res graphics are delightfully effective. I particularly liked the distant Earth which appears on the horizon as you rocket aimlessly around the luna surface. All in all this is a classy climax to Hewson's Seiddab trilogy and so is well

worth checking out. It's certainly as good as those highly-rated 32 offerings from the Tom Mix stable.—S.K.

**Maker:** HEWSON CONSULTANTS  
**Format:** cassette  
**Price:** £7.95  
**Graphics:** KKK  
**Playability:** KK  
**Addictiveness:** KKK  
**Overall:** KKK



## TAIL END CHARLIE

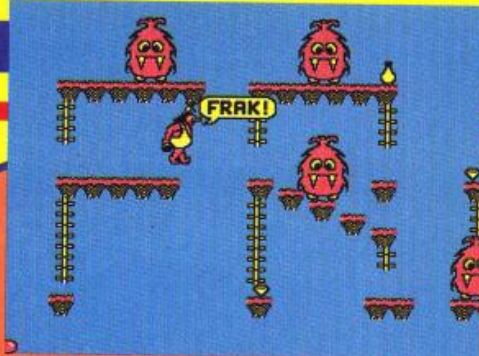
Star Raiders circa World War II. Despite the army fatigues this is pretty standard shoot-'em-up fare, in which enemy fighter planes whirl and tease your straining gunsight. You've four difficulty levels and thirty missions to complete, which vary between high-level bombing sorties and low-level rocket attacks (phew!). It must be said that considerable effort has been made to turn this into an authentic flight simulation/arcade hybrid. Rather cleverly height and movement all have relative effects upon the action and the flight deck details any damage done to the ship.

You also receive messages from the pilot during the mission — nothing inspires confidence like being rubbished over the airways! But despite this fine realisation I found

the game a little lacklustre. All the careful embellishments tend to slow down the onscreen action.

I also disliked having to negotiate the Softlock security code every time I donned my flying goggles. Like *Jet Set Willy* the game comes with an numerical grid which must be consulted prior to entering your Lancaster. At least this version isn't colour coded and so doesn't alienate those colour blind/black 'n' white TV owners. Small mercies eh?—S.K.

**Prog:** NIGHT GUNNER  
**Maker:** DIGITAL INTEGRATION  
**Machine:** SPECTRUM 48K  
**Format:** cassette  
**Price:** £7.95  
**Graphics:** KK  
**Playability:** KK  
**Addictiveness:** K  
**Overall:** KK



## THIS YO-YO NO NO-NO

I sit here with a new game in my hand. A small, rather unimpressive gold package, with what looks like a kangaroo on the front. On the back is inscribed the immortal legend, "probably the finest graphics ever programmed into a game on the BBC". Oh yeah? And how many times have we heard that before? Hang about... HANG ABOUT. These really are the finest graphics ever seen in a BBC game! Traditional block characters make a hasty departure via the window, enter stage right a new generation of cartoon type characters, with an almost filmic quality about them. The secret is Mode 1 hi-res graphics — more detail than the usual Mode 2 rubbish.

Mind you the author's a nutter. Troggs with yo-yos signals white coats time for me.

The trog is the central character. He runs up and down ladders and jumps onto platforms, Donkey Kong-style, avoiding balls and daggers thrown by an unseen hand.

It's really something to see. The trog is Disney-like in character. He scuttles around the screen with his hands clasped behind his back to disguise his secret weapon — a... er... yo-yo? — which he uses to great effect against his attackers.

This could set a new standard in BBC graphics. If you see it, buy it. —K.A.

**Prog:** FRAK  
**Maker:** AARDVARK  
**Machine:** BBC  
**Format:** cassette  
**Price:** £6.95 (approx.)  
**Graphics:** KKK  
**Playability:** KKK  
**Addictiveness:** KKK  
**Overall:** KKK

## 3-TIME LOSER

Three games for the price of one. This is too good to be true — or is it? How, one asks, do these people manage to supply three games for the price of one? Easy, they fish around in other people's dustbins.

All three games are for two players (one of them can be the computer). First there's *West World*, a Wild West shoot-out. Each player controls a cowboy who walks like

a dog. Next is *Space Race*. Rather like a primitive *Rocket Raid*, the idea is to race the opposing spaceship through a tunnel and into a docking slot. There has been a great deal of speculation over the shape of the spaceship of the future but an ace of diamonds must be pretty low on the list.

Finally we are given *Kamikaze*. 'A suicidal onslaught'. The name of the company

wreaking this havoc is Terminal Software. —K.A.

**Prog:** TRIPLE TOURNAMENT  
**Maker:** TERMINAL  
**Machine:** COMMODORE 64  
**Format:** cassette  
**Price:** £7.95  
**Graphics:** nix  
**Playability:** uh-huh  
**Addictiveness:** pass  
**Overall:** Deep 6



## TWANG!



Not exactly hip but certainly hot! After a couple of notable duffers (*Eskimo Eddie*, *Pogo*) Ocean return to form with *Cavelon* — a quite superb maze game.

Christian Urquart, author of the best selling *Kong* and *Hunchback* for the Spectrum has excelled himself here with this infuriating but compulsive medieval quest.

As a portly knight you must gird your loins and waddle bravely through the portals of the dread castle Blah in order to rescue the incarcerated princess Guinevere. There are six levels to traverse all of which boast considerable peril. (She had better be worth it.) To move between the floors you need to collect the portions of door which have been scattered

about the maze. These portions are guarded by a host of trigger-happy archers who'll do their level best to deflate your ardour. Only the mystical aura of the legendary Excalibur can protect you and even then only in bursts. Upon completing each level a little graphic routine depicts your triumph. Although there's a comprehensive joystick option I opted for the more definite feel of the keyboard. Well, if you're gonna spend days on

a game you might as well get comfortable, eh?—S.K.

**Prog:** CAVELON  
**Maker:** OCEAN  
**Machine:** SPECTRUM 48K, COMMODORE 64  
**Format:** cassette  
**Price:** £5.90  
**Graphics:** KKK  
**Playability:** KKK  
**Addictiveness:** KK  
**Overall:** KKK



# KOSMIC KANGA



At **John Menzies** now



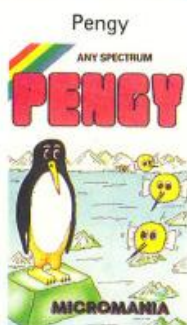
**KOSMIC KANGA**, a multi-screen, amazing, arcade standard original action game. Featuring superbly animated graphics and packed full of arcade features. Help **KANGA** find his space ship so he can return home to his planet. Leap about buildings, trees, clouds etc., pick up bonuses and throw boxing gloves at the enemies.

Keyboard or most joystick. **48K SPECTRUM & COMMODORE 64**



Tutankhamun

48K Spectrum



Pengy

16K/48K Spectrum



Invasion Force

48K Spectrum plus stack SLR

**ONLY £5.95 EACH**

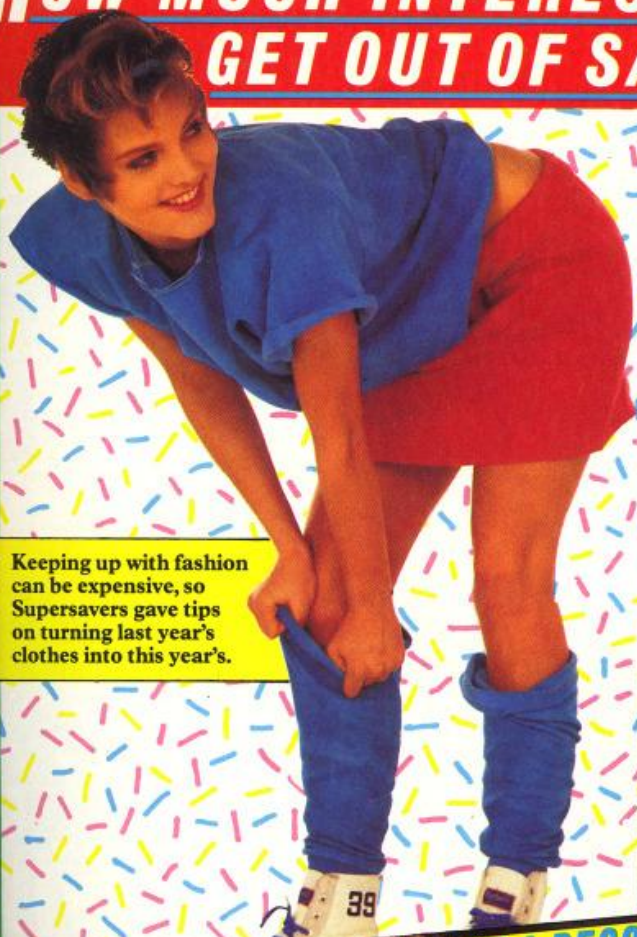
Available from most good software retailers. If your local software retailer is out of stock, send cheque/P.O. to Micromania, 14 Lower Hill Rd., Epsom, Surrey, KT19 8LT., and we will send your order by first class post free.

## MICROMANIA

DEALERS—AVAILABLE FROM ALL LEADING DISTRIBUTORS OR MICROMANIA (03727) 20152



# HOW MUCH INTEREST DO YOU GET OUT OF SAVING?



Keeping up with fashion can be expensive, so Supersavers gave tips on turning last year's clothes into this year's.

Supersavers gives you lots of tips on money making. Like starting your own car-washing business or gardening.



**BE A MONEYMAKER**

**SUPER SAILOR DAY**

In the last Supersavers magazine there was a chance to go sailing and win your own Topper Dinghy.



**MAKE A RECORD**



Lynn Hoole, winner of our songwriting competition, not only had her song recorded in a top London studio. She also flew to New York to see her record being pressed.

All Supersavers over 7 get this full colour magazine three times a year. It is packed with articles, saving tips, competitions and readers' letters.

All new Supersavers get this pack which contains a paying in book, record book, two pens and a ruler and lots more!



You can join Supersavers at any branch of Barclays. All you need is £1 to start off your account. Fill in the coupon and take it along to your most convenient branch. And remember over 400 of our branches are open on Saturday morning.

**ALL ABOUT RAILWAYS**

Reading about the world's fastest trains led to a ride on Finland's last surviving steam railway.



I would like to open a Supersavers Account.  
I wish to start my account with a deposit of £

Name

Address

Postcode

Date of Birth

For very young children accounts will be opened on their behalf in the name of an adult. They will not be eligible for Club membership or the magazine until they reach the age of 7.

Instruction to branch staff:  
Attach this coupon to Supersavers Registration Card and send to Supersavers at Head Office.

**BARCLAYS**  
**Super Savers CLUB**

BK 9

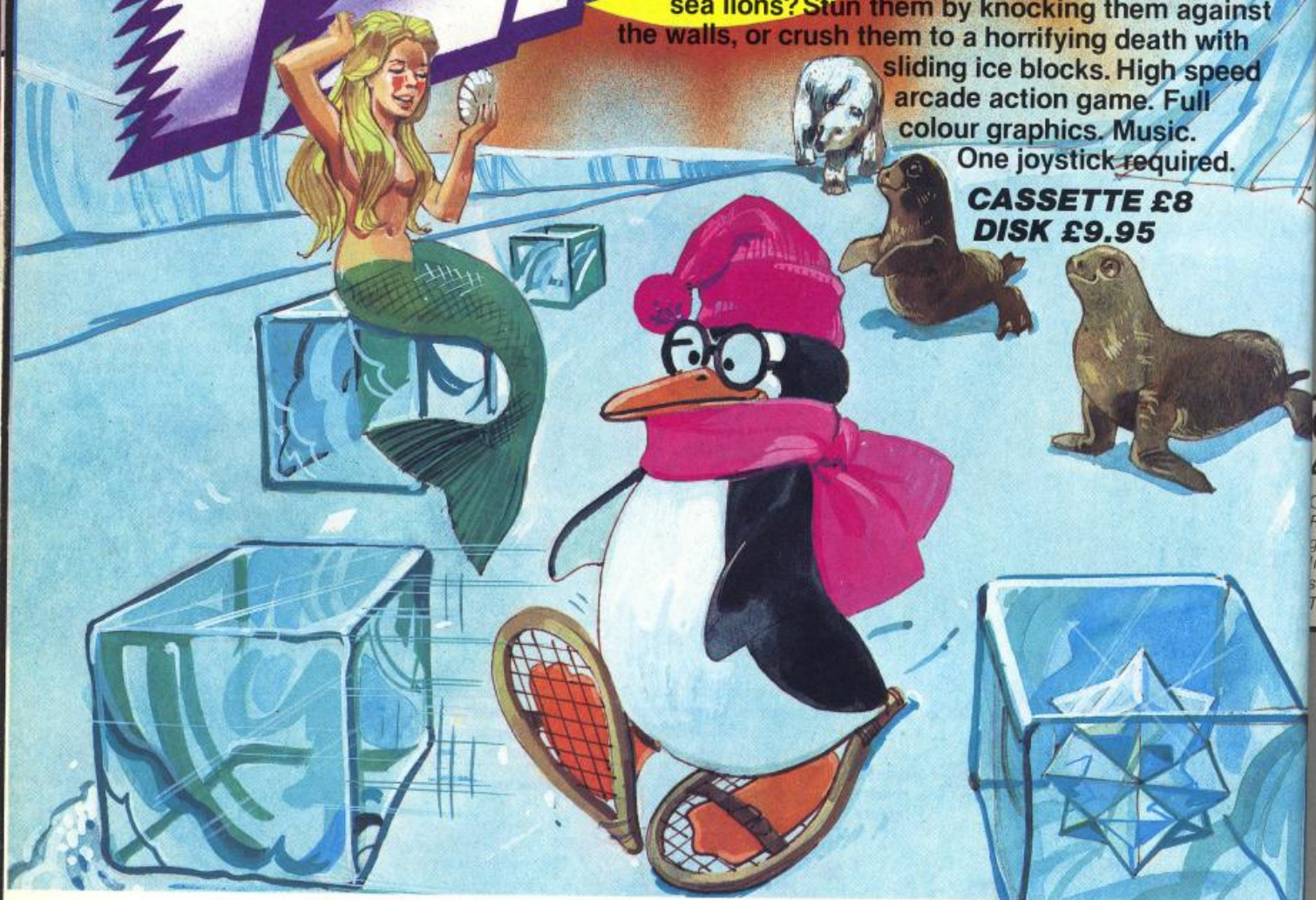


Available for  
**TANDY COLOUR 16K**  
**COMMODORE 64** **ATARI 16K**  
**DRAGON 32**

# PENGON

Can you save penguin Willy from the ferocious mutant sea lions? Stun them by knocking them against the walls, or crush them to a horrifying death with sliding ice blocks. High speed arcade action game. Full colour graphics. Music. One joystick required.

**CASSETTE £8**  
**DISK £9.95**



Mail Order Sales from  
Microdeal Mail Order 41 Truro Rd,  
St. Austell Cornwall PL25 5JE

Credit Card Sales      
Phone 0726 3456



Dealers Contact

**MICRODEAL DISTRIBUTION**  
**0726-3456**

or **WEBSTERS SOFTWARE**  
**0483 62222**

## MICRODEAL

Selected Microdeal Titles available from computer dealers nationwide or from larger branches of







# THE GLORY OF THE RAJ



## THE GREEDY DWARF/ Goldstar/BBC 'B'

In this text-only adventure, King Arganda — the Indomitable — has had his crown jewels nicked by a dwarf — the Greedy and Loathsome. The adventurer who risks all to recover the missing rocks will be rewarded with fame and glory.

"The Greedy Dwarf is the most intellectually satisfying of all the games I played. The text reads as well as a good novel — and that makes a change. This is really important because you very quickly begin to build up a picture of the king's castle in your mind's eye. All the same, for myself, it's a case of 'what good is a book without pictures?' I enjoy graphical adventures most of all."

RAJ SINGH got the break millions only dream of — a part in *Indiana Jones and the Temple of Doom*, mega-adventure and long-awaited sequel to Steven Spielberg's *Raiders of the Lost Ark*. In the movie, he plays the sinister Little Maharaja of Pankot.

Indiana Jones (Harrison Ford) is entertained in the Palace of Pankot by said little Maharaja (Raj Singh) — bejewelled, primed and lacquered in his fabulous costume. Raj holds court with impeccable hospitality and charm. That's until Indy stumbles across him at work one evening, participating in the revival of an ancient and evil sect, in which the Goddess Kali demands human sacrifice...

The satin-clad Satanist is now back at school (in Ealing!) and the only beastly thing about him is his Dragon 32, bought with movie earnings.

He prefers adventure games, and drinks Coke, not blood.

"Steven Spielberg, Le Huy Quan (Short Round) and I played the arcade machines at Elstree studios together during the breaks in filming. Steven liked *Pole Position* and *Dig Dug*. He was very, very good. He fixed the machines so that we didn't have to pay to play.

"Being an actor is not my real ambition. I'm really interested in computing and want to work on the business side. Acting would be my major hobby.

"Making the film was lots of fun and a real experience. The set for the actual Temple of Doom was so vast and extravagant I could hardly believe it. I was nervous at first when it came to my part, but Steven was so nice that I soon forgot about that."

## QUETZALCOATL/Virgin/ 48k SPECTRUM

QUETZALCOATL is a real Indiana Jones-style adventure. Raj looked a bit peeved with the prospect of another maze game, but once he got started rapidly became involved. Instead of the usual bird's eye view, our guest found himself inside the scrolling 3D tunnels of the maze. As in the Temple of Doom, directional dyslexics stand to lose not

only their way but their lives!

"Did I like *Raiders of the Lost Ark*? You bet! My sister and I saw it about seven times! Getting chosen for the sequel was a dream come true, and I certainly like this adventure. The display is classy and exciting and you get right into the adventure first. The text's entertaining too. Especially when you try to pronounce 'Huitzilopotchli'."



## THE PRIZE/Arcade/ 48k SPECTRUM

THE PRIZE is your actual maze game. The quest here involves putting the three types of Guardian under heavy manners and collecting the vital 'code pods' in the correct order in order to progress through the levels. Getting to the central maze chamber might give you even more than a gloat — Arcade are offering £5,000 cash money for a snapshot of the final screen. Could this be the final wink of the walnut of life? Raj didn't think so.

"I think it's a real cheat. For starters it's too much like Berserk, and the graphics are poor and gaudy to the point of naff. It may have a few more screens, but it's basically a shoot 'em up, not what I'd call an adventure. The money is just a gimmick to entice you into playing what is basically an uninventive game. Even money won't make you play a dull game. I think it's boring."

## VALHALLA/Legend/CMB 64

VALHALLA has been variously described by resident square-eyed adventure hacks as "state of the art", "the best adventure game in existence" and "a real pain". Raj acts come and go, eat, drink and die. Valhalla plays on alone — like a movie.

"You'd obviously need a really long time to even start to play this game properly. The graphics have a lot of character and the locations have atmosphere. But there are just so many characters to learn about. You'd have to become an expert in their individual natures in order to progress. It doesn't help that you have no time to think before you move, as the game will go on its own way without you, and you have to make snap decisions. It's a very clever game indeed — in fact I think it's a bit too clever, and I don't really like it."



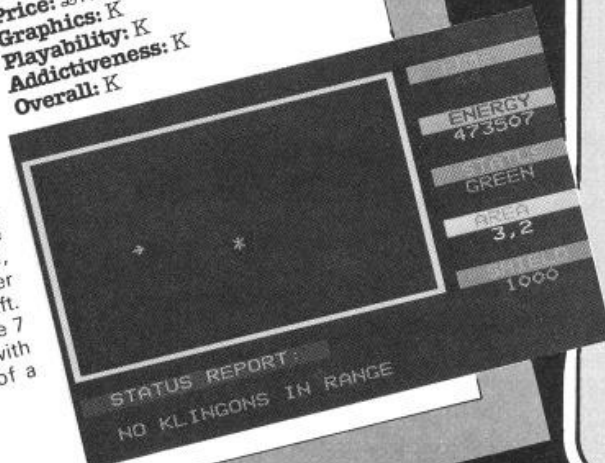


**BOLDLY TRIED  
TREK/BBC**

Well, folks, the cat's out of the bag. The highbrows at Acorn User magazine DO play games with their Beebs. They've written *Trek* and sneaked it out the back door when they thought nobody was looking. Mind you, they don't make it easy, it's a complicated game — three onboard computers, seven weapons systems, seven screen displays... and it takes some time to get used to. The object of the exercise is to patrol the universe, doing a pest control number on a fleet of alien spacecraft. The trouble is it's in Mode 7 and I had a bit of trouble with the stunning realism of a

starship represented by a small and rather lonely arrow. In fact after all the guff in the build-up it's a bit of a disappointment. — K.A.

**Maker:** ACORN  
**User/Micrograph:**  
**Format:** cassette  
**Price:** £7.95  
**Graphics:** K  
**Playability:** K  
**Addictiveness:** K  
**Overall:** K

**SHEEPISH****IT'S THE  
WOOLUF!/SPECTRUM**

"It's the Wooluf," you may recall, was the title of a truly abysmal cartoon show that escaped from the Hanna-Barbera stable sometime during the late sixties/early seventies. Gruesomely animated and horrendously unfunny, it was one of the worst post "Scooby Doo" (original season) HB offerings ever and consequently marked the end of an era for the once highly-rated fun merchants.

I tell you this simply for lack of anything else to say about this flat offering from The Home of The Things.

As far as I can see it's a straight reworking of Virgin's early clunker, *Sheepwalk*. The graphics are neater but the gameplay is strikingly similar. In it you must instruct

**BETTER BUT...****SPACE COMMAND/SPECTRUM 48K**

Space Command is the best offering yet from the elderly (cough) team of Poole and Murray, authors of *Yomp* and *Rider*, also from Virgin. Here the quasi-militaristic tone of their earlier work has been replaced with good ol' SF. You play Defender (no relation) to a domed Kandor-style asteroid which is busy ploughing through the galactic spacelanes. As you might imagine this reckless behaviour is guaranteed to arouse the ire of local life-forms and they do their best to flatten the flying city.

It's all very similar to Imagic's old *Atlantis* ROM. The graphics are nice, although nowhere near as sensational as the promo blurb would have you believe, and the gameplay is tough. I've yet to clear the first wave, who look like renegades from Jet Pac!

Limited laser fire and shallow fuel tanks add to your problems.

I guess if you're still in the market for a space shoot 'em up then this is worth a look, although after an hour or so I wasn't so much addicted as cheesed off. Hope the next one's a little more original boys. — S.K.

**Maker:** VIRGIN GAMES  
**Format:** cassette  
**Price:** £5.95  
**Graphics:** KKK  
**Playability:** KK  
**Addictiveness:** K  
**Overall:** KK

**FRIGID  
PENGU/BBC**

*Pengi* is a penguin (yeah?). He's locked in the freezer and you've got to get him out.

In short, another one of those games where you have to shift blocks of ice about in order to get three specially marked blocks in a line. Just to make things harder a flock of Snow Bees, with fatal stings, buzz between the blocks looking for penguins to sting. They can be crushed with the ice blocks or, if you can lure them to the electric fence (in a freezer?) they can be stunned and then stomped on.

Old Pengi is none too bright, though. Once he's aligned the blocks and escaped from the freezer he gets locked up in another one and has to start all over again.

It's all good clean fun but the credibility rating runs a bit low. The day I find a penguin and an electric fence in my freezer is the day I volunteer for the rubber room. — K.A.

**Maker:** VISIONS  
**Format:** cassette  
**Price:** £6.95  
**Graphics:** K  
**Playability:** KK  
**Addictiveness:** K  
**Overall:** K



your trusty collie to herd a flock of sheep across a bridge, through a wood and into the relative safety of the sheep pen. Meanwhile the hungry 'wooluf' patrols the forest in the hope of gobbling up some stray dinners. Clear the sheet and you're blessed with another flock of even more suicidal sheep. Woolly stuff indeed. — S.K.

**Maker:** CRYSTAL COMPUTING

**Format:** cassette

**Price:** £5.95

**Graphics:** K

**Playability:** K

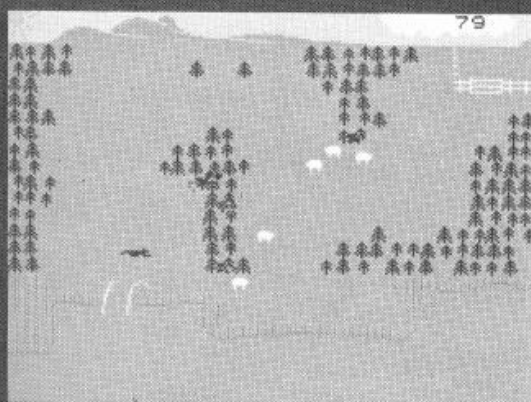
**Addictiveness:** K

**Overall:** K

# IT'S THE WOOLUF!



## CRYSTAL



## AVAST BEHIND!

### SEA ADVENTURE/BBC

*Sea Adventure* is just what it says, an adventure at sea — with graphics. Let's talk about graphic adventures. Most fail on the BBC, mainly because of memory limitations. Virgin, with *Sea Adventure*, uphold a grand old tradition in this respect. In fact it's a major step backwards. I mean, BASIC? Not only that, the only way to enter text is by the function keys (this means it knows a grand total of 10 words — impressive, huh?) The graphics in Mode 7 are feeble. The occasional animation displays a profound flair for the non-event. — K.A.

**Maker:** VIRGIN GAMES

**Format:** cassette

**Price:** £6.95

**Graphics:** None

**Playability:** None

**Addictiveness:** Do what?

**Overall:** None

## HEADACHE

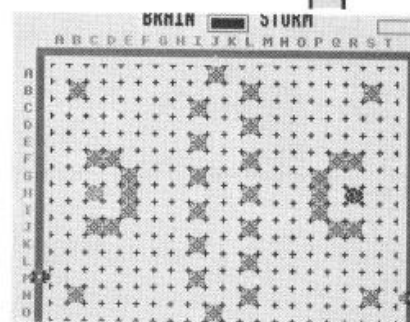
### BRAINSTORM/BBC

This month Virgin Games bring us a new concept.

Totally Misleading Instructions.

After a week or so things improved. An envelope containing a letter from Virgin and a small diagram arrived. It seemed the game was virtually unplayable without the diagram. But the really good bit was that the diagram made a total mockery of the instructions in the program itself.

Looking to the game it's a board-type game of "skill, memory, logic and nerve for two players". The idea is for each player to defend his brain (the one on the screen) against the lasers of his opponent by the strategic placing of deflecting prisms. The game comes to an end when one or other of the



player's brains is toasted. What more can you say? — K.A.

**Maker:** VIRGIN GAMES

**Format:** cassette

**Price:** £6.95

**Graphics:** K

**Playability:** K

**Addictiveness:** K

**Overall:** K

## BIG BIRD

### BLACK HAWK/CBM 64

Popular rumour has it that this game was inspired by the Falklands conflict but I would be prepared to bet that Robert Duval strafing the beaches of the Valkyries' in *Apocalypse Now* had more than a passing say in the matter. *Black Hawk* is a highly sophisticated attack aircraft; fast and deadly. Your mission is to seek out and destroy enemy airfields and launch sites on a small group of islands. Your aircraft is fitted

with an advanced computer system which automatically switches between two attack modes — bomb-'em-to-hell or shoot-'em-out-of-the-skies.

If your 'on target percentage figure' (how much destruction you cause) is high enough advanced weaponry is automatically fitted, giving greater kill power. All this is accompanied by Wagner's 'Ride of the Valkyries'. Music while you work?

In 'attack' mode you use the joystick to control sights, dropping bombs on the unfortunates below. If you miss any of the mobile targets (tanks, missiles, etc) the computer automatically reverts to 'defence' mode, giving you a second chance. Fast action and lots of variety. — K.A.

**Maker:** CREATIVE SPARKS

**Format:** cassette

**Price:** £7.95

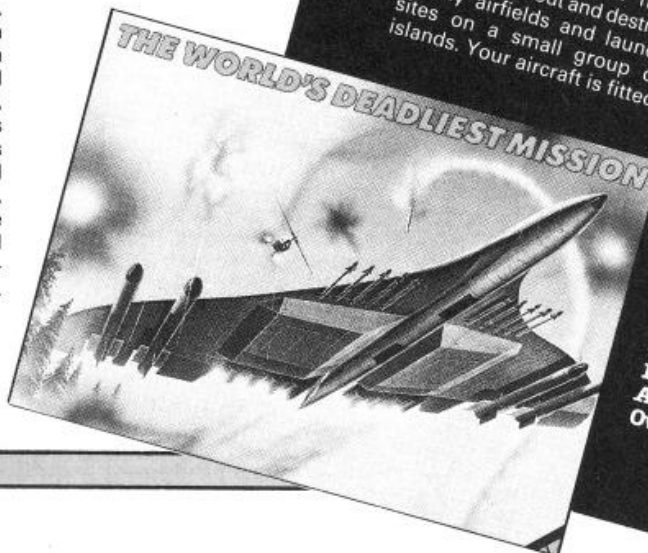
**Graphics:** KK

**Playability:** KK

**Addictiveness:** KK

**Overall:** KK

# THE WORLD'S DEADLIEST MISSION





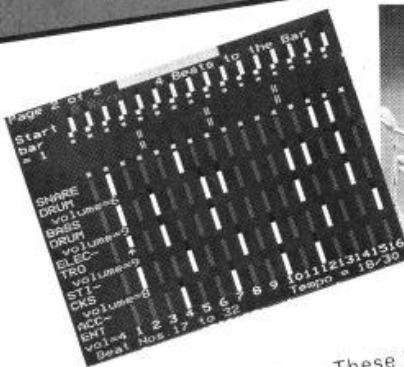


## WHACKATTACK DRUM KIT/BBC

Some time ago Quicksilver thrust *Music Processor* upon an unsuspecting world, the end result of which was weeks of sleepless nights for parents/wives/dogs.

The success of *Music Processor* has inspired the Game Lords to produce *Drum Kit*, which no doubt will produce exciting responses in any deathwatch beetles that happen to be in the immediate vicinity.

Down the side of the screen are the various drums; snare, base, etc., each of which is designated a row of buttons. The idea is that each button represents a bar beat and you use the cursor and return keys to turn the buttons on and



off. If a button is on the associated instrument plays a beat, if not it doesn't. Very simple, very straightforward. You can also use the envelope editor to redefine the sounds and store up to 4,000 beats on tape.

Just as *Music Processor* was, *Drum Kit* is easy to use and quite effective. I had some reservations about some reservations but these were mainly limitations imposed by the machine (the Beeb's sound chip is good but hardly recording standard).

These limitations are less apparent with *Drum Kit*. While its use as a serious instrument are somewhat dubious, as a practice instrument it could definitely prove its worth.—K.A.

**Maker:** QUICKSILVA  
**Format:** cassette  
**Price:** £9.95  
**Graphics:** K  
**Usefulness:** KK  
**Addictiveness:** KK  
**Overall:** KK

## SLOW PORKER PAINTPIC/CBM 64

For about a week *Paintpic* was known as *Paintpig* around this household until somebody quite rightly pointed out that pigs don't feature all that strongly and what looked like a 'G' was more likely to be a 'C'.

My first attempt, intended to be a subtle rendition of *Guernica*, came out looking like the ceiling had fallen on it. Practice was definitely the order of the day. After a bit the commands became more familiar and it became easier.

There seem to be a few contradictions here. Com-

puter aided design (CAD) by its nature should be as fast as possible otherwise it's just a damned nuisance. *Paintpic* is too slow to be realistic. There's no doubt you can do a lot with it — it has routines for drawing, painting, circles and arcs to mention but a few — but drawing anything is like waiting around for a bus.

The help screens are totally incomprehensible.

It works, but it's expensive and unless you enjoy spending weeks on a drawing think about something else.—K.A.



**Maker:** KUMA  
**Format:** cassette  
**Price:** £19.95  
**Graphics:** KK  
**Usefulness:** K  
**Addictiveness:** K  
**Overall:** K

## VAST SCOPE SCOPE II/SPECTRUM 48K



Don't be fooled by the "Games Designer" tag plastered across the packaging of *Scope 2*, this beautifully structured utility is quite unlike menu driven customisers such as Melbourne House's *Hurg* and Software Studio's *Games Designer*. It's a far more useful medium-level language dedicated purely towards the manipulation of high-speed graphics, sound and animation. And the beauty of the system is that code generated by *Scope 2* will run independently of its mother tongue.

The perfect tool for frustrated games writers! What's more it's exceptionally accessible! You've a mere 36 command words to master which, once written into Basic REM statements, can be instantly compiled into machine code using a simple USR call. Of course experienced m/code hackers will bemoan the system's limitations but others will find it a genuine boon.

*Scope 2* itself appears remarkably clean. The only bug I came across was its total refusal to recognise the NOTE command. *Scope's* equivalent to the REM statement.

But that's a small price to pay. The package is completed by a useful sprite designer routine and some simple *Scope 2* listings. With this and Gilsoft's *The Quill* the Spectrum games market has been blown apart. Owners of the original *Scope* should upgrade immediately. Great stuff!—S.K.

**Maker:** ISP  
**Format:** cassette  
**Price:** £17.95  
**Graphics:** N/A  
**Usefulness:** KKK  
**Addictiveness:** KKK  
**Overall:** KKK



## LIBRARIAN ACOS+/CBM 64

*ACOS+* doesn't exactly speed up cassette loading but it certainly makes life easier. It enhances the cassette filing system (*ACOS* stands for Advanced Cassette Operating System), making it operate in a similar fashion to a disc — although it still retains the snail-like qualities of '64 loading.

Part of the reason for discs being so fast is that they keep a catalogue of files on the first sector so that they can move quickly to the requested file. *ACOS+* does much the same thing. It looks at its catalogue and then lets you fast-wind the tape to the position of the file you've asked for. Of course you still have to press the fast forward button but because the computer has control of the cassette motor it can stop when it reaches the right program.

In addition to this you get a whole load of new commands.

Then we come to the BASIC extensions. They operate like normal keywords and give some very nice control over sound and sprite graphics.

All in all a nice package. The only point against it is that no program will work unless *ACOS+* is installed, so forget about any ideas of using it to make a killing on the games market.—K.A.

**Maker:** MELBOURNE HOUSE  
**Format:** cassette  
**Price:** £8.95  
**Graphics:** N/A  
**Usefulness:** KK  
**Addictiveness:** N/A  
**Overall:** KK



# Tandy®

## Chart-Topping Cassette Software On The TRS-80™ Colour Computer!



**NEW! Pengon.** A high-speed arcade game with full colour graphics and music! Can you save Willy the Penguin from the vicious mutant sealions by stunning them! **6-7307** ..... **£7.95**

**NEW! Cuthbert In Space** He is sent on a mission of plunder against the Moronians solar System, landing his spacecraft and re-belling at the Moronians fuel dump. **6-7308** ..... **£7.95**

**NEW! Dungeon Raid.** Journey through the catacombs killing Snakes, Oafs, Snappers and the Ghost that guards each deathly dungeon - without killing your own "Clone"! **26-7309** ..... **£7.95**

**NEW! Keys of the Wizard.** A text only adventure game. Find all the treasures and store them safely in the sanctuary, whilst fighting off the creatures and avoiding traps and tricks. **26-7310** ..... **£7.95**

**NEW! Eight Ball.** Line up your cue, decide what strength shot you need and exactly where you want to hit the cueball. Superb full-colour graphics with realistic sound effects. **26-7311** ..... **£7.95**

**NEW! Caterpillar II.** Hours of fun stopping the descending Caterpillar with your laser gun before it winds its way down through the mushroom field. **26-7312** ..... **£7.95**

### OTHER TITLES:-

Cuthbert In The Jungle. **26-7301** ... **£7.95**  
Cuthbert Goes Walkabout. **26-7302** **£7.95**

Cuthbert Goes Digging. **26-7303** ... **£7.95**  
Skramble. **26-7306** ..... **£7.95**

Frogger. **26-7304** ..... **£7.95**  
Crazy Painter. **26-7305** ..... **£7.95**

## Build A System With Tandy Accessories!

### Ultra-Compact Colour Graphics Printer



**£149** ■ Uses Easily Replaceable Ink Cartridges

Create a variety of graphic output from charts to computer-generated "doodles". Prints in red, blue, green and black on 4 3/4" wide paper. Text mode prints 40 or 80 characters per line at 12 characters/second - ideal for program listings and output. **26-1192** ..... **£149.00**

### Thermal Matrix Printer With Graphics

**£79.95** ■ Ideal For Use With The MC-10 Or Colour Computer

TP-10. Prints 32 characters per line at 30 characters per second on 4" wide thermal paper. Features include special repeat function to make graphics programming easier. **26-1261** ..... **£79.95**  
Paper. 4" wide roll of thermal paper. **26-1332** ..... **£79.95**



Pkg. of 2/£2.79

### Disk and Computer Storage

**£349.95** ■ Graduate To A Colour Computer Disk System

**NEW! Colour Computer 2 Disk 0 Kit.** Use with our new Colour Computer 2. 156K of user storage. **26-3029** ..... **£349.95**  
Colour Disk 1, 2 or 3. Requires Disk 0. **26-3023** ..... **£249.95**  
CCR-81 Cassette Recorder. **26-1208** ..... **£39.95**  
CCR-82 Compact Cassette Recorder. **26-1209** ..... **£34.95**

### Low Noise Colour Ink-Jet Printer

**£499** ■ Prints In Seven Vivid Non-Smearing Colours

Prints 2600 dots/second in graphics mode with a resolution of 560 dots/line (monochrome) and 640 dots/line (multi-colour mode). Text mode gives you 12 cpi at 37 characters per second. **26-1268** ..... **£499.00**  
Dragon Printer Cable. **26-7204** ..... **£19.95**



## Take A Look At Tandy, Today

Visit your local store or dealer and ask about our expanding range of microcomputers and software - we service what we sell!  
See Yellow Pages For Address Of Store Nearest You!



SUMMER  
 MAIL ORDER ONLY  
 SAVINGS

**21.95**  
~~26.95~~ plus £1 post & packing

Only **9.95**

Still incorporating the all important rear expansion connector which means other peripherals can be connected at the same time i.e. Ram Packs, Printers, Speech Units etc, and of course the key replication principle used guarantees this will never conflict electrically with any other add-ons.

## RomSlot

only ~~11.95~~<sup>8.95</sup> plus 50p post & packing



## Quickshot



Please allow up to 28 days from receipt of your order although we normally despatch from stock within 7 days. All AGF products are guaranteed for 12 months and are supplied on a 14 day money back undertaking. AGF Hardware, Boonor Regis, West Sussex. Telephone: (0243) 823337.

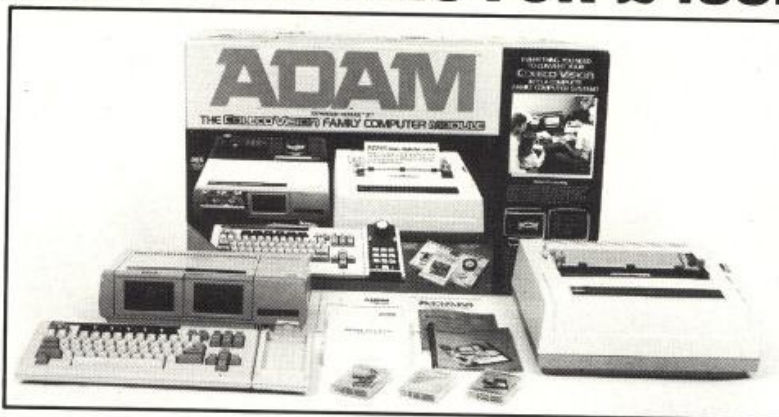


OVERSEAS PRICES ON APPLICATION  
DEALER ENQUIRIES WELCOME



# A COMPLETE PACKAGE - ALL THIS FOR £499!

- \* 80K\* RAM (Exp to 144K)
- \* Full Stroke Keyboard
- \* 256K Data Storage Unit
- \* Daisywheel Printer
- \* Built-in Word Processing
- \* Buck Rogers Arcade Game
- \* Colecovision Compatible



# ADAM<sup>TM</sup> - £499

Inc VAT

## QUITE SIMPLY - VALUE FOR MONEY!

If you're looking for real value in a computer system, one which can handle anything from serious Word Processing to enhanced Colecovision style video games such as Buck Rogers, look no further. The Coleco Adam is here with a package which will make you wonder if you're dreaming when we tell you about it. A price breakthrough in computer systems, Adam is comprised of an 80K RAM memory console\* with a built-in 256K digital data drive; a professional quality, stepped and sculptured 75 key full-stroke keyboard; a letter quality daisywheel printer and a full word processing program built into the Console. Two additional pieces of software, Smart BASIC and also 'Buck Rogers - Planet of Zoom' (the ultimate in advanced video games), are included as well as a blank digital data pack. Adam can be used with any domestic colour Television set.

**MEMORY CONSOLE/DATA DRIVE:** The heart of the Adam system is the 40K ROM and 64K RAM memory console which combines with the 32K ROM and 16K RAM in Colecovision to give you a total of 72K ROM (including 24K cartridge ROM) and 80K RAM (expandable to 144K). Built into the memory console is a digital data drive which accepts Adam's digital data packs, a fast and reliable mass storage medium that is capable of storing 256K of information, that's about 250 pages of double spaced text! The console is also designed to accommodate a second optional digital data drive.

**FULL STROKE KEYBOARD:** The Adam keyboard has been designed as a professional quality keyboard that combines ease of use with an impressive array of features. It is stepped and sculptured for maximum efficiency and has 75 full stroke keys which include 6 colour coded Smart Keys which are redefined for each new application; 10 command keys which are dedicated to the word processing function, and 5 cursor control keys for easy positioning of the cursor at any point on the screen. You can attach a Colecovision controller to the keyboard to function as a numeric keypad for easy data entry. It can also be held like a calculator, a feature which makes working with numbers particularly easy. The joystick part of the hand controller can be used in the same way as the cursor control keys, to move the cursor around the screen.

**LETTER QUALITY PRINTER:** The SmartWriter letter quality daisywheel printer is a bi-directional 80 column printer which prints at a rate of 120 words per minute. It uses standard interchangeable daisywheels, so a variety of typescripts are available. The printer has a 9.5 inch wide carriage for either single sheets or continuous fan fold paper and uses standard carbon ribbons. It is comparable to many printers which cost as much as the total Adam package. The printer can be used either with the Adam's SmartWriter word processing program or as a stand alone electronic typewriter.

**BUILT-IN WORD PROCESSOR:** Adam comes with SmartWriter word processing built-in. This program is so easy to use that you only have to turn the power on and the word processor is on line and ready to go. Detailed instruction books are not necessary as the Computer guides you step by step, working from a series of Menu commands. It enables you to type in text, then completely edit or revise it with the touch of a few keys. Changes are readily made and a series of queries from the computer confirm your intentions, so that you can continuously double check your work as you type.

**COMPATIBILITY WITH COLECOVISION:** By using high speed interactive microprocessors in each of the modules, the Coleco Adam is designed to take additional advantage of both the 32K ROM and 16K RAM memory capability in the Colecovision. If you do not already own a Colecovision Console (£99 inc VAT), then you will need to purchase this when you initially purchase your Adam Computer package (£499 inc VAT), making a total purchase price of (£598 inc VAT).

**WHAT IS COLECOVISION:** Colecovision is one of the worlds most powerful video game systems, capable of displaying arcade quality colour graphics of incredible quality on a standard Colour TV set. The console (see picture bottom left) accepts 24K ROM cartridges such as Turbo and Zaxxon and is supplied with the popular Donkey Kong cartridge and a pair of joystick controllers. Colecovision has a range of licensed arcade hits available such as: Gorf, Carnival, Cosmic Avenger, Mouse Trap, Ladybug, Venture, Smurf, Pepper II, Space Panic, Looping, Space Fury, Mr Do, Time Pilot, Wizard of Wor and many others. So there you have it, Adam plus Colecovision the unbeatable combination. Send the coupon below for your FREE copy of our 12 page Colour brochure giving details on the complete Adam system.

SILICA SHOP LTD., 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX Tel: 01-309 1111 or 01-301 1111

## ORDER NOW - OR SEND FOR A FREE COLOUR BROCHURE

To: SILICA SHOP LTD, Dept BIGK 0984, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX Telephone: 01-309 1111 or 01-301 1111

### LITERATURE REQUEST:

- ☐ Please send me your FREE 12 page colour brochure on Colecovision/Adam  
☐ I own a Videogame ☐ I own a Computer

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode:

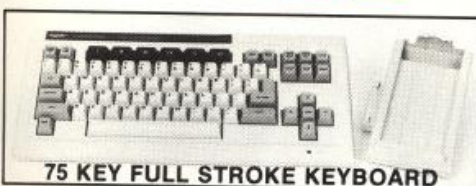
### ORDER REQUEST:

- Please send me: ☐ Adam (add-on package only) £499 inc VAT  
☐ Adam & Colecovision (£499+£99) £598 inc VAT

- ☐ I enclose Cheque/P.O. payable to Silica Shop Limited  
☐ CREDIT CARD - Please debit my Access/Barclaycard/Visa/Am Ex/Diners Club

Card Number:

Rev 2



75 KEY FULL STROKE KEYBOARD



MEMORY CONSOLE & DATA DRIVE



DAISYWHEEL PRINTER



COMPREHENSIVE INSTRUCTIONS



COLECOVISION GAMES CONSOLE





The WICO range — with the 3-Way top of the list.

# STICKS MAY BREAK...

... Or do their bearings in, but nothing fazes JOHN CONQUEST. He's got plenty more to fall back on

LOOK THROUGH the computer mag ads and you'll see that there are a lot of people trying to sell you custom joysticks, all convinced that theirs is the real McCoy. "Arcade action", "instant response", "high quality", "professional" — writing joysticks ads looks like a doddle, but what we're concerned with here is the rather more difficult business of actually buying one.

Obviously the first consideration is compatibility, whether or not the widget will fit your machine. Virtually all the joysticks currently available are designed to fit Atari video & computer systems and Commodores, though

they'll also work on CBS's Colecovision videos (you'll still need a standard controller in the second port to make the games run). Wico supply adaptor leads for Apple and Radio Shack machines and, like Suncom, for Texas Instruments TI 99/4As. A rare exception is Suncom's *Stike Commander* (£16.95), made specifically for the BBC or Dragon, though Kempston are also planning a BBC stick.

## VEXED

The vexed question of interfaces is one on which you'll need expert, and hopefully disinterested, advice. For Spectrums, the *Kempston* at £11.50, which will accept any stick, has only one drawback, a single port. For BBC's the *Wizard* at £14.95 is recommended. The basic rules are not to get joysticks with plugs jury-rigged to fit machines they weren't designed for (they don't work too well) and to avoid anything that needs a program to make it run.

A less obvious but vital

consideration is the size of your hand. Believe me, that's important. Many of the sticks I tried simply weren't comfortable, but might well suit someone with smaller, or indeed larger, hands and this applies especially to shaped grips.

Unfortunately a lot of shops stock a very limited range, usually Quickshot IIs or Point Masters, so for this and many other reasons it's well worth while going to one of the big computer shops and trying your hand at their range. Lion House in London's Tottenham Court Road, for instance, has 17 models ready to be hooked up for demonstration, and the Silica shop in Sidcup reckons to have at least 15 of a possible 26 in stock at any given time. Even if you just try them for feel, you'll notice the differences.

Ask yourself realistically how much you're going to use a stick. Price differences are almost entirely down to quality of construction and the cheap ones simply aren't

up to a lot of punishment. If you're heavily into 'Decathlon', to take an extreme example, a cheap joystick is going to be a waste of money. With joysticks you get what you pay for with a vengeance, and Atari owners at least should calculate whether they're really improving on the standard issue sticks.

## OBVIOUS

The most obvious differences between cheap and not so cheap sticks are whether or not they have steel shafts, the grade of plastics (high impact or extruded) used and the general solidity of construction. What you don't see is the guts, which is what really sorts them out. Very few sticks have microswitches (though Kempston are rumoured to be using them in all future models), but the leaf switches found in most vary considerably in quality and the cheap ones have very limited lives. Also



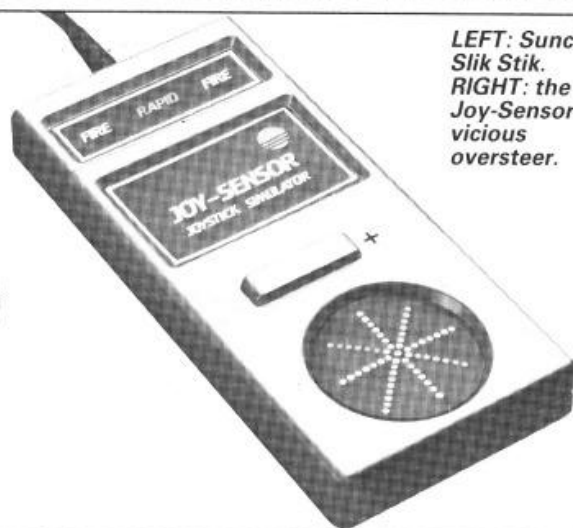
WICO  
nge —  
with the  
ay top  
he list.

hidden inside the casing is the shaft mounting which is another thing that decides whether or not the stick will go on doing what you want it to do.

You should also think about the kind of game you usually play. Sticks come in two basic configurations, with the fire button in the handle, either centre fire on the top or trigger fire in the handle itself, or mounted on the base. I'm convinced that handle fire is a major contribution to fire control. Most of the sticks with handle fire have a base button as well, which can be a nuisance when hand holding, and some base mountings are available in either left or right hand versions or already have both, either as separate buttons or as a bar across the width of the base.

Most of the sticks mentioned were tested with Activision's Atari computer version of *River Raid*. It requires precise manoeuvre, reliable and responsive speed control and pinpoint fire — in other words it uses everything that a joystick ought to offer.

The cheapest sticks around are Acorn at £13 a pair (soon to go up to £19), which are so terrible that nobody seems to stock them. The *Pinnacle* at £7.95 is admired more for its price than for the quality of its 8-way movement and handle and base fire buttons, but if you really want to spend the minimum, this is the one.



LEFT: Suncom Slik Stik. RIGHT: the Joy-Sensor vicious oversteer.

For £9.95 you can get Spectravision's *Quickshot I* with centre handle fire and sucker feet, which, for rather more, is a standard Spectrum interface offering. Like its big brother (below) its shaped handle makes hand size critical. Easy to use, though because of the shaft mounting rather loose, it's as fragile as it looks and would last about five minutes in an arcade. Its leaf switches have a poor reputation. Alternatively there's Suncom's *Slik Stik*, the cheapest half way reasonable stick, which has a ball grip, a left hand side base fire button and is a nice hand size. Solidly made, it's the kind of thing Atari ought to be offering as standard.

First in over the £10 mark is the very basic Kempston 1000 (£10.99) which has little over the Slik Stik except a base fire bar, workable from

left or right. The handle suggests that it might best be controlled with the thumb. It's followed at £11.95 by the *Quickshot II* which is identical to the junior version already dealt with except that it has 'auto rapid fire' via a trigger in the handle, its main selling point.

## LOOSE FEEL

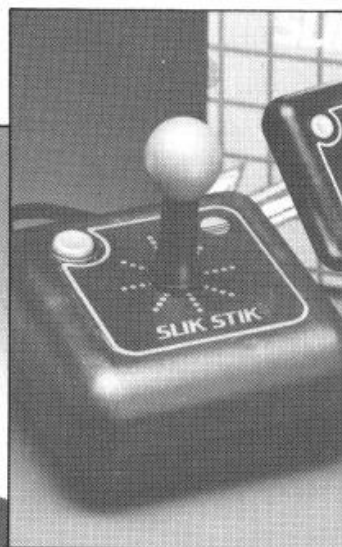
The *Triga Command II* (£12.99) has a very similar loose feel, again due to the shaft mounting, and looks very plasticky. It has a trigger fire only (and suction cup feet) and comes in £19.99 versions for Spectrum and BBC. The handle design however is excellent with a diamond cross-cut pistol grip that is very satisfying. The much sturdier Kempston 3000 with handle centre, trigger and base fire bar buttons is £12.75.

At £12.95 you can choose between the *Point Master*, very similar to the *Quickshot II* but slightly less robust, and Sumlock's all-British *Pro-Ace* which resembles the Kempstons in its solid high-impact plastic construction and fire bar (plus centre fire in the handle), but which I found sluggish and awkwardly shaped. On the other hand, Sumlock back up the quality of their leaf switches with a two year warranty, so it should be pretty reliable in the long term.

The top of the range Kempston 5000 (£13.50) is, again, a very solid piece of work with a ball grip on a short, tapered steel shaft and both left and right hand base



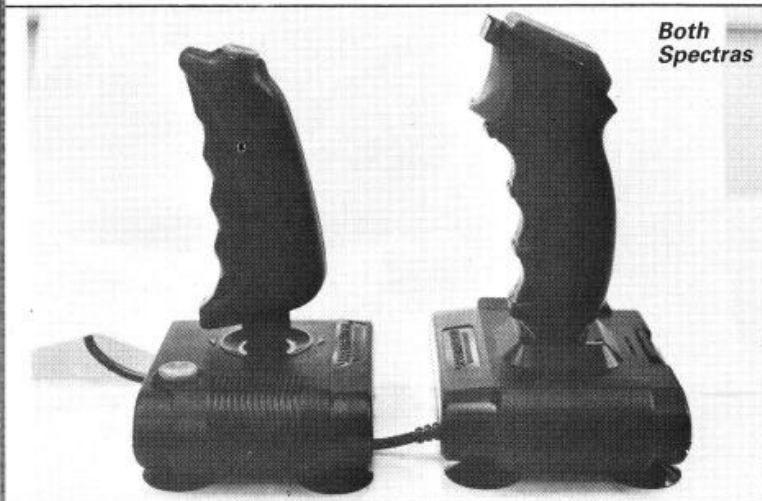
ABOVE: the Spectravision 2



ent. If  
Deca-  
reme  
tick is  
oney.  
what  
enge-  
ers at  
ulate  
really  
ndard

differ-  
nd not  
ether  
hafts,  
(high  
d and  
con-  
't see  
what  
Very  
cross-  
pston  
using  
s), but  
nd in  
ply in  
ones  
Also





Both Spectras

fire buttons. It feels a bit stiff but I'm told that it wears in well. The next Suncom, the £13.95 *Starfighter* (also available in a ritzier version for Apple computers at a very ritzy £39.95) is a very nice hand size with excellent manoeuvre and speed control. It has a left hand base fire button and a stubby unshaped plastic handle that I found far too short, but that's me.

Wico, like Suncom and American firm, make their first entry at £14.95 with *The Boss*, a muscular brute that I found very heavy to use, aggravating my advanced case of video wrist, but very positive. However as the hand grip is shaped for a much smaller hand than mine, it's virtually unusable in my glove size.

*The Arcade* at £15.95 is the cheapest stick that one can get really enthusiastic about. Dutch made, with very superior microswitches, it's extremely positive and responsive, a real pleasure to use. This is an excellent device and highly recommended — not just by me but by Lion House where it's a big favourite.

## STEEL SHAFT

Back to Suncom at £18.95 with the *TAC II* which has a ball handle, steel shaft, non-slip feet and left and right hand side base fire buttons. A nice size for hand holding but, despite the amazing manoeuvre control, I find the shaft too short, the fire buttons need very firm instruction and the game (*River Raid*) seemed much speedier than with other sticks.

The legendary *Le Stick* at £19.95 boasts unique mercury switches, but they're a mixed blessing. While it's

ideal for one-handed use and suits games like *Decathlon* superbly, firing jogs the switches so that it has a tendency to jump about when you

bles one to cut off the base button, extremely useful if, like me, you like holding the stick in one hand and working it with the other. With other dual fire sticks it's very easy to find your fingers working both fire buttons, which may not be what you want. For *River Raid* at any rate the *Three Way* is the primo stick for control, fire accuracy, delicacy of manoeuvre, speed control and overall feel and response.

## TOUGH BABY

From the same stable as *The Arcade* comes the *Professional Mark II* at £28.95, which looks rather like it had been ripped off the front of an arcade machine. This is one tough baby and though I can't help wondering exactly what 'Professional' means in this context, if anything

## THE PROFESSIONAL



start shooting. *Le Stick* is if anything too responsive and so hard to control, making it a real wrist killer.

## QUALITY

Jumping to £24.95 we have another Wico, the *Red Ball*, a quality number with a longer steel shaft, a good size ball handle with built in fire button, plus another on the base, and all the control one expects from Wico widgets. However at this price I'd spring another £3 to get the £27.95 *Wico Three Way*. This is my personal favourite of all the sticks I tried and, for my money, the top of the range. It has a very long steel shaft, which means a far better 'throw', and three different clip-on handles, though in practice I only use one, the slim tapered job. The *Three Way* has a centre fire button in the handle and another on the base, but it offers a unique switching feature which ena-

deserves the name this does. I imagine some of you must at some time have put your noses into a video arcade. If so, you'll know exactly what to expect from this one.

The joker in the joystick

pack is Suncom's *Joy Sensor* which looks rather like an up-market version of Intellivision's control pad. I can't make it work and though I've heard rumours of people who have mastered it and love it, I've never actually met one of them. All it gives me is vicious oversteer. At £29.95 this seems like a real gamble, but maybe I'm missing something.

## MOVE BLIP

All joysticks do pretty much the same thing, move a little blip round a TV screen. So how come there's a £20+ difference between the cheapest and the most expensive? Well, it depends on whether they're being made to a price or to a standard. I am not a racist... but. The tell-tale on the cheap sticks is the 'Made in Taiwan, Hong Kong, South Korea' and there's no getting away from the fact that they're not in the same class as the American and Dutch made sticks.

The trick is to find one that suits both your hand and your pocket, which is why you need access to a wide range. However even the big shops have no consensus view; Lion House are big Wico fans, plugging the price range with the *Pinnacle* and *The Arcade*, while *Silica Shop* prefer the Suncom *Slik Stik* and *Starfighter* with the *Quickshots* as back up. To me the ideal stick would be a cross between the *Triga* (handle design), *The Arcade* (micro switches) and *Wico Three Way* (everything else). In the real world three sticks seem to me to stand out as value for money and they are:

1. Suncom Slik Stik — £9.95.
2. The Arcade — £15.95.
3. Wico Three Way — £27.95.

## THE LOT





# SEE THE MOVIE— THEN PLAY THE GAME

MOVIES are increasingly finding their way into the world of the micro—and vice versa. Some have taken the arcades by storm, like *Tron* and *Star Wars*. Others run direct to micro—like Palace's *The Evil Dead* and (well, OK) *ET*. In the latter, Atari relied on the mega-popularity of the movie to sell a rushed-out, naff game. It bombed spectacularly. *ET* stands as a case history. Corporate disaster due to the underestimation of games lovers.

*Raiders of the Lost Ark* was translated (also unsuccessfully) into the Atari game of the same name. It also inspired a whole 'genre' of games, like Activision's *Pitfall* and Quicksilver's *Fred*.

## INDIANA JONES and the TEMPLE OF DOOM

IT will not have escaped you that *Raiders of the Lost Ark* now has a sequel—*Indiana Jones and the Temple of Doom*. Be prepared for the reverberations that these latest perils of El Archaeologist will surely spread to the games world. Spielberg productions have conspired to ensure that you never get beyond the very edge of your seat. Don't see it if you want to relax. Heroic stuff. I like it better than *Raiders*. Will it make a game? Someone sure as hell will try...

A picture of your Indie to cut out and keep.



# YOU REMEMBER CELLULOID—

SEVERAL times in the last three years Major Motion Pictures have generated Major Video Games—*Raiders*, *E.T.*, *Star Wars*, the James Bond movies... not all of which have been unqualified successes. NICKY XIKLUNA armed herself with popcorn and notebook and checked out the autumn crop. Her aim? To spot next year's mega-licence deals before they happen.

# DON'T YOU?



# SUPERGIRL

THE 'Super' family are back to save the World again. This time it's Supergirl. Supergirl's not as grand a movie as its predecessors, perhaps because the action's confined to the small Mid-Western town of Midvale. But the cast is really strong, including Peter Cook, Mia Farrow, Simon Ward, Peter O'Toole and Faye Dunaway as Supergirl's opponent—Selena.

The power-crazed Selena utters the cry of "Today Midvale—tomorrow the World!" and the battle is ON. Don'tcha try it Selena. We know who's going to win. But what fun it is getting there!

# ELECTRIC DREAMS

VIRGIN'S *Electric Dreams* shows that computers haven't been typecast after their film debut in *Wargames*. This microcomputer acquires a few extra million K's of memory and learns to talk. He finally pops all his pixels by falling in LERV.

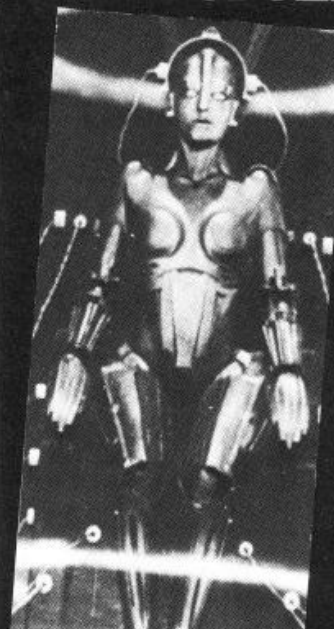
I don't think that *Electric Dreams* will take shape as a game, but you might be interested in the specta-

cular computer graphics set to original music by Boy George, Heaven 17 and more.

A special interface was built to base the effects on the ability of a simple micro. Then they took off and got really complicated.

The result is half way between a hi-tech pop-promo and a musical. It's an entertaining night out—especially if you've an innate liking for schmaltz.

**Hero Miles will try  
anything to put his  
computer in its place  
—even champagne!**



Fritz Lang's 1927 robot. Shades of *Star Wars*?

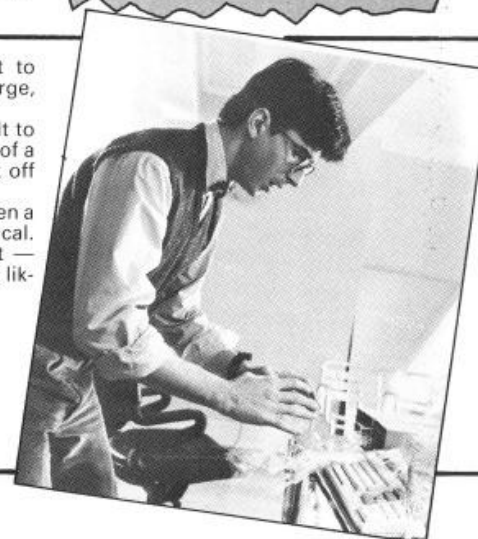
IF YOU thought that the epic fantasy film was new, here's one that's celebrating its 57th birthday, and still going strong. *Metropolis* is a touchstone lurking behind nearly every scrap of phantasmagoria produced since it was made (in 1927!). Fritz Lang's original monumental vision has had its echoes in *Blade Runner*, *Lord of the Rings*, and Roger Dean-style artwork. And for my money—it hasn't dated so easily.

Georgio Moroder thinks so too. He bought the film rights. He's coloured it and set it boogie-ing along to modern music, like Pat Benetar and Adam Ant. A real stunner.

# GREMLINS

GREMLINS are being kept mysterious by Spielberg Productions. So no pictures! (The Shad. says that they're a cousin of *ET*—with teeth). Havoc is wreaked on yet another Mid-Western town, after *Gismo*—the first and benign Gremlin—is fed hamburgers after midnight.

There's already a Thor game out by the same title—but it's nothing to do with the celluloid version. That one's coming out soon from Atari—who hold the rights to this nice little number.





For  
ORIC  
By  
GRAEME  
MORRIS

```

10 REM *****
12 REM **
14 REM ** LASER DEFENSE **
16 REM **
18 REM ** FOR **
20 REM **
22 REM ** BIG E **
24 REM ** *****

```

```

195 IFN=9THENX=X+6:IFY=25THENY=24
199 IFN=10THENY=Y+4:IFY=140THENY=140
200 IFN=11THENY=Y-4:IFY=18THENY=18
205 IFTA=0THENCURSETX,X,3:CHAR43,0,2
210 TA=0:CURSETX,X,3:CHAR43,0,2
220 RETURN
225 IFL5=0THENH=H+1:RETURN
230 TA=1:AS=5-1:CURSETL5*10+68,132,0:CH
AR43,0,2
235 B=H+1
240 L1=L1+3:L1=L1
245 CURSETX,X,3:CHAR43,0,1:RETURN
250 H=0:THENH=H+1
255 FORM=110B:L1=0:L1=110B
260 CURSETX,0,100,3:DRAWF(M)-120,1,0D-15
265 H=X:W=760
270 FORP=1100STEP-1:FORG=110B
275 CIRCLEP,0:H=X+10:GOTOH:HEXID,0
280 CURSETX,X,3:CHAR43,0,1
285 TA=0:B=0:TA=1:EX4
290 RETURN
300 EX=EX+1:H=H*20
305 FORZ=110B
310 IFX(Z)=1THENH=50
315 RC=OX(Z)+BX*OZ(Z)
320 IFPOINT(RC,M)=0THENJ(Z)=1:H=H+1:GOTO
330
325 CURSETRC,M,3:DRAWOZ(Z),20,1
330 NEXT
335 IFH=8THEN380
340 IFBX=7THEN145
345 FORZ=110B
350 IFJ(Z)=1THEN370
355 CURSETOX(Z)+B*OZ(Z),165,1
360 HTS=HTS+1
365 GOSUB500
370 NEXT
380 CURSET0,0,0:FILL160,1,0:CURSET0,0,0:
FILL160,40,64
385 FORG=13210189:CURSET10,6,0:DRAW200,0
390 NEXT
395 CLS
399 DO=50:DR200-AL5*20+1000:IFHTS=0HIS
HSC=50+5000
400 IFATC=1ANDHIS=7THENHSC=0
405 PRINT" HTS ON CITY: ";HTS;"
CORE: ";SC
410 IFHIS=7THEN70
415 CURSET20,150,0:EXPLODE
420 FORZ=1100STEP-1:GOTO4:1:HEXID
425 FORG=201015:STEP-1:CURSETZ,0:HEXID
430 CURSET70,65,0:G4="CITY DESTROYED"
435 GOSUB1500
440 CURSET10,80,0:G4="PRESS F 10 TO
440SUB1500
442 CURSET70,95,0:G4="PRESS F 10 TO
440SUB1500
445 GETF4:IFF4="p"THENH10=5
447 IFF4="e"THEN445
450 TEXT:GOTOH:HEXIDEND
500 EXPLODE:FORC=110B:CIRCLEC,1:HEXID
505 FORG=51015STEP-1:GOTO4:0:HEXID
510 RETURN
1000 CLS

```



1010 A\$="...RED ALERT...CITY UNDER ATTACK  
K...USE CURSOR TO AIM...SPACE  
CE TO FIRE"

1020 PLAY1,0,4,500:MUSIC1,3,1,0  
1030 DOKEE26B,£010A  
1040 CLS

1050 FORZ=1T0102

1060 PLOT0,11,LEFT\$(A\$,38)

1070 PLOT0,12,LEFT\$(A\$,38)

1080 A\$=MID\$(A\$,2)+LEFT\$(A\$,1)

1090 WAIT8:NEXTZ

1100 PLAY0,0,0,0

1110 RETURN

1500 FORZ=1T0LEN(A\$)

1510 CHARASC(MID\$(A\$,Z,1)),0,1

1520 CURMOV6,0,0:NEXTZ

1530 RETURN

2000 ZX=46080

2010 FORV=1T06

2020 READC:D=8\*C

2030 FOR0=0T07:READF

2040 POKEZX+D+Q,F:NEXT

2050 NEXT

2060 RETURN

3000 DATA111,255,255,255,255,255,255,255,  
255

3010 DATA112,0,3,3,3,3,7,7,7

3020 DATA113,96,96,96,96,96,255,255,255

3030 DATA114,0,0,0,0,0,255,255,255

3040 DATA115,96,96,96,96,99,99,99,255

3050 DATA116,8,8,8,8,28,8,20,20

010

0,0,0:

W200,0

15=0THE

NEXT  
MOVED"

TO PLA  
TO END

1:HEX1  
NEXT



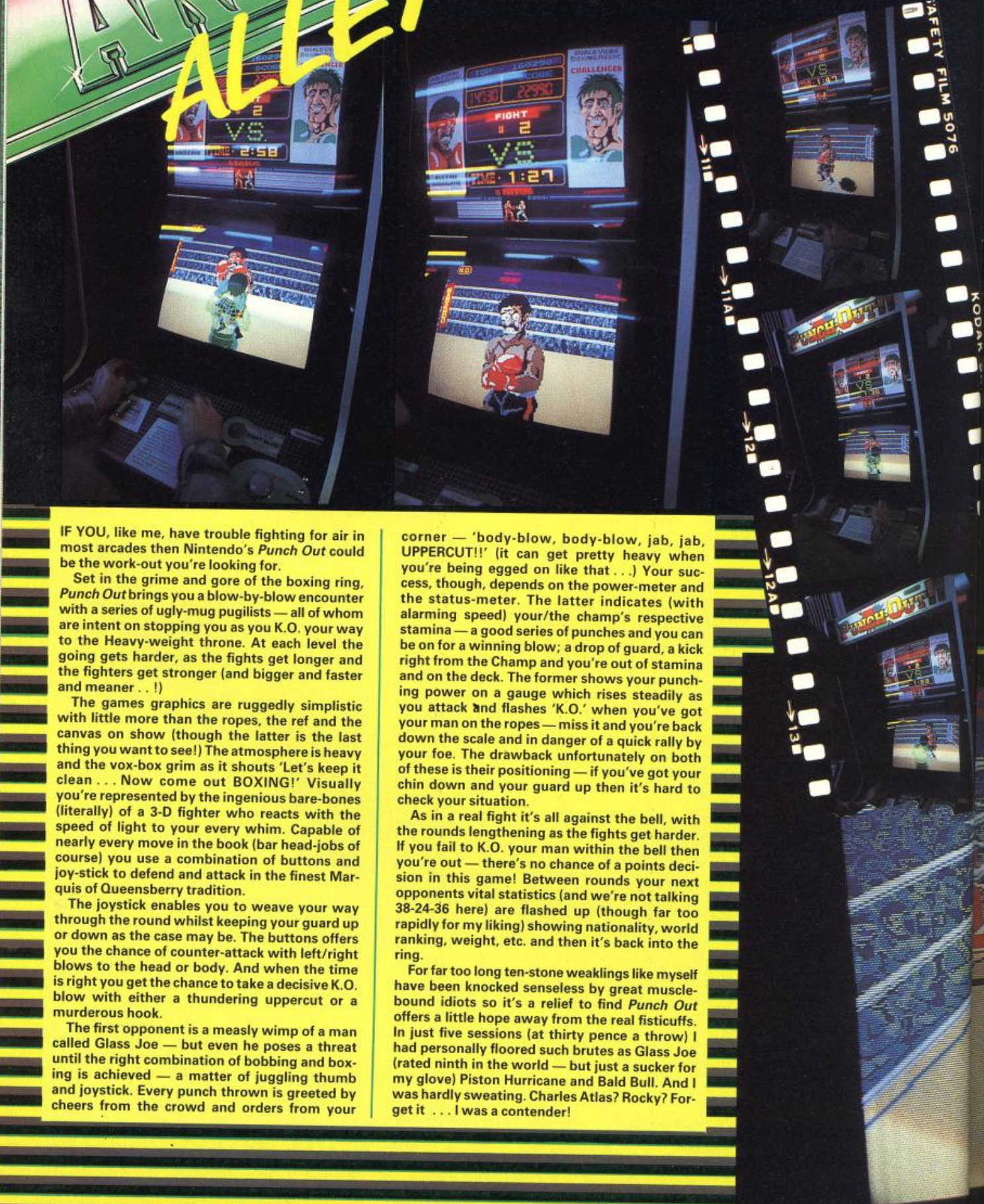


# ARCADE



# ARE YOU

# ALLEY



IF YOU, like me, have trouble fighting for air in most arcades then Nintendo's *Punch Out* could be the work-out you're looking for.

Set in the grime and gore of the boxing ring, *Punch Out* brings you a blow-by-blow encounter with a series of ugly-mug pugilists — all of whom are intent on stopping you as you K.O. your way to the Heavy-weight throne. At each level the going gets harder, as the fights get longer and the fighters get stronger (and bigger and faster and meaner . . . !)

The games graphics are ruggedly simplistic with little more than the ropes, the ref and the canvas on show (though the latter is the last thing you want to see!) The atmosphere is heavy and the vox-box grim as it shouts 'Let's keep it clean . . . Now come out BOXING!' Visually you're represented by the ingenious bare-bones (literally) of a 3-D fighter who reacts with the speed of light to your every whim. Capable of nearly every move in the book (bar head-jobs of course) you use a combination of buttons and joy-stick to defend and attack in the finest Marquis of Queensberry tradition.

The joystick enables you to weave your way through the round whilst keeping your guard up or down as the case may be. The buttons offers you the chance of counter-attack with left/right blows to the head or body. And when the time is right you get the chance to take a decisive K.O. blow with either a thundering uppercut or a murderous hook.

The first opponent is a measly wimp of a man called Glass Joe — but even he poses a threat until the right combination of bobbing and boxing is achieved — a matter of juggling thumb and joystick. Every punch thrown is greeted by cheers from the crowd and orders from your

corner — 'body-blow, body-blow, jab, jab, UPPERCUT!!' (it can get pretty heavy when you're being egged on like that . . .) Your success, though, depends on the power-meter and the status-meter. The latter indicates (with alarming speed) your/the champ's respective stamina — a good series of punches and you can be on for a winning blow; a drop of guard, a kick right from the Champ and you're out of stamina and on the deck. The former shows your punching power on a gauge which rises steadily as you attack and flashes 'K.O.' when you've got your man on the ropes — miss it and you're back down the scale and in danger of a quick rally by your foe. The drawback unfortunately on both of these is their positioning — if you've got your chin down and your guard up then it's hard to check your situation.

As in a real fight it's all against the bell, with the rounds lengthening as the fights get harder. If you fail to K.O. your man within the bell then you're out — there's no chance of a points decision in this game! Between rounds your next opponents vital statistics (and we're not talking 38-24-36 here) are flashed up (though far too rapidly for my liking) showing nationality, world ranking, weight, etc. and then it's back into the ring.

For far too long ten-stone weaklings like myself have been knocked senseless by great muscle-bound idiots so it's a relief to find *Punch Out* offers a little hope away from the real fisticuffs. In just five sessions (at thirty pence a throw) I had personally floored such brutes as Glass Joe (rated ninth in the world — but just a sucker for my glove) Piston Hurricane and Bald Bull. And I was hardly sweating. Charles Atlas? Rocky? Forget it . . . I was a contender!



# ARE YOU READY FOR THE BIG K.O.?

'Cos if you're not, stay well clear of Nintendo's *Punch-Out*. DAVID DORRELL sags to the canvas with a streaming nose and a ruptured gut, while a smirking DAVID CORRIER snaps busily away from the comfort of his ringside seat.

PUNCH-OUT's HEAVYWEIGHT HIERARCHY  
(in ascending order of pugilistic prowess)

**GLASS JOE** — French, weedy and rated ninth in the world.

**PISTON HURRICANE** — Cuban, hard and a bit of a heel, rated eighth in the world.

**BALD BULL** — as mean as Mr. T and twice as fast, rated seventh.

**KID KWIK** — American and faster than a McDonalds at getting you down.

**PETER PASTA** — Italian and smarmy with it — a walking Mafia man.

**MR. SAND MAN** — World champ, American and guaranteed to put you to sleep but fast.





# ARCADE of the FUTURE?

In the USA they're saying that Arcades are deadsville, Dad. Yet at the same time the technology has never seemed more promising. Assuming the genre survives, what will a typical arcade look like in ten years time? TREVOR MENDHAM speculates . . .



EVER SINCE the arrival of the first *Space Invaders* machines just a few short years ago, the quality and realism of arcade games has been improving at an exponential rate. The games we play now would have been inconceivable in those early days. And yet despite this rapid advance I believe that we have not yet come anywhere near the form's ultimate potential. The video game of tomorrow will be as far removed from that of today as *Dragon's Lair* is from, well, *Space Invaders*. For this reason I'd like to speculate on the shape that this ultimate game of tomorrow might take.

In the arcade of tomorrow, you are unlikely actually to see anybody playing a game! Rather, there will be groups of half a dozen or so enclosed 'booths' clustered together, each just large enough to contain one player. Above each set of booths, a master screen will show a sample of the game, along with instructions, details of price and the names of the high scorers.

On finding a game that takes your fancy, you place your money (probably a five pound coin) in the slot of an

unoccupied booth and step through the door.

The booth is circular, with the controls mounted on a stick set in the floor which can be adjusted to suit your height. In the more uptown arcades, there may even be a chair for you to sit on during the game — though true video experts are likely to reject this as a distraction. You close the door and press the start button. The booth goes dark, and you enter into another world . . .

## Reality

The canvas on which the action takes place is not just a small, flat TV screen, but instead consists of the whole of the wall in front of you! With full 180 degree projection you really feel *part* of the game, rather than just an outside observer. What is more, the pictures are not just computer graphics, but are generated by laser disc technology and are based on real photographic material. When combined with quadrophonic sound, it becomes extremely difficult to remember that it is not real but merely an electronic fantasy.

The scene set — be it a view into deep space or an ancient castle — the game begins as your opponents come into

view, strapped into their jet-packs or wearing their suits of armour (as appropriate). Now the reasons for the clusters of booths becomes apparent, for whilst some of the enemy are controlled by the computer, the rest of your opponents are your fellow players! And you have no way of determining which is which! Until, that is, you get close enough to make out their faces. For the 'men' in this game are not just anonymous graphic blobs, but all have faces and features. Those belonging to the computer will have those chosen randomly from a stock of photographs, whilst those controlled by players will use photographs generated by the camera hidden in the wall which is constantly observing you. And of course, just as you can see the faces of the others, so they can see you — and, if you are close enough in game terms, the microphone in your booth will allow you to talk to each other!

## Friend or Foe

Of course, if you have recognised one of your opponents as a friend you must then decide whether to work together or whether to kill him for the points. And if you decide on an alliance, are

you sure you can trust him . . . ?

Does that scenario have you drooling? Well, as any science fiction reader will tell you, that's just the start — there are many more possibilities, leading up eventually to direct mental stimulation and game control. However, I have deliberately limited my speculations for one very good reason.

## It Exists

That is that everything I have mentioned above is possible today. The technology already exists, it is simply a case of bringing it together. We have had the ability to produce the hardware for a long time — it is no more advanced than that of a flight simulator. As for the software, well, there are professional, industrial programmers who are more than capable of handling the complex graphics manipulation required, whilst when it comes to the games side there is a vast pool of talent currently cutting their teeth on the home computers. The game I've described could be in the arcades within two years. All it would need would be an entrepreneur with a awful lot of capital — and even more guts!



**Midsummer is never a very good time for computer companies, but this July was disastrous for two state-of-the-art operations — America's Atari and Britain's Imagine Software. Deeply in trouble, short of money and beset by the fruits of several bum decisions, both operations all but closed down in their present form six weeks ago. What went wrong, what are the lessons for others, and can anything be salvaged from the wreckage? TONY TYLER assesses . . .**

## AFTER THE

## REQUIEM AT SUNNYVALE

Six weeks ago an American businessman named Jack Tramiel put 185 million dollars on the table under the noses of Mr Warner and his Brothers and a few minutes later was walking out of there with a company called Atari metaphorically under his arm. Tramiel had also guaranteed to pick up Atari's debts — valued at three times the cash price-tag. All the same it was a chickenfeed purchase. By selling off the lion's share of Atari, Warners had put a stop to a miserable five years of steady losses and marketplace disappointment. What went wrong?

The answers must be, in no particular order: terrible management decisions; the existence of CBS-Coleco and the existence of Commodore International.

Atari is the company who, more than any other — certainly in the United States — began it all. It has been losing money almost ever since, certainly since founder Nolan Bushnell sold off his Sunnyvale operation to Warner and the Brothers more than five years ago for a multi-million sum. Despite an excellent early hardware design lead, high manufacturing standards, and a second-to-none reputation as a games concern — not to mention a peerless coin-op division that has always been a pioneer (and indeed which Warners have hung on to) — the com-

pany's men-in-charge then became confused over and over again. The way in which the US market at first shaped up nicely for the switch from games machines to computers, then changed its mind — then partly changed it back again and got interested in proper computers after all — led Atari's

management to make a series of ghastly wrong decisions, blunders that unfortunately cost the company money and credibility at a time when the lead due to the Bushnell years was evaporating rapidly.

In hardware, the company had got off to a good

second leg (the VCS being its first) with the 400/800 series, 6502 machines ahead of their time in many ways, with sprites, 256 colours, RAM up to 48K and already-available disc drives and other peripherals. Plus a vast, quality library of software in ROM form (not all of them were VCS upgrades). This range established a good user base in the USA; and as it was considerably better than anything up to Apple II status, dominated the lower-price market. Commodore's elderly PET and low-RAM VIC-20 paled alongside the Atari models. At the same time the company were committed to produce full-time for the seemingly everlasting VCS.

The ball was first fumbled 15 months ago, when Apple upgraded the II to the IIe, Commodore introduced the "Vic-64", and at the same time it was becoming clear that Atari would soon have to choose between the videogame and computer camps. There is little doubt that there were voices in the company raised at this time arguing for an all-out computer strategy. Unfortunately there still were (and are) all those VCS owners out there. The company decided to continue pursuing both at the same time. It must have seemed a sane enough strategy then; though in retrospect it seems clear that it served only to over-expand the company and spread its resources still more thinly, at a time when research projects were already promising to take Atari further and further into more exciting and expensive areas than low-

**ATARISOFT STUFF:** a move along the right lines, but it came too late.





# AFTER THE CRASH...

grade domestic computer manufacture. AtariTel — a grandiose networking plan — was hatched (and lingers yet). Widgets like AtariLab, and the usual controller additions — trackball, graphics pad, and so on — proceeded more or less to plan. All these had to take up a share of the overall company resource. And Atari's prices made punters grumble.

The next wave of hardware (Spring, 1983) was dis-



THE 2600 VCS. It made Atari...

astrous: the 5200 game system in tandem with the 1200XL computer. The 5200 was a re-boxed 400 computer with a widely-disliked joystick (it was never on sale in the UK), distinguished also for near-total incompatibility between it and the 2600VCS, for whose owners' sake the whole project had been laid on in the first place.

The 1200XL was a computer, another machine featuring 100% incompatibility with any other Atari product. In retrospect it emerges as an early prototype for the XL range and should never have been marketed at all. The 1200XL was ditched shortly after launch but the 5200 turkeys on. Now, of course, it has been joined by yet another game system, the PRO 7800, compatible (at least) with the VCS. So that mistake has, at last, and much too late, been put right. And Atari finally has a product with which to make one last, despairing counterattack against Coleco.

It was when Atari was first reeling away from the initial Coleco thrust into its traditional turf that one began to hear odd stories filtering out of Ca. concerning Atari's desperate plight re: unsold VCS ROMs. As legend unkindly had it, the bulk of these were copies of those very Lucas/Spielberg movies — *Raiders of the Lost Ark* and *E.T.*, particularly, as it happens, *E.T.* — for which Atari had allegedly paid such enormous sums. As Parker have also discovered, good films as spin-offs are lousy compared to good arcade rights (though if these should also be based on films then

you have a different story). *Raiders* was actually a thoughtful game which made much use of the VCS's capabilities; its trouble was it was too difficult. So it, and *E.T.*, simply sat on shelves up and down America until storekeepers refused to take any more Atari cartridges unless the company helped them unload the deadbeats. Eventually 450,000 *E.T.*'s were assembled, driven out to the New Mexico desert in a convoy of twenty-tonners, and then buried — with the aid of excavators and earth-movers — in a gigantic hole in the ground not far from White Sands nuclear testing site; all under the silvery light of a Western moon. It's a nice story, anyway.

Coupled with news of disasters real and embroidered came the news that the company had bombed out on the Dow Jones for the second year running. The computer switch seemed to be happening after all, just when Atari has lost its edge, and now Commodore, with its 64 model, was making the running. Legal gripes with Texas Instruments and the software houses Activision and Imagic — the first of a whole series of energy-sapping legal battles — distracted the company. At this time the XL models were only just appearing. AtariTel was getting nowhere, other widgets were more or less on time — but overall Atari wasn't getting enough of the new action to do more than slow down its rate of obvious decline. Staff were cut. Whole departments went, budgets were cut to the bone. Most of the manufacture was shifted to Taiwan and South Korea.

Alan Alda was fired.



... But the 5200 nearly broke them.

With hindsight it seems that the company was more or less on course and conceiving the right ideas until the need for a 400/800/VCS general upgrade became obvious. Then the company wasted a whole critical year floundering about with the 1200XL and the doomed 5200, while wasting its diminishing strength trying



The 800XL: a good machine and a good range — but again, it didn't make up for lost ground.

to maintain a presence everywhere else on the computer front. In fact, they are still a year behind — a year they don't have.

Inevitably this year's Dow Jones has been as bad as any in the past three years; and for some months before Tramiel the company had been rumoured to be up for sale.

Similarly the company are unlikely to abandon, after all this time, the 20 million VCS owners. (This of course is a partial argument for the 7800 as well.) Therefore they must keep some software development. This seems to mean a computer software division as well, so those jobs are probably safe too. This in turn supports the idea of continuing the hardware ... and so it goes on.

One area that must be taken care of is serious applications software. Atari machines have been relatively ill-served in the past in this area, and the computers have suffered in the marketplace as a result. The 64 is no better than the Atari as a games machine, and as a small business micro it only shows up well because of its software. Atari has never had this quality of business support; nor sought it, alas.

Above all the company has got to think international (AtariSoft is a good move) with all its heart — and this means bringing its prices heavily down across the board if it is to compete with Tramiel's old company, now emerging as the machine for the first-time buyer. Atari have already all but lost the videogame war with Coleco. Now, to survive at all, they must fight back, either there, or against Commodore in the computer market.

## SHOWING NO MERSEY

THEY HAD the highest profile of any British software company, games or not; they had some of the ritziest offices in microdom; they had had a series of high-scoring hits and possessed even higher hopes for the future. Despite this (cynics will say, 'Because of this'), last month the mighty Imagine edifice all but crumbled into ruin, the first and (to date) most notable of Great British Software Disasters.

Putting aside for a moment the thought that the men at Imagine were not exactly top of the popularity stakes (the 'they brought it on themselves' theory, though how this works has yet to be convincingly demonstrated), the



The Imagine 'A' Team: now relegated.



virtual demise of this once-towering operation is bad news for everybody.

It's safe to say that Imagine's problems probably began over a year ago, with over-expansion, over-confidence and a few runaway egos wreaking havoc. The easy returns of the previous year (1983) had convinced many — not just Imagine — that this business is replete with easy pickings. Add to that the pronounced showbiz mentality in games software writing, and you have a situation where several seriously wrong decisions can be taken with the utmost of ease.

It now seems clear that the first major problem was an old favourite: overstocking coupled with a need for liquidity. Translated, that means duplicating too many copies of new games (and perennials), basing sales forecasts on a mixture of gung-ho optimism and overconfidence generated by previous, easy, high turnover.

The second major problem grew out of the first. As is now well-known (but was heavily denied at the time), just before last Christmas Imagine were secretly approached by the publishers Marshall Cavendish, famous for their 'part-works'. MC wanted to produce the ultimate how-to computer p/w — you guessed it, to be called INPUT — and as an incentive to buyers, they wanted to attach, to the cover of each issue, a freebie computer game or piece of instructional and entertaining software. Imagine tendered for the job and were given the contract.

What went wrong? There's no doubt that the in-house expertise of the company was, and remains, fully sufficient to the task. It seems (here Unkind Legend once again takes over) that Imagine spent the advance of several hundred thousand pounds (not £5 million as rumoured at the time) on motorbikes and the pop-star-style fast living ... and woke up one morning to an acute case of deadline-itis. Here overconfidence again took over (it's said), and a load of substandard stuff was churned out very fast, and given to MC.

However by this time MC had a very shrewd idea of the state of the art and what they knew told them that the contracted-for games were simply not up to scratch. They

rejected them outright — which left Imagine in the position of having to repay the advance (around a quarter of a million). And INPUT went on sale without anything attached to the cover at all.

For Imagine, repayment proved so difficult that within a day or so their problems (exacerbated by poor security — see below) had become common knowledge. It now seems clear that an emergency aid package, possibly from a merchant bank, came up with the cash, short-term, but (like the IMF giving money to Mexico) imposed so many swingeing conditions concerning repayment and interest that if anything the company's real position grew actually worse.

The directors — Dave Lawson, Mark Butler, Bruce Everiss and Ian Hetherington (plus one other mystery backer, so far unnamed) — appear to have banked all on a recovery plan based on the following three stages.

(1) Raise as much cash as possible on the sale of back-catalogue titles.

(2) Trim the overheads to the bone.

(3) Re-make the catalogue around the vaunted and much-hyped 'megagames' *Psclopse* and *Bandersnatch*.

(4) Take it from there.

(1) was partially implemented, not without major difficulty, later than had been hoped, and for a far lower figure than can have been wished (to a company called Beau Jolly, reportedly for less than £1.00 per copy). Incidentally, it is widely thought that Imagine's half-assed attempt to lower their prices across the board (to £1.95 from £6.95) at this time (shortly afterwards aborted, for reasons that were never very convincing) was an attempt to achieve (1). Alas, a move that, six months before, would certainly have rescued them, came too late ...

The reduction of overheads was relatively easy, considering the high profile, the six Liverpool offices, the abundance of staff and the high living. In fact, it turns out that not all of the famous and expensive motor cars actually belong to the company and therefore count as capital assets. Many of the cars are leased ...

Meanwhile, the main Sir Thomas Street office was closed, as were a couple of warehouses. Staff were laid

off — especially bad news in Liverpool.

As for (3) the 'megagames', these remain an asset (and are duly being fought over by the survivors). It seems that by a combination of turbo-loading techniques and extra (dangled) hardware, the company were — are — on the verge of a new class of game altogether. Even so, as others are discovering (Hi, Ultimate!) the extra development time demanded by extra-good games costs money ... cash the company no longer had.

The can of worms first opened up by the Marshall Cavendish fiasco reached ugly fruition two months ago with a sudden, new crop of rumours concerning the company. It was said that one (or maybe two) of the directors had done a runner to the USA with a bag of money. Fist-fights were hinted at ... Actually, it now seems as if Dave Lawson, the slight and quietly-spoken founder-figure/chief programmer, and Ian Hetherington, the bulky former finance director of Imagine were in California last month: to raise money! It also seems as if they weren't too successful, since the rumour's final form now has Lawson and Hetherington forming an entirely new company called FinchSpeed (assets: the megagames; the company cars), while Mark Butler, already immobilised by a bike crash, has reportedly been relegated to a second-row forward's slot in the new outfit (against his will). Meanwhile Bruce Everiss, former Operations Director, has departed altogether for pastures new ...

Finally, it was reported a few days before time of writing that the rump of Imagine has recently sold off 111,000 back tapes (presumably ones that Beau Jolly didn't want) at (wait for it) 30p per copy! And a sinister note has been struck by the reported "interest" (absolutely nothing more as yet) taken by the Merseyside Police in Imagine's affairs, especially involving non-payment to creditors.

The easiest thing to say is that it was all inevitable. The combination of easy money, youthful self-confidence and more than a hint of megalomania, led to the Biblical result: unmitigated disaster. This would be easier to swallow if it invariably happened. It doesn't. A great many pop

stars are living, walking proof that ego, too much cash and big-headedness do not necessarily lead to ignominious downfall.

The truth is that Imagine, for all their unfavourable image, were caught out, like others before them, by a combination of one or two bad decisions, a change in market trends and a continual lack of ready cash. They also believed in themselves to a point where it became quite easy to ignore mounting evidence to the contrary ... So have a snide laugh if you like, but don't laugh too hard, or you may not see something similar creeping up on you. Nobody is immune from failure.

What now? Lawson remains an excellent games designer, the megagames are probably very good — and that's all one can safely say at this stage. Start Againsville in fact. But perhaps the shock of the whole event may force realism on to the survivors: we may well hear more of FinchSpeed.

Let's hope so. For despite all the hokum the disinformation and the bragging, there was always plenty of talent there.

**Dave Lawson (right): still hanging in with FinchSpeed — or trying to. Mark Butler (left) now finds his position more uncertain than most. Back to Bug Byte?**





**SPECIAL DISCOUNT  
TO CLUBS**  
(Group Cover - Join now)

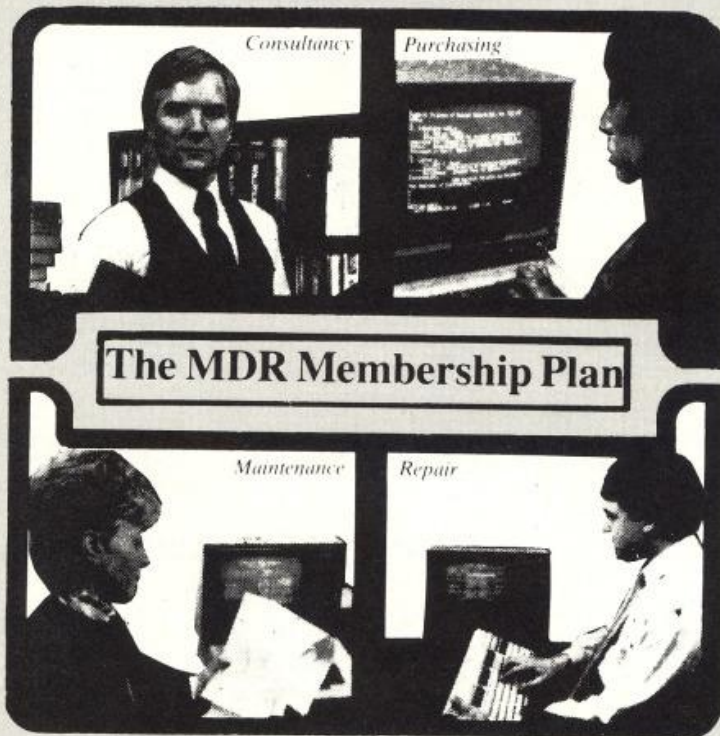
# Settle down to trouble free Computing with M.D.R.<sup>®</sup>

Announcing the birth of the personal information centre . . .  
... a new concept in intelligent sourcing of computer suitability  
to your needs, consultancy, purchasing, maintenance and repair.

\*EPSON FX80 £322 + VAT  
\*EPSON RX80 FT £226 + VAT  
\*EPSON RX80 T £200 + VAT  
\*BROTHER HR5 £130 + VAT  
\*STAR GEMINI 10X £199 + VAT  
\*STAR GEMINI 15X £297 + VAT  
\*COLOUR MONITOR  
FIDELITY CM 14 £185 inc VAT  
\*HUNDREDS OF DISCOUNT  
PRICES.

WE SUPPLY  
96% of all hardware  
98% of all printers  
all at discount prices  
Join MDR Now

Cash with order. No need to  
join for purchasing, but it's  
always better to look before you  
leap.



\*SANYO MBC 555 +  
Swordstar, Mailmerge, Calcstar,  
Infoster £810 + VAT (QT 1)  
\*EPSON PX8 + Wordstar,  
Protatable Cardbox, Schedule  
Protatable CALC (QT 2)  
\*COMMODORE 64  
£148 + VAT (QT 3)  
\*BBC B £315 + VAT (QT 4)  
\*ACT APRICOT 256K 2 x 315 K  
DD + MON £1,500 + VAT (QT 5)  
\*FUTURE FX20 plus  
Spellbinder £1,593.75 + VAT (QT 7)  
\*ORIC ATMOS 48K  
£132 + VAT (QT 6)  
\*SINCLAIR SPECTRUM 48K  
£98 + VAT (QT 7)  
\*ATARI 600XL £117 + VAT (QT 8)

**DELIVERY £7.50**  
IN LONDON DELIVERY FREE

## HOW TO JOIN

All you have to do is write your name and address on the coupon below enclosing your cheque/P.O. for £10, made payable to: MDR Ltd and you will immediately be eligible for all MDR<sup>®</sup> services. Please allow 7 days from date of posting. (A certificate of membership is issued). Dealer enquiries welcome.

... think of MDR<sup>®</sup> when you are about to purchase a micro, peripherals, or software whether it be for your business or pleasure, consult us for just about anything - MDR<sup>®</sup> will provide you with the correct answer for the right decision.

... thinking of purchasing? ... MDR<sup>®</sup> can provide you with the item of your choice at discounted prices of up to 20%!

☐ Think of MDR<sup>®</sup> like the AA if you like

☐ Membership open to business and home users!

☐ Up to 20% discounts on purchasing!

☐ 24-hour emergency service!

☐ Star Bargains!

☐ 48-hour replacement machine service!

**IMMEDIATE COVER - All for £10.00 membership fee! ... remember, if we can't help  
you, a full refund will be given! Join now, and settle down to Trouble Free Computing.**



**mdr<sup>®</sup> limited**  
27 BELLEVILLE ROAD  
LONDON SW11 6QS  
TEL (01) 223 1613



CONSULTANTS, SUPPLIERS AND ENGINEERS TO HOME  
AND BUSINESS COMPUTER USERS

Post to: MDR<sup>®</sup> Ltd, 27 Belleville Road, London, SW11 6QS.

Please find enclosed my cheque for £10.00

I understand that I will automatically be eligible for MDR<sup>®</sup> services, and may call  
days from date of posting and receive the service I require.

NAME .....

ADDRESS .....

TEL (Day) .....

TEL (Eve) .....

I require immediate service on:

☐ PURCHASING

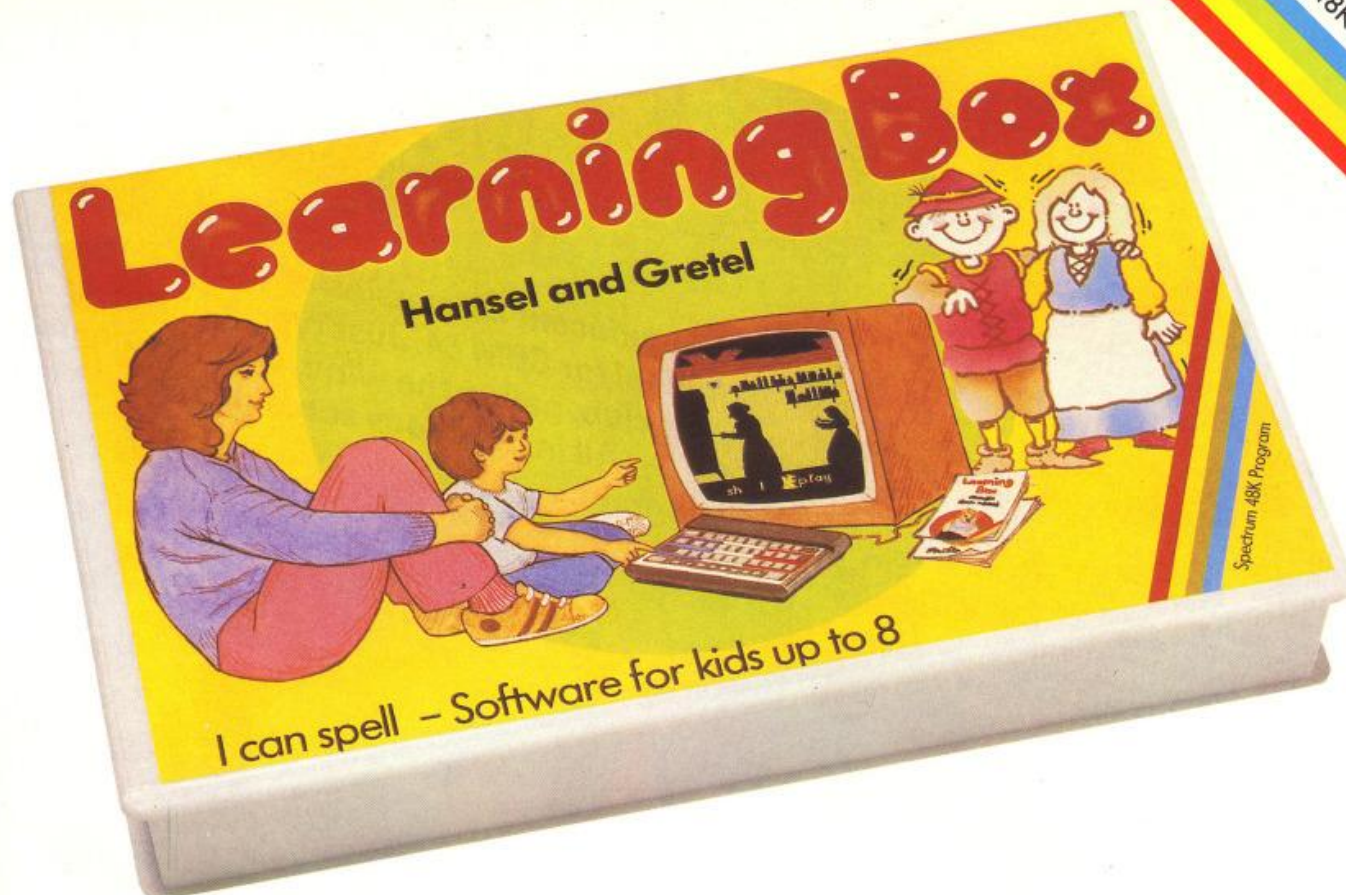
☐ CONSULTANCY

☐ MAINTENANCE

☐ REPAIRS

To help us serve you better, please enclose a brief of the service you require.





## Family Fun

'Learning Box' is a series of 8 complete programs based upon traditional children's stories. Each has an educational purpose to help children from 4 to 8 get ahead with their reading and counting.

### More Than Just Software

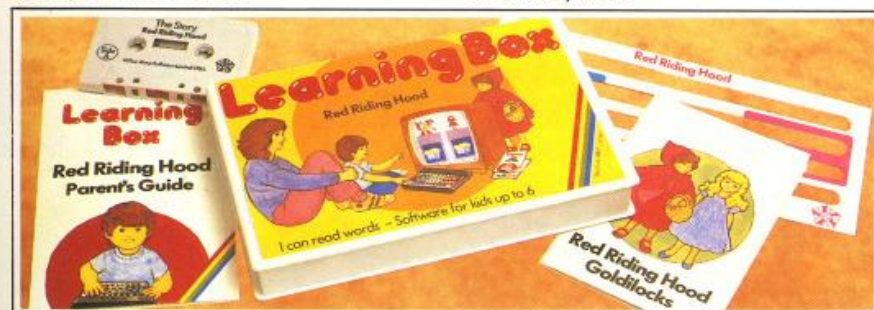
Each Learning Box contains the program, a beautifully illustrated storybook, a recording of the story, an overlay to simplify the Spectrum keyboard and a step by step Parent's Guide.

exciting but it also practises reading and spelling.

Each program has up to 7 activities and games of varying difficulty.

### Order Now!

Make learning fun for your children. Order your Learning Boxes now and postage and packaging comes free. All 8 programs are available while stocks last. All you have to do is fill in the order form and return it to us with your cheque or Postal Order. Or you can use your Access or Barclaycard.



### Family Fun

While your kids are driving Mr Mac's train they're learning to tell the time. When they're concocting spells from 'The Magic Shop' they're learning to use money. Pulling up 'The Enormous Turnip' or escaping with 'Hansel and Gretel' is

### Outstanding Value

**£9.95** inc VAT

**Free postage & packing**

Dealer enquiries welcome to: Arrow Publications, Tel: (01) 387 2811.

### How to order

Simply fill in the coupon, enclosing your cheque/PO made payable to: TBS, or use your credit card, and post to the address below. Please allow 28 days for delivery.

Post this coupon NOW to: TBS, 38 Hockerill Street, Bishops Cleeve, Hertfordshire CM23 2DW.

Please send me:

Qty		Tick Box
.....	RED RIDING HOOD	<input type="checkbox"/>
.....	I can read words	<input type="checkbox"/>
.....	GOLDILOCKS	<input type="checkbox"/>
.....	I can read sentences	<input type="checkbox"/>
.....	5 LITTLE DUCKS	<input type="checkbox"/>
.....	I can count	<input type="checkbox"/>
.....	9 CURRENT BUNS	<input type="checkbox"/>
.....	I can do sums	<input type="checkbox"/>
.....	THE ENORMOUS TURNIP	<input type="checkbox"/>
.....	I can build words	<input type="checkbox"/>
.....	HANSEL AND GRETEL	<input type="checkbox"/>
.....	I can spell	<input type="checkbox"/>
.....	MR MAC'S DAY	<input type="checkbox"/>
.....	I can tell the time	<input type="checkbox"/>
.....	THE MAGIC SHOP	<input type="checkbox"/>
.....	I can use money	<input type="checkbox"/>

All programs only £9.95 inc VAT each. FREE POST AND PACKAGING.

I enclose my cheque/PO payable to TBS for £.....  
Please debit my Access/Barclaycard (delete as necessary).

CARD NO.

.....

NAME

.....

ADDRESS

.....

.....

SIGNATURE

BK 9



THE

# COMMODORE

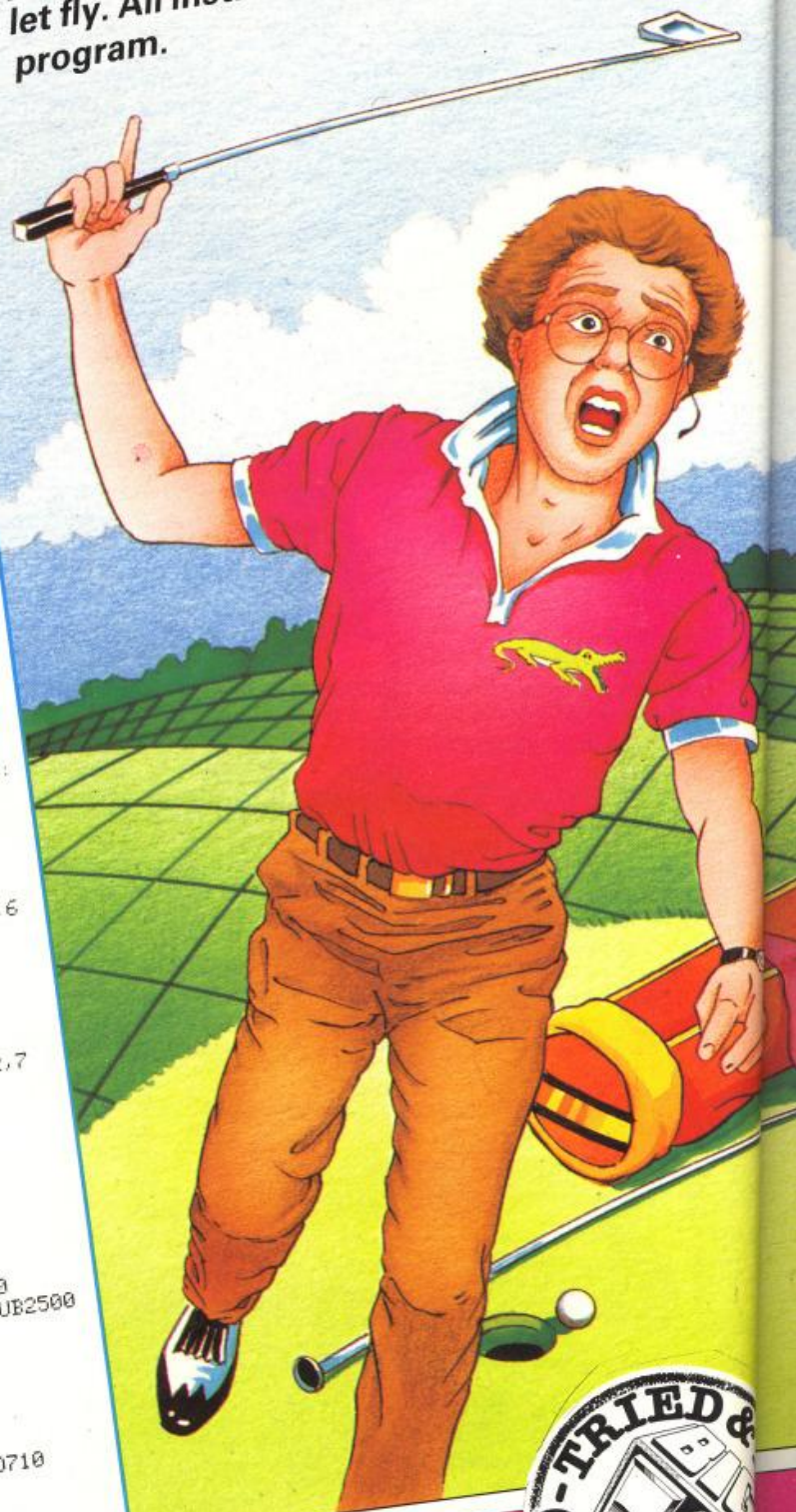
FOR CBM 64

A magnificent conversion of the PET original for CBM 64. Just type it in, select your club, gauge the wind, sniff the air and let fly. All instructions contained within the program.

```

10 POKE53280,5:POKE53281,5:PRINT" " CL=54272
40 Z$=" " FORI=1TO39:Z$=Z$+" " NEXT
50 B$=" " FORI=1TO40:B$=B$+" " NEXT
60 N=0:K=1104:P1=0:A1=0:TR=1
70 DEFFNA(X)=INT(X*AND(1))/7)
80 DEFFNB(X)=INT((8-9*AND(1))/7)
100 PRINT"3"TAB(16)"77 GOLF *000
110 PRINT" WELCOME TO THE LINKS! THIS";
115 PRINT" IS AN 18-HOLE COURSE OF PRO";
120 PRINT"FESSIONAL STANDARDS";
125 PRINT"COURSE RECORD IS 2 UNDER ";
126 PRINT"SO PLEASE REPLACE DIVOTS AND SHOW";
135 PRINT"COURTESY TO YOUR FELLOW GOLFERS";
145 PRINT" HAVE A GOOD ROUND SEE YOU AT THE";
19TH!" 150 PRINT" WHAT IS YOUR HANDICAP";
160 INPUT:IFH>0ANDH<30THEN190
170 PRINT"FGA RULES HANDICAP 0-30":GOTO150
190 PRINT" DIFFICULTIES AT GOLF";
200 PRINT"1. HOOKING
210 PRINT"2. SLICING
220 PRINT"3. POOR DISTANCE
230 PRINT"4. TRAP SHOTS
240 PRINT"5. PUTTING";F=F+INT(F)
250 INPUT" YOUR WORST";F=F+INT(F)
260 H=INT(H):IFF>0ANDF<6THEN290
270 PRINT"DON'T BE SHY":GOTO 250
290 PRINT"SELECTION OF CLUBS";
300 PRINT"YARDAGE CLUBS NO.
310 PRINT"280-200 1-4 WOODS 1-4
320 PRINT"200-100 1-5 IRONS 11-15
330 PRINT"100- 0 6-9 IRONS 16-19
340 PRINT" TO FADE OR DRAW THE BALL";
350 PRINT"TYPE F OR D WHEN ASKED";
360 PRINT" TO HIT STRAIGHT TYPE RETURN
370 PRINT" *** WARNING ***";
380 PRINT"DON'T HIT IT TOO HARD";
390 GOSUB9000:GOSUB1700:GOSUB9000
400 REM GENERATE HOLE
410 Z=K:G=102:N=N+1:REDD,P:PRINT" ";
420 FORI=1TO18:PRINTB$:NEXT
430 PRINT" HOLE";N: S=4:A=0
440 PRINT" DISTANCE";D:"YDS "; "PAR";P
450 T=K+280:E=1:FORI=1TO40:FORJ=1TO5
460 POKET+CL,0:POKET,160:POKET+CL,5:T=T+40*E:
NEXTJ:T=T-40*E 470 U=FNB(1):S=S+U
480 IFS<40RS>8THENS=S-U:GOTO470
490 T=T+1+40*FNB(1):E=-E:NEXTI
500 S=3:T=T+79:FORI=1TO5:FORJ=1TO5
510 O=224:IFI=3ANDJ=2THENO=43:O=T
520 POKET,0:POKET+CL,13:IFO=43THENPOKET+CL,6
525 T=T+40*E:NEXTJ:T=T-40*E
530 U=FNB(1):S=S+U
540 IFS<3THENS=S-U:GOTO530
550 T=T-1+40*FNB(1):E=-E:NEXTI:O=69
555 FORI=1TO8+FNA(8)
560 S=K+O+FNA(9)+40*FNA(15)
570 IFPEEK(S)=160THENPOKES,87:POKES+54272,7
580 NEXT IFO=69THENO=55:GOTO555
590 POKET+360,148:POKET+360+CL,2
600 X=0:Y=19:V=75:W=(Q-K-37)/20:L=1
605 IFD>450ANDD<550THEN1200
610 IFRND(1)>.6THEN1100
620 PRINT" WHICH CLUB DO YOU CHOSE";
640 GOSUB2000
650 PRINT" WHICH CLUB DO YOU CHOSE";
660 INPUTC:C=INT(C)
670 IF(C>0ANDC<5)OR(C>10ANDC<20)THEN700
680 PRINT"NO SUCH CLUB IN THE BAG":GOSUB2500
690 GOTO640
700 Q0=0:IFC<15THENB=100:GOTO1500
705 PRINT"
706 PRINT"
710 INPUT"AGE (0-100)";B
740 IFB>0ANDB<100THEN760
750 PRINT" I DID SAY 0-100!WELL";:GOTO710
760 B=B/100:IFF=3THENB=B*.85
770 IFL=2THENB=B*AR:IFC<3THENB=B*.7
790 GOSUB2500:REM DISTANCE
800 M=309-FNA(12)-(H+30)*.7-C*.3
810 M=INT((B*M*75/D)+.5):Q=0
820 A=A+1:PRINT"

```





## by JON BULL

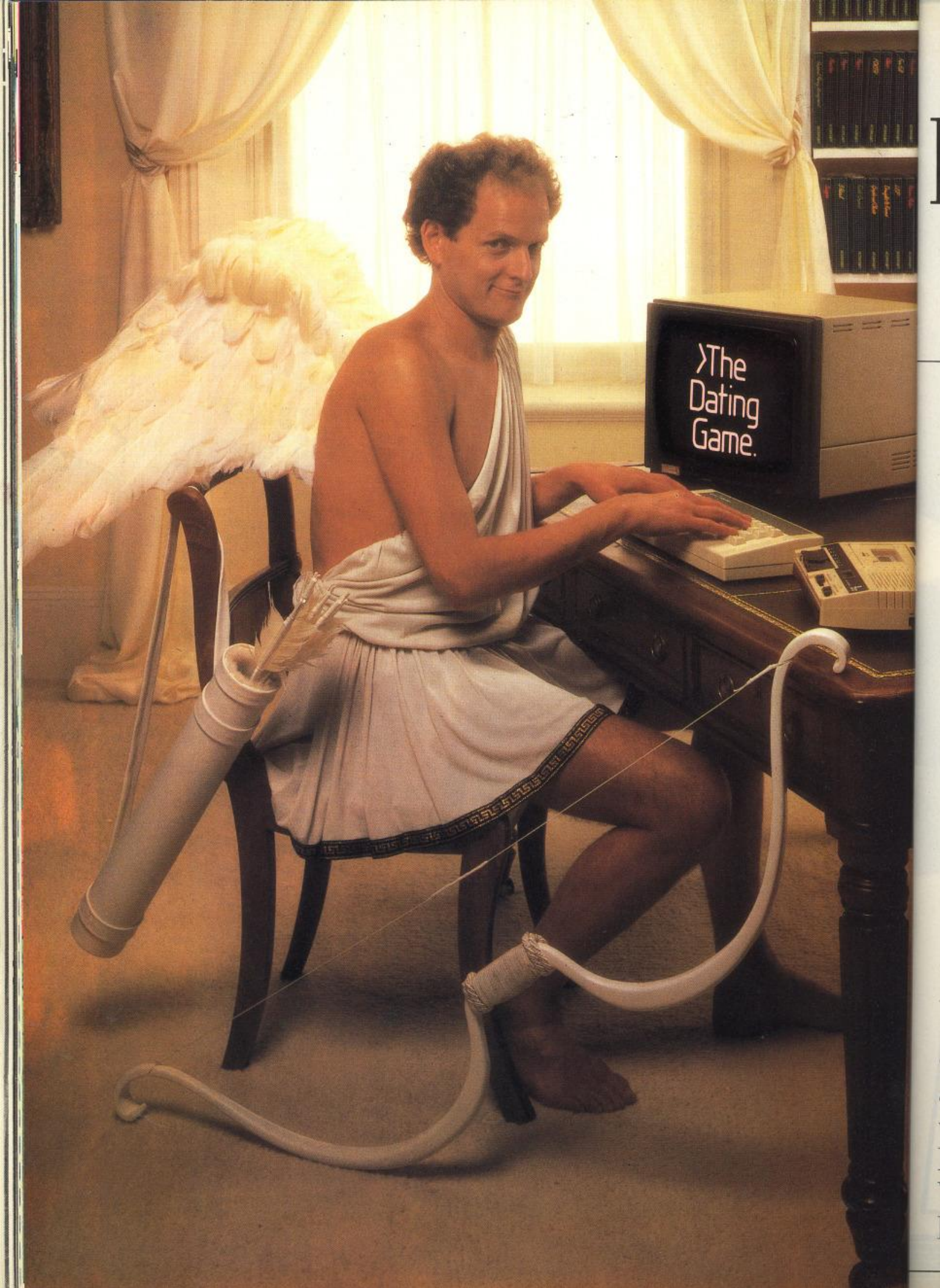


```

6310 GOSUB2500:GOSUB2000:GOTO6140
0:POKEKK-11+CL,10
5100 POKEKK-10,160:POKEKK-10+CL,10
5110 D=INT(D*50R/(X-V)*12+(Y-W)*12/31)
5120 IFD>58THEND=56+FNA(3)
5130 JB4=KK+29-INT(D/2):POKEJB4,81:POKEJB4+CL
0 5140 PRINT"YOU ARE";D;"FEET FROM THE PIN"
5150 INPUT"PUTTING STRENGTH (0-13) "C
5200 IFC<0ANDC<=13THENA=A+1:GOTO6240
5240 E=C*(4+M*AND(1))-2.5+(RND(1))*(H+30)/40)*
M:E=INT(E*JA):M=M*.8
5250 FORI=1TOE:D=D-1:S=INT(KK+29-D*T/2)
5260 FORJ=1TOI:NEXTJ
5270 POKES,S1:POKES-T,32:POKES+CL,0
5280 IFS<KK+29THENPOKEKK+29,93
5300 NEXTI:REM **MIGHT RUN OFF GREEN
5300 IFD<0THENT=-T:D=-D
5305 IFS=KK+29THENFORI=1TO99:NEXT:POKES,93:GO
TO6400 6400 GOSUB2500:REM PUTTING
6410 PRINT"YOU'RE DOWN IN";A;
6420 ON(A-P+3)GOTO6460,6450,6440,6490,6490
6430 PRINT"-KEEP YOUR HEAD DOWN":GOTO6500
6440 PRINT"A PAR, NICE GOING":GOTO6500
6450 PRINT"-A BIRDIE,WELL PLAYED!":GOTO6500
6460 IFF=3THEN6480
6470 PRINT"-A GREAT BIG EAGLE!!!!":GOTO6500
6480 PRINT" A HOLE IN ONE!!!!!!"
6490 PRINT
6500 P1=P1+P:A1=A1+A:IFP1=A1THEN6550
6510 A#="UNDER":IFA1>P1THENA#="OVER"
6520 PRINT"YOU ARE";ABS(P1-A1);
6530 PRINTA#;"PAR AFTER";N;"HOLES
6540 GOTO6500
6550 PRINT"LEVEL PAR AFTER";N;"HOLES
6560 PRINT"":GOSUB9000
6570 IFN<18THEN400
6580 REM E.O.G
6590 PRINT" ***GAME OVER***"
6600 ONINT((A1-P1)/5+2)GOTO6730,6700,6660
6610 PRINT"YOU'VE HACKED YOUR WAY";
6620 PRINT"ROUND BADLY,BEST TAKE";
6630 PRINT"SOME LESSONS BEFORE YOU";
6640 PRINT"DIG UP THIS COURSE AGAIN
6650 GOTO6900
6660 PRINT"AN AVERAGE ROUND-YOU";
6670 PRINT"SHOULD IMPROVE NEXT TIME"
6680 PRINT"SEE THE CLUB PRO FOR A";
6690 PRINT"FEW TIPS":GOTO6900
6700 PRINT"CONGRATULATIONS!YOU P";
6710 PRINT"LAYED A GOOD ROUND I I I";
6720 PRINT"KE YOUR STYLE":GOTO6900
6730 PRINT"AN UNDER PAR ROUND!!
6740 PRINT"NEXT TIME YOU PLAY TRY";
6750 PRINT"A HIGHER HANDICAP
6800 END:REM**PHEW!!**
7000 REM ROUGH
7010 GOSUB2000:IFABS(Y-17)>10THEN7030
7020 AA=.75:PRINT"IN LIGHT ROUGH":GOTO7040
7030 AA=.5:PRINT"YOU ARE IN HEAVY ROUGH
7040 GOSUB2500:GOTO640
7500 GOSUB2000:REM TRAP
7520 PRINT**BUNKERED**":GOSUB2500
7530 GOSUB2000
7540 INPUT"WHICH CLUB";C:C=INT(C)
7550 IFC<11ANDC<20THEN7590
7560 PRINT"YOU WON'T GET OUT WITH";
7570 PRINT"THAT":GOSUB2500
7580 GOSUB2000:GOTO7540
7590 INPUT"% AGE SWING";B
7610 M=68+FNA(17)-(19-C)*5-(100-B)*.4
7620 IFF=4THENM=M*.7
7625 IFRND(1)<.4THENM=M/3
7630 IFM>25THEND=0:B=1:GOTO810
7535 GOSUB2000
7640 PRINT"YOU FLUFFED IT":GOSUB2500
7650 A=A+1:GOTO7500
8000 REM TREES
8010 GOSUB2000:PRINT"IN THE TREES
8020 PRINT"YOU CAN ONLY HACK OUT SIDEWAYS
8030 TR=0:GOSUB2500:GOTO640
8500 REM WATER
8510 GOSUB2000:PRINT" ** SPLASH !!! **
8520 PRINT"IN THE STREAM-LOST BALL"
8530 GOSUB2500:GOSUB2000:GOTO1380
9000 PRINT"PRESS ANY KEY TO CONTINUE
9500 GETA:IFA#=""THEN9500
9600 RETURN
9900 DATA367,4,445,4,314,4,189,3,520,5
9910 DATA331,4,458,4,375,4,177,3,424,4
9920 DATA562,5,336,4,208,3,447,4,298,4
9930 DATA542,5,385,4,478,4
READY.

```







# The Electron has added even more strings to its bow.

The list of top quality software for the Acorn Electron is growing all the time.

As you can see, there's already an outstanding selection of exciting programs covering everything from monsters to music and murder to marriage guidance.

And ultimately, the Electron will enjoy a range of software as comprehensive as that of its illustrious big brother, the much-acclaimed BBC Micro.

You'll find all the programs featured here at your local Acorn stockist. (To find out where that is, simply call 01-200 0200.)

Alternatively, you can send off for the Electron catalogue and order through the post by writing to Acornsoft, c/o Vector Marketing, Denington Estate, Wellingborough, Northants NN8 2RL. Tel: 0933 79300.

GRAPHICS: Graphs & Charts, Creative Graphics, Picture Maker.

BUSINESS: Personal Money Management, Desk Diary.

EDUCATION: Tree of Knowledge, Peeko-Computer, Business Games.

LANGUAGES: LISP, FORTH, S-Pascal, Turtle Graphics.

GAMES: Starship Command, Monsters, Chess, Draughts and Reversi, Snapper, Meteors, Hopper, Sphinx Adventure, Arcadians, Free Fall.

QUIZZES: Theatre Quiz, Crime and Detection Quiz, Music Quiz, History Quiz, Science Fiction Quiz, '...I Do', The Dating Game.

CHILDREN'S EDUCATIONAL SOFTWARE: Happy Numbers, Timeman One, Timeman Two, Wordhang, Happy Letters, Map Rally.

**ACORN** **SOFT**







Use the 'Z' key to control your descent and hit the green spot as many times as you can out of ten. Good luck, and don't break a leg!

FLIGHT 7      LANDINGS 1

CONGRATULATIONS  
YOU LANDED SAFELY

# GLIDER

[illegible]

```

1100 DATA 74,148,188,127,254,124
1110 REM TITLE SCREEN
1120 INK 1: PAPER 7: BORDER 0: B
RIGHT 1: CLS
1130 LET N=0
1140 LET Y=4: LET Z=67
1150 LET S#="" : I R N G GL I D E
P
1170 PRINT INK 4: AT 21,0:
1180 LET A=-20
1190 FOR T=1 TO LEN A#
1200 PRINT INK 1: PAPER 8: AT S,T
+4: A$(T) : PAPER 8: INK 1: AT S,T+
S: * INK 2: AT 4,T+4:
1210 BEED .1: A: LET A=A+2
NEXT T
1220 FOR U=1 TO 17
1230 PRINT INK 2: AT Y,Z: "AT
Y+1,Z INK 1: AT Y-1,Z:"
1240 BEED .1: U/2
NEXT U
1250 BEED .1: U/2
1260 IF U=1 THEN PRINT AT Y-1,Z
"AT Y-1,Z INK 2:
1270 IF U=NO THEN PRINT AT Y-1,Z
"AT Y-1,Z INK 2:
1280 AT Y-1,Z: * BEED .1: 1
PAPER 8: FLASH 1: * BEED .1: 1
1290 BEED .1: PAUSE 200: RETURN
1300 NEXT U

```



# WE'VE GOT THE TALENT- and our games prove it!

Amazing graphics, fast and furious action, challenging strategy, compelling adventure – this first wave of games from TALENT has got the lot!

Written by professional computer scientists using powerful new programming techniques (which leave machine code standing), these games have pushed home micros to the very limit!

**SPOT YOURSELF A TALENT GAME TODAY - WE'RE GOING PLACES - FAST!**



## ARCHIPELAGO

Dare you venture into the ancient undersea labyrinth which link the islands of the Archipelago? Fabulous jewels await you there – but the guardians of the treasure mark your every move, waiting to deal a swift and terrible vengeance. How long can you survive?

A fast-moving, action-packed game with brilliant graphics, animation and music.  
Commodore 64 (joystick needed) Cassette £7.95 Disk £9.95

## KALAH

One of the oldest games in the world! Originally played by Bedouins using pebbles and holes scooped in the desert sand, this strategy game has absorbed the mind of man for thousands of years. Superb graphics and music, with a choice of levels and depth of search. Easy to learn, fiendishly difficult to beat!  
Commodore 64 Cassette £7.95 Disk £9.95

## LASER REFLEX

A new angle in alien zapping! Against a brilliant backdrop of stars, you must defend your asteroid base from wave after wave of swooping mutating starships. Your defence – a powerful laser deflected against a giant mirror. How long can you hold out before your defences crumble?

BBC Model B Cassette £7.95  
Electron Cassette £7.95

## WEST

A compulsive adventure game set in a ghost town in the Wild West. Your task – to flush out a gang of bank robbers and retrieve their loot – with only your trusty steed and your six-shooter to aid you! Test the speed of your draw, your skill at cards, your powers of survival!

The first of a stunning series of adventure games from Allan Black, played in real-time.  
Commodore 64 Cassette £9.95 Disk £12.95  
BBC Model B (text only) Cassette £7.95  
Electron (text only) Cassette £7.95

## PANORAMA (H)

An outstanding graphics package for the Commodore 64. Features include: free-hand sketches, circles, ellipses, block move, copy and reverse, magnification, choice of cursor, joystick or key control. PLUS texture definition and texture and colour fill. PANORAMA (H) uses the full colour facilities of the Commodore 64. Pictures can include text and can be stored and incorporated into BASIC programs. The program is menu-driven and comes with a comprehensive illustrated instruction booklet. We use PANORAMA (H) to create all the graphics for our Commodore 64 games. Need we say more?  
Commodore 64 Cassette £17.95 Disk £19.95

SOFTWARE FROM SCOTLAND

**£2 DISCOUNT ON ALL TALENT PRODUCTS!**

For every TALENT product you order, we'll deduct £2.00 from the price.  
This offer must end on August 31st so don't delay – make sure you've got TALENT!

INSTANT ACCESS 24 HOUR ORDERING SERVICE TEL 041-552 2128

To: TALENT COMPUTER SYSTEMS  
FREEPOST (no stamp required)  
GLASGOW G4 0BR

Please send me the following items:

COMMODORE 64	Quantity		SPECIAL PRICE
PANORAMA (H)	—	Cassette (£17.95)	£15.95
PANORAMA (H)	—	Disk (£19.95)	£17.95
ARCHIPELAGO	—	Cassette (£ 7.95)	£ 5.95
ARCHIPELAGO	—	Disk (£ 9.95)	£ 7.95
KALAH	—	Cassette (£ 7.95)	£ 5.95
KALAH	—	Disk (£ 9.95)	£ 7.95
WEST	—	Cassette (£ 9.95)	£ 7.95
WEST	—	Disk (£12.95)	£10.95
BBC MODEL B	—		
LASER REFLEX	—	Cassette (£ 7.95)	£ 5.95
WEST (text only)	—	Cassette (£ 7.95)	£ 5.95
ELECTRON	—		
LASER REFLEX	—	Cassette (£ 7.95)	£ 5.95
WEST (text only)	—	Cassette (£ 7.95)	£ 5.95
TOTAL			

Total (includes postage and packing)

I enclose a PO/Cheque to the value of £ .....

Please debit my ACCESS

Name (block capitals) .....

Address .....

Post Code .....

BK 2

Signature .....

Tel .....

Please allow up to 28 days for delivery. We shall not bank your remittance until your order has been despatched.

Dealer enquiries welcome. Contact Veronica Colin on 041-552 2128

# TALENT

## COMPUTER SYSTEMS

CURRAN BUILDING, 101 ST. JAMES ROAD, GLASGOW G4 0NS TEL 041 552 2128



# FUN WITH SPEECH 64!



## Speech Synthesiser for the Commodore 64

**SPEECH 64** for the Commodore 64 is ready to talk immediately on power-up, has an infinite vocabulary and extra BASIC commands. Retailing at only **£29.95**, **SPEECH 64**'s advanced features will give you, your family and friends lots more fun with your computer! Its sister unit  $\mu$ SPEECH — for the Sinclair Spectrum — is a smash hit in the UK and over 10 other countries, and has been awarded the CTA 'Product of the Year' accolade.

**SPEECH 64** is easy to use! It needs no software to be loaded, it does not steal RAM from the BASIC operating system, or stop arcade style action.

With extended BASIC commands like SAY and its Text to Speech facility **SPEECH 64** can be programmed in plain English, just like this: **SAY "to say anything you want"**

You can choose from two different voices, each with programmable intonation, and other commands control the voicing of keys as they are pressed — a useful educational aid for young children.

**SPEECH 64** comes complete with full documentation and two free full colour posters. Watch out for **SPEECH 64** as it appears in retail outlets nationwide — or use the order form below, at no extra cost.

# CURRAH

## Computer Components Ltd

To: **SPEECH 64 Offer**, P.O. Box 1, Gateshead, Tyne & Wear, NE8 1AJ

Please Supply ..... **SPEECH 64** unit(s) at £29.95 each incl. VAT & P & P

Name (please print) ..... B.K.1

Address (please print) .....

..... Postcode .....

I enclose a cheque/PO payable to 'SPEECH 64 Offer' value £ .....

or debit my Access/BarclayCard No.

Signed (credit card orders not accepted unless signed) .....

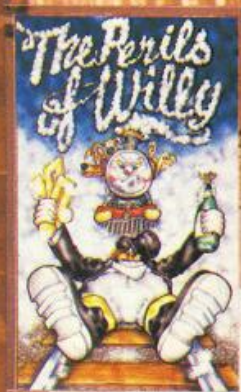
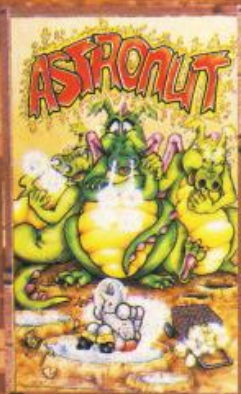
**Credit Card Hotline 091 - 482 4683** Please allow 28 days for delivery. Offer valid UK only



**JONES**  
**OF DOOM**  
**MM**

**2 HUNCHBACK**  
AT THE OLYMPICS  
NOW SHOWING  
ON YOUR  
48k SPECTRUM AND  
COMMODORE 64

**3 JES**  
**W**  
ON 48k  
A)  
POPUL  
COMID



**SOFTWARE  
PROJECTS**

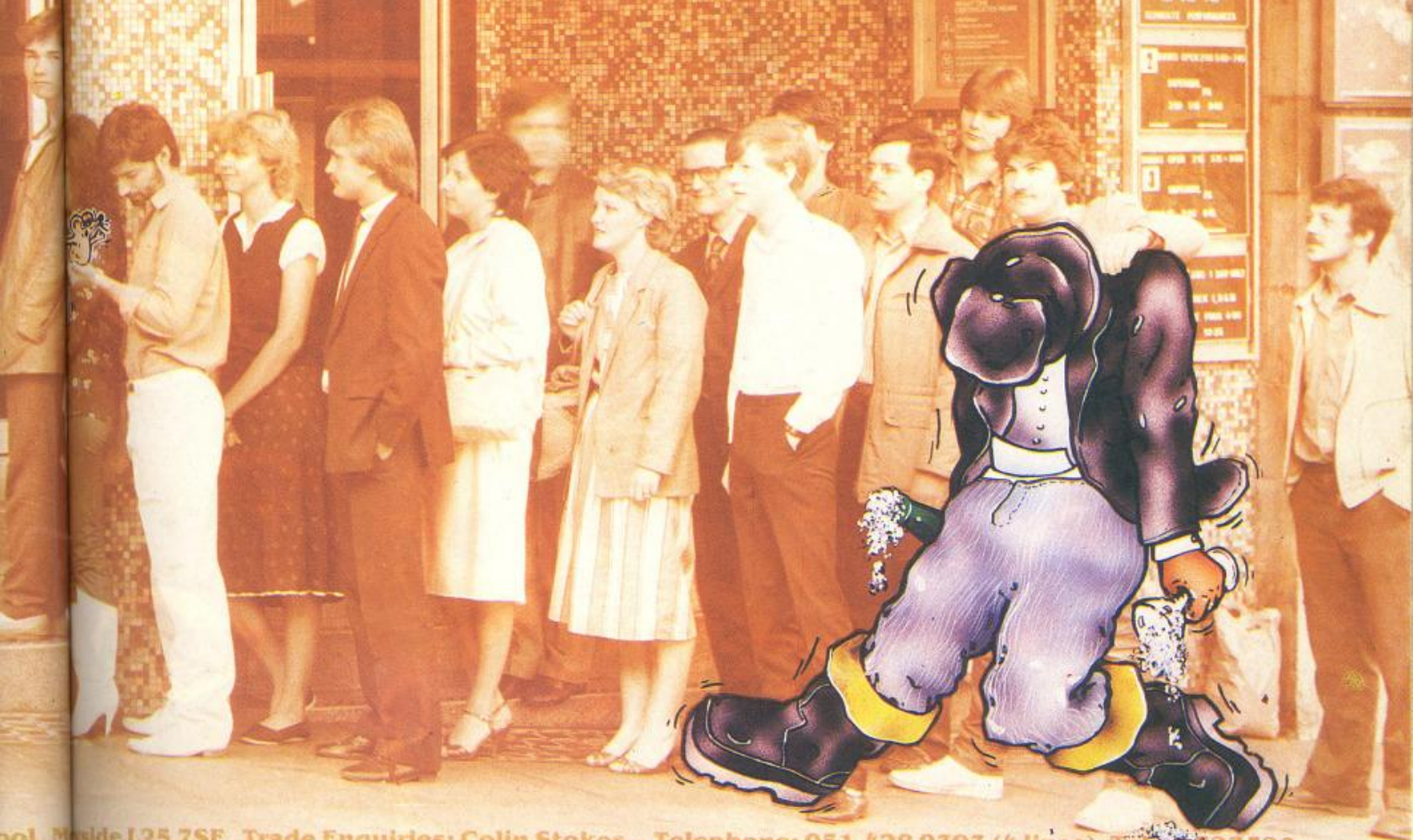
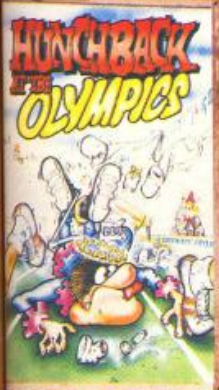
Bear Brand Complex, Allerton Road, Woolton, Liverpool, L15 8JL  
Available from selected branches of W.H. Smith, Boots, Jenzie



E SET  
WILLY  
8k SPECTRUM  
AD BY  
ULR DEMAND  
MMDORE 64

4 The World Premiere  
of  
**ASTRONUT**  
NOW APPEARING ON  
YOUR 48k SPECTRUM

5 **PERILS  
OF WILLY**  
MINER WILLY'S  
FIRST SHOWING  
ON THE  
VIC 20 PLUS 16k



pool, Maide L25 7SF. Trade Enquiries: Colin Stokes — Telephone: 051-428 9393 (4 lines). Telex: 627520.  
ts, Jolezies and all good software stockists.



# STORM

For BBC by A. TRENKER

1 REM STORM COPYRIGHT OCTOSOFT 1984  
A.TRENKER D.SCHWANENFLU

GEL

4\*FX12,0

5 INPUT "LEVEL PLEASE (1 EASY 10 INFO  
SSIBLE)",I

6 D% = 6

10 MODE5

20 PROCINIT

30 VDU23,1,0;0;0;0

40\*FX11,5

42\*FX12,20

50 COLOUR1

60 TIME=0

1000 FOR N=1TOP:PROCKEY:PROCF:NEXT

1001 IF FNH GOTO 2000 ELSE IFFNO THEN20  
00

1002 PROCROCK:GOTO1000

2000 SOUND 2,-15,10,30:IFFNO M\$="OUT OF  
FUEL" ELSE M\$="HIT BY ASTEROID"

2001 CLS:MODE7:ACROSS=11:C=1:PROCBIGLET  
TER







In a dense meteor storm, the good ship Pegasus is battling for survival. How long can it survive without running out of fuel — or getting crushed by a huge boulder? Quite frankly, pal, that's up to you. The controls are in front of you and there are fuel cells out there to pick up... if you can get to them. Chortle, chortle.

CONTROLS:

= LEFT

= RIGHT

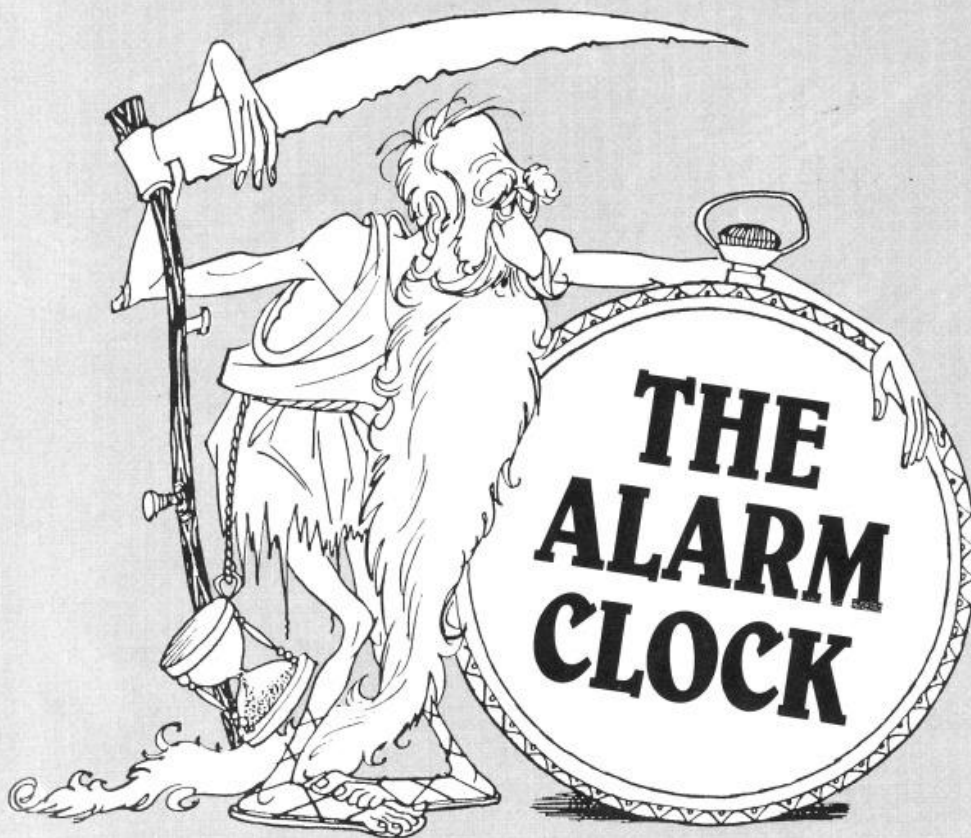
HINTS — Go as fast as possible to get the best score. However, the slower you approach a fuel cell the more fuel you get. Have a nice trip!

1 = RETROS FIRED  
Q = ACCELERATE

```
2002 SCORE%=(D*3/TIME/600)
2003 VDU10,10,10:PRINTTAB(14)" SCORE=";
SCORE%:VDU10,10:*FX12,0
2004 FOR T=1TO255STEP30:SOUND1,-14,T,2:
NEXT:*FX15,1
2005 M$="ANY KEY TO PLAY AGAIN":C=4:ACR
OSS=7:PROCBTGLETIER:VDU10,10,10:RUN
9000 DEF PROCIN1
9013VDU23,230,28,73,93,127,127,93,8,0
9015VDU23,231,32,120,124,60,127,62,14,2
9020VDU23,232,57,127,126,60,124,126,60,
14
9025VDU23,233,0,56,28,62,62,28,8,0
9026VDU23,234,62,99,111,103,111,111,127
,62
9027 FZ=300
9029 D=10
9030 XZ=RND(6)/6
9031 DEF FNR=(RND(1)/10*(D/999))
9033 DEF FNF=(RND(1)/1500)
9034 DEF FNG=(FZ<0)
9035 DEF FNIH=(POINT(XZ*64/32,0Z)=2)
9036 DEF FNG=(POINT(XZ*64/32,0Z)=3)
9037 ENVELOPE1,0,7,2,2,6,12,6,127,0,0,-
127,126,0
9038 DEF FNLH=(FZ<30AND FZ>27)
9039 VDU23,1,0;0;0;0;0
9040 F=5:0Z=780
9090ENDPROC
9100DEF PROCKEY
9103 IF FNG SOUND 1,2,40,5:FZ=FZ+10
9104 IF FNLH SOUND1,1,30,30:FZ=FZ-4
9105 PRINTTAB(XZ,DZ-1)CHR$(32)
9110A=INKEY(1)
9115IFA=44 THEN IF XZ>1 THEN PRINTTAB(X
Z,DZ)CHR$32:XZ=XZ-1:PRINTTAB(XZ,DZ)CHR$2
30:FZ=FZ-1
9120IFA=46 THEN IF XZ<19 THEN PRINTTAB(
XZ,DZ)CHR$32:XZ=XZ+1:PRINTTAB(XZ,DZ)CHR$
230:FZ=FZ+1
```

```
9125IF A=49 THEN IF P<10 P=P+.6:FZ=FZ-2
9126IF A=81 THEN IF P>0 P=P-.5:FZ=FZ-3
9130 PRINTTAB(XZ,DZ)CHR$(230)
9131 SOUND 1,-10,120-P*10,1:SOUND1,0,0,
0
9132 PRINTTAB(XZ,DZ-2)CHR$(32)
9140 D=D+1
9190ENDPROC
9200DEFPROCROCK
9205 COLOUR2
9210IF FNR PRINT TAB(RND(19),30)CHR$(RN
D(3)*230) ELSE PRINTTAB(0,30)" "
9211IF FNR PRINT TAB(RND(19),30)CHR$(RN
D(3)*230)
9212IF FNR PRINT TAB(RND(19),30)CHR$(RN
D(3)*230)
9213IF FNR PRINT TAB(RND(19),30)CHR$(RN
D(3)*230)
9214IF FNR PRINT TAB(RND(19),30)CHR$(RN
D(3)*230)
9215 COLOUR1
9218 IF FNI COLOUR3:PRINTTAB(RND(19),30
)CHR$(234)
9219 COLOUR1
9220VDU10
9221 PRINTTAB(XZ,DZ-1)CHR$(32)
9290ENDPROC
9600 DEF PROCBTGLETIER
9601 PRINTCHR$(128/C);
9602 PRINTTAB(ACROSS)CHR$(141);M$:PRINT
CHR$(128/C);:PRINTTAB(ACROSS)CHR$(141);M
$
9605 ENDPROC
9700 DEFPROC
9705 PRINTTAB(0,0);"FUEL "FZ;" TIME ";
INT (TIME/100);" "
9710ENDPROC
```





Can it be those Invaders you are thrashing at 3.00am are the same ones you were belting at 7.00pm? You need an alarm clock like this useful time-tracking BBC utility from KIM ALDIS...

THE FIRST LAW of computing tells you real world time and key-bashing time are not the same thing. Doing a Fred Astaire on the keys for a subjective thirty seconds can turn out to be (have been?) three weeks when you look up at the clock on the wall.

The Alarm Clock is one way of combating the alarming way in which time passes when hammering the keys. It's an interrupt driven routine (more of that later) and it works with any BASIC program. Arcade games might cause a bit of a problem as it stands but if you trim it down a bit and shove it somewhere it won't get in the way you should be in business.

In this listing the code is assembled in the user defined character area from &C00 but this can be changed by altering the value of the variable 'code'. Other possible areas are given later.

## Modes

There is a slight problem — it only displays the time in mode 7. This is because it pokes directly into screen memory. For the benefit of the joker out there who's raising his eyebrows and saying what the hell use is

that, there's good reason. The alternative method of getting the time on the screen is to save the current text cursor position, move it to the top of the screen, print the time and then move it back to its original position. All very nice and hunky dory except for one small point. If you're editing a BASIC program there are two cursors. One where you're putting text and one where you've moved to with the cursor keys for copying. This makes life complicated when you return from the routine after it's finished printing the time. If you're editing you suddenly find yourself typing in the wrong part of the screen. OK clever boy? Whatever mode you're in the alarm still goes off fit to wake the dead so it's no big deal.

## Diversion

So what's an interrupt? While the computer is running your program it's also doing lots of other things in the background: like refreshing memory, scanning the keyboard etc. It looks as though it's doing more than one thing at a time but in fact all the tasks that need to be carried out in the background

are coping bits of the CPU's spare time by generating interrupts. If, say, the keyboard wants some attention it gives the CPU the electronic equivalent of a tap on the shoulder and utters the immortal words, 'Over 'ere John'. The CPU tidies up its current task and then diverts its attention to whatever has interrupted it. When it finishes it carries on with what it was doing in the first place.

## Eventful

The thing about interrupts on the BBC is that they're a piece of cake to get at. Under certain conditions something called an Event is generated which can be made to cause an interrupt (when events are 'enabled'). A list of events is given for all to see on Page 425 of the Acorn Bible. For an alarm clock it seems sensible to use the 'interval timer crossing zero' event. Set the timer to minus one, it counts up and when it crosses zero it generates an event. All we need is to write a routine which increments a counter in memory, displays the counter in terms of hours and minutes and reset the timer to minus one so the

whole process can then start all over again.

## Breakdown

The nice thing about an interrupt driven routine is it carries on even when you junk the program that caused it and run a new one. So now you know. Big Brother Clive and the Quantum Lunch-pail aren't the inventors of multi-tasking.

Just by way of added value the routine includes a little-known way of disabling the Break key! When Break is pressed the operating system looks at location &287 for a JMP instruction. If it's not there it carries on and does its suicide number as per normal. However if there is a JMP it does two jumps to the address held in the next two bytes, firstly with the carry flag clear then, after the system has been reset with the flag set.

The listing is well structured and REMmed so it's fairly easy to follow. Line 150 disables events (if you don't do this then while the code is being assembled then the interrupt only has half a routine to go to. The computer promptly knots its knickers and refuses to talk to you). The registers have to be saved before and restored after the routine is entered in order that the operating doesn't get upset when it goes back to its primary task.

To use the clock just enter the time and alarm at the appropriate prompts. Once set it carries on quite happily whether there's a program running or not. Even pressing BREAK has no effect on it. To change the time or the alarm just reload the program and run it again.

## Codes

If you want to use the user defined characters then try altering the value of code to one of the following:

code=&800... sound and printer buffers.  
code=&900... cassette output buffer.  
code=&B00... soft key buffer.  
code=&D00... if you use discs forget it, if not it's probably the best place for it.

Remember putting things into buffers that aren't meant to be put there can produce strange results. Of course, you could always take the view that as you've paid the thing you might as well do what you like with it.

Full listing begins opposite. Remember, careful typing and checking is the BIG K key to smooth-running programs.



```

10 REM" *****
20 REM" *      ALARM CLOCK      *
30 REM" *      (C) 1984        *
40 REM" *      KIM ALDIS       *
50 REM" *****
60
70MODE7
80code=&C00
90SWORD=&FFF1:OSWRCH=&FFEE:OSBYTE=&F
FF4
100screen=&70
110PROCass
120PROCsetbreak
130PROCset_time
140END
150DEFPROCass
160*FX13,5
170 FOR I%=0 TO 2 STEP 2
180P%=code
190DOPT I%
200BCC end
210.start
220LDA #clock MOD 256 \Store address
230STA &220 \of routine
240LDA #clock DIV 256 \at event vector
250STA &221
260LDA #14 \re-enable
270LDX #5 \events
280JSR OSBYTE
290.clock \save registers
300PHP
310PHA
320TXA
330PHA
340TYA
350PHA
360" ..... SAVE REGS
370JSR write_clock
380JSR inc_time
390JSR print_time \restore
400PLA \registers
410TAY
420PLA
430TAX
440PLA
450PLP
460.end
470RTS
480.write_clock
490LDX #clock_paras MOD 256
500LDY #clock_paras DIV 256
510LDA #4 \set timer
520JSR OSWORD \to -1
530RTS
540.inc_time \update counter
550SED
560LDA secs
570CLC
580ADC #1
590STA secs
600CMP #&60
610BMI end1
620LDA #0
630STA secs
640LDA mins
650CLC
660ADC #1
670STA mins
680CMP #&60
690BNE end1
700LDA #0
710STA mins
720LDA hours
730CLC
740ADC #1
750STA hours
760CMP #&24
770BNE end1
780LDA #0
790STA hours
800.end1
810CLD
820LDA hours \check for
830CMP alhours \time reached
840BNE out \alarm setting
850LDA mins
860CMP almins
870BNE out
880LDA secs
890CMP #10
900BPL out
910LDY #0

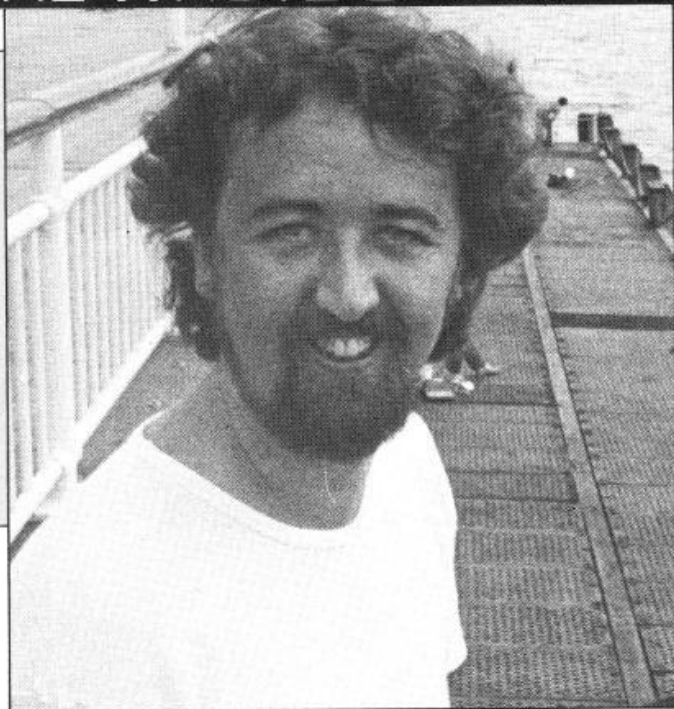
```

```

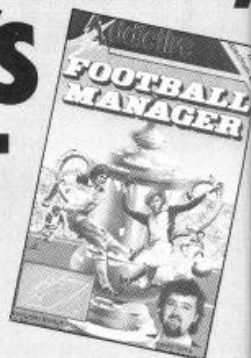
920.alarm \sound alarm
930LDA #7 \and display
940JSR OSWRCH \message
950LDA message,Y
960JSR OSWRCH
970INY
980CMP #&0D
990BNE alarm
1000.out
1010RTS
1020"
-----
1030.print_time \update screen
1040LDA &350 \find top of
1050STA screen \screen
1060LDA &351
1070STA screen+1
1080LDY #0
1090LDA hours \update screen
1100JSR print \display of
1110LDA #ASC":" \time
1120STA (screen),Y
1130INY
1140LDA mins
1150JSR print
1160LDA #ASC":"
1170STA (screen),Y
1180INY
1190LDA secs
1200JSR print
1210LDA #ASC" "
1220STA (screen),Y
1230RTS
1240.print \convert to
1250PHA \decimal for
1260AND #&F0 \display
1270CLC
1280ROR A
1290ROR A
1300ROR A
1310ROR A
1320CLC
1330ADC #ASC"0"
1340STA (screen),Y
1350INY
1360PLA
1370AND #&F
1380CLC
1390ADC #ASC"0"
1400STA (screen),Y
1410INY
1420RTS
1430.hours \storage area
1440EQUB 0 \for counters
1450.mins \and message
1460EQUB 0
1470.secs
1480EQUB 0
1490.alhours
1500EQUB0
1510.almins
1520EQUB 0
1530.message
1540 EQU$ STRING$(20,"")+CHR$&0D
1550.clock_paras
1560 EQU$ &FFFFFFF0
1570EQUB&FF
1580J: NEXT
1590ENDPROC
1600DEFPROCset_time
1610CLS
1620PRINT"ENTER TIME"
1630INPUT"HOURS",hrs$
1640INPUT"MINS",mins$
1650hrs$=" "+hrs$:mins$=" "+mins$:hrs$=EV
AL(hrs$):mins$=EVAL(mins$)
1660?hours=hrs$:?mins=mins$
1670CALL start
1680PRINT" ALARM"
1690INPUT"HOURS",alhrs$
1700INPUT"MINS",almins$
1710alhrs$=" "+alhrs$:almins$=" "+almins$
alhrs$=EVAL(alhrs$):almins$=EVAL(almins$)
1720?alhours=alhrs$:?almins=almins$
1730PRINT"Enter Message ";
1740INPUTmess$
1750mess$=mess$+CHR$&A
1760message=mess$
1770ENDPROC
1780DEFPROCsetbreak
1790?&287=&4C
1800?&288=code MOD 256
1810?&289=code DIV 256
1820ENDPROC

```





# FRANKLY, BRIAN, THE GAME'S NOT WHAT IT WAS.



**Says KEVIN TOMS, whose Football Manager prog has gained cult status. NICKY XIKLUNA blows the whistle . . .**

KEVIN TOMS is TALL. It's like interviewing a tree. Except that no mere tree could write a computer game like *Football Manager*.

*Football Manager* — for the few non-initiates — is a strategy game which involves you in the raw economics of the sport. You decide on the players, bid on the transfer market, shell out wages and balance your economies. As you make your way through the leagues towards t' Cup, you are rewarded with graphical action sequences — "highlights" — from the matches you've played. The outcome, Brian, is not predictable.

Two years ago, in a Milton Keynes basement, the six and a half foot frame of the brain behind the (big) boots was bent in two as he stuck cassette labels onto his first ZX 80 versions of *Football Manager*.

Big Kevin gave up his job as a Cobol programmer, and put all his bytes in one (mail-order) basket bid. Right on cue, Uncle Clive brought out the Spectrum. That night, the ZX 80 waned forever. Big Kev transferred his prodigy to the Spectrum with marathon speed.

*Football Manager* has been transferred to the Beeb, and more recently to CBM 64. With improved graphics — the mode 7 pin-men have metamorphosed too, into solid flesh thanks to ex-YOPS programmer Peter Lunn. Overall the game has sold some 100,000 copies, the sole commodity that keeps Addictive Games' four personnel

employed. Kevin Toms has thereby changed his title from "Chief Label Appender" to "Chief Games Designer".

Big Kev was once Little Kev, and that's when he started creating board games. Later he made calculators play games! He had several attempts at designing a football board game, but found that the necessary simplification ruined any sense of realism. With the advent of the home micro, the scales dropped from his eyes. But even now, 27-year-old Kev continues to think of himself as a games man rather than a computer man.

"All games are pure entertainment. They work through the effect they have on emotions, just like music or a novel. Now that's an entirely different approach to just branching over from programming. What's needed is to bring the experience of an

old skill to a new industry. For example, all graphics should have a use. They shouldn't just look pretty.

"I don't like making things up. I enjoy working within constraints. The appeal of *Football Manager* lay in the fact that everyone was familiar with the game."

Surprisingly, Brian, Kevin Toms is not an out-and-out football fanatic. Having been sprogged in Paignton, Devon, he supports Torquay, in a lapsed kind of way.

"Football? A terrible sham. I used to attend matches, but I got put off, along with many others. The managers just had no idea how to organise entertainment. They've never advertised and they can't stop the hooligans."

'Twas in Issue One of this very organ that Arsenal mid-field player Charlie Nicholas placed *Football Manager* first

in his personal league of computer soccer games, saying: "I'm not even sure that it's a game at all . . . could be useful — to Football Managers!"

Does the author have any ambitions to change art into life, and manage a team some day?

"Nope. I'm happy with what I'm doing. I just want to be the best in my field — that's all!"

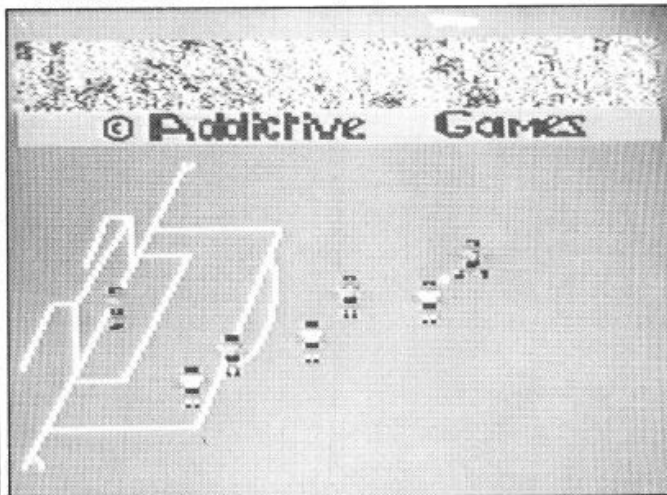
Tom's favourite games are *Buck Rogers in the 21st Century* and *Pole Position*. "My all time favourite is *Twin Kingdom Valley*. I don't play many games."

Secondary ambitions? "I'm very keen on getting hold of a good music synthesiser, like Alpha Centuri or an Apple. It's very arrogant, but I want to compose, and believe I can."

He confides that his favourite music is — heavy metal (yecch!) Yes, this gentle giant gets his head down and knees up to the dulcet strains of Black Sabbath and Rainbow! He admits to having wild day-dreams about rock-stardom.

"I like being recognised. It's nice to get feedback — when people say they like what you've done."

What is it with these programmers? They're all performers! Could the patient detailing of those obedient on-screen sprites hint at a deeper desire for the captivation and control of massive audiences? Or are music and maths inextricably linked in their dark souls? I'll let you know when I've got some more evidence.





# WHO WILL JOIN THE EVIL DEAD NEXT?

FROM BRITAIN'S MOST  
POPULAR HORROR FILM  
COMES A MOST  
EXCITING COMPUTER GAME

A FAST MOVING GAME  
OF SKILL AND STRATEGY  
FOR THE COMMODORE 64

# THE EVIL DEAD

THE GAME THAT GUARANTEES SLEEPLESS NIGHTS!

AVAILABLE FROM  
ALL GOOD COMPUTER  
GAMES STOCKISTS INCLUDING  
THE VIDEO PALACE  
100 OXFORD STREET, LONDON W1.



PALACE  
software

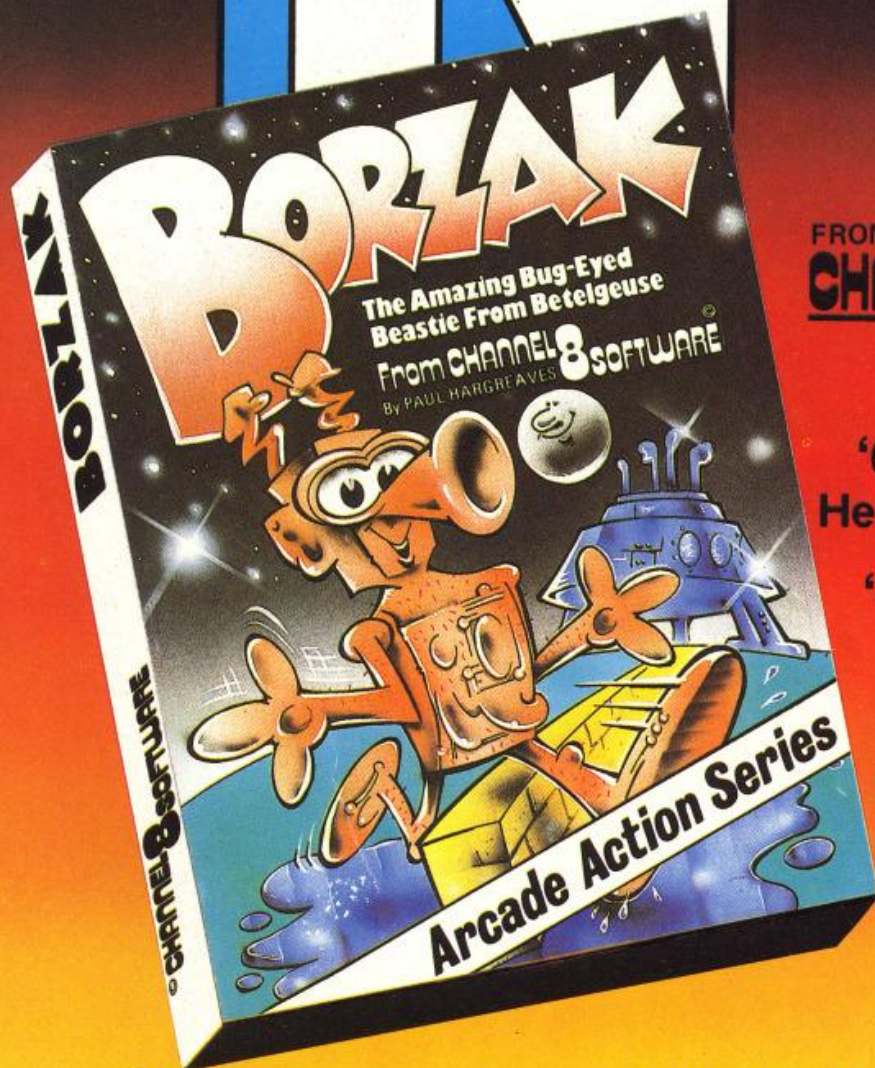
275 PENTONVILLE ROAD, LONDON N1 9RL

DISTRIBUTED BY  
PALACE VIRGIN GOLD  
69 FLEMPTON ROAD,  
LONDON E7 7NL  
TELEPHONE: 01-539 5566



# THE

# NO. 1



FROM  
**CHANNEL 8 SOFTWARE**

'Oh Borzak ★■?!'  
He's just fallen in the bog.

'Oh Borzak ★■?!'  
He's just been hit  
by a piranha.

Borzak the amazing bug eyed beastie from Betelgeuse is our Number One, maybe he will be yours.

Borzak runs, jumps and ducks on the way to his spacecraft, on 48k Spectrum and Commodore 64 with keyboard or joystick control. Price £6.95 including VAT.

'Oh Borzak ★■?!' Don't curse too loud if you can't get him back to his ship.

## OTHER CHANNEL 8 SOFTWARE TITLES

SHEAR PANIC  
THE BLACK SQUID  
THE CONSTRUCTOR  
I SPY FOR KIDS LANDER  
PRIMARY MATHS  
MATHS TUTOR TODDLER TUTOR  
'GOTCHA' MATHS  
ASTRAL ZONE

FEASIBILITY EXPERIMENT  
TEN LITTLE INDIANS  
THE WIZARD AKYRZ  
ARROW OF DEATH PT. 1  
ESCAPE FROM PULSAR 7



THE GOLDEN BATON  
ARROW OF DEATH PT. 2  
PERSEUS & ANDROMEDA  
THE TIME MACHINE  
WAXWORKS CIRCUS

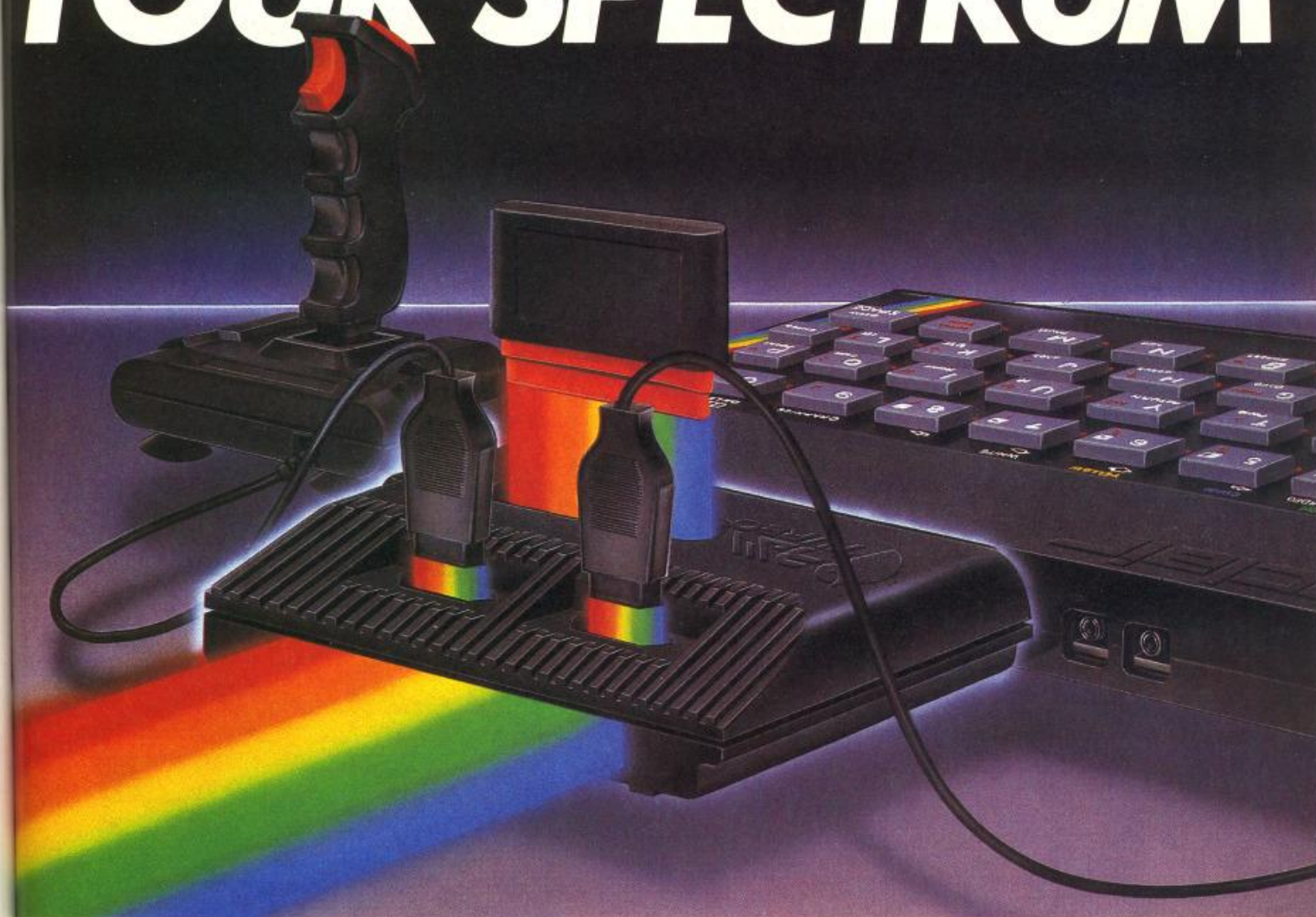
**CHANNEL 8 SOFTWARE**  
51 Fishergate, Preston,  
Lancs PR1 8BH.  
Tel: (0772) 53057



Selected titles available from larger branches of , Greens at Debenhams, Lewis's, Spectrum dealers and good computer shops everywhere, (in case of difficulty send P.O. or Cheque direct).



# TURBO CHARGE YOUR SPECTRUM



## Outperforms any Spectrum interface

The unique Turbo interface from Ram gives you all these features – and more – in one unit:

- \* A variety of interfaces including: Rom cartridges, two 9-way D plugs for standard joysticks, PLUS full expansion bus at rear.
- \* Compatible with Kempston and Protek protocols.
- \* Works with latest Quickshot Mk II auto rapid-fire joysticks!
- \* Choice of Rom cartridge or tape cassette software.
- \* Instant program loading with cartridge software.
- \* Built-in power safety device – unique to Ram Turbo.
- \* Full one year guarantee.
- \* Immediate availability – 24 Hr: despatch on receipt of P.O./ credit card details (cheques – seven days).
- \* Incredible value – only £22.95.

So don't wait around – simply complete the coupon and send it to us today.

Or call our credit card hot line on 02514 25252. (Access and Visa welcome).



Ram Electronics (Fleet) Ltd, 106 Fleet Road, Fleet, Hampshire GU13 8PA.

Please send me:

\_\_\_\_\_ Spectrum Turbo Interface(s) at £22.95  
+ £1 p+p (overseas orders £3 p+p)

\_\_\_\_\_ Quickshot II Joystick(s) at £9.95  
(Only when purchased with Turbo – normally £12.95 + £1 p+p)

I enclose cheque/postal order or charge my Access/Visa for: £ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Tel \_\_\_\_\_

To: Ram Electronics (Fleet) Ltd, 106 Fleet Road, Fleet, Hampshire GU13 8PA.

24 hour  
dispatch for  
Credit Cards and  
Postal Orders



Trade and export enquiries welcome.



# Taskset & commodore 64

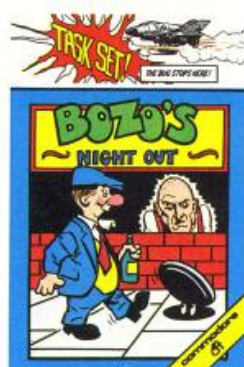
We're only writing games, and we're only writing for the 64. Rely on us to bring you the greatest games, the greatest concepts and the greatest value.



The complete deep space saga. A radical joystick action can bring inspired flexibility and a horrific kill-rate. The outstanding graphics include highly detailed craft and lots more than eight sprites at once. A full music and effects sound track accompanies the action. All these features combine with player options and a top 20 hi-score table to set new standards in hi-tech slaughter.



A brand new character game. Poor old Bozo, all he has to do is to get home after a night out with the lads. That's easy until a wobble becomes a lurch and a stagger. Later into the night, all rules go out of the window as he disbelieves what's happening in front of his blood-shot eyes. An epic journey with ultra-smooth graphics and sprites which run rings round normal games.



## SUPER PIPELINE

Keep the pipeline open. Foreman Fred and Plumber Pete have their work cut out. The evil ladderman drops metal wedges to plug the pipeline - and only Pete can fix 'em. Pete trusts Fred to defend him against the six-legged Venusian pipe spiders and the hard case lobster while he knocks out the plugs and restores the flow. Full accompanying music and effects, options and hi-score table.

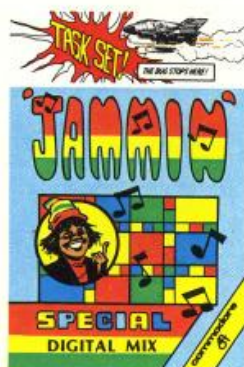
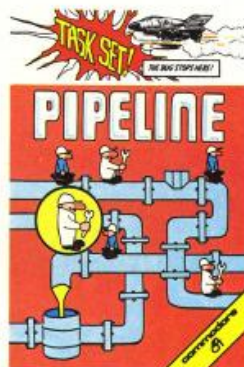
## JAMMIN'

Unlike anything else, a totally musical game yet highly colourful. Guide Rankin' Rodney through the top 20 mazes - each with an interactive rock sound track. Gather the instruments and make a band but watch out for bum-notes, dischord and that most deadly effect - distortion. If you've never heard the full music capabilities of the 64, grab an instrument and join the band.

## COSMIC CONVOY

Just surviving is not good enough in this giant convoy. Control three fighters at once, to defend the huge transporters as they ply between the planets. Only those transports reaching planetfall will gain galactic credits, and no-one expects promotion for losing the

All available now on cassette or disk.



## TASKSET LTD - The Specialists

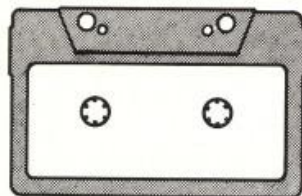
Naturally, everything we've written for the 64 is available on either cassette or disk.

Selected titles available from:  
W H Smith, Boots, Menzies and all good computer stores.

Major distributors include  
Microdealer UK, Websters, Centresoft and P.C.S.

All games are the exclusive copyright of Taskset Limited. All rights are reserved. Be warned, infringement of those rights is an offence.

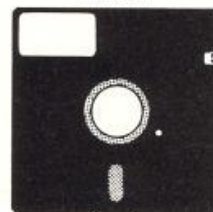
cassette



£6.90

each

disk



£9.99

© MCMLXXXIV TASKSET LTD 13 High Street, Bridlington, Yorks YO16 4PR. 0262-73798

## Taskset Ltd

13 HIGH STREET BRIDLINGTON YO16 4PR

ACCESS ORDERS (0262) 73798 24 HOURS

Dealer enquiries welcome (0262) 602668





**NatWest**  
The Action Bank

...POCKET THIS...

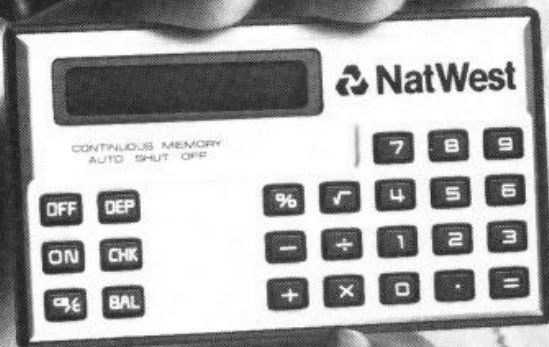
CALCULATOR THEN WORK OUT.

HOW MUCH YOU'VE SAVED...

When you operate a savings account, it's handy to know just how much you have in it. That's why the first thing we give you when you join the NatWest ON LINE Savers Club, is a continuous memory calculator that records your balance even when switched off. This is information of vital importance to ON LINE savers. Because unlike other schemes, ON LINE savers have the chance to buy the things they want through our exclusive telephone ordering system.

Simply pick up the phone, quote your personal code number and order from our exciting catalogue packed full of interesting goods. To join the ON LINE Savers Club, just drop into any NatWest branch with £5 (£2 covers membership) and you'll receive our special ON LINE savers pack. A folder containing all you need for your ON LINE Account, a wallet and of course the calculator. Alternatively for an application form, send the coupon to National Westminster Bank PLC, ON LINE, FREEPOST 2, London EC2B 2GN.

**ON LINE**  
SAVERS CLUB



Name

Address

Postcode

Send to: National Westminster  
Bank PLC, ON LINE,  
FREEPOST 2, London  
EC2B 2GN.

All orders for goods supplied through the On Line system will be fulfilled by Empire Stores Ltd. at 18 Canal Road, Bradford, West Yorkshire. This scheme is available to any applicant under the age of 19. For current interest rate please ask at your local NatWest branch.



One useful technique I have incorporated is that of moving players by string manipulation. One of the Atari's stronger characteristics is its string handling capabilities. For those of you who have tried to move players from Basic you know only too well just how slow vertical movement can be. Using strings this program has been written entirely in Basic and the vertical movement of the missile is fairly fast.

The music for this program has not been done by using the SOUND statement. My thanks for help on this must go to a friend of mine called Brian Lee. I am what you might call tone deaf and Brian is a musician. He did the programming for the song 'Messing about on the river' entirely using POKES.

# PROGRAM

10 — DIMension the arrays used.  
20 — Start with the title screen and music.  
30 to 90 — Set up strings and variables used.  
100 to 135 — Set up player missiles.  
150 to 190 — Sets up first screen.  
200 to 360 — Main program loop.

210 — Works out where to place boulders.  
220 — Prints next part of river thus scrolling screen upwards.  
230 — Resets RVs.  
240 to 252 — Varies position of river on screen.  
260 to 280 — Reads joystick and gets ready to position boat.  
290 — Checks fire button and torpedoes not already fired.  
300 If no torpedo jump firing

section.  
30 to 330 — Moves missiles.  
340 to 360 — Checks for  
crash of boat.  
500 to 540 — Missile hit  
routine.  
2000 to 2060 — Boat crash  
routine.  
3000 to 3050 — Create  
custom display list.  
4000 to 4080 — New  
character set generation.  
5000 to 5280 — Title screen  
and music.  
6000 to 6030 — Game over.

## NOTES

```

290 IF STRIG(0)=0 AND FIRE=0 THEN FIRE=1:MX=50:POKE 53249,Y-1:MY=Y-1
300 IF FIRE=0 THEN GOTO 330
310 A$(256+MX,256+MX+9)="BULL#"
320 MX=MX+4:IF MX>110 THEN FIRE=0:A$(256+MX,256+MX+9)="♥♥♥♥♥♥♥♥♥♥"
330 POKE 53248,Y
340 IF PEEK(53252)<>1 THEN IF PEEK(53252)<>5 THEN IF PEEK(53252)<>4 THEN GOTO 350
350 IF FIRE=1 THEN IF PEEK(53253)<>1 THEN IF PEEK(53253)<>5 THEN IF PEEK(53253)<>4 THEN GOSUB 500
360 POKE 53278,0:GOTO 210
500 SOUND 2,10,0,14:SOUND 0,0,0,0:SOUND 1,0,0,0:H$(MY-48)/4:H$(MY-32)/8
510 COLOR 36:FOR I=-1 TO 1:FOR J=-1 TO 1:PLOT HX+I,HY+J:NEXT J:NEXT I
520 POSITION 0,23:FIRE=0:POKE 53249,0:A$(256+MX,256+MX+9)="♥♥♥♥♥♥♥♥♥♥":SOUND 0,SL,6,8:SOUND 1,8,8,4
530 IF SC=250 OR SC=500 OR SC=750 OR SC=1000 THEN SL=SL-10:BO=BO-0.1
540 SOUND 2,0,0,0:SC=SC+10:RETURN
2000 SOUND 0,0,0,0:SOUND 1,0,0,0:POKE 53278,0
2010 FOR I=0 TO 255:POKE 704,I:SOUND 2,I,0,14:NEXT I:POKE 704,54:SOUND 2,0,0,0:L=L-1
2020 POKE 53249,0:POKE 53248,0:GRAPHICS 18:POSITION 4,2:? #6:"SCORE = ":50:POSITION 4,4.? #6:"LIVES = ":LI
2030 IF LI=0 THEN GOTO 6000
2040 POSITION 4,6.? #6:"PRESS [2] [3]"
2050 IF STRIG(0) THEN GOTO 2050
2060 A$(256+MX,256+MX+9)="♥♥♥♥♥♥♥♥♥♥":GOTO 160
3000 GRAPHICS 0:POKE 752,1:POKE 82,0:POSITION 0,0:POKE 708,152:POKE 711,23
3010 POKE 756,CHSET/256
3020 DL=PEEK(560)+256*PEEK(561):POKE

```

# RIVER!





```

L+3,68:POKE DL+28,0
3030 FOR I=6 TO 27:POKE DL+I,4:NEXT I
3040 POKE 559,62:POKE 53277,3
3050 RETURN
4000 CHSET=256*(PEEK(106)-8):RESTORE 4
030
4010 READ A:IF A=-1 THEN RETURN
4020 FOR I=0 TO 7:READ B:POKE CHSET+A*
8+I,B:NEXT I:GOTO 4010
4030 DATA 0,0,0,0,0,0,0,0
4040 DATA 1,255,255,255,255,255,255,25
5,255
4050 DATA 4,85,85,85,85,85,85,85
4060 DATA 3,170,170,170,170,170,170,17
0,170
4070 DATA 5,125,255,255,255,255,255,25
5,125
4080 DATA -1
5000 GRAPHICS 18:POSITION 3,1: ? #6:"[B]
UNDER TROUBLE":POSITION 4,4: ? #6:
"by n farrier"
5010 POSITION 5,5: ? #6:"MARCH 1984":P
OSITION 4,9: ? #6:"Press Start":R
ESTORE 5270
5020 POKE 53775,3:POKE 53768,0
5030 POKE 53761,168:POKE 53763,168:POK
E 53765,168
5040 Q=5080:BAR=5070:GAP=5090
5050 V0=53760:V1=53762:V2=53764
5060 GOTO 5100
5070 FOR A=1 TO 120:NEXT A:RETURN
5080 FOR A=1 TO 40:NEXT A:IF PEEK(5327
9)<>6 THEN RETURN
5085 SOUND 0,0,0,0:SOUND 1,0,0,0:SOUND
2,0,0,0:PDP :GOTO 30
5090 POKE 53761,160:FOR A=1 TO 5:NEXT
A:POKE 53761,168:RETURN
5100 FOR R=1 TO 2:IF R=2 THEN RESTORE
5270
5110 FOR T=1 TO 2
5120 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:READ A:POKE V0,A:GOSUB
Q:READ A:POKE V0,A:GOSUB Q
5140 READ A:POKE V0,A:GOSUB BAR
5150 NEXT T
5160 FOR T=1 TO 2
5170 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:READ A:POKE V0,A:GOSUB
Q:READ A:POKE V0,A:GOSUB Q:NEXT T

```

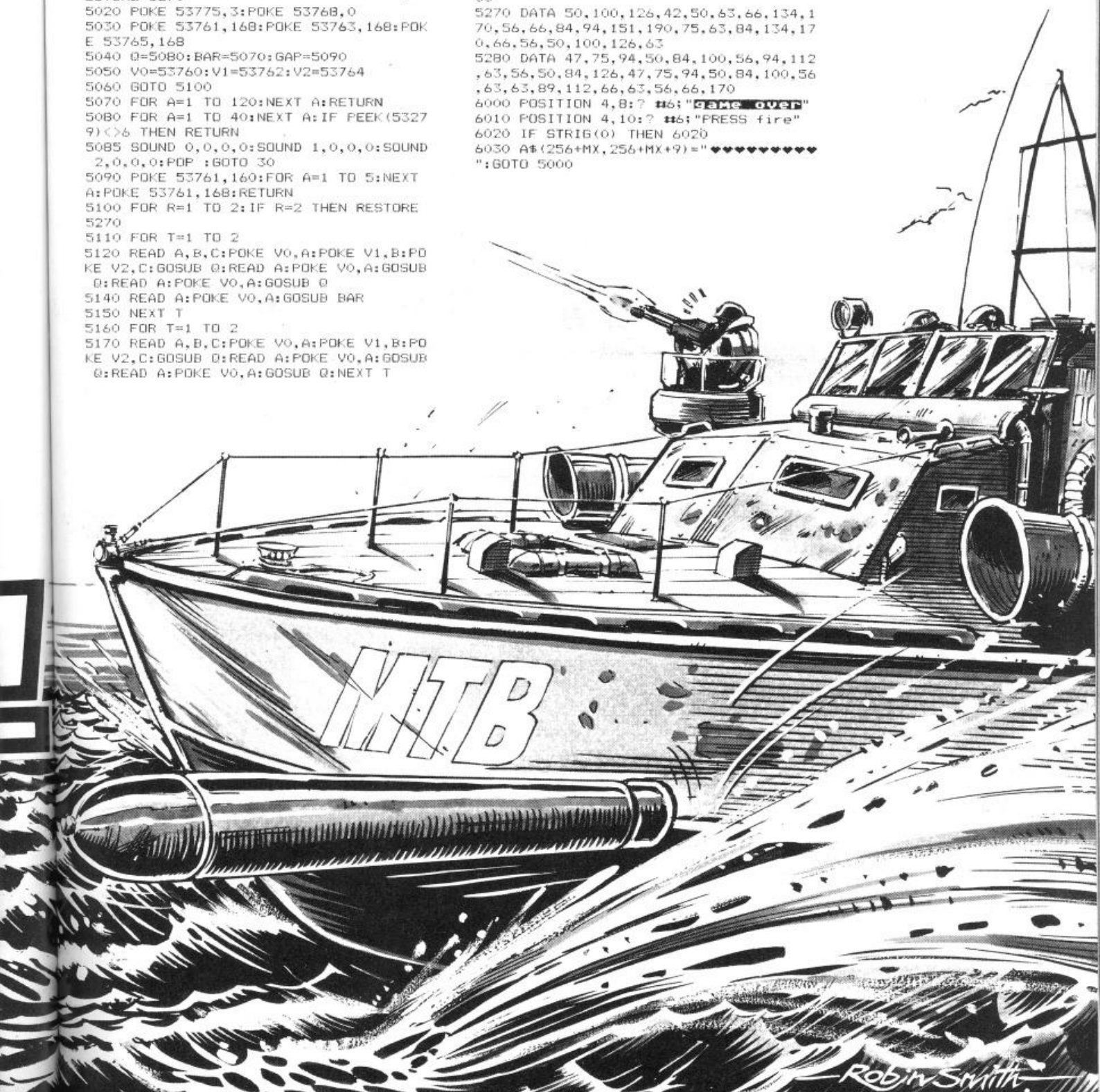
```

5180 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:READ A:POKE V0,A:GOSUB
Q:GOSUB Q:GOSUB BAR:NEXT R
5190 FOR T=1 TO 2
5200 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:GOSUB GAP:GOSUB Q:GOSU
B GAP:GOSUB Q:NEXT T
5210 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:READ A:POKE V0,A:GOSUB
Q:READ A:POKE V0,A:GOSUB Q
5220 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB BAR
5230 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:GOSUB GAP:GOSUB Q:GOSU
B GAP:GOSUB Q
5240 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:READ A:POKE V0,A:GOSUB
Q:READ A:POKE V0,A:GOSUB Q:GOSUB GAP
5250 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB Q:READ A:POKE V0,A:GOSUB
Q:READ A:POKE V0,A:GOSUB Q
5260 READ A,B,C:POKE V0,A:POKE V1,B:PO
KE V2,C:GOSUB BAR:RESTORE 5270:GOTO 51
00
5270 DATA 50,100,126,42,50,63,66,134,1
70,56,66,84,94,151,190,75,63,84,134,17
0,66,56,50,100,126,63
5280 DATA 47,75,94,50,84,100,56,94,112
,63,56,50,84,126,47,75,94,50,84,100,56
,63,63,89,112,66,63,56,66,170
6000 POSITION 4,8: ? #6:"Game over"
6010 POSITION 4,10: ? #6:"PRESS fire"
6020 IF STRIG(0) THEN 6020
6030 A$(256+MX,256+MX+9)="*****"
":GOTO 5000

```

by NIGEL  
FARRIER

for  
ATARI





# Salamander

## SOFTWARE



### DRAGON 32/64

#### DRAGON TREK

Excellent version of this classic game

#### WIZARD WAR

Strategy game of magical combat

#### VULCAN NOUGHTS & CROSSES

3-D Tic-tac-toe

#### GAMES COMPENDIUM D1

Six games for all the family

#### GOLF

Almost as good as the real thing!

#### GRAND PRIX

Eight circuits from around the world

#### STARJAMMER

3-D space game

#### SALAMANDER GRAPHICS SYSTEM

Advanced picture drawing system

#### SUPER SKILL HANGMAN

Over 1000 word vocabulary

#### NIGHT FLIGHT

Single engine light aircraft simulator

#### GRIDRUNNER

Classic arcade game

#### FRANKLIN'S TOMB

First of the Dan Diamond Adventures

#### LOST IN SPACE

The Dan Diamond Adventure continues...

#### FISHY BUSINESS

Conclusion of the first Dan Diamond Trilogy

#### EVEREST

Strategic simulation

#### LASER ZONE

Awesome shoot 'em up stuff!

#### D.R.S.

Powerful Date Retrieval System

#### TURTLE GRAPHICS

Fun & Educational implementation of LOGO

#### THE CRICKLEWOOD INCIDENT

Truly weird and wonderful adventure

#### WINGS OF WAR

World War Two Adventure

#### RED MEANIES

Machine code 3-D maze game

### ACORN ELECTRON

#### 737 FLIGHT SIMULATOR

Professional standard

#### ELECTRON GRAPHICS SYSTEM

Advanced picture drawing system

#### GRAPHS

Five programs up to 'A' level standard

#### VECTORS

Fourteen programs up to 'A' level standard

#### TURBO COMPILER

Less than 2K machine code BASIC compiler

### PRICE

9.95

9.95

7.95

7.95

7.95

7.95

7.95

9.95

7.95

7.95

7.95

9.95

9.95

9.95

7.95

7.95

14.95

9.95

7.95

7.95

7.95

### PRICE

9.95

9.95

9.95

14.95

9.95

### BBC MODEL B

#### DRAGON RIDER

Flaming steeds and alien wyrms

#### TANKS!

Armoured warfare for two

#### GAMES COMPENDIUM B1

Four games for the kids

#### GAMES COMPENDIUM B3

Three action games for the kids

#### EDG GRAPHICS PACKAGE (tape)

Sophisticated picture drawing

#### EDG GRAPHICS PACKAGE (disc)

Extended version of EDG tape

#### UTILITIES PACKAGE

Four essential programming aids

#### TURBO COMPILER\*

Less than 2K machine code BASIC compiler

#### 737 FLIGHT SIMULATOR\*

Professional standard

#### FRENCH TUTOR\*\*

Up to and beyond 'O' level

#### GRAPHS\*\*

Five programs up to 'A' level standard

#### VECTORS\*\*

Fourteen programs up to 'A' level standard

#### FRANKLIN'S TOMB

First of the Dan Diamond Adventures

#### LOST IN SPACE

The Dan Diamond Adventure continues...

#### FISHY BUSINESS

Conclusion of the first Dan Diamond Trilogy

#### EAGLE

Original machine code arcade game

\* DISC VERSIONS ALSO SUPPLIED  
\*\* MAY BE TRANSFERRED TO DISC

### PRICE

7.95

7.95

5.95

5.95

19.95

24.95

9.95

9.95

9.95

9.95

9.95

14.95

9.95

9.95

9.95

7.95

### PRICE

9.95

7.95

9.95

9.95

9.95

7.95

### PRICE

6.95

6.95



PURVEYORS OF FINE QUALITY SOFTWARE TO THE GENTRY SINCE 1982

### SAVE £1

If you return this voucher and order form you will be entitled to a £1 discount on the order. Only one discount per order. This offer applies only to products ordered by mail direct from Salamander Software. 17 NORFOLK ROAD, BRIGHTON, EAST SUSSEX. BN1 3AA. TELEPHONE: BRIGHTON (0273) 771942.

Name .....

Address .....

Post Code .....

PLEASE MAKE CHEQUES/POSTAL ORDERS PAYABLE TO SALAMANDER SOFTWARE

Please rush me the following titles:

TITLE MACHINE PRICE

£ p

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Less discount .....

TOTAL .....





# charts



SP = Spectrum, AC = Acorn, 64 = Commodore 64,

key

V20 = Vic 20, 81 = ZX 81, DR = Dragon 32, OR = Oric-1

## TOP 30 GAMES

(Retail)

			SP	AC	64	V20	81	DR	OR	Price
1	1	JET SET WILLY	Software Projects	*						£5.95
2	2	FIGHTER PILOT	Digital	*						£7.95
3	7	BLUE THUNDER	Richard Wilcox	*						£5.95
4	25	TRASHMAN	New Generation	*						£5.95
5	15	CODE NAME MAT	Micromega	*						£6.95
6	13	NIGHT GUNNER	Digital	*						£6.95
7	5	CHEQUERED FLAG	Psion	*						£5.95
8	3	ATIC ATAC	Ultimate	*						£5.50
9	9	POGO	Ocean	*						£5.90
10	6	HUNCHBACK	Ocean	*		*				£6.90
11	12	FRED	Quicksilva	*						£6.95
12	—	SPACE PILOT	Anirog	*		*				£7.95
13	—	GNASHER	Mastertronic	*						£5.95
14	8	SCUBA DIVE	Durell/Martech	*		*		*		£6.95
15	—	BLADE ALLEY	PSS	*						£5.95
16	4	MANIC MINER	Bug-Byte	*		*				£7.95
17	—	ESCAPE FROM KRAKATOA	Abbex	*						£5.95
18	17	REVENGE OF THE MUTANT CAMELS	Llamasoft	*		*				£7.50
19	—	PSYTRON	Beyond	*						£7.95
20	11	LUNAR JETMAN	Ultimate	*						£5.50
21	16	ZAXXAN	Starzone	*						£5.95
22	10	ANT ATTACK	Quicksilva	*						£6.95
23	—	FORBIDDEN FOREST	Cosmi	*		*				£8.95
24	—	DINKY DOO	Software Projects	*		*				£7.95
25	26	THE ALCHEMIST	Imagine	*						£5.50
26	23	THE SNOWMAN	Quicksilva	*						£6.95
27	29	DEFENDA	Interstellar	*						£5.95
28	20	WHEELIE	Microsphere	*						£5.95
29	14	FLIGHT SIMULATION	Psion	*						£7.95
30	21	CHINESE JUGGLER	Ocean	*		*				£6.90

Compiled by MRIB Computer.

## VIDEO GAMES

(Dedicated Consoles)

- 1 (1) POLE POSITION (Atari)
- 2 (4) PITFALL 2 (Activision)
- 3 (3) SUPER COBRA (Parker)
- 4 (5) MARIO BROTHERS (Atari)
- 5 (11) FROSTBITE (Activision)
- 6 (2) SPACE SHUTTLE (Activision)
- 7 (6) POPEYE (Parker)
- 8 (9) DEATH STAR BATTLE (Parker)
- 9 (8) ENDURO (Activision)
- 10 (7) MS PAC MAN (Atari)
- 11 (10) Q-BERT (Parker)
- 12 (15) FROGGER (Parker)
- 13 (13) PHOENIX (Atari)
- 14 (23) RIVER RAID (Activision)
- 15 (16) DONKEY KONG (CBS/Coleco)
- 16 (18) DIG DUG (Atari)
- 17 (12) GALAXIAN (Atari)
- 18 (14) BATTLE ZONE (Atari)
- 19 (22) BIG BIRD EGG CATCH (Atari)
- 20 (20) PITFALL (Activision)
- 21 (26) SPACE INVADERS (Atari)
- 22 (—) KANGAROO (Atari)
- 23 (—) ALPHA BEAM (Atari)
- 24 (17) SNOOPY VS THE RED BARON (Atari)
- 25 (—) DECATHLON (Activision)
- 26 (19) MOON PATROL (Atari)
- 27 (25) COOKIE MONSTER MUNCH (Atari)
- 28 (29) SMURFS (CBS/Coleco)
- 29 (—) WIZARD OF WOR (CBS/Coleco)
- 30 (24) TUTANKHAM (Parker)

Compiled by MRIB Computer.

also selling well  
in mail order...

A monthly selection from the top-selling mail-order games

ATIC ATAC  
(Ultimate)  
BUMPING BUGGIES  
(Bubble Bus)  
CHUCK-E-EGG  
(A&F Software)  
COLDITZ  
(Phipps Associates)  
CYLON ATTACK  
(A&F Software)  
FIGHTER PILOT  
(Digital Integration)

FLIGHT PATH  
(Anirog)  
THE FOREST  
(Phipps Associates)  
FLYING FEATHERS  
(Bubble Bus)

JET PAC  
(Ultimate)  
KRAKATOA  
(Abbex)  
MEGAWARZ  
(Paramount)

NIGHT RUNNER  
(Digital Integration)  
OUTBACK  
(Paramount)  
PILOT 64  
(Abbex)  
RALLY SPEEDWAY  
(Adventure International)  
SPACE PILOT  
(Anirog)  
TEST MATCH  
(CRL)



# MAKE SURE YOUR HOME COMPUTER WORKS... FOR YEARS AND YEARS

Guarantee years of service from your home computer. Protect your investment by joining the MICRO REPAIR CLUB.

After your warranty has run out can you afford the manufacturers' repair charges which can be as high as £60 minimum?

THE MICRO REPAIR CLUB is a brand new organisation offering a unique scheme which guarantees that should your computer break down, it will be repaired at absolutely no cost.

THE MICRO REPAIR CLUB has been formed to save you money and ensure that your computer is in tip-top working condition for years to come.

**A one-year membership that guarantees all repairs to your micro costs only £24.95, with an annual renewal of £14.95. A two-year membership costs £35.95, three years £46.95.**

**For incredible value for money a four-year membership costs only £57.95.**

**All prices are inclusive of VAT**

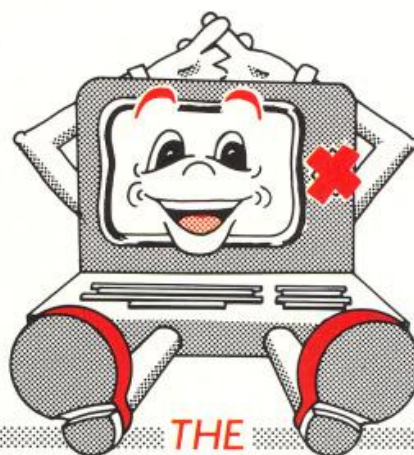
THE MICRO REPAIR CLUB is backed by one of the world's largest insurance groups and the actual repair work will be carried out by Computeraid Services, a division of Thorn EMI Information Technology Ltd.

There can be no greater protection. So if you own a Sinclair, BBC, Acorn, Dragon, Commodore or any other home computer join the Club by ringing the HOTLINE on 01-946 7777 or clip the coupon below and send it to:

Micro Repair Club Limited,  
Swan Court, Mansel Road,  
Wimbledon,  
London SW19 4AA.

Members  
watch out  
for more  
great bargains  
in the future

Teachers  
find out about  
our special  
offer for  
schools



THE  
MICRO  
REPAIR  
CLUB

I would like to join the MICRO REPAIR CLUB for \_\_\_\_\_ years and look forward to receiving my full membership pack.

I enclose a cheque for **£24.95** ☐ One year's membership\*

**£35.95** ☐ Two years **£46.94** ☐ Three years **£57.95** ☐ Four years

Made payable to Micro Repair Club Limited

\*Please tick relevant box

Please debit my Visa/Access card No: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

I own a \_\_\_\_\_ home computer and it is in working order.

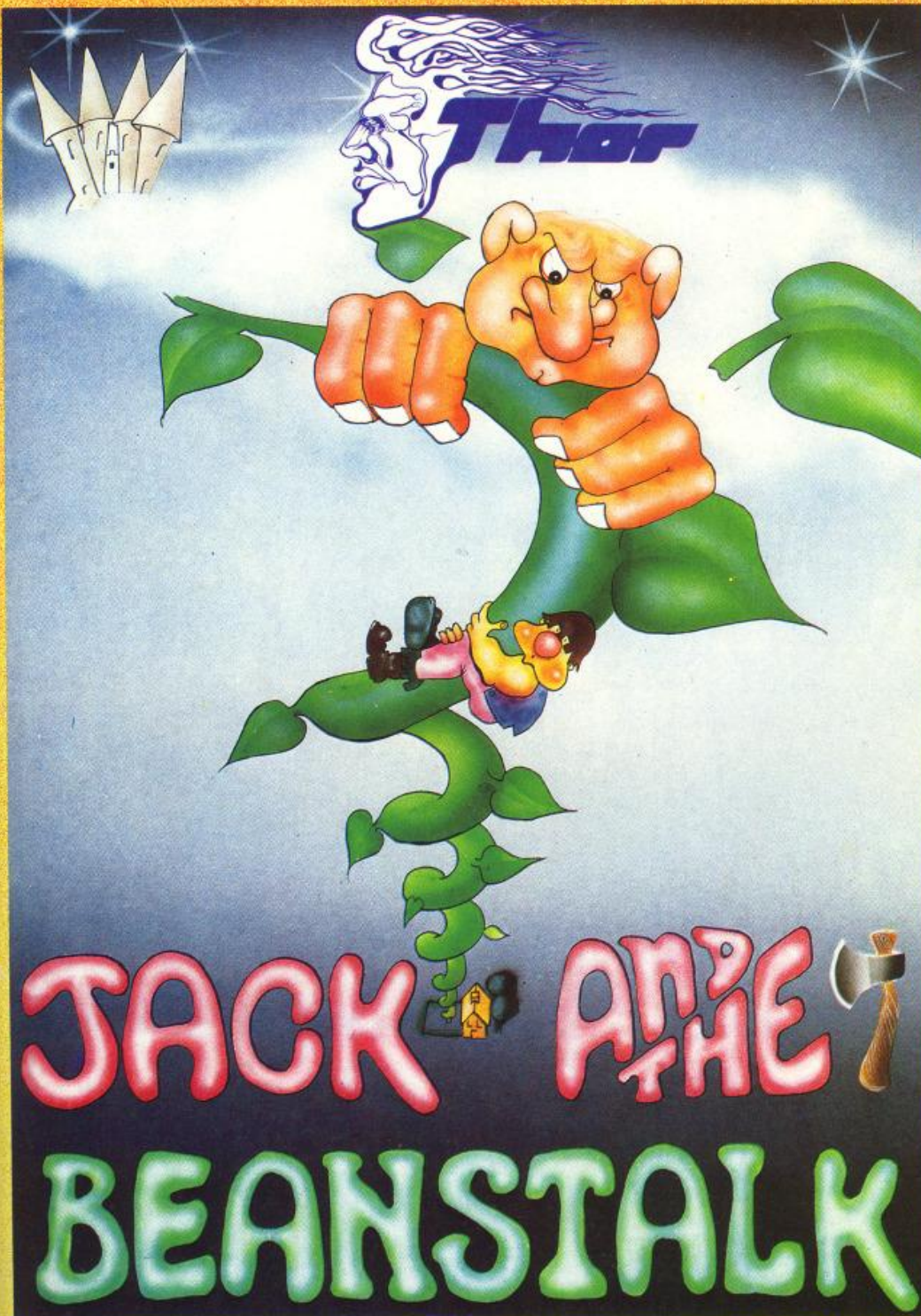


# GOD'S GREATEST!

48K Spectrum

Available soon for CBM 64

This is  
no Fairytale  
it's for  
REAL!



by CHRIS KERRY



ACTUAL SCREEN DISPLAYS  
The Most Graphical  
Arcade Simulation  
Ever Produced

AVAILABLE FROM SELECTED BRANCHES OF:

John Menzies

WHSMITH

Boots

makro

Dixons  
SOFTWARE  
EXPRESS

Greenchip

al DEBENHAMS

LASTS

ALSO AVAILABLE AT ALL  
USUAL SOFTWARE OUTLETS.

RETAILERS CONTACT:

MICRO DEALER UK Ltd

Tiger trader

Lightning

PRISM

CentreSoft

PCS DISTRIBUTION

Bulldog

SDL

ONLY  
£5.95

CBN64  
£6.95  
available  
now

If you have difficulty in obtaining your copy, just fill in the Coupon below.

Post coupon now to: Thor (Computer Software) Co. Ltd.,  
Erskine Industrial Estate, Liverpool,  
Merseyside L6 1AP Tel: 051-263 8521/2

I enclose Cheque/PO for £ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Credit Cards - Orders accepted by Phone -  
051-263 8521/2

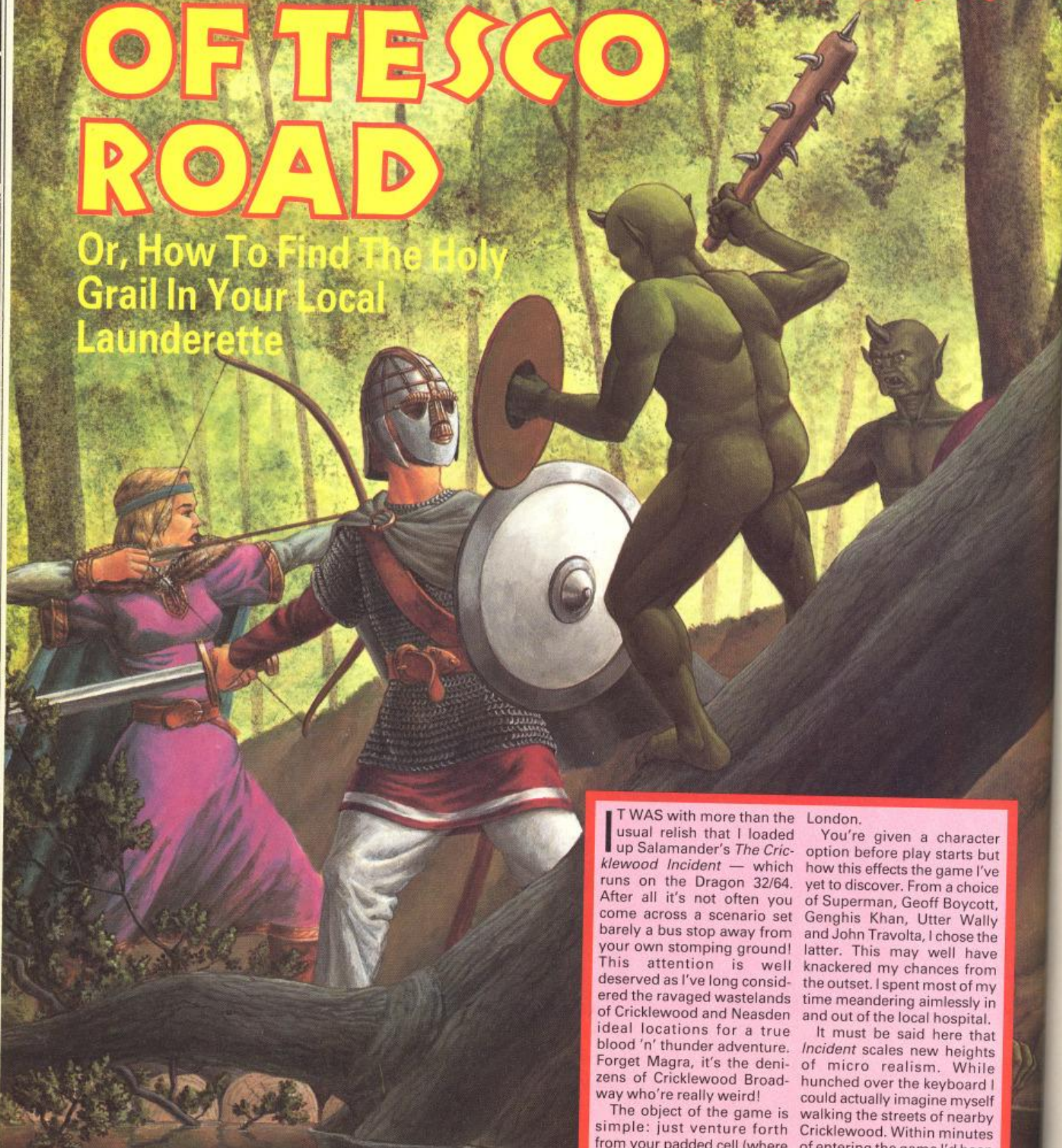
DISTRIBUTORS AND OVERSEAS ENQUIRIES CONTACT PAUL 051-263 8521/2



DORKSLAYER!

# THE BASILISKS OF TESCO ROAD

Or, How To Find The Holy  
Grail In Your Local  
Launderette



**I**T WAS with more than the usual relish that I loaded up Salamander's *The Cricklewood Incident* — which runs on the Dragon 32/64. After all it's not often you come across a scenario set barely a bus stop away from your own stomping ground! This attention is well deserved as I've long considered the ravaged wastelands of Cricklewood and Neasden ideal locations for a true blood 'n' thunder adventure. Forget Magra, it's the denizens of Cricklewood Broadway who're really weird!

The object of the game is simple: just venture forth from your padded cell (where else?) and unearth the legendary Holy Grail. Apparently it rests in North West

London.

You're given a character option before play starts but how this effects the game I've yet to discover. From a choice of Superman, Geoff Boycott, Genghis Khan, Utter Wally and John Travolta, I chose the latter. This may well have knackered my chances from the outset. I spent most of my time meandering aimlessly in and out of the local hospital.

It must be said here that *Incident* scales new heights of micro realism. While hunched over the keyboard I could actually imagine myself walking the streets of nearby Cricklewood. Within minutes of entering the game I'd been seized by a UFO, savaged by a gaggle of wild Australians and manhandled by an irate





Hell's Angel. An accurate simulation indeed!

The *Cricklewood Incident* used the standard Salamander formatted text display and enjoys reasonable response times. Along with the usual onscreen bumf there's a health tag (I spent most of the time in an advanced state of despair) and a money box. To successfully complete the adventure you're going to need quite a bit of cash, so try and keep those tills ringing. I invariably left the thing penniless.

A GOOD deal less zany is *The Lords Of Midnight*, a heavy duty phantasy from Beyond Software. It's rapidly amassing a huge army of admirers, and with good reason. Superbly designed and marvellously executed, it's definitely one to impress the cat with. But considering the lack of traditional input procedures, can it truly be classed as an adventure?

Well yes, I think it can. Having entered the realms of *Midnight* you can't help but feel a sense of awe and puzzlement. Moving within the game is truly an exploration of the unknown. All are archetypal symptoms of a good adventure. So the format of the thing is pretty irrelevant in my book.

Although it's early days yet, it's worth noting that *Doomdark's* foul hordes invariably march through the mountains of Ithril and so into the Plains of Blood, so it's clearly possible to avoid his hellish minions and launch an attack on Ushgarak from the rear! (Kindly re-phrase that, Keaton — Ed.) Should you *Doomdark* devotees discover anything else of note while exploring the land of *Midnight*, be sure to drop me a line, OK? This one's set to run and run.

While we're dispensing help (of a sort) I must say that I've been deluged with requests for tips on *Valhalla*. Well, my tip is — don't buy it! As a piece of coding it's a marvel, but as a game ... it sucks. For the same money you could pick up *Africa Gar-*

*dens* (from Gilsoft) and *Temple of Vran* (from Incentive) and still have a couple of quid left over for some issues of *2000AD*. Much better value.

Oric Atmos owners are currently rather poorly served in the adventure field, so it's perhaps fortunate that some of the early BASIC offerings for the Oric 1 still run quite happily on the new (sic) machine. The most familiar of these is *Zodiac* (and its follow up *House of Death*) from Tansoft. Although heavily criticised for their relative simplicity, I rather like 'em. Both based around old dark houses and involving a quest for hidden treasure, they share a nice line in humour and some high quality scripting. The quote of locations may be meagre but they're finely drawn. A pity they're shamelessly overpriced.

Tansoft are also set to release *The Kilburn Incident* (currently under wraps but obviously along the lines of Salamander's *Dragon* hit) sometime soon, and Quick-silver have converted Derek Brewster's smashing *Velnor's Lair*, which we looked at some time ago. Both should go some way to placating your hungry Atoms.



# A great adventure is...

A totally original plot; a wide range of interesting locations; new problems to solve and a variety of other characters available for helping or hindering the player. A good Adventure should be written in at least 32K of memory, as anything less is inadequate for storing the vast amounts of data used in the game. A game which is advertised as having "full screen graphics" or "a graphical representation of each location" is not necessarily better than the original text-only Adventures. Graphical Adventures seem to be the "in thing" at the moment, but it is often found that the programmer will sacrifice memory which could be used to make the game more complex, just for drawing a colourful picture on the screen. For me, an Adventure which has excellent verbal descriptions of all locations is just as good — if not better — than one with multi-coloured graphics and sound.

SIMON BIRCHALL

Other contributions welcome.

## MEGASAVE FANTASTIC SAVINGS

SPECTRUM		SPECTRUM		COMMODORE	
SABRE WOLF	8.25	ATIC ATAC	4.75	SON OF BLAGGER	6.50
PSYTRON	6.30	AUTOMANIA	5.75	BEACH HEAD	8.50
MUGSY	5.95	BLUE THUNDER	4.75	VALHALLA	11.50
JACK & BEANSTALK	4.95	INFERNO	5.50	QUILL	11.50
FIGHTER PILOT	6.25	CODE NAME MAT	5.20	SHEEP IN SPACE	6.40
TORNADO LOW LEVEL	4.75	MILLIONAIRE	4.50	GYROPOD	5.50
HULK	8.50	STOP THE EXPRESS	5.00	LOCO	6.50
LORDS OF MIDNIGHT	8.50	SINK THE TITANIC	6.75	HULK	8.50
KOSMIC KANGA	5.10	SPECGRAPH	8.25	ARABIAN KNIGHTS	5.85
JET SET WILLY	4.75	COSMIC CRUISER	4.25	SOLO FLIGHT	12.50
BEAKY	4.85	WORLD CUP F BALL	5.95	BOZO'S NIGHT OUT	5.50
AD ASTRA	4.95	WORSE THINGS HP N AT SEA	4.95	STAR TROOPER	5.75
NIGHT GUNNER	5.50	QUILL	10.75	CAVELON	5.55
FOOTBALL MANAGER	5.55	WHITE LIGHTNING	12.50	ENCOUNTER	8.75
TRASHMAN	4.75	BLADE ALLEY	4.75	HOUSE OF USHER	5.85
MOON ALERT	4.90	3D LUNA ATTACK	4.75	FOOTBALL MANAGER	6.95
ANTICS	5.75	CAESAR THE CAT	5.95	AUTOMANIA	6.85
WARS OF THE WORLD	6.75	PYRAMID	4.95	FELIX IN THE FACTORY	6.85
LES FLUCS	5.50	ANDROID II	4.75	ALLET INTERCEPTOR	5.85
CAVELON	4.95	AUF WIEDERSEHEN PET	4.95	ALL £7.95 ANIROG	6.30
MICRO OLYMPICS	4.95	STAR BLITZ	5.85	TRASHMAN	6.85
DOOMSDAY CASTLE	5.30	FACTORY BREAKOUT	4.95	BLUE THUNDER	5.85
DEATHCHASE	5.25	AIR TRAFFIC CONTROL	8.50	WIMBLEDON	6.85
HARRIER ATTACK	4.95	HOBBIT	11.50	JACK & THE BEANSTALK	5.85
SCUBA DIVE	4.75	FANTASIA DIAMOND	6.25	ANDROID II	5.90
WHEELIE	4.95	FULL THROTTLE	5.95	WHEELIN' WALLY	5.85
CAVERN FIGHTER	4.95	ORC ATTACK	6.10	FLIGHT PATH 737	6.30
TRIBBLE TROUBLE	4.95	TOWER OF EVIL	6.10	THE EVIL DEAD	6.85
GLUG GLUG	4.75	AMSTRAD		PYRAMID	5.50
3D TANK DUEL	4.95	HARRIER ATTACK	7.85	GILLIGANS GOLD	5.75
KRAKATOA	4.75	CODE NAME MAT	7.85	PINBALL WIZARD	5.75
DEFENDA	4.75	HUNTER KILLER	7.85	SUPER PIPELINE	5.50
FRED	5.90	GUIDE TO AMS BASIC	18.00	AZTEC CHALLENGE	7.50
3D ANT ATTACK	5.90	VIC-20		SKULL	6.85
BUGABOO	5.90	FLIGHT 737	6.50	FORBIDDEN FOREST	7.50
SNOWMAN	5.90	TOWER OF EVIL	5.45	HEATHROW A T C	6.85
VALHALLA	11.50	COMPUTER WAR	5.45	CYBERTRON MISSION	6.85
MESS FROM ANDROMEDA	4.75	SUB COMMANDER	5.45	ORACLES CAVE	6.85
MATCH POINT	6.85	TANK COMMANDER	5.45	SWOOP	6.85
LORD OF TIME	8.50	CHARIOT RACE	5.95	GHOULS	6.85

FREE POST

PLEASE STATE WHICH MICRO  
SEND CHEQUE/P.O. TO:

FAST SERVICE

**MEGASAVE**  
Dept K, 76 Westbourne Terrace, London W2







# SS FIRE

For VIC 20

By E. McRACKEN

It's the old double-gun routine. Shoot from both sides of the screen, where the bullet trails meet a line drops into a high score box. It's a test of skill and reflexes for one or two people.

WARNING: This is a TRANSLATED listing. Instructions in 'wavy' brackets should NOT be typed in but followed, i.e. CUR RT = cursor right.

```
1910 PRINT"(CLR)":GOTO12
1950 POKEN+2,0:FORZX=1TO50:POKEN,120+ZX:
FORE=1TO10:NEXTE:NEXTZX:POKEN,0
1960 PRINT"(CLR)":GOTO 12
2000 PRINT"(HOME){CUR DN}{CUR DN}{CUR RT
}{CUR RT}{CUR RT}{CUR RT}{CUR RT}{CUR RT
}CROSS FIRE"
2010 PRINT"{CUR RT}{CUR RT}{CUR RT}{CUR RT}{CUR
RT}{CUR RT}{*Y}{*Y}{*Y}{*Y}{*Y}{*Y}{*Y}{
*Y}{*Y}{*Y}{*Y}"
2020 PRINT"{CUR DN}THE OBJECT OF THE GAM
E";
2030 PRINT" IS TO SCORE AS MANY"
2040 PRINT" POINTS AS YOU CAN BY"
2050 PRINT" SHOOTING AT A TARGET"
2060 PRINT" AT THE BOTTOM OF THE"
2070 PRINT" SCREEN. YOU HAVE TWO"
2080 PRINT" GUNS EACH SIDE OF THE";
2090 PRINT" SCREEN ABOVE THE"
2100 PRINT" TARGET AND YOU MUST"
2110 PRINT" FIRE EACH ONE. WHEN"
2120 PRINT" THE SHOTS MEET THAY"
2130 PRINT" WILL MOVE DOWN THE"
2140 PRINT" SCREEN AND HIT THE"
2150 PRINT" TARGET."
2160 PRINT"(RVS DN){CUR DN}{CUR RT}{CUR
RT}{CUR RT}{CUR RT}{CUR RT}{HIT A
KEY"
2170 GETW$:IFW$=""THEN 2170
2180 PRINT"(CLR)":RETURN
3000 PRINT"(CLR){CUR RT}{CUR RT}{CUR RT}{
CUR RT}{RED}{CUR DN}{CUR DN}{CUR DN}{CU
R DN}YOU SCORED";SC
3010 PRINT"{CUR RT}{CUR RT}{CUR DN}{CUR
DN}{CUR DN}{CUR DN}ANOTHER GO?(Y/N)"
3020 GETRS$
3030 IFRS$="Y"THEN GOTO 10
3040 IFRS$="N"THEN PRINT"{CUR DN}{CUR DN
}{CUR RT}THANKS FOR PLAYING.":NEW
3050 GOTO 3020
```

8

9

12

14





# Discount Computer Software

Registered No. 1795113  
Telephone: (0256) 51444  
16 Coates Close, Brighton Hill,  
Basingstoke RG22 4EE

**AMAZING SOFTWARE BARGAINS BY MAIL, 100's OF TITLES AVAILABLE!  
TELEPHONE ORDERS WELCOME. WRITE OR RING NOW FOR FULL DETAILS**

Game	Supplier	RRP Inc. VAT	Our Price Inc. VAT	Game	Supplier	RRP Inc. VAT	Our Price Inc. VAT
<b>SPECTRUM</b>				<b>COMMODORE 64</b>			
FOOTBALL MANAGER	ADDICTIVE	6.95	5.75	KONG 64	ANI ROG	7.95	6.75
CHUCKLE EGG	A & F	6.90	6.00	SKRAMBLE 64		7.95	6.75
JUNGLE FEVER		6.90	5.90	3D TIME TREK		5.95	4.95
PINMANIA	AUTOMATA	10.00	8.75	FLIGHT PATH 737		7.95	6.75
PI-BALLED		6.00	5.00	SPACE PILOT		7.95	6.75
KONG	ANIROG	5.95	4.95	SPACE PILOT		7.95	6.75
MOON BUGGY		5.95	4.95	CYBOTRON		7.95	6.75
SLAP DAB		5.95	4.95	ZODIAC		7.95	6.75
GALACTIC ABDUCTOR		5.95	4.95	ICE HUNTER		6.95	5.95
GALAXIANS	ARTIC	4.95	4.15	PETCH		6.95	5.95
CHESS II		9.95	8.50	HOUSE OF USHER		6.95	5.95
BEAR BOVVER		6.95	5.95	TWIN KINGDOM VALLEY	BUD BYTE	9.50	8.25
MONKEY BUSINESS		6.95	5.95	OMEGA RUN		7.95	6.75
BIRDS & BEES		6.95	5.95	DERBY DAY		7.95	6.75
PSYTRON	BEYOND	7.95	6.75	HARRIER ATTACK	DURREL	6.95	5.95
POOL	CDS	5.95	4.95	SCUBA DIVE		6.95	5.97
TEST MATCH	C.R.L.	5.95	4.95	BURGER TIME	INTERCEPTOR	7.00	5.95
STAR GAZER SECRETS		5.95	4.95	GET OFF MY GARDEN		7.00	5.95
DERBY DAY		5.95	4.95	CHINA MINER		7.00	5.95
HANDICAP GOLF		5.95	4.95	ARABIAN NIGHTS		7.00	5.95
OMEGA RUN		5.95	4.95	REV OF MUTANT CAMELS	LLAMASOFT	7.50	6.25
THE GREAT DETECTIVE		5.95	4.95	HELLDATE		5.00	4.00
THE INCREDIBLE ADVENTURE		5.95	4.95	HUNCHBACK	OCEAN	6.90	5.85
THE WARLOCKS TREASURE		5.95	4.95	GILLIGAN'S GOLD		6.90	5.85
OLYMPICS		5.95	4.95	ANDROID 2		6.90	5.95
GRAND NATIONAL		5.95	4.95	THE BOSS	PEAKSOFT	8.95	7.50
GLUG GLUG		5.95	4.95	SUPER PIPELINE	TASKET	6.90	5.85
WAR OF THE WORLDS		7.95	6.95	BOZO'S NIGHT OUT		6.90	5.85
STOP THE EXPRESS	C.R.L.	7.95	6.95	SNOOKER	VISIONS	8.95	7.50
FULL THROTTLE	HUDSON	6.95	5.95	BEACH HEAD	ACCESS	9.95	8.50
INFERNO	MICROMEGA	6.95	5.95	MANIC MINER	SOFTWARE PROJECTS	7.95	6.75
FIGHTER PILOT	R. SHEPHERD	6.50	5.65	PYRAMID	FANTASY	6.50	5.35
NIGHT GUNNER	DIGITAL	7.95	6.95	THE SKULL	GAMES M/C	6.95	5.95
SEA HARRIER ATTACK		6.95	5.95	GHOULS	MICROPOWER	6.95	5.95
JUNGLE TROUBLE	DURREL	5.95	4.95	SWOOP	MICROPOWER	6.95	5.95
SCUBA DIVE		5.95	4.95	BLUE THUNDER	R. WILCOX	6.95	5.95
NIGHTFLIGHT II		7.95	6.75				
3D SPACE WARS	HEWSON	5.95	4.95				
HEATHROW		7.95	6.75				
3D LUNATRAK		7.95	6.75				
THE ALCHEMIST	IMAGINE	5.50	4.60				
PEDRO		5.50	4.60				
SPLAT	INCENTIVE	5.50	4.60				
VALHALLA	LEGEND	14.95	11.95				
PARAS	LOTHLORIAN	5.95	4.95				
MUGSY	MELBOURNE HSE	6.95	5.75				
TUTANKHAMUN	MICROMANIA	5.95	4.95				
PENDY		5.95	4.95				
CODENAME MAT	MICROMEGA	6.95	5.75				
HAUNTED HEDGES		6.95	5.75				
LASERWARP	MICRO-GEN	6.95	5.75				
TRASHMAN	NEW GENERATION	5.95	4.95				
MR WIMPY	OCEAN	5.90	4.90				
HUNCHBACK		6.90	5.70				
ESKIMO EDDIE		5.90	4.90				
SCRABBLE	PSION	15.99	13.00				
FLIGHT SIMULATION		7.95	6.75				
3D ANT ATTACK	QUICKSILVA	6.95	5.95				
BUGABOO THE FLEA		6.95	5.95				
THE SNOWMAN		6.95	5.95				
BLUE THUNDER	R. WILCOX	5.50	4.50				
MANIC MINER	SOFTWARE PROJECTS	5.95	4.95				
JETSET WILLY		5.95	4.95				
ATIC ATTACK	ULTIMATE	5.50	4.60				
SNOOKER	VISIONS	8.95	7.70				
<b>ZX81</b>				<b>VIC 20</b>			
FOOTBALL MANAGER	ADDICTIVE	5.95	4.95	BONGO	ANI ROG	7.95	6.75
PIMANIA	AUTOMATA	5.00	4.00	SKRAMBLE		7.95	6.75
PILOT	HEWSON	5.95	4.95	KRAZY KONG		7.95	6.75
OS SCRAMBLE	QUICKSILVA	3.95	3.40	BATTLEFIELD		5.95	4.95
49er	SOFTWARE FARM	5.95	4.95	SLAP DAB		5.95	4.95
				DARK DUNGEONS		5.95	4.95
				FLIGHT PATH 737		5.95	4.95
				FLIGHT ZERO ONE FIVE	AVS	7.95	6.75
				FALCON FIGHTER	INTERCEPTOR	6.00	5.95
				ARCADIA	IMAGINE	5.50	4.50
				HELLGATE	LLAMASOFT	6.00	5.95
				GOLD RUSH	MR MICRO	6.90	5.85
				BENGO		6.90	5.85
				HUMPHREY		6.90	5.85
				AMIGO		6.90	5.85
				PUNCHY		6.90	5.85
				SKYHAWK	QUICKSILVA	7.95	6.50
				SPACE JOUST	SOFTWARE PROJECTS	5.95	4.95
				JET PAC	ULTIMATE	5.50	4.65
				SNOOKER	VISIONS	8.95	7.50
				<b>ORIC</b>			
				SEA HARRIER ATTACK	DURELL	6.95	5.95
				SCUBA	DURELL	6.95	5.95
				XENON	UK	8.50	6.50
				ZORGONS REVENGE	UK	7.50	5.50
				PROBE 3	UK	7.50	5.50
				THE HOBBIT & BOOK	MELBOURNE HOUSE	14.95	12.95
				DINKY KONG	SEVEN SOFT	6.95	4.94
				DRACULA'S REVENGE	SOFTK	6.95	5.95
				ULTIMATE ZONE	TANSOFT	8.50	6.50
				RAT SPLAT	TANSOFT	7.95	5.95

TO: DISCOUNT COMPUTER SOFTWARE. PLEASE ACCEPT MY ORDER FOR  
THE FOLLOWING PROGRAMS/SPECIAL OFFERS

1. ....  
2. ....  
3. ....  
4. ....  
5. ....  
Make cheques payable to Discount Computer Software.  
Cheque No ..... For £ ..... enclosed  
Please debit my  
Access No ..... Signed .....

16 Coates Close, Brighton Hill,  
Basingstoke RG22 4EE

SEND

Name .....

Address .....

BK1

SEND SAE FOR UP TO DATE LIST OF OUR AMAZING BARGAINS



# A NEW DIMENSION IN FAMILY ENTERTAINMENT



**NOW AVAILABLE**  
For SPECTRUM, CBM 64

**COMING SOON**  
Versions for BBC, Electron, Amstrad, Oric & others



April 14th 1912. On her maiden voyage the Titanic hit an iceberg and sank taking with her a vast fortune in gold.

Your mission is to raise sufficient finance and equip an expedition to find the Titanic and it's lost gold.

Easy!! Well it could be but with 460 possible locations for the gold you

need to watch your divers' air supply.

You begin your search when suddenly ...well that would be telling wouldn't it.

Comes with **Currah Micro Speech** (Spectrum version only).

Number one in our new range of games designed for family enjoyment.

Fantastic value for money.

**R.R.P. £7.95 inc. VAT**

**R&R**

**SOFTWARE**

**DEALERS:** Contact your normal distributor or ring us direct.

**PROGRAMMERS:** Send us you latest quality program for evaluation NOW.

R&R Software Ltd. 5 Russell Street Gloucester GL1 1NE  
Tel (0452) 502819



# Now YOU can go for gold ...with the



Fancy pitting yourself against the world's best at this summer's Olympics?

You can do so without going anywhere near Los Angeles — with the most challenging package of programs of 1984.

MICRO OLYMPICS is more than a game. It's a brilliantly written collection of ELEVEN track and field events.

And because we know we're going to sell many thousands of them we've brought the price right down — to just £5.95.

Ever imagined yourself as another Seb Coe? Then try to run against the world record holder at 1500 metres. And if that distance is too much for you then there's always the 100, 200, 400 and 800 metres to have a go at.

Not much good at running? Don't worry, MICRO OLYMPICS has many more challenges for you. Why not try your skill at the high jump or the long jump?

And if you can't beat the computer at running or jumping then you can always throw things around in frustration! The trouble is that it's just as hard to be a champion at the discus, the hammer or the javelin.

And the pole vault takes the event to new heights!

Yes, it's fast, furious fun, pitting yourself against the world's best times and distances on your micro.

You may not be another Steve Ovett or Alan Wells, but with practice you COULD become the Micro Olympics Champion!

Also available from WHSmith  
and all other leading stores



**Play Micro Olympics  
— and let your fingers  
do the running!**

**Send for it today**

Please send me \_\_\_\_\_ copy/copies of  
Micro Olympics at £5.95

☐ I enclose cheque made payable to  
Database Publications Ltd.  
for £ \_\_\_\_\_

☐ 48k Spectrum  
☐ Commodore 64  
☐ BBC 'B'  
☐ Electron } £5.95  
each

Please tick box

I wish to pay by ☐ Access ☐ Visa

No. \_\_\_\_\_ Expiry date \_\_\_\_\_

Signed \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Post to: Micro Olympics offer, Database Publications,  
68 Chester Road, Hazel Grove, Stockport SK7 5NY.

BK2



IN ALLIGATA'S

COMMODORE 64

'DEFEND' OR DIE!

SPECTACULAR...

## GUARDIAN



## STAR REVIEW

"The BEST version of the arcade hit. Far far superior to anything currently available including the official Atari-soft version."

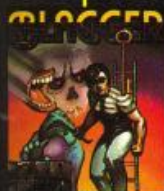
Computer Games & Systems' Retailer

ELECTRON

Once again Alligata's reputation for fast machine code action and high resolution graphics has combined to create a classic battle spectacular.

**Guardian.** Programming perfection, enthralling, fast screen scrolling action that will test skill and reflexes to breaking point in a desperate defensive mission against the invading landers. If successful in capturing humanoid from your planet surface and returning them to native outer space, the landers will mutate to take up a direct and deadly pursuit upon your space fighter. But things aren't quite that easy - the flying pods, swarms, alien bombers and deadly baiters are just as dangerous. We know you don't like to be beaten but we're sure you'll eventually go under.

**Loco.** Skilfully manoeuvre the six track railway dodging aerial bombardment from planes and airships, avoiding fatal collision with oncoming handcars aided only by your lethal smoke and steam and a unique split screen feature giving immediate action viewing with a master plan image of impending danger. **Son of Bagger.** Not many sequels live up to reputation, but in this drama of one, long continuous screen action the antics of Slippery Sid will keep you enthralled for days on end. **Contract Bridge.** Improve your technique with this sophisticated program where the computer bids and plays the other three hands in a full rubber plus scoring. **Aztec Tomb Part II.** If you solved the mystery of the South American jungle in part one, the sequel might be just within your grasp. **Bagger.** Platform programming at its best, 30 nerve racking screens featuring Roger the Dodger and his cat burglar exploits. **Rocket Roger.** Walk, run, jump and even jet thrust your way round this single, continuously scrolling screen drama as rocket propelled Roger mines crystal fuel for his stranded mother ship, fighting off hordes of marauding nasties on the way.



Please indicate programs required

Type Disk CBM64

- ☐ Guardian  
☐ Bagger  
☐ Contract Bridge (T £9.95)  
☐ Loco  
☐ Son of Bagger  
☐ Rocket Roger

Electron

- ☐ Guardian  
☐ Bagger  
☐ Contract Bridge (T £9.95)

I enclose a cheque/PO \_\_\_\_\_ Payable to Alligata Software (Allow 75p for post and packaging)

Charge my Access £ \_\_\_\_\_ Card No. \_\_\_\_\_

Name \_\_\_\_\_ Signature \_\_\_\_\_

Address \_\_\_\_\_

Alligata Software Ltd  
1 Orange Street, Sheffield S1 4DW  
Tel: (0742) 755796

Despatch is normally made on receipt of order and should reach you within 7 days

**Alligata**  
Software Limited



**BBC AND  
ELECTRON**  
VERSIONS FOR CBM 64 & SPECTRUM SOON!

## SPACE STATION ALPHA

A GRAPHICAL  
SPACE BATTLE

The deadly cylon fleet has reached its destination. Their objective - destroy planet earth. Each ship in the fleet carries a single devastating lithium torpedo. Earth shields are up but their power is being drained. You, as commander of earth's last remaining space station are all that stands between the cylons and earth's total obliteration.

£7.95

## SPACE STATION ALPHA



## ZORAKK THE CONQUEROR

A GRAPHICAL  
ADVENTURE GAME

Journey through the medieval lands of Ramagora in search of the three pieces of the long lost crown of Ultimate Darkness. Battle with vicious brigands, avoid the greed of the great dragon, suffer plagues and famine in pursuit of your ultimate goal.

This is a graphical adventure in which you play the part of Zorakk and take control of his loyal warriors.

£7.95

# ICON

## SOFTWARE

65 HIGH STREET, GOSFORTH, TYNE & WEAR, NE3 4AA.  
TEL: (091) 2846966

AVAILABLE FROM ALL GOOD COMPUTER STORES,  
OR DIRECT FROM US!

TRADE ENQUIRIES WELCOME

ATTENTION  
PROGRAMMERS!  
WE PAY EXCELLENT  
ROYALTIES FOR ORIGINAL  
EXCITING PROGRAMMES  
ON BBC, ELECTRON,  
CBM 64 & SPECTRUM

Please send me the following items .....  
ZORAKK... ELECTRON ☐ BBC ☐ for £ .....  
ALPHA... ELECTRON ☐ BBC ☐ for £ .....  
Name ..... Address .....





GOES BANANAS...

# ARTIFICIAL INTELLIGENCE IS COMING TO GET YOU

In five (or ten, or maybe twenty) years the significance of Artificial Intelligence (or Fifth Generation) will have become a lot clearer than it is today. In the meantime, it's nice to ditch the bugs, bytes and sprites for a moment and enjoy a good old speculative waffle about what it MIGHT mean. Your cue, 'Q'...

IS your micro being nasty to you? Do parking meters feel hungry when they're not fed?

Humans like to animate the inanimate. Perhaps this is one of the reasons that Artificial Intelligence holds such a fascination.

How often do you swear at your micro? Really curse the thing? Recently arcade games have been hooked up with hidden microphones to record the ways in which people "relate" to them. Many folk that would otherwise be considered legally sane often talk to machines. Humans become emotionally involved with their own personal technology by giving things names and by talking about (and to) machinery.

We all *really* know the reason the prog just crashed again has little to do with the way your micro feels about you... yet nearly all humans animate machines to a greater or lesser extent.

This techno-kinship can have very positive effects — many people given the choice of communicating with a machine or a person, will often prefer the machine, (cash dispensers have queues of people when banks are empty). Recently psychological "Expert" programs (more 'bout them later) have acted as "listeners" to patients' problems. Many of the users found this preferable to talking to humans and a considerable number felt that they responded more honestly to an Interactive Expert Program when answering personal questions about themselves.

Before positively defining what Artificial Intelligence is we have to define intelligence and in particular human intelligence. If a machine is to mimic human behaviour must be analysed in order to structure and devise software and hardware that mimics it. For some tasks this is now relatively easy — but for others it

reaches into the realms of paradox, psychology and philosophy 'cos we dunno very much about the way our brains work, end of story. Nevertheless one part of A.I. research is devoted to finding out.

The definition of A.I. is not constant. Once a business program replaces a payroll clerk the definition of A.I. tends to go up (or is it sideways?). Machines and their software systems are the result of human ideas and actions, the transference of thought into "physical reality"; but often, because they are built by teams, they

represent a combination of ideas and these creations lead in an almost truly evolutionary way to more complex machines just as organisms evolved from amino acids (go fetch that biology book). Tracing the evolution of computers is a good case in point. In order to begin to understand human intelligence one has to understand the development of the brain and its friend, pal, or chum, the mind.

Some experts maintain that it will never be possible to construct machines to think like humans because they must be able to "relate" to themselves in the real world, i.e. they would have to possess bodies similar to

humans in order to "think" like humans. ("Be" humans?)

What now does seem technically feasible is that the new "intimate technology" will increase the human love affair with machines and that for specific tasks many people will react to machines and their software systems as though they were human and that by studying this phenomenon more will be learnt about the man-machine interface.

The practical application of A.I. is in the realm of the next generation of more user friendly intimate technology and one way that this is progressing is through the use of Expert Programs.

The whole area of Expert Programs is still in its infancy. These programs interrogate the expert e.g. a hearing specialist, in a particular field and then (provided this has been done with sufficient programming skill) the resultant program and database can be interactive. Most of these Expert Programs have an update facility (sometimes allowing the "nature" of the program to re-program itself) and thus such a system can be used in place of a human expert for certain tasks.

Right now A.I. ideas are being used in inter-active video disc systems which can be used in the training of skills and the merchandising of products which require explanation. Research is also taking place in speech recognition and of course into the whole area of language itself, for words only acquire meaning in a relationship with each other. How the brain extracts "meaning" from words and sentences is still very unclear. This is the area where A.I. research meets paradox in a world that seems bizarre and unreal, the world of philosophy and "quantum reality" where arguments rage about what is "real" and what is not.

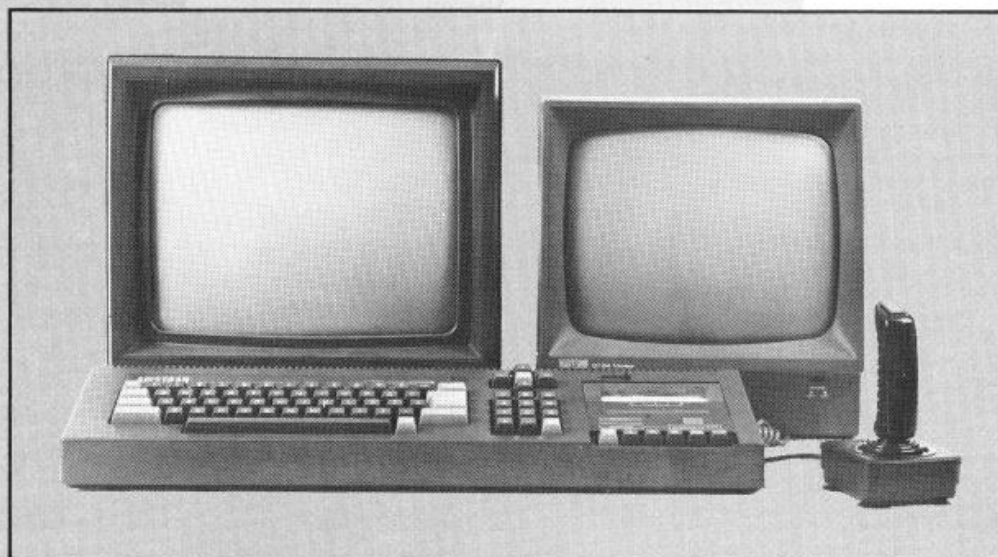


TONY BENYON



# NICE...BUT WILL IT AMSTRADDL THE WORLD LIKE A COLOSSUS?

**JOHN CONQUEST**  
has a paws-on  
session with  
the Amstrad  
CPC 464...



BY NOW you must have heard tell of the Amstrad CPC 464 — well, that's the official name but I've not heard it called anything but 'The Amstrad'. The budget hi-fi empire's entry into the home computer field has been much heralded by the press and now that it's in the shops we're getting the bench tests, with the computer mags going into various degrees of ecstasy. The message, which you may have heard before, is that this is the greatest thing since sliced silicon.

The Amstrad is a good machine, no question. But a great one? Not really. It is, however, a great piece of marketing. Designer Richard Perry hit the nail on the head when he said, with admirable honesty and clarity, that his package was designed to compete directly with the Commodore 64, be better value than the Spectrum and cheaper than the BBC B.

## INTEGRAL

As a cost accounting exercise it achieves all these targets. For £229 you can get a 64K (42K usable) computer with a built-in cassette player/recorder and loud-speaker, plus a high-res monochrome monitor. For another £100 you can have a colour monitor instead. Clearly Amstrad, learning other companies' expensive

lessons, are applying the same minimum component principle that made them such a power in hi-fi. The integral program recorder, which, incidentally has two loading speeds, 1K baud and the rather chancy 2K baud Speedload, has such obvious advantages that it seems destined to become an industry standard.

Though the manual is average (i.e. better than Commodore's but not as good as Acorn's), the friendly Locomotive Basic leaves Commodore's for dead and is very fast. Other features are exceptionally sharp colours (though the claimed 27 are actually 9 with bright and pastel modes, feeble compared to Atari's 256), stereo sound via the hi-fi hook-up (extra), real-time interrupts and windows. Amstrad's £14.95 joystick is a horror, but although the single port will take any D-pin joystick, only Amstrad's will let you use two, the second plugged into the first.

The keyboard isn't as good as the Commodore's, let alone Atari's, but the initial cramped feeling would probably fade with practice. A rather feeble space bar has the Control key right next to it, which seems risky, but there's a whacking great

Entry key and a separate numeric keypad.

For a new machine there's already a fair amount of software, with more coming. However, some independent software houses are expressing open concern over Amstrad's distribution policy. According to leading software company Virgin Games, Amstrad prefer that all commercial programs are regulated through Amsoft, its own software house. Independents can 'go it alone' but risk incurring the 'disapproval' of Amstrad. Virgin say that this is in complete contrast to the MSX companies who are extremely forthcoming with help and assistance so creating a better atmosphere for software production.

## CO-OP

Level 9, the adventure gamers, however, have reported good co-operation from Amstrad so it appears that reaction to the new machine amongst software houses can be best described as 'mixed'. But, on the practical side, with the Amstrad's very similar Z80 engine room, Spectrum software should be very easy to convert. The present trickle could become a flood.

## TV vs. MONITOR

My quarrel with Amstrad is the monitors, which are modified and stripped down Amstrad tellies, and not the best in the world. As monitors they're adequate, but with at least one company, Normende, making TVs that are just as good as most monitors and will let you watch Hill Street Blues as well, I can't see the point of spending money, and cluttering up my life, with yet another gadget. I'd rather the £30 modulator and power supply unit that lets you run the Amstrad through an ordinary TV.

The Amstrad has definitely jumped into the charts with a bullet and the prices and specs make it undeniably attractive. Right now I wouldn't care to be Sales Manager for 64s, Spectrums, Electrons or Ataris, let alone any of the second division machines. But I can't help feeling that it's flavour of the month. With the Elan Enterprise, not to mention the MSX machines on the horizon, the hubbub will soon die down and instead of trying to look like a world beater, the Amstrad will settle down to appealing to people who want a neat package. Which should assure it of a future.



# NEAT...BUT CAN IT DENT THE DISC MARKET?

... While KIM ALDIS gets to grips with the Ikon Ultradrive, a hi-speed minicassette storage system for BBC and Dragon

CASSETTES ARE a pain in the butt, disc drives are expensive everybody knows it. But probably not so many know that there is a solution which makes a debatable compromise — a fast tape drive.

Ikon's Ultradrive (for BBC and Dragon) is such a widget; faster than cassettes but slower and less expensive than discs. In fact it's more than just a fast cassette because its operating system has total control over the forward and reverse movement of the tape, enabling it to do a fast search for the file or program it's looking for.

First impressions: it looks smart. Small, cream in colour to match the BBC, a black front to it and extremely small cassettes, about two inches by one. (The young lady who purports to share my life referred to them as 'dinky'.)

## SHORT SIDE

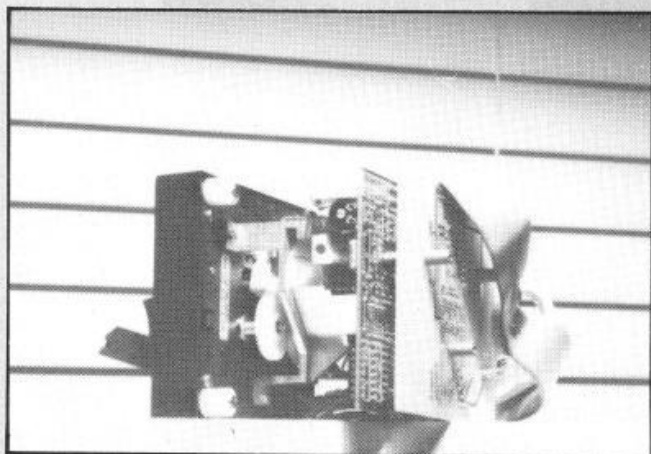
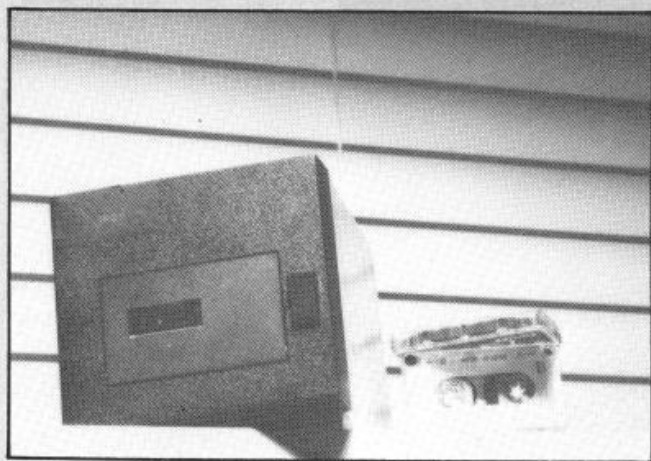
Fitting proved to be something of a pain. The EPROM went into the sideways sockets easily enough but I was definitely not happy about the cable connections. A ribbon cable runs to the user port and another to the auxiliary power socket, both on the BBC's underside — both on the short side. Short I said and short I meant. The damn things were so short that the only place to put Ultradrive was on top of the computer,

right over the mains transformer and right in front of the monitor. Acorn tend to get upset by people putting things on top of their baby and my own feelings about keeping data storage media near transformers move in much the same direction. I've had trouble with disc drives when they get too close to the monitor for much the same reason.

## FAST LOAD

Ikon, the manufacturers, had thoughtfully provided a tape of games to demonstrate the speed at which Ultradrive operates. Not good — buried in the midst of this lot were clones (if not actual copies) of Acornsoft's *Snapper*, *Monsters* and Program Power's *Chess*.

So just how fast is it? To a large extent this depends on where the file is on the tape. The easiest way to demonstrate this is with a few timings. Cataloguing the first side of a tape took five seconds. Fast. Turning over to see what was on the other side proved to be a different story — nearly three minutes! This illustrates one of Ultradrive's main problems. Loading is very fast, only 15 seconds for *Monster's* main program to load — after it had taken over a minute to find. This, in itself is still not bad when compared to cassettes but it is possible for Ultradrive



rive to take much longer. The problem lies in the fact that it has to look at the catalogue before it knows where to look on the tape. Consider a worst possible case where the tape is wound fully forward and the program you want to load is also at the end of the tape. Three minutes are spent twiddling thumbs until the catalogue is found, followed by a further three minutes while it goes back to the end of the tape to load. Admittedly this is a worst case but if you think about it it's not that unusual. Supposing you're working on a piece of software. Being a naturally cautious person you save your program at regular intervals in case it decides to do a suicide number. Every time you save it Ultradrive goes to the catalogue, writes the filename and any other garbage it needs then goes to wherever your program is to save it. This process repeats itself every time a load or save is made. Unless you make a point of using a new tape so your program is right next to the catalogue the time saving is very little when compared to cassette.

I definitely didn't like the utilities. One or two of these

(REWIND, CAT, SWAP — for swapping loops) are on Ultradrive's ROM. Unfortunately, like the Acorn DFS, the most often used commands, RENAME, DELETE, ACCESS and INFO, are on the utilities tape — slow and inconvenient to get at. To be of any real use they should be accessible from ROM where they can't interfere with anything.

## CHEAPER

By way of summary, Ultradrive is reasonably good but it could be better. The main flaw is in the design of the operating system without resident utilities. Those on tape aren't as comprehensive as they should be either; no BACKUP, COPY or COMPACT. But then I already use discs so maybe I'm being over-critical. It's easy to see that Ultradrive is better than cassette (what isn't) and at £79.95 is up to £150 cheaper than discs, once you've forked out for the DFS. It all depends on how short of cash and how long on time you are. In spite of its shortcomings it still works well.



# MAIL ORDER ADVERTISING

## British Code of Advertising Practice

Advertisements in this publication are required to conform to the British Code of Advertising Practice. In respect of mail order advertisements where money is paid in advance, the code requires advertisers to fulfil orders within 28 days, unless a longer delivery period is stated. Where proofs are returned undamaged within seven days, the purchaser's money must be refunded. Please retain proof of postage/despatch, as this may be needed.

## Mail Order Protection Scheme

If you order goods from Mail Order advertisements in this magazine and pay by post in advance of delivery, BIG K will consider you for compensation if the Advertiser should become insolvent or bankrupt, provided:

- (1) You have not received the goods or had your money returned; and
- (2) You write to the Publisher of BIG K summarising the situation not earlier than 28 days from the day you sent your order and not later than two months from that day.

Please do not wait until the last moment to inform us. When you write, we will tell you how to make your claims and what evidence of payment is required.

We guarantee to meet claims from readers made in accordance with the above procedure as soon as possible after the Advertiser has been declared bankrupt or insolvent.

This guarantee covers only advance payment sent in direct response to an advertisement in this magazine not, for example, payment made in response to catalogues etc, received as a result of answering such advertisements. Classified advertisements are excluded.

## AVALON HILL GAMES

Microcomputer  
Games

### Summer Season Silly Sale

TITLE	CURRENT RETAIL PRICE	OUR PRICE	ATARI NOT XL SERIES	CASSETTES APPLE	★ CASSETTES TRS 80	CBM PET	DISKS ATARI NOT XL	★ DISKS APPLE
Computer Acquire	£14.95	£3.95		16K	16K	16K		48K
Bomber Attack	11.95	3.95	16K	32K		8K		
Close Assault	21.95	6.95	40K	48K	48K		48K	
Conflict 2500	11.95	3.95	32K	16K	16K	16K		48K
Controller	21.95	6.95					40K	
Empire of the Overmind	25.95	7.95					40K	
Facts in Fives	18.95	4.95					48K	
Flying Ace	18.95	5.95	16K				32K	
Galaxy	14.95	4.95	16K	16K	16K	16K		48K
Gypsy	15.95	3.95	16K				32K	
Knockout	14.95	4.95	16K					
Legionnaire	25.95	6.95	16K					
Comp. Maj. League Baseball	18.95	4.95			16K			
Moon Patrol	18.95	4.95	16K					
Road Racer/Bowler	11.95	3.95	16K			8K		
Shootout at OK Galaxy	14.95	4.95	16K	32K	16K	8K	32K	
Space Station Zulu	14.95	4.95	32K				48K	
Computer Stocks & Bonds	14.95	4.95	32K	32K	16K	16K	40K	
Tank Arcade	11.95	3.95	16K		16K	8K		
Tanktics	21.95	6.95						48K
Telengard	19.95	6.95					48K	
Vorrak	18.95	5.95					48K	
Voyager	14.95	4.95	24K	32K	16K	32K		

To:

**R. M. TRADING CO.**  
75 STONELEIGH AVE.  
ENFIELD, MIDDX.

Access/Visa Card No.

Cheque/Postal Order enclosed £.....

When ordering state computer and

Memory size. Where possible please

give 2nd choice as stocks are limited

POST FREE

Your name & address

.....  
.....  
.....  
.....

BK1



# 4<sup>th</sup> DIMENSION<sup>®</sup>

## Computer Games & Graphics

£5.50

**CHATEAU  
OF THE  
UNDEAD!**

SPECTRUM 48K

Original adventure game, kill the Vampire and steel his treasure before dawn breaks-each of the 40 chateau rooms are graphical and hold many hidden secrets.

## The Perfect Cover

We have a team of some of the best designers in the profession producing colour advertisements for magazines as well as large amounts of cassette covers and leaflets.

### Use Our Talent

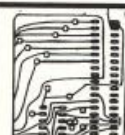
We also have a package deal especially formed to assist you to market your computer game cassettes with professional graphics backed up by full colour printing and finishing services. For details Call: 0245 41 2124.



No. 556



No. 557



No. 558



No. 559

Catalogue available by request

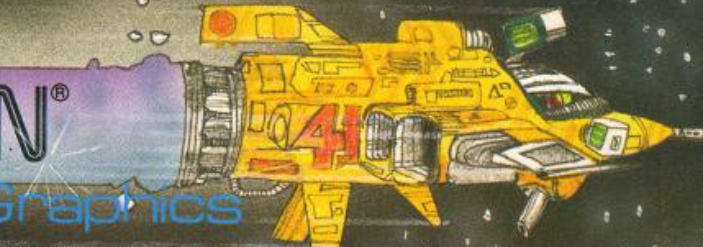


No. 600

Cols. red white yel \*L/blue D/blue Green



No. 601



£5.50

**DOG  
FIGHT**

Pit your Jet Fighter against your opponents-one or two players...or fight your 48K SPECTRUM



Space Warrior

ALL Machine code Galaxian-type game. Multi-Screen Arcade Action, with Training Mode.

Also Available

**'Wheeler Dealer'** £4.50

Finance and Strategy game, Turn £15 into £200,000 If you can!!! Avoid Police, Floods, Tax Inspectors and Loan Sharks- If you want to succeed in being Rich! SPECTRUM 16K.

Rush me the following Tapes:

- |   |       |         |
|---|-------|---------|
| <input checked="" type="checkbox"/> Chateau of the Undead | £5.50 | NAME    |
| <input type="checkbox"/> Dog Fight & Space Warrior        | £5.50 | ADDRESS |
| <input type="checkbox"/> Wheeler-Dealer                   | £4.50 |         |

Please Include 50p post & pack

Tel:

TOTAL £

Please make all Cheques/P.O.s For Tapes Payable to: 4th Dimension

Rush me the following Goodies:

- |   |     |      |      |       |         |
|---|-----|------|------|-------|---------|
| <input checked="" type="checkbox"/> T-Shirt/s   | No. | Size | Col. | £5.00 | NAME    |
| <input type="checkbox"/> Sweat Shirts           | No. | Size | Col. | £8.50 | ADDRESS |
| <input type="checkbox"/> American Baseball Caps | No. |      |      | £5.99 |         |
| <input type="checkbox"/> More designs & Info    |     |      |      |       | Tel:    |

Post & Pack Included

TOTAL £

Please make all Cheques For Shirts etc. Payable to: Pandora Design

**ANY GAME PROGRAMMES?** For free appraisal and assistance with marketing, send tapes with full instructions to:

**NEW IN!  
AMERICAN  
CAPS**



4th Dimension,  
Green Gables,  
Blackmore End,  
Nr. Braintree,  
Essex. CM7 4DN.  
Tel: 0371 - 850323.

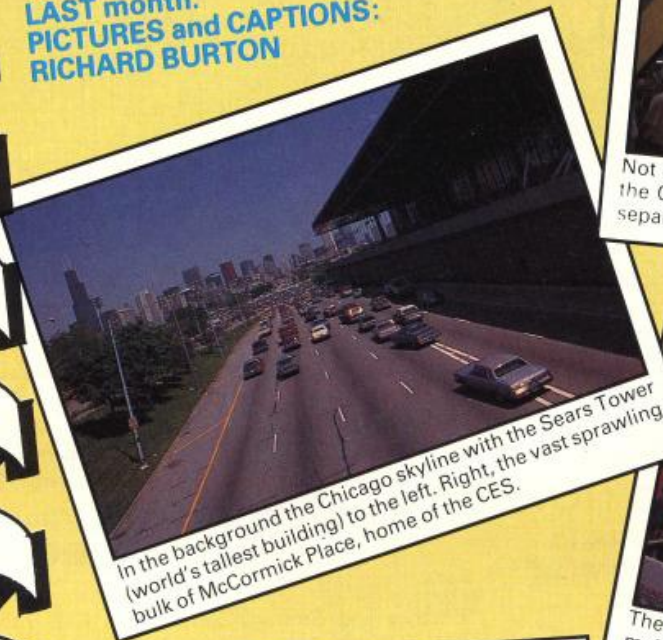




# BACK IN THE

For a whole mess of reasons America remains the hub of the computer galaxy. What happens there today may well happen here tomorrow. For this reason we've devoted a few pages to an in-depth look at the U.S. scene: pictures you haven't seen of products you may never see; American computer-games magazines under the microscope; and what must surely be the state of SOME art or other, a comic designed and printed entirely on Apple's amazing Macintosh micro. So get some pumpkin pie outta the icebox, suck on a Dr Pepper, and get your head down. 'Cos this month BIG K is . . .

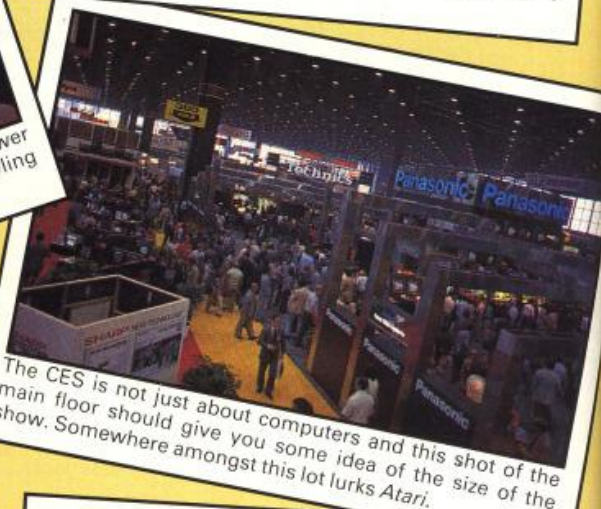
**THE VIEW FROM McCORMICK WEST**  
Last month we reported in haste from the Consumer Electronics Show in Chicago. This month we give you . . . some of the shots and stories we didn't have room (or time) for LAST month.  
**PICTURES and CAPTIONS:**  
**RICHARD BURTON**



In the background the Chicago skyline with the Sears Tower (world's tallest building) to the left. Right, the vast sprawling bulk of McCormick Place, home of the CES.



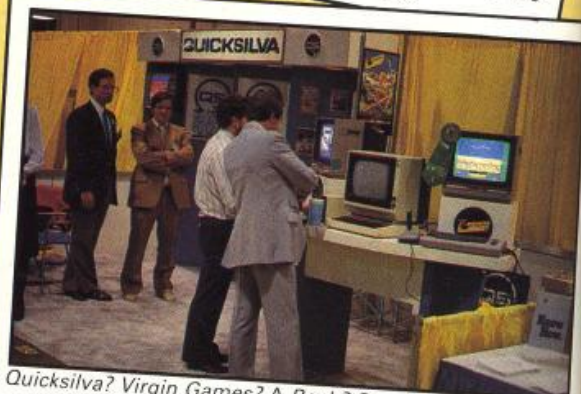
Not quite a MacDonalds Golden Arch, just the entrance to the CES main exhibition hall. The whole show filled three separate buildings.



The CES is not just about computers and this shot of the main floor should give you some idea of the size of the show. Somewhere amongst this lot lurks Atari.



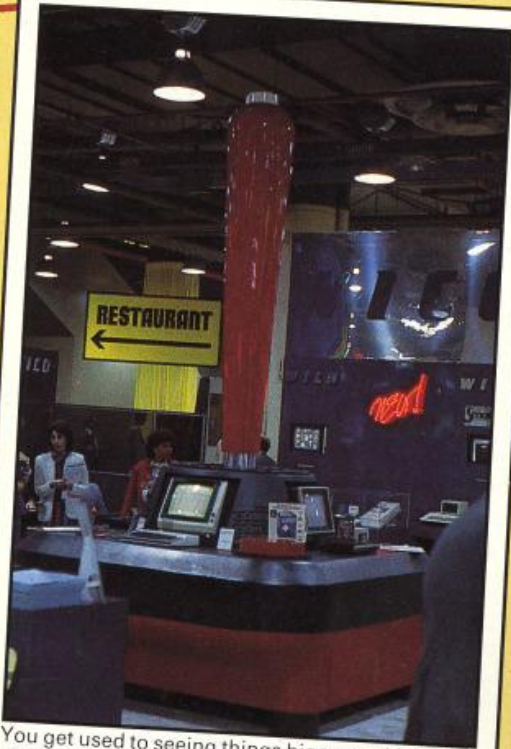
Atari have a lot of games and a lot of computers — most of them on the their stand. Imagine this little set-up in your bedroom!



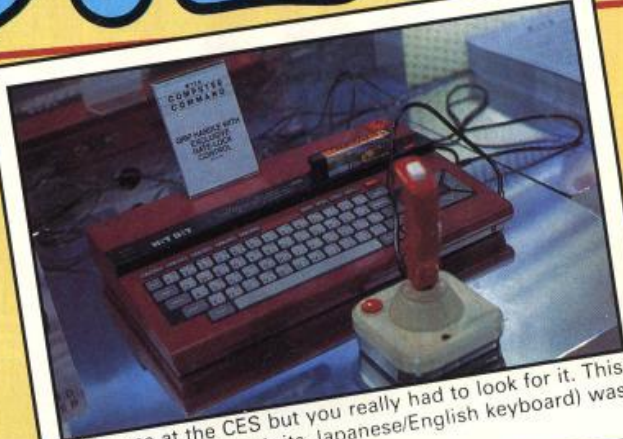
Quicksilver? Virgin Games? A Beeb? Can this really be Chicago? Yep, sure is, pard, and this here's where them Brits try to teach as about video games. Dang nerve!



# U.S.A.



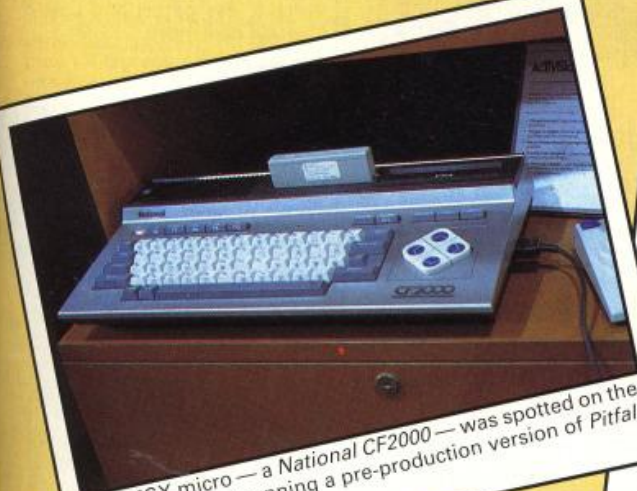
You get used to seeing things bigger and (sometimes) better in America, including a giant *Wico* joystick. All suggestions for games that can be played with this joystick to BIG K.



MSX was at the CES but you really had to look for it. This Sony Hit Bit (still with its Japanese/English keyboard) was sighted on the Wico stand.



A genuine ROM-based MSX game — Konami's *Child Park*, a typically oriental game owing more than a little to Activision's *Pitfall* in places.



This MSX micro — a National CF2000 — was spotted on the Activision stand running a pre-production version of *Pitfall* II.



Seen for the first time, new add-ons for Coleco's Adam computer: A 5 1/4" disc drive, a second *Digital Data Drive*, a 64K *Memory Expander*, and more. Coleco are heavily backing their much-criticised computer system. Will it work?





BACK IN THE U.S.A....

# CAN 20 MILLION VCS OWNERS BE WRONG?

A QUICK glance at the American computer press tells you a lot about the origins of our own version. Like microprocessor technology itself microcomputer magazines originated over There and subsequently appeared over Here, already having acquired a form of recognised identity.

That the model has been US-defined becomes apparent by a quick glance at, say, *Byte*. *Byte*'s obvious editorial aim is to rule the world (which they all but do already, to judge by the thickness of their issues). Their chosen slant is the Authoritative shtick. Clinical, clearly laid-out and above all voluminous, *Byte* sails placidly along on a sea of immense knowledgeability, prestige, and considerable advertising revenue. It is the very model of a modern micro magazine.

Also with a good reputation among magazine buyers in the UK are *Compute!* and *Creative Computing*, both of which take a more relaxed editorial line, aiming generally to the "left" of *Byte* in their (equally calculated) unstuffiness, cheerful layouts, and air of calm, knowing, expert, fair minded, hippie self-confidence.

Although with a few minor exceptions these three are the US computer magazines most highly rated in the UK in fact there are a very great number of other, not too different magazines, many of which never get distributed here. But to say many of them are unlike anything you've seen before would be to overstate matters. There are: business machine magazines; general computing magazines; hand-held personal computer magazines; soft magazines; dedicated-machine magazines; educational titles, and game magazines.

There are a lot of game magazines, actually.

As we all have our definition of games magazines let me say I mean magazines who deal with "recreational

Not on your life, matey, to judge by the profusion of U.S. computer-game magazines — most of them really video-game mags at heart... TONY TYLER peruses a sample of BIG K's transatlantic opposition.



computing"; any use of a computer or computer-like object to do anything spectacular and involving, not already defined as either Business or Educational. Leaving it at that (for now) in the UK, what do we find in the US? Proportionally nearly three times as many games magazines. And for this you can blame the Atari VCS and other videogame machines.

The fact is that, for Americans, the Age of the Computer began with the Atari VCS — later on with the Intellivision, the Odyssey, the Sega and of course the Coleco as well. As a result they

underwent an entirely separate stage — the great VCS Diversion. By committing millions of potential one-time buyers to games consoles, the salesmen ensured that the real computer revolution in America would come, for the average American family, at least a year late as a result.

Videogame culture — as a genuine and recognised precursor to full-blown computer culture — began with Atari, lives on — still — with ColecoVision, and in its two years of unchallenged monopoly has spawned several videogame magazines. Examples are *Elec-*

*tronic Games*, *Electronic Fun*, *Joystick* (since defunct), and *Vidiot* (ditto) to name just a few better-known.

The arrival (willy-nilly) of the US computer revolution has meant that survivors have had to consider becoming keyboard conscious, in mid-stream as it were. *Electronic Games* has for some time now printed short utility programs for the US-favoured computers. But chiefly because they daren't abandon the huge US videogame ownership, even "Junior Computer" mags continue to review and support videogame stuff wholeheartedly. Apart from that a list of their contents would sound familiar enough to British ears: general features; software reviews; some hardware; standalones (big business in the US), and arcades. To this add occasional very short utility programs for the half-dozen most popular computers; equally short games listings; and movie/TV reviews where appropriate. It all sounds recognisable enough stuff. On paper.

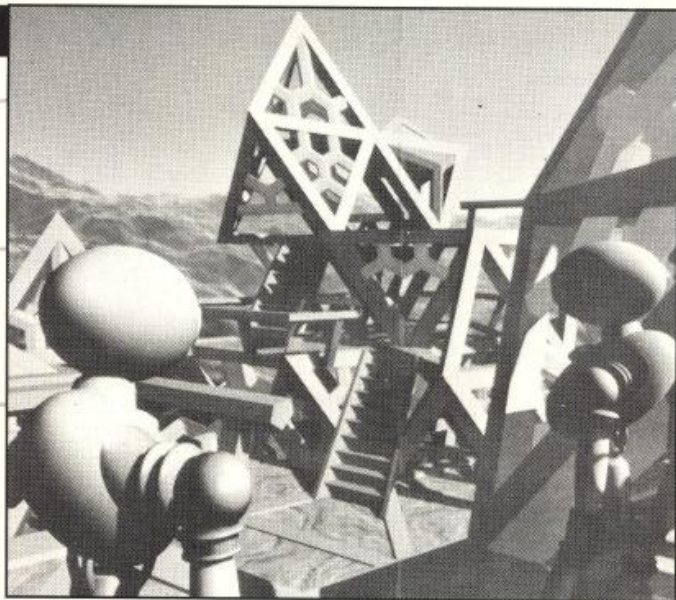
But there are differences. American games mags carry far less advertising than their British cousins, in general have less pages and cost a good deal more.

One thing you get for your money is full colour throughout; and I guess they need the money since they all have staffs about three times the size of British magazines. Artwork in these magazines is often (though not always) superb. Above all the flavour is American.

## ELECTRONIC GAMES Monthly; \$2.95

The doyen, fatter than ever now since the demise of its chief rival. Original launch diet (videogames, arcades, standalones) still predominates, though computer features have been increased over the last year or so. Specialises in imaginative reviewing — every feature in





EG is almost certain to be a review of some sort — often using artwork to romanticise the limitations of the writing (a little too Gee Whiz in places, gang!) Averages 132 pages per issue, of which (in our sample) 44 were advertisements.

Verdict: The definitive videogamer's magazine. Will take the Pro 7800 seriously.

### COMPUTER GAMES Monthly; \$3.00

Like EG, CG aims squarely at VCS country. ("We're talking about those ten-year-olds", a company rep recently told our man in Chicago). Half the number of pages of its rival and correspondingly less advertisements. Nevertheless paper quality is excellent and of course full colour predominates. Layout is cheerful and uneconomical by British standards. Like EG, uses The Review as all-purpose feature device. No computer programs whatever — wholly a software buyer's

magazine. Good writing; especially good letters.

Verdict: smart, a bit padded, good print job, may find life tough if videogame market continues to go down the tube as predicted.

### K POWER Monthly; \$1.95

Our American namealike, one of the slimmest of our sample at 64 pages, nonetheless takes the same definite step up the evolutionary ladder (so to speak) as EG by featuring type-in programs for major US computers and also "support" features... all of this, albeit, on a very modest scale. Otherwise... the mixture as before.

Verdict: half-hearted; bland; untidy.

### VIDEO GAMES Monthly; \$2.00

The mixture pretty much as before — VG (can you think of any unused 'G's?') majors by a whisker on arcades, with ROM- and disc-based game

reviews (in the usual various guises) predominating. Nothing for tappers at all — nothing remotely technical, in fact. Average issue 80-odd pages, the usual full colour and airy layouts. Our sample, interestingly, features a respectful interview with Nolan Bushnell and a tough, gritty, knowledgeable and utterly ruthless demolition job on the Timex-Sinclair 2068 (the US-packaged Super-Spectrum). Screen shots and nice artwork round it off.

Verdict: As Computer Games.

The above list represent the bottom rung (as it were) of our sample (in 'seriousness' terms). Next tier up finds us, as it does in the UK, among the dedicated-user magazines. These naturally exist, in great profusion, for all major machines, and many of them reach our shores to compete directly for sales with the home-grown product.

However not all of them do go on sale here. For example, Atari have magazine support in Britain, only not from American magazines. Two more Atarimagazines in our overall sample are *Antic*, which subdescribes itself as *The Atari Resource* (resourceful of them); and *Atari Connection* (perhaps the most uninspiring name of the whole bunch). Both are pricey at three bucks, actually well-presented and balanced, and aimed clearly at the novice (or relative novice, computer user. You expect, and get, quite long and easy pro-

grams, both games and utilities, in Atari Basic — but articles on, say, 6502, Assembler or Adventure Parsing would be wildly over the top of their mission profile. Both magazines also feature general articles, often of a 'speculative' and 'thoughtful' nature (i.e. padding).

As always it is all in four colours and on good, thick paper with a decent bit of a gloss to it. *Antic* is 100 pages, *Atari Connection* a little smaller at 80.

The single most irritating thing about all of these magazines (and there are many others we haven't even mentioned) is that as far as they and their huge readerships are concerned the words Spectrum or Acorn, Ultimate, Minter and Smith, don't mean a thing. In Britain the videogame machine was relatively slow to arrive — Sinclair's ZX80 was hard on its heels. As a result dedicated videogames never took massive root here, as they did in the States — they never had time to. Would-be computer types skipped that stage altogether and went straight into small, cheap micros, cassettes and started programming right away. It is doubtful if a purely videogame magazine could even have survived in Britain.

American computer game magazines are all intensely respectable, and for an American market, well-designed. And yet in Britain no equivalent readership is said to exist. There must be something significant in this, if I could only work out what it is.

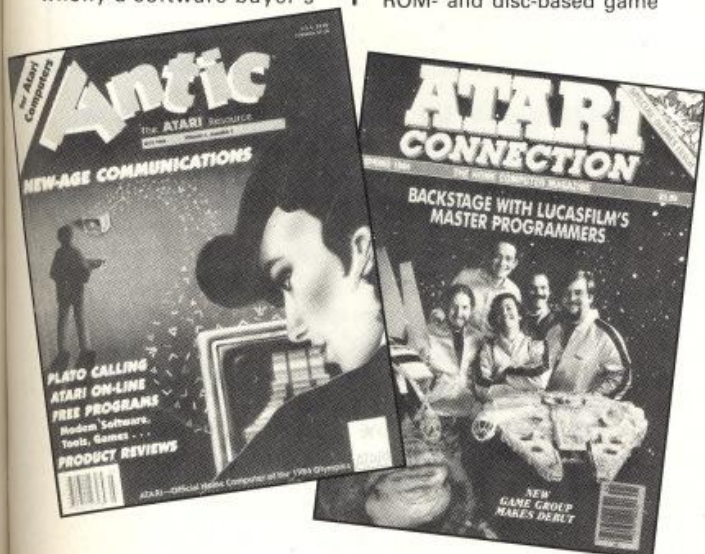
## ALAS, NO LONGER WITH US...

Not all of the vast range of US computer-game mags have stayed the course. One of the first, *Electronic Fun* (incorporating *Computer and Video Games*) transformed itself into *Computer Fun* a few months ago... but lasted a mere two issues. *Mikrokids* (pic), more or less the US equivalent (in content if not style) of our own dear departed *Load Runner*, merged recently with *K-Power* (see main text). It suffered, as *Load Runner* suffered, from a jovial, patronising, educational tone and was — in a word — just too juvenile for words. So down the tube it went.

Then there was *Joystick* — in



this writer's view, probably the best of the originals in both in looks and style (even if it was as videogame-dedicated as its opposition). For two years it gave EG and EF a run and half for their money, but in circulation wars there are seldom winners, only losers, *Joystick* lost.







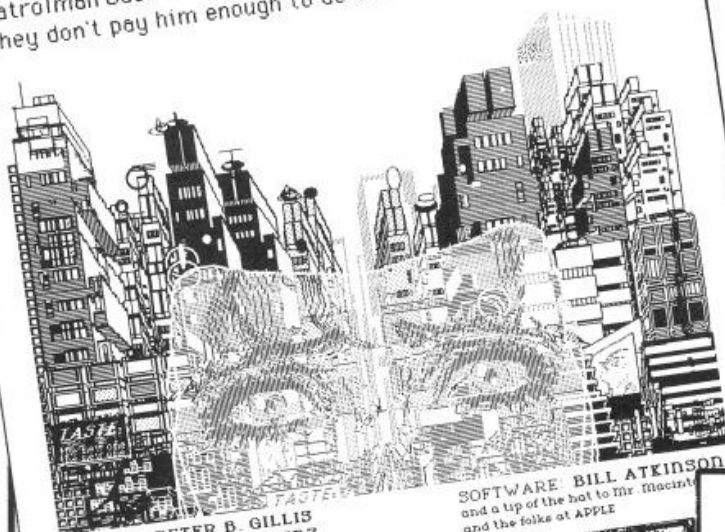
BACK IN THE USA

# What You See

There's only one contender — and no contest — for the USA's Computer of the Year: it's the Apple Macintosh. And although it's only been on sale for less than six months, owners are already using it to stretch a frontier or two. BIG K's MIKE GOLD, for example, also a comics editor and originator (his day job), has discovered Project Zero, the world's first comic produced entirely on a computer, artwork and all. Here's how it was done...

## ZERO

Chicagoland, city of the Big Shoulders, late summer. Patrolman Jack Scratch on another damn patrol. They don't pay him enough to do this. If it isn't one thing...



STORY: PETER B. GILLIS  
ART: MICHAEL SAENZ  
EDITING: MIKE GOLD

SOFTWARE: BILL ATKINSON  
and a tip of the hat to Mr. Macintosh  
and the folks at APPLE



The artwork and lettering on this page was done entirely on an Apple Macintosh computer and an Apple Imagewriter dot-

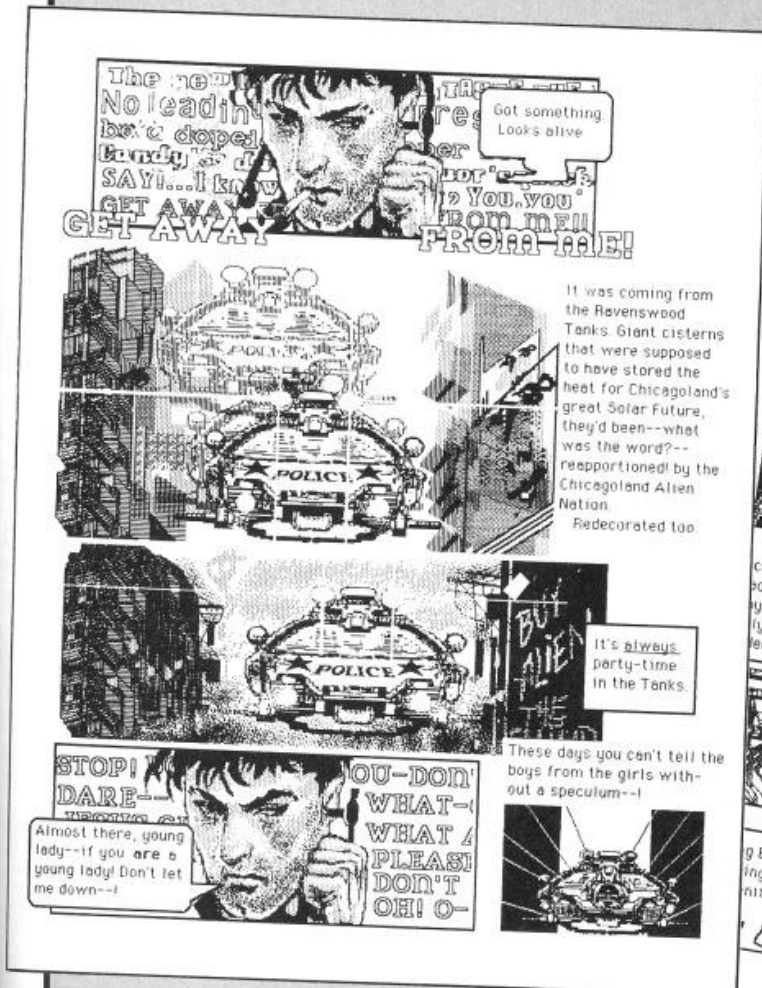
COMPUTER GRAPHICS. They're nothing new — people have been creating this sort of stuff for years. But in order to do so, they had to have constant access to a lot of expensive equipment.

Until now. In January of this year, Apple released the Macintosh — a truly revolutionary machine. For a grown-up computer, it is relatively inexpensive. And unlike the other so-called personal computers, the Mac is totally graphics-orientated.

When the Mac came out, Apple introduced two programs: a decent word-processing package, and an extraordinary graphics package. Most people thought MacPaint was going to be fun, but of little use. After they got their



# Is What You Get



matrix printer. The brainwork and design was done by Human Beings.  
© M. Saenz & P. Gillis 1984.

hands on the program, they quickly changed their minds.

In the hands of painter/comics artist Mike Saenz, MacPaint became a tool to expand the sense of wonder. Saenz is best known for his work as an airbrush artist for Marvel Comics' upmarket Epic Illustrated magazine; MacPaint is about as far from an airbrush as a storytelling artist can get.

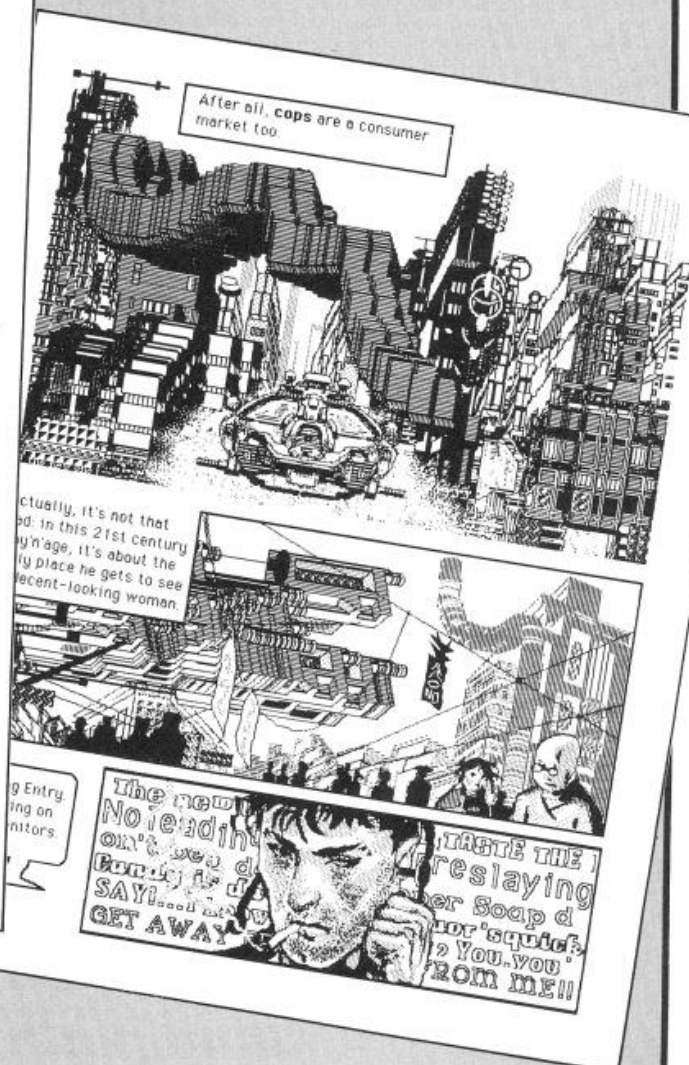
Whereas Saenz's work speaks for itself, you must remember that everything you see here was created from the ground up: nobody ever produced comics this way before. This work represents Mike's efforts after owning a Macintosh for a mere five months.

In reviving his comic book story, Saenz

turned to his friend, fellow Chicagoan Peter Gillis. A comics writer for five years, Gillis has written the adventures of most Marvel superheroes, as well as a number of characters published by leading independent comics publisher First Comics — who have shown a great deal of interest in Mike and Peter's efforts.

Their story — shown here still in development stage and only tentatively entitled *Zero* — was produced last July at the 1984 Chicago Comicon comic art convention to considerable acclaim. Fellow artists were scratching their heads, and writers, editors, and fans alike gazed upon *Zero* if they had just taken a good, hard look at the future.

They most certainly had.





## ZIP CODE

## HARD QUESTIONS

MIKE GOLD sums up the State of the Nations



SO WHY was the Consumer Electronics Show so important?

By now, you've probably been *Consumer Electronics Showed* to death. But retailer response has a life-and-death impact upon new products — and even upon old companies.

The summer show, held in early June in Chicago, is particularly important. Whereas the winter show in Las Vegas is often better attended, the summer show allows manufacturers to unveil their goodies in time for Christmas orders. A majority of home electronics items — particularly games and low-end computers — are sold during the last three months of each year.

Now that the show is behind us, what was unveiled is no longer as important as how the retailers reacted. Will they order it? Will they push it? What are they stuck with from last year?

Of those items in the gaming and computers arena, CES-watchers had four questions:

1) Does anybody care about the so-called "dedicated machines" — those that only play games?

2) Does anybody who is not on Atari's payroll actually believe they're still in the games business?

3) Does anybody believe the Coleco Adam is worth stockroom space?

4) And if Atari and Coleco are both on the ropes, where's the action?

The answers were quite clear: no, not really, no, and Commodore.

Nobody had much interest in hardware that could only play games. Imagic stopped making game carts for all Atari, Intellivision and Coleco formats, concentrating on the C-64, with a lesser interest in Apple, IBM, and the VIC-20. The Coleco people must have been thrilled at that one: while passing over Coleco, Imagic was making software for a machine six months dead.

Indeed, only Parker Brothers and Activision were showing any real support for Atari and Coleco — and neither company put a lot of effort into the Adam. It should be noted Parker and Activision — both with some interesting-sounding games — were producing their wares in just about every conceivable format, save Sinclair. The dedicated machine is an item of the past.

Atari made a strategic mistake. The show is

split up among four different buildings, with most "big boys" in the main facility. The computers and games folks had their own building, but Atari, in a typical fit of corporate megalomania, put its display in the main plant. Many retailers (or more appropriately, their games/computers buyers) never went to the big room, limiting their show leather to their own building. If Atari was playing Mountain, many buyers just weren't interested in coming to Mohammed.

Perhaps it was just as well. Atari's big announcement was its super new 7800 game computer, with its ability to produce almost arcade-quality graphics. Retailers who went over to their exhibit generally told me the last thing they wanted to see from Atari was another dedicated machine: "Just what I need — still another format for Pac-Man," one major buyer told me bitterly.

"If Atari will advertise it, I suppose I'll have to stock it," another buyer stated. "But believe me, I'm not going to get stuck with a lot of those things in my warehouse."

No other software games manufacturer, as of this date, has announced any support for the 7800. Atari is out there all alone.

As for Coleco... well, it was so quiet at the huge Adam exhibit, you could hear a stockholder's blood pressure surge. There was some interest in Coleco's new software, but the Adam's an industry joke.

Coleco just might hold on, but with their basic game unit selling for \$79.00, I wouldn't bet the rent on it.

So who's the winner? Commodore, hands down. But they probably don't believe it.

Everybody loves the C-64. Every software manufacturer had its games available for the C-64. All the educational stuff was being written for the C-64. Other formats had varying levels of support, but everybody — even Atari — was backing the 64.

I doubt Commodore was all that enthusiastic. Their big announcement, the "Plus/4" (the renamed C-264) met a lot of scratched heads. This new unit is not an enhanced version of the 64 — indeed, the graphics and sound are inferior. What it is, is an inexpensive computer with built-in word processor, spreadsheet, database management, and business graphics. But the Plus/4 is to these functions what your fingers are to a calculator: Anybody who needs a computer with those capabilities quickly will realize that for a couple

hundred bucks more, they could buy a low-end Apple or other, similar "real computer".

But The Marketplace, the true basilica of capitalism, patted Commodore on its head and pointed at the goldmine: The Commodore 64. The machine that, in spite of its age, was the true winner of the Consumer Electronics Show sweepstakes.

*Seen Better Days...* Atari's 5200 game player, its 600XL computer, and the long-discussed AtariTel telephone terminal. Atari is making noises like they're still alive, but they haven't manufactured a 200 player since February, and the 600XL is selling like day-old hotcakes. And nobody is actually talking about AtariTel.

*Also Seen Better Days...* IBM's PCjr, and even the mighty PC itself. Nobody's buying the former, and the latter is fighting competition from every conceivable corner. IBM cut the retail price on each nearly 25%, and the PC's built-in memory had been doubled.

IBM's new PC is likely to abandon the 5 1/4" floppy, in favour of the 3 1/2" Sony hard-shell discussed in Apple's Macintosh.

And while I'm on the subject, IBM was hardly pleased to discover Apple's much-ballyhooed Macintosh has become the fastest selling personal computer in history.

## STATESIDE CHATTER

*Stateside Chatter:* So what did I like at the summer CES? Well, you have to take games announcements with a grain of salt — the games are rarely as great as their prototypes — but I found the science fiction novel tie-ins of interest. These include *Hitchhiker's Guide to the Galaxy* (created, in part, by Hitchhiker's author Douglas Adams), Isaac Asimov's *Robots of Dawn*, Ray Bradbury's *Fahrenheit 451*, and adaptations of novels by Arthur C. Clarke, Robert Heinlein, and Larry Niven.

The game I'm having the most fun playing is Penguin Software's *Transylvania*... as written for the Macintosh. Yes, that's right — the one machine that is supposed to be useless for gamers. Well, it is great for adventure gamers, and the Mac's enhanced black-and-white graphics allows *Transylvania* for the Mac to run rings around all other versions.

Next month... Anything but the Consumer Electronics Show...



# ATARI VCS OWNERS LOOK AT THESE PRICES!

**WE STOCK A RANGE OF OVER 200 VCS CARTRIDGES  
AND 90 OF THEM ARE UNDER £10 - SEND FOR FREE CATALOGUE**

Silica Shop the leading mail order specialists in the Video Game and Home Computer world are pleased to offer you some really amazing bargains. We have a range of over 200 cartridges to fit your Atari VCS, over 90 of these are priced at under £10, so there's plenty to choose from if you're looking for a bargain. You may well be wondering how we are able to offer so many cartridges at such good prices. Well, Silica Shop have now been specialising in Atari game software for over 5 years and with a turnover of £1.5m and over 35 staff, we are able to make bulk purchases at lower prices than many of our competitors. We offer a 48 hour delivery service on all software and Postage and Packing is totally free of charge. Should you wish to obtain further details on our extensive cartridge range, we have a 32 page illustrated catalogue available free of charge. We are currently running a 'buy one get one free' offer on many of the Activision, C.B.S. and Parker cartridges. All offers are subject to availability and full details can be found in our catalogue, so send for your copy now. It is our aim to never be knowingly undersold, we will normally match a competitors price providing they actually have the goods in stock. Silica Shop runs an Independent Atari VCS owners club, with regular mailings to over 35,000 members. These mailings include detailed game reviews on the extensive range of Atari and third party cartridge releases. So complete the coupon below and send us your order, or your request for a FREE copy of our catalogue and we will add your name to our Atari VCS mailing list.

**E.T. £4.95 ★ MISSILE COMMAND £7.95  
RAIDERS OF THE LOST ARK £8.95**

**And that's not all - look at the list below and see our other offers:**

<b>£4.95</b> E.T. <b>£5.95</b> Boxing Freeway Kaboom! Laser Blast Skiing Stampede Tennis <b>£6.95</b> Air Sea Battle Barnstorming Brain Games Bridge Challenge Nexar Chopper Commnd Demons to Diam Grand Prix Ice Hockey Maze Craze Night Driver Starmaster Warlords <b>£7.95</b> Adventure Breakout Haunted House	<b>£7.95</b> Missile Command Pinball (Video) Soccer Yars Revenge <b>£8.95</b> China Syndrome Gangster Alley Master Builder Planet Patrol Raiders Lost Ark Tape Worm <b>£9.95</b> 3D Tic Tac Toe Asteroids Astro Attack Basketball Battlezone Berzerk Black Hole Bowling Capture Casino Checkers (Video) Chess (Video) Circus Codebreaker Commun Mutants Dodge'Em Dragonstomper Dream Flight	<b>£9.95</b> Escape Mindstr Felix Return Fireball Fire Fighter Forrest Frogger (c) Galactic Galaxian Golf Ground Zero Indy 500 Killer Sattelites Labyrinth Mafia Magic Puzzle Miniature Golf Missile War Ms Pacman Olympics (Video) Othello Outlaw Overkill Pac Kong Party Mix Phoenix Rabbit Transit Sea Master Skin Diver Sky Diver Sky Scraper Space Eagle Space Raider	<b>£9.95</b> Space Robot Space War Squirrel & Nail Star Raiders Suicide Mission Super Breakout Superman Survival Island Sword of Saros Time Machine Time Race Tom Boy Trick Shot <b>£13.95</b> Combat Math Gran Prix Missile Control Surfers Paradise <b>£14.95</b> Atlantis Commando Attack Cosmic Ark Demon Attack Dragonfire Eggomania Fathom Gopher Infernal Tower Lost Luggage No Escape	<b>£14.95</b> Octopus Picnic Racquetball Riddle of Sphinx Solar Storm <b>£18.95</b> Alpha Beam Backgammon Big Birds Egg Cthc Cookie Monster Defender Football (Realspt) Snoopy/Red Baron Sorcerers Appren Tennis (Realspts) Volleyball (R/spt) <b>£19.00</b> Supercharger <b>£19.95</b> Jawbreaker King Kong Marauder Miner 2049er Polaris Sky Jinks Springer Threshold	<b>£22.95</b> Demolition Herby Jungle Hunt Kangaroo Ram It Shark Attack Space Invaders Stargunner Vanguard <b>£24.95</b> Fast Food <b>£25.95</b> Laser Gates Moonsweeper <b>£27.95</b> ACTIVISION BUY ONE GET ONE** FREE Decathlon* Enduro* Keystone Kapers* Megamania** Oink** Pitfall* Plaque Attack** River Raid* Robot Tank* Sequest** Spider Fighter**	<b>£27.95</b> C.B.S. BUY ANY TITLE GET ONE** FREE Carnival** Donkey Kong** Donkey Kong Jnr** Gorf** MouseTrap Mr Do Smurl** Solar Fox** Time Pilot Venture** Wizard of Wor** Zaxxon <b>£27.95</b> PARKER BUY ANY TITLE GET ONE** FREE Action Force** Amidar** Empire Strks Back Frogger Jedi Arena** Reactor** Sky Skipper** Spiderman**	<b>£27.95</b> RECENT RELEASES BUY ONE GET ONE FREE OFFERS DO NOT APPLY TO THIS SECTION Centipede Crystal Castles Dig Dug Frostbite H.E.R.O. Mario Brothers Millipede Moon Patrol Pac-Man Pengo Pitfall II Pole Position Space Shuttle <b>£29.95</b> PARKER BUY ONE AND GET ANY** FREE CARTRIDGE FROM £27.95 SECTION ON LEFT Death Star Battle Popeye Super Cobra Tutankham Q*Bert
---	---	--	---	--	---	---	---

**SILICA SHOP LIMITED, Dept BIGK 0684, 1-4 The Mews, Hatherley Road,  
Sidcup, Kent, DA14 4DX Telephone: 01-309 1111 or 01-301 1111**

## ORDER FORM:

- ☐ Please send me a copy of your VCS catalogue  
☐ I already own an Atari VCS console  
☐ I am considering purchasing an Atari VCS console

## ADDRESS:

Mr/Mrs/Miss: .....

Address: .....

.....

.....

.....

Postcode: .....

To: SILICA SHOP LTD., Dept BIGK 0684, 1-4 The Mews, Hatherley Road,  
Sidcup, Kent, DA14 4DX Tel: 01 309 1111 or 01 301 1111

- ☐ Please send me the following goods:

QTY	TITLE	£

- ☐ I enclose a Cheque/P.O. payable to Silica Shop Ltd.  
☐ CREDIT CARD - Please debit my Access/Barclaycard/  
 Visa/American Express/Diners Club Card  
 Card Number: .....



# SOFTWARE INVASION...

Let excitement invade your home computer!  
Travel to Alpha Centauri. Enter the Vortex.  
Command the ground missiles, or join the  
shoot-out at the O.K. Corral!

## GUNSMOKE

...the movement of the saloon-bar door was all the warning he needed! At the speed of light his hand moved toward his holster, while a sixth sense warned him of the upper floor window... 3D ACTION, SOUND EFFECTS, BEAUTIFUL GRAPHICS BBC MODEL B £7.95 CASSETTE £11.95 DISK

## 3D BOMB ALLEY

...the continued thunder of the hissing ground missiles had long now deafened him - unless he had some of those bombers down, the fleet, in the small stretch of water was a sitting duck... 3D ACTION, SOUND EFFECTS, BEAUTIFUL GRAPHICS BBC MODEL B £7.95 CASSETTE £11.95 DISK

## ATTACK ON ALPHA CENTAURI

...he punched the key, and the control monitor filled with the picture of bug-eyed wasps attacking from their volcanic nest; decisively he dived to the left and his laser gun burst into action... 3D ACTION, EXPLOSIVE SOUND EFFECTS BBC MODEL B £7.95 CASSETTE £11.95 DISK

## VORTEX

NEW!

## VORTEX

...there was no escape, he had to enter the Vortex and bet on his skills! He grabbed the manual controls and with determination fired both upper deck guns... EXCELLENT SOUND KEYBOARD OR JOYSTICK, BBC MODEL B ALSO AVAILABLE ON ACORN ELECTRON CASSETTE FOR £7.95.

## EAGLES WING

...he glanced at his fuel levels, a few more seconds of flying time. He had to swing round through the burst of fire to reach the Docking platform, he knew, in two minutes the game could be over... GRAPHICS, REALISTIC COMBAT, SUPERB CONDITIONS, BBC MODEL B, £7.95 CASSETTE, £11.95 DISK.

## Spooks & Spiders

...perhaps, very slowly, he could reach the cellar - quietly he started climbing down, his foot slipped as the giant spider dived towards him... SOUND EFFECTS, EXCELLENT GRAPHICS, BBC MODEL B, £7.95 CASSETTE, £11.95 DISK.

**HOW TO ORDER:** You may purchase any of the Games listed from most good BBC Software Stockists, W H Smiths, HMV or your nearest Spectrum Dealer. To order direct, fill in the coupon below with your requirements, make cheque/P.O. payable to: SOFTWARE INVASION and post to us! Please allow 7 to 14 days for delivery.

**OVERSEAS ORDERS:** Please add £0.75p per game ordered.

Do you write your own programmes? If you have an unusual programme which can meet our standards you could be earning more than £250 per week. Why not take advantage of our sought after reputation. Write now!

# SOFTWARE INVASION

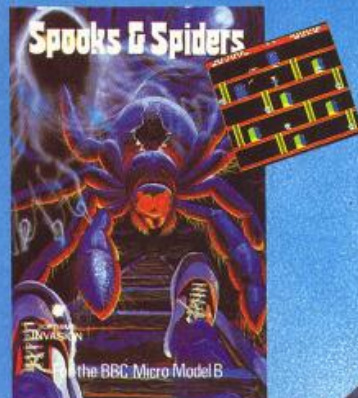
50 Elborough St., Southfields, London SW18 5DN.

● Distributors, Multiple Store and Retailer Group inquiries invited.

● Available from WH Smith, HMV, all Spectrum shops and over 500 retail outlets in the U.K.

NEW!

## Spooks & Spiders



Post to:  
SOFTWARE INVASION 50 ELBOROUGH STREET SOUTHFIELDS LONDON SW18 5DN

GAMES	QNTY	TAPE	DISK	40 TRACK	80 TRACK	£
VORTEX						
VORTEX (Acorn Electron)						
ATTACK ON ALPHA CENTAURI						
3D-BOMB ALLEY						
GUNSMOKE						
EAGLES WING						
SPOOKS & SPIDERS						

I enclose my Cheque/P.O. for £.....

Name \_\_\_\_\_

Address \_\_\_\_\_

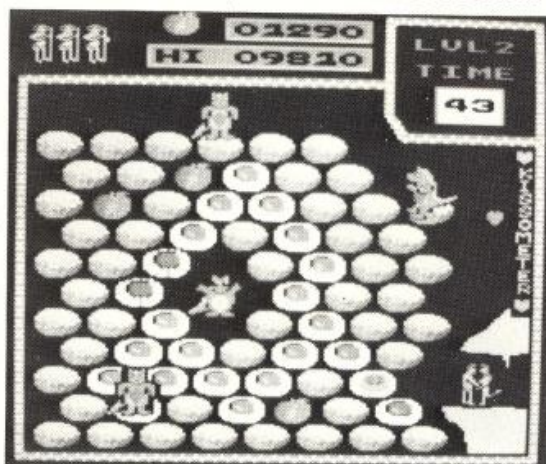
I am a Distributer/Multiple/Retailer/Dealer Please contact me (please delete whichever not applicable).





## OG THE CAVEMAN

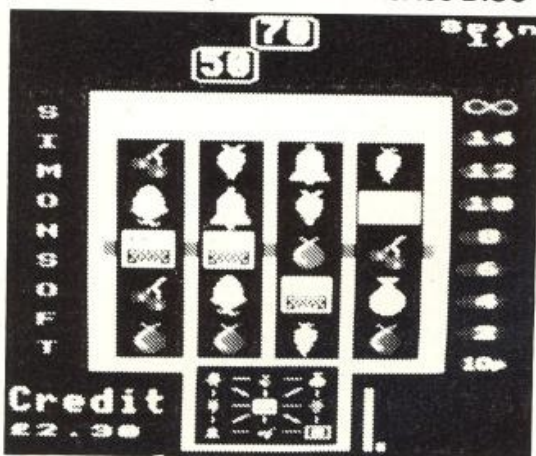
£7.95 BBC 32K, ELECTRON £9.95 DISC



OG is in a calamity. His territory has been taken over by dinosaurs that lay eggs at a really hectic rate. Og must crush the brood before they hatch by jumping on to each and every egg. Og's problems are compounded by a pack of slaving dinosaurs hungry for his blood — and on higher levels by grand old Ma dinosaur herself. Og can use his magic staff to set a trap, but time is precious as Og knows all too well. Big bonuses can be scored for jumping on fruit, and an even bigger bonus for snatching a kiss from his waiting cavewife.

## SUPERFRUIT

£5.95 BBC 32K, ELECTRON £7.95 DISC



Features full colour hi-res graphics, great sound effects, spinning reels, 5 x 4 display of fruit, "bounce" as each reel settles, nudge box, nudge gambles, two-way nudges, swap reels, hold reels, collect win, gamble any win, "loser's gamble" if first gamble is lost, Supergamble for the jackpot and a coin pile that shrinks and grows with your winnings. Separate instruction program. This implementation is in a class of its own.

**Simply the best!**

To order send cheque/P.O. to:

**SIMONSOFT, 25 TATHAM ROAD,  
ABINGDON, OXON OX14 1QB  
TELEPHONE 0235 24140**

Please state whether you have a BBC or an Electron computer.

# MAKE SURE YOUR HOME COMPUTER WORKS... FOR YEARS AND YEARS

Guarantee years of service from your home computer. Protect your investment by joining the MICRO REPAIR CLUB. After your warranty has run out can you afford the manufacturers' repair charges which can be as high as £60 minimum? THE MICRO REPAIR CLUB is a brand new organisation offering a unique scheme which guarantees that should your computer break down, it will be repaired at absolutely no cost. THE MICRO REPAIR CLUB has been formed to save you money and ensure that your computer is in tip-top working condition for years to come.

**A one-year membership that guarantees all repairs to your micro costs only £24.95, with an annual renewal of £14.95.**

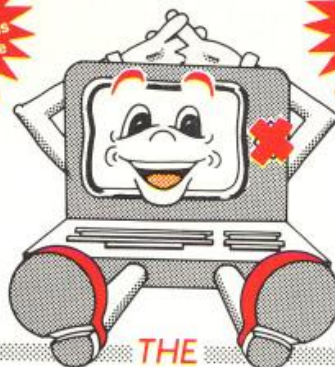
**A two-year membership costs £35.95, three years £46.95. For incredible value for money a four-year membership costs only £57.95.**

**All prices are inclusive of VAT**

THE MICRO REPAIR CLUB is backed by one of the world's largest insurance groups and the actual repair work will be carried out by Computeraid Services, a division of Thorn EMI Information Technology Ltd.

There can be no greater protection. So if you own a Sinclair, BBC, Acorn, Dragon, Commodore or any other home computer join the Club by ringing the HOTLINE on 01-946 7777 or clip the coupon below and send it to:

Micro Repair Club Limited, Swan Court, Mansel Road, Wimbledon, London SW19 4AA.



THE  
**MICRO  
REPAIR  
CLUB**

I would like to join the MICRO REPAIR CLUB for \_\_\_\_\_ years and look forward to receiving my full membership pack.

I enclose a cheque for **£24.95** ☐ One year's membership\*

**£35.95** ☐ Two years **£46.94** ☐ Three years **£57.95** ☐ Four years

Made payable to Micro Repair Club Limited \*Please tick relevant box

Please debit my Visa/Access card No: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

I own a \_\_\_\_\_ home computer and it is in working order.



## LISTING 1

```

10 REM      Extension to Hi-res
20 REM      Printing Routine
30 REM      By Richard Taylor
40 REM
50 CLEAR 64716
60 LET a=64717
70 FOR l=1 TO 7
80 LET t=0: READ v,a$
90 IF LEN a$>2<>INT (LEN a$/2)
THEN GO TO 200
100 FOR c=1 TO LEN a$ STEP 2
110 LET x=CODE a$(c)-48-7*(a$(c
)>="A")
120 LET y=CODE a$(c+1)-48-7*(a$
(c+1)>="A")
130 POKE a,16*x+y
140 LET t=t+16*x+y
150 LET a=a+1
160 NEXT c
170 IF v<>t THEN GO TO 200
180 NEXT l
190 PRINT "Data OK - Now load P
rinting      Routine & Save": STO
P
200 PRINT "ERROR in line ";990+
l*10
210 STOP
1000 DATA 6067,"3E03CD01162A515C
110400193E50BE2802CF122A515C11F0
FC7323722100002258FEC9FE20303BFE
063835FE18303111FDFC6F260029195E
2356EBE9D0FD2D0D"
1010 DATA 8782,"96FDA4FDB2FDC2FD
2DFD8FFD2DFD2DFD09FE09FE09FE
09FE0CFD1FFE1FFE3E3FFDCB57462036
FEA53805D6A5C3100CFE803806FE9030
023E20325EFE2A58"
1020 DATA 8841,"FE225CFECD5FFE2A
58FE7DC6086F300A7CC60867FEB03802
CF042258FEC9F53E20325EFE2A5AFE22
5CFEFB76CD5FFE2A58FE225CFEF1325E
FECD5FFEFD0CB5786"
1030 DATA 6939,"18C52A58FE2E0018
C72A58FE7DA720013C3D6F2258FEC92A
58FE7D3C20023EFF6F2258FEC92A58FE
7C3CFEB038023EAF672258FEC92A58FE
7CA720013C3D6722"
1040 DATA 8446,"58FEC92A58FE7D3C
200C7CC60867FEB03E003802CF046FE6
7F20EB2258FEC911F2FDC3800A11F0FC
CD800AFDCB5786A7C8FDCB57C62A58FE
225AFEC91112FE32"
1050 DATA 6218,"0E5CC3800A11F0FC
CD800A573A0E5CC311221128FE320E5C
C3800A1131FE320F5CC3800A11F0FCCD
800A4F3A0E5CFE16280A3A59FE473A0F
5C4F1803FD46D578"
1060 DATA 1546,"FEB03802CF04ED43
58FEC900000000"

```



# MORE HI-RES PRINTING

...In which RICHARD TAYLOR continues his  
arcane and fearfully knowledgeable series on  
Hi-res programming tools for Sinclair  
Spectrum

LAST MONTH I presented a high resolution printing program. This time I'm going to continue (why not?) by listing an addition to the old routine which improves it so that it can be used directly with PRINT statements — in stark contrast to having to use unwieldy pokes and machine code USR calls.

The augmentation to the original program will also give it some new features, such as actually being able to define the colour the output is printed in, a routine to help make the flicker evident in the first version a thing of the past and to allow you to Hi-Res print whole strings of characters in one fell swoop.

As with the last program, this also is written in machine code. If, like the majority of the computerised population, you've got an instinctive fear of MC, then don't worry; the program comes nicely packaged in a BASIC format — listing 1 for 48K hackers or the second listing for relatively impoverished hackers of the 16K variety. The loader program also incorporates a checksum routine, which should prevent

any crashing machine code or hex hassles.

Before I continue, I feel I should warn you that you'll need to muster a copy of last month's prog from somewhere. If you didn't type it in, or the version you did possess was mislaid/erased/savaged by a mad dog then you'll need to either nick or cadge a copy. Failing that, you'll need last month's mag and some finger power. Once you've sorted that out, you're ready to type in this month's listing. After you have RUN the program (and waited a couple of minutes), you'll get one of two messages; either one instructing you to load the Hi-res printing program from last month and then save or, for the less fortunate, a message informing you that there is an error in a certain DATA statement. If you do get the latter message then I'm afraid that you'll have to find the error in the offending line and correct it before trying your luck at re-running. Once you're successful you can load the code from last month's program with 'LOAD "CODE"' and then make a couple of copies of the new program



## LISTING 2

10 REM Extension to Hi-res  
20 REM Printing Routine  
30 REM By Richard Taylor  
40 REM

50 CLEAR 31948  
60 LET a=31949  
70 FOR l=1 TO 7  
80 LET t=0: READ v,a#  
90 IF LEN a#>2<>INT (LEN a#>2)  
THEN GO TO 200  
100 FOR c=1 TO LEN a# STEP 2  
110 LET x=CODE a#(c)-48-7\*(a#(c  
>)>="A")  
120 LET y=CODE a#(c+1)-48-7\*(a#  
(c+1)>)>="A")  
130 POKE a,16\*x+y  
140 LET t=t+16\*x+y  
150 LET a=a+1  
160 NEXT c  
170 IF v<>t THEN GO TO 200  
180 NEXT l  
190 PRINT "Data OK - Now load P  
rinting Routine & Save": STO  
P  
200 PRINT "ERROR in line ";990+  
l\*10

210 STOP  
1000 DATA 5427,"3E03CD01162A515C  
110400193E50BE2802CF122A515C11F0  
7C73237221000022587EC9FE20303BFE  
063835FE18303111FD7C6F260029195E  
2356EBE9D07D2D7D"  
1010 DATA 6606,"967DA47DB27DC27D  
2D7D8F7D2D7D2D7D097E097E097E  
097EEC7D1F7E1F7E3E3FFDCB57462036  
FEA53005D6A5C3100CFE803806FE9030  
023E20325E7E2A58"  
1020 DATA 7177,"7E225C7ECD5F7E2A  
587E7DC6086F300A7CC60867FEB03802  
CF0422587EC9F53E20325E7E2A5A7E22  
5C7EFB76CD5F7E2A587E225C7EF1325E  
7ECD5F7EFD0CB5786"  
1030 DATA 5915,"18C52A587E2E0018  
C72A587E7DA720013C3D6F22587EC92A  
587E7D3C20023EFF6F22587EC92A587E  
7C3CFEB038023EAF6722587EC92A587E  
7CA720013C3D6722"  
1040 DATA 7422,"587EC92A587E7D3C  
200C7CC60867FEB03E003802CF046FE6  
7F20EB22587EC911F27DC3800A11F07C  
CD800AFDCB5786A7C8FDCB57C62A587E  
225A7EC911127E32"  
1050 DATA 5578,"0E5CC3800A11F07C  
CD800A573A0E5CC3112211287E320E5C  
C3800A11317E320F5CC3800A11F07CCD  
800A4F3A0E5CFE16280A3A597E473A0F  
5C4F1803FD46D578"  
1060 DATA 1418,"FEB03802CF04ED43  
587EC900000000"

with:-

SAVE "HRES PRNT2"CODE  
64717,651 (for 48K hackers)  
SAVE "HRES PRNT2"CODE  
31949,651 (for 16K hackers)  
Remember to VERIFY — it's  
not hard to forget to connect the  
MIC lead up when you save and  
end up with a blank tape.

Now for a description of your  
new program. First of all, you'll  
need to start any program you  
write utilising the routine with a  
RANDOMIZE USR 64717 for 48K  
owners or RANDOMIZE USR  
31949 for 16K owners. You'll no  
doubt be pleased to know that  
this is the only machine code call  
you'll need as the rest can be  
controlled with the more friendly  
PRINT statement. After using this  
call you won't be able to use a  
ZX printer, if you're lucky (sic)  
enough to have one, since any  
output that is usually directed to  
the printer, using LPRINT or  
LLIST, is diverted to the hi-res  
print routine. After that, you can  
output to the Hi-res routine with  
a PRINT #3; command followed  
by... what you want.

The syntax of the new style  
PRINT statement is much the  
same as a normal one except, of  
course, everything is done in Hi-  
res. As usual, you can use the  
normal colour directives to  
change colours but, although the  
program will accept it, the  
INVERSE directive has no effect.  
You can use OVER, but its func-  
tion is somewhat different to  
normal. AT and TAB will work  
but they need to be supplied with  
Hi-res co-ordinates to work on  
i.e. the range for row numbers is  
0 to 175 and 0 to 255 for column  
numbers. What you print is  
defined in the usual way, either  
as strings or as numbers. There's  
no restrictions on doing maths  
or doing a bit of string slicing  
in the statements; you can even put  
something like 1/COS (SQR ((x-  
2\*x3))) if you're mathematically  
minded.

A simple example. The pro-  
gram below will move an "O"  
from the left to the right hand

side of the screen. With this, and  
any other programs, 16K hack-  
ers will have to change any  
occurrence of USR 64717 to USR  
31949.

10 RANDOMIZE USR 64717  
20 FOR a=0 TO 248  
30 PRINT #3; AT 100,a;"O"  
40 NEXT a

Listing 3 is in a high-res ver-  
sion of the bouncing ball pro-  
gram.

When you print strings of  
characters, each successive  
character is printed 8 pixels to  
the right of the previous one,  
taking a new line if necessary, as  
in normal PRINT statements.

Unlike normal print state-  
ments, however, the Hi-res ones  
won't ask you if you want to scroll  
when the printing reaches the  
bottom of the screen, they just  
stop with a "5 Out of Screen"  
error report. The use of printing  
strings of characters is illus-  
trated below, with a short  
example which moves the word  
'SPECTRUM' across the screen:-

10 RANDOMIZE USR 64717  
20 FOR a=0 TO 192  
30 PRINT #3; INK RND\*7; AT  
99,a;"SPECTRUM"  
40 NEXT a

The operation of OVER in Hi-  
res is somewhat different to its  
normal operation. OVER is used  
to implement the anti-flicker  
device the program possesses.  
What the anti-flicker routine does  
is simply allow you to overprint  
a redundant character with a  
space and move it to a new posi-  
tion a redundant character with  
a space and move it to a new  
position in one command. How-  
ever, it is assured that you'll  
never see the character in the  
intermediary stage of being  
overprinted but not re-printed  
(the cause of flicker). What you  
do is, in the PRINT #3 statement,  
put AT (where the space is to be  
printed — i.e. the character's old  
position); OVER 1; AT (the new  
position); (the character you  
want to print)". An example  
would be PRINT #3; AT oldy,  
oldx; OVER 1; AT y,x;"O". This  
technique is used in listing 3 at  
line 40.

## LISTING 3

10 RANDOMIZE USR 64717  
20 LET x=128: LET y=88: LET  
oldx=x: LET oldy=y  
30 LET a=2: LET b=-2  
40 PRINT #3; AT oldy,oldx; OVER  
1; AT y,x;"O"  
50 LET oldx=x: LET oldy=y  
60 LET x=x+a: IF x>248 OR x<0  
THEN LET a=-a: GO TO 60  
70 LET y=y+b: IF y>167 OR y<0  
THEN LET b=-b: GO TO 70  
80 GO TO 40





No. 5: EASTERN FRONT, 1941 (Atari)

# EASTWARD HO!

Operation Barbarossa, 1941, was the code-name for the German invasion of Soviet Russia. The invasion itself came badly unstuck, millions of lives were lost and untold damage caused. The only good result was one of the best ROM computer games ever made. JOHN CONQUEST appraises . . .

NOW THIS is what I call a real computer game, one that uses the Atari as a thinking machine not just a big fast storage bin for jumped-up video games. You play the Germans, the Atari (any model) plays the Russians and, as your team were the real-time losers, it takes mucho brain strain to reverse the result of the German invasion of Russia. Even if there was a loony at head office, the Hums had some very bright boys on the job — you have to do better than they did.

Open the £19.95 box and you get a ROM cartridge, a very useful operational map of the game area — Poland to the Urals, Finland to the Caucasus — and possibly the worst instructions ever.

## MAP

Plug in the cartridge and a joy stick, switch on and you get a small portion (about 1/4th) of the map on screen which you scroll round to get the other installments. There are 1840 'squares' on the map but most of the action will be in the western half. Take a long hard look at that patch of dark green Vs in the left middle. That's the dreaded Pripet Marshes and they are very bad news.

Select offers you Learner, Beginner, Intermediate, Advanced, Expert 1941 and Expert 1942. With Learner you get a single Panzer corps while Uncle Joe had a militia army standing pat on Moscow. The 'object' is to take Moscow but the real idea is to run the unit through the various kinds of terrain to see what happens. (It slows down drastically when it hits marshes, forests and rivers, that's what happens.) so the first lesson you learn is to keep 'em in the open.

Place the cursor on any unit, fire, and its name and current status will appear at the bottom of the screen. Status is in two parts, muster

and combat strengths. The latter is the business end but at advanced levels you have to keep a sharp eye on the balance in case panic sets in. While firing, a Maltakreuz (Maltese cross) appears over German units; move the stick in the direction you want the squareheads to go and the cross moves accordingly. You can enter up to eight orders at a time, changing direction as often as you like, and little green arrows flash along the route with the cross at the terminus.

Panzers moving unchallenged across open country can, in practice, only manage seven orders a turn and that kind of breakout stuff comes much later, after you cross the Dnieper, so what with terrain effect and the commies the chances of all your orders being carried out are pretty remote.

When you've run out of ideas, get the vital sector on screen, press Start and the computer will execute as much and as many of your

orders as it thinks reasonable. At the same time it'll move the Russians, usually to the same places, curse it. Anything to mess you about. All this happens to the sound of muted heavy guns.

Beginner gives you 17 Germans while the computer, no fool, gives itself 32 Russians. The sole object of this limited (northern sector only) exercise is to take Moscow. At all levels a turn is a week and Learner, Beginner and Intermediate run from June 22 to September 28 1941. Beginner is best used to practice co-ordination. It's essential not to create traffic jams, blocking units in behind each other, especially Panzers which need plenty of elbow room.

This is where you learn about the Pripet Marshes. Try sending units through them and see where it gets you. Even at this level there are inevitable, savage and crucial battles round Minsk, Kiev and Smolensk.

On to Intermediate and you

now have to take Moscow, Leningrad and Stalingrad with 30 corps, the godless Reds fielding 66 armies. The front stretches from top to bottom of the map and it's a lot more work. Even so it's not really difficult yet and solid methodical slugging should see you right.

Advanced is something else again. You have 42 corps, with reinforcements trickling in through Poland, Rumania and Hungary, a flashing asterisk indicating availability, plus two Finns waiting for you to take Leningrad. But the Russians have 96 armies and their two best generals, Autumn and Winter, the guys who saw off Napoleon when he tried this game. Mud sets in on October 5 and everything freezes over, the screen going a ghastly white, on November 2, only easing up slightly just before the end of the game, March 29 1942. To add to the fun you also have to get to Gorky, Kuibishev, Kazan and Krasnodar, way out east.





Expert 1941 also runs from June 1941 to March 1942, with 47 Fritzes 1941 also runs from June 1941 to March 1942, with 47 Fritzes facing up to 119 Ivans, and there are three new wrinkles: a massive negative starting score, four useful but delicate Fliegerkorps and you have to put units into specific modes. The Fliegerkorps are Stuka units whose strength can be added to attacks, but their bases have to be kept near the front but well away from any Russians. The modes are standard (do anything), assault, forced march and entrenchment, all of which have pros and cons.

Expert 1942 is identical except that the campaign runs from May 1942 to March 1943, with appropriate set-up. I must admit that I don't know whether these levels are actually winnable — Heinz Guderian I ain't — but the Save routine is vital. You gotta sleep sometime!

It always pays to combine forward planning with simple opportunism. As you can only see part of the battlefield at a time, it's useful to think of the units in a given area as a Group and have some idea of what each Group is trying to do. Exploit gaps, sure, but don't get carried away or the Panzers will be cut off and massacred.

The best way to wipe Bolshy units out is to bracket them between your own and this trick can be pulled off on quite a large scale if your Panzers are doing their job. Of course the Russians can, and do, play this game as well.

*Eastern Front* is the work of designer Chris Crawford who also did the conceptually excellent but functionally rather primitive *Legionnaire* (Avalon Hill). A great strength of his designs is that apart from using the space bar to cancel orders and the Start button to execute them, they're completely joystick operated which makes them far more playable than, for instance, Strategic Simulations' horrendously complex all-keyboard *Battle for Normandy*.

Like all the present generation of wargames, *Eastern Front* (1941) is very obviously based on a board game, Avalon Hill's classic *Stalingrad*. But as a computer game it's in a class of its own, the state of the art of electronic kriegs-

## INTERACTIVE BREAKTHROUGH-OR LOGISTIC PAIN?

RICHARD BURTON checks out *Empires*.

LET ME tell you, this Galactic Domination lark is real hard graft. There are fleets to build and dispatch, mining operations to set up, battles to be fought and alliances to be formed. If that wasn't enough there's the constant threat of that awesome pangalactic entity known as the Post Office to contend with. Heavy stuff.

You're confused? I can dig it. But what we have here is one of the more unusual offerings in the field of computer games — Imperial Software's *Empires*. More than a game really, since Imperial refer to it as a "... Fully interactive strategy game". Interactive it certainly is with room for up to six people (plus one umpire) to play — none of whom need ever meet any of the others. Such a unique, untypical games situation comes about by each player only having his or her own part of the game to contend with and communicating with the others through the umpire.

Let me explain. The basic *Empires* kit comes in a cardboard box looking not unlike a traditional board game. Only a flash containing the words "For 48K Spectrum" gives away the true nature of the game. Inside a styrofoam tray contains four program cassettes, 3 for the players and one for the umpire, individual player rulebooks plus a larger Umpire's manual, four cardboard Galactic Maps and a large wedge of small record cards to keep track of individual movements once the game really gets into its stride. An Expansion Kit (the first of several that are promised) contains 3 more cassettes to bring the player roster up to six plus

fresh supplies of Galactic Maps, record cards, etc.

When you're a long way from home you can never have too many Galactic Maps.

Once the basic kit has been acquired three aspiring, power-hungry tyrants, each with access to a 48K Spectrum, are chosen at random and supplied with one of the player cassettes plus rulebook and all the trimmings. A fourth individual, who knows where the true power lies, takes the umpire's cassette and rulebook and all four depart to their corners (homes?) to prepare to intergalactic conflict.

### NUMBERS

Depending on numbers players find themselves as either a human of the Federation of Earth, a reptilian Warlord of Tyr or a mechanical Robozon of Tyr. Each has a home star system, a population to protect and a budget. However, regardless of race, creed or date of manufacture, the subsequent gameplay is the same.

First the program is loaded and a name and security code chosen which will stay with the player throughout the game. The Main File gives three main options: Military, Strategic and Mining.

Military is to do with building ships (battlecruisers and scout ships) and assigning officers to them from a roster supplied.

Strategic Command handles all military and civilian movement. Solar systems can be scanned for information before committing forces to them. The on-screen map matches the card Galactic Maps supplied with the game so that constant

checks on deployment of forces can be kept.

Once all the data has been fed in the player's first move is complete. The data is SAVED onto a blank cassette and given (sent?) to the umpire. Depending on how widely scattered the players are, this is where the awesome cosmic power of the Post Office could come in, by sending important data into the nearest black hole. A serious flaw in the system, we think.

Assuming that all the players' moves arrive safely and before interest flags the umpire, using his own special program, evaluates the total situation. He has the power to resolve the outcome of battles, communicate with players individually, even (sneaky devil) send false data or garbled messages.

Once battles have been decided, claims staked, etc., the updated blanks are returned to the players ready to begin the second move.

As the game progresses alliances can be formed between players, secret messages exchanged, etc. Be warned that *Empires* could go on for a very long time — games of months in duration are not expected to be uncommon.

The objective is simply to trash every other race in the universe and become the Supreme Ruler. There are only three ways to lose: If a player's population drops below a danger point (not very likely); total bankruptcy; or an enemy race destroying a home planet's defences (most likely).

Without doubt Imperial Software have an extremely impressive product in *Empires*. It's state-of-the-art in computer strategy games. Their approach is thoroughly professional. Screen graphics are very good with fast, menu-driven commands. *Empires* is complex and stimulating enough to keep a player's attention for a long time (it will need to) and has the potential for expansion (already started). But — it has to be said — who will buy it?







## How Hardware Influences programming

**T**HE MOTOROLA 68000 chip on its own, unattached to anything, would be as much use as a dog's dinner. To make it useful you have to attach memory (normally in the form of RAM, ROM and EPROMs) and I/O devices (often known as 'Ports').

The chip is connected to these by what is commonly known as a 'Bus', in actual fact by three distinct busses, 'Control', 'Data' and 'Address'.

The function of Address Bus is to select the correct 'slot' or location. The function of the Data Bus is to carry data from/to the selected (by the address bus) location. Finally the Control Bus governs and monitors the state of the micro hardware, especially the interaction between memory and the 68000.

Each Bus is a collection of electrical lines. Generally speaking these lines can be on or off (i.e., set or clear), thus conveying binary information. In the case of the Data Bus these number 16 and are numbered from 0 to 15. The Address Bus has 23 lines and they are numbered 1 to 23.

asking 'what has happened to Address line zero?' — where the hardware starts to affect the software. When there isn't a zero address line then a processor cannot select odd numbered addresses (binary remember) because it cannot switch on or off a non-existent line. This therefore induces the processor to think of the memory as occurring on even boundaries. Because of this, if you try and access odd memory via an Address Register or the Program Counter then an error will occur. This error is called an Address Exception.

There are only 23 Address lines emanating from the 68000 and 68010; the top eight bits of the Program Counter and Address Registers are thus superfluous, and presumably are there only for upward compatibility with future Motorola 68000 based products. Just to confuse matters the 68008 chip (as used in the Sinclair QL) only has 20 Address lines, numbered 0 to 19, available from the chip itself. This means that only one(!) megabyte of memory is directly addressable if you are using the 68008 variety. Sharp-eyed readers among you may notice that there is an A0 address line; this is because the 68008 reads its data in one-byte chunks (there are only 8 Data

## The Status Register Format

Bit	Flag	
0	Carry	
1	Overflow	(C)
2	Zero	(V)
3	Negative	(Z)
4	Extend	(N)
5-7	Unused	(X)
8	Interrupt mask 0	
9	Interrupt mask 1	
10	Interrupt mask 2	
11	Unused	
12	Unused	
13	Supervisor	(S)
14	Unused	
15	Trace	(T)

tains the Data Registers D0 to D7, Address Registers A0 to A7, a program counter and a status register.

## Data Registers

Data Registers are general purpose registers. They can operate on byte, word and long word sized data. They can be used as indexes in PC and Address Register Indirect addressing modes. Unfortunately they cannot directly point to memory locations.

## Program Counter

In the 68000 the Program Counter is a 32-bits wide Register. It functions as a pointer to a memory address where the next instruction to

## Supervisor Mode

The Bits can be either Set or Clear. The Status Register can be modified. What can be modified depends on the register itself — to be specific, it depends on the Supervisor Flag. If it is set then the 68000 is in Supervisor Mode of processing, otherwise User mode.

The difference between these two modes is mainly one of privilege. In Supervisor Mode you are allowed to execute any legal instruction. In User Mode there are a few instructions you cannot execute, these being mainly instructions that would allow you to enter Supervisor Mode! If not in Supervisor

# ALL PRESENT AND CORRECT

The Control Bus has many different functions to perform in its role and each are individually named such as 'DTACK' and 'UDS'.

Those of you who know about address lines may be

Bus lines). It still maintains compatibility with the 68000 by forcing you to use even address boundaries.

## 68000 Architecture

THE MOTOROLA 68000 con-

...Snaps **BERNARD TURNER**, dashing of a crisp salute as he sums up his epic 3-porter on the 68000 Wonder Chip

be executed is contained. Each time the 68000 wants to start a new instruction it consults the Program Counter (PC) as to from where in memory it should fetch the new instruction.

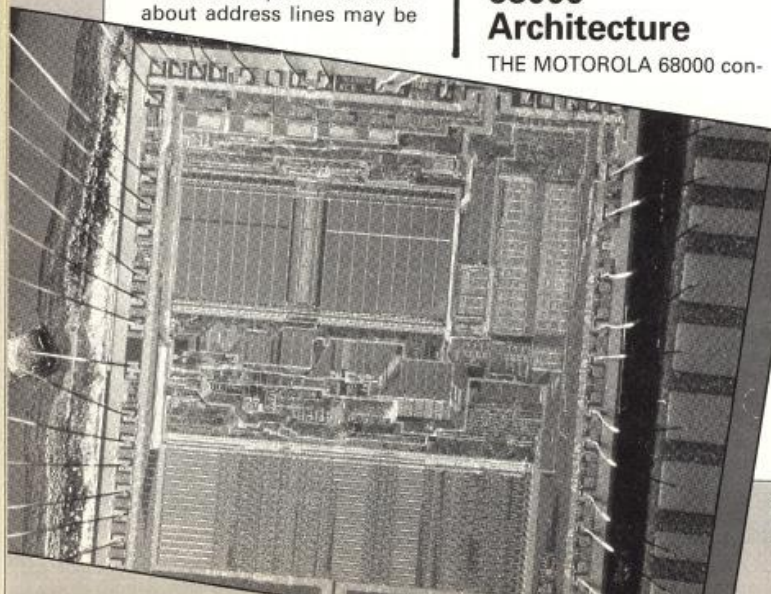
## Status Register

The Status Register reflects and influences the MPU as it is processing. It is only 16 bits in size and is distinctly separable between its top and bottom 8 bits. The top byte is known as the System Byte. The bottom byte is known as the User Byte or Condition Code Register.

Mode then it should only be possible to enter it by an Exception or by a 'entrance' made available to you by the person who programmed the Supervisor Mode portion.

## Trace Mode

The most valuable bonus of Supervisor Mode is its ability to single-step through each instruction. 'Single-stepping' is the execution of a single instruction, then normally a jump to a monitor routine, which allows you to examine and modify processor registers. You can then execute the next instruction and so on. Single-stepping is initiated by setting the Trace Bit (T) to one.







# blue chip computers

**\*FREE\***

POSTAGE AND PACKING ON ALL ORDERS OVER £10.00

ADD £1.00 TO ORDERS UNDER £10.00. UK MAINLAND ONLY  
WESTERN EUROPE + 10%  
ELSEWHERE + 15%

## Grand Summer Sale

## SALE

**We pride ourselves on a fast delivery  
& customer satisfaction**

**AUTHORISED  
TEXAS INSTRUMENT  
DEALER**

### TEXAS INSTRUMENTS TI99/4A

	USUAL PRICE	SALE PRICE
TI WRITER	£89.95	£59.95
TI CASSETTE RECORDER	49.95	39.95
TI CHESS	29.95	26.95
TI MUNCHMAN	19.95	17.95
DONKEY KONG	24.95	21.95
PACK MAN	19.95	18.95
DEFENDER	19.95	18.95
TI INVADERS	14.95	13.95
TI 5 a side SOCCER	10.95	9.95
TI CAR WARS	10.95	9.95
TI ATTACK	10.95	9.95
TI TOMBSTONE CITY	10.95	9.95
TI ZERO ZAP	10.95	9.95
TI MIND CHALLENGE	10.95	9.95
TI OLDIES BUT GOODIES	10.95	9.95
TEACH YOURSELF BASIC	9.95	4.95
TEACH YOURSELF EX BASIC	13.95	9.95
PROGRAMMING AIDS 1	10.95	8.95
STARTER PACK	9.95	8.95
GAME WRITER PACK	9.95	8.95
EARLY READING	10.95	9.95
EARLY LEARNING FUN	10.95	9.95
BEGINNING GRAMMAR	10.95	9.95
ADD AND SUBTRACT NO1	10.95	9.95
ADD AND SUBTRACT NO2	10.95	9.95
ALIGATOR MIX	14.95	10.95
NUMBER MAGIC	10.95	9.95
ALIEN ADDITION	10.95	9.95
MINUS MISSION	10.95	9.95
METEOR MULTIPLICATION	10.95	9.95
DEMOLITION DIVISION	10.95	9.95
CASSETTE CABLE LEAD	9.95	7.95
QUICK SHOT 11 JOYSTICK & INTERFACE	24.95	19.95
EDITOR ASSEMBLER MANUAL BASIC	13.95	9.95
ADVENTURE MANIA	7.95	5.95
MANIA	7.95	5.95
ROBO-PADS	6.95	5.95
THE BLACK TOWER	5.95	5.50
RUNNER ON TREITON	5.95	5.50
BUILDER/MINEFIELD	5.95	5.50
TROLL KING	5.95	5.50
DADDIES HOT ROD	5.95	5.50
HUNCH BACK HAVOC	5.95	5.50
FUNPAC	6.95	5.95
CRYSTAL SWEEP	7.95	6.95
EXTENDED BASIC		
BOMBS AWAY	7.95	5.95
FROGGIE	6.95	5.95
FROGLET/BATTLESHIPS	9.95	7.95
PEARL DIVER	7.95	6.95
OPERATION MOON	7.95	6.95
ASCOT STAKES	7.95	6.95

HOPIT
CHARACTER GENERATOR
BLASTEROIDS
BOMBS AWAY
BOUNCER
KONG
LIONEL AND THE LADDERS
ABM CONTROL/FROGLET
MINI MEMORY
SNEAKIES
KIPPY NIGHTMARE
OTHELLO
TOAD GRAPHICS
DIYAD

### 48K SPECTRUM

VOLCANIC PLANET
BLOCKADE RUNNER
GOLD RUSH
HUNCH BACK
PACCACUDA
LANCER LORDS
BIRDS
POTTY PAINTER
ALCHEMIST
PIN BALL WIZARD
JUMPIN JACK
ESCAPE M.C.P.
QUACKERS
FOOTBALL MANAGER
GOLF
HUNTER KILLER
SWITCHABLE PROGRAMME
JOYSTICK INTERFACE

### VIC 20

#### All Rom Cartridge

SARGON CHESS
PIRATE COVE
SUPER LANDER
JUPITER LANDER
RAT RACE
ROAD RACER
MINE MADNESS
SUBMARINE COMMANDER
MOLE ATTACK
MACHINE CODE MONITOR

	USUAL PRICE	SALE PRICE
HOPIT	7.95	6.95
CHARACTER GENERATOR	7.95	6.95
BLASTEROIDS	7.95	6.95
BOMBS AWAY	7.95	6.95
BOUNCER	9.95	7.95
KONG	9.95	7.95
LIONEL AND THE LADDERS	9.95	7.95
ABM CONTROL/FROGLET	9.95	7.95
MINI MEMORY		
SNEAKIES	7.95	6.95
KIPPY NIGHTMARE	9.95	7.95
OTHELLO	6.95	5.95
TOAD GRAPHICS	6.95	5.95
DIYAD	6.95	5.95

VOLCANIC PLANET	7.95	4.95
BLOCKADE RUNNER	7.95	4.95
GOLD RUSH	7.95	4.95
HUNCH BACK	6.90	4.95
PACCACUDA	6.95	4.95
LANCER LORDS	6.95	4.95
BIRDS	6.95	4.95
POTTY PAINTER	6.95	4.95
ALCHEMIST	5.95	4.50
PIN BALL WIZARD	7.95	4.95
JUMPIN JACK	5.95	4.50
ESCAPE M.C.P.	6.95	4.95
QUACKERS	6.95	4.95
FOOTBALL MANAGER	6.95	4.50
GOLF	6.95	4.50
HUNTER KILLER	8.95	4.95
SWITCHABLE PROGRAMME		
JOYSTICK INTERFACE	24.95	19.95

SARGON CHESS	9.95	7.95
PIRATE COVE	9.95	7.95
SUPER LANDER	9.95	7.95
JUPITER LANDER	9.95	7.95
RAT RACE	9.95	7.95
ROAD RACER	9.95	7.95
MINE MADNESS	19.95	11.95
SUBMARINE COMMANDER	28.95	17.95
MOLE ATTACK	9.95	7.95
MACHINE CODE MONITOR	39.95	19.95

### VIC 20 CASSETTES

FROGGER	5.95	4.50
SUPER VADERS	6.95	4.50
CENTROPODS	5.95	4.50
ANTI MATTER SPLATTER	5.95	4.50
THE CATCH	5.95	4.50
CRITTERS	6.95	4.50
ENGLISH INVADERS	5.95	4.50
PACCACUDA	5.95	4.50
QUACKERS	5.95	4.50

### EXPANDED 8 OR 16 K

MOVER MANIA	7.95	4.95
BIRDS AND APPLE TREES	6.95	4.50
ENGINE SHED	6.95	4.50
LUNAR RESCUE	6.95	4.50
CYCLONS	6.95	4.50
MYRAID	6.95	4.50
CRITTERS	6.95	4.50

### COMMODORE 64

SNOWBALL (ADVENT)	9.95	7.50
COLLOSAL ADVENTURE	9.95	7.50
HUNGRY HORACE	7.95	5.50
QUASAR (BUCK ROGER)	8.95	5.95
ALIEN RESCUE	8.95	5.95
WANDA	7.95	5.50
QUAK ATTACK	7.95	5.50
ZOIDS	7.95	5.50
BUG SQUAD	7.95	5.50
SIREN CITY	7.95	5.50
KONG	7.95	5.95
ESCAPE M.C.P.	7.95	5.50
PARATROOPERS	7.95	5.50
JUMPIN JACK	8.95	5.95
JEEPERS CREEPERS	7.95	5.50
REVELATION	7.95	5.50
ARMAGEDDON	7.95	5.50
WIDOWS REVENGE	7.95	5.50
KICK OFF	6.95	4.95
EXTERMINATOR	6.95	4.95
QUIZZER	6.95	4.95
WORD WIZZARD	6.95	4.95
METRO BLITZ	7.95	5.50
3-D SPACE	6.95	4.95
ATTACK MUTANT CAMELS	7.50	4.95
REVENGE MUTANT CAMELS	7.50	4.95

SEND CHEQUE OR POSTAL ORDER NOW TO:

BLUE CHIP COMPUTERS, 16 Clapgate Lane, Goose Green, Wigan WN3 6RN

STATING NAME, ADDRESS, TEL. No. & GOODS

REQUIRED.

OR PHONE TELE SALES ON WIGAN (0942) 495753

WITH YOUR ACCESS/BARCLAY CARD NO.

\* General enquiries ring (0942) 322543

TO: BLUE CHIP COMPUTERS, 16 Clapgate Lane, WIGAN.

Please send me .....

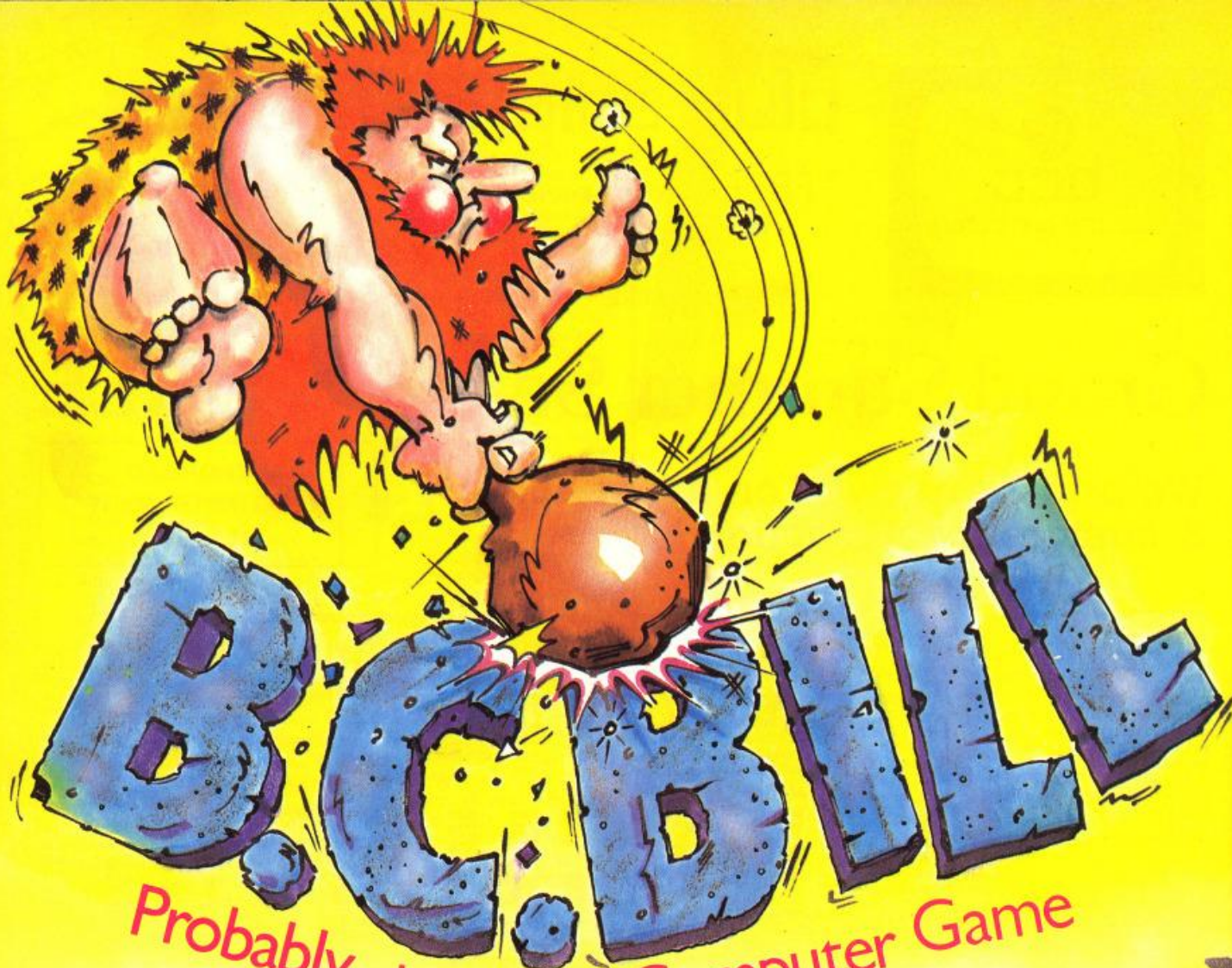
Name .....

Address .....

Tel. ....

I enclose a cheque/p. order to the value of £ .....





## Probably the Best Computer Game since the Dawn of Man

### B.C. BILL

At the Dawn of Time when men were chauvinists and women let them get away with it B.C. Bill ruled his kingdom ....

You have to support a hungry and ever increasing family and fight survival against the marauding dinosaurs intent on eating you, your food and wives.

Armed only with a club of wood you go into battle to protect what is rightly yours!

ALL THESE GREAT GAMES ARE AVAILABLE FROM IMAGINE/BEAU JOLLY

#### SPECTRUM 48

SPE 48 8 ZZOOM  
SPE 48 9 ZIP ZAP  
SPE 48 10 STONKERS  
SPE 48 11 ALCHEMIST  
SPE 48 12 PEDRO  
SPE 48 14 COSMIC CRUISER  
SPE 48 15 B.C. BILL

#### SPECTRUM 16K

SPE 16 1 ARCADIA  
SPE 16 5 AH DIDDUMS  
SPE 16 6 MOLAR MAUL  
SPE 16 7 JUMPING JACK

#### VIC 20

VIC 20 1 ARCADIA  
VIC 20 2 WACKY WAITERS  
VIC 20 3 CATCHA SNATCHA  
VIC 20 4 BEWITCHED

#### COMMODORE 64

COM 64 1 ARCADIA  
COM 64 12 PEDRO  
COM 64 14 COSMIC CRUISER  
COM 64 15 B.C. BILL

#### DRAGON

DRA 32 12 PEDRO  
DRA 32 13 LEGGIT  
DRA 32 14 COSMIC CRUISER  
DRA 32 15 B.C. BILL

#### ELECTRON

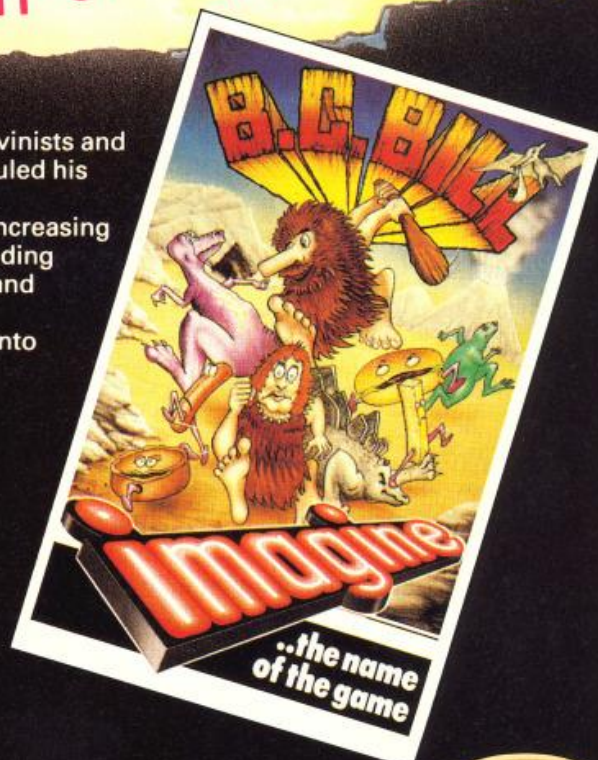
ETRON 12 PEDRO

#### ATARI

ATARI 13 LEGGIT

#### BBC 32

BBCB 12 PEDRO  
BBCB 15 B.C. BILL



A Fantastic NEW Game from



If you have any difficulty obtaining any of these games please write to: Beau-Jolly Ltd., 19A New Broadway, Ealing, London W5 5AW.



# A SUPERB RANGE OF GAMES SOFTWARE FOR SHARP MZ-7000 SERIES



**FROGGER — £6.95**

This most popular of arcade games has been totally recreated for the Sharp computer. Superb graphics and as fast as you like from beginner's level up to 'Superhuman'. Get each of four frogs over the busy motorway, then hop from boat to raft to log to crocodile until safely home sitting on a lily pad. Terrific fun.



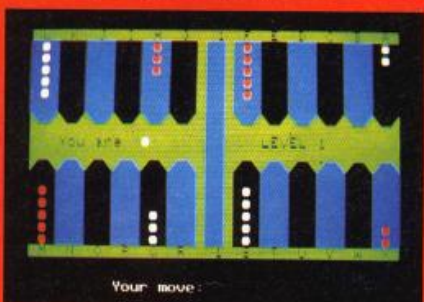
**SPACE PANIC — £7.95**

How long can you survive in the multi-storey building filled with alien bugs. This machine-code programme accurately simulates the arcade game where you climb ladders and dig holes to catch the aliens then fill them in again once they are caught. The red ones must fall through one floor, the green ones, two floors and white ones, three floors. Red aliens who have time to dig themselves out get rather cross and become green. PANIC!! Joy stick or keyboard control.



**GALAXIANS — £7.95**

A high-speed machine-code version of the popular arcade game where the massed space invaders must be cleared from the skies. After a few seconds they will begin to swoop and dive at you, showering you with scatter bombs as they go. The game becomes progressively more demanding as you kill more and more of the marauding aliens. Verv entertaining — hours of fun!!! Joy stick or keyboard control.



**BACKGAMMON — £7.95**

Now available for the MZ-700, this traditional board game can now be played against the computer. Simple to follow instructions for the beginner — higher levels available for the more experienced player.



**NIGHTMARE PARK — £6.95**

If you have never played this type of game before, you're in for a treat. As you make your way along the intricate pathways to the exit, you are constantly given tasks to perform or games to play. Each of these must be successfully completed before you are allowed to continue. It takes a lot of doing. You must remain quick and alert at all times. A little luck is handy. Amazing graphics and sounds!!!



**FIGHTER COMMAND — £6.95**

A mission flown completely on instruments where you are pursuing a fleet of ten enemy aircraft fleeing from you. They will show on your long range radar screen and you must manoeuvre your craft to get them within range of your missiles. If you get too near, they will fire at you and warp away to safety. You only have one chance to destroy incoming missiles with your lasers.



**CHESS — £9.95**

Suitable for the rank beginner through to the more experienced player, this Chess program may be used in three different ways.

1. As a referee between two players, checking for valid moves, CHECK and CHECKMATE situations.
  2. As an opponent with 14 levels of intelligence to match your skills.
  3. As a teaching aid when asked to play against itself or show you the best move if you get into difficulties.
- Long games may be saved on cassette for completion at a later time and a print-out of all moves made is available.



**XANAGRAMS — £9.95**

Not only a terrific spelling test but also a great game. You are asked to guess up to five words, represented by blocks on the screen in a crossword format. All the letters that you need are shown on the right of the screen in alphabetical order and the computer will give you the first letter if you ask it nicely. Suits almost any age with 3 skill levels and from 1 to 5 words to be guessed. Really habit-forming!!!



**LIGHTNING PATROL — £3.95**

Choose your rank in the RAF and you are immediately sent on a mission to catch and shoot down ten enemy Mirage jets that are fleeing after their attack on your airbase. You must manoeuvre your plane to get them in your gun-sights whilst they are weaving about the sky to avoid being hit. Limited ammunition and fuel available so efficiency and accuracy are all important to your completion of the mission. Promotion for the successful but poor performances can mean you are asked to leave the air force. Joy stick or keyboard control.

**PLUS AN EXTENSIVE RANGE OF OVER 100 GAMES, BUSINESS AND EDUCATIONAL SOFTWARE FOR THE SHARP MZ 700 SERIES — FREE COLOUR CATALOGUE AVAILABLE**

**SOLO SOFTWARE**

TOMBS OF KARNAK — DRAGON CAVES — ENCOUNTER — FLAME OF NIGHTMARE — CHOCK-A-BLOCK — SCOOP — CLUB GOLF — CHESS — APOCALYPSE — SAFE-CRACKER — GOLD MINER — AT-MOUSE — PARA-SHOOT — TYPE TRAINER — ACE RACER — FIVE YOURS — SNAKER — STARTREK — CHANNEL TUNNEL — CONVA — MULTI-LINGUIST — BASIC TUTORIAL — SCOOP — WORD INVADE — MASTER — KINGS & QUEENS — MAP OF UK — MATHS QUEST — AL

PLAIN — GLOBAL WAR III — FIGHTER COMMAND — FROGGER — PANIC — BACKGAMMON — MOON FLITE — CHESS — ADVANCED — DONS C.W.E. — LIGHTNING PATROL — COMPUT-A-SLOT — SUPE — E.T. — POLARIS — MIDAS — DOMINATION — INCA GOLD — UP — MATHS — TYPE TRAINER — MATHS TANK — COUNTER BLAST — ERN MATHS — MIGHTY WRITER — BIKER — GET LOST — MUSIC — DATABASE FILER — SPREADSHEET — WORD PROCESSOR —



95B Blackpole Trading Estate West, Worcester Telephone (0905) 58351 (24 hrs)





# MW

# MW

## THE MICRO WORKSHOP MICRO COMPUTER SPECIALISTS

(Spectrum Group Member)

Software and hardware over the counter for Sinclair Spectrum, BBC, Vic-20, CBM-64, AMSTRAD, Memotech, Atari, etc.

- |                |              |
|----------------|--------------|
| * COMPUTERS    | * RAMPACKS   |
| * JOYSTICKS    | * BOOKS      |
| * KEYBOARDS    | * DISCS      |
| * TAPES        | * LIGHT PENS |
| * COMPONENTS * |              |

Business/Serious Programs available  
Located directly opposite Epsom Main Line  
Station. Visit us or ring for friendly service. See  
and try before you buy.

Overseas/Export orders welcome

**12 STATION APPROACH  
EPSOM, SURREY  
EPSOM 21533**

## PGSL

49 Knightswood  
St Johns, Woking  
Surrey GU21 3PU

P P G S L  
P P G S L  
G S L  
S L

**OVER 500 PROGRAMS  
PLUS EDUCATIONAL & BUSINESS SOFTWARE**

**THIS MONTH'S SPECIAL OFFER:  
10% OFF ANY PROGRAM**

SELECTION	RRP	OFFER
1 Tornado Low Level (Spec)	£ 5.95	£ 5.35
2 Tales of the Arabian Nights (CBM)	£ 7.00	£ 6.30
3 Sabre Wulf (Spec)	£ 9.95	£ 8.95
4 Beach Head (CBM)	£ 9.95	£ 8.95
5 War of the Worlds (Spec)	£ 9.95	£ 5.35
6 Trashman (64) (CBM)	£ 7.95	£ 7.15
7 World Cup (Spec)	£ 6.95	£ 6.25
8 Valhalla (CBM)	£14.95	£13.45
9 3D Tank Dual (Spec)	£ 5.95	£ 5.35
10 Android 2 (CBM)	£ 6.90	£ 6.20

We also stock over 500 programs for most other machines  
Send large SAE (A4 size) for a catalogue

### HARDWARE

Most printers available at excellent discounted prices  
STAR EPSON - - -

ORDER FORM: Tick the program number required  
1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐  
I enclose cheque/PO payable to PGSL for £

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Post to PGSL, 49 Knightswood, St Johns, Woking, Surrey GU21 3PU

## Commodore 64 & BBC 'Model B' Users

NOW YOU CAN  
JOIN IN THE FUN  
OF KEVIN TOMS' No. 1 Football Game



## FOOTBALL MANAGER

### Football Manager

Designed by Kevin Toms

This outstanding game of skill and strategy is now widely available and you can join the many thousands of satisfied customers who have purchased the game.



Action from the game (CBM 64)

'The Highlight sequences are pure magic. And then you have to sit on the sidelines and sweat it out! Completely fantastic. I want one!'

Quote by Charlie Nicholas  
Reprinted from Big K

### Some of the features of the game:

- Matches in 3D graphics
- Transfer market
- Promotion and relegation
- F.A. Cup matches
- Injury problems
- Full league tables
- Four Divisions
- Pick your own team for each match
- As many seasons as you like
- Managerial rating
- 7 skill levels
- Save game facility

Prices: BBC Model B £7.95  
Commodore 64 £7.95  
Spectrum 48K £6.95  
ZX81 16K £5.95

(N.B. 3D GRAPHICS ARE NOT INCLUDED IN THE ZX81 VERSION)  
Overseas orders add £1.50

Strategy Game of the Year, 1983 (Nominated)

Golden Joystick Awards

To order by mail (p&p free) send  
cheques or postal order to:



## Addictive

available from computer software stockists  
nationwide including selected branches of

John Manzius

**Addictive Games**

7A RICHMONDHILL, BOURNEMOUTH BH2 6HE

## The name of the Game...



## ..IS COMING!



Open  
8.30-6pm  
Mon to Fri  
& 9.00-1pm  
Sat  
Closed on Satur-  
days preceding Bank  
Holidays

# VicOdden's

## of London Bridge

**Software Specialist**

6, London  
Bridge Walk  
London SE1  
Tel:  
01- 403 1988

Prices correct at time of going to press E&OE  
All offers subject to availability

## Soft ware. Daft prices.

### Software for the ZX Spectrum

	S.R.P.	OUR PRICE		S.R.P.	OUR PRICE
Missile Defence	£5.95	<b>£3.00</b>	Knot in 3D	£5.95	<b>£3.00</b>
All ASP Software	£6.50	<b>£4.00</b>	3D Tunnel	£5.95	<b>£3.00</b>
StarTrek 3000	£5.95	<b>£3.00</b>	Rabbit Shoot	£5.95	<b>£3.00</b>
Home Accounts	£19.95	<b>£12.95</b>	Nowotnik Puzzle	£5.95	<b>£3.00</b>
Stock Control	£19.95	<b>£12.95</b>	Chequered Flag	£6.95	<b>£4.00</b>
Database	£19.95	<b>£12.95</b>	Lazer Zone	£6.95	<b>£3.00</b>
Mailist	£19.95	<b>£12.95</b>	Traxx	£6.95	<b>£3.00</b>
Easiledger	£19.95	<b>£12.95</b>	French Vocab	£6.95	<b>£4.00</b>
Pedro	£5.50	<b>£3.00</b>	Young Learner	£6.95	<b>£4.00</b>
3D Haunted	£6.95	<b>£3.00</b>	Astro-maths	£7.95	<b>£4.00</b>
Hedges			Star Reader	£7.95	<b>£4.00</b>
Use & learn	£9.95	<b>£6.95</b>	Chemistry	£7.95	<b>£4.00</b>

### Software for the Dragon

	S.R.P.	OUR PRICE		S.R.P.	OUR PRICE
Transylvanian	£6.95	<b>£3.00</b>	Trace Race	£6.95	<b>£3.00</b>
Tower			St George/Dragon	£6.95	<b>£3.00</b>
UGH!	£6.95	<b>£3.00</b>			

### Software for the oric

	S.R.P.	OUR PRICE		S.R.P.	OUR PRICE
Harrier Attack	£6.95	<b>£4.00</b>	Starfighter	£6.95	<b>£4.00</b>

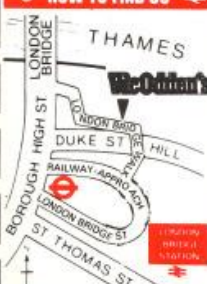
### Software for the BBC

	S.R.P.	OUR PRICE
Dictator	£6.95	<b>£4.00</b>

**If you see these prices anywhere else don't tell us, tell the Police!**

**WE ALSO STOCK A WIDE RANGE OF OTHER SOFTWARE, PLEASE CALL IN & SEE**

#### HOW TO FIND US



**spectrum**  
CHARGE CARD  
**BARCLAYCARD**  
VISA  
Access, Visa, Trustcard & Creditcharge orders can be accepted by post or by telephone on 01-403 1988, 01-407 6833, during normal working hours. There is no surcharge on any credit card orders.  
**ALL MAIL ORDERS to**  
6 London Bridge Walk,  
London SE1 2SX

#### INSTANT CREDIT

**UP TO  
£1000**

Up to £1000 Instant Credit available to callers who hold a current Clearing Bank Bankers Card or Credit Card for identification. Mail Order customers can apply for a Budget Account Card - please send for application form.

#### VicOdden's

#### MAIL ORDER SERVICE

All mail order & phone enquiries to 6 London Bridge Walk 403 1988

Name .....

Address .....

CC 9/84

**MAIL ORDER POST FREE!**



### WANNA WIN A FIVER?

Yes, you too can join the formidable team of literati assembled on this here double-page spread and end up RICHER by FIVE WHOLE POUNDS! (If we publish your letter, that is.)

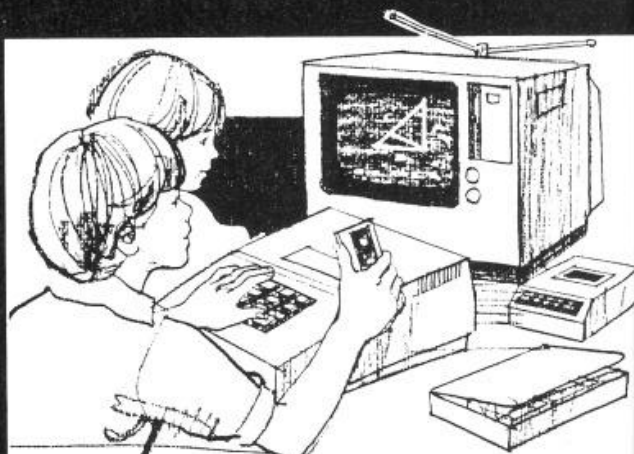
Post your Boast to ...  
Letterbase,  
Big K  
Room 2038  
IPC Magazines Ltd  
Kings Reach Tower  
Stamford Street  
London SE1 9LS

### THIS MONTH'S ALL-PURPOSE BIG HELLO TO ...

Alan Odiam, David Jones, Ian Raine, Arthur Moore, Shirley Wills; and Thor Franksson and Gudjon Runarsson from Iceland.

### Map Plotters Foiled

My friend and I have completed a map of Ultimate's *Sabre Wulf*. If you would like a copy of the map, which has 256 locations, please send your offer. We have sent copies of this letter to other magazines, so the highest offer gets the only copy.  
**ALAN PARKER,**  
Brighton, Sussex.  
● We already have one (see page 15). Better luck next time.



### CATCH 22

The Shadow asked about the real state of computers in schools (issue #2). At Stowmarket High School we have 10 480Zs connected to a 380Z, crammed into a tiny ex-needlework room. These are supposed to fulfil the needs of over 1,000 of us. And as for the state of 'computer awareness' (let alone the prospect of 'O' levels) all we've got is 30 kids playing games.

In desperation, I wrote to my LEA. They replied: "Com-

puters are advancing so rapidly that there is little point in trying to teach the subject to children, as it will be different in a week." Fair enough. But in the 'O' level Computer Studies syllabus, it says you must know all about binary, hex and data encoding etc. So here I am stuck in catch 22. Isn't the British Education system wonderful?

**ADRIAN HUNT,**  
Badley, Suffolk.  
● No.

### HOW MANY?

Just one groan about Big K magazine — the amazing array of advertisements that seem to have literally taken it over. Did you know there were 41 in issue #4?

**CHRISTOPHER SIMPSON,**  
Northants.

● No kidding? There were supposed to be 43. (Heads will roll ...)

### HOW MUCH?

I bought a Prism VTX 5000 modem and logged onto Prestel and Micronet. There's lots of info, free games and top games at bargain prices. Great! but then I discovered the cost.

There's about £100 to start with, then a subscription fee of £14 every 12 weeks. PLUS the telephone bill. So if you're thinking of doing the same — remember you'll need MONEY.

**DOUGLAS SPENSE,**  
Stockport.

HERE ARE my suggestions (Big K Issue #2) for suitable network names for political parties ...

SDP/Alliance — TOGETHER-NETS/WETNET  
Shirley Williams — HAIRNET  
The Liberal Party — DRAG-NET  
National Front — SKINNETH  
Conservatives — COB-WEB/BANNET/OBSTINET  
Scottish Nationalist Party — LOCH-NETS  
Communist Party — RED-NET/DOMINET/BREZHNET/NIET  
**IAN WESTON,**  
Whetstone.  
● Thank you, Ian. That's five pounds net profit.

### TOWING THE LINE

### 1985 Champ?

Do you think MSX will have a big impact in Britain? With Sinclair now concentrating on QL, will this knock the Spectrum down to a relative ZX80 level by comparison?

**DAVID THOMPSON,**  
Leeds.  
● Yes. No.

### KEYBOARD SKILLS No 4:



THE OVERHEAD HANG



### BURN BABY BURN!

I want to know if any BBC freaks out there have managed to kill the dragon in Bug-Byte's *Twin Kingdom Valley*. Whatever I do, I get frazzled by his fiery breath. I want to kill him because of the master key he possesses.

ALUN PHILLIPS,  
Merseyside.

● Beebed-up Dorkslayers please assist. Meanwhile, here are some *Jet Set Willy* aficionados athirst to spill a bean or two...

### JSW Tip 1

TO GET the objects from the Conservatory roof, MERGE the first part of the program, then CLEAR 32767: LOAD " " CODE. When this is loaded type in POKE 60231,0: POKE 42183,11: POKE 56876,4. The new version can be saved by SAVE "Jetset" line 10 SAVE "JSW" CODE 32768,32768 GO TO 40. As there was a code in *Manic Miner*, there is also one in *Jet Set Willy*. Go to the first landing and enter WRITETYPED and enter combinations of numbers to travel between rooms.

DAVID MAHON,  
SWINTON, S. YORKS.

### JSW Tip 2

FOR ENDLESS lives, follow thusly:

Type MERGE " ". Stop the tape when 0 OK, 0:1.Type II (so as to clear this line). Type in this line: 35 POKE 35899,0. Now start the tape again.

To disable the ATTIC and BANYAN TREE bugs (This enables you to get to the right hand side of the Banyan Tree) follow these instructions:

Merge the program as above. Now type CLEAR 32767. Type LOAD " " CODE. Start the tape again and let the program load. Once loaded enter: POKE 60231,0: POKE 42183,11: POKE 59901,82 :POKE 56876,4. To play, enter "GO TO 40".

BILLY ARMSTRONG,  
Sligo, N. Ireland.

● And now some *Football Manager* freaks...

### ZIT DANDRUFF — J'ACCUSE

So Zit Dandruff knocks the Spectrum, eh? (Issue #4). He really has no right to call himself a Computer Snob. Unless the word Snob has changed its meaning from "One who looks down on those he considers his inferiors" to "One who is a wally". Colour and sound? The BBC can only rustle up eight colours. And as for that pimple of a speaker! Three sound and one noise channel, with a feeble eight bit control! It's just not good enough.

But then he just has to look at the beast to know that he's buying the Cortina of the computing world. What a

disaster!

If Zit Dandruff immediately purchases an Atari, he may yet be able to hold up his head at the golf club. Okay? Yah!

Incidentally, the Atari book you should have recommended to A.C. Lowe (issue #4) is 'Your Atari Computer' by Ian Poole (published by McGraw-Hill). This book is neither boring nor O.T.T. It covers both elementary and advanced Atari Basic, as well as most of the pre-XL hardware.

CHRIS BONE,  
Watford.

● Er... and which machine do you like, Chr\$?

### Slug Slams Pirate Myth



Come off it! The software houses aren't starving yet. And don't give us the rubbish about piracy losing the industry x zillion quid last year. You know as well as I do that these figures are totally spurious, based on the assumption that everyone with a pirated copy (where does this "seven pirate tapes for every one legit" come from?) would have bought a copy of the real program. What nonsense — apart from the fact that the dross, and most of the punters (i.e. the kids) are on fixed incomes,

either pocket money, weekend earnings (or like myself — the dole) and could not possibly afford anymore than they buy already.

This letter will probably be treated with a snide aside underneath the missive — but don't forget, we've sussed you.

THE WERESLUG,  
Gastropodsville.

● Forget all that — tell us how you came to be called 'Wereslug'.

● And now some *Football Manager* freaks...

### SCORE . . .

IF YOU press a key during the match highlights at the end of a particular move, the screen will change immediately and you'll get another chance to score.

MATTHEW WARE,  
Norwich, Norfolk.

### . . . THEN SELL YOUR TEAM!

If you want to load your chances in *Football Manager*, and don't mind a long game, sell all your team and make a lot of money. It's possible to play on and make more money. Then you can buy back your players and play on — rich!

CHRISTOPHER LUNN,  
Huntingdon, Cambridge.





# AND NOW HERE ARE THE WINNERS OF OUR COMPETITIONS

The results are in! BIG K's first two Big Kompetitions have been judged to be a great success, especially by a lucky few who have kopped some ace prizes. Read on, Macduff...

## BIG K Coleco competition

**April issue.** Eight features of the Coleco Module 3 computer (Adam, to you) were listed and entrants asked to place them in order of appeal to the average home user. The judges checked out the coupons and decided that the best order submitted came from *Gary Adams of Farnworth*, who put:

1-B, 2-E, 3-L, 4-A, 5-J, 6-C, 7-K, 8-D.

Gary wins the Module 3 plus a ColecoVision video game system to plug it into. The same goes for *Geoffrey Loveman of Southampton*, who submitted the next best attempt.

*Michael Hogburn of Reading* carried off the second prize of a ColecoVision video game system plus Module 1 Atari

## BIG K Atari competition

**May issue.** An Atari 800XL plus 1050 disc drive was the prize awaiting a winner in this competition. Ten questions with multiple choice answers were given. The best set of answers, in the judges' opinion, came from *Don Murray of London*. He put:

1-A, 2-C, 3-B, 4-A, 5-A, 6-A, 7-A, 8-B, 9-B, 10-A.

Don wins the 800XL and disc drive while 10 runners-up each receive prizes of AtariSoft games to run on most of the popular micros. All should by now have been notified of their winnings.

Big Kongratulations to one and all. More results coming soon (doncha just love all these 'K' jokes?).



## NEXT MONTH IN BIG K...

**LAME GAMES**  
incorporating  
**NAFFWARE**  
and  
**DUFF ROMS**  
of the Western World  
We slag off the Turkeys, win readers, miff advertisers!  
**MSX**  
Is it any more than a set of initials?  
**ATARI PLAYER MISSILES**  
Sunnyvale  
Supersprite  
System Sussed

## GULPO!

Back by almost no demand (especially from the BIG K staff) the Department of Unintentional Blunders rides again.

**Reviews (Big K No.4, p.27).** In the review of Anirog's *Cybotron* it was stated that the player was only able to fire in the direction of travel. This is not strictly true as two joysticks can be used in this game, the second giving fire in eight different directions. Nostra culpa, Anirog.

**Hunt the prog (Big K No.3).** Apologies to call CBM 64 owners who looked in vain for the prog mentioned on our June issue's cover. Fact is we found an evil bug lurking in that program and had to pull it out (the prog, not the bug) at the very last minute. Problem was that issue's cover had already gone to press some time before (as most covers do) leaving us helpless and red-faced. Well, it shows that we care about the listings we give you.

**Commodore owners.** We love hearing from you, really. But we wish it was for reasons other than problems with those pesky Commodore graphics character sets. It's finally dawned on us that what we all need is a totally inclusive, completely comprehensive BIG Katalog of Kommodore, sorry, Commodore, Graphics.



plus  
**EVERYTHING YOU NEVER  
WANTED TO KNOW ABOUT  
ADVENTURE GAMES**



# Ever bought a game that's not as good as its box?

Everybody has seen the home computer game packs that sparkle with imaginative colour and graphics, and lure buyers into the store.

Sadly, some who have bought have found that the game sparkled less than the box. For, as more and more companies jump on the home computer bandwagon, it becomes ever more likely that most of the imagination and excitement is concentrated in the pack. Instead of playing a fast game, you lose a fast buck. Or, more likely, several.

Yet games have become increasingly sophisticated. Scenarios are more varied, levels of play have been increased, and high resolution colour graphics capabilities are being used together with

dramatically improved sound effects. The trick is to know which games are as good on screen as they are on the pack.

Relax. Help is at hand. Logic 3, publishers of the most effective self pacing programming tutorials, have selected The Best Games for Britain's top home computers.

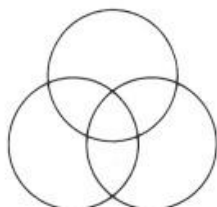
So buy only the best. Send today for your free copy of The Best Games from Logic 3, and learn how you could save £2.00 when you buy your next computer game. If you're a dealer, we won't hold it against you — trade enquiries are welcome.

Do it. Now.

**Send the coupon.**  
**Have a good game without being had.**

Please rush me my free copy of The Best Games. I already have/am thinking of getting a _____ home computer.	
Name _____	
Address _____	
_____	
_____	
County _____	Postcode _____

BK 9 84



## LOGIC 3

— THE KEY TO THE WORLD OF TOMORROW.

Logic 3 Ltd, Mountbatten House, Victoria Street, Windsor SL4 1HE



# ADVERTISEMENT INDEX

Acorn.....	50, 51
Activision .....	10
Addictive .....	106
A.G.F. ....	32
Alligata.....	81
Anirog.....	15
Avalon Hill Games .....	86
Barclays Bank .....	25
Beau-Jolly.....	104
Blue Chip.....	103
Cascade .....	112
Channel 8 .....	64
Consumer Electronics.....	9
CRL.....	16, 17
Currah.....	55
Database .....	80
Elite .....	Cover 2
File 60 .....	13
4th Dimension.....	87
Hutchinson (Arrow Publications).....	47
Icon .....	82
Interceptor .....	Cover 3
Lawton .....	78
Logic 3 .....	111
Megasave .....	75

Micro Deal.....	26
Micromania .....	24
Micro Repair Club .....	72, 97
Micro Workshop .....	106
MLS .....	6
Mr Micro .....	Cover 4
NatWest.....	67
PG SL.....	106
Power Software .....	106
Ram .....	65
R & R .....	79
Romik .....	7
Salamanda.....	70
Silica Shop .....	33, 95
Simon Soft .....	97
Software Invasion.....	96
Software Projects .....	56, 57
Solo .....	105
Supersoft.....	14
Talent .....	54
Tandy .....	31
Taskset.....	66
Thor.....	73
Ultimate.....	2
Vic Oddens.....	107
Video Palace .....	63

## THE FABULOUS CASSETTE

# 50

FROM **Cascade**

**NOW AVAILABLE FOR**  
 **commodore 64**

## 50 GAMES ON ONE CASSETTE

DRAGON BBC A/B Spectrum  ATARI ORIC-1 ZX 81 VIC 20

**ONLY**  
**£9.95**  
 (INC P&P and VAT)

It is impossible to tell you everything about the 50 games on CASSETTE - 50 but they include many types such as maze, arcade, missile, tactical and logic games, to suit most tastes in computer game playing. CASSETTE - 50 will appeal to people of all ages and the games will provide many hours of entertainment for all the family at a fraction of the cost of other computer games.

**EXPRESS DELIVERY-  
ORDER NOW**

Name

Address

Post Code

Country

*Dealers & Stockists enquiries welcome.*

Please send me by return of post, Cassette 50 at £9.95 per tape. I enclose a cheque/postal order for

£  made payable to Cascade Games Ltd.

Please debit my ☐ No.

☐ SPECTRUM ☐ ORIC 1 ☐ ZX 81 ☐ VIC 20 ☐ APPLE ☐  
☐ COMMODORE 64 ☐ DRAGON ☐ ATARI ☐ BBC A/B ☒



Cascade Games Ltd.,  
 Suite 4, 1-3 Haywa Crescent, Harrogate,  
 North Yorkshire, HG1 5BG, England.  
 Telephone: (0423) 504526.

BK 9/84



# TALES OF THE ARABIAN NIGHTS

Full of Eastern Promise!

FROM  
**INTERCEPTOR**  
SOFTWARE

THE SAGA OF IMRAHIL  
THE KALENDAR PRINCE  
ON A QUEST TO FREE  
THE PRINCESS ANITRA  
FROM THE HAREM OF THE  
EVIL SULTAN SALADIN.

WRITTEN BY IAN GRAY  
CONTAINS OVER 3 MINUTES  
OF EASTERN MUSIC BY CHRIS COX  
PRODUCED BY RICHARD PAUL JONES

ONLY  
**£7.00**  
ON CASSETTE  
**£9.00**  
ON DISK

CONTAINS  
**SPEECH**

NO HARDWARE REQUIRED

SUITABLE FOR THE  
**commodore 64**  
NOW WITH **ULTRA LOAD** FAST LOADING

**INTERCEPTOR**  
**MICRO'S**

LINDON HOUSE, THE GREEN, TADLEY, HAMPSHIRE

TEL (07356) 71145

**AVAILABLE NOW**  
FROM  
ALL GOOD COMPUTER  
RETAILERS





## Punchy Now Runs & Jumps On:-

**VIC 20 + 16K**

**CBM 64** (Distributed by Commodore)

**SPECTRUM 48K**

**SPECTRAVIDEO 318/328**

**AMSTRAD CPC 464**

(Distributed by AMSOFT)

**M.S.X.** version available in June.

### Punchy

- Full graphic display
- Multi screen
- Demands high skill
- Includes speech output

### The Game

NASTY PUNCH has locked JUDY away in the Punch & Judy booth. You must rescue her by guiding brave BOBBY the policeman across the stage.

To achieve success you must, amongst other challenges, make BOBBY leap the obstacles, land on a flying carpet and ROCK THE BABY.

All the well known characters from the traditional Punch & Judy show make an appearance in this unique game.

The graphics and speech combine to produce one of the best programs available for the 48K Spectrum.

Contents: Punchy Tape



**PUNCHY (VIC + 16K) . . £6.90**

**OTHER MR. MICRO TITLES AVAILABLE NOW:—**

GOLD RUSH (VIC 20) £6.90  
INVINCIBLE (VIC 20) £6.90  
HUMPHREY (VIC + 16K) £6.90  
MYSTERIOUS ISLAND (VIC + 16K) £9.90

DIGGER (VIC + 16K) £6.90  
BENGO (VIC 20) £6.90  
AMIGO (VIC + 16K) £6.90  
HUMPHREY (BBC B) £6.90  
PUNCHY (SPECTRUM 48) £6.90  
CRAZY GOLF (SPECTRUM 48) £6.90  
DRACULA (ORIC) £6.90  
RAM DAM (VIC) £13.90

£6.90

£6.90

£6.90

£6.90

£6.90

£6.90

£6.90

£6.90

£13.90

**SPECIAL TRADE PACKAGE AVAILABLE.**

DRAGON TAMER (DRAGON) £9.90  
SCORE STORE (ALL) £1.95  
HARLEQUIN (SPECTRUM 48) £6.90  
LIGHTNING ASSEMB/DIS (ORIC) £13.90



**ACCESS & VISA.**  
TEL: 061-728 2282

**AVAILABLE FROM ALL GOOD STOCKISTS OR ORDER DIRECT FROM:—**

**MR. MICRO LTD., 69 PARTINGTON LANE, SWINTON, MANCHESTER M27 3AL, ENGLAND.**

**MR. MICRO**

SMK 5N17/K 69