

POPULAR COMPUTING

A FOCUS MAGAZINES PUBLICATION

December 10-16 1987 60p WEEKLY

This Week

- News** p. 1-11
Russians persecute programmers
New campaign to free detained p. 4
Go! gets new labels
Capcom and Rainbow Arts sign to Go!..... p. 4
Ocean in coup
Platoon to break records p. 5
Freddies Back!
Flintstones new game..... p. 6
- News Analysis** p. 12
Direct distribution; what does it really mean?
- Game of the Week**
The Bard's Tale by Electronic Arts for the Atari ST..... p. 17

SAHSON has these options this battle round:

- Party attack
- Attack foe
- Defend
- Use an item

Select an option.

Character Name	HP	Mana	Exp	SP	CP
SAHSON	28	0	0	0	0
EL CID	24	0	0	0	0
HERBES	24	0	0	0	0
PELLEW	20	15	0	0	0
ORROR	20	17	0	0	0
BRIAN THE PIST	20	0	0	0	0

Hanover launch for new Amiga range?



The Amiga 2000 will be upgraded.

COMMODORE is to launch a new range of Amiga computers next year. "Existing A500 machines will be upgraded to 1Mb of Ram. The

new A500 will be unveiled at the West German Hanover Fair, March 16-23," our sources revealed last week.

The other Commodore Amiga, the A2000, is set to change as well. The existing 68000 microprocessor will be updated from 8MHz to 14MHz.

Other changes to the A2000, apart from a name change to A2010, will be a new blitter chip capable of addressing 4Mb of video Ram, improved screen resolution and a maximum colour palette of 265 out of a total of over 6 million colours.

There will also be a new Denise chip, but details on this are a little vague. In addition, there is a new

version of the Amiga boot-up system Kickstart 1.3.

Commodore also plans to bring out an A3000 machine. The A3000 was announced in June during the US Consumer Electronics Show but was not shown. The machine will have a 28MHz 50030 microprocessor and a new 19 inch colour monitor. Price has yet to be finalised, but its likely to be around \$3000. Commodore US when asked for a reaction said: "We cannot comment on un-disclosed material."

● The A3000 machine's debut may be delayed by as much as a year. There is currently a world shortage of 60030 chips on which the machine is based.

Activision link-up with Mastertronic

- Games** p. 17-24
Matchday 2, Nightmare, Backlash, Rampage. The latest new releases and reviews
- Hardware review** p. 28-29
A new Citizen printer is fully examined
- Soundcheck** p. 31
Inputed software from MCMXCIX
- Pirates!**..... p. 32-33
A look at a new software emerging from the ashes of another
- Software review** p. 36-37
A new package to help you create your own arcade games

MASTERTRONIC has announced a surprise link-up with American software house Activision. The deal concerns Activision's agreement to licence a number of back catalogue titles to Mastertronic for release under the Ricochet label at £1.99 and £2.99 for the 8-bit games and £9.99 for the 16-bit games.

According to Rod Cousens, Managing Director of Activision: "We have been in discussions with budget labels for the last 12 months over the licensing of our products. It is only in the last month that we have had discussions in depth with Mastertronic.

We are pleased to forge an association with Mastertronic and look forward to an on-going successful relationship."

This is the second attempt Activision has made into the budget market. The first was with Firebird with which they released a selection of titles. Activision has no plans at present to cut its link with Firebird. "There are a number of titles excluded from the agreement with Mastertronic," Cousens said.

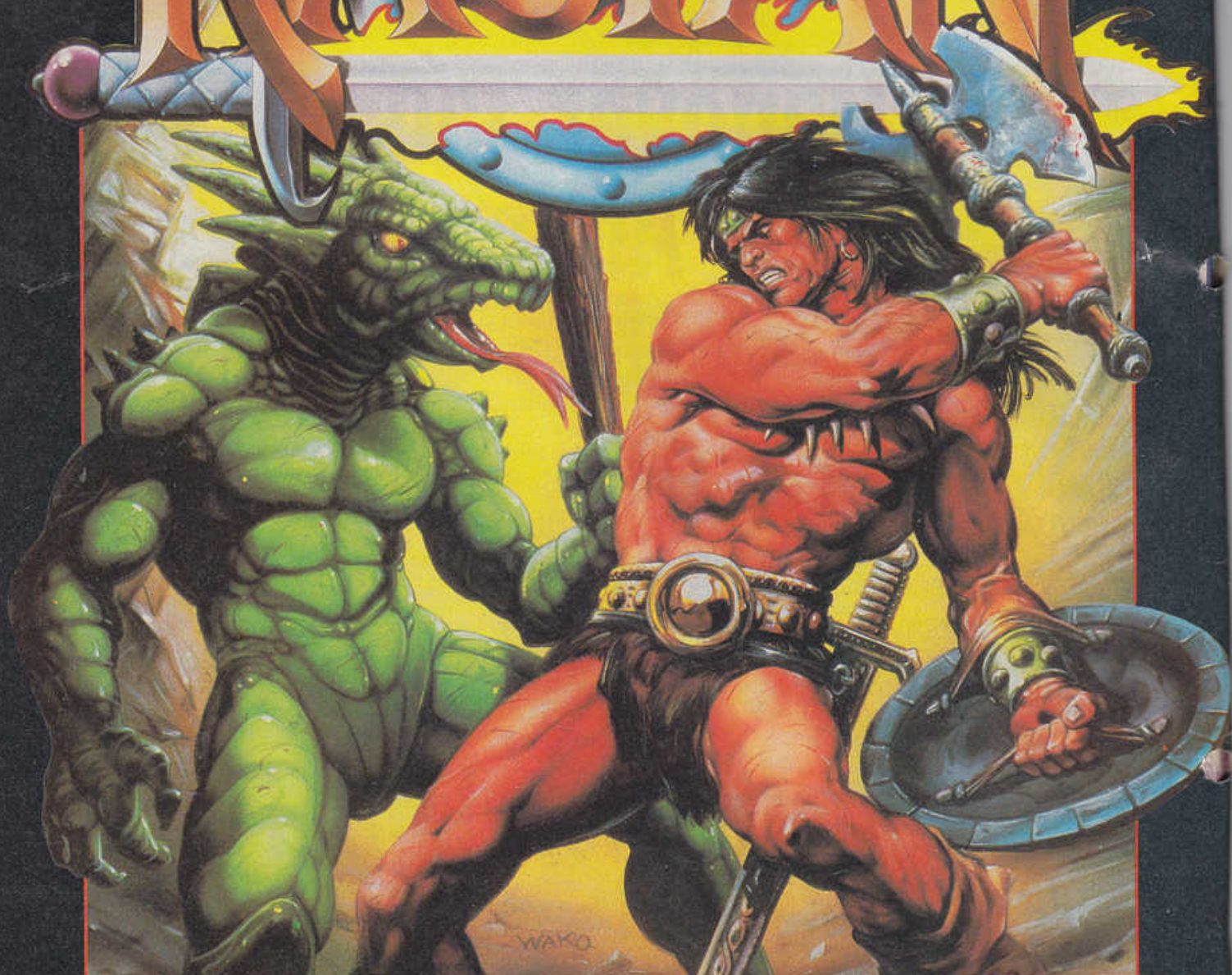
First products to be released on the Ricochet label will be *Ghostbusters*, *Eidolon* and *Ballblazer*.



Rod Cousens - in discussion with budget labels.

TAITO
COIN-OP

RASTAN

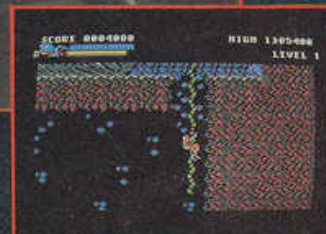


...the Warrior King

The latest hit coin-op from Taito.

Lands that produce men of legend, dragon slayers, lie in his shadow — guardians of evil fear his fire spewing sword, the axe he wields as swift as lightning. State of the art programming makes a true simulation of the Arcade for your home micro, enjoy superb graphics and realistic action as RASTAN takes on a world of dangers — magical wizards, fire breathing lions, bats, snakes, skeletons and finally the living dead.

Is it more than you can handle?



Imagine
...the name
of the game

Spectrum	7.95 Cass.	SPECTRUM + 3 DISK 14.95
Commodore	8.95 Cass.	12.95 Disk
Amstrad	8.95 Cass.	14.95 Disk

Licensed from Taito Corp., 1986. Programmed for Amstrad, Spectrum, Commodore by Imagine Software.

Imagine Software Limited · 6 Central Street · Manchester M2 5NS · Tel: 061 834 3939 · Telex: 669977

It would appear that the computer industry is set for continued expansion as this week we report on the launch of a new range of Amiga computers.

Whether these, especially the A500, will be in direct competition with Amstrad's possible new 16-bit micro, one can only speculate, since both parties are keeping quiet on the matter.

The omen, however, is good for the computer industry - more competition, more products. As Christmas approaches, and at a time when critics are accusing the industry of dwindling, the evidence, as far as we are concerned, seems to the contrary.

Our optimism is also reflected in the move of next year's PCW Show to Earl's Court Exhibition Centre.

The organisers obviously believe that an expanding industry now requires a bigger and better event, where the diverse interests of the consumer can be catered for accordingly.

Consequently, separate categories have been introduced, so that business, leisure and games' users will get the maximum benefit out of the show.

One games company likely to be present at next year's show is Electronic Arts, the subject of this week's news analysis.

What does Electronic Arts' direct distribution mean for the company in Britain? Does this 'cutting out the middleman' actually benefit the consumer in any way or does it simply increase profits for the software company?

Electronic Arts is also well known for its various affiliated labels and licensing agreements. But it is not alone in this field as other software houses have had their fingers in these pies for quite some time now.

One such company is Mastertronic, which this week surprised everybody by engaging in a licensing deal with Activision. This will be Activision's second digression into the budget market, an indication perhaps that full-price software houses are seeking more to infiltrate the budget business which is gaining increasing percentages of the market place.

Nikki Carvey

ABC

NEWS DESK..... 1-11

Epson and Amstrad peace pact... Go! tie up a couple of software houses... Hewson get recruiting... Virgin go racing... Soviets imprison programmers

NEWS ANALYSIS 12

Nikki Carvey looks at what direct distribution is and what it really means for the software houses

LETTERS 15

Fanzine mail, complaints and some praise for *Popular*

GAMES 16-25

Game of the week, *The Bard's Tale*, plus *Matchday 2* on the Amstrad CPC, *Knightmare* on the Spectrum, *Backlash*, *Rampage*, *Sorcerer Lord*, *Ramparts*, *Tonic Tile*, *Street Hassle*

KENN GARROCH 26

Everything you need to know about languages, how to go from dec to hex and more

THE UPRIGHT CITIZEN 28-29

Roger Howorth examines the new Citizen printer the LSP-100

FOR FUTURE REFERENCE 31

Mark Jenkins examines a new company importing music software

RISEN FROM THE ASHES..... 32-33

David Lester takes an in-depth look at new software house Pirate

PLAY IT YOUR WAY 36-37

Duncan Evans uses his head as he creates a few masterpieces with a new games creator

COMPATIBLE LINK-UP 39

Barry Smith gets into linking with his Z-88

DESIGNER PROGRAMMING 41

Kenn Garroch in the first part on what is involved in writing programs

Cix Cix, Cix - NUMBER OF THE BASE..... 42-43

Steve Gold examines a UK on-line database service, Cix

LISTINGS..... 44-47

ORG for the Spectrum by Robert Glavas, The Puz for the Atari ST by David W Ratcliffe, Print 4 and scroll by Jonathan Lewis for the Amstrad and Interesting Cursor for the BBC by Ivor Hewitt

COMMENT 62

The decline of Adventure games

PUZZLE..... 62

Another puzzle, and the solution to last week's tormentor

POPULAR COMPUTING WEEKLY

A FOCUS MAGAZINES PUBLICATION

Vol. 6: No. 49

Executive Editor Francis Jago
Deputy Editor John Brissenden
Features Editor Duncan Evans
Production Editor
 Yvonne Hartland
Chief Sub-editor
 Harold Mayes MBE
Staff Writer Nikki Carvey
Advertisement Manager
 David Osen
Classified Manager
 Susannah King
Classified Executives
 Robert Cole, Tim Owen
Managing Editor Brendon Gore
Publisher Trish Phillips
Group Publisher Paul Coster
Chief Executive Richard Hease

Financial Director
 Brendan McGrath
Published by Focus Magazines,
 Greencoat House, Francis Street,
 London SW1P 1DG

Typeset by Magazine Typesetters,
 6 Parnell Court, East Portway,
 Andover, Hampshire

Printed by McCorquodale
 Magazines, Andover, Hampshire

Distributed by SM Distribution,
 London SW9, Telephone: 01-274
 8611, Telex 261643
 © Focus Magazines 1987.
 ISSN 0265-0509

ABC

Popular Computing Weekly. Tel:
 01-834 1717. Fax 01-630 6165

Go! sign exclusive label



Go! Director Tim Chaney with Capcom's U.S. President George Nakayama.

US GOLD offshoot label Go! has secured an exclusive licencing agreement with Japanese arcade manufacturers Capcom. Famed for the *Commando* and *Ghosts and Goblins* arcade releases, 10 new Capcom products will be released over the next 15 months by Go!. The initial four games to be released during the first half of 1988 will be *Street Fighter*, *1943* - the follow up to *1942* - *Black Tigers* and *Tiger Road*.

Tim Chaney, Director of Go! is very excited about the success of this new joint venture. "We expect revenues to reach £2 million," enthused Chaney. "The size of this deal really does put the size of Go! and its affiliated companies into true perspective."

Although Go! is an offshoot of US Gold, Chaney says that Go! will be competing with US Gold in the same way that Imagine competes with Ocean. George Nakayama, President of Capcom USA said,

"This is a big deal for Capcom because the European market is growing rapidly and tying up with the largest publisher is a big agreement for us."

Capcom sales in 1983 were \$1.1 million. This year sales are projected to reach \$71.4 million.

The Capcom arrangement is not the only deal Go! has struck up recently. German software publisher Rainbow Arts has signed a deal for 15 months which gives Go! a minimum of 12 new titles on the C64, Atari ST, Amiga and Amstrad CPC.

Rainbow also plans at least six PC products. The first release is the Gauntlet clone, *Garrison*, which will be followed by *Bad Cat*, *Jinks* and *Around The World In 80 Days*.

Tim Chaney said, "The Rainbow Arts product is very impressive. The 16-bit titles are very strong and will form an important part of our business during 1988."

Back in the U.S.S.R.

A NEW campaign aiming to highlight the plight of Soviet computer programmers who wish to leave the Soviet Union has been launched.

Computer programmers across the world are being asked to show their solidarity in a unified effort to help free those being detained in the Soviet Union.

A refusenik is a Soviet citizen who has applied for an emigration visa and has had the application refused by the Soviet authorities. Many who have applied to leave have found themselves losing their jobs, face threats and physical assault and also be denied access to laboratories and research libraries.

Dr Jonathan Sutton, campaign officer of Scientists For The Release of Soviet Refuseniks (SRSR), says that, despite the general aura of glasnost, "the overall numbers of refuseniks being allowed to emigrate has not shown any signif-

icant increase in the last few months."

There are 241 refuseniks whose cases are being pursued by the SRSR; of those more than 50 are computer scientists and technicians.

According to the SRSR, those who apply to emigrate from the Soviet Union are subject to State persecution with some people waiting for up to 17 years to leave the country and others forced into prisons.

When *Popular Computing Weekly* asked the Soviet Embassy how computer programmers who wish to leave the U.S.S.R. are treated, we received the answer, "No comment". If you want more information about how you can get involved and help free those being detained, write to Dr Jonathan Sutton, Campaign Officer, Scientists for the Release of Soviet Refuseniks, 4a New College Parade, London NW3 5EP.

Hewson recruitments



Andrew Hewson - elusive as to art future plans.

PROJECT 4 is the latest venture from Andrew Hewson. While it is still at the concept stage, he has evolved a novel way of recruiting the programming team by cassette.

"The average recruitment advertisement would not convey the full excitement of the project and since we were producing cassettes left, right and centre, the obvious thing was to produce it on cassette," Hewson explains.

Laid over a backing track of the

sound effects from some of previous Hewson games, the cassette describes the type of people wanted, including a team leader, two programmers - permanent, full-time - graphic artists and musicians - freelance.

Hewson stresses the importance of the team leader's role, saying: "They have to have a vision of what I am attempting to create. It will be on their shoulders to bring the concept into fruition."

He added that since the project will be over five formats, he needs a team which would be able to create equally proficient games on all versions.

Elusive about his underlying plans for the project, Hewson would only describe the game as, "technically sophisticated but one you can pick up and play straightaway."

Further he would only concede that it was "more designed for the youth market."

Curiouser and curiouser. Interested parties should telephone 0235 832939 - 24 hours - for an audio cassette, or send a CV and samples of best work to Hewson Consultants Ltd, Milton Park, Abingdon, Oxon OX14 4RX.

Epson and Amstrad's no-score draw

EPSON has dropped its law suit against Amstrad. The lawsuit was over Amstrad's use of the initials LQ on its range of printers. Epson was claiming that for the last four years it had been producing printers with the initials LQ and that the letters were connected with the Epson brand.

An understanding has now been reached by both companies and Amstrad and Epson will be having new printers using the initials LQ.

A spokesperson from Amstrad said: "We recognise that the printer designation LQ has been used previously, is presently used and will in future be used on a range of Epson letter quality printers."

Amstrad believe that because the products are aimed at different markets, there will not be any confusion over the products.

Edward Huggins, corporate communications manager of Epson

said: "There is confusion amongst dealers and end-users asking if we're making printers for Amstrad. A lot of people thought we had linked up with them, there is no link-up."

Huggins was rather adamant about Amstrad's intention to carry on calling their printers LQ.

"We certainly wouldn't use DMP. Amstrad have jumped onto our territory and it's been causing confusion."

With Amstrad claiming there is no confusion and Epson saying there is, it will be down to the consumer to decide which printer is suitable for their needs.

Either way, it looks likely that both Amstrad and Epson have benefited more than anyone else from the publicity with an increased awareness in their products, both within and out of the industry that has already made them both very successful.

New budget range by Firebird

A NEW budget range of discs has been launched by Firebird for the Amstrad, Atari ST and C64. For the moment, the games will be taken from the existing range of budget software, with titles such as *Trust*, *Ninja Master* and *Freak Factory*.

Leah Wright, Firebird public relations manager for the budget range, is not sure whether this will change in the future, saying: "We are not 100 per cent sure about initiating new titles, but there are no plans for one at the moment."

For Amstrad and C64 users, the

discs offer two games instead of the usual one. There will be eight discs for the Amstrad costing £6.99 each and 10 for the C64 at £3.99 each.

Wright added that Firebird is particularly proud of its budget discs for the Atari ST, commenting: "Not many software houses offer this and we have enhanced the graphics and put in more levels."

Titles soon to be released on the Atari ST include *Harvey Headbanger*, *Warhawk* and *I-Ball*, priced at £9.95.

When Smokey sings

AFTER many months of waiting, Ocean has finally set a release date for *Platoon*, the computer game of the smash-hit film. The game will be available in all formats in the shops on January 25, 1988.

The film, a winner of four Oscars, including the prestigious Best Picture award and also three Golden Globes, is the story of young, inexperienced people fighting in the Vietnam war.

The computer game places the player in the role of a young recruit in a platoon of five. The player must overcome the hostilities of the different environments presented. There are six sections in the game, each presenting a problem to overcome.

Gary Bracey, software manager of Ocean, expects the game to be a hit. "We have put a great deal of

effort into the gameplay to make the game exciting."

Ocean also has a coup for *Platoon*. When the video is released in January, there will be a trailer for the computer game. "This is the first time a licence has been publicised in this way. We are having a joint publicity campaign with RCA/Columbia, which is releasing the video," Bracey says.

In return for the trailer on the video, Ocean will be having an advertisement for the video during the loading screen of the game. The video and computer game are part of a minimum £500,000 marketing budget.

Early purchasers of the game will find the package includes the classic soul song, *Tracks of My Tears* by Smokey Robinson, a song featured in the sound track of the film.

Virgin racers



Mark Smith in the driving seat.

VIRGIN GAMES has announced the sponsoring of a Formula First racing driver.

The driver, Mark Smith, is an author of interactive adventure books and has had several of his books made into computer games.

Virgin Games has produced *Falcon*, *the Renegade Lord*, and will be releasing a new Mark Smith title *Duelmaster*, *Challenge of the Magi* early next year.

Virgin will be sponsoring Smith for the forthcoming Top Gear Formula First series to be held over five rounds at Brands Hatch.

Paul Latham, general manager of Virgin, says: "He was looking for sponsorship and persuaded us to sponsor him."

"We are very much looking forward to seeing the distinctive Virgin Games logo flash round the track."

New kit for ST

AN UPGRADE kit for the Atari ST is available from Evesham Micros. Costing £59, it will permit owners of the Atari 520 ST FM to expand its memory to 1Mb. In addition, an installation service is provided for £15.

For those wanting a 520 ST FM which is already upgraded, Evesham is supplying them for £338, although it has a different disc drive from the Atari 1Mb computer. Evesham managing director,

Richard Austin says: "We believe that the upgrade kit represents the best possible option for people who already own a 520 ST FM."

"We even urge those on the verge of buying their first ST FM to consider our product instead of buying the full 1Mb version," he continued.

Bob Gleadow, managing director of Atari (U.K.) Ltd, comments: "Whatever is good for the end-user is O.K. with me."

Italy gets on-line

BRITISH technology is expanding overseas as Telemap becomes a major shareholder in a new Italian company, LogOn Technology SRL.

Lasernet 800, the company's first on-line service, offers a similar range of features to Micronet. Operated by the Italian state telecommunications company, SIP, it is based on Italy's national videotex system, Videotel.

Mike Brown, Telemap technical director and vice-chairman of LogOn Technology, is enthusiastic about the deal, saying: "The scene is set in Italy for a dramatic expansion in the use of data communications systems both in the business and residential sectors.

The new company promises rapidly to become the most successful supplier of videotex technology in Italy and the leading service provider to the home microcomputer user, as well as a valuable partner for Telemap in the international market."

Assisting Lasernet 800 on its rapid road to success is a substantial promotional campaign in the Italian computer press.

In addition, SIP and various hardware manufacturers, including Commodore, are distributing free or low cost modems to encourage the public to become part of the new system.

The agreement between Tele-

map and LogOn Technology will allow the new company to access various Telemap products, including 'Shades', the leading U.K. multi-user game.

Signor Simone Majocchi, managing director of LogOn Technology, says: "Through the relationship with Telemap, LogOn Technology will have access to five years of expertise in videotex and a range of successful products.

"Combined with our local knowledge and experience, that puts the new company in an unrivalled position in the Italian videotex market."

Telemap can be contacted on 01-278 3195.

New logo

PENDOWN, Logotron's word processing software for children, now has extra files and utilities as standard.

These include two font files of graphic characters, a set of larger and lower case infant letters, sample adventure games written using Adventure Writer and topic-specific help files.

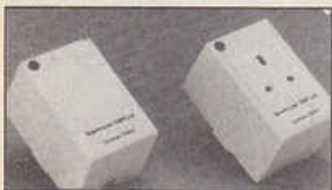
The graphic characters will enable you to create various compositions, including insect motifs and runic designs. Since PenPlus has a double strike facility you can also now have a more dense print.

Money is one of the sample adventure games. The player is given money to shop for sweets and comics with and then has to work out how to pay for them.

For current owners of *PenDown*, *Extra 1* and *2* is available separately at £9.00.

Alternatively, from the beginning of December you can buy the *PenDown* package including *Extra 1* and *2*, for £34. For any further information, contact Lototron Ltd on (0223) 323656.

New range from Bowthorpe



Bowthorpe plugs.

A NEW range of filter plugs and adaptors has been introduced by Bowthorpe EMP. Designed to pro-

tect computers against mains-borne surges and RF interference, the filter plugs and adaptors are available in 3, 7 and 13-amp ratings.

Fitted with sleeved pins, which complies with the latest safety regulations, they also have a neon light which indicates to the user when the power is on and if the equipment is faulty.

Prices vary according to the

model and are inclusive of VAT, package and posting.

The 3-amp filter plug costs £21.10 and the adaptor £24.55. The 7-amp filter plug is £24.92 and the adaptor £28.37. The 13-amp filter plug is £32.78 and the adaptor £36.23.

Further information from Bowthorpe EMP Ltd, Stevenson Road, Brighton, East Sussex BN2 2DF.

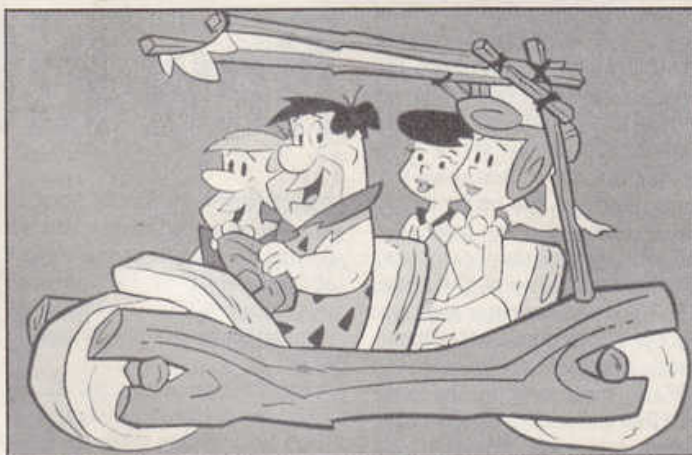
Freddy's revenge

GRAND Slam Entertainment has announced plans to release a new Flintstones computer game, following a previous release based on the life and times of the prehistoric Fred Flintstone.

At present, plans are at the storyboard stage. One idea being considered is based around the 'Battles Of The Sexes', with Wilma trying to persuade Fred he should really work in the house rather than go to the bowling alley.

An exceptional feature planned for the game is that the personality of the character will change in the manner in which you complete the game.

The player will be able to choose between Fred or Barney, though



The Flintstones.

not Wilma.

Grand Slam will say nothing

about the game other than to wait and see. So wait and see we must.

ST music

A NEW musical package for the Atari ST is to be launched by Tigress Designs. *Patchman 32* is an editing package for the Roland MT32 and is aimed at the semi-professional musician who uses a 4/8-track machine on which to record music.

Patchman 32 has many features including 64 user voices, 128 preset voices, 30 drum voices, 128 patch memories and 30 drum memories. Despite the high sophistication of the product, Tigress say the product is easy to use, as most features require only pointing and clicking with a mouse.

Patchman 32 costs £85.95 and is available initially direct from Tigress Designs Ltd, 25 Burmester Road, London SW17 0JL. Tel: 01-946 7870.

On-line appeal a great success

THIS year's Children in Need appeal excelled itself with donations exceeding £13 million. More than £50,000 was raised by the Micronet, Prestel and ITEC link up, whereby the public took part in an on-line auction, questioned celebrities and contributed to the appeal.

Micronet had organised the whole on-line side of the appeal and also conducted the celebrity interviews and auction. Prestel assisted with the auction but mainly dealt with pledges, while the ITEC representative co-ordinated the ITECs involved, which was over 50. One ITEC even made £5000 on its own.

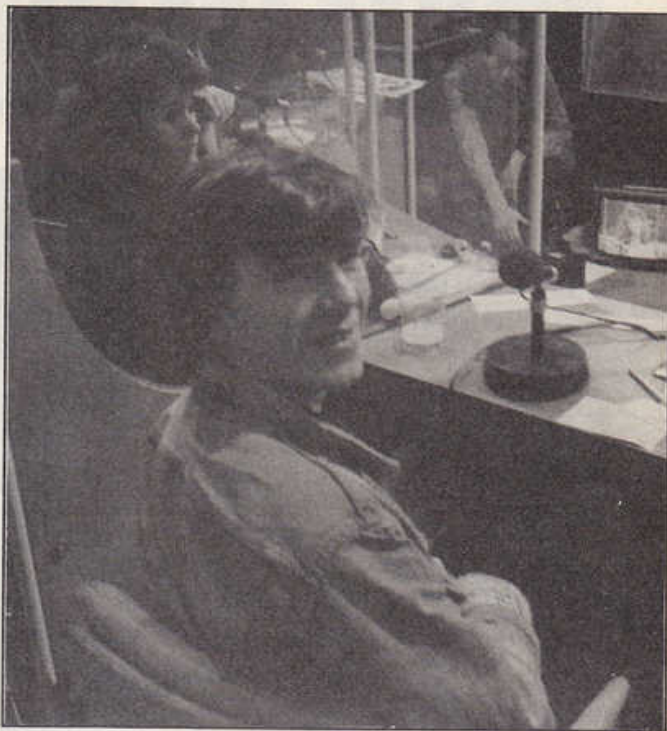
Witnessing the organised chaos of the event, was *Popular Computing Weekly*. We spoke to Micronet public relations man David Rosenbaum about what the appeal entailed. "Preparations have gone on since September," he said. "We have eight terminals here, of

which four are BBC micros, assorted modems and printers and a team of 13 people, including ITEC and Prestel representatives."

Despite preparations so far in advance, the team was not prepared for the amazing public participation on the night. A special program had been written to process the auction bids, but it was all just too much.

Rosenbaum explained: "The response was so huge that the systems could not cope and we became backlogged. For the auction, consisting of 60 items, we had more than 5,000 bids, which is incredible."

The minor technical problems did not hold back the money, however, and several items sold for considerably more than cost value. An Atari ST went for £500, a Z88 for £285, some *Wogan* tickets for £50, a Psion Organiser for £120, and a duvet - to keep you and your



Simon O'Brien and Gillian Kearney at the Children in Need appeal.

computer warm through winter - for £110.

It was at the sight of a famous face that the money really poured in. One viewer wanted to see Joanna Lumley eat a Cadbury's Flake, while a Micronet user offered £100 to stop Des O'Connor singing.

It was heartening that so many celebrities supported the appeal, including Nigel Havers, Gloria Hunniford and Rowan Atkinson. Some of them even had a word or two in *Popular Computing Weekly's* ear.

EastEnder, Nick Berry, revealed his most embarrassing moment was having sung his No. 1 record, *Every Loser Wins*. He has no plans to release a follow-up.

Ex-Brookside, Simon O'Brien (Damon Grant for the uninitiated) was also there doing his bit for charity. His plans for the immedi-

ate future include presenting Night Network and playing in his first pantomime, *Snow White*, as Jason, the Queen's evil henchman.

Frank 'It made me feel sad 'arry' Bruno was the gentle giant as ever. He is still hoping to fight Tyson and at the moment is training three hours a day to keep in trim.

The rest of the time is just spent doing the rounds of press and television.

Dr Who, alias Sylvester McCoy, made a dashed visit. Currently performing in the musical, *The Pied Piper* at the National Theatre, he will be filming another series of *Dr Who* next March. Without Bonnie Langford, you will be sad to hear.

All in all, everyone just had a good time and millions were raised in the process. Even the BBC sandwiches were not that bad.



Sid Smith of Micronet with Nick Berry of EastEnders.

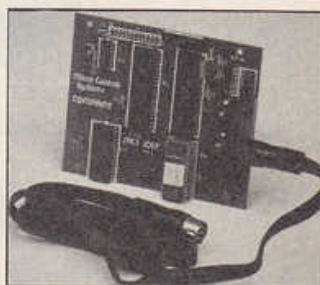
Printer link-up for Commodore users

OWNERS of Commodore 64 and 128 computers can now use Canon and Epson printers as Micro Controls System (MCS) has introduced an 8K version of its Comprint buffer interface.

The device is installed easily by plugging the Comprint circuit board inside the printer and then

connecting the cable to the serial port of the computer. That done, the Comprint unit makes the printer emulate a Commodore system, the result of being designed round a code translator. It also permits access to all other features offered on Epson and Canon printers.

The 8K Comprint is aimed at those who wish to get more from a Commodore. It costs £34.99 for the Epson version and £44.99 for the Canon. Accompanying the launch of the unit is the news that the 2K versions have been reduced to £29.99 and £39.99.



The Comprint unit.

NEW AMIGA NOW OTHER HOME COM

Amiga 500 is here.

With a mind-blowing array of features and capabilities.

And a £499.99* price ticket (inc. VAT), hundreds of pounds less than anyone could have predicted.

"...a miracle of compression..." writes *Popular Computing Weekly** "...it all adds up to a formidable system which is clearly better than anything else at the price."

This elegant little machine takes family computing into new dimensions of creativity, excitement and productivity.

It outruns and outguns office PCs as a business multi-tasker, performing a deskful of different jobs simultaneously, at over 7 million steps per second in realtime.

So other home computers may not be the only machines it consigns to the toy cupboard.

AMAZING SCIENCE FACT.

Amiga is used by Disney, Universal and other Hollywood studios for its dazzling 3D graphics manipulation and animation powers.

A sophisticated high-speed graphics processor called a blitter chip transforms images in realtime.

You can paint the screen with more than 4,000 colours. Create and modify designs and effects as you like, with pin-sharp resolution.

You command an almost limitless workshopful of stunning professional graphics capabilities.

With an optional Genlock interface, you can capture images off videotape. Manipulate and mix



them with graphics. Then re-transfer them to videotape!

This means you can produce spectacular special effects like those created by Amiga computers for Channel 4's *Chart Show* and the American TV science fiction series *Amazing Stories*.

YOU AIN'T HEARD NOTHING YET

Concealed within the sleek Amiga shape, there is also a pro-quality sound synthesiser and a four-track stereo sound system.

Driven by another powerful and unique custom chip, it can synthesise musical instruments a

*Includes DeluxePaint from Electronic Arts worth £79 + VAT! (Excludes monitor or TV modulator.)

AMIGA 500. COMPUTERS ARE JUST TOYS.

Your Amiga can also synthesise the human voice.

It can speak back anything you care to write on the keyboard.

So this is one computer that can not only word process with faultless professionalism, and incorporate superlative graphics into the text, it can also read the text back to you aloud.

GAMESMANSHIP AND WORKMANSHIP!

The new Amiga 500, in fact, dumbfounds its competitors in every way.

Graphics, stereo sound, multi windowing, multi screens, 512K to 1Mb RAM (expandable by an incredible 8 further megabytes externally**), 3½" internal disk drive with 880K of mass memory, 4 unique dedicated chips plus the 16/32-bit power and 7.14MHz speed of its central processor, communications and vast expansion potential all add up to a computer of immense professional capability.

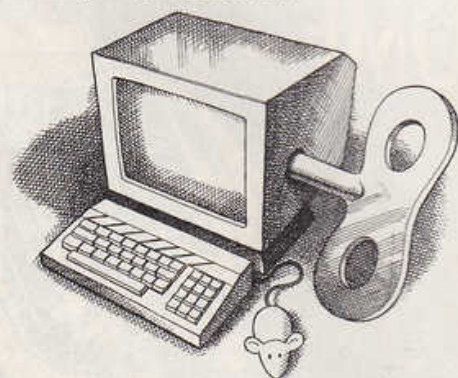
Yet the same technology allows the Amiga 500 to play games so mind bending that only full-scale arcade machines have been able to play them until now.

AND AMIGA MEANS 'FRIEND'!

However many of the Amiga's extraordinary talents you find yourself using, they will all be beautifully simple and natural.

You will be totally at home in the friendly and effortless Amiga

environment, where everything happens by windows, icons, mouse and pulldown menus.



And the Amiga 500 simplifies life in another way too.

There is now no comparable home computer. At any price.

INCREDIBLY
ONLY **£499.99***
INCLUDING VAT

Try the astonishing new Amiga 500 at your nearest Commodore Amiga dealer.

And discover why *Personal Computer World*†, having tested the graphics performance of Amiga's latest and most powerful rival, concluded "...Amiga still reigns supreme..."

sound effects.

An optional digitiser allows you to take onboard real sounds. Mix and modify the two. Translate your compositions from keyboard to sheet music. Play them back through the monitor's speaker or your hi-fi.

*Popular Computing Weekly, 22-28 May 1987. †Personal Computer World, February 1987. **Subject to availability.

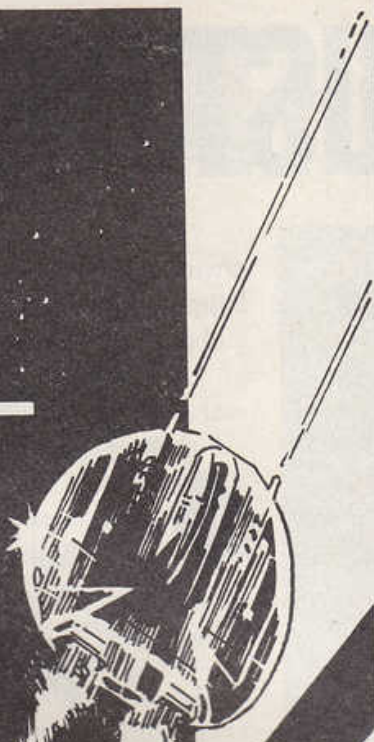
AMIGA IS A TRADEMARK OF COMMODORE-AMIGA INC. © 1987 COMMODORE BUSINESS MACHINES (UK) LTD. ALL RIGHTS RESERVED.



Commodore

THALAMUS

FAR FROM HOME -



FAR FROM...

Hunter's MOON

BY MARTIN WALKER



Cassette £ 9.99 | Disk £12.99 CBM 64/128

The AMIGA Centre Scotland SPECIAL OFFERS

STOP PRESS
We are now supplying 58020/1, 68881 Upgrades for all Amigas

DIGI-PAINT..... £40.00 Deluxe Video 1.2..... £60.00

AMAZING COMPUTING
★ Shipped directly to us by air ★ All back issues available ★ Sent by First-Class post £3.50

NEW MAGAZINES IN STOCK
★ INFO £3.50
★ ROBO CITY NEWS £2.50
★ AMIGA SENTRY £3.00
★ SUBSCRIPTIONS ★
12 issues for 10 times cost of single issue: excludes postage

BUTCHER 2
★ 25 IFF Graphics Utilities ★ See full review in YOUR COMMODORE September 1987 ★ New features. Registered Users Upgrade (send original disc) £8.00
Butcher 2 £27.00

EARTHBOUND FONTS
★ Over 80 fonts on three discs ★ Over 80 different point sizes on each disc ★ Utilities to view any Font ★ Upgrade Fonts using discs
each £13.00
all three £38.00

RAY TRACER
★ 3D Graphics in 4096 colours ★ Disc contains Source Code in C and BASIC ★ Enter our Competition and win a 3D Utility £11.00

RAY TRACER NEWSLETTER
★ Issues 1-4 on disc ★ Hints, tips, tutorials, pictures ★ Code to create your own JIGGLER-type movies
Discs 1 to 3..... each £8.00
Disc 4..... £3.00

DISKPRO + 1
★ Increase free disc space by compressing your files ★ Includes free DIMMER to save your monitor £22.00

EXPRESS PAINT
★ Supports PAL and OverScan ★ Uses Half-Bright mode (64 colours in to-resh) ★ "Typeset" newsletters, images, posters, business reports ★ Flow text into areas of any shape (not just boxes) ★ Overlay mode ★ Fast scrollable canvases ★ Link text files from any word processor (inc. NotePad) ★ Alter all the icons to customise the program ★ Use any AMIGA screen resolution (up to 752 pixels wide) ★ Supports a canvas size of 8000 (eight thousand) pixels wide by a height only limited by memory. £58.00

AIRT
★ State of the art icon-driven programming language ★ Over sixty commands ★ Over 5600 instructions possible per program ★ Includes Editor, Compiler, Print Utility, Form Utility..... £55.00

OUTLINE
★ Keep lists of data in a way which used to be the province of the database ★ Compatible with any word processor ★ Use to prepare lists, speeches, papers, books, agendas..... £36.00

SCULPT-3D
★ Eric Graham's new masterpiece ★ 3D Modelling Program ★ THIS IS THE UK PAL VERSION ★ Mouse or keyboard-driven ★ Combine primitive solids to form complex shapes ★ Build shapes by extruding or spinning curves ★ Construct surfaces from contour lines ★ IFF output: previews in less than one minute..... £69.00
Demonstration disc..... £4.00

FORMS IN FLIGHT
★ 2D/3D Drawing and Animation ★ View from any perspective or direction ★ Rotate, Pan, Roll, Magnify, Move In/Out ★ Splines, Polygons, Freehand, Snap ★ Complex Object-Nesting and motion ★ Surface extrusions - any angle ★ Efficient hidden line removal ★ Red/Blue stereo images ★ Plotter support ★ Comprehensive manual (Requires 1Mb to run)..... £60.00

**COMING SOON
FACCS-11
MICROFICHE FILER
RAM and Hard Disc expansion**

DOUG'S MATH AQUARIUM
★ Explore and display functions in 2D/3D ★ Uses recursion to create fractals, Mandelbrots ★ Wire Frame, Contour Map or Superimpose modes ★ 200M in/out and change position ★ Cycle colours and change Sample Rate ★ Teaching/Learning/Research tool..... £58.00

ANIMATOR: APPRENTICE
★ Create solid Disney-style 3D Animations ★ Includes shading in 4096 colours ★ Background masking ★ Real-time audition (Requires 1Mb to run)..... £195.00
ANIMATOR: JUNIOR..... £52.00
Demonstration Discs..... £7.00
Library Discs..... £14.00-£25.00
2-hour demo film on VHS..... £25.00

Send large S.A.E. for our software and reviews lists. Dealer enquiries welcome

★ 24 hours VISA Card Service ★
★ All prices include VAT and Postage (UK and BFPO) ★
★ Callers: Wednesday-Saturday 12 noon to 6.00pm ★
AMIGA Centre Scotland
4 Hart Street Lane, Edinburgh EH1 3RN Tel: 031-557 4242 anytime

SUPERTEC LTD - computer solutions!

Atari computer systems available from stock - ALL MODELS - call for details.

520 STFM - 1040 STF - MEGA ST2 & ST4
HARD DRIVES - MONITORS - PRINTERS
ATARI PC's
ATARI SLM 804 LASER PRINTERS

MONITOR MASTER - COLOUR/MONO SWITCH £351

AMSTRAD PC1512 ALWAYS IN STOCK.
We have a full range of AMSTRAD products available. Ask about the new PPC640 portable.



AKHTER PC'S from £499 (exc VAT) call for details.
We have a wide range of software, this includes:

GAMES - APPLICATIONS - GRAPHICS
PLEASE CALL AND ASK

SUPERTEC IS A GENUINE ATARI AND AMSTRAD DEALER, NOT JUST A POSTAL ADDRESS. WE SUPPORT OUR CUSTOMERS WITH QUALITY SERVICE AND BACKUP IF REQUIRED. DON'T COMPLAIN US WITH 'BOX MOVERS'. IF YOU KNOW WHAT YOU WANT, WE WILL SUPPLY ON MAIL OR TELEPHONE ORDERS. ORDER WITH VISA OR ACCESS FOR IMMEDIATE DESPATCH OF STOCK ITEMS.

PRINTERS - PLOTTERS - MODEMS - DISC DRIVES - HARD DRIVES - CABLES - MONITORS and SOFTWARE!

We can supply items from the following manufacturers:
Panasonic - Micro Peripherals - Epson - Brother - Philips - Mannesmann Tally - Roland - Tandon - Miniscribe - Star Micronics - Amstrad - Akhter - Miracle Technology - Cumana - Eldersoft - and more. JUST CALL AND ASK!
COME FOR A CHAT ABOUT YOUR NEEDS, YOU WON'T BE GIVEN THE HARD SELL BUT WE WILL TRY TO HELP.
PC & ATARI ST based DESK TOP PUBLISHING systems from Mirrosoft (FLEET STREET PUBLISHER) - TIMEWORKS DTP - Soft Logik (PUBLISHING PARTNER)

Don't be a DINOSAUR - move to the best and easiest micro's to use. You can easily pay three times (or more) as much, for the so called 'INDUSTRY STANDARD' computers or still not get a system as good.

THIS AD WAS PRODUCED ON AN ATARI LASER!

SUPERTEC LTD
CORNWALLIS HOUSE
HOWARD CHASE
BASILDON
ESSEX
SS14 3BB

TEL (0268) 282308

OPEN 9 TO 5 PM MONDAY TO FRIDAY
PERSONAL CALLERS WELCOME - WE HAVE SYSTEMS ON DEMO FOR YOU TO TRY
VISA & ACCESS ACCEPTED-



DIARY DATES

DECEMBER

December 9-10

IBM's Strategic and Tactical Directions: 9370, PS/2, SAA Seminar

Sheraton Park Tower, 101 Knightsbridge
Details: PS/2 and the communications capability needed for SAA, examines the 9370 product, contrasting with mini-computers

Organiser: EMAP Conferences, 12 Bedford Row, London WC1R 4DU, 01-404 4844. Contact Tessa Dwan or Sarah Gladstone

December 12

Christmas ZX Microfair

New Horticultural Hall, London SW1

Details: Latest innovations for Sinclair users

Advanced tickets: £1.50 adults, £1 children. Tickets on the door: £2 adults, £1.50 children

Organiser: Mike Johnson, 01-801 9172

JANUARY

January 19-22 1988

The Which Computer? Show

The National Exhibition Centre, Birmingham

Details: Product launches, free seminars concerning computing

issues in lay terms

Organiser: Cahners Exhibitions, Chatsworth House, 59 London Road, Twickenham TW1 3SZ, 01-891 5051

FEBRUARY

February 4-6 1988

The Amstrad Computer Show

The Great Hall, Alexandra Park, London

Details: Displays and demonstrations of all the latest hardware, software and peripherals for Amstrad computers

Organiser: Database Exhibitions, 061-456 8383

This event has been postponed from January 28-30 to the above date.

MARCH

March 18-20 1988

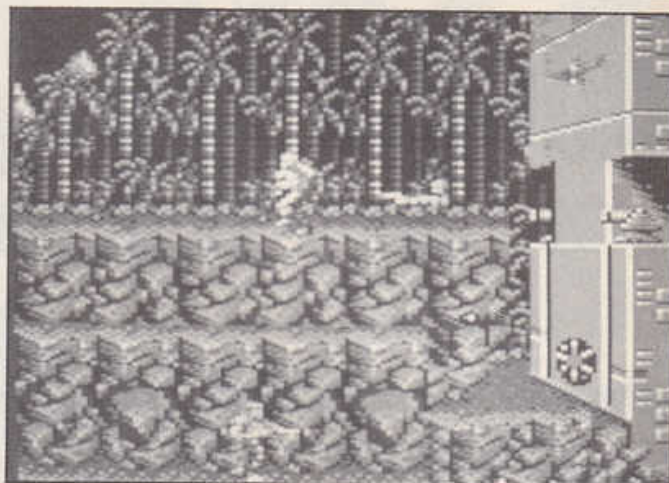
The Electron and BBC Micro User Show

UMIST, Manchester

Details: Displays and demonstrations of all the latest hardware, software and peripherals for Acorn computers

Organiser: Database Exhibitions, 061-456 8383

Prices, dates and venues of shows can vary, and you are therefore strongly advised to check with the show organiser before attending. We cannot accept responsibility for any alterations to show arrangements.



SOFTWARE HOTLINES

Christmas fever is starting to grip the industry. High flying executives are perspiring as products begin to overrun schedules and programmers are being heated over hot coals for not producing the goods on time.

The big question is, which of the titles mooted for a December release will actually arrive on time?

US Gold's *Gauntlet 2* and *Outrun* are both running tight but you can expect a virtual tidal wave from Ocean. *Gryzor*, *Phantom Club* and *Madballs* all have December 3 release dates. The following week *Basket Master* on the *Imagine* label, *Wizball* ST and PC, *Rastan* and *Slapfight* ST are due in the shops.

Gryzor, on the Amstrad CPC, is pictured at the top of the column. Negotiate the electric force field and blow away wave after wave of fanatical guerrillas as you progress towards the enemy base. Based on the Konami coin-op it should be one to watch out for.

Phantom Club also sounds interesting. Programmed by 'The Duke', the Hungarian who wrote

Movie, it is a 3-D strategy game. It involves saving the reputations of various superheroes who have succumbed to the temptations of life.

What you won't see until after the festivities have subsided are *Platoon* on anything, and *Eco* on the ST.

Robtek is having something of a blitz on the 16-bit market at the moment, with *Ball Raider* on the Amiga out now at £19.95, and *Dizzy Wizard* due next week at the same price.

At the \$9.95 level and on the Amiga, *Quasimodo* and *Championship Backgammon* are now available, with *Championship Draughts*, *Jigsaw Mania*, *Rocky* and *Brainstorm* promised for December 10.

The people who brought you *Hunt For Red October*, **Argus Press Software**, will be turning back the clock with their next release, *Pacland*. Whatever next? We have had *Breakout* variants, so the next step has got to be *The Return of Pong!*

The picture at the bottom of the column is *Blamp Lamp*, mentioned last week. Having seen some more screens I can confirm that this looks very impressive.

Stop press, last minute news. *Gauntlet 2* has been released on the Spectrum and Amstrad.

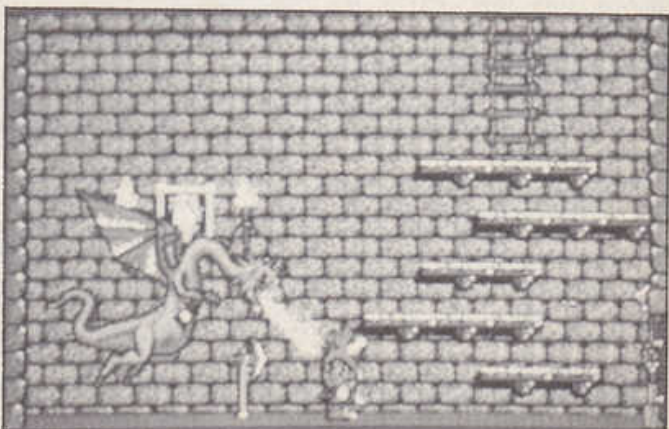
Duncan Evans

CHARTS

Top Twenty

1	(15)	Combat School	Ocean
2	(1)	Grand Prix Simulator	Code Masters
3	(3)	Solid Gold	US Gold
4	(27)	Live Ammo	Ocean
5	(7)	Soccer Boss	Alternative
6	(6)	Star Wars	Domark
7	(2)	Game Set Match	Ocean
8	(NE)	Match Day 2	Ocean
9	(4)	Pro Ski Simulation	Code Masters
10	(33)	Gary Lineker's Superstar Soccer	Gremlin Graphics
11	(8)	Renegade	Imagine
12	(5)	Joe Blade	Players
13	(10)	BMX Simulator	Code Masters
14	(NE)	Buggy Boy	Elite
15	(11)	Fruit Machine Simulator	Code Masters
16	(9)	Dizzy	Code Masters
17	(17)	Back To The Future	Firebird
18	(20)	Indiana Jones	US Gold
19	(19)	10 Pack	Gremlin Graphics
20	(18)	Thundercats	Elite

All figures compiled by Gallup



Middle men re-assessed

Nikki Carvey investigates to what extent the consumer gains or suffers from direct distribution.

Electronic Arts, the major U.S. Software House, is well-known for its direct distribution methods. This policy is as unique in the consumer software industry. Electronic Arts claims direct distribution is also the best policy. But who benefits from direct selling?

Electronic Arts believes it needs distribution strength to succeed in the world of fast turn-over consumer software. In the U.S., it has already proved that this system works, with more than half its total sales volume going direct to retailers.

The same system is now operating in Britain. Despite the obvious differences in the U.S. and U.K. markets, spokesperson for Electronic Arts, Lesley Mansford, is confident that direct distribution will work equally well over here. "We've spent much time and effort researching into the feasibility of it over here. There is no reason why it should not work," she said.

Richard Tidsall of CentreSoft, one of the U.K.'s biggest distribution companies, did not agree with her. "It is a backward step," he commented. "Direct supplies were quite common in the early days of the industry but slowly disappeared as software companies found it better to use a separate distributor."

The crux of the matter is essentially, 'Is it or isn't it?', with Electronic Arts arguing that direct distribution is better for all concerned, and the distributors maintaining that their service is superior.

"The distributor is only interested in shipping the stuff out and not what the stuff is," explained Lesley Mansford. "By selling our own products, Electronic Arts can control the situation, knowing that each product will receive sufficient attention. It also enables us to get closer feedback from the retailers and have a more personal relationship with them."

Richard Tidsall would have none of it. "The retailers find direct supplies an inconvenient imposition. They have to spend

more time on accounts and deal with more people. They would rather spend the time on selling."

David Ward, chairman of Ocean Software, was also inclined towards this opinion, as far as individual retailers were concerned. "Distributors act as wholesalers giving them a choice of products rather than having to deal with 40 or 50 software companies. In addition, it enables them to buy smaller quantities than if buying from the manufacturer."

But if direct distribution is so much better than involving a middle man, the obvious question is why Tidsall's issue is predictable. "Because they are happy with the

to the distributor and say, 'Can I come back?'"

It is the success of Electronic Arts' distribution network that has led to the growth of its affiliate labels - independent software houses who have their products distributed and marketed under the E.A. banner. In the U.K. it currently has three affiliates; Nexus, CRL and Martech.

Simon Harvey, spokesman for Martech, explained why he thought Martech signed with Electronic Arts. "One contributory aspect of the Martech/Electronic Arts deal was that E.A. gives retailers solid support at the point of sale, providing them with pos-

public wants. It is all a question of supply and demand."

Since direct distribution effectively cuts out the middle man, the implication is that the consumer will benefit along with the retailer and software house. Not so. Mansford, however, was adamant that the consumer does not lose out.

"We produce high quality products each time. Our games tend to appeal more to older people who are more interested in thinking games rather than shoot-'em-ups. Consequently, the consumer does not get easily bored playing the game and so the product has an extended life."

Simon Harvey supported her view stating, "It is false to suggest that a company who distributes directly should pass on savings to the consumer because they still incur the same costs, such as shipping products in and out, administration etc. They go through identical functions to the distributor, they just have different names."

Richard Tidsall did concede that consumers might be slightly affected by direct selling, through the inconvenience of not being able to purchase the product from certain chainstores who only deal with a single supplier. Boots, for example, are supplied by CentreSoft and since Electronic Arts does not sell its products to CentreSoft, the public cannot buy its games in Boots. Electronic Arts backs up its products with a merchandising service. This is one aspect of direct selling that is appealing more to stores, especially big ones like Smiths. According to David Ward, such stores are: "Moving away from central buying towards a merchandised service".

Whether this means that more companies will go into distributing for themselves has yet to be seen. Richard Tidsall, for one, certainly does not think so. At the end of the day, direct distribution appears to benefit the software manufacturers, while the retailers find a distributor more convenient. In both instances, consumers are left out in the financial cold. □



John Forrest, Director of European Distribution for Electronic Arts - "The consumer benefits from direct distribution because it offers them a better range of products."

role of the distributor, who pushes the product for them. Our service is just as good as anything offered by direct distribution."

Mansford, on the other hand, believes that distributors currently monopolise the industry in Britain and because of the muscle they can exert, software houses cannot afford to take the risk. "If a small house like Palace decided to sell direct, they would put themselves in a precarious position. If it does not work, they cannot go back

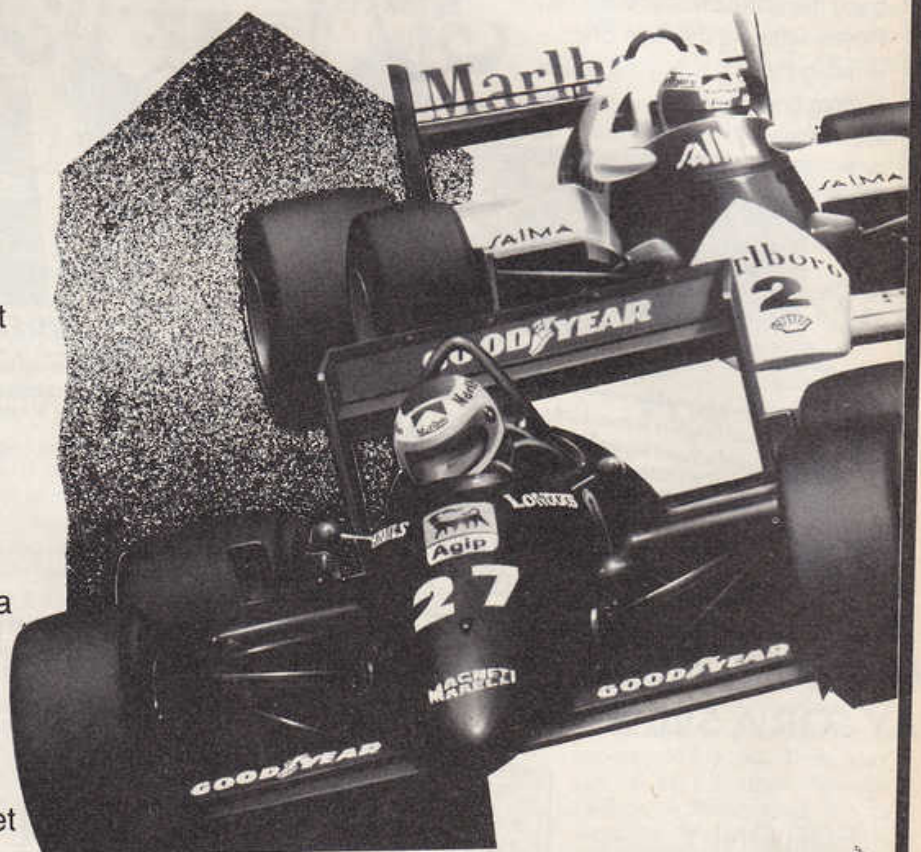
to the distributor and say, 'Can I come back?'"

David Ward, however, thought that too much emphasis was placed on the argument about distribution, saying, "The method of distribution is unimportant since you can only shift what the

XMAS N°1?

Grand Prix Simulator is one of the sales success stories of this year. The Amstrad version was launched first and has spent 20 weeks at the top. This was followed by the Spectrum version which entered the chart at number one. Six weeks later it is still there. Now there is the Commodore 64 version which has the potential to repeat the story.

Grand Prix Simulator is endorsed by Johnny Dumfries who drove for the Lotus Formula 1 team in 1986 and is driving for the Jaguar world sportscar championship team next year. 'The game has a striking resemblance to Grand Prix driving in that the only way to get a fast lap time is to be very smooth and accurate. Being heavy handed or jerky may look spectacular but it slows you down.'



PRESS RELEASE

For years the pop music industry has created different versions or mixes of the same tune. The 12" single version, the LP version, the disco mix etc. Code Masters have taken this concept and applied it to computer games to create the Code Masters Plus range.

The A side of the first cassette contains the game. This is to the high standard that the public expect of Code Masters products. Side B contains the expert version of the same game. This is so difficult as to be unplayable until the standard version is mastered. The challenge that this represents will considerably increase the life and addictive qualities of the game.

There is also a second cassette which contains two sides of alternative scenarios in which either version of the game can be played. This extends the game further still.

Launch titles are as follows:—

Super BMX Simulator on the C64 by Richard Darling. Containing over a year's worth of enhancements and improvements over the best selling BMX Simulator. This game incorporates artificial intelligence and an innovative four player option. There are fifteen different scenarios in which it can be played.

Jet Bike Simulator on the Amstrad CPC and Spectrum by the Oliver Twins. This brings the excitement of overhead view racing to water, with the added attraction of 24 different scenarios.

Code Master Plus will be packaged in double crystal library cases along with a mini poster and stickers. The first titles will be available at the beginning of December. At £4.99 they are excellent value and remain a pocket money purchase.



DON'T MISS..

BOARD GAME

COMPUTER GAME

THE BEST FOOTBALL GAMES YOU CAN BUY

FOOTBALLER OF THE YEAR

Enjoy the world of a Football League Player suffering the pain and winning the glory, starting at the bottom and becoming a legend... A Footballer of the Year.



SUPERSTAR SOCCER

The most original computer football game of all time.... Available on CBM64/128 disc and cassette, Amstrad disc and cassette, Spectrum 48/128K cassette, MSX Cassette.



Available Now
£14.99

Gremlin Graphics Software Ltd /
Gremlin Board Games Ltd.,
Units 2/3 Holford Way,
Holford, Birmingham
B6 7AX

CBM64/128 · AMSTRAD £9.99C · £14.99D
SPECTRUM · MSX £7.99

Available from
October

ORDER YOUR GAMES NOW!!

If you would like us to rush one of these great games direct to your home at no extra charge fill in this coupon NOW and post to:-

GREMLIN BOARD GAMES/GREMLIN GRAPHICS SOFTWARE LTD.
Units 2/3 Holford Way, Holford, Birmingham B6 7AX.

I would like _____ copies of Gary Lineker's Footballer of the Year. (Cheques made payable to Gremlin Board Games) Name _____	I would like _____ copies of Gary Lineker's Superstar Soccer. System _____ (Cheques made payable to Gremlin Graphics Software Ltd) Address _____
Total Amount Enclosed £ _____	Postcode _____
Please debit my Access/Visa account <input type="checkbox"/>	CHEQUE/P.O./OR ACCESS/VISA ONLY
Signature _____	Date _____

SUPERPAC: COMPLETE SYSTEM FOR LESS THAN WHAT YOU WOULD PAY FOR A 520 STFM!

FOR ONLY
£259.95
INC VAT
THE SUPERPAC
INCLUDES...



COMPUTER:

- v ATARI 520 STM computer.
- v 16 bit 68000 CPU, 8 MHz.
- v 520K bytes of RAM, 192K bytes of ROM.
- v 128K ROM cartridge optional.

FD-200 DISC DRIVE:

- v Double-Sided 3.5 inch Disc Drive
- v 720K bytes (formatted) of storage.
- v Twice the capacity of the 520STFM drive.
- v Runs all protected software.

OUR PRICE PROMISE:

Yet a complete system, up to the mains plug, and with a double-sided disc drive, the MEGAPAC costs only £259.95 inc. VAT, actually less than the 520 STFM! You can be certain that this is the best price you would find anywhere, we will refund the difference if you find the same system cheaper from any official ATARI dealer. Please allow £7.00 for post and packing.
Public Domain software: only £2.00 per disc!. Ring for list.

SOFTWARE:

- v ATARI Basic.
- v RAM disk, clock, Doodle.
- v Megaroids, ST Writer Wordprocessor.

DISPLAY:

- v UHF output for colour TV.
- v monitor output.
- Monitor optional.

Monitors (if required):
ATARI monochrome, high resolution
SM 125 £135.00 inc. VAT
Philips colour, medium resolution
CM 8833 £299 inc. VAT
Post and packing on monitor £7.00
We stock the entire range of ATARI products including monitors, printers: Mega ST2 and ST4 Laser printer, ATARI PC and large selection of software and accessories (leads, ribbons, paper discs, graphic tablets, video digitiser, hard disc, drive mechanism, sound synthesiser etc.)

SHOPPING HOURS AND ORDERING:

We are open Monday to Saturday, from 9.00am to 5.30pm (Saturday from 10.30am). We accept Access and Visa credit cards.

A.S.&T.

EVERYTHING ATARI ST
ATARI
Power Without the Price™

(0702) 510151

Monday to Saturday
9.00am to 5.30pm
A.S.&T.
M25 (25 miles)
London

**PHONE ORDERS:
(0702) 510151**
ADVANCED SYSTEMS AND TECHNIQUES
UNIT 32/33 RUTHERFORD CLOSE
PROGRESS ROAD
EASTWOOD INDUSTRIAL ESTATE
SOUTHEND-ON-SEA
ESSEX SS9 5LQ

The dead zone

As a regular reader of your magazine, I would like to enquire as to why there are no listings for programmes or articles featured on the Tatung Einstein computer. As most shops do not seem to stock much information for this machine, it would be very helpful, to myself and other users, to have a list of stockists where we could obtain software.

Could you also advise of any Einstein User Groups in my area, as I am interested in contacting other users.

I enjoy your magazine but I feel that it is neglecting some of the lesser known though often excellent micros, such as the Einstein, whose capabilities are often underestimated.

*Philip Clews,
Crewe,
Cheshire.*

The Einstein, as with many other 'dead' computers, still has a user base but the limitations of space mean we cannot promise to cover it. However, the following letter should be of some help.



Einstein a go-go

I am writing to thank your magazine for including the 1987 National Einstein Exhibition in the events column. The show which was held at the National Motorcycle Museum on Saturday 14th November was a tremendous success.

We were overwhelmed by the response with close on 2000 attending, the activity there would have had to be seen to be believed.

The turnout was so good that we have now arranged for another

exhibition to take place on Saturday April 23rd, this will take place at the same venue, only in a larger hall.

To all those who attended, may I extend our warmest gratitude for making it such a great day. May I also take this opportunity to inform all Einstein owners of the existence of the U.K. Einstein User Group and I enclose the November edition of our magazine for your perusal.

*Mike Smallman,
U.K. E.U.G.,
7 Sheepen Place,
Colchester CO3 3LD,
Essex.*

Free advertising

Thank you very much for printing our letter informing your readers of our fanzine. However, in the next issue I read the letter entitled "People in Glass Houses" where somebody was complaining about our kind of letter.

This is the argument I have: how on earth are people supposed to know about us if we don't inform them? I remember some years back where magazines like *Popular* would print numerous letters each issue asking for the space to announce some club or bulletin board. We certainly cannot afford any advertising when each individual's wages at the end of each issue is 80p. Perhaps to avoid any further argument you could devote a page in the not-too-distant future to fanzines like ourselves.

While I'm on the 'soap box' please allow me to say that you can get copies of 'Silicon', issue two, from the address below by sending an S.A.E. and a cheque made out to Phillip Henry for 25p. There, that wasn't too painful was it?

*'Silicon',
14 Rennie Crescent,
Cheddleton,
Nr. Leek,
Staffs,
ST13 7HD.*

Not too painful, no, but enough is enough. Please, no more fanzine letters!

Don't stop

Let me say how pleasantly surprised I am by the new format of *Popular Computing Weekly*. Your news coverage is second to none, especially being first about the Commodore Amiga virus which was of interest to myself and other Amiga owners.

What I am interested in, is more information about budget software for the Amiga. Is there any chance you might be doing a feature on budget games for the Amiga in a forthcoming issue?

*Simon Taylor,
Burnley.*

Er, what's that?

I should be obliged if you could explain in simple basic English what is 'virus' - is it a new strain of 'AIDS' or something? I am a simple sort of body who uses his computer for pleasure. I am not a whizz-kid so I fail to understand a word that has been written on the matter in the last two weeks of *Popular Computing*. Perhaps I should visit my doctor and get injected against it!!!

*Norman Gardner,
Swanage,
Dorset.*

I think your doctor would be as mystified as you are. Simply it is a program that corrupts discs and can move from one disc to another. There, happy?

Viral revenge

I have been following the reports of the 'virus' program affecting AMIGAs with some interest.

As a games software writer I have been personally ripped off by people who think it is their right to buy a program and then supply pirate (stolen) copies to all and sundry. The practice may only make a small dent in big company profits, but this overshadows the fact that the original writer is losing royalty payments on his work.

Now, suddenly, people are afraid of being infected by the 'virus'. Well, that isn't necessarily a bad thing; after all, if all your games and application software is obtained legally and you only use accredited copies, then there is little to worry about.

In my opinion if you become infected it's probably no more than you deserve! There is some truth in the remark 'IF YOU CAN'T WRITE IT YOURSELF THEN YOU SHOULD BE PREPARED TO PAY FOR IT'.

*Ron Jeffs,
Taunton,
Somerset.*

As I said in my editorial last week, the main problem with this argument is that the virus has spread on freeware discs more

than any other single type of disc, with the most infected ones being no more than innocent enthusiasts.

Positive expansions

May I say how much I enjoy reading your new expanded games section especially since you are now using colour.

It would be nice if occasionally your software editor could include some reviews on new products for the MSX, since I own this machine, and *Popular* is about the only decent general interest computer mag. around.

*Ian Jones,
Derby.*

Me and my dog

In case anyone is interested, eight months ago I founded the *Atari ST and Commodore Amiga Mutual Friendship Society*. The Society has gone from strength to strength, all members benefitting from shared ideas with a common understanding and respect for one another's abilities.

After extensive promotion we now boast three members including me and my dog. There were five of us but there was this fight... I forget what it was about.

Our Society is completely without prejudice and there is no bias towards either of our adopted computers except for the Amiga. If anyone would like to join our Society they must send in their application in 1st Word format on a 3.5" disc. All applicants MUST own both an Atari ST AND a Commodore Amiga. No time-wasters please. Allow 28 days (+ 3 months quarantine) for us to process your disc as we are not geared up to deal with thousands of applications all at once.

Finally, I would just like to add that in the new year we shall be phasing out the more limited machine completely. And the dog.

*Brian Cavers,
London.*

We are sorry but *Popular Computing Weekly* cannot guarantee to reply to all letters requesting a personal answer. It helps us enormously if readers are prepared to have general queries answered on these pages, so, if possible, please do not send SAEs.

When the going gets tough... the Bard goes drinking

It was a close-run thing but *The Bard's Tale* is the shock winner of the Game of the Week award. For sheer addictiveness, gameplay and value it just edged out *Backlash*. *The Bard's Tale* is one of those pseudo role-playing games where the player creates and arms six characters who then go and save the world, or some similar laudable quest.

In this case the objective is a little closer to home. The city in which you reside, Skara Brae, has been taken over by an evil mage called Mangar and lawlessness is rife.

The object is to find Mangar and persuade him to release the city from his evil grasp. It is not an easy task, as there are two towers you cannot get into - not for a long time anyway. There are the catacombs under the Mad God's temple which are guarded by devotees of said Mad God and a few other tricky places.

There are seven races to play as characters, humans, elves, dwarfs, hobbits, half-elves, half-orcs and gnomes. Each race usually is good at one particular profession - elves like magic, dwarfs are good fighters, hobbits are agile enough to make good thieves. The rest of the races can perform a mixture of everything, with varying degrees of success.

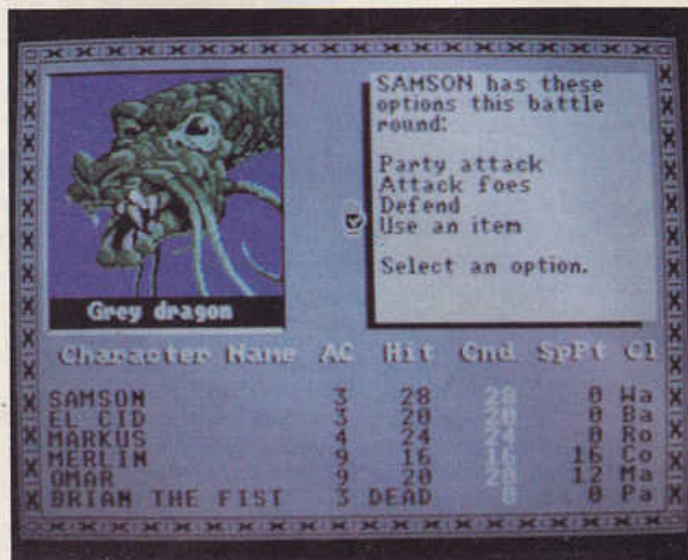
As usual, each character has attributes ranging from one to

18, which affect how well they perform. There are secondary attributes which have a more discernable effect on play, including condition which shows how many hit points you have left and spell points. Each spell you cast costs spell points, so when they have been exhausted it is back to wielding a staff for a time.

Now to the important stuff, character classes. The fighter types are under five categories - warriors, paladins, rogues, hunters and monks. Although warriors are the old standbys, I would recommend a hunter for any party because of his ability to strike a critical hit and kill opponents with one well-aimed blow.

Conjurers and magicians deal with the magic side of *The Bard's Tale* and after they reach third-level magic spells they can swap classes. Once they reach a certain level they can change into a Sorcerer or Wizard, which are fairly powerful. A character who has mastered all seven spell levels of all four magic user classes is known as an Archmage. You will need at least one of them eventually.

The final class, and the most distinctive, is the bard, a warrior who has turned his back on the profession and turned wandering minstrel. Bards have six tunes -



though they must procure an instrument first to play them - which have a wide variety of effects. The trouble is that a bard can play only as many tunes as he has experience levels. Then it is down the tavern for a pint to refresh the vocal cords. Thus when the going gets tough, the bard goes drinking.

The screen display is split between the characters state at the bottom, information on the right and a 3-D view in the centre. The view of the city scrolls towards you in real-time, very fast as well. This view changes to a close-up of a monster whenever your party is assailed.

Initially it is a good idea to avoid parties of things like barbarians, unless you want Conan-fodder. While humans, and even gnomes and dwarfs roam the streets during the day, at night some of the more unpleasant creatures emerge. Giant spiders are ghastly but contender for top of the yucks must be the zombies. You are greeted by the sight of a decomposing monster chewing on the end of a human bone. Blood runs down the bone and drips off the end with truly gruesome animation. Most of the monsters are animated minimally, as well as being very well-drawn, so that dwarfs leer, gnomes twitch, dogs snarl, and zombies chew.

The graphics are excellent and give a real feel for the game. When you are jumped by four contingents of 99 black widow spiders in the castle you can feel the hairs on the back of your neck rise.

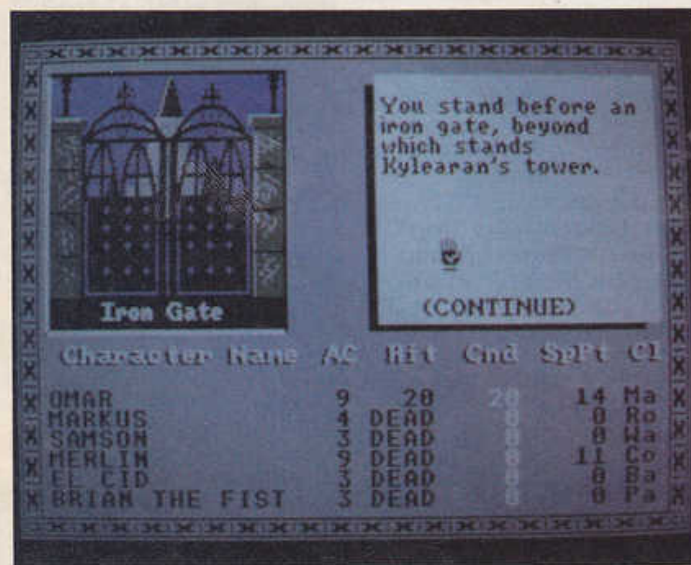
The game is well-structured so that to get into a more difficult location you have to conquer the deepest region of the beginners' dungeon. So it continues all the way through.

When you have earned sufficient experience points you can visit the local review board for an increase in level and hit points - and spell points if applicable. The trouble is that you are not told where it is but I can assure you it is not too far away. The first dungeon is easy enough to find, provided you like wine.

It will take a long time to finish *The Bard's Tale*. I have not come close, despite playing the Amiga version for three months.

If you are looking for a real challenge, a real fantasy quest, and a brilliant game to boot, it does not get any better than this.

Reviewer Duncan Evans Program *The Bard's Tale* Micro Atari ST (C64/Amiga) Price £24.95 Supplier Electronic Arts, 11/49 Station Road, Langley, Berks SL3 8YN.





Matchday

It's taken a long time, but Commodore's *International Soccer* has finally been superseded. I wasn't all that enamoured with Ocean's original *Matchday*, but the sequel, called *Matchday II* unsurprisingly, has quality written all over it.

There is a huge selection of options available including all those fiddly bits like, defining your own keys, giving teams a goal start, time limit per half, whether to attend games that

you're not playing in, changing team and pitch colours, and changing team names and tactics.

You can play a game on its own against the computer or with a friend, or against a friend. The good point is that you can also play in a league championship, with up to seven friends playing the other teams, and can play in three rounds of a cup competition.

It is these latter options that make *Matchday II* such a worthwhile successor to *International*

Soccer. Not that it's a mediocre game to play down on the pitch either.

The scrolling of the pitch is a little slow and cumbersome, but the amount of control you can exercise, variety of deflection angles, and other features such as barging into the opposition more than make up for it.

The kickometer isn't the best method of judging the strength of a ball, but it can be fixed in one position, and it does allow backheels!

A marker surges between counters representing the backheel, weak shot, medium shot, and wallop. When it reaches the desired kick you want to play jab the fire button and Bob Wilson's your uncle.

Matchday II is more than a capable successor to *Matchday*, it's great.

With the league and cup options there is the variety to keep you playing for months.

Reviewer Duncan Evans Program *Matchday II* Micro Amstrad CPC Price £8.95 Supplier Ocean, 6 Central Street, Manchester M2 5NS.

Knightmare

A clever graphic adventure which has put some originality into what was becoming a boring field, *Knightmare* is based on the TV series of the same name.

Each screen of the game, represented as a page of a magic book, shows a chamber of a dungeon.

In your quest to escape from the dungeon you must use the normal adventuring techniques and vocabulary - magic spells, collecting objects, asking for advice from the other characters, fighting or avoiding monsters, and so on.

In this case, the text input uses an ingenious two-key system which allows you to match verb and noun by scrolling through the relevant possibilities.

If you are stuck, the Oracles, good or evil, will give you either helpful advice or a misleading riddle.

You cannot select which Oracle you consult, so it can be more helpful to ask other characters such as the Old Man, or take the

advice of the Dungeon Master who appears at the top of the screen.

The single-colour graphics are clever, featuring little details such as dripping water in the dungeons.

Since *Knightmare* looks fairly complicated, it is also good to note that there is a game save option.

A good combination of puzzles and arcade action, *Knightmare* deserves to be seen whatever your normal taste in games.

Reviewer John Renwick Program *Knightmare* Micro Spectrum Price £9.99 Supplier Activision, 23 Pond Street, Hampstead, London NW3 2PN.



Your complete guide to all the software released this week

Amstrad CPC

Program *Dr Scrim's Spook School* Price £1.99 Supplier Mastertronic, 8-10 Paul Street, London EC2.

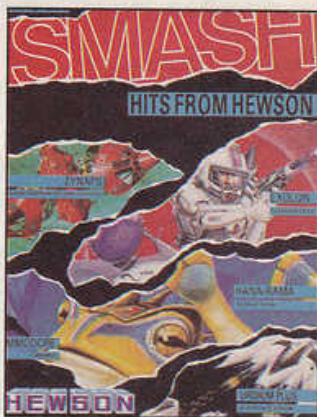
An arcade adventure with fairly simple graphics. The object is to test your ingenuity against gruesome ghouls, ghostly ghosts and hideous hunchbacks. Interesting, but not particularly original.

Program *Four Smash Hits* Price £9.95 Supplier Hewson, 56b Milton Trading Estate, Milton, Abingdon, Oxon.

Amazing value for money package that includes *Zynaps*, *Ranarama*, *Uridium Plus*, and *Exolon*. It all depends on how many of the games you have already, but for new Amstrad owners this makes a great Christmas prezzy.

Program *Knight Orc* Price £19.95 Supplier Rainbird, Wellington House, Upper St. Martins Lane, London WC2H 9DL.

Level 9's challenging adventure, this time for the 6128, with lots of illustrations.



Amiga

Program *Thai Boxing* Price £9.95 Supplier Anco, 35 West Hill, Dartford, Kent DA1 2EL.

Martial arts game with plenty of gratuitous violence. Just watch the faces of the combatants become sickeningly bruised and bloody. Some nice backdrops make this version an improvement on, say, the ST and it is fairly cheap as well.

continued on page 18 ►

Software guide continued

◀ continued from page 17

IBM PC/Compatibles

Program *The Hunt For Red October* Price £24.95 **Supplier** Argus Press Software, Victory House, Leicester Place, London WC2H 7NB.

Yankee imperialist propaganda reaches the PC. Not as good as the Amiga version, but if you are interested in submarine simulations then it is worth a look.



Spectrum

Program *Nightshade* Price £1.99 **Supplier** Ricochet, 8-10 Paul Street, London EC2.

One of the later Ultimate filmation games, the formula was getting a little tired by this time. Still, worth the money if you have not bought it already.

Program *Action Reflex* Price £1.99 **Supplier** Ricochet, 8-10 Paul Street, London EC2.

Another re-release at a budget price. You play a bouncing ball in a series of mazes.

Program *UCM* Price £1.99 **Supplier** Ricochet, 8-10 Paul Street, London EC2.

The title stands for Ultimate Combat Mission, but that is an exaggeration to say the least. You are an intergalactic criminal trying to escape from a top security jail. The graphics are nothing special but it plays well enough.

Program *Firetrap* Price £7.99 **Supplier** Electric Dreams, 31 Carlton Crescent, Southampton SO1 2EW.

Climb up the monochrome burning building, avoiding monochrome bricks, cars, glass and obstacles as you seek to rescue the people trapped inside. Aside from the colour scheme, it is not a bad implementation of an old arcade game. Definitely one to consider.

continued on page 23 ▶



Cosmic Causeway

If at first you don't succeed, try, try again. Robert Bruce's sentiments obviously hit hard at Gremlin, leading it to release its latest game, *Cosmic Causeway*.

Anyone who knows Gremlin well will realise that in many ways this game is the third part of a series of games which have been remarkable for their excellence, and complete lack of success.

The first game was *Bounder*. Programmed in-house by Gremlin

in 1986, it received critical acclaim from everyone who reviewed it but failed to sell very well in the shops.

Convinced that the concept was a good one - bouncing balls along a track - Gremlin published another game using the same concept; *Trailblazer*. Again, although the press loved it, it failed to sell in the quantities it deserved.

Now, Gremlin has released the follow-up to *Trailblazer*, *Cosmic Causeway*, and if it is not the massive hit I predicted for the other two, I'll eat my hat.



Grid Start

From one end of the spectrum to the other. Last week there was the Electronics Arts impressive *Test Drive*, a high-class driving game. This week the Anco *Grid Start*, a pole position-style game, has been released.

Grid Start puts you behind the wheel of a chunky six-gear formula one racing machine, with a

choice of six international circuits on which to race.

You can either practice or get straight into the championship, which includes a race on all circuits against 26 competitors.

A championship table lets you know who is doing badly and more often than not you will find yourself propping it up.

The problem is that the slightest contact with another car or a straw bale or any piece of scen-

The object is to control your ball as it bounces round a space assault course. Each time you land on a block it can either help or hinder you - speeding you, stopping you, giving extra bounce - in your quest. Where *Trailblazer* was good, *Cosmic Causeway* is brilliant.

The graphics are well-depicted and the scrolling, supposed to be into the screen, is smooth and amazingly fast. To add to its playability, each level has a bonus ball which, if collected, gives the player a bonus ability - rather like *Nemesis*, although in this case you can choose which bonus you want.

Another bouncy theme tune and the added feature of being able to blast baddies, including a huge dragon which attacks you as you complete level three, and you have a complete game which should be a part of arcade fans' collections.

If I had my way, it would be game of the week but unfortunately I have been over-ruled.

Reviewer Daniel McGrath **Program** *Cosmic Causeway* Micro C64 Price £9.95 **Supplier** Gremlin Graphics, 10 Carver Street, Sheffield.

ery results in a deafening explosion with pieces of car flying everywhere.

Your overalls are obviously made of sterner stuff, though, as you are able to continue in a new car after a few seconds.

When some of the drivers in the race drive suicidally into the back of you it can be very irritating.

The only safe way I could get round was to be permanently in third gear and then try not to let everyone lap you.

Not many frames are used for the other cars vanishing into the distance, so it looks a little jerky, but the scrolling of the track is fine, as it should be.

For the price *Grid Start* is reasonable value and, provided you can master the kamikazi opposition, should prove entertaining enough.

Reviewer Duncan Evans **Program** *Grid Start* Micro Amiga Price £9.95 **Supplier** Anco Software, 35 West Hill, Dartford, Kent DA1 2EL.

CLIK

AMIGA
SOFTWARE
SPECIALIST

Unit 1, Willowsea Farm, Spout Lane North, Stanwell Moor, Staines, Middx TW19 6BW

GAMES

TITLE	RRP	OUR PRICE
Alternate Reality	£24.95	£18.50
American Pool Sim	—	—
Auto Jewel	£24.99	£18.50
Alien Strike	£19.95	£15.50
Adventure Const. Set	£29.95	£21.50
Art Parts I	£9.95	£7.50
Art Parts II	£9.95	£7.50
Arctic Fox	£29.95	£21.50
Arazoks Tomb	£28.75	£20.50
Arena/Brattacus	£34.95	£24.75
Archon	£29.95	£21.50
Archon 2	£29.95	£21.50
B.M.X.	£9.95	£7.50
Battle Thru' Time	£9.95	£7.50
Ball Raider	£19.95	£15.50
Backlash	£19.95	£15.50
Ballyhoo	£29.99	£21.50
Balance Of Power	£39.95	£26.50
Barbarians	£24.95	£18.50
Bureaucracy	£34.95	£24.75
Borrowed Time	£24.99	£18.50
Baseball	£24.99	£18.50
Bards Tale	£24.95	£18.50
B.M.X. Sim	—	—
California Games	£24.99	£18.50
Chessmaster 2000	£24.95	£18.50
Championship Golf	£34.99	£24.75
Challenger	£9.95	£7.50
Cut Throats	£29.99	£21.50
Cruncher Factory	£9.95	£7.50
Seven Cities Of Gold	£29.95	£21.50
Deep Space	£29.99	£21.50
Deadline	£29.99	£21.50
Doctor Fruit	£9.95	£7.50
Demolition	£9.95	£7.50
Deja Vu	£29.95	£21.50
Diablo	£19.95	£15.50
Defender Of Crown	£29.95	£21.50
Eagles Nest	£19.95	£15.50
Extensor	£19.95	£15.50
Enchanter	£29.99	£21.50
Earl Weaver Baseball	£24.95	£18.50
Flight Sim. II	£49.95	£32.50
Firepower	£24.95	£18.50
Fighter Command	£29.99	£21.50
Faery Tale Adv.	£49.99	£32.50
Feud	£9.99	£7.50
Flight Simulator	£49.99	£32.50
Final Trip	£9.95	£7.50
Football GFL	£24.99	£18.50

TITLE	RRP	OUR PRICE
Grand Prix Sim	—	—
Gunship II	£24.95	£18.50
Guild Of Thieves	£24.99	£18.50
Goldrunner	£24.95	£18.50
Grid Start	£14.95	£11.50
Gauntlet	£24.99	£18.50
Hollywood Poker	£19.95	£15.50
Hollywood Hijinx	£29.99	£21.50
Hitch Hiker	£29.99	£21.50
Hardball	—	—
Hacker	£24.99	£18.50
Hacker II	£24.99	£18.50
Insanity Fight	£24.95	£18.50
Impact	£14.95	£9.75
Infidel	£29.99	£21.50
Jump Jet	£9.95	£7.50
jinxter	£24.95	£18.50
Jewel Of Darkness	£19.95	£15.50
Kampfgruppe	£29.99	£21.50
Karate	£19.95	£15.50
Karate Kid II	£24.95	£18.50
King's Quest Pack	£24.99	£18.50
Karting Grand Prix	£9.95	£7.50
Knight Orc	£24.95	£18.50
King's Quest III	£29.99	£21.50
Little Comp People	£34.99	£24.75
Leviathan	—	—
Leaderboard	£24.95	£18.50
Leisure Suit Larry	£24.99	£18.50
Leather Goddess Of Phobos	£29.95	£21.50
Marble Madness	£29.95	£21.50
Mouse Trap	£14.95	£11.50
Mean 18 Golf	£29.99	£21.50
Mech Brigade	£29.99	£21.50
Moon Mist	£29.95	£21.50
Mind Shadow	£24.99	£18.50
Mind Forever	£34.99	£24.95
Ninja Mission	£9.99	£7.50
One On One	£29.95	£21.50
Orge	£24.99	£18.50
Pub Crawl	£9.99	£7.50
Portal	£34.99	£24.75
Plutos	£14.95	£11.50
Planet Fall	£29.99	£21.50
Phantasie	£24.99	£18.50
Pawn	£24.95	£18.50
Roadwars	£19.95	£15.50
Roadwar 2000	£24.99	£18.50
Red October	£21.69	£16.50

TITLE	RRP	OUR PRICE
Suspect	£29.99	£21.50
Sorcerer	£29.99	£21.50
Stationfall	£29.99	£21.50
Starcross	£29.99	£21.50
Star Glider	£24.95	£18.50
Silent Service	£24.95	£18.50
Silicon Dreams	£19.95	£15.50
Skyfox	£14.95	£11.50
Skyfighter	£14.95	£11.50
Sinbad And The Throne Of Falcon	£29.95	£21.50
Sinbad	£39.95	£24.75
Shanghai	£24.99	£18.50
Season And Holidays	£9.95	£7.50
Seastalker	£29.99	£21.50
S.D.I.	£29.95	£21.50
Surgeon	£49.95	£32.50
Swooper	£19.95	£15.50
Strategic Def Initiative	£29.95	£21.50
Strip Poker	£19.95	£15.50
Space Quest	£29.99	£21.50
Space Bottle	£9.95	£7.50
Spellbreaker	£29.99	£21.50
Space Ranger	£9.99	£7.50
Solid Gold	£9.99	£7.50
Street Sports Baseball	£24.95	£18.50
Skyfighter	£14.95	£11.50
Suspended	£29.99	£21.50
Super Huey	£19.99	£15.50
Testdrive	£24.95	£18.50
Thai Boxing	£9.95	£7.50
Time And Magik	£19.95	£15.50
Trinity	£34.99	£24.75
Terrorpods	£24.95	£18.50
Temple Of Apsah	£24.99	£18.50
Tass Times	£24.99	£18.50
Uninvited	£29.95	£21.50
Ultima 4	£24.99	£18.50
Ultima 3	£24.99	£18.50
Universal Milit. Sim.	£24.95	£18.50
Vader	£9.95	£7.50
Winter Games	£24.99	£18.50
Winter Olympiad '88	£19.95	£15.50
Wizard's Crown	£29.99	£21.50
Wishbringer	£29.99	£21.50
World Games	£24.95	£18.50
Witness	£29.99	£21.50
Zork I	£29.99	£21.50
Zork II	£29.99	£21.50
Zork III	£29.99	£21.50

UTILITIES

Acquisition 1.3	£249.00	£185.00
Analyze 2	£149.95	£102.50
Audiomaster	£46.00	£32.00
A C Basic	£195.00	£132.50
Animator/Images	£103.50	£75.50
Assembler	£69.95	£49.50
A C Fortran	£295.00	£202.50
Butcher	£29.95	£21.50
B B S PC	£99.95	£65.00
Climate	£39.95	£29.50
City Desk	£114.95	£85.00
Deluxe Music Con Set	£69.95	£48.50
Deluxe Paint	£24.95	£18.50
Deluxe Paint II	£69.95	£48.50
Digitprint	£59.95	£42.50
Digiview 2.0	£185.00	£142.50
Digiview adaptor	£22.95	£18.50
Diga	£57.50	£42.50
Draw Plus	£184.00	£135.00
Flipside	£29.95	£21.50

Futuresound	£175.00	£155.00
Goldspell	£39.95	£29.50
Hot And Cool Jazz	£9.95	£7.50
Hai Calc	£59.95	£42.50
Instant Music	£29.95	£21.50
Laserscript Driver	£39.95	£29.50
Lattice C Prof 3.1	£299.00	£184.50
Lattice C 4	£172.50	£122.50
Lisp	£149.95	£95.50
Marauder 2	£39.95	£29.00
Maxplan Plus	£149.95	£102.50
Micro A P L	£99.95	£72.50
Modula 2 (STD)	£99.95	£69.50
M C C Pascal	£89.95	£62.50
Mi-Amiga File	£99.95	£65.00
Music Studio	£34.99	£24.75
Maxplan A500	£99.95	£72.50
Modula 2 (developer)	£149.95	£110.50
Organise	£99.95	£72.50
P C L O Plus	£495.00	£355.00

Publisher Plus	£99.95	£72.50
Publisher 1000	£199.95	£120.00
Rock 'n' Roll	£9.95	£7.50
Sunix	£57.50	£39.50
Sega Assembler	£49.95	£34.50
Softwood File 2	£99.95	£72.50
Shell	£49.95	£34.50
Scribble 2	£99.95	£72.50
Softwood Write	£99.95	£72.50
Textsoft	£56.35	£39.50
T.V. Text	£99.95	£72.50
Toolkit	£39.95	£29.50
Videoscape 3D	£143.75	£110.00
Visawrite	£99.95	£72.50
Video Titler	£71.30	£50.50
VIP Prof	£228.25	£165.00
The Works	£149.95	£105.00
Word Perfect 4.1	£228.85	£175.00
X Cad	£460.00	£325.00
Zuma Fonts 1,2,3	£34.95	£24.75

All our prices include VAT and First Class Post.

Tel: **0753 682988**

For personal service

Please make cheques payable to Clik and send to:

**CLIK, UNIT 1, WILLOWSEA FARM, SPOUT LANE NORTH
STANWELL MOOR, STAINES, MIDDLESEX TW19 6BW**

Evesham Micros

All prices VAT/delivery inclusive

ATARI Christmas Special 1040STF only £399.00

520 STFM short supply, order early	£279.00
520 STFM with 1meg memory upgrade	£338.00
1040 STF with SM125 mono monitor	£499.00
Mega ST2 with mono monitor	£899.00
Mega ST4 with mono monitor	£1199.00
Atari SLM804 laser printer, great value at	£1199.00
Atari SM125 mono monitor	£134.00
Atari SC1224 colour monitor, few at	£299.00

All ST prices include: mouse etc. PLUS 5 disks of s/ware including graphics, wordpro, utility, game and demos.

Philips CM8833 colour monitor c/w ST lead ...	£279.00
Philips CM8852 as above, higher resolution ...	£319.00

(Extra £10.00 discount on either if bought with an ST)

**520 STFM 1 MEG
MEMORY UPGRADE**
Requires soldering, full
instructions supplied.
£59.00

3.5" disks
10...£11.95 in plastic case £13.95
25...£27.95 in 40 cap case £34.95
Fully guaranteed double sided media

AMSTRAD 1512/1640

Be spoilt for choice from our vast range

We have a full complement of models including the highly popular Evesham upgraded machines. Our single floppy 21/32 MEG models are professional internal installations leaving maximum possible future expansion room. Twin floppy versions use a hardcard, which can also be specified on single drive versions if required. 1512 models can be supplied with 640K RAM installed for £20.00 extra. Prices in light type are excluding VAT.

Migent Ability & 4 US Gold games FREE with 1512

	SD	DD	AMS 20MEG	SD 21MEG	DD 21MEG	SD 32MEG	DD 32MEG
MONO 1512	381.74 439.00	477.39 548.00	N/A	598.26 688.00	693.91 798.00	641.74 738.00	737.39 848.00
COLOUR 1512	520.87 599.00	616.52 709.00	N/A	737.39 848.00	833.04 958.00	780.87 898.00	876.52 1008.00
MONO 1640	494.78 569.00	581.74 669.00	868.70 999.00	711.30 818.00	798.26 918.00	754.78 868.00	841.74 968.00
CGA colour 1640	625.22 719.00	712.17 819.00	912.17 1049.00	841.74 968.00	928.69 1068.00	885.22 1018.00	972.17 1118.00
ECD (EGA) 1640	755.65 869.00	842.61 969.00	1129.57 1299.00	972.17 1118.00	1059.13 1218.00	1015.65 1168.00	1102.61 1268.00

Western Digital Hardcards

Top quality equipment at simply amazing prices. We supply ready configured for 1512 or 1640 (please state). Prices include the highly praised Xtree file management software (normally £50.00).

21 MEG...£249.00 32 MEG...£299.00

commodore

Excelsator+ 64/128 compatible disk drive ...	£159.95
Excelsator+ as above with Freeze Machine...	£179.95
(All Excelsator orders include GEOS software)	
Freeze Machine tape to disk backup cart.	£ 28.95
Amiga 500 with D. Paint & Silent Service	£449.00
Philips CM8833 to suit Amiga, + STEREO	£279.00
Philips CM8852 as above higher resolution ...	£319.00

(both c/w cable £10.00 off if bought with an Amiga)

PRINTERS Prices include... CABLE, VAT & DELIVERY

We use and recommend Star printers. They offer a combination of features, print quality, reliability and value that is unbeatable. Don't make the wrong decision, get it right with a Star printer at our special prices. State computer type when ordering.

Our NL-10 price includes 2 extra ribbons (value £13.90) as well as cable VAT & delivery

Star NL-10 No. 1 seller, 120/30cps	£199.00
Star NX-15 wide carriage version of NL-10 ...	£319.00
Star ND-10 180/45cps	£299.00
Star ND-15 wide carriage version of ND-10 ...	£419.00
Star NR-10 240/60cps	£379.00
Star NR-15 wide carriage version of NR-10 ...	£499.00
Star NB24-10 brilliant 24 pin, 216/72cps	£479.00
Star NB24-15 wide 24 pin	£599.00
Star SF-10D cut sheet feed, 10" models	£ 59.00
Panasonic KXP-1081 very popular	£179.00
Amstrad LQ3500 new 24 pin at low price	£349.00

How to order

All prices VAT/delivery inclusive
Next day delivery £5.00 extra

Send cheque, P.O. or ACCESS/VISA details
Phone with ACCESS/VISA number
Govt. or PLC official orders welcome
All goods subject to availability E.&O.E.
Open to callers 6 days, 9.30-5.30
Telex: 333294 Fax: 0386 765354

Evesham Micros
63 Bridge Street
Evesham
Worcs WR11 4SF
Tel: 0386 765500

Also at: 1756 Pershore Rd., Cotteridge, Birmingham, B30 3BH Tel: 021 458 4564

SPECIAL OFFER POLAROID PALETTE FOR THE B.B.C. MICRO

£490 (+ VAT)

System includes
Autoprocessor,
Cutter Mounter,
Sample Films.



The simple way to
instant 35mm
presentation
slides, prints
and overhead
transparencies.

To take advantage of this limited period offer please send your order to: Robin Cartwright Polaroid (U.K.) Ltd., Ashley Road, St. Albans, Hertfordshire AL1 5PR.

- Please debit my Polaroid Account No:.....
 Cheque for full order value enclosed (£563.50 inc VAT).....
 Please debit my Access Account No:.....
Barclaycard Account No:.....

Name Address

..... Signature

ELECTRIC PROCESSOR/ILLUMINATED CUTTER MOUNTER £50 EXTRA (+ VAT)

Polaroid

Polaroid is a registered trademark of Polaroid Corporation, Cambridge, Mass. USA.

C.I.

D A T A

BRITAINS 1st INDEPENDENT
TELEPHONE COMPUTER
SOFTWARE REVIEW SERVICE

NEW GAME 1

0898 700 101

INCENTIVE SOFTWARE'S
'DRILLER'

NEW GAME 2

0898 700 102

IMAGINE SOFTWARE'S
'FREDDIE HARDEST'

NEW GAME 3

0898 700 103

IMAGINE SOFTWARE'S
'AUTHENA'

* PHONE THESE NUMBERS WIN THESE GAMES! *

CHRISTMAS GAME 1

0898 700 104

VIRGIN GAMES' DELUXE SCRABBLE

CHRISTMAS GAME 2

0898 700 105

THE POWER HOUSES' MORPHICLE

CHRISTMAS COMPETITION

0898 700 106

INCLUDING LAST MONTH'S WINNERS
THE REVIEWS THAT SPEAK FOR THEMSELVES!

BROADSYSTEM LTD. THE ELEPHANT HOUSE. LONDON NW1. U.K. ONLY
CHARGEABLE AT 25p(OFF PEAK) AND 38p(STANDARD/PEAK) PER M/N. INCLUSIVE OF VAT.



YOUR MICRO DESERVES THE BEST...

When your home or business micro costs several hundreds of pounds, it deserves the finest repair facilities in Europe (well, probably!). And the finest prices – £5 off trade rates for a limited period only. ★ How? At Verran we use our own range of advanced automatic test equipment (now sold worldwide), backed by stringent 2-8 hours soak-rack testing. That means speed, ultra-low prices and, most important, guaranteed reliability. For the first three months we'll repair any fault free. For the next three, at half these quoted prices. ★ It's the finest service available.

★ Currently we handle over 3500 products on average every day. Providing services for such leading companies as Amstrad plc, Commodore Business Machines, Sinclair Research, Rank Xerox, Dixons, Currys, Boots, W H Smiths, John Menzies and many more.
★ Join them and take up our special offer now.



Recommended and Approved by

AMSTRAD ATARI COMMODORE
ACORN SINCLAIR

EUROPE'S LEADING COMPUTER REPAIR CENTRE

...AND UNBEATABLE DISCOUNTS ON ALL COMPONENTS!!!

★ With over £500,000 worth of spares in stock, we can meet many of your specialised requirements. We've listed a few examples and for anything not displayed just call us and we'll quote immediately inclusive of first class post.

SPECTRUM SPARES

Z80 CPU	2.50
ULA 6C001	7.00
Power Supply	6.50
ROM	7.00
4116 RAMS	.75
ZTX 650	40
ZTX 213	40

Keyboard Membrane

Spectrum	3.00
Spectrum Plus	8.00
QL	9.00
Metal Templates	3.00

COMMODORE SPARES

6510 Processor	12.00
6525 CIA	12.00
6581 Sid Chip	15.00
901225 Graphic ROM	10.00
901226 Basic ROM	10.00
901227 Kernal ROM	15.00
906114 House Keeper	10.00
6569 - VIC	18.00
4164 RAMS - Memory	1.00

Power Supplies

C64	19.50
C16	15.00

All the above prices include VAT but please enclose a further £1.50 post and packing on all component orders.

HOW TO CONTACT US

★ For quotes on computers not listed or on any component, telephone 0276 66266. (Quoting POP/5012).

★ To send us your micro for repair, mail it securely packed, accompanied by cheque, postal order (made out to Verran Micro Maintenance Limited) or quote your Access or Barclaycard number. And to obtain your special discount quote POP/5012



Verran Micro-Maintenance Limited, Unit 2H & 2J, Albany Park, Frimley Road, Camberley, Surrey GU15 2PL. Telephone 0276 66266.

Merry Christmas from all of us at **Verran**

PROGRAMMERS

Over the last year the ZEN ROOM has produced some of Europe's top games, like TAU CETI, DRACULA, CYBORG, ACADEMY, DEATH OR GLORY, BALLBREAKER and THE ROCKY HORROR SHOW. Now Britain's most innovative software development team are looking for experienced freelance programmers to join them. If you have just written a game or are about to and would like the financial and programming back-up the ZEN ROOM can offer contact Michael Hodges on 01-985 2391 or write to the ZEN ROOM, Unit 7D, Kings Yard, Carpenters Road, London E15.

THE ZEN ROOM

A DIVISION OF CRL GROUP PLC



VISA

FREE

Large (100 disk capacity) lockable disk storage box worth £13.95 -

CATALOGUE: Send 50p (or 30p with order). Refundable

HIGH QUALITY

JAPANESE HIGHGRADE

5.25" DS/DD DISKS

Large storage case totally FREE with the following quantities of high quality Japanese disks-

25 disks ...	£18.75
50	£28.95
100	£49.95
150	£73.95
250	£119.95

All Inclusive of Post & VAT

ORDER BY PHONE FOR SAME DAY DESPATCH

FREEPOST YOUR ORDER TODAY - NO STAMP REQUIRED

Nebulae, Dept. N.J. FREEPOST, Kilroot Park, Industrial Estate, Carrickfergus, Co. Antrim BT38 7BR
Telephone (09603) 51020 (Monday to Friday 9 to 5)
7 day delivery and 14 day money back period.
We accept orders from all government bodies, schools, universities, PLC's etc.
We despatch on receipt of an official purchase order.

Tel: (09603) 51020

DRIVER

IN
THE NEW
DIMENSION

SIMTECH

<p>ATARI ST</p> <p>520 STM £206.99</p> <p>520 STFM £269.95</p> <p>1040 STF £469.95</p> <p>1040 STF + mono monitor £569.95</p> <p>MEGA ST2 £869.99</p> <p>0.5 Mb RAM upgrade (excl. postage) £80.00</p> <p>BUSINESS SOFTWARE</p> <p>Signum £184.00</p> <p>1st Word Plus £62.95</p> <p>Fleet St. Publisher £92.00</p> <p>Publishing Partner £127.50</p> <p>Haba Writer III £32.46</p> <p>Accountant Plus (Sage) £193.49</p> <p>VIP GEM £199.10</p> <p>Fast Basic (Disc) £38.60</p> <p>Mark Williams 'C' £123.98</p> <p>Michtron BBS £39.79</p> <p>Talent RAM Disc and Spooler £12.50</p> <p>GFA Draft £89.98</p> <p>SOFTWARE/Games</p> <p>Airball £19.95</p> <p>Fight Simulator II £37.95</p> <p>Silent Service £19.95</p> <p>Barbarian £19.95</p> <p>Starglider £19.95</p> <p>Leaderboard £19.95</p> <p>Leaderboard Tournament £8.59</p> <p>Chess (Psion) £19.95</p> <p>Gauntlet £19.99</p> <p>Arkanoid £12.50</p> <p>Star Raiders £17.65</p> <p>Xevious £19.95</p> <p>Road Runner £19.95</p>	<p>Pirates Of Barbary Coast £10.94</p> <p>10th Frame Bowling £19.95</p> <p>Pinball Factory £19.95</p> <p>Crystal Castle £17.65</p> <p>Gato £22.99</p> <p>SDI £22.99</p> <p>Shanghai £10.95</p> <p>Strike Force Harrier £19.95</p> <p>Arena/Brataccas £26.95</p> <p>Phantasie II £19.95</p> <p>Phantasie III £19.95</p> <p>Barbarian (Palace) £13.49</p> <p>Blue War £16.40</p> <p>Balance Of Power £24.20</p> <p>Indiana Jones £16.40</p> <p>Defender Of The Crown £24.20</p> <p>Sentinel £16.40</p> <p>Battlezone £24.20</p> <p>Colourspace £15.56</p> <p>Liberator £10.94</p> <p>Tee-up £12.50</p> <p>Boulderdash Constr. Kit £19.95</p> <p>Timeblast £8.59</p> <p>SOFTWARE/Adventures</p> <p>The Pawn £19.99</p> <p>Guild Of Thieves £19.99</p> <p>Hitchhikers Guide £24.20</p> <p>Bally Hoo £24.20</p> <p>Hollywood Hijinx £24.20</p> <p>Stationfall £24.20</p> <p>Bureaucracy £26.09</p> <p>Silicon Dreams £18.40</p> <p>Jewels Of Darkness £16.40</p>	<p>Star Trek £19.95</p> <p>Signum £184.00</p> <p>VIP GEM £199.10</p> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> <p>PRINTERS</p> <p>EPSON and NEC</p> <p>DISCS</p> <p>Atari and Triangle</p> </div> <p style="text-align: center; font-style: italic; font-size: small;">Call for latest prices and availability</p> <p style="text-align: center; font-style: cursive; font-size: 1.5em; margin-top: 10px;">Happy New Year</p>
---	--	--

How to order:

All prices include VAT and UK Mainland delivery.

By Post to: PCW, 118 Doggett Road, Catford, London SE6 4QB

By Phone: Call 01-690 3569

◀ continued from page 18

Software guide
continued

Atari ST

Program *Las Vegas* Price £9.95
Supplier Anco, 35 West Hill, Dart-
ford, Kent DA1 2EL.

Really dreadful attempt at a fruit
machine simulation that was done
far better in Eidersoft's *Vegas*
Gambler.

Program *Karting Grand Prix*
Price £9.95 Supplier Anco, 35
West Hill, Dartford, Kent DA1 2EL.
Not very much to do with karting,
and even the wealth of options
regarding players, tyre compound,
conditions, sprocket size, difficulty
and number of tracks cannot re-
deem this Super Sprint style game.



BBC B/Master/ Electron

Program *Star Wars* Price £9.95
(tape), £12.95 (disc) Supplier Do-
mark, 22 Harefield Road, London
SW19 3TA.

Great game converted to BBC ma-
chines. A must for every Acorn
fan's shopping list.



continued on page 24 ▶

Backlash

Finally it arrived. It just failed
to take Game of the Week but
it is still the best out-and-out
blasting game to appear on the
ST so far. The objective, or lack
of it, is the reason *Backlash* was
not Game of the Week. The
objective, you see, is to register a
high score - 42,000 was mine. No
mission, no target zones, nothing
but kill, kill, kill. Considering
that there is a reputed 495K
squashed on to a single-sided disc
that is a rather surprising flaw.

Unlike most shoot-'em-ups, the
entire screen is utilised and also
the action is in 3D.

You find yourself flying over a
plain which loops around at the
edges and is dotted with grey
discs which zip towards you at a
dizzying rate. Also on the plain
are indestructible cones and cir-
cular silos from which emerge all
manner of enemy craft.

They range in viciousness from
ones which rush around spitting
the occasional fireball at you to
ones which fire like machine guns
and others which lay down sheets
of fire which roar towards you
with frightening speed and ap-
palling regularity once you reach
level four.

Another hazard, one which
cannot be avoided and has to be
destroyed, is the guided missile
which homes in on you and it



starts to weave around on the
higher levels.

You are not powerless to resist
the onslaught. You are armed
with fireballs. The animation of
the fireballs scorching into the
distance, bouncing along as they
go, is wonderful. You can fly
underneath incoming fireballs as
they bounce over you.

There is a moderate amount of
animation in the enemy; one ship
in particular reveals itself as an
eye when it gets close. Then you
let it have it. Spotting the foe
from a distance is facilitated by
a circular scanner which appears
in the top half of the screen.

The game really is an all-
consuming action experience ST
owners cannot afford to miss.
When you are under fire from all

directions and enemy ships are
exploding into spinning dia-
monds all around, the excitement
is unbelievably intense. With a
few additions this could easily be
turned into a commercial arcade
game.

For 10 minutes of adrenalin-
pumping, heart-pounding action
with a genuine arcade feel, *Back-
lash* is brilliant. If you do not
have a copy, proceed in an order-
ly manner to your nearest stock-
ist and treat yourself.

Reviewer Duncan Evans Pro-
gram *Backlash* Micro Atari ST
Price £19.95 Supplier Nova-
gen, 142 Alcester Road, Bir-
mingham B13 8HS.

Rampage

Rampage at the arcades was
one of the highlights last
year. *Rampage* the Commodore
64 version seems to be a wasted
licence. The object is to be as
nasty and evil as possible as you
go from city to city smashing
every building in sight.

Gameplay is very confusing as
you control your little nasty
around the screen. Sound effects
are used to the bare minimum
and the theme tune is not too
exciting.

One plus point for the game is
the packaging, which is set to
appeal to those who like violence
in computer games. Unfortunat-
ely I cannot see anyone paying
£9.99 for a piece of artwork.

The potential for *Rampage*
was there to be tapped, Activi-
sion has not utilised its program-
mers or the Commodore 64 effec-
tively. When you compare this to
an old Activision release such as
Ghostbusters it makes you rath-
er sad to think that Activision

has decided to purchase material
like this. In its haste to release
the game in time for Christmas it
has overlooked the all-important
quality of the game.

I have been told that the C64 is
not the best version of the game
but it could have been better if
Activision had managed to get
the three-player option. Criti-
cisms apart, *Rampage* must

have been an enormous task to
convert, and in that light, is not
too bad.

Reviewer Simon Gillan Pro-
gram *Rampage* Micro Commo-
dore 64 Price £9.99 (tape),
£14.99 (disc) Supplier Activi-
sion, Pond Street, London NW3.



◀ continued from page 23

Software guide continued



Commodore 64

Program *Angle Ball* **Price** £2.99
Supplier Mastertronic, 8-10 Paul Street, London EC2.

Pool transported to a hexagonal table. You can control spin, strength and position. The frame set-ups become increasingly difficult.

Quite a reasonable game, but it really depends on whether you like pool.

Program *Talladega* **Price** £2.99
Supplier Mastertronic, 8-10 Paul Street, London EC2.

A 3-D driving game from a few years ago, that was good at the time. There are no screen shots on the packaging and the game is now very dated.

Program *Winter Olympiad 88*
Price £9.95 **Supplier** Tynesoft, Addison Industrial Estate, Blydon upon Tyne, Tyne & Wear NE21 4TE.



Sorcerer Lord

From the author of *Battlefield Germany* is *Sorcerer Lord*. A change of theme but this is still a wargame in the tradition of standard fantasy board games. The plot sounds as if it was inspired by an Elric of Melniboné story. Over in the shadowlands you see, after idling around for a few centuries, Shadow Legions are on the march. A new Shadow Lord has whipped up enthusiasm for conquest and the land of Galanor is on the menu.

As a self-respecting *Sorcerer Lord* it is for you to organise the defence and command the alliance of men and the elves of Imryth - this really is Elric stuff.

The game is played on a hexagonal map, so beloved of board gamers, and uses simple, colourful and clear graphics for the units, fortresses and the like. Terrain includes woods, hills, wooded hills, mountains and desert, each of which affect movement detrimentally.

To get an overall view of how the war is progressing there is an option to display the entire playing map, which is very useful in the mid-game stage.

Features you would expect in a PSS game are all there. You can



only see units in line of sight. There are five movement modes; armies and their leaders can be stacked and fatigue affects play their part.

Sorcery plays a major role in the battles and rather than the player having spells to cast, it is all limited to summoning demons to fight in your cause.

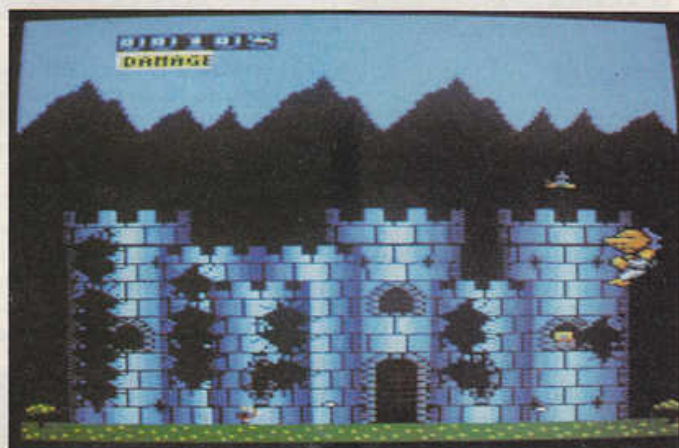
The amount of help you get depends on the sorcery rating of your army leader and how near to a rune ring you are. As with Elric asking for help from his patron Arioeh, what you sometimes get is not worth the blood spent for it. Should you get a host of major demons, though,

the opposition can expect trouble with a capital T.

Sorcerer Lord is on the expensive side but with its fantasy board game heritage and pieces of novels in the plot and quality packaging, it is definitely worth it.

I liked *Sorcerer Lord*, so if you fancy a taste of sword and sorcery, go for it.

Reviewer Duncan Evans
Program *Sorcerer Lord* **Micro** Amstrad CPC **Price** £12.95 (tape); £17.95 (disc) **Supplier** PSS, 452 Stoney Stanton Road, Coventry CV6 5DG.



Ramparts

Ramparts is a new release from the recently set up U.S. Gold offshoot label Go!

Unfortunately, *Ramparts* looks and plays like a very average budget price game and it is very disappointing to find Go! having to release material like this bearing in mind the amount of effort being put in to make Go! a premier label.

The plot concerns Sir Griswold

and Sir Larkin. They have been cursed by the Evil One who has made them the size of ferocious giants.

The object is to hunt down the Evil One and restore the honour of the knights.

The task of doing it is not easy; hostile barons of huge fortified castles stand in the way. To survive you must smash your way through the castles, steal food and generally make sure the castle is in ruins.

The inlay card states that *Ramparts* is "compulsive, fast moving action that'll keep bringing you back time after time."

Ramparts is without doubt one of the most unplayable games of late.

The idea of going up and down a castle smashing it up in the process does not work with this game. There is only one screen in which the castle appears and for £9.99 Go! is really underestimating the intelligence of Amstrad CPC owners.

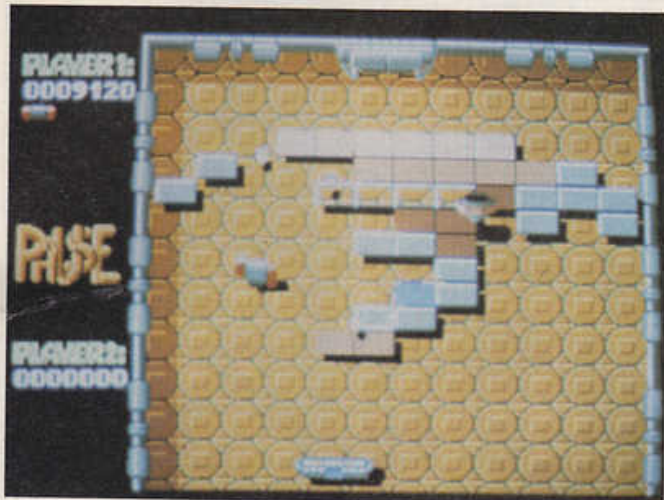
No doubt when Christmas has passed the game will revert to the more realistic price of £1.99. It looks and plays like a very average budget release. By releasing it as full price, Go! will probably have many disappointed purchasers.

Reviewer Leslie Bunder
Program *Ramparts* **Micro** Amstrad CPC **Price** £9.99 (tape); £14.99 (disc) **Supplier** Go!, Units 2-3, Holford Way, Holford, Birmingham B6 7AX.

Software guide
continued

Tonic Tile

While this game has a good deal to commend it in terms of the colourful graphics, well-sampled music and sound effects, it has to be said that it is a little late to do another version of *Arkanoid*.



As with all these *Breakout* derivatives, *Tonic Tile* features a series of screens made up of coloured blocks, a bat moving from left to right at the bottom, a bouncing ball to hit into the blocks, and several kinds of bonus targets and weapons which can make life either more difficult or easier.

In this case the selection includes bonus canisters which make your bat sticky, increase

its size, generate two extra balls to hit, give you laser fire or slow the ball.

Special whirly targets, very similar to the Slinkies in *Marble Madness*, score you extra points, and if you hit a rotating drill-shape you will clear the screen.

There are indestructible, invisible, and extra durable blocks, too - in other words, *Tonic Tile* has all the same elements as *Arkanoid* and *Impact*.

I found the mouse control rather unresponsive and in a game where speed of reflexes is everything that is unfortunate.

It would be pleasant to be able to be more enthusiastic, since *Tonic Tile* makes good use of ST abilities and features some excellent effects.

Unfortunately, it offers nothing new and I cannot see it appealing to anyone who already has *Arkanoid* or *Impact*.

Reviewer John Renwick Program *Tonic Tile* Micro Atari ST Price £19.99 Supplier The Edge, 36-38 Southampton Street, London WC2 7HE.



Another winter sports simulation, set in Calgary next year. The graphics of the six games, ski jumping, slalom, downhill racing, bob sled, biathlon, and speed skating are excellent on the C64, but haven't we seen all this many times before?

At least the games are interesting and there is a competition to win a trip for two to Calgary.

Program *Ramparts* Price £9.95 Supplier Go!, Unit 2-4, Holford Way, Holford, Birmingham B6 7AX.

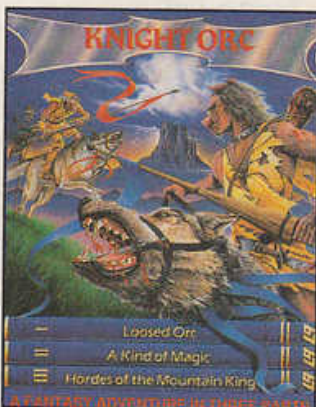
Good simple fun, but rather on the expensive side.

Program *Four Smash Hits* Price £9.95 Supplier Hewson, 56b Milton Trading Estate, Milton, Abingdon, Oxon.

See Amstrad listing. Even better value on the C64.

Program *Tobruk* Price £9.95 (tape), £14.99 (disc) Supplier PSS, 452 Stoney Stanton Road, Coventry CV6 5DG.

For once the press release did not speak with a forked tongue 'Tobruk is a one or two player game, with full joystick control and excellent arcade sequences'. It is a good game too.



Street Hassle

Some games defy belief. Not because they are particularly good, or particularly bad, but because it is amazing that they exist. *Street Hassle* is such a one - so morally corrupt and in such bad taste that I am amazed it reached the market. I liked it, especially the neat cartoon-style graphics and the mindless violence.

Lou Reed references notwithstanding, *Street Hassle* is a kind of parody of games like *Death Wish* or *Cobra*, where the impressively-muscled hero sets out to rid the streets of punks.

Here the tattooed muscleman in sunglasses is a mild-mannered schoolteacher driven to the brink by an outbreak of thuggery among old women and blind people.

As you move through the lev-

els, your offensive - and I mean offensive - moves vary. On the first level, you can grab old women and nut them.

On the second level, it is an aeroplane spin, and goodness knows what happens later because I was rolling on the floor with my legs in the air.

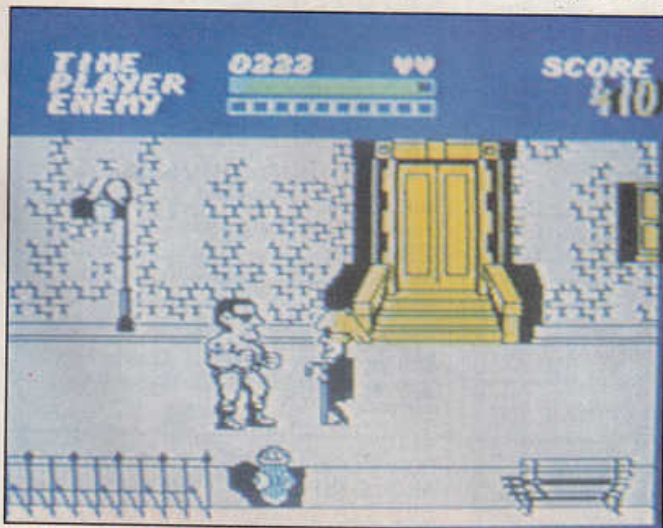
All that is accompanied by cryptic messages which could be quotes from Dirty Harry or Neitsche. "Crime swallows like a microphone stand", "Think of it as urban renewal", and "I'm thinking of your burial".

Small prizes will be awarded to anyone who can identify the quotes.

I will not reveal the secret of how you get past the snarling dogs, the bars, the gorillas and the bomb-planting anarchists.

It is very difficult, to say whether *Street Hassle* is a good game but it had me in stitches.

Reviewer John Renwick Program *Street Hassle* Micro Spectrum Price £7.95 Supplier Melbourne House, 8-10 Paul Street, London EC2A 4HJ.





The leading North West
Specialist ATARI Dealer



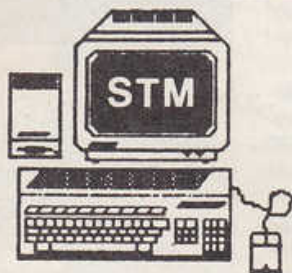
**ADBROKE
COMPUTING**
INTERNATIONAL

33 Ormskirk Road,
Preston, Lancs.
Tel: (0772) 21474
Mail Order: 203166
Bul/Board 27236 6pm to 9am



This Company has given years of full support to ATARI users Countrywide from their retail shop premises at Ormskirk Road, Preston. Now from their NEW Mail Order Depot they can offer the same Excellent service to all Mail Order Customers.

All Software and Hardware is fully tested prior to selling. This ensures Customers receive working items so that returned goods, and all the attendant frustration are a thing of the past. All Hardware is supported by our own 'ON SITE' engineers, therefore quick turn round on all repairs is Guaranteed. All prices quoted are fully VAT inc. and there are no 'hidden extras', what you see is what you get. Prices include delivery. Items despatched same day. Ring for latest price changes.



520STM Packages.....PHONE



1040STF+Mouse
+Softwr.....£480.00
1040STF+Mouse
+Hi-Res Mon
+Softwr.....£580.00
1040STF+Mouse
+Colour Mon
+Softwr.....£780.00

1Meg Upgrades are available for the 520STM. These are our own design and are very simple to fit.

Using the same board, all ST's can be Upgraded to 2mg or 4mg. So no need to sell your 520 just Upgrade to a Mega ST using our board.

1Meg Upgrade (STFM).....£70.00
1Meg Upgrade (All ST's).....£135.00
2.5Meg Upgrade +Board.....PHONE
4Meg Upgrade +Board.....PHONE

If any of the above Upgrades are purchased with Hardware then deduct £5 from total.

PRINTERS

Dot Matrix
Star NL10.....£240.00
NL10 Sheetfeeder.....£55.00
National Panasonic.....PHONE
MP165.....PHONE
MP135.....PHONE
LX86 Tractor Feed.....£19.00
LX86 Sheetfeeder.....£55.00
LQ800 24pin D/M.....£525.00
All Others.....PHONE



	3 1/2" D/S D/D	5 1/4" D/S D/D 46TPI
Per Disk	£1.99	£0.80
10 Disks	£16.00	£6.50
10 Disks+Plastic lib case ...	£17.50	£7.50
100 Disks+Cases	£150.00	£60.00
500 Disks+Cases	£650.00	£280.00

All Disks are covered by an unconditional lifetime guarantee.



We also stock a full range of quality P/D ST Software at £3.99 per Disk Send SAE for catalogue.



Our ATARI trained engineers will repair all Hardware in minimum time at competitive rates. Please ring for a quotation. All repairs carry a 90 day warranty.

NEWLY IMPORTED
Imager. Easily fixed to your printer it will digitise anything placed in the printer and save to Disk to be used with Degas, Elite etc. RRP £99.99.

All Printers, Disk Drives etc supplied with cables etc. **NO HIDDEN EXTRAS**

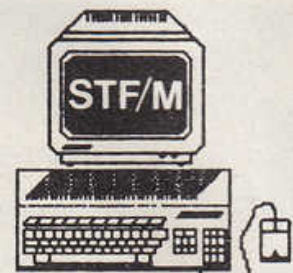
Mega ST's.....PHONE
Lazer Printers.....PHONE
PC Clones.....PHONE

DUST COVERS

Computers.....£3.99
Monitors.....£4.99
Disk Drives.....£2.99
Printers.....£7.99

IF IT'S AVAILABLE we have it!
Send SAE for full catalogue.

All Dedicated books and mags in stock



520STFM+Mouse
+Softwr.....£285.00
520STFM+Mouse
+Softwr
+1Meg Upgrade.....£350.00
520STFM Mega Pack
520STFM+Mouse
+Softwr
+1Meg Upgrade
+1Meg 2nd Drive.....£485.00
Equal to 1040STF+1/2Meg Drive
+Modulator

For Med Res Col Mon add.....£299.00
For High Res Mono Mon add...£129.00

All Hardware is covered for 12 months by our service dept. and is tested prior to delivery to assure satisfaction.



We have a complete range of Software in stock and fully tested.

We also stock a full range of ATARI 8Bit Hardware and Software including the new XE range. Please ring for prices

PERIPHERALS

Triangle 1mg D/Drive.....£139.00
Triangle 2x1mg D/Drive.....£229.00
Pro Draw Graphics Tab'.....£310.00
Cumana 1Meg D/Drive £139.00
All Drives come complete with Software

HARD DRIVES

Atari 20mg.....£550.00
Triangle 20mg Hard Disk.....£669.00
Supra 20mg.....£550.00
30mg.....PHONE
60mg.....PHONE

Any Software problems? Queries? give us a ring we usually have the answer

TO ORDER Simply send, or phone your order, stating Full Name, Address, Visa or Access Nos, Cheque or Money order. Make payable to Ladbroke Computing International, 33, Ormskirk Road, Preston, Lancs. PR1 2QP.

FOR MORE INFO CALL ON THE ABOVE NUMBERS OR SEND SAE AND STATE FULL REQUIREMENTS

"You've heard of Silicon Valley?
Now you have . . ."

Micro Mountain!!

Mountains of products at low, low prices

LOWEST PRICES

UNBRANDED DISC PRICES INCLUDE:
SLEEVES, LABELS AND WRITE-PROTECT TAGS.
ALL CARRY A CERTIFIED 100% LIFETIME
GUARANTEE

WE SUPPLY

HOME USERS
USER GROUPS
TRADE
EDUCATION
GOVERNMENT
OVERSEAS
1-MAN BAND
TO
P.L.C.'s!!
WITH . . .
DISCS - 3", 3 1/2", 5 1/4"
& 8"
TAPES - REELS &
CARTRIDGES
STORAGE - BOXES,
LIBRARY CASES
PACKAGING - SCREEN
PRINTING, LABELS
CUSTOMISATION -
FORMS, LABELS ETC
SOFTWARE - IBM ETC
CABLES - CONNECTORS
ACCESSORIES -
CLEANING KITS ETC
PAPER, RIBBONS
ETC, ETC, ETC . . .

UNBRANDED DISCS

	25	50	100	250
5 1/4" BULK				
Single Side 48T	£10.95	£19.95	£36.45	£84.85
Double Side 48T	£11.45	£20.15	£36.95	£84.95
Single Side 96T	£11.45	£20.15	£36.95	£84.95
Double Side 96T	£11.95	£20.95	£37.45	£84.45
3 1/2" BULK				
Single Side 135T	£29.00	£57.00	£98.00	P.O.A
Double Side 135T	£33.00	£62.00	£110.00	P.O.A

★ ★ ★ SPECIAL DEALS ★ ★ ★

25 x 5 1/4" DS/48T PLUS DP100 DISC BOX ONLY **£17.49!**
25 x 5 1/4" DS/96T PLUS DP100 DISC BOX ONLY **£17.99!**
50 x 5 1/4" DS/48T PLUS DP100 DISC BOX ONLY **£26.99!**
50 x 5 1/4" DS/96T PLUS DP100 DISC BOX ONLY **£27.49!**
25 x 3 1/2" SS/135T PLUS DP080 DISC BOX ONLY **£34.99!**
25 x 3 1/2" DS/135T PLUS DP080 DISC BOX ONLY **£38.99!**
50 x 3 1/2" SS/135T PLUS DP080 DISC BOX ONLY **£59.49!**
50 x 3 1/2" DS/135T PLUS DP080 DISC BOX ONLY **£63.49!**

NO HIDDEN EXTRAS . . . WHAT YOU SEE IS WHAT YOU PAY!

BRANDED DISKETTES

WE CAN SUPPLY ALL MAJOR BRANDS AT LOWER THAN TRADE!!

Example:
5 1/4" VERBATIM DS/DD 48T
only **£10.99 for 10**
5 1/4" 3M's DS/DD 48T
only **£7.99 for 10**

5 1/4" MAXELL DS/DD 48T
only **£10.99 for 10**

5 1/4" DYSAN DS/DD 96T
only **£13.99 for 10**

5 1/4" DYSAN DS/HD 1-6Mb
only **£16.99 for 10**

5 1/4" XIDEX DS/DD 48T
only **£4.95 for 10**

3 1/2" SONY SS/DD 135T
only **£14.99 for 10**

3 1/2" SONY DS/DD 135T
only **£17.99 for 10**

3 1/2" SONY DS/HD 2-0Mb
only **£45.99 for 10**

DISC BOXES



DP070
Lockable with hinge, index dividers and two keys.

DP070 - Holds 70 x 5 1/4"
£8.90

DP100 - Holds 100 x 5 1/4"
£9.90

DP020 - Holds 20 x 3" or
Holds 100 x 3 1/2"
£9.90

DP040 - Holds 40 x 3 1/2"
£7.90

DP080 - Holds 80 x 3 1/2"
£8.90

ALL PRICES INCLUDE VAT AND CARRIAGE
ALL PRODUCTS CARRY A NO-QUIBBLE
REPLACEMENT GUARANTEE FOR LIFE!!

SPECIAL LIMITED OFFER

**Solid Built Monitor
or T.V. Swivel Stand**

Special purchase enables us to offer you this **HIGH QUALITY ACCESSORY** at the remarkably **LOW PRICE OF**

ONLY

£6.99

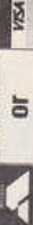
Limited Stocks

So Buy Now!

TO ORDER

Call our Order Desk on
0525 853333

quoting your
ACCESS



or
BARCLAYCARD

Number or send a cheque
or Postal Order with
your requirements to:

DATapro

Computer Supplies

DATapro House
North Street
Leighton Buzzard
Beds LU7 7EQ
0525 853333
(10 lines)

Fax: 0525 850485
Tlx: 826717 SHARET G-165

TRADE ENQUIRIES WELCOME!

SAME DAY DESPATCH

24 HOUR ORDERLINE - 0525 853333

The upright Citizen

Roger Howorth reviews the Citizen LSP-100 printer.

The Citizen LSP-100 is a new 9-pin dot matrix printer designed to challenge the mighty Epson LX800, and at £245 it might do it. The LSP-100 promises the purchaser up to 175cps in draft and 40cps in correspondence quality print modes, and by using variations of effects such as italic, condensed and so on, can produce more than 400 print styles. The LSP-100 has a Centronics parallel interface as standard with optional RS232 serial, Commodore or Apple IIe ports if required.

the printer with the computer cable being plugged into the exposed end of the interface card. The cards are designed to fit the overall look of the printer and, as such, are really noticeable only when they are removed.

Dip switches

The interface card also houses a set of dip switches which set the printer default settings such as the character set, whether a cut sheet feeder is to be used, and so on.

"Form Feed" but have several other functions.

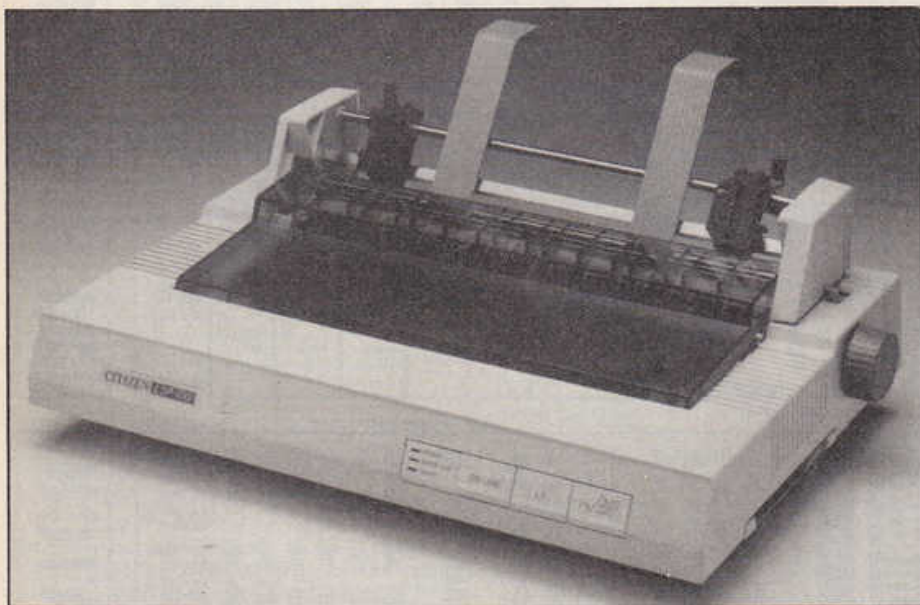
There is a brief section in the manual which describes likely problems owners of various computers might face when connecting the printer. This includes alterations to the dip switches where necessary, as well as advice on the correct lead. The computers covered in this section are Amstrad PC and CPC, Atari ST and 8-bits, BBC, Commodore and Sinclairs, as well as the ubiquitous IBM PC or compatibles.

Control codes

The printer is configured for use with the standard Epson control codes and so for most people there should be no need to fiddle with the dip switches. If you need to use IBM control codes or have bought the optional cut sheet feeder, a few adjustments will be necessary. This can either be done with software every time you use the printer or more permanently by altering the settings of the dip switches located on the interface module.

The interface card is encased in a plastic shell and is removed easily by sliding it from the main printer case. Because there are no exposed electronic components, the task is not as intimidating as it first sounds, the interface card seems sturdy and is as easy to remove as opening a box of matches.

The manual has a fully-illustrated appendix which explains exactly what effect the eight dip switches have and using them it is possible to select a variety of default character sets, like all printers available these days it is also very easy to alter these settings by sending software control codes from your computer.



The Citizen LSP-100.

The unit is reasonably compact, measuring approximately 15in. x 10in. x 3in., and features Epson and IBM control code compatibility. More unusually, it has a 4K data buffer to speed long print runs and includes friction, tractor and bottom feed options in the standard package.

Construction

The LSP-100 has a solid feel to it but is light, weighing slightly less than 4Kg. There is a hinged smoked plastic cover on the top of the machine which gives access to the ribbon and paper thickness adjustments, but the main mechanics are all safely hidden inside.

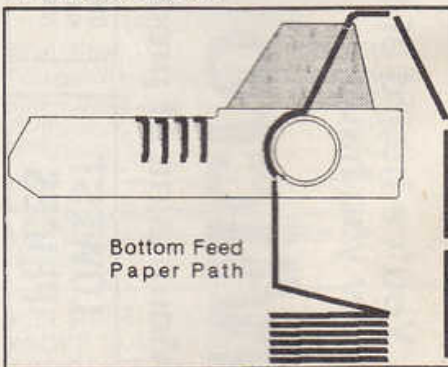
The printer can be fitted with either a parallel, RS232, Commodore or Apple IIe interface card. They slide into the base of

Being located on the interface card makes them easy to reach once you have removed the card but to do so it is necessary first to disconnect the printer from the computer and the mains.

The "Bottom Feed" option is useful if you intend to use a printer stand or continuous labels, as it makes the paper path straighter and thus less likely to jam. The accompanying diagram shows how when using Bottom feed the paper enters the printer just below the carriage and leaves just above it.

Most printers allow the paper to be fed only from behind the carriage.

The power switch is out of the way on the side panel and another three switches are mounted vertically on the front. They are labelled "ON LINE", "Line Feed" and



The bottom feed option makes the paper path straighter.

For those unfamiliar with Epson or IBM control codes, the idea is that as printers all support a variety of functions, such as printing in italic or underlined, it makes sense to be able to control those features from the computer by sending simple instructions. It is achieved by using one of two universal standards laid down originally by Epson and IBM.

To use a particular feature of your printer, you print a special sequence of two or three characters. Whenever the printer receives them, instead of printing them out as it would with all the other alphabetic characters it receives, it activates the relevant feature instead.

Operation

Once your computer and printer are joined successfully by a piece of wire, unless you are very unlucky or are using IBM control codes when you do not have an IBM, you should experience no real problems. That holds true for virtually any printer you care to mention, whether you are driving it

"The Citizen LSP-100 is a new 9-pin dot matrix printer designed to challenge the mighty Epson LX800, and at £245 it might do it."

from Basic with the LPRINT command or from a word processor.

I reviewed the LSP-100 using an Atari ST and *First Word Plus* and the printer worked satisfactorily first time. Using *Easy Draw 2* to produce the sample graphics again caused no problem. It is possible to swap between correspondence quality and pica, italic, emphasised and condensed by using various combinations of the three switches located on the front panel but for most people these tasks can be performed faster and more accurately by sending the correct control codes from the computer, most word processors will cope with this automatically.

For those who produce printouts from their own programs, the manual provides examples of how to use every feature of the printer from Basic, as well as a list of hints on how to adapt the examples to suit some of the more popular dialects of BASIC. The list includes Apple, Amstrad, TRS-80, CP/M, Atari, Commodore, BBC and



Fast and accurate graphics.

you know who. I was most impressed by the speed and quiet of the LSP-100. It is common practice for printer manufacturers to quote figures which are nothing if not wildly optimistic and Citizen's claimed speeds follow the trend, I printed a 4.2K file in 40 seconds which is approximately 105cps and in correspondence quality the same file took two minutes 56 seconds, which is 24cps. Those figures are certainly competitive, more so when viewed alongside the price and quality of construction, which are both excellent.

Graphics

Graphics are fast and accurate. The picture of a house took three minutes to produce, the others were faster still. Here the 4K data buffer helps if you do not have your own printer spooler software.

Another pleasant feature of the Citizen is its comprehensive hex dump facility. Most printers allow you to enter a special mode where, instead of printing alphabetic characters, they print the hexadecimal codes sent between computer and printer. Citizen has taken this one step further by printing both a table of the hexadecimal numbers and another of the ASCII characters alongside.

That kind of function is probably used only rarely but if you find the printer is not doing what you think it should, here is an invaluable debugging tool which, is made far easier to use with the dual table system.

The Citizen LSP-100 is aimed at people who might buy an Epson. I think the kind

of person who would buy an Epson would do so regardless of the features and price of the competition.

Having said that, I think many people considering a mid-priced printer will be swayed towards the new Citizen.

It is fast and quiet, features which are not necessarily appreciated when first buying a printer but when you have used one for a time.

Well-built

The machine is well-built. That is important, not only because it is less likely to suffer from wear and tear than a more flimsy device but also when considering print quality.

One 9-pin printer will produce much the same quality output as another 9-pin printer only if the paper and printer head are moved with the same degree of accuracy. Put another way, to produce NLQ output the printer must be accurate to within 1/72 of an inch. It cannot do so if the quality of build allows any unwanted movement in the various components.

This all adds up to a recommendation of the LSP-100 as a serious work horse. If you want something to produce listings or the occasional letter, you might be able to save £50 to £100 by getting a slower printer which still has similar features. If, however, you require a printer for graphics work or print-out documents regularly which are more than a few pages long, you may benefit from the extra speed and robust quality of this machine. □

Computer Music at it's best...



MIDI INTERFACE

For ZX SPECTRUM - Compatible with 48/128k/+2

- MIDI DELAY FACILITY • STORES THOUSANDS OF NOTES
- MIDI IN/OUT/THROUGH • FULL MIDI COMPATIBLE ASSIGNMENTS
- CONTROL ANY MIDI COMPATIBLE INSTRUMENT
- FORWARD AND REVERSE SEQUENCE PLAYBACK
- REAL OR STEP TIME INPUT FROM INSTRUMENT OR COMPUTER
- SUITABLE FOR HOME OR PROFESSIONAL USE
- FULL SYNC FACILITY • 8 TRACK MIDI SEQUENCER
- COMPLETE WITH HARDWARE / FULL SOFTWARE
- TRANSPOSE FACILITY • MICRODRIVE COMPATIBLE
- COMPREHENSIVE INSTRUCTION MANUAL
- MIDI LEAD INCLUDED
- EXCEPTIONAL VALUE

128k/+2 to Midi Lead
(BT style plug to 5 pin DIN)
ONLY £9.75
It is not necessary to purchase the lead with the Cheetah Midi interface

Extra 5 pin DIN
to 5pin DIN Midi Leads
ONLY £4.99

SOUND SAMPLER

For ZX SPECTRUM - Compatible with 48/128k/+2

- SAMPLE ANY SOUND • SYNC FACILITY • MIXING OF SAMPLES
- SUITABLE FOR HOME OR PROFESSIONAL USE • SIMPLE TO USE
- REPLAY AT VARIOUS PITCHES FORWARDS OR BACKWARDS
- POWERFUL EDITING FACILITY • ECHO, REVERB ETC.
- SAMPLE SOUND EFFECTS INCLUDED • COMPLETE SYSTEM
- EACH SAMPLE SOUND STORED AS FILES IN MEMORY
- BANDWIDTH-AN AMAZING 17.5KHz
- OUTPUT THROUGH MOST HI FI'S • MICRODRIVE COMPATIBLE
- GRAPHICS SAMPLE DISPLAY • PLAYBACK FROM KEYBOARD
- REALTIME PITCH HARMONISER

Dog barking, Glass breaking, Drum beating, Car revving even make your voice sound like Mickey Mouse — it's all possible with this amazing add-on from Cheetah



SPECDRUM
£29.95

AMDRUM
£34.95

SPECDRUM / AMDRUM

Digital Drum System for the Spectrum 48K 128K +2
and Amstrad 464.664.6128.

As featured on
"Micro Live"
and
"Saturday Superstore"

- 8 DIGITALLY RECORDED REAL DRUM SOUNDS
- SIMPLE TO USE — UP AND RUNNING IN ONLY MINUTES
- A TRUE DIGITAL DRUM MACHINE
- 'REAL TIME' OR ON SCREEN PROGRAMMING
- COMPLETE WITH SOFTWARE
- EXTRA SOUNDS CAN BE LOADED FROM TAPE
- CREATIVE, EDUCATIONAL AND FUN

• THE MOST EXCITING PERIPHERAL EVER DEVELOPED

- DYNAMIC FILING SYSTEM — STORE OVER 1000 PROGRAMMED RHYTHMS
- SONGS CAN BE SAVED ON TAPE
- TAPE SYNC FACILITY
- POLYPHONIC • COMPREHENSIVE MANUAL
- JUST PLUGS IN TO MOST HI FI'S

Prices include VAT, postage & packing. Delivery normally 14 days.
Export orders at no extra cost. Dealer enquiries welcome.

Cheetah, products available from branches of **Dixons Harrods LARYS**

WHSMITH • High St. Stores and all good computer shops
or direct from Cheetah.

NOW AVAILABLE
Latin Kit & Editor
£3.99
Electro Kit & Editor
£4.99
Afro Kit & Editor
£4.99

128 to Midi Lead
available
now at... **£9.75**



CHEETAH MARKETING LTD
Norbury House, Norbury Road,
Fairwater, Cardiff CF5 3AS.
Telephone: Cardiff (0222) 555525
Telex: 497455 Fax: (0222) 555527

Sounds of the future

Mark Jenkins reports on a new company, MCMXCIX which imports music software.

Over the last year or so, one of the most enterprising music software importers has been Take Note, based in Camden. Now Dean Stanton, who half-owned the company, has left to set up his own import service under the banner MCMXCIX (1999 to those in the know).

MCMXCIX (MCM for short) is a division of the Synthesizer Company (TSC for short - not getting confusing, is it?).

It sells a vast selection of synthesizers, drum machines and accessories from Roland, Yamaha, Korg, Akai and many others. MCM share their offices and showrooms off London's Edgware Road but are otherwise fairly independent, since the retail activities of TSC have to be kept separate from the wholesale activities of MCM (although TSC is one of the stockists of MCM's lines - there, now we're all confused).

Atari ST and Macintosh

MCM's music software is more or less evenly divided between the Atari ST and the Apple Macintosh, although the IBM PC and compatibles and the Amiga are getting an increasing look-in.

Most of the software comes from American companies such as Digidesign, Intelligent Music, Mark of The Unicorn, Dr. T and Caged Artist, although some German lines such as Beam Team are included as well.

We will be looking at STACKS of software from MCM over the coming months, but here is a taster of some of the lines they will have in stock.

Mark Of The Unicorn Performer

One of the most respected MIDI composition packages in the US, designed for the Apple Mac 512K and needing a MIDI interface such as the OpCode range (which also works with software from Digidesign, Mark Of The Unicorn, etc.).

Launched for the Mac, M! is now available for the ST and offers "intelligent" performance and composition, claiming to "magnify your skills and stimulate your imagination".

Basic musical material such as notes and chords can be specified and the

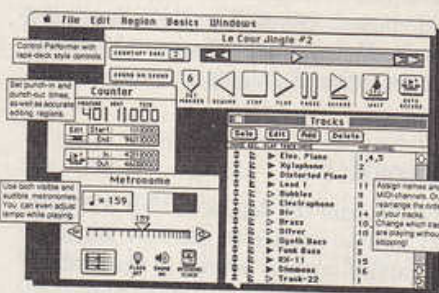
program builds on them to create complete compositions. These are file-compatible with other more conventional programs for editing purposes.

Dr. T Range

The latest version of Dr. T's Keyboard Controlled Sequencer (V. 1.5) comes complete with a Multi Programming Environment (MPE) routine which allows you to run several other programs simultaneously.

These could include Fingers (a baby version of M!), the Copyist scoring program, any of the Caged Artist Series of editors for the Roland MT-32, Roland D-50, Yamaha DX-7 (DX-Heaven) and other synths, and so on.

The interesting thing about the MPE is that it is not just a switcher but a true multi-tasking environment. While you are editing synth sounds, the sequencer can



Screen shot of MCMXCIX's Performer for the Apple Macintosh 512K.

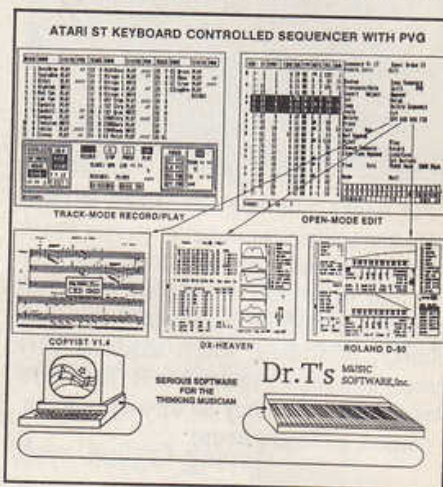
still be running, which means that you can enter System Exclusive sound edited into the sequence.

This allows you to alter synth sounds as they are playing in a sequence, which takes us back to the good old days of flexible analog synths and sequencers.

The MT-32 Editor will of course be welcomed, and comes with a routine to convert D50 sounds to MT32 sounds. Dr. T's Copyist will score out Keyboard Controlled Sequence files on any number of staves and with any complex time signature. It runs on the ST or IBM PC compatible and can use Panasonic and other common

printers.

The PVG (Programmable Variations Generator) creates series of notes with



Scores out keyboard controlled sequence files on any number of staves.

regular changes in velocity, pitch or other values. It will be available in an integrated package with the KCS.

Sound Designer range

The Sound Designer range was again launched on the Mac but is becoming available for the ST. Different versions allow you to edit sounds for the Emulator, Akai, Prophet 2000, Mirage and other samplers, and file compatibility will eventually allow you to exchange sounds from one sampler to another.

MCM are also handling several hardware products including Twister and Q-Sheet which comprise a MIDI/SMPTE mixer automation system, various MIDI interfaces, the Axxess Mapper which is a MIDI splitter/keyboard zone controller, and much more. Also on the Mac only so far you can get Jam Factory ("an improvisation and live performance processor") and UpBeat ("the smart rhythm programmer for all drum machines").

MCM will be happy to send you details of any of their products; contact them at the address below.

MCMXCIX, 9 Hatton Street, London NW8, 01-724 7104.

Risen from the ashes

The software industry has weathered various storms in its short life, including an above-average number of firms going bankrupt. Notable firms to have bitten the dust include Imagine, in 1984; Rabbitt, a one-time major software player; and, last summer, Creative Sparks Distribution.

"Much has been said as to why CSD crashed, most of it merely gossip and speculation. One of the consequences of the crash was that the CSD software publishing subsidiaries, MicroGen and Sparklers, the budget label, were also compelled to cease trading. MicroGen had been taken over by CSD only some six months or so previously.

For weeks following the demise of CSD, trade newspapers were full of stories about various bidders for the constituent parts of CSD and eventually it was all sold. The software publishing side was, I am told reliably, profitable, which explains why there was so much interest in it from third parties wanting to buy an up-and-running, if paused, software house.

Acquisitions

Ultimately, Softly Softly and Software Ltd, two of the rumoured bidders, slipped from the quest and Maynard International bought Sparklers, with a huge back catalogue of titles, while Tynesoft acquired the rights to MicroGen back titles.

Since then, Sparklers has been very quiet, although at the PCW Show, Maynard International publicity mentioned something about a relaunch, which it seems will also apply to its other label, the ironically-named Top Ten Hits, notable mainly for its continued absence from the said chart.

It also transpires that the better titles acquired will be released through The Alternative label. Meanwhile, Tynesoft have made far less noise about their acquisition but instead has released some of its new titles under the MicroValue 2 cassette, which seems destined to follow the chart success of its predecessor.

While all that was happening in the summer months, little was heard of the erstwhile liveware of CSD; two of them, though, were planning their come-back, which has now happened and seems to have been successful.

Leigh Richards, who ran the software publishing arm of CSD, and Henry Kitchen, who was the high-profile managing director of the old firm, are now quietly running a new publishing operation, Software Pub-

lishing Associates. Better known by its two brand names, Pirate Software, the budget label, and Crysos, the full price label, these ranges have been set up remarkably fast and smoothly, given the extent of the demise of CSD. Perhaps a more appropriate name might have been Phoenix or Firebird but there might have been problems with that.

One of the surprises to some people was the ease and speed with which the two found themselves once again running a publishing organisation, in the aftermath of one of the biggest bankruptcies of the software industry. The new firm is owned by a large city-backed institution with interests in several slices of the computer cake, including Software Ltd, the distributor once thought most likely to buy the Sparklers label.

That makes the new labels part of a substantial organisation comparable in size to Mastertronic or the Centresoft/U.S. Gold empire. As yet, it remains to be seen how far Richards capitalises on this trump card in terms of gaining software market share.

That makes the new labels part of a substantial organisation comparable in size to Mastertronic or the Centresoft/U.S. Gold empire. As yet, it remains to be seen how far Richards capitalises on this trump card in terms of gaining software market share.

No conflict

Richards said the demise of CSD was in no way a disadvantage to the new job, since the publishing arm served to demonstrate that he could run a software publishing operation and make it work. Far from his running around trying to raise finance for the new venture, he was approached by the new backers to run SPA, which is a wholly-owned subsidiary of the parent company and which "had seen the profit opportunities of publishing".

Given that there was such a substantial parent, it is something of a surprise to find that Richards and Kitchen did not buy the Sparklers and MicroGen labels. They have clear reasons. "Why worry about yesterday's products? Other people may be, but I am interested in giving people new and fresh products," said Richards.

Kitchen was even more blunt, saying: "Sparklers titles were a good product a year ago; if people want to buy old games,

that is fine, but it is not what we want to sell."

That does not stretch to the third, less well-known side to the publishing division, Trust, a budget business software house. Considering the continuing high sales and support for the product, it was acquired from the receiver by SPA and is apparently still selling very well.

Programmers needed

Arguably the most important area to consider when setting up a software house is from where the games will come. Will you get enough, of sufficient quality? While you might expect programmers from Sparklers to keep well clear of any new venture by the same people, that has not happened. Many of the new titles are written by the people who produced much of Sparklers catalogue. So, as well as the free publicity every new label attracts, and the resulting flood of enquiries from prospective programmers, Software Publishing Associates has the added advantage of a network of programmers already operating.

In practice, Richards claims that all the programmers who worked for him under CSD and who are still coding are working for him and SPA - as well as many more, both in response to recent advertisements for programmers and to the usual launch publicity.

There seems to have been some opposition from an even more surprising source, one of the distributors taking the range which one would have thought would be only too keen to sell the titles. It seems that one retailer tried to order some of the new Pirate range through his normal supplier but was astonished to find the supplier being as forceful as he could in trying to dissuade the shopkeeper from buying the games.

That appears extremely puzzling, until the same shopkeeper explains that the distributor then tried to persuade him to take an alternative brand of software which, he assured the shopkeeper, was much better quality. Perhaps, if that is true, the better brand should sell itself, not needing any underhand tactics.

There have also been one or two trade comments as to the name of the budget label, suggesting that it might encourage piracy or at least condone it. As one might expect, Richards denies the possibility of any such affects which, if true, would presumably lead to his titles being pirated

first of all, so it would be in his interest to change names if he thought there was anything in the allegations.

“Given that there was such a substantial parent, it is something of a surprise to find that Richards and Kitchen did not buy the Sparklers and MicroGen labels. They have clear reasons. “Why worry about yesterday’s products? Other people may be, but I am interested in giving people new and fresh products,” said Richards.”

So, now that the new labels have emerged from the ashes of CSD, how are they faring? Pirate appears to be doing well. While not yet an equal rival to the big three, its titles are on sale alongside all the other budget majors, such as Players, Atlantis and Powerhouse and, in particular, they seem to be receiving good coverage in the major multiples like WH Smith. As with any publisher, sales figures were not proffered; had they been given others would only have disputed them, goes the argument, so why bother?

Certainly the packaging is very striking – the usual glossy picture, with a decidedly grim skull and crossbones emblazoned on the rear. Three screenshots of each title are also included on the back, apparently not just title screens but “real action shots of the game”. As with the Sparklers range, there are titles at £1.99 and £2.99.

Titles available so far include such delights as *Call Me Psycho*, as well as *Holiday in Sumaria*, *Super Smashout* and others. The most successful title to date apparently is the well-received *Trivial Fruit* game on the Commodore, a £2.99 title. The *Call Me Psycho* title does not though, mean, that Pirate will be following CRL down the road of horror software and computer nasties?

Horrorware

“Horrorware is not our scene at all,” according to Richards. “Software which is

radical and different, yes; offensive or sadistic, no.

We do not need pornography in this business; if some people need to go to those lengths to sell their product, one may draw one’s own conclusions.”

Call Me Psycho, despite its particularly pleasant packaging, is nothing to do with any of the films of the not-so-dissimilar name but is a standard arcade game.

There are a few new titles in the pipeline for most major formats except for CPC.

The next releases will be *KGB Agent* and *Operation Ahoria* on Commodore 64, and *Cyber*, *Murphy* and *Knightfall* for the Spectrum.

Thereafter, Pirate hopes to release about six to eight budget titles each month, increasing to 10–12 by the end of 1988. Given that volume, there should be at least some chart presence if the games are any good.

Gallup is a sore point with most budget software houses and all eyes are on the changes which have been announced recently.

Pirate is expecting it to show a number of its titles riding high as Gallup are “noting our increasing presence” in the market. In support is the current Christmas boom, which SPA says is going very well – “far in excess of the sales we had at CSD”.

SPA is moving ahead. It has launched one of the first packages of software to be available on 3in. disc for the new Spectrum, a compilation of three of its current hits, retailing at the budget price of £4.95. If this goes well, more will follow.

Although so far Pirate has grabbed most of the limelight, its full-price brother has not been idle.

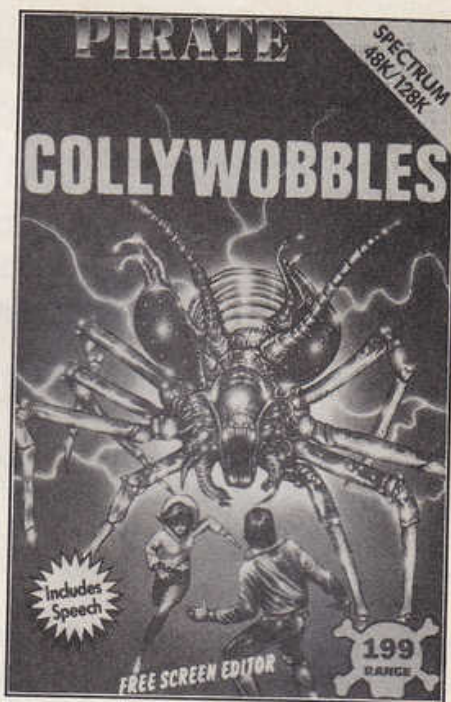
Crysis is about to release its first title. *Eric, Phantom of the Opera*. It will be launched initially on the Spectrum, at £7.95 on tape or £9.95 on disc. It is supported by a fairly substantial advertising campaign and you will probably have seen the teaser advertisement for it; it is an arcade adventure based closely on the original novel, set in Victorian times.

The graphics are said to be a replica of the Paris Opera House and certainly look operatic.

Raoul, the lead character, whose girlfriend you are trying to rescue, is well depicted, complete with dark suit and top hat. When jumping or crouching he even holds on to his hat.

While not a world-beater, the preview copy looks well-written and a difficult challenge.

To make it even more difficult, Mark Rivers, the programmer, has designed it so that you cannot shoot and move at the same time; you need to “make a strategic



Pirate software – in the limelight.

decision” as to which to do and when.

There are other novel twists, too, such as the way your girlfriend’s heart is shown beating when you approach.

More budget games

At present most publishers seem to be moving from full-price and down towards budget and it is somewhat surprising to find a new budget label making the reverse move.

SPA feels that there is still plenty of mileage available from the full-price software on 8-bit machines, but, nonetheless, 16-bit is taking over.

Which is why the second Crysis title is for the Amiga, again due for release next month.

Larry and the Ardies is due for early December and should follow on the ST soon afterwards, both priced at the lower end of the range at £14.95.

Pirate, too, will not be neglecting the ST or Amiga and have four titles lined up for release at £9.95 in January, 1988 – two titles for each machine.

Not to be left out, the business side, Trust, is also planning conversions to ST and Amiga of its popular products which retail at between £19.95 and £99.95.

Ambition? Of course, Richards would like to see SPA becoming a pack leader before too long, as might be seen from the ambitious plans outlined, spanning almost every sector of the market.

It remains to be seen whether or not the bird recently risen from the ashes makes it as far as becoming an eagle or simply teeters around among the sparrows. □

cavendish commodore centre

EUROPE'S
SPECIALISTS
IN AMIGA'S

66 London Road
Leicester LE2 0QD
Tel: (0533) 550993

OFFICIAL
COMMODORE
BUSINESS
CENTRE

Amazing Amiga A1000 State of the Art in Multi-tasking

**** BEWARE OF CHEAP GREY IMPORTS ****

All our Amiga's are fully guaranteed and are the latest in UK specification they come with ONE years on site (home) maintenance at NO extra cost.

There is a single 880K 3.5" disk drive built in plus full function detachable and height adjustable keyboard

Each Amiga 1000 comes complete with 1.1 & 1.2 operating systems compatible with ALL Amiga software. Disk based operating systems allows one to upgrade cheaply in both directions.

Full intro & operating manuals
Amiga BASIC with manual
New Amiga users tutorial Disk
Graphics demonstration software

The BEST prices on Guaranteed Products

A1000...256K ram Computer.....£449.95
A1000...512K ram Computer.....£499.95
A1010...External 880K additional drive.£199.95
A1060...Sidecar Unit 256K ram & drive..£399.95
A1081...Amiga super Colour Monitor.....£299.95
A1050...256K Ram Cartridge for A1000...£ 79.95
Extra 256K ram for Sidecar giving 512K.£ 39.95

Super Saver System Prices (All 512K ram)

A1000+.A1081.....(save £50)£749.95
A1000+.A1081+.A1010.....(save £100)£899.95
A1000+.A1081+.A1010+A1060.(save £200)£1199

ALL PRICES INCLUDE VAT

There is an EXTENSIVE range of Amiga Software, hardware and books plus all other AMIGA related peripherals. WE ARE THE SPECIALISTS.



A1060 SIDECAR UNIT

Provides complete IBM PC hardware and software compatibility for the AMIGA. Allows MSDOS to run in an Amiga window while another software package runs in a different window. Contains three full size PC expansion slots. Connects to the Amiga expansion bus and contains it's own 5.25" disk drive. This is the latest version of sidecar and is complete with software.

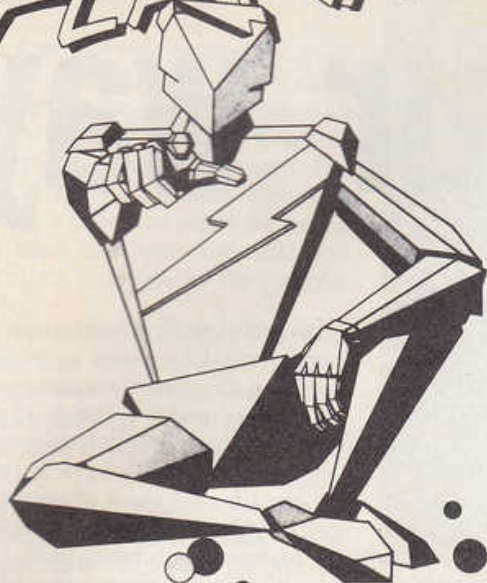
UK(AUG) Amiga Users Group

The UK(AUG) is Europe's largest Amiga only Users Group and has close links with the main groups in America and Australia. It produces a massive A4 newsletter bimonthly containing everything and more for the Amiga User. PUBLIC DOMAIN. The AUG has over 140 880K disks of PD software with more added each month from our contacts. These are £3 each including disk. There is a active BBS service with on line help from the vast membership. Product discounts for Members. JOIN NOW ONLY £20 per year (UK) £25-Europe £30 others.

**Send Cheque or phone
for Visa/Access. Add
£10 per order for
insured next day
delivery (UK only).**

WE WANT YOU!

PLAYERS



THE PLAYERS TEAM ARE OUT LOOKING FOR YOU!

CAN YOU WRITE COMMERCIAL QUALITY GAMES IN MACHINE CODE?

Write in Strictest Confidence to:
 RICHARD PAUL JONES
 PLAYERS SOFTWARE, CALLEVA PARK
 ALDERMASTON
 BERKS RG7 4QW

or phone: (07356) 77421 (5 lines)

TRANSFORM LTD COMPUTER ACCESSORIES

ZX Spectrum and QL Microdrive Storage Box



- Designed to match QL and Spectrum
- Holds 20 cartridges and index cards
- Fully interlocking
- **QL CHESS**

£4⁹⁵

Available from selected WH Smiths and leading computer shops

£16⁹⁵



Available Now

Box + 2 Cartridges	£7.95
Box + 10 Cartridges	£17.50
Box + 20 Cartridges	£32.00
SUPADRIVE Microdrive Utility	£9.95

VISA

TRANSFORM LTD (Dept. PW) 01 658 6350
 24 West Oak, Beckenham, Kent BR3 2EZ

Once Bytten



AMIGA HARDWARE

A500 + Modulator	£499.95
(Includes D/Print + 10 P/D Discs + More!)	
1081 Monitor (Few Only)	£299.00
A1010 Ext. Disc Drive	£244.00
Curmana CAX354 Disc Drive	£139.00
512Kb Expansion + Clock	£99.00
Supra 20Mb Hard Disc for A500	£745.00
Supra 60Mb Hard Disc for A500	£1495.00
Easy Drawing Tablet A500	£315.00
Rendale PAL Genlock A500/2000	£269.00
Ruby-Comm Viewdata/TTY Comms	
(Allows split baud rates)	£139.95
Centronics Printer Lead	£12.95

Less Your Part Exchange

ATARI ST HARDWARE

520 ST-FM (Inc. 5 P/D Discs)	£279.50
520 ST-FM + SM125 Mono Monitor	£379.50
MEGA ST 2Mb	£837.50
MEGA ST 2Mb + SM125 Mono Monitor	£937.50
MEGA ST 4Mb	£1117.50
MEGA ST 4Mb + SM125 Mono Monitor	£1210.50
SC1224 Colour Monitor	£372.50
SLM804 Laser Printer	£1210.50
SH204/5 20Mb Hard Disc	£559.95
MEGA ST 4Mb SM125 + SLM804 + SH205	£2779.00
Above Deal Plus Timeworks DTP	£2850.00
Centronics Printer Lead	£12.95

Less Your Part Exchange

ST SOFTWARE - GAMES

Star Trek	
Star Wars	£14.95 each or all three for £42.00
Backlash	

Jewels Of Darkness, Silicon Dreams,	
Golden Path, Boulderdash Construction Kit,	£9.95 each
Pirates Of Barbary Coast, Tass Times In Tone Town	

Zork I, II or III, Ballyhoo, Hollywood Hijinx,	
Trinity, Spellbreaker, Moonmist, Wishbringer,	£12.95 each
Hacker, Hacker II, Borrowed Time, Mindshadow	

AMIGA SOFTWARE - GAMES

All the latest titles - available on first day of release
 At least 25% off RRP

Flight Simulator II (Limited offer)	£29.95
King's Quest I, II and III (Set)	£18.75
Hunt For Red October	£14.95
Balance of Power	£22.50
Gnome Ranger	£11.25
Lurking Horror	£18.75
Terrapods	£18.50

AMIGA SOFTWARE - SERIOUS

Scribble v2.01	£79.95
Superbase Personal	£79.95
Lattice Amiga Dos C v4.0	£134.50
AC/Fortran	£229.50
Page Setter	£89.95
Dynamic Cad	£389.95
Aegis Draw-Plus	£149.95

ST SOFTWARE - SERIOUS

Timeworks Desktop Publisher (Brilliant!)	(Intro. offer) £79.95
1st Word Plus	£64.50
Easy Draw 2	£64.50
Cyber Studio (All add-ons also available)	(Intro. offer) £69.95
Wordwriter ST (Inc. 3-way Spell Checker and Thesaurus)	£64.50
Swiftcalc	£64.50
Superbase Personal	£79.95
Mark Williams C	£99.95

DISCS

All with lifetime guarantee. 100% error free

Xidex/Dysan Bulk 3 1/2" (including labels)					
	10	25	50	100	200
SSDD 135tpi	£11.95	£27.95	£51.50	£95.50	£187.50
DSDD 135tpi	£13.50	£31.50	£57.50	£110.00	£199.00

Safe Data 3 1/2" DSDD 135tpi
 10 in Library Case £14.95

BASF/Athana Bulk 5 1/4" (including sleeves and labels)					
	25	50	100	200	1000
SSDD 96tpi	£9.40	£17.75	£31.90	£61.70	£272.50
DSDD 96tpi	£9.80	£18.50	£33.50	£64.40	£285.00
High Density	£31.62	£55.25	£101.90	£196.70	£897.50

SPECIAL LIMITED OFFER

3M Branded 3 1/2" DSDD 135tpi 10 box only £17.50

BBC

Joystick (no interface needed) £5.95

All our prices include VAT and carriage in U.K. Overseas orders welcomed. For Europe please add 10% to above prices, further afield please ask for a quote. If you don't see it here... give us a call. Remember... we support most micros and have new stocks arriving daily.

We especially welcome part-exchange and we would be only too pleased to quote you.

Write to:

59 SWANLEY ROAD
 WELLING, KENT DA16 1LL
 or 'PHONE: 01-304 2631

Cheques to AMTEN LIMITED

Callers welcome but please 'phone first
 We are open Mon.-Sat. 9am-10pm

VISA

Play it your way

It has always been the dream of those who lacked the talent to produce fast action arcade style games to rival the professionals. Until now, that dream has been largely unfulfilled, so-called Game-maker programs being pitiful affairs designed to raise and then dash expectations cruelly.

This is all about to change, for Commodore 64 owners anyway. From Outlaw Productions, an offshoot of Palace Software, there is a Shoot 'Em-Up Construction Kit.

Three types of game can be produced with the kit - vertically-scrolling shoot 'em-ups, Rambo-style games with some reverse action, and single-screen maze or shooting games.

For such an impressive product the packaging is surprisingly sparse. A simple plastic box and a large glossy sheet containing the instructions disguise the powerful utility the Kit is.

On the disc or cassette there are four sample games. The entertainment value may be suspect but they serve to illustrate the various types of game which can be produced. The SEUCK program contains the data for a blank game which you must fill in to create your masterpiece.

The entire program is menu-driven, with various sub-menus covering sprites, objects, background, enemy attack waves, player limitations, levels, sound effects and the front end.

Sprites are the things which fly, crawl and move round. A spaceship, alien, missile or explosion can all be defined as a sprite. There are 127 sprites available and the process to transform a blank block of pixels into an exciting image goes something like this.

Select the sprite number and start painting on the pixel grid. You are allowed four colours but the restrictions pay a

Duncan Evans grabs a joystick and goes where no Kit has gone before.

heavy toll. One of the colours is assigned as the background and is used for erasing. Two colours are used in all 127 sprites, so great care must be taken when selecting

moves and whether the animation, up to 18 frames, will take place in sequence or depend on direction of movement.

The other major option is to do with editing an object, which is an enemy, and defining how it will behave in the game. You can alter the speed of movement, the number of points the player receives when it is destroyed, how many times you have to hit it before it is blown away, whether it fires at random or in a specific direction,

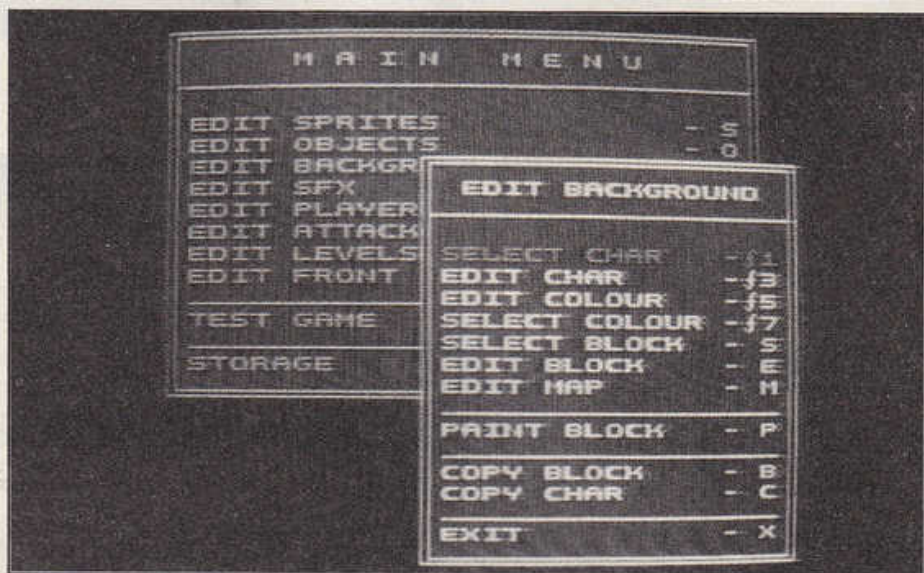
how rapidly it fires and the speed of the bullets, result of a collision with your ship or with a bullet, and a host of functions linked to other sections of the program.

The collision routines are interesting since you can make the enemy impervious to your fire and thus invincible, or set up things so that you can fly straight through them unharmed.

The other items in this section are mainly in the audio department. You can alter sliders on a display of the registers of the SID chip to produce weird and wonderful noises or just dull ones; it all depends on your creativity. These noises can then be assigned as an explosion or bullet sound effect.

When you have your sprites and objects the next thing to do is design the background, so that you can plot the attack waves over the scenery. The background is made up from 4x8 pixel characters which are welded to form character blocks. They appear on the screen in a 5x5 matrix.

There are 254 characters available which you can paint with four colours. The restrictions on the colours this time is even more severe. The first three colours have to stay the same for the entire map. The fourth colour can be different for every block - not character - but has to be from the first eight in the C64 palette for some reason. A fair amount of foresight and



Selecting the background character.

them. Only the final colour can be different for each sprite.

There are four functions for manipulating your design. You can slide it around in its box, which is useful if you have designed it lopsided, mirror the design in any direction and copy it to another sprite number. Finally, you can erase sprites which are beyond redemption.

Once all the sprites are defined they must be assigned an object number in the range 00 to 58. An object can be one sprite on its own or a number of them strung together to form an animated sequence.

Certain object numbers are pre-assigned so that 00 is always player 1 and 01 is player bullet 1. One of the major items in this section is the edit sprite and place utility. It facilitates the selecting of sprites and arranging them in the desired order for animation.

There are options for determining the speed at which the object animates or

imagination has to go into planning the backgrounds if they are to avoid a similar look.

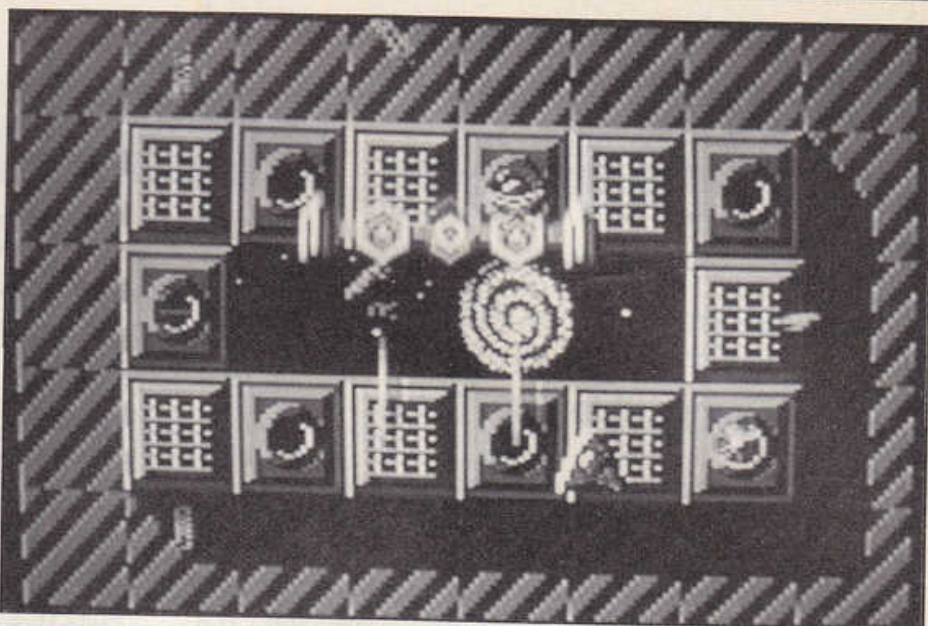
Once a block has been constructed it can be copied around and inserted into the map at the desired point. The basics are all there - now for the clever part, designing the enemy attack waves. Because this section is so heavy on memory there is a limit on how complex the attack waves can be. This takes the form of a units free counter which decreases as the patterns are defined.

First, you select the enemy sprite, then call up the map. You are given rough and fine control over where to position the sprite. Once the object is positioned you trace the attack route with the joystick and press F7 to store the pattern in memory.

It is nearly there now. The broad canvas of your megagame has been painted; all that is left to add are the small details and your signature.

The player variables include the number of lives up to seventy; speed of ship, 1-5; number of bullets, up to three; directional fire; bullet duration - 1-99; and collision with characters. The latter feature is the one responsible for determining whether the player ship can travel through obstructions and whether the ship will stop or be destroyed. So if you are a balloon you could have cacti which burst you and fences which just prevented your passages.

The same procedure is repeated for player two and you can have two players on screen at once. Sound effects are next. Although you cannot have music playing throughout the game, there is nowhere near sufficient memory; you can arrange simple tunes by having stationary objects firing bullets with a zero life expectancy so they do not go anywhere. Assign a different note to each object when it fires and I



Testing the game.

am sure anyone with sufficient patience could mangle a well-known tune. You can have 24 sounds effects, which is good enough.

Down to defining the levels for your shoot-'em extravaganza. This option allows up to 22 levels, each of which may be still, continuously scrolling, or push scrolling - for Rambo style games. You can define whereabouts on your map as each level goes; they do not have to follow either and what happens at the end of the level.

The speed of scrolling is variable between slow and not so slow. For vertically-scrolling shooters it is certainly fast enough and, more important, very smooth. Considering the nature of the program, I was surprised and delighted to note that the scrolling is of professional quality.

What could possibly be left to do? The front end, of course - the piece with messages and introductions. The character

set is completely re-definable and you can type in instructions for the people who never read the inlay.

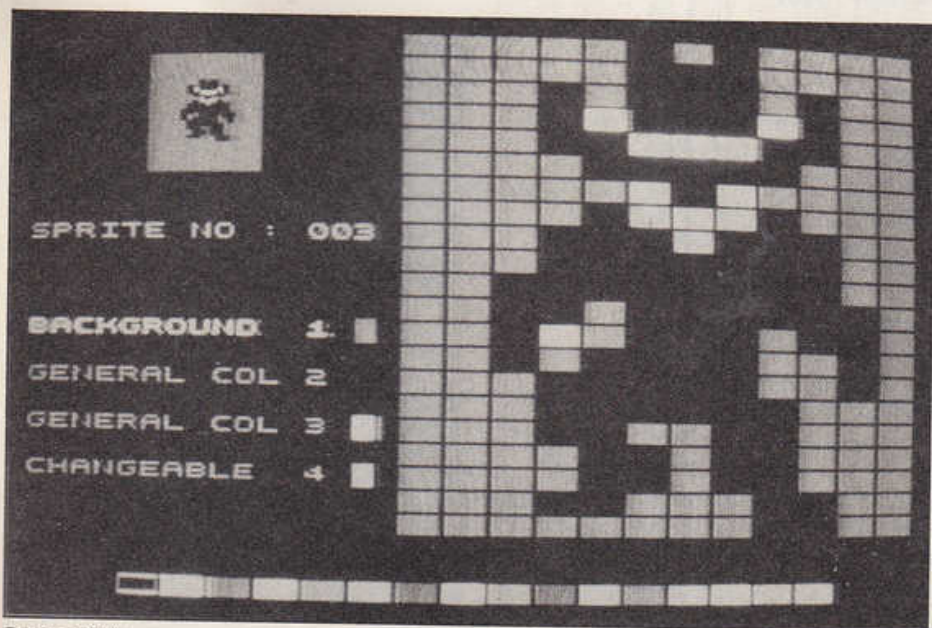
All that is left is to select in which colours you want the front end to flash and there you have Pommando 2, Blambo, Who Dares Wins a Truffle, or whatever. You have to test it as well.

Once satisfied that it is the next best thing since *Starglider* you can save everything in a format which can be reloaded and played without having to go through the editor.

The big question is if the Shoot 'Em-Up Construction Kit is good enough to enable you to produce professional software? The answer is almost or not exactly, depending on how you look at it. What you can produce is equivalent to budget standard, providing you have a fair amount of imagination, which is a real achievement by Outlaw.

The area which would have turned an excellent product into an absolutely brilliant one involves the changing of the presets. Then you could have *Nemesis*-style games in which the player picked up extra weapons, speed, limited invulnerability and the like. I can see there is room for SEUCK 2 at some point.

What you have is basically the arcade equivalent of the Quill or GAC and the same concerns apply. If you have the imagination, the style and the vision, the Shoot 'Em-Up Construction Kit will serve you well. Congratulations to Sensible Software, the programmers and Outlaw for making the breakthrough. □



Editing a sprite.

Program Shoot 'Em Up Construction Kit Micro C64 Price £14.95 tape, £19.95 disc Supplier Outlaw Productions, 275 Pentonville Road, London N1.

EIDERSOFT SOFTWARE LTD PRESENTS...

AN IBM PC ON YOUR ST!

Special package of PC Ditto and the Triangle 5¼" IBM™ Compatible Disk Drive

PC-DITTO

PC Ditto is the superb new IBM PC emulator for the Atari ST which will run over 95% of IBM PC software! Coupled with our Triangle 5¼" Floppy Disk Drive you immediately transform your ST into an IBM PC!

PC Ditto, the official UK version imported by Robtek, is almost fully compatible with the IBM PC. Running in software, it operates in all screen resolutions, offering VGA and CGA graphics capabilities.

5¼" IBM DRIVE

Of course, the only way to get IBM software into your Atari ST used to be to transfer the files across the serial ports using appropriate comms software. Not any more! The Triangle 5¼" IBM compatible disk drive allows you to not only read files off an IBM 5¼" disk, but to write them back again. The files can then be read by a proper IBM machine without even having to think about serial ports, baud rates, handshaking or Xmodem!

The Triangle 5¼" disk drives also operates as a normal ST disk drive (but with 5¼" disks of course!) and can format to either the ST's normal 720K or, using special software provided, the standard IBM 360K (8 or 9 sectors per track). For IBM mode, the drive is switchable between 40 tracks (IBM) or 80 tracks (ST).

PC-Ditto and a Triangle 5¼" IBM Compatible Disk Drive costs just £199!

EIDERSOFT
SOFTWARE LTD

• UNIT 4 STANNETS • LONDON NORTH TRADE CENTRE • BARNDON • ESSEX • SS15 6DJ •

Tel: 0268 541212

Triangle 5.25" IBM Compatible Disk Drive costs £147.78 if bought separately.

IBM IS THE TRADEMARK OF INTERNATIONAL BUSINESS MACHINES.
ALL PRICES QUOTED ARE EX-VAT.

NEW!

PC-DITTO

SOFTWARE BASED IBM EMULATOR FOR THE ATARI ST.

THIS PROGRAM RUNS ALL POPULAR IBM PROGRAMS

INCLUDING:

LOTUS 123 – FRAMEWORK – SYMPHONY – FLIGHT SIMULATOR – SIDEKICK – WORDSTAR – WORD PERFECT – AND MUCH MORE

PRICE £49.95

Available from:



MICHTRON U.K.



Box 68, St Austell, Cornwall PL25 4YB
Tel: 0726 68020



SIMPLY MEGA !!

HAUTE CUISINE FOR YOUR AMIGA –
AT TAKE AWAY PRICES

FAERY TALE ADVENTURE
£ 29.50

DIGI-PAINT
£ 39.50

EXTERNAL 3.5" DRIVE
(NEC 1036A, ESPECIALLY MODIFIED)
(FOR 500, 1000 & 2000)
£ 125.00

AEGIS VIDEOSCAPE 3D
£ 130.00

GARRISON
£ 23.00

WORD PERFECT
£ 215.00

PRICES INCLUDE VAT & POSTAGE AND PACKING.
CALL OR WRITE FOR OUR LATEST LIST.

SIMPLYMEGAWARE

SIMPLY MEGAWARE LTD
49 Links Drive
Solihull, West Midlands
B91 2 DJ
TEL: 021 705-3570



Outside U. K. and Dealer Enquiries
G.T.I. GmbH
Oberhöchstädt Strasse 53b
6370 Oberursel, West Germany
TEL. (010 49) 6171 53863

Compatible link-up

Barry Smith reviews a link hit by C Port for the Z88 and non-IBM compatible PCs.

When the Z-88 was launched, Cambridge Computer announced a PC link kit consisting of a cable and software for the IBM PC and compatibles which would allow *PipeDream* files to be transferred to IBM PCs and converted to *WordStar* or *Lotus 1-2-3* format. Owners of non-IBM compatible machines, however, have had to wait for third-party developers to produce link kits.

C Port

One such developer is London-based software house C Port. It already has a Z-88-Amstrad PCW import/export kit and is working on a similar kit for the Apple Macintosh. The latter is expected to be launched in the new year, probably at the Which Computer? Show, and will provide a transfer facility between *PipeDream* and the *MacWrite* file format.

The PCW kit allows owners of the Amstrad PCW series of machines to transfer files between *PipeDream* on the Z-88 and CP/M or *LocoScript* on the PCW. It consists of a 9-pin to 25-pin serial cable, menu-driven software to run on the PCW and a short manual. PCW owners will need one of the Centronics/RS232 add-on units available to use C Port and the software requires CP/M Plus version 1.4 or later.

Data transfer

Data transfer between PCW applications and *PipeDream* or *Diary* is via ASCII text files, the software does not create *LocoScript* files directly on the Amstrad. This has the advantage that *PipeDream* files can also be converted for use with many CP/M applications, such as *WordStar*, *NewWord* and *Protext* but it means that *LocoScript* users require version 1.2 or higher, since earlier versions of *LocoScript* do not support the ASCII format.

Before transferring files in either direction you must create plain text files. You do so with *PipeDream* by choosing the Save as Plain Text option on the <>FS (file save) screen. In the same way, *LocoScript* files destined for the Z-88 should first be converted using the *LocoScript* F7-Make ASCII file function from the disc management screen.

WordStar and *NewWord* users can achieve the same effect by printing to disc. You can then use the 'Convert CP/M text file to *PipeDream*' option on the C Port menu to make a *PipeDream* file ready to send to the Z-88. *PipeDream* files are also converted to CP/M (ASCII) text files at the PCW end, since the Z-88 has no facilities to do this.

The C Port link makes use of the Z-88 built-in Import/Export file transfer program and implements the same file transfer protocol on the PCW. This protocol allows for batch transfer of multiple files and can send filenames across with the files. Moving either single or multiple files in either direction therefore is very straightforward.

Line breaks

When converting from *PipeDream* to CP/M format the program allows you to choose whether to preserve line breaks or not.

If you are transferring running text it is usually best to eliminate the line breaks so that hard carriage returns appear only at paragraph ends.

Each paragraph can then be re-formatted by the target word processor between whatever margins happen to be set. Tabular material, however, will transfer better if you retain the existing line breaks.

Once you have *PipeDream* files in CP/M format, most CP/M word processors should be able to read the text. If you have eliminated line breaks, *NewWord* and *WordStar* require you to re-format the entire document to wrap the lines again; the *NewWord* command is Ctrl-QB and the *WordStar* equivalent is Ctrl-QQB. To import the CP/M text file into *LocoScript*, you must re-boot the machine with a *LocoScript* start-of-day disc, create a new document and then import the text into the clean *LocoScript* document using f7-Insert Text. *LocoScript* will re-format the text as it is read in.

Transfer in the opposite direction works equally smoothly - the only pitfall is forgetting to choose the Load as Plain Text option on the <>FL (file load) screen;

this results in each line being truncated at the first column.

Storing

In addition to text file transfer, the C Port software allows the transfer of binary files from the PCW to the Z-88. In theory, since the Z-88 and the PCW both use the Z-80 central processor, this should allow you to develop software using CP/M software tools - either the bundled assembler and debugging tools, or a high level language compiler - and transfer the finished result to the Z-88 for execution. It would then be possible to store the software on EPROM for distribution.

Given the current paucity of Z-88 development tools, this kind of procedure will probably be the only option for most serious developers for some time. Do not embark on it lightly, though, because the Z-88 is not a CP/M machine - you would need to determine how the Z-88 operating system works yourself or get technical assistance from Cambridge Computer.

Printer server

More useful for most PCW owners will be the ability to use C Port as a Printer server. The PCW printer has a non-standard interface and can be driven only by the PCW. By running the C Port software and choosing the printer server option you can print from *PipeDream* or the *Diary* using <>PO and allow C Port to route the output to the printer. Since the Z-88 default printer driver is Epson and the PCW printer is Epson-compatible this option works very well.

The C Port link kit is an excellent buy for PCW owners who want to use the Z-88 when they are away from their desks. The file transfer and conversion routines work well and the printer server option overcomes one of the main problems with the Z-88, its lack of a proper parallel printer port. □

Product: Z-88-PCW Import/Export Utility
Supplier: C Port
Telephone: 01-376 5098
Price: £24.95.

EXPERIENCE THE REAL THING!

WIN A WINTER OLYMPIC HOLIDAY WORTH MORE THAN £2000



WINTER OLYMPIAD'88

Winter Olympiad '88 is undoubtedly the best winter sports simulation to date. It features the classic winter olympic events; Ski Slalom, Giant Slalom, Two man bob, Ski-Jump, Biathlon and Speed Skating. These have been depicted in a way not seen on any home computer before. The result is a phenomenally realistic and spell-binding game.

Available on the following formats:

- CBM64, BBC/ELECTRON, ATARI £9.95
- SPECTRUM, AMSTRAD, C16/+4 £7.95
- DISK - BBC £14.95
- MASTER COMPACT £14.95
- ATARI 8 BIT £14.95
- ST. £19.95 • AMIGA £19.95
- IBM £19.95



TYNESOFT

COMPUTER SOFTWARE

Designer programming

The first part of Kenn Garroch's series on program design deals with the methods of preparation involved in writing a program.

One of the more difficult and somewhat obscure problems about writing a computer program is determining what needs to be done. The bigger the program, the more complex this becomes. One way is to tackle the problems as they appear.

The disadvantage with this is that, while it can work well for simple problems, when something difficult occurs work tends to halt until the problem is solved. Also with this method the finished program tends to be rather spaghetti-like and, after a few months, incomprehensible.

Method

A better method is to use the top-down approach and split the idea into sections which can easily be understood and hence programmed.

The best place to start is not with the computer but with a piece of paper. The first step is to write all the things the program should do. Options which many not have occurred in the original idea should also surface at this stage, making the program more comprehensive than it would have been if it had just been worked out on the keyboard.

Once the basics have been set out, the breakdown can begin, with the aim of transforming each section into a series of steps.

Since programming languages, with the possible exception of multiple-processor languages such as OC-CAM and ADA, always work as a sequence of steps, the final program breakdown needs to be of the same format. As each section is broken down further, it should eventually approach a form which can be transferred directly into programming language

statements.

Of course, while all this is happening, new possibilities will occur which can be included in the original idea. In fact, this can and does occur at every stage of the process.

Flow charting

Two formalised methods can be used to help with splitting the idea into programmable statements.

The most common is flowcharting, which uses a set of standardised boxes into which statements are placed. They are then linked with lines to show how the program runs from one to the other.

Each box can later be split into a series of smaller boxes, eventually giving a set of flowcharts which contain program commands. I find flowcharts to be rather time-consuming and sometimes confusing, although there are times when they produce a better result than any other method.

Alternatives

An alternative is to use a kind of written English-cum-programming language with

this is fairly fast and does not involve all those tedious boxes and lines flowcharting requires.

Writing program code

At some stage the program code, whether in a high-level language or machine code, has to be written.

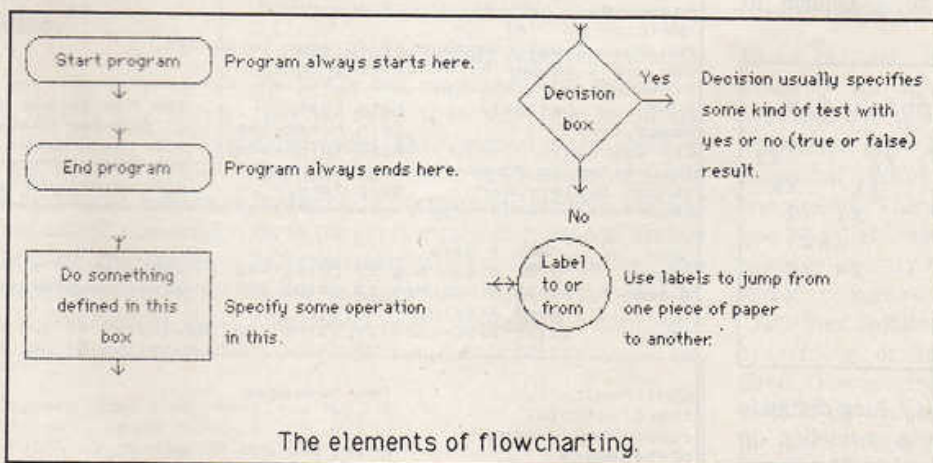
"The best place to start is not with the computer but with a piece of paper."

At that point, a good reference book is vital. All languages and assemblers have numerous commands which can be put together in different ways to achieve the same result.

The trick is to determine the best way, i.e., the fastest, simplest, and most elegant method.

This is where the manual is useful and, although it is usually more important in machine code than in a high-level language, each command should be considered very carefully to make sure it is the best to use.

Once a method has been written, tested and used, it should be filed with as much documentation as necessary, so that it can be included in future programs with as little fuss as possible. That can save a great deal of time and effort at a later date. □



labels, loops and jumps to set out the idea. This is sometimes known as pseudo code. They are broken into subsections which eventually become the program statements.

For most programming requirements,

Cix, cix, cix

- the number of the base

Now into its second year of operation, Cix, the U.K. cousin of the *Byte* magazine on-line database in the U.S., is growing rapidly. Steve Gold looks at what services are available to subscribers who get their Cix by telephone.

One of the problems with accessing bulletin boards is the number of times another modem user beats you to it. With several thousand modems in use in the U.K. it is not surprising that the single-line BBS is overloaded at times.

Multi-user BBSs are a comparative rarity on this side of the Atlantic, on account of few subscription-based BBS services taking off in the U.K. One service which has taken off in recent months, however, is Cix, short for Compulink Information eXchange.

Modelled initially on the highly-successful Bix Byte Information eXchange system in the U.S., Cix uses similar software but running on a proprietary Tower Unix system with 4Mb of system RAM in which on-line users can cavort.

Cix has eight access ports which users dial up on the long-suffering Guildford telephone exchange. Soon the number of available ports will increase to 15, when the service transfers to a London 01 number.

```
Type 'cix' to login: cix

XXXXX   XXXXXX  XX    XX
XXXXXXXX  XX    XX   XX
XX  XX   XX     XX  XX
XX      XX     XXX
XX  XX   XX     XX  XX
XXXXXXXX  XX    XX   XX
XXXXX   XXXXXX  XX    XX
```

When that happens, long-distance callers will experience a reduction in calling costs, since London is a B1 reduced rate trunk call from most major centres in the U.K.

Cix costs £12 to sign-on, for which users receive a pseudonym on the network, as well as a password of their choice. For the materially minded, a comprehensive set of user documentation is supplied. It

includes an A5-sized manual, useful help card and other documentary evidence of membership.

On-line costs are £1 per hour at cheap rate, £1.80 per hour at peak rate, which is defined as 8am to 6pm Monday to Friday. The charges are in addition to the telephone call costs associated with dialling Cix in Guildford.

The company hope soon to introduce a PSS link into the system, allowing users to access Cix via the Compulink closed-user PSS identity. Call costs for PSS access will probably be about three pence a minute, roughly comparable with those charged by Telecom Gold and other electronic mail

networks. On-line charges accrued during the month are direct-debited to a recognised credit card or via a direct debit to a subscriber's bank account, a useful facility since it saves time on both sides.

With such a charging system users are expected to use at least £5 worth of call time per month - five hours during cheap rate, less during peak rate. Most of the Cix 920-plus membership easily exceed that call quota, although occasional users should be aware of the £5 per month minimum billing charge.

In return you get access to all eight Cix Dowty Quattro modems, all of which will accept calls at any modem speed between

```
On 0483-573337 V21 V22 V23
V22bis (MNP supported)

CIX Version 4.02C
Nickname? (Enter 'new' for new user)
Password:
*Welcome to CIX*
You have 2 mail message(s) in your in-basket,
You are a member of 10 conference(s)

-----
CHAT now available      'help chat'      for how to use it!
Newsbytes?              'join newsbytes' 27 October issue now online
Cix Queries?            'mail to cixadmin' for the answers
Interested in Novell?   'mail to novell'  for info on the Netwire Conference
Tandon Dealer/User ?    'help tandon'    for important Tandon information!
-----

From      Memo # Date
fthorn    7721 R Sun Aug 23 18:42 1987. newsbytes 25 august edition
ianben    11435 R Fri Nov 13 09:03 1987. Hacker newsletter
To      Memo # Date
fthorn    12196 . Sun Nov 29 13:04 1987. newsbytes 01 dec 87 edition
dj        12196 . Sun Nov 29 13:04 1987. newsbytes 01 dec 87 edition

Conf/Topic      New Messages
learn/tutorial   19
compulink/joining 17
pc/hardware      691
pc/software      783
pcw/news         402
newsbytes/editorial 4
newsbytes/digest 8
Main:
```

Logging-on.

CIX 'Internal' Conferences

o learn	Interactive tutorial for the Compulink CoSy system.
o conf	NEW CONFERENCES LIST
o vendor	All advertisements go here - rates available on request.
o moderators	CIX moderators conference
o eureka	Questions, Answers and discoveries on CIX, or BBS's.
o pads	PAD's - discussion on a choice of PAD for CIX.
o sysnews	Compulink CoSy System News.
o compulink	All about Compulink
o chatter	Conference for general chatter - anything goes!
o cixadmin	Discussions on CIX administration and billing.
o classified	CIX classified adverts - private ads only.
o orderit	--*-- The COMPULINK mail order service --*--
c devteam	The CIX Development Team Conference
o cix_fac	Suggestion area for changes to CIX
o cixutils	Utilities to help you use CIX

300 and 2,400 baud, including the ubiquitous Prestel 1,200/75 baud rate. For higher-speed and longer-distance callers, the Micro Networked Protocol error-correction standard is available automatically, provided that subscribers use a modem which supports the facility. Once on-line, users are presented with a rapid log-on system which requests their name and chosen password. Like its BBS forebears, Cix is split into a number of conferences, which are sub-divided further into topics.

Each conference, as can be seen from the log-on illustrations, is a sub-division of a group of conferences.

New conferences can be started by subscribers at any time and, provided there is sufficient interest, the conference will be sustained by Cix technical staff.

Creating a conference is no small task, since a conference creator usually is

"Cix costs £12 to sign-on, for which users receive a pseudonym on the network, as well as a password of their choice."

topics, reading the latest news and treating each conference much like a BBS in its own right.

As well as the expected BBS-style topics of conversation, Cix also has a number of other user services, including a weekly

Computer Connected Conferences

o lan	Local Area Network Conference.
o mug	Multi User games
o advsys	Byte's adventure authoring system
o cad	computer aided design
o 1992computer	Conference to design the mass market machine for 1992
o community	Applications of computing for the benefit of the community
o email	Electronic Mail
o orator	ORATOR, the Intergrated Services Communications Manager.
o prog.eds	Talk about your favourite programmers editor
o progut	Tutorials on various programming languages.
c infocom	For all INFOCOM nuts - Your destiny is about to unfold!
o games	Games Conference
o videogames	For all you Video Junkies...
o stories	Anecdotes, Stories, Lies of computing as when you were a lad
o numerology	A discussion about number counting systems, et al.

world-wide news service - Newsbytes; a racing tipster - Captain Carsdale, and several hobby forums. These items are provided as a service for subscribers, either by Cix or people the company commissions on behalf of its subscribers.

"Other" Conferences

o link	LINK! Magazine authors, editors, and scoundrels conference.
c usimg	United States Immigration Reform Group.
c hit	Electronic comes in F.E. course

Like bulletin boards, however, subscribers to Cix will reap additional benefits if they do more than just look in on the conferences. Participation is the order of the day, with many users becoming familiar people to the many subscribers who log-on to the service each day. Several system enhancements are in the pipeline. One major enhancement being beta-tested by subscribers at the moment is a multi-user

game - *Mug Phantasia*. Like most Mugs, *Phantasia* is designed to be played by several people at the same time. Once Cix moves to a London telephone number and its line capacity increases to 15, many more people will be able to log-in simultaneously and play the game at a surprisingly low cost.

Compared to the cost of playing other Mugs such as *The Gods* and *Mud* the BT Multi-User *Dungeon* - *Phantasia* represents excellent value at £1 an hour. Once Cix becomes available via PSS the costs of calling the service will fall still further.

Cix is growing all the time. It grew originally out of Compulink, a multi-user BBS network created by Frank and Sylvia Thornley, who still run the Cix system. Compulink was and still is a major distributor of shareware and public domain

software. For around £3 a disc, users can get any one of literally thousands of PD/shareware software packages, all classified neatly via a series of library discs.

Contained in a new user's subscription pack are several discs which unpack to

give a complete list of what software is available through Cix. Another service available free to subscribers is a monthly newsletter, *Link*. It aims to keep the more occasional user of Cix aware of what they are missing. The more frequent user will also be enlightened by *Link*, since there is so much activity on what must surely be one of the busiest U.K. on-line systems.

Further details of Cix can be obtained by writing or telephoning the service direct. The service is available on a trial basis to new users, who may log-on using the main system port.

**Compulink Information Exchange,
Compulink User Group,
67 Woodbridge Road,
Guildford, Surrey GU1 4RD.
Tel: 0483 65895 (voice)
0483 579337 (data - V21, V22, V22Bis
and V23 baud rates)**

Leisure Conferences

o cd	Compact Disc Swap Shop and Mail order
o books	At last...some culture
o films	What's happening on the big screen.
o food	Food Drink ETC
o jokes	Here we go then !!!
o ring_world	Ring World - The Game!
o philosophy	A conference for those interested in philosophy.
o lonely_hearts	There must be somebody special out there somewhere.....
o gene	A conference for anyone interested in genealogy.
o diplomacy	The Diplomacy board game
o radio	For anyone interested in any aspect of Amater Radio.
o music	Music of all types in all forms
o audio	Technical forum for HIFI, stereo, studio work etc.
o aviation	All aspects of General Aviation

ORG

Robert Glavas

The game of *ORG* is based loosely on the good old *Connect 4* theme. Instead of using the Earth's gravity so that the counters drop down, *ORG* can be played in four directions and is therefore more complicated.

There are two players, blue and yellow - dark or light for those in black and white - who must rotate their counters around the board using the 'Z' and 'X' keys. When the

required position has been reached, the counter can be whizzed across the board by pressing SPACE. If a Kempston interface is present the counters are controlled by a joystick.

A game can end in a draw or by the yellow or blue player winning. If a game has been won, the score will be updated and the board re-set. The STOP key - symbol shifted A - acts as a reset switch which can be used to restart the game.

The program uses graphical techniques which ensure that it can be played in black and white or colour. It should also be compatible with all of the Spectrum series of machines. □

```

7 DATA 2,P(PLAYER)*2+7
14 DATA (P(PLAYER)-6)*2,23
21 DATA 18,23-(P(PLAYER)-14)*2
28 DATA 18-(P(PLAYER)-21)*2,7
100 RESTORE 100: FOR F=USR "A" TO USR "H"+7: READ A: POKE F,A: NEXT F
110 DATA 0,31,63,127,A,A,A,A
120 DATA 0,252,254,255,A,A,A,A
130 DATA 127,A,A,A,A,63,31
140 DATA 255,A,A,A,A,254,252
150 DATA 0,21,42,85,42,85,42,85
160 DATA 0,84,170,85,170,85,170,85
170 DATA 42,85,42,85,42,85,42,21
180 DATA 170,85,170,85,170,85,170,84
200 IF INKEY<>"**" THEN GO TO 200
210 OVER 0: INVERSE 0: POKE 23624,71: POKE 23658,8: POKE 23651,2
0: POKE 23562,2: POKE 23609,3: CLEAR : BEEP .0001,69: GO SUB 9000
220 LET KEMP=1: FOR F=1 TO 10: IF IN 31>31 THEN LET KEMP=0
230 NEXT F
240 RANDOMIZE
300 LET O=CHR# 144+CHR# 145: LET W=CHR# 146+CHR# 147: LET E=CHR# 148+CHR# 149
9: LET R=CHR# 150+CHR# 151
310 LET Z=ES+ES+ES+ES+ES+ES: LET X=RS+RS+RS+RS+RS+RS
500 PRINT AT 0,0: INK 0:"ORG"
510 FOR F=174 TO 169 STEP -1: FOR G=1 TO 23: IF POINT (G,F) THEN PRINT AT 3+(175-F),(6*1.3):O$AT 4+(175-F),(6*1.3): INK 2:R$
520 NEXT G: NEXT F
530 PRINT AT 17,2:"BY ROBERT GLAVAS (C)1987 A.D"
540 LET B=1/20: BEEP B,15: BEEP B,20: BEEP B,22: BEEP B,28: BEEP B,26: BEEP B,2
6: BEEP B,26: BEEP B,30: BEEP B,30: BEEP B,30
700 DIM T$(2,16): LET T$(1)="ANY KEY TO BEGIN": LET T$(2)="": D
IM T(2,2): LET T(1,1)=20: LET T(2,1)=10: LET C=1
710 PRINT INK 5:AT 21,0:T$(C): LET T(C,2)=0
720 IF INKEY<>"**" THEN GO TO 800
730 LET T(C,2)=T(C,2)+1: IF T(C,2)=T(C,1) THEN LET C=(1-(C-1))+1: GO TO 710
735 IF INKEY<>"**" THEN GO TO 800
740 GO TO 730
900 LET BLUE=1: LET YELLOW=2
810 LET NONE=0: LET DRAW=-1
820 DIM I(2): LET I(BLUE)=1: LET I(YELLOW)=6
830 DIM K(2): LET K(BLUE)=65: LET K(YELLOW)=70
840 DIM W(2): LET W(BLUE)=0: LET W(YELLOW)=0
900 CLS : GO SUB 9000: FOR F=16 TO 175 STEP 20: INK 6: PLOT F,0: DRAW -F,175-F:
INK 5: PLOT 255-F,175: DRAW F,F-175: NEXT F: INK 7
910 PRINT OVER 1:AT 4,12:"ANY KEY":AT 12,6:"AN EVEN NUMBER MEANS":AT 14,6:"TH
AT THE BLUE PLAYER":AT 16,11:"GOES FIRST"
920 FOR Q=1 TO 300: LET R=INT (RND*6500+.5)+1000: PRINT AT B,14:R: IF INKEY<>"
* THEN LET Q=301
930 NEXT Q: LET PLAYER=YELLOW: IF R/2=INT (R/2) THEN LET PLAYER=BLUE
940 LET B=1/20: BEEP B,25: BEEP B,27: BEEP B,29: BEEP B,27: BEEP B,20: BEEP B,2
7: BEEP B,23: BEEP B,20: BEEP B,20: BEEP B,20
950 FOR F=1 TO 300: NEXT F
999 REM XXXX SET XXXX
1000 CLS : GO SUB 9000
1010 PRINT AT 2,0:
1020 PRINT TAB 9: BRIGHT 0:Z$TAB 9:X$
1030 FOR F=1 TO 7: PRINT TAB 7: BRIGHT 0:Z$( TO 2): BRIGHT 1:Z$: BRIGHT 0:Z$( TO 2)
1040 PRINT TAB 7: BRIGHT 0:X$( TO 2): BRIGHT 1:X$: BRIGHT 0:X$( TO 2): NEXT F
1050 PRINT TAB 9: BRIGHT 0:Z$TAB 9:X$
1060 PRINT AT 5,2: INK I(BLUE):O$AT 6,3:E$AT 6,2:W$AT 7,3:R$AT 5,20: INK I(Y
ELLOW):O$AT 6,29:E$AT 6,20:W$AT 7,29:R$: INK 7:AT 9,2:"WON":AT 9,27:"WON":AT
11,5-LEN (STR# W(BLUE)):W(BLUE):AT 11,30-LEN (STR# W(YELLOW)):W(YELLOW)
1070 DIM P(2): LET P(BLUE)=1: LET P(YELLOW)=15
1080 LET ENTRS=0
1999 REM XXXX GAME XXXX
2000 LET WINNER=NONE
2010 FOR Q=-4E10 TO 4E10: GO SUB 3000
2020 LET PLAYER=3-PLAYER
2030 IF WINNER=NONE THEN NEXT Q
2040 IF WINNER=DRAW THEN PRINT AT 21,12:"D R A W"
2050 IF WINNER=BLUE THEN PRINT AT 21,7:"B L U E W I N S"
2060 IF WINNER=YELLOW THEN PRINT AT 21,5:"Y E L L O W W I N S"
2100 LET B=1/20
2110 FOR F=1 TO 3
2120 BEEP B,30: BEEP B,32: BEEP B,35: BEEP B,40: BEEP B,35: BEEP B,40: BEEP B,40
: BEEP B,40: BEEP B,40
2130 NEXT F
2140 IF INKEY<>"**" THEN GO TO 2140
2145 IF INKEY<>"*" THEN GO TO 200
2150 IF INKEY<>"**" THEN GO TO 2150
2160 IF WINNER=DRAW THEN GO TO 1000
2200 LET PLAYER=WINNER: GO TO 1000
2999 REM XXXX MOVES XXXX
3000 RESTORE P(PLAYER): READ X,Y: PRINT AT X,Y: INK I(PLAYER):O$AT X+1,Y:W$
3010 FOR Q=-4E10 TO 4E10: LET A$=INKEY$: GO SUB (8038 AND NOT KEMP)+(8000 AND KE
MP): IF A$<>"*" THEN GO TO 3010
3015 IF A$<>"*" THEN GO TO 200
3020 IF A$<>"*" THEN GO SUB 3100
3021 IF WINNER=NONE THEN RETURN
3022 IF A$<>"*" THEN GO TO 3000
3030 LET Z=-1: IF A$="X" THEN LET Z=1
3035 RESTORE P(PLAYER): READ X,Y: PRINT AT X,Y: INK 7: BRIGHT 0:E$AT X+1,Y:R$
3040 LET P(PLAYER)=P(PLAYER)+Z: IF P(PLAYER)=0 THEN LET P(PLAYER)=20
3050 IF P(PLAYER)=29 THEN LET P(PLAYER)=1
3055 RESTORE P(PLAYER): READ X,Y: PRINT AT X,Y: INK I(PLAYER):O$AT X+1,Y:W$
3059 BEEP .01,40: BEEP .01,45
3060 NEXT Q
3099 REM XXXX SLOT XXXX
3100 IF P(PLAYER)<8 THEN IF ATTR (X+2,Y)<71 THEN RETURN
3110 IF P(PLAYER)>7 AND P(PLAYER)<15 THEN IF ATTR (X,Y-1)<71 THEN RETURN
3120 IF P(PLAYER)>14 AND P(PLAYER)<22 THEN IF ATTR (X-1,Y)<71 THEN RETURN
3130 IF P(PLAYER)>21 THEN IF ATTR (X,Y+2)<71 THEN RETURN
4000 IF P(PLAYER)>7 THEN GO TO 4100
4010 FOR F=X+2 TO 16 STEP 2
4020 PRINT AT F-2,Y: BRIGHT 1-(1 AND F=4): INK 7:E$AT F-1,Y:R$
4030 PRINT AT F,Y: INK I(PLAYER):O$AT F+1,Y:W$
4035 BEEP .05,RND*5+30
4040 IF ATTR (F+2,Y)<71 THEN LET A=F: LET F=99
4050 NEXT F
4060 LET B=Y: GO SUB 5000
4070 RETURN
4100 IF P(PLAYER)>14 THEN GO TO 4200
4110 FOR F=Y-2 TO 9 STEP -2
4120 PRINT AT X,F+2: BRIGHT 1-(1 AND F=21): INK 7:E$AT X+1,F+2:R$
4130 PRINT AT X,F: INK I(PLAYER):O$AT X+1,F:W$
4135 BEEP .05,RND*5+30
4140 IF ATTR (X,F-2)<71 THEN LET B=F: LET F=-1
4150 NEXT F
4160 LET A=X: GO SUB 5000
4170 RETURN
4200 IF P(PLAYER)>21 THEN GO TO 4300
4210 FOR F=X-2 TO 4 STEP -2

```

```

4220 PRINT AT F+2,Y; BRIGHT 1-(1 AND F=16); INK 7;E$;AT F+3,Y;R$
4230 PRINT AT F,Y; INK I(PLAYER);O$;AT F+1,Y;W$
4235 BEEP .05,RND*5+30
4240 IF ATTR (F-2,Y)<71 THEN LET A=F; LET F=-1
4250 NEXT F
4260 LET B=Y; GO SUB 5000
4270 RETURN
4310 FOR F=Y+2 TO 21 STEP 2
4320 PRINT AT X,F-2; BRIGHT 1-(1 AND F=9); INK 7;E$;AT X+1,F-2;R$
4330 PRINT AT X,F; INK I(PLAYER);O$;AT X+1,F;W$
4335 BEEP .05,RND*5+30
4340 IF ATTR (X,F+2)<71 THEN LET B=F; LET F=99
4350 NEXT F
4360 LET A=X; GO SUB 5000
4370 RETURN
4999 REM XXXX CHECK+SWAP XXXX
5000 IF A=4 OR A=16 OR B=9 OR B=21 THEN LET ENTRS=ENTRS+1; IF ENTRS=24 THEN LET WINNER=DRAW
5005 FOR G=-6 TO 0 STEP 2
5010 IF ATTR (A-G,B+G)=K(PLAYER) AND ATTR (A-G-2,B+G+2)=K(PLAYER) AND ATTR (A-G-4,B+G+4)=K(PLAYER) AND ATTR (A-G-6,B+G+6)=K(PLAYER) THEN GO TO 7000
5020 IF ATTR (A+G,B+G)=K(PLAYER) AND ATTR (A+G+2,B+G+2)=K(PLAYER) AND ATTR (A+G+4,B+G+4)=K(PLAYER) AND ATTR (A+G+6,B+G+6)=K(PLAYER) THEN GO TO 7000

```

```

5030 IF ATTR (A,B+G)=K(PLAYER) AND ATTR (A,B+G+2)=K(PLAYER) AND ATTR (A,B+G+4)=K(PLAYER) AND ATTR (A,B+G+6)=K(PLAYER) THEN GO TO 7000
5040 IF ATTR (A+G,B)=K(PLAYER) AND ATTR (A+G+2,B)=K(PLAYER) AND ATTR (A+G+4,B)=K(PLAYER) AND ATTR (A+G+6,B)=K(PLAYER) THEN GO TO 7000
5100 NEXT G
6000 LET PLAYER=3-PLAYER
6100 RETURN
7000 LET WINNER=PLAYER
7010 LET W(PLAYER)=W(PLAYER)+1
7020 RETURN
7999 REM XXXX KEMPSTON XXXX
8000 IF IN 31=1 THEN LET A$="X"; RETURN
8010 IF IN 31=2 THEN LET A$="Z"; RETURN
8020 IF IN 31=16 THEN LET A$=" "
8030 RETURN
8999 REM XXXX SIG XXXX
9000 PLOT 237,0: DRAW 0,10: DRAW 6,0: PLOT 246,0: DRAW -7,0: DRAW 0,-8: DRAW 7,0: DRAW 0,8: PLOT 248,10: DRAW 0,-10: DRAW 7,0: DRAW 0,0: DRAW -7,0
9010 RETURN
9100 REM ONCE PROGRAM HAS BEEN
9101 REM COMPLETED IT CAN BE
9102 REM SAVED TO AUTO-RUN WITH
9103 REM SAVE "ORG" LINE 0

```

PROGRAMMING: ATARI ST

The Puz

Stuart W. Booth and David W. Ratcliffe

The Atari ST range of computers are undoubtedly the most powerful computers in their price range. They are also fortunate to have a very powerful operating system (TOS) and also an exceedingly friendly front end (GEM).

"THE PUZ" is a GFA BASIC program which accepts a NEOchrome or Degas picture, displays it for 4 seconds and then randomly jumbles it. The puzzle is to unjumble it by rearranging the pieces. This is easily done by pointing at the piece you want to move with the mouse and clicking with the left button on any part of it - it will then be highlighted by a dotted line and the pointer will change to a hand. Place the hand where you want to position the selected piece and press the left button. The two pieces will then exchange places. To help you, you can view the unjumbled picture by pressing the right button. However, you can only do this three times so be thrifty! If at any time you want to leave the program press the ESCape key.

The whole program is run from within a single "DO" loop using only procedures to branch to the necessary code when needed. This enables the program to be adapted by only changing the relevant sections of code.

Procedure Load-picture

This presents the user with the standard GEM file select dialogue box by using the

```

Rem *****
Rem * THE PUZ picture jigsaw by: Stuart W. Booth &
Rem *                               David W. Ratcliffe
Rem *                               August 1987
Rem *****
Rem * GFA Basic stores a menu bar as a predefined string array.
Rem * It then uses the array number of the string to indicate which menu
Rem * choice has been selected.
Rem *****
Dim A$(23)
A$(0)=" Desk "
A$(1)=" About THE PUZ "
A$(2)="-----"
A$(3)="1"
A$(4)="2"
A$(5)="3"
A$(6)="4"
A$(7)="5"
A$(8)="6"
A$(9)=""
A$(10)=" Options "
A$(11)=" Load NED picture "
A$(12)=" Load DEGRS picture "
A$(13)=" Start THE PUZ "
A$(14)="-----"
A$(15)=" Quit "
A$(16)=""
A$(17)=" Help "
A$(18)=" Loading picture "
A$(19)=" Starting THE PUZ "
A$(20)=" Moving pieces "
A$(21)=" Quitting "
A$(22)=" Statistics "
Rem *****
Rem * The menu is 'switched on' by calling Menu with the desired string *
Rem *****
Menu A$(0)
Menu Off
SetColor 15,0,0,0
Rem *****
Rem * The 'On Menu Gosub' is used whenever a menu choice is selected. *
Rem * this then calls the Procedure INFO which determines which choice was *
Rem * selected and calls the relevant procedure. *
Rem *****
On Menu Gosub Info
Do
  If Chosen#&False
    Menu 13,2
  Endif
On Menu
Loop
Procedure Info
  Flag#False
  Value=Menu(0)
  If Value=1
    Alert 1," THE PUZ|By D Ratcliffe and S Booth| Written in GFA
Basic| August 1987",1," OK ","B
  Endif
  If Value=11 Or Value=12
    @Load_picture(Value)
  Endif
  If Value=13
    @Jumble
  @Main

```

continued on page 46 ▶

◀ continued from page 45

command FILESELECT. The required file name is returned in Orig-pic\$ variable.

The picture specified by the file name is loaded into the screen memory using the standard BLOAD command. The screen start address is found by using the XBIOS function. The colour palette is then loaded into the palette address in a single command using the standard XBIOS call. SGET is used to capture the full screen and store it into the string ORIG-pic\$.

Procedure Jumble

The screen is divided into one hundred blocks in a ten by ten matrix. Four random integers are found using the RANDOM function, these numbers correspond to the piece number to move from and to. After being converted into actual screen coordinates, the two pieces to swap are stored in variables BLOCK1\$ and BLOCK2\$ using the GET command. The PUT command is used to place the two blocks in transposed positions.

Procedure Peep-at-picture

Before allowing you to peep at the original picture, the jumbled picture is saved to memory using the SGET command. The original picture is displayed with the SPUT command for four seconds, before being replaced with the jumbled picture again. The variable looked is used to hold the number of times you have peeped at the picture.

Procedure Do-you-want-to-quit

An Alert box is displayed to confirm your request to quit. Variable answer% stores which answer you gave. The program is either terminated or resumed depending upon this variable. □

```

Endif
If Value=15
  @Do_you_want_to_quit_the_program
  If Flag=True
    End
  Endif
Endif
If Value=18
  @Help_load_picture
Endif
If Value=19
  @Help_starting
Endif
If Value=20
  @Help_moving_pieces
Endif
If Value=21
  @Help_quitting
Endif
If Value=22
  @Help_statistics
Endif
Menu A$()
Return
Procedure Main
Menu Kill
Do
  Rem *****
  Rem * The whole program is controlled from within this "DO" loop.
  Rem * using only procedures to branch to other program segments.
  Rem *****

```

```

If Mousek=2 And Looked<4 !Is the mouse's 2'nd button pressed? and have
you
  @Peep_at_picture !peeped more than 3 times?
Endif
If Mousek=1 !Is 1st butto
  @Move_block !Yes, prepare to move that block.
  If Complete=True !Have you completed the picture?
  @You_have_done_it !Yes, Congratulations!
  Endif
Endif
If Inkey=Chr$(27) !Is the ESC key being pressed?
  @Do_you_want_to_quit_this_picture !Yes, ask if you want to quit.
  Endif
If Flag=True Then
  Goto Leave_main
Endif
Loop
Leave_main:
On Menu GOSUB Info
Return
Procedure Load_picture(Type%) !Type% indicates if the selected
picture was a NEO or DEGAS format file
Moves_made=False
If Type=11 Then
  Offset%=128
  Palette%=124
  Filetype%="\*.NEO"
Endif
If Type=12 Then
  Offset%=34
  Palette%=32
  Filetype%="\*.PI*"
Endif
Cls
Fileselect Filetype$,Dum$,Orig-pic$
If Orig-pic$="" !Why did you press on 'CANCEL'?
  Goto Leave_load
Endif
Bload Orig-pic$,Xbios(2)-Offset% !Load file into screen memory.
A=Xbios(6,L:Xbios(2)-Palette%) !Reset the colour Palette.
Sget Orig-pic$ !Store the screen display in variable.
Chosen%=True
Leave_load:
Return
Procedure Jumble
Rem *****
Rem * Procedure to jumble to screen about
Rem * Variable Loop% controls difficulty. The higher, the harder!
Rem *****
Resolution%=Xbios(4)
If Resolution%=0
  Res_offset%=32
Else
  Res_offset%=64
Endif
Res_offsety%=20
Add Res_offsetx%,20 And Resolution%=2
Alert 2,"How hard do you want the PUZ",2,"NOT SO|SO-SO|RRGGHH!",Answer%
Sput Orig-pic$
For Loop%=1 To 50*Answer%
  From_x%=Random(10)
  From_y%=Random(10)
  To_x%=Random(10)
  To_y%=Random(10)
  Get
  From_x**Res_offsetx%,From_y**Res_offsety%,From_x**Res_offsetx%+(Res_offsetx%-1
  ),From_y**Res_offsety%+(Res_offsety%-1),Block1$
  Get
  To_x**Res_offsetx%,To_y**Res_offsety%,To_x**Res_offsetx%+(Res_offsetx%-1),To_y
  **Res_offsety%+(Res_offsety%-1),Block2$
  Put From_x**Res_offsetx%,From_y**Res_offsety%,Block2$
  Put To_x**Res_offsetx%,To_y**Res_offsety%,Block1$
Next Loop%
Prog_start_time%=Timer
Return
Procedure Peep_at_picture
Rem *****
Rem * Procedure to peep at the original picture (3 times only!)
Rem *****
Sget Jumble_pic$ !Store jumbled picture in variable.
Sput Orig-pic$ !Re-place original picture.
Pause 100 !Gaze at original masterpiece!
Inc Looked !Increment variable, to ensure that you don't cheat!
Sput Jumble_pic$
Return
Procedure Do_you_want_to_quit_the_program
Alert 2,"Do you really want to QUIT|this wonderful program",2,"QUIT|SORRY!!
BOOBED",Answer%
If Answer%=1
  Flag=True
Endif
Return
Procedure Do_you_want_to_quit_this_picture
Alert 2," | Hell?! | What do you want to do now?
",2,"QUIT|INFO|CONTINUE",Answer%
If Answer%=1
  Chosen%=False
  Flag=True
Endif
If Answer%=2
  @Show_information
Endif
Return

```

continued next week

Print 4

Jonathan Lewis

This routine for the Amstrad prints a block of 4 characters at the text position. Enter the routine and use CALL 40000,C1,C3 to execute it. C1 is the character number printed at the top left, the top right is ASCII code C1+1. The bottom left is C3 and bottom right is C3+1. For example, CALL 40000,65,67 prints

AB
CD



```
5 ' PRINT A BLOCK OF 4 CHARS AT THE CURSO
R POSITION
10 ADDR=40000
20 READ A$:POKE ADDR,VAL("&"+A$):ADDR=ADD
R+1
30 IF A$="C9" THEN PRINT "CALL 40000,C1,C
3 TO ACTIVATE":END
40 GOTO 20
50 DATA DD,46,02,78,CD,5A,BB,3C,CD,5A,BB,
3E,0A,CD,5A,BB,3E,08,CD,5A,BB,3E,08,CD,5A
,BB,DD,46,00,78,CD,5A,BB,3C,CD,5A,BB,C9
```

Scroll

Jonathan Lewis

The ability to scroll the screen is quite handy when writing text-based programs from wordprocessors to adventure games. Scrolling up or down is even more useful. This routine for the Amstrad will go in either direction and allow selection of the background to be used to fill the empty space that is scrolled onto the screen. Simply type in the program, run it, and use CALL 40000,ink,direction, ink is from 0-255 and defines the filling pattern, direction is 0 for down, and any other value less than 256 for up.



```
5 ' Scroll
10 addr=40000
20 READ a$:POKE addr,VAL("&"+a$):addr=add
r+1:IF a$="C9" THEN PRINT "Param scroll i
nstalled:call 40000,ink,direction(0='down
' - any non zero='up')":END
25 GOTO 20
30 DATA DD,46,00,DD,5E,02,7B,CD,4D,BC,C9
```

Interesting Cursor

Ivor Hewitt

This routine for the BBC is intended for inclusion in any program that requires input from the user. It makes the cursor more interesting to watch.

For those BBC users who have the older Basic, lines 280-320 can be changed to:

```
9
280 .dur
285 ]
290 P%=P%+1
295 [
300 .count
305 ]
310 P%=P%+1
315 [
320 .du2
325 ]:P%=P%+1
NEXT
```

To get around the fact that EQU does not exist.



```
80 *TV0,1
90 MODE1
100 *FX13,4
110 e=5:s=7:REM change to e=8:s=16 FOR MODE 7
120 FORP=0TO2STEP2
130 P%=&640
140 [OPTP
150 PHP:PHA:TYA:PHA:TXA:PHA
160 INCcount
170 LDA#3
180 CMPcount
190 BNEend
200 LDA#0:STACount
210 LDA#10:STA&FE00:LDAdur:STA&FE01
220 LDA#11:STA&FE00:LDAdu2:STA&FE01
230 DECdu2:INCdur:LDAdur:CMP#e:BNEend
240 LDA#0:STAdur:LDA#s:STAdu2
250 .end
260 PLA:TAX:PLA:TAY:PLA:PLP
270 RTS
280 .dur
290 EQUBO
300 .count
310 EQUBO
320 .du2:EQUB(8)
330 ]:NEXT
340 ?&220=&40: ?&221=&06:*FX14,4
```

MICRO-FILE

HARDWARE

STORT SOFT MAIL ORDER SPECIALISTS

INCREDIBLE LOW PRICES!

ALL DISCS CARRY A NO QUIBBLE REPLACEMENT GUARANTEE ARE CERTIFIED 100% ERROR FREE AND COME WITH LABELS, 5 1/4" ALSO HAVE SLEEVES AND WRITE PROTECTS. FLIP SIDED DISCS HAVE TWO INDEX HOLES AND TWO NOTCHES.

SPECIAL OFFER !!

25 SS 48TPI 5.25" DISCS & 100 CAP LOCKING DISC BOX	£16.00
50 SS 48TPI 5.25" DISCS & 100 CAP LOCKING DISC BOX	£25.00
100 SS 48TPI 5.25" DISCS & 100 CAP LOCKING DISC BOX	£39.95
25 DS 48TPI 5.25" DISCS & 100 CAP LOCKING DISC BOX	£17.00
50 DS 48TPI 5.25" DISCS & 100 CAP LOCKING DISC BOX	£26.50
100 DS 48TPI 5.25" DISCS & 100 CAP LOCKING DISC BOX	£42.00

5 1/4" DISCS FROM AS LITTLE AS 33 PENCE

BLANK 5 1/4" DISCS

DISC NOTCHER FREE WITH EACH 100 DISCS PURCHASED

UNBRANDED	TRIAL 10	25	50	100	10 in a plastic lib. case
SS48 TPI	£4.50	£9.00	£17.00	£33.00	£5.50
DS48 TPI	£5.50	£11.00	£19.00	£35.00	£6.50
DS96 TPI	£6.50	£13.00	£21.00	£37.00	£7.50
DS96 TPI FLIP SIDED	£7.00	£14.00	£22.00	£38.00	£8.00
MIMIC FLIP SIDED DS96 TPI	£8.95	£20.00	£38.00	£70.00	£9.95
MIMIC HIGH DENSITY 1.8meg	£23.00	£52.00	£100.00	£180.00	£24.00
COLOURED - mix and match or all one colour					
SS48 TPI	£6.50	£12.00	£22.00	£42.00	£7.50
DS48 TPI	£7.50	£14.00	£24.00	£44.00	£8.50
DS96 TPI	£8.00	£16.00	£28.00	£50.00	£9.00

LOCKING DISC BOXES

5 1/4" HOLDS 50	£7.95	5 1/4" HOLDS 100	£9.95
3 1/2" HOLDS 40	£7.95	60/90 (HOLDS 60 3" or 90 3 1/2")	£9.95

ANCILLARIES

ST/IBM/AMIGA/PC 1512 TO CENTRONICS PRINTER LEAD	£7.95
ST TO RS232 MODEM LEAD	£7.95
SWITCH BOX - 2 POSITION (ie 1 printer to 2 computers and vice-versa)	
Centronics or RS232 - please specify	£29.95
QUICKSHOT II MICROSWITCH JOYSTICK	£8.95

3.5" SPECIAL OFFERS

25 SS/DD 135 TPI(MF10D) & 80 or 60/90 locking disc box	£32.00
50 SS/DD 135 TPI(MF10D) & 80 or 60/90 locking disc box	£55.00
25 DS/DD 135 TPI(MF20D) & 80 or 60/90 locking disc box	£36.00
50 DS/DD 135 TPI(MF20D) & 80 or 60/90 locking disc box	£61.00

135tpi unbranded	10	25	50	100	500	10
SS/DD (MF10D)	£10.00	£24.00	£47.00	£92.00	£399	in a case £12.95
DS/DD (MF20D)	£11.50	£27.00	£53.00	£99.00	£429	£14.95

CUMANA DRIVES

ATARI ST 1 MEGABYTE	£139.00
AMIGA 1 MEGABYTE	£129.00
NO ADDITIONAL LEADS OR POWER SUPPLY REQUIRED	

ATARI HARDWARE - BARGAIN PRICES

520 STFM £279.95

520 STM, SF354 (1/2 meg drive)	£279.95
520 STM, SF314 (1 meg drive)	£339.95
520 STM, SF354 & SM125 mono monitor	£374.95
520 STM, SF314 & SM 125	£434.95
1040 STF & SM125 mono monitor	£570.00
Mega ST (2 megabyte RAM & 1 meg drive)	£845.00
Mega ST (2 megabyte RAM & 1 meg drive) & SM125	£935.95
Mega ST (4 megabyte RAM & 1 meg drive)	£1095.00
Mega ST (4 megabyte RAM & 1 meg drive) & SM125	£1190.00

All Hardware comes with free dust covers!! All ST's come with 5 public domain discs including CPM emulator and the arcade game Megaroids, 5 blank discs to get you going or choose 5 additional discs from our public domain library. Basic language disc and manuals.
520 STM ONLY comes with 1st Word word processor and spelling checker.

COMPUTER ACCESSORIES

5 1/4" DISC NOTCHER (Double your disc capacity on a single sided drive)	£3.95
DISC CLEANING KITS Liquid non-abrasive type - protect your valuable software	
5 1/4" DCK	£3.95
3 1/2" DCK	£4.95
SPECIAL PRICE	
MOSFT, SMM804 Printer, SC1224 Colour Monitor, 1st Word & Spell It plus	
as above	** £899.00 **
MEGA ST (2 meg), SMM804, SC1224, 1st Word & Spell It	** £1250.00 **
MEGA ST (4 meg), SM125 Mono Monitor, SLM804 Laser Printer & SH205 Hard Disc Drive	** £2699.00 **

Just write for more information. Cheques etc. payable to STORT SOFT (International orders add 10% and remit in pounds Sterling by bank draft or international money order. Write for quote in any other currency)

ACCESS/MASTERCARD/EUROCARD/VISA accepted. CREDIT CARD ORDER LINE - 0279 89509
24 HOURS A DAY, 7 DAYS A WEEK - VAT & P.P. INC. NO HIDDEN EXTRAS - WHAT YOU SEE IS WHAT YOU PAY

18 CROWN CLOSE, SHEERING, BISHOP'S STORTFORD, HERTS CM22 7NX

LOUTRONICS

Olivetti Half Height 80 track D/S Disc Drive, fully tested	£57.95 P.&P. £2
5 1/4" Half Height Disc Drive, 80 track D/S	£79.95 P.&P. £2
5 1/4" Half Height Disc Drive, 40 track D/S (secondhand, tested)	£38.00 P.&P. £2
5 1/4" Half Height Disc Drive, 80 track D/S (secondhand, tested)	£48.00 P.&P. £2
Joystick mechanism, rotary switched (not cased), brand new	£1 each, P.&P. 30p each or £5 for 6. P.&P. 75p
Hard Controller Cards (IBM Compatible) Dmtpi or Western Digital 1/2 length	£86.00 P.&P. £2
Cumana sketch pads for BBC with S/W, leads etc, brand new (original price £69.95)	£14.95
Qume Sprint 10 35 CPS Daisywheel printers, brand new and boxed (RS 232)	£275 Carriage £10
Astec Switch mode PSU card 5 volt at 2.5 amp, 12 volt at 2 amp and minus 12 volt at 100 ma.	£16.95 P.&P. £2
brand new	
Mitsubishi 3 1/2" drives 80 track D/S, brand new	£69.95 P.&P. £2
5 1/4" Half Height Disc Drive, 80 track/stitchable 40, tested	£58.00 P.&P. £2
Seagate 20Mb ST225 Winchester	£135 P.&P. £2

Many surplus computer bargains, components, connectors, RAM, Eproims, etc.

SURPLUS/REDUNDANT STOCKS PURCHASED FOR CASH

ALL PRICES INCLUDE VAT

11 Hercies Road, Hillingdon, Middlesex UB10 9LS

Tel: 0895 55399 (Wednesday closed)

(638)

CROWN COMPUTERS!!!

ANY PRICE AND WE WILL MATCH IT!!!

In Stock now

Atari 520 STFM	269.95
Amiga 500 Sports Bundle	519.00

NEW

Commodore, Amstrad, Spec 10% off RRP

6 High Street,
Boston, Lincs.

Tel: (0205) 53611

Phone now for orders!

(528)

ADVERTISING RATES FOR MICRO-FILE

Semi Display £8 per single column centimetre (+VAT)
Lineage 35p per word (+VAT)

CALL SUSANNAH KING, ROBERT COLE or TIM OWEN on
01-834 1717 FOR SEMI DISPLAY ADVERTISING

CHRISTMAS CRACKERS

SPECTRUM +/48/128/+2/+3

★ All £2.99 ★

Danger Mouse, Black Hawk, Snooker, Enigma Force, Alchemist, The Comet Game, Mantronix, Project Future, Invaders, Toy Bizzare, Valhalla, Twister, Komplex, Fighting Warrior, Psytrax, Hellfire, Mugsy, Starbike, Frost Byte, Equinox.

★ All £3.99 ★

Sir Fred, B. J. Superstar, Nomad, Bounder, Sam Stoat, Zorro, Revolution, Who Dares Wins II, Sure Champ, Pole Position, Skool Daze, B. C. Quest For Tyres, Cop-Out, Moon Cresta, Hurg (Games Designer), Ball Blazer, Skyfox, F. B. Boxing.

★ All £4.99 ★

Crystal Castles, Terra Cresta, Vectron 3D, Lord Of The Rings, Pyracurse, Impossiball, City Slicker, Firelord, Young Ones, Sold A Million, Heavy On The Magic, Crash Smashes II, Adrian Mole (inc. book), Mini Office, Pacman, Cookbook + Tapes, Eidolon, Kung-Fu Master, Avenger, Krakout, Prohibition, Zynaps, Shao Lin's Road, Mario Bros, Dandy, Donkey Kong, Double Take, Galvan, Combat School.

★ All £6.99 ★

Druid II, Hybrid, Game Over, Mag Max, Jackel, Nemesis, Super Sprint, Hang On, Army Moves, Phsycho Soldier, Gryzor, Victory Road, Side Wize, Slap Fight, Athena, Buggy Boy, Mad Balls, Renegade, J. Nipper II, Exolon, Sentinel, Navy Moves, Thundercats, Bubble Bobble, Side Arms, 720°.

COMMODORE 64/128

★ All £2.99 ★

Herby's Dummy Run, Who Dares Wins II, F.A. Cup Football, Kettle, Paradroid, Booboo, Nexus, Empire, Max Headroom, Prodigy, Tenth Frame, Mario Bros, Dandy, The Eidolon, Superstar Ping Pong, War, Rock N Wrestle, The Great Escape, Red Hawk, Every One's A Wally.

★ All £3.99 ★

Uchi Mata, Split Personalities, Bazooka Bill, Deactivators, Enigma Force, Biggles, Mutants, Deep Strike, Spin Dizzy, Desert Fox, Saboteur, Equinox, Xevious, Room Ten, Icups, Stainless Steel, Heartland, Heavy On The Magic.

★ All £4.99 ★

Leviathan, Howard The Duck, Breakthrough, World Games, Tomahawk, Fist II, Trap Door, Short Circuit, Tau Ceti, Yie Ar Kung Fu II, Avenger, Cyborg, Dan Dare, Nemesis, Wonderboy, Samurai Trilogy, Paranoid, Star Raiders II, Heartland, Thing Bounces Back, Infiltrator, Space Harrier, Sentinel, Super Huey II, Dragon Lair II, Kayleth, Death Or Glory, Tag Team Wrestling.

★ All 6.99 ★

Slap Fight, Thundercats, Combat School, Tarzan, Star Glider, Road Runner, Mag Max, Ace 2, Arkanoid, Victory Road, Trantor, Gryzor, Gauntlet, Druid II, Bubble Bobble, 720°, Side Wize, Renegade, Side Arms, Infiltrator II, Five Star II, Domarks Revenge, Star Wars.

AMSTRAD CPC

★ All £2.99 ★

Beachhead, Yie Ar Kung Fu, Bounder, Red Arrows, Skyfox, Mario Bros, Tenth Frame, Tarzan, The Great Escape, Shadowfire, Nodes of Yesod, Revolution, Ping Pong, Dandy, Infiltrator, Impossiball, City Slicker, The Boggit, Equinox, V, Nomad, Football Manager.

★ All £3.99 ★

Moon Cresta, Zoids, Gunflight, Fairlight, Fighting Warrior, Herberts Dummy Run, Commando, Deep Strike, Desert Fox, Spin Dizzy, Night Rider, Saboteur, Xevious, Shao Lin's Road, 3D Star Strike 2, Breakthrough, Shockway Rider, Short Circuit, Strike Force Cobra, Grange Hill, Gladiators, International Karate, President, View To A Kill, Arkanoid, Barbarian, Dandy, Future Night, It's A Knockout.

★ All £4.99 ★

Movie, Dodgy Geezers, Big Sleaze, Now Games 3, Mad Max, Batman, Top Gun, Ghosts N Goblins, Get Dexter, Space Harrier, Dragon's Lair, Deactivators.

★ All £6.99 ★

Army Moves, Exolon, Saboteur, Paperboy, 720°, Action Force, Athena, Bubble Bobble, Charlie Chaplin, Combat School, Head Over Heels, Tai Pan, Track And Field, Indiana Jones, Rygar, Zynaps, Super Sprint, Freddy Hardest, Uridium, Solomon's Key, Side Arms, Navy Moves, Druid II, International Karate II.

Joysticks Magnum £9.99 Phaser One £9.99 Cheetah 125 £6.99 Pro 5000 £10.99 Challenger £4.99

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

★ SPECTRUM + STARTER PACK (INC. TAPE REC., JOYSTICK, OVER 30 GAMES) ★

ONLY £95

★ COMMODORE 64 STARTER PACK (INC. TAPE REC., JOYSTICK, OVER 30 GAMES) ★

ONLY £145

☆ All prices include postage and packaging ☆ Very Fast Despatch ☆

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

All cheques/POs payable to:

**S.U., 155 Wash Lane, Yardley,
Birmingham B25 8PX**

(602)

PHONE 01-471 8900
NOW **SEGA**

SEGA MASTER COMPUTER + HANG ON £99.95

SEGA GAMES
2 MEGA BYTE

OUT RUN £24.95
ROCKY £24.95
SPACE HARRIER £24.95

1 MEGA BYTE

ASTRO WARRIOR £19.95
BLACK BELT £19.95
WONDER BOY £19.95
ACTION FIGHTER £19.95
PRO WRESTLING £19.95
ALEX KIDD £19.95
FANTASY ZONE £19.95
QUARTET £19.95
WORLD GRAND PRIX £19.95
SECRET COMMAND £19.95
CHOPLIFTER £19.95
THE NINJA £19.95
ENDURO RACER £19.95

SEGA CARDS

MY HERO £14.95
GHOST HOUSE £14.95
TEDDY BOY £14.95
SUPER TENNIS £14.95
F-16 FIGHTER £14.95
TRANSBOT £14.95



ONLY £99.95

24-hour Securicor delivery on machines

Or why not come and pick up your system from us today?

PHONE FOR NEW RELEASES

TRADE ENQUIRIES WELCOME ON SOFTWARE
SEND CHEQUES TO:

A.I.S. DISTRIBUTION
202/203 SHOPPING HALL, MYRTLE ROAD
EAST HAM, LONDON E6 (UK only) (617)

MICROWARE COMPUTER SERVICES

COMPUTER HARDWARE

Amiga 500 inc. Deluxe Paint modulator & Starter Pack £449
Amiga 500 inc. Deluxe Paint modulator & Starter Pack & 1081 Colour medium res monitor £739
Amiga 500 inc. Deluxe Paint modulator & Starter Pack + NEC 3 1/2" Disc Drive £559
Amiga 500 inc. Deluxe Paint modulator & Starter Pack + 1081 Monitor & NEC disc £849
Atari STF built-in 1/2 Meg disc drive and modulator £289
Atari 1040 STFM with colour monitor, free printer and software £899
Atari desktop publishing with Mega ST monitor, laser printer and software £2,799
Amstrad PCW 9512 word processor with monitor, daisywheel printer etc. £499
Amstrad CPC 464 with colour monitor, tape deck, joystick and 17 games £289
Amstrad CPC 6128 with colour monitor, disc drive, joystick and 17 games £379
Spectrum +2 with tape deck, joystick and 6 games £129
Spectrum +3 with disc drive, joystick and 6 games £189
Atari XE computer games console with joystick and game £79

PERIPHERALS

1081 medium res. colour monitor £329
Philips 8833 med. res. colour monitor stereo £279
Philips 8852 med/hi res. colour monitor stereo £319
NEC 3 1/2" 880K disc drive £129
512K RAM expansion with clock £99
Diggi view II with A500 adaptor £189
Easy drawing tablets for A500 £289
20Mb hard disc for A1000 £669
2Mb RAM expansion for A1000 £410

8 BIT HARDWARE

Commodore 64 package includes Computer data recorder joystick, 11 top games £159
Commodore 64 + 1541C disc drive + joystick & 11 games £299
1541C disc drive £159
Commodore music expansion system £99
Commodore sound sampler £69

PRINTERS

Citizen 1200/40 CPS with interface £199
Premier 35 daisywheel printer £479
Cannon colour ink-jet printer £479
Xerox 1420 colour ink-jet printer £999
Epson LX86 120 CPS £279

(Full range of top manufacturers' printers available)

£10 OFF ALL 16-BIT AND AMIGA HARDWARE FOR ORDERS PLACED BEFORE 14 DECEMBER

THIS IS ONLY A VERY SMALL SELECTION OF OVER 250 PRODUCTS. PLEASE PHONE FOR CHRISTMAS SPECIAL OFFERS.

PO Box 2, Skegness, Lincolnshire PE25 2QL. Tel: 0754 610217

Order instructions: write name, address, postcode and phone number. Write order out clearly stating quantity, description and price, make cheques or PDs payable to Microware Computer Services and send to above address. All prices are fully inclusive. Prices subject to change without notice on availability. E. & O.E. (575)

PRE-CHRISTMAS COMPUTER SALE

Commodore 64 compendium £134.99
Commodore C16 compendium £39.99
Commodore Modems £24.99
SX64 portable (1 only) £279.99
1541 C drives £149.99
1570 drives £149.99
Commodore monitors £69.99
Spectrum + 48K bargains £59.99
Spectrum 128K £169.99
Musical Synthesiser keyboard (128K/+2) £29.99

2-BIT COMPUTERS

26-28 Bowsfield Lane, Stockton, Cleveland TS18 3ER
Telephone 0642 604768
Ask for Department PC (616)



COMPUTAMART

Used Computer Specialist

SELL USED COMPUTERS!

It's here at last - the only professional start-up package to enable you to earn a highly profitable FULL-TIME living from selling used computers and accessories. Ideal for shops, market traders, mail order etc., etc. Computamart, pioneer of the specialist used computer retail outlet, has just launched an associateship offer, similar to a franchise - but with NO ROYALTY PAYMENTS and with no experience necessary!

The deal includes use of the well known retail name, comprehensive operator's manual, regular buy-price guides, hotline support, exclusive trading areas and all the benefits of group trading, at an introductory all-in price of £550 to the first 10 applicants (£750 thereafter). If you are genuinely interested in entering this fast-expanding sector of the market, are over 18 and have the necessary start-up capital, then don't delay, write for more details immediately.

COMPUTAMART

195 Seabourne Road, Southbourne
Bournemouth, Dorset BH5 2HJ
Tel: 0202 433759 (586)

 24 hours
0932 787568


COMPUTERS

 24 hours
0932 787568

AMIGA	£	ATARI	£	AMSTRAD	£
A500 inc. Deluxe Paint + starter pack	£489.99	520 STFM	£299.99	PCW8256	£343.85
A1081 Hi-Res Monitor (not stereo)	£339.99	1040 STF (includes starter pack)	£399.99	PCW8512	£458.85
A1010 Ext. Drive	£249.99	1040 STFM (includes mono monitor and starter pack)	£499.99	PCW9512	£573.85
A501 512K Expansion	£119.99	SM125 Mono Monitor	£149.99	PC1640 SDMD	£573.85
A521 TV Modulator	£24.99	SC1224 Colour Monitor	£399.99	PC1640 DDMD	£688.85
Pagesetter	£108.10	Flight Simulator II	£45.00	PC1640 HD/MD	£1033.85
Faery Tale	£48.00	Fleet Street Publisher	£115.00	Colour Display	£172.50
Flight Simulator II	£45.00	Art Director	£49.95	EGA Display	£345.00
Word Perfect	£228.85	Aegis Animator	£57.00	PC Write	£113.85
Sculpt 3D	£77.00	Kuma Range	Ring	PC Planner	£113.85
TV Text	£99.00	Film Director	£59.00	Super Calc 3-21	£69.95
Aegis Sonix	£57.50			Wordstar Express	£69.95
				Super Base Personal	£99.95
				Windowworld	£59.95
				1st Word Gem	£79.95

If you cannot find the computer - printer - modem - discs - paper - software - please ring

To order please send cheque and POs made payable to: **ARB COMPUTERS**, 40 Halliford Close, Shepperton, Middlesex TW17 8SL.

All prices include VAT, postage and carriage charge. Please allow 5 days for delivery. (599)



ATARI 520 STFM NOW IN STOCK

FOR NEW PRICE ONLY £279.95

Includes Mouse controller, manual, language disc and starter pack

AMIGA A500 NOW IN STOCK

FOR ONLY £429



ATARI 520 STFM PACK INCLUDES ATARI BASIC, MOUSE, MANUALS PLUS STARTER PACK

ATARI 1040 PACK INCLUDES ST BASIC, SM125 MONO MONITOR, MOUSE, MANUALS AND STARTER PACK £279.95

AMIGA PACK 1 INCLUDES
Amiga A500 ★ Deluxe Paint ★ Workbench 1.2 ★ Very First Steps Tutorial
£429.95

AMIGA PACK 2 INCLUDES
Amiga A500 + 1901 Colour Monitor ★ Deluxe Paint ★ Workbench 1.2 ★ Very First Steps Tutorial
£679.95

	RRP	OUR
Atari 1040 ST	£499.95	£459.95
Atari 1040 ST + SM125 mono monitor	£599.95	£559.95
Atari 520 STFM	£299.95	£289.00
Atari Mega ST 2 + SM125 mono monitor	£999.95	£894.95
Mega ST4 + SM125 mono monitor	£1205.95	£1149.95
Atari 12" medium res colour monitor	£399.99	£369.95
Triangle 1 meg drive	£159.95	£139.95
Cumana 1 meg drive	£159.95	£134.95

ST SOFTWARE AT GIVEAWAY PRICES

Flight Sim. II	£37.95	Plutos	£7.50
Knight Hawk	£14.95	Diablo	£14.95
Arctic Fox	£14.95	3D Galax	£14.95
Music Construction Set	£18.75	Defender Of The Crown	£22.95
Bards Tale	£18.75	Star Trek	£16.95
Gato	£19.95	Chopper X	£7.95
Eagles Nest	£14.95	Backlash	£16.95
Flip Side	£8.95	Hunt For Red October	£19.95
Terrorpods	£18.75	Star Wars	£16.95
Sentinel	£14.95	Blue War	£16.95
Degas Elite	£19.95	Marble Madness	£16.95
Chess Master 2000	£18.75	Tanglewood	£16.95
Sky Fox	£14.95	King's Quest Triple Pack	£19.95
Art Director	£39.95	Gauntlet II	£19.95
Fantasy III	£18.75	Solomon's Key	£16.95
Barbarian	£18.75	Ogre	£19.95
Mud Pies	£6.95	Pro Sound Designer	£44.95
Indiana Jones	£14.95	Perfect Match	£8.95
Trivial Pursuits	£18.50	Side Wack	£15.95
Impact	£11.50	Station Fall	£19.95
Barbarian (Palace)	£12.95	Mortville Manor	£15.95
Rama Rama	£14.95	Tai Pan	£14.95
Timeblast	£7.50	Missing One Druid	£7.95

MORE PACKS AVAILABLE, PHONE FOR DETAILS.

AMIGA HARDWARE

	RRP	OUR
Commodore PC	—	£499.00
Amiga 2000	£1259.25	£995.00
XT Bridge Card (Amiga 2000)	£573.85	£449.95
Internal 1 Meg Disc Drive (Amiga 2000)	£228.85	£199.95
1010 External Disc Drive	£286.85	£259.95
Amiga Internal 1 Meg Upgrade	£113.85	£99.95
Triangle 1 Meg Disc Drive	—	£139.95
Cumana 1 Meg Disc Drive	—	£139.95
Amiga (2000) 2 Meg RAM expansion	£458.85	£359.95
Commodore 64 C pack	—	£159.00

Now in stock SEGA Master Systems £99, + software now in stock

AMIGA SOFTWARE

King's Quest (3 pack)	£24.95	Area/Bratticus	£29.95
Barbarian	£18.75	Diablo	£14.95
Gold Runner	£18.75	Alien Strike	£11.50
Terrorpods	£18.75	Mouse Trap	£11.50
Ogre	£18.75	Plutos	£11.50
Archon/toni	£17.95	Road War 2000	£18.75
Flight Sim II	£37.95	Portal	£29.95
Deluxe Paint II	£57.95	Hunt For Red October	£18.75
Marble Madness	£14.95	Skyfighter	£12.95
Instant Music	£18.75	Dr. Fruit	£8.95
Sinbad	£29.95	Invaders	£8.95
Super Huey	£14.95	Pseud	£8.95
Bards Tale	£18.75	Space Ranger	£8.95
Chess Master 2000	£18.75	The Final Trip	£8.95
Earl Weaver Baseball	£18.75	Grand Slam Tennis	£18.75
Seven Cities of Gold	£11.50	King's Quest Triple Pack	£19.95
Mean 18 Golf	£18.75	King's Quest 1/2/3	£8.95
Deep Space	£19.95		

BUSINESS SOFTWARE

Word Perfect	£239.95
Super Base	£79.95

More Software than we can show, please ring.

We are a Commodore appointed dealer. All trade enquiries welcome.



10
£10.95

BLANK DISCS

20 £21.50
50 £49.95

100
£97.00



Trade enquiries welcome

Lockable disc boxes 3.5" holds 80 £9.95

Spend over £50 on Software and get a Free Calculator



SOUND N VISION



11 Silk St, Leigh, Lancs WN7 1AW.

Phone now for details - Tel: (0942) 673689

Cheques and P/Orders payable to: Sound N Vision P.&P./VAT INCLUDED

Visitors welcome in showroom. Send S.A.E. for price list.

(642)

QL USERS

There is now a mouse available that is compatible with hundreds if not thousands of QL programmes, as standard.

How much would you expect to pay for this degree of high quality power?

The Smiling mouse costs, fully inclusive, £40. Too good to be true?

Why not write for further details or see our ad in *QL World*. Lots of other QL goodies available.

Send cheque/POs to, or write for further details, to:

SMILING SOFTWARE

Dept PCW1
8 Croxton Close
Marple
Stockport
Cheshire SK6 7RQ

(567)

DISCOUNTS £1-£30 ON ALL COMPUTER S/WARE BY MAIL

AMIGA
AMSTRAD
ATARI (AND ST)
BBC
C16 and C64



ELECTRON
IBM PC AND COMPATIBLES
MSX
PCW 8286/512
SPECTRUM (48/128/+2)



SEND 18p STAMP FOR LISTS
W * P (SOFTWARE)

45 CHARLOTTE SQUARE
TROWBRIDGE BA14 8PR
TEL: 02214 5629

(632)

IBM PC and AMSTRAD PC1512/1640 SHAREWARE/PUBLIC DOMAIN SOFTWARE

WATCH OUT! There are *SHAREWARE SHARKS* about, and they're after your money!!!

Why pay them £5 to £10 per disc when you can have a larger choice plus the latest releases from us, at only £3 per disc (less for quantity, Starter pack at only £2/disc!). Send SAE for a free catalogue.

NEW!!! Modula-2 compiler, 3D Chess, Bridgepal, Composer, UK General Ledger, plus many more.

PC-STAR

P.O. Box 164, Cardiff CF5 3YB

(573)

They said it was quite impossible . . . NOW HERE IT IS!!

NEW MASTERCOMPOSER NEW

SPECIAL CHRISTMAS OFFER

will put **INSTANT MUSICAL CREATIVITY** into your
Amstrad CPC . . .

SIMPLY THE MOST INTELLIGENT MUSIC PROGRAM EVER WRITTEN FOR THE CPC MACHINE. Melodies in beautiful three-part harmony are composed – and played simultaneously – by **MASTERCOMPOSER ITSELF!!** Every day you get a performance of melodies *never heard before*.

* **MASTERCOMPOSER USES EXPERT KNOWLEDGE OF RHYTHM AND HARMONY** to compose lively JIGS, slow WALTZES, catchy CALYPSOS, rousing MARCHES . . . in any key, Major and Minor. Conceived and developed by Dr Brian James, dedicated Amstrad programmer and music-lover, over SEVEN YEARS . . . *You've never heard computer-music like this.*

* **LIGHTNING-FAST MACHINE-CODE** means the musical creativity is instantaneous!! Your Amstrad will sing as never before, with specially designed voices with tremolo tones and very skilful accenting.

* **VERY USER-FRIENDLY MENU CONTROL** with easy saving and loading of music. Mastercomposer is for EVERYONE – from novice to expert.

* **NO EXTRA HARDWARE IS REQUIRED** – however, your Amstrad has a small stereo output socket and any amplifier will improve the sound.

MASTERCOMPOSER will produce a printout of the melodies, compatible with nearly all printers.

POCKET COMPOSER is **MASTERCOMPOSER** restricted to the popular 4-beat bar. This still allows an enormous range of musical styles. If you buy Pocket Composer you automatically qualify for £10 discount off **MASTERCOMPOSER**.

SPECIAL CHRISTMAS PRICES

MASTERCOMPOSER (disc) £29 (r.r.p. £49)

POCKET COMPOSER (disc) £12 (r.r.p. £15)



Includes First Class Post for U.K. (Overseas, please add £2.00)

Tape version also available for £2 less



WESTHILL MUSIC (PCW)

75 BEECH ROAD, WESTHILL, SKENE,
ABERDEENSHIRE AB3 6WR

(608)

ESCAPE Software

ATTENTION ALL MUSIC LOVERS! SCORE – The Complete Composer's Package

At last you can use your QL to write and play your own music in whatever style you wish. **SCORE** is specially written for use with Miracle System's new MIDI interface. Control up to 16 MIDI instruments (synthesizers, drum machines etc.) using up to 64 independent voices. Alternatively, play music on your synthesiser, record it on your QL, edit it and then replay. Your finished compositions can be used from within your own programs. Features include: automatic harmonisation, automatic arpeggio, large library of rhythms and arpeggio patterns, and much much more! You don't even have to read music to use **SCORE** but if you wish to learn, **SCORE** is your ideal teacher! Come to the launch at the ZX Microfair on Dec. 12!

SCORE (available 12th Dec.) £29.90

MIDI interface (Miracle) £49.00

(plugs into the ROM port and requires fast external memory – e.g. Expander or Trump Card – to operate correctly.)

Our Range of Educational Software

Wendy's Garden For pre-school children £13.80

QL Spelling Tutor. Our best selling program! £14.95

QL Maths Tutor. Includes Nim and Hi-Lo games: £14.95

QL Professor (Digitrac). Indispensable! £14.95

We also supply memory expansion (Expanderam - 512K at £99. Trump Card - 768K at £199) and other hardware and software.

Please write or phone for details. Wendy's Garden and our Tutor programs were completed with Q Liberator.

Send cheques or P.O.'s to:

ESCAPE Software (Dept. PCW),
2 Henley Road, Ilford, Essex IG1 2TT. Telephone: 01-478 8281
Overseas orders add £1

(250)

BRADWAY SOFTWARE (PW)

The specialists in Really Useful Utilities for the Spectrum 48 and 128 and +2

LETTA-HEAD PLUS. Design your letterhead, poster or label on screen, add text from the library of 25 different fonts, select the required output format and print all the copies you need. Price only £9.

DUMPY 3. Produces over 100 different size, shape, density and shaded screendumps. Price less than 1p per dump!! £8.50.

LIN-O-TYPE. Print out any ASCII wordprocessor file in high density NLQ in a choice of 25 fonts, or turn your Spectrum into a full WYSIWYG electronic typewriter. Price £8.50.

ASTRUM+. The very best Z80 assembler and monitor package. Full wordprocessor style editor, unlimited source code on microdrives or Opus Discovery. Command driven monitor with multiple breakpoints, single stepping, slow run etc. Price £13.50 (state microdrive or Opus version).

DISC MANAGER. Discovery disc sector editor and file management program. Erase, rename, copy groups of files, examine, modify and understand disc directory, recover damaged data. Price £10.50 on 3 1/2 in. disc only.

All programs drive all printer interfaces and are compatible with Microdrive, Wafadrive and Disc. Letta-Head, Dumpy and Lin-O-Type require an Epson compatible printer. Prices are for cassettes, include full instructions. P.&P. within Europe. Please add £2 per program worldwide airmail postage, £1.50 for microdrive cartridge or disc. Send for further details!

(264)

33 Conalan Avenue, Sheffield S17 4PG

SPECIAL CHRISTMAS OFFERS

25 x 5-25" DS-DD DISCS
PLUS
100 CAPACITY LOCKABLE DISC BOX
FOR

ONLY £16.50

OR
50 x 5-25" DS-DD DISCS
PLUS
100 CAPACITY LOCKABLE DISC BOX
FOR

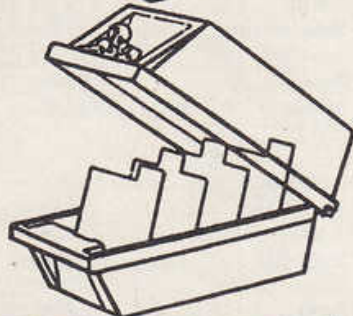
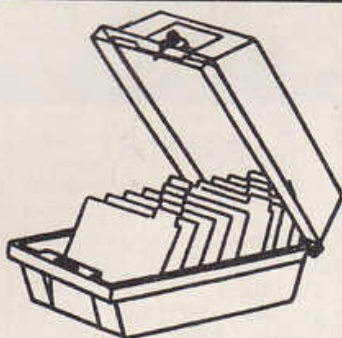
ONLY £26.00

20 x 3-5" DS-DD DISCS
PLUS
40 CAPACITY LOCKABLE BOX
FOR

ONLY £28.00

OR
40 x 3-5" DS-DD DISCS
PLUS
40 CAPACITY LOCKABLE BOX
FOR

ONLY £48.00



75 x 5-25" DS-DD DISCS
PLUS
100 CAPACITY LOCKABLE DISC BOX
FOR

ONLY £34.00

OR
100 x 5-25" DS-DD DISCS
PLUS
100 CAPACITY LOCKABLE DISC BOX
FOR

ONLY £41.00

50 x 3-5" DS-DD DISCS
PLUS
90 CAPACITY LOCKABLE BOX
FOR

ONLY £60.00

OR
80 x 3-5" DS-DD DISCS
PLUS
90 CAPACITY LOCKABLE BOX
FOR

ONLY £89.00

DISKS 5 1/4"

QTY	SS/48	DS/48	DS/96
25	£9.00	£10.00	£11.00
50	£16.00	£18.00	£20.00
100	£30.00	£33.00	£36.00
200	£58.00	£61.00	£68.00

All includes envelope, labels and fitted hub rings
100% guarantee

DISKS 3 1/2"

QTY	SS/DD	DS/DD
10	£10.00	£13.00
20	£19.00	£25.00
30	£28.00	£37.00
50	£46.00	£52.00
100	£90.00	£100.00

Price includes labels
100% guarantee

UK MADE LIBRARY CASE

5 1/4" or 3 1/2"
(10 capacity)

ONLY 95p
(if bought with discs)

PRINTER CABLE

ST/IBM/AMSTRAD 1512/CLONE
25 way D to 36 way cent

ONLY £7.75

REMEMBER THE PRICE YOU SEE IS ALL YOU PAY. (U.K. ONLY) THEY INCLUDE VAT AND CARRIAGE

Cheque or Postal Order to:

MCS Manor Court Supplies Ltd
Dept PCW1, Glen Celyn House, Penybont, Llandrindod Wells, Powys LD1 5SY.
Telephone: 0597 87784 or 0597 87792

HEAD CLEANERS

Special offer price if bought with discs + box offer

5 1/4" + Fluid£2.50
3 1/2" + Fluid£3.50

Both for use with single or double drives

EDUCATION AND GOVERNMENT ORDERS WELCOME

TRADE ENQUIRIES ALSO WELCOME

(601)

ROCK BOTTOM DISCS

(Lifetime Guarantee)

★	FREE CASE	★	FREE CASE	★	FREE CASE	★
		10	30	50	100	
Unbranded 3-5" DS/DD	£11.50	£30.00	£48.00	£91.00		
Unbranded 3-5" SS/DD	£10.95	£29.00	£47.00	£89.00		
Branded Wabash 3-5" DS/DD	£15.00	£41.00	£65.00	£120.00		
Branded Wabash 3-5" SS/DD	£14.00	£38.50	£63.00	£116.00		
Unbranded 5 1/4" DS/DD	£5.70	£13.90	£22.00	£41.00		
Branded Wabash 5 1/4" DS/DD	£7.00	£19.00	£29.00	£56.50		

★ Special Christmas Offers ★

BRANDED 3-5" SONY DS/DD Pack of 10 ONLY £19.95
FREE LIB. CASE (10) with 10 3-5" UNBRANDED or WABASH DISCS worth £1.30

LIB. CASE (10) 3-5" £1.30 LIB. CASE (10) 5-25" £1.30

Remember all prices include VAT & POSTAGE. For EXPRESS 1st class despatch please add £1 per 10 discs.

CREDIT CARD HOTLINE 0329 282083 (24 hour)

Cheques/PO to: (598)

Athene Consultants, 33 Holly Grove, Fareham, Hants PO16 7UP

KENT BARGAINS

Generous discount on ATARI ST and COMMODORE software

SPECIALISTS IN BBC, AMIGA AND AMSTRAD

Master Compact..... SAVE £300
— BUSINESS OFFER

Amstrad PC1512..... SAVE £100
— BUSINESS PACK

BUY A PRINTER AND WE PAY THE

VAT.

EDUCATIONAL SOFTWARE A SPECIALITY

Lighthouse Computer Service
4 Park Avenue, Deal. Tel: (0304) 362049

(537)

DISCS, AMIGAS, AMSTRAD

STAR SOFT ARE PROUD TO PRESENT

ST. super clock

Star U.K. Computers Ltd
Star U.K. Ltd.,
491-493 Union Street,
Aberdeen, Scotland AB1 2DB
Tel: (0224) 581858

Star U.K. proudly present their new real-time clock. ST-Superclock! This piece of hardware plugs in under the ST's keyboard (no electronics experience needed) and therefore does not tie up any necessary ports! It comes with a comprehensive manual and FREE SOFTWARE!

Your files can now always be saved at the correct time, and the many ST clock accessories (among others) provided with the Superclock will make sure your ST will always be kept up to date. The Superclock runs on Ni-Cad batteries which charge up automatically every time your ST is switched on!

R.R.P. £29.95

DEALER ENQUIRIES WELCOME.

SEE HALF PAGE NEXT WEEK FOR EXCITING XMAS AND NEW YEAR DEALS

PHONE 0224 581858 TODAY WITHOUT DELAY

ATARI, ACORN & MUCH MORE

(641)

AMAZING

This is the verdict from all our customers who purchased a copy of "The Gamerster". This is a truly unique utility that allows the user to gain infinite lives on most types of games, and includes the brilliant "Slomo" device, to slow down most programs to your desired speed. Win all those top prizes with "The Gamerster".

"Well worth buying..." CRASH
"Very easy to use..." A.S.D. Mid-Glamorgan
"Absolutely brilliant, now I play all those impossible games and easily gain high scores." R.D. Manchester

Spectrum 48/+/128/+2/+3
Compatible with Multiface 1/Multiface 128/Snapshot

R.R.P. £9.99..... MAIL ORDER £5

Cheques/POs to:

S.U., 155 Wash Lane, Yardley, Birmingham B25 8PX

SAME DAY DESPATCH

(540)

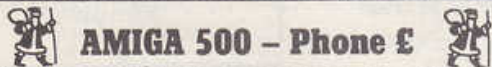


A precision graphics utility for:
 Designers Architects Hobbyists
 ★ Create, manipulate, combine, compare, fill, patterns and multiple sheet drawings
 ★ Fast and secure archival and retrieval of drawings
 ★ Mostly single keystroke commands
 For use with disc-drive and dot-addressable printer £29 plus VAT

Culton Sales and Services Limited
 34 Mount Street, Dorking, Surrey RH4 3HX
 Tel: (0306) 885138

(631)

RAMSOFT COMPUTERS



AMIGA 500 - Phone £

ATARI 520STFM & 1040STF - Phone £

Various Package Deals Now Available
 20-Day Replacement On Our Computers
 1 Year Full Warranty

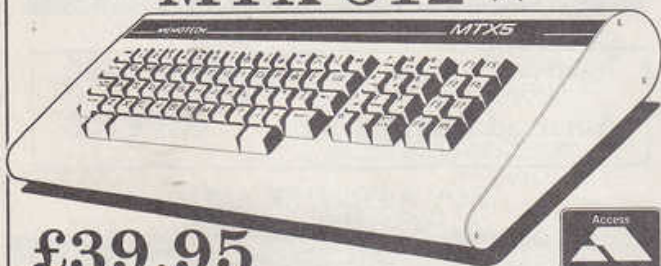
Customer Technical Advice Hotline

★ ALSO AVAILABLE - ST and AMIGA BOOKS, PRINTERS, DISC DRIVES AND SOFTWARE ★
 ENQUIRIES - PHONE 0706 43519 (1-7pm)

ACCESS (Not VISA) Orders Accepted

RAMSOFT, 24 BANKFIELD LANE
 NORDEN, ROCHDALE, LANCS OL11 5RJ

★ MEMOTECH MTX 512 ★



£39.95

Plus £3.05 postage (total £43)

- ★ 64K User Ram ★
- ★ Z80 Processor ★
- ★ 3 Channel Sound ★
- ★ 16 Colours ★
- ★ Extensive Software ★
- ★ CP/M 2.2 Adaptable ★
- ★ Fully Guaranteed ★

☆☆☆☆☆☆☆☆☆☆

Further details/orders to:

UK HOME COMPUTERS

82 Churchward Avenue, Swindon, Wilts SN2 1NH
 Tel: 0793 695034

35 LONDON ROAD, TOOTING,
 LONDON SW17 9JR

TIMESOFT TEL 01-685 9849

PLEASE PHONE IF YOU DO NOT SEE WHAT YOU WANT !!!



ATARI ST

NEW RELEASES

Super Sprint	£11.95
Bard's Tale	£18.95
Star Trek	£15.50
Backlash	£15.50
Star Wars	£15.95
Marble Madness	£19.95
Chessmaster 2000	£18.95
Degas Elite	£23.95
Defender Of The Crown	£24.95

SALE

Leaderboard	Phone for price
Silicon Dreams	£9.95
Jewels of Darkness	£9.95
Golden Path	£9.95
Boulderdash Con.	£9.95
Pirates	£7.50
Taff Times	£9.95
Hacker 2	£9.95
Hardball	£13.95
King's Quest Pack	£19.95

AMIGA

NEW RELEASES

Test Drive	£19.95
Grid Start	£7.95
Thai Boxing	£7.95
Marble Madness	£15.95
Sinbad	£23.95
Chess Master 2000	£19.95
Guild Of Thieves	£18.95
Winter Games	£17.50
Bards Tale	£19.95
Mean 18	£18.95
Phalanx	£6.95
Q-Ball	£15.95
Impact	£11.95
Starglider	£17.95
Terropods	£18.95
Goldrunner	£18.95
Leaderboard	£19.95
Silent Service	£18.95
Earl Weaver Baseball	£17.95

PLEASE MAKE ALL CHEQUES
 PAYABLE TO TIMESOFT!

IF YOU DO NOT SEE WHAT YOU REQUIRE PLEASE
 PHONE FOR A LOW PRICE.

PHONE FOR LOW PRICES ON AMIGA A500

(498)

Phone for best price

Commodore 64 compatible drive	£129.95
Commodore 64 pack 1	£195.95
Amiga 500 pack	£439.00
Atari STM pack	£269
Neos mouse	£23.95
Commodore music expansion system	£77.50
Amstrad PCW 9512	£520
Amstrad DMP 3160 printer	£199
Amstrad DMP 4000	£345
Amstrad LQ 3500	£345
Sinclair +2	£138
Sinclair +3	£199

3 1/2" LIBRARY CASES	95p
3" MIMIC CF2 (10)	£20.00

5 1/2"	DS/DD	3 1/2"	DS/DD
10	£4.75	10	£9.50
25	£12.50	25	£23.50
50	£19.95	50	£45.00

80 capacity 5 1/2" LSB	£8.00
100 capacity 5 1/2" LSB	£11.00
3 1/2" / 5 1/2" library cases	95p
40 capacity 3 1/2" LSB	£7.95
Spectrum 128+	£99.00
Citizen 2 col. dot matrix printer	£28.95
Datex Microstick joystick	£8.99
C2N data recorder	£25.99

All prices include VAT and postage. ALL TRADE ENQUIRIES WELCOME.
 Ring now for Amstrad 1512 and 1640 ribbon paper and other computer consumables.

M.D.S. Computer Supplies

11 Church Street, Banbridge BT32 4AA
 24-hour Credit Card Hotline 08206 23477

Enquiries - Tel: 08206 23399

A Division of Brocklis Enterprises Ltd.

(468)

AMIGA EXPERIENCE
HARDWARE & SOFTWARE

NEW AMIGA 500

AMIGA A500/8833 MONITOR OFFER
AMIGA A600 with PHILIPS 8833
HIGH RES COLOUR MONITOR
with STEREO SOUND OUTPUT
Mouse, Workbench, Basic and DPaint
Software plus free scart cable £665

CUMANA 1 MEG
AMIGA DRIVES
in stock
for **£129**
NOW!

AMIGA A500 SPORTS BUNDLE
Contents: AMIGA A500 COMPUTER •
COMMODORE SPORTS HODDALL • AND
INDIVIDUALLY PACKED SPORTS GAMES FROM
ACTIVISION • GFL AMERICAN FOOTBALL •
BASEBALL • CHAMPIONSHIP GOLF
£469.95 + free modulator

PHILIPS 8833 Monitors
Stereo Sound, Free Scart Cable
THE WORKS

ONLY
£265



COMMODORE C64 SPORTS PACK £169.95
Price includes: Commodore C64, Commodore C2N cassette unit, joystick,
Commodore sports holdall bag, Barry McGuigan's Boxing, Great American Road
Race, Decathlon, On Field Football, Star League Baseball.
COMMODORE 64 POWER PACKS
ONLY **£11.50**

DISCS

DISCS! DISCS! DISCS! DISCS! DISCS! DISCS! DISCS!
ALL DISCS COME COMPLETE WITH LABELS
10 3 1/2" DS/DD Discs, £10, 25 3 1/2" DS/DD Discs, £24, 50 3 1/2" DS/DD Discs, £47, 100 3 1/2" DS/DD
Discs + 1 Lockable Disc Box, £93, 200 3 1/2" DS/DD Discs + 2 Lockable Disc Boxes, £188, 500 3 1/2"
DS/DD Discs + 5 Lockable Disc Boxes, £447, Lockable Disc Box - Holds 80 3 1/2" Discs, £9.95
100 Disc Labels, £2.

Name
Address
Postcode

Please rush boxes I have ticked above.
I have enclosed cheque/postal order made payable to "MEMORY STORE". Thank you.
★ Overseas orders - enquires for postage ★
MEMORY STORE IS PART OF FUJISAN DISTRIBUTION LIMITED 1987

BE PART OF IT

OUT NOW! OUT NOW!

OUT NOW SOFTWARE OUT NOW SOFTWARE OUT NOW

Amiga Titles

Title	Price	Tick	Title	Price	Tick
Borrowed Time	£18.75	□	Shanghai	£18.75	□
Championship Golf	£26.25	□	Championship Football	£18.75	□
Little Comp People	£26.25	□	Space Battle	£7.50	□
Cruncher Factory	£7.50	□	Final Trip	£7.50	□
Vader	£7.50	□	Dr. Fruit	£7.50	□
Sky Fighter	£11.20	□	Balance of Power	£22.50	□
De Ja Vu	£22.50	□	Sirbad	£22.50	□
Defender of the Crown	£22.50	□	S.D.I.	£22.50	□
Uninvited	£22.50	□	Barbarian	£18.75	□
Terrorpods	£18.75	□	Star Glider	£18.75	□
Guild of Thieves	£18.75	□	Knight Orc	£14.95	□
Winter Games	£18.75	□	World Games	£18.75	□
Hardball	£18.75	□	Phantasia III	£18.75	□
Faery Tale	£34.95	□	Digi Paint	£42.00	□
Firepower	£18.75	□	Gold Runner	£18.75	□
Karate Kid II	£18.75	□	Amiga Karate	£18.75	□
Flight Simulator II	£38.50	□	Scenery Disc II	£18.75	□
Scenery Disc 7	£18.75	□	Silent Service	£18.75	□
Impact	£11.20	□	O-Ball	£14.95	□
Leviathan	£14.95	□	Living Daylights	£14.95	□
BMX Simulator	£7.50	□	Backlash	£14.95	□
Indoor Sports	£14.95	□	Zuma TV Text	£74.50	□
Analyze & Spreadsheet	£110.00	□			

OUT NOW SOFTWARE OUT NOW SOFTWARE OUT NOW

Atari Titles

Title	Price	Tick	Title	Price	Tick
Borrowed Time	£18.75	□	Shanghai	£18.75	□
International Karate	£14.95	□	Championship Football	£18.75	□
Little Comp People	£26.25	□	Fast Basic	£67.50	□
Balance of Power	£22.50	□	Fleet Street Publisher	£90.00	□
Defender of the Crown	£22.50	□	S.D.I.	£22.50	□
T.N.T.	£14.95	□	Barbarian	£18.75	□
Terrorpods	£18.75	□	Star Glider	£18.75	□
Guild of Thieves	£18.75	□	Knight Orc	£14.95	□
Winter Games	£18.75	□	World Games	£18.75	□
Hardball	£18.75	□	Phantasia III	£18.75	□
Leaderboard	£18.75	□	Metrocross	£18.75	□
Gauntlet II	£18.75	□	Road Runner	£18.75	□
Karate Kid II	£18.75	□	Jeffery Archer	£14.95	□
Flight Simulator II	£38.50	□	Scenery Disc II	£18.75	□
Scenery Disc 7	£18.75	□	Silent Service	£18.75	□
Trivial Pursuits	£14.95	□	Star Wars	£14.95	□
Solomon's Key	£14.95	□	Impossible Mission II	£14.95	□
BMX Simulator	£7.50	□	Backlash	£14.95	□
Outrun	£14.95	□	Captain America	£14.95	□
Spy v Spy	£14.95	□	Mortville Manor	£18.75	□
Blue War	£14.95	□	Film Director	£44.00	□
Prohibition	£14.95	□	10th Frame	£18.75	□
Indiana Jones	£14.95	□	F-15 Strike Eagle	£18.75	□

OUT NOW SOFTWARE OUT NOW SOFTWARE OUT NOW

THE MEMORY STORE

Suite 5, 136 Ingram Street, Glasgow G1
Telephone: 041-552 4222

(639)



5 1/4" DISCS WITH PLASTIC DISC BOX

10 5.25" DS/DD 48 TPI..... **£7.50**
10 5.25" DS/DD 96 TPI..... **£10.00**

3 1/2" DISCS

10 3.5" SS/DD 135 TPI..... **£8.50**
10 3.5" DS/DD 135 TPI..... **£9.50**

5 1/4" DISCS

10 5.25" DS/DD 48 TPI..... **£7.00**
10 5.25" DS/DD 96 TPI..... **£8.00**

ALL DISCS INCLUDE LABELS AND FREE
POSTAGE AND PACKING

PSION ORGANISER XP (WITH
32K RAM) **£139.00**
DATAPAK 128K FOR THE
PSION ORGANISER **£99.95**

AMIGA SOFTWARE

DARK CASTLE **£21.75**
STAR GLIDER **£21.75**
BARBARIAN..... **£21.75**
GUILD OF THIEVES **£21.75**

OTHER SOFTWARE
AVAILABLE FOR THE
ATARI ST, AMSTRAD
CPC/PCW AND CBM 64. ALL
AT DISCOUNT PRICES.

VAT INCLUDED IN ALL PRICES. ALL CHEQUES/POs MADE PAYABLE TO:

(640)

FOR SALE

BLANK CASSETTES

WITH LIBRARY CASES

	C10	C15	C20	C30
20	7.50	7.70	7.90	8.70
50	16.00	16.20	16.90	18.50
100	29.00	30.00	31.00	35.00

Fully Inclusive (C.O.D. £1 extra)

DISKS

10 5 1/2" DS/DD
£6.00 inc. case

10 3 1/2" SS/DD
£11 inc. case

10 MAXELL 3" CF2
£20

MEMOTECH COMPUTERS AND ACCESSORIES

MTX 512 COMPUTER	£43.00
DMX 80 PRINTER	£150.00
RS232	£30.00
PASCAL ROM	£30.00
SPECULATOR ROM	£30.00
1/2 mb. DISK DRIVE & INTERFACE	£160
1/2 mb. DISK DRIVE & INTERFACE	£160

All the above prices are fully inclusive. We stock the entire Memotech Range. Order/Enquiries to:

UK HOME COMPUTERS
82 CHURCHWARD AVE, SWINDON,
WILTS SN2 1NH
24-hr Phone Service 0793 695034

Self Adhesive Disk & Cassette Labels

DISK LABELS - 3" & 3 1/2" Disk labels, 71 x 69 mm, on tractor feed backing for computer overprinting. White: 500 - £15.55, 1000 - £22.05, 2000 - £25.69. Tinted labels in - Blue, Pink, Grey, Cream, Yellow, Orange, Green: 500 - £21.35, 1000 - £31.05, 2000 - £43.63. 5 1/4" Disk, 95 x 36 mm, White: 500 - £12.75, 1000 - £17.75, 2000 - £20.56. Tints as above: 500 - £15.20, 1000 - £24.65, 2000 - £34.36.

CASSETTE LABELS - On tractor feed backing. Rolls of 500 labels, White - £14.66, Tinted - £16.90. A4 sheets, 12 labels per sheet, 100 labels - £3.50, 200 - £6.00, 1000 - £21.85. All prices are inclusive of VAT & carriage.

We are specialist computer label makers and can provide printed labels in 24/48 hrs. For price list and sample brochure of our full range of self adhesive micro computer labels plus details of quantity discounts

☎ Sittingbourne (0795) 28425 (24 hrs)

Industrial Process
Unit A4
Smeed-Dean
Centre
Sittingbourne
Kent ME10 3RN
Self Adhesive Labels - **SUPERFAST**

SUCCESS IN SOFTWARE

**GAMES PROGRAMMERS, GRAPHIC ARTISTS
MUSICIANS and GAMES DESIGNERS!**

Success In Software is the guide to the home computer software industry. If you are a games programmer, graphic artist, musician or games designer, then Success In Software is a must. This manual will be a great help in finding work in this hot industry. Chapters include: Presentation Contracts, In-House And Freelance Work, How To Put Together A Games Design, What Your Demo Should Include, How Much Can You Expect For Your Work?, Industry Contacts And Telephone Numbers. And much more! Written by the contract co-ordinator of one of the UK's top software houses!

Only £7.95 inc. P.&P. from:
Micro Media

137 Alexandra Road, Walsall, W. Mids. WS1 4AY (636)

DISCIPLE DISC MANAGER

A must for all Disciple users. 3 programmes: Configurer, Cataloger and Autoloader offers powerful file handling in a disc drive environment. Menu driven!

Name and number discs... and use this data to automatically create a master catalogue of all the contents of all your discs.

No typing in! Search, update etc. Multiple rename or erase + much more! Easy to use - Great graphics - Only £12.95 S.A.E. for details and leaflet.

BETTERBYTES
10 Spital Terrace, Gosforth
Newcastle upon Tyne NE3 1UT (558)

MICRO DRIVE MANAGER

Makes cartridge handling really easy. Features back-up cartridge, multi-FORMAT and PRINT extended catalogue with sensible error handling.

Select files from a pageable catalogue to LOAD, re-name ERASE file (S) or make multiple copies for quick loading.

Send cheque for £7.50 to D. Smith, 7 Curlew Drive, Hythe, Hants. SO4 6GB. Tel: (0703) 845 787. 643

COMMODORE 1701 monitor - £100. Tel: Staines 0784 57945. (After 5pm.)

OPUS DDOS for BBC B complete - £25. Tel: 0621 893048.

ATARI 520 STM, mouse, SF354 disc drive - £195. SM125 b/w monitor with swivel base £75. All boxed, hardly used. Tel: 01-348 3538.

AMIGA software sales. Faery Tale £20, Goldrunner £10, Karate Kid II £10, Sinbad £20, Defender Of The Crown £20, Terrorpods £15, Scribblers 2 £55. All originals, first come, first served. Tel: 01-444 3213.

AMSTRAD PCW 8512: Protex (latest with spell-checker and mail-merge), Electric Studio mouse and graphics, Draftsman, games, 15 discs, cost £900, as new for £520. Will split. Tel: 01-444 3213.

REPAIRS

T.M. COMPUTER SERVICES

FAST COMPUTER REPAIRS

Spectrum Plus.....	£15.95
Commodore 64.....	£22.00
Vic 20.....	£22.00
C16.....	£20.00
Plus 4.....	£22.00
Amstrad 464.....	£32.00

FREE collection and delivery in Leeds, Bradford and Huddersfield areas.

Phone Heckmondwike 0924 402715 day or night!

Computers direct to:

Mr. T. Marshall (PCW)
21 FOURELL STREET, HECKMONDWIKE,
W. YORKS WF16 0EA

enclosing cheque and brief description of fault

COMPUTER REPAIRS AT TRADE PRICES!!

All repair work guaranteed for 3 months!!
All prices include parts, labour, VAT and post!!
** No hidden extras **

SPECTRUM	£16.00
C64	£24.00
C16	£16.00
PLUS 4	£24.00
SPECTRUM 128	£22.00

MOST REPAIRS DONE SAME DAY

Please enclose payments with computer. Please make all cheques & PO to:

FUTRONIX

26b Heath Street, Golborne, Cheshire WA3 3AD (Nr. Wigan!). Tel: 0942 718423
Futronix are a stockist of a large range of software, hardware and peripherals for the ATARI ST, AMIGA A500, SPECTRUM and COMMODORE computers. Send S.A.E. for full details.

Futronix shop is open 9-5 six days a week (597)

COMPUTER REPAIRS

Fixed Super Low Prices!

Inclusive of parts, labour and VAT



FIRST AID FOR TECHNOLOGY

1 week turnaround
Free collections/delivery available for local area

★ AUTUMN OFFERS ★

SPECTRUMS	£14 inc. + Free Game
C64	£22 inc. + Free Game
C16	£18 inc.
VIC20, C+4	£22 inc.
BBC	£32 inc.
ELECTRON	£19 inc.
AMSTRAD 464	£32 inc. + Free Game
SPECTRUM 128	£16 inc.
C64 P.S.U. FOR SALE	£20 inc.

Please enclose payment with item - 3 month warranty on repair
Please enclose advert with repair

W.T.S. ELECTRONICS (182)

5-9 Portland Road, Luton, Beds LU4 8AT. Tel: 0582 458375. Telex: 265871

Britain's No.1 ST User Group and Finalists in the 1987 Desktop Publishing Awards can now offer you even more. With annual membership at £5, including free disc and prices from £2.50 per disc, you just can't beat us for value. Same day despatch on all orders guaranteed. Forget the rest and try the best by sending large S.A.E. to:

Floppyshop ST
50 Stewart Crescent
Northfield
Aberdeen AB2 5SR



ATARI ST PUBLIC DOMAIN

Why reinvent the wheel? We have a large selection of languages, demo's, utilities, comm's and games etc. available. A stamp for our list will save you hours of frustration.

Discs from £2.50

MCSOFT

9 Abingdon Gardens, Bath,
Avon BA2 2UY (178)

AMIGA CUMANA DISC DRIVES/JUMPDISK CHRISTMAS PACK

Using only the internal disc drives becomes tedious and frustrating. The Cumana disc drive for the Amiga is the answer. It is quite compact and highly reliable - we test each drive prior to the search and there is a 12 month guarantee. We include with all orders the Christmas issue JUMPDISK, the top two PD selling discs and a special software surprise. Immediately available for only \$129 inc. VAT & p&p.

George Thompson Services Ltd.
Dippen Lodge, Dippen, Brodick, Arran,
Scotland KA27 8RN. Tel: 077082 234 (291)

ALADDINK

FABRIC RIBBON CASSETTE RE-INKING

Trial offer: £1 per ribbon

Post used cassettes with payment to:

ALADDINK (Dept PC),
4 Hurkur Crescent, Eyemouth,
Berwickshire TD14 5AP
Tel: 08907 50965 (338)

PUBLIC DOMAIN SOFTWARE

For the ATARI ST range of computers. Send a stamp for our comprehensive catalogue containing full details of the COMPLETE PD SERVICE we offer. Prices from only £1.50p per disk!

SOFTVILLE

55 Highfield Avenue, Waterlooville,
Hants PO7 7PY (630)

COMPUTER PROGRAMS

REAL-TIME or HIGHER-SPEED professional Cassette Duplication and Blank 1 to 1,000+. Computer printed cassette labels, BBC & PC Disk copying 1 to 500+. Fast Security Delivery Service.

FILTERBOND LTD. - JBS RECORDS DIV.,
FREEPOST, 19 Sadlers Way, Hertford SG14 2BR,
0992 500101 17

NETCODE LTD

CHRISTMAS BARGAINS!

	Our Price	RRP
Citizen 120D Parallel I/F	£132.00	£199.00
Panasonic 1081 Parallel I/F	£139.00	£245.00
PC 20Mb Hard Disc Kit	£195.00	—

	Our Price	RRP
Citizen LSP 100 Parallel	£165.00	£245.00
Amstrad 1512 PC Mono SG	£369.00	—
Amstrad 1512 PC 20Mb Seagate	£599.00	—
Amstrad 1640 20Mb Mono	£699.00	—
Amstrad 1640 ECD 20Mb	£949.00	—
Amstrad 1640 20Mb Seagate Mono	£699.00	—
Amstrad 1640 ECD 20Mb Seagate Mono	£949.00	—
20Mb Seagate Kit for PC XC	£225.00	—
40Mb Kit	£499.00	—
20Mb Hard Card	£230.00	—
Star NL 10 Parallel I/F	£179.00	—
20Mb Hard Card for IBM PC	£225.00	—

Citizen	Panasonic	Epson
MSP 15E.....£269.00	1081.....£149.00	LX 800.....£199.00
MSP 10E.....£223.00	1082.....£199.00	FX 800.....£305.00
MSP 40.....£310.00	1083.....£299.00	FX 1000.....£433.00
MSC 45.....£399.00	1592.....£349.00	
MSP 50.....£399.00	1540.....£499.00	
MSP 55.....£499.00	1595.....£499.00	
45 HQP.....£570.00	3131.....£249.00	
110 Laser.....£1330.00	3151.....£419.00	

REPAIRS

On site maintenance service available. In house repairs carried out on the following:
Printers, disc drives and IBM compatible computers
90-day warranty on all repairs

Dealer/Overseas/Educational enquiries welcome
All prices exclusive of VAT. Postage and packing £8

To order phone **0753 75041** or send cheque to:

367 Cippenhan Lane, Slough, Berks SL1 2YE

(New premises opening shortly in Hounslow)

£20 OFF! Software worth £100 with this advert

Name.....

Address

Telephone Number.....Product.....Amount £.....

Access/Visa No.



MACRO SLE



1 THE SOUTH EAST

EALING

EALING COMPUTER CENTRE

19 Queens Parade, Ealing, London W5. Tel: 01-991 0928
West London's newest and best computer showroom

Special opening offers - VAT inc. (limited stock)

ATARI 1040 STF £399.99 1040 STF + SM125. £499.99
STAR NL10.....£199.99 OPUS PCIII TF £699.99

All models on display. 100s of titles for Atari, IBM

Authorised dealer

ATARI
Power Without the Price™

Opus.
PC COMPUTERS

THE stair
PRINTERS FOR BUSINESS
(584)

SWAFFHAM

GRAPHIX

★ Cheapest prices in Norfolk!
★ Phone for system discounts ★ All prices + VAT

HARDWARE

Easel Drawing Tablet A500	£284 + VAT
A2000 CPU with keyboard	£1006
A2000 with colour monitor	£1305
A2000 internal 3½" disc drive	£100
A2000 2 meg Ram	£375
PC/XT bridgeboard + 5¼" disc drive	£475
PC/AT bridgeboard + 5¼" disc drive	£675
PC controller and 20 meg hard disc	£475
Amiga controller and 20 meg hard disc	£575
A500 CPU	£399
A500 512K Ram	£104
A500 R.F. modulator	£21
Colour monitor 1084 (new)	£300
External 3½" Commodore disc drive	£210
20 meg drive for A1000	£650
60 meg A1000	£1300
1 meg internal drive Ram expansion	£270
2 meg internal drive Ram expansion	£420
External 20 meg drive for A500	£660
External 60 meg drive for A500 (new)	£1350
External 250 meg drive for A500 (new)	£2650
Internal 20 meg drive A2000 (new)	£510
Internal 60 meg drive A2000 (new)	£1100
Comspec 2 meg Ram w/passthrough	£505
Cumania external 3½" drive	£119
DIGIPIC AMIGA FRAME GRABBER (excellent, new)	£299
PAL GENLOCK FOR A500 A2000 NEW	£250
512K Ram expansion with/clock for A500E99	£99
Diggivew A1000	£165

SOFTWARE

CREATIVITY

Aegis Art Pack 1	£20
Aegis Impact	£55
Aegis Sonix	£50
Aegis Audio Master, samples editor	£40
Aegis Videescape 3D	£120
Aegis Video Titler (new)	£65
Pagesetter (very popular)	£90
Prism 1 version 1.2 PCW	£52
Silver (ray tracing animation, new)	£125
Calligrapher colour fonts	£69
Provideo titling package for disc package	£150
Provideo font library set I	£75
Provideo font library set II	£75
Aegis Draw Plus	£150
Aegis Animator/Images	£85

BUSINESS

Maxi Plan A500 V	£85
Maxi Plan +	£125
Superbase Personal	—
Superbase Professional	£205
Visa Write (new)	£85
Word Perfect	£240
City Desk, desktop publishing (new)	£86
CLI Mate	£30
Pix Mate	£40
Intro Cad	£50
Ruby-Com Viewdata/TTY coms pack	£145

PRINTERS - PHONE FOR PRICES

Monday - Saturday 9am - 9pm.
All prices include P.&P. plus VAT.
Phone for more details.
☎ Swaffham 0760 24947

(637)

LEIGH-ON-SEA

A.S. and T. Ltd.

Largest Atari St dealer in
Essex

Tel: 0702 510151
Unit 32/33
Rutherford Close
Eastwood Industrial Estate
Leigh-on-Sea
Essex

(Progress Road/A127)

(388)

PETERBOROUGH

DOOM IS BACK

Peter Killworth's classic BBC adventure
countdown to *DOOM* is back - bigger and
better than ever.

Can you escape from "Doomawangra"
before the planet's corrosive atmosphere rots
your ship - and you?

BBC DISC - £9.95
CPC DISC - £9.95
PCW DISC - £14.95
PC DISC - £17.50

All prices include VAT and p.&p.

Topologika, PO Box 39, Stilton,
Peterborough PE7 3BR
Tel. 0733 244682 (24-hr) (625)

DEALERS!

You can reach 40,000 readers for as little as £25 a week!
For more details phone Susannah on 01-834 1717

2 NORTHERN ENGLAND NORTHAMPTON

MICROCOM SYSTEMS OUTSTANDING SOFTWARE

For IBM PC and Compatibles

£4.50 V.A.T. & **Discount**
per disc **postage** **10%**
included **on 10 or more**

- **BUSINESS 1.** EZ-Forms business form generation, completion and printing program.
- **CAD 1.** Artimia, a 4 colour object oriented drawing program. Colour required.
- **COMM 1a,b,c,d,e** (5 disks) RBBS Bulletin Board System 14.1D
- **DATABASE 1a,b** (2 disks) File express menu driven general purpose database manager
- **EDUCATION 1.** Interactive DOS tutorial for new PC users. Makes learning DOS painless.
- **GAMES 1.** 3-D PacMan, Kong, SpaceWar, Janit Joe, and more. Colour required.
- **GAMES 2.** Quibert, Pango, Centipede, Monopoly, Zorro and more. Colour required.
- **GAMES 3.** Blackjack (you set rules), Arm Chair QB and Empire (War Game)

- **GAMES 4.** Castle, Star Trek and the original Colonial Caves Adventure.
 - **GAMES 5.** The Hack adventure game from the universities. Like Rogue, only more complex.
 - **GAMES 6.** Pinball, Othello, Dragons, Sopwith (fly one) and more. Colour required.
 - **INFO 1a,b** (2 disks) Cooking recipes database with keyword/ingredient retrieval
 - **LANGUAGE 5.** Turbo Pascal interactive debugger, pop-up help, formatters, etc
 - **LANGUAGE 7.** Complete Pascal interpreter/compiler. Great for learning Pascal.
 - **ORGANIZER 1.** DeskMate, a Sidekick clone and the Judy calendar program.
 - **UTILITIES 1.** A collection of invaluable general purpose DOS utilities. A must
 - **UTILITIES 2.** More invaluable DOS utilities. Too many to list here!
 - **UTILITIES 3.** A comprehensive set of debugging and diagnostic utilities.
- NEW RELEASES/UPDATES**
- **CAD 2a,b** (2 disks). An advanced 2D/3D drafting program. 640K and colour required.
 - **COMM 1a,b** (2 disks). Version 2.4 of the ever-popular Qmodem comm. program
 - **COMM 2a,b** (2 disks). Procomm 2.42, an excellent modem program with terminal emulation.

- **EDUCATION 3.** PC fast type typing-tutor. Colour required.
- **EDUCATION 5.** Learn Origami, the Japanese art of paper folding. Colour required.
- **EDUCATION 8.** Spanish language vocabulary and verb drills and verb conjugator.
- **EDUCATION 9.** First language vocabulary and verb drills and verb conjugator.
- **EDUCATION 10.** German language vocabulary and verb drills.
- **FINANCES 3a,b** (2 disks). Express Calc 3.12, a powerful spreadsheet program.
- **GAMES 8.** Striker helicopter attack and Risk, world domination. Colour required.
- **GAMES 9.** EGARisk, the game of world domination in very high resolution. EGA required.
- **GAMES 10.** Solitaire, Teed-Off Golfing, and Sailing In The Bermuda Triangle. Colour required.
- **GAMES 12.** MyChess (9 levels), Backgammon and Wheel Of Fortune. Colour not required.
- **GRAPHICS 1.** Record and play back screen. Images excellent for demo etc. Colour required.
- **LANGUAGE 3a,b** (2 disks) The A862.18 macro assembler and debugger
- **SHELL 4.** Automenu and HDM II 4.04 hard disk menu. Creates custom full-screen menus
- **UTILITIES 5.** Utilities for formatting, parading and optimising hard disc drives

- **UTILITIES 6.** Advanced utilities including Dpath, Eac, Hotdos, Resident program utilities.
- **UTILITIES 7.** More advanced utilities including MasterKey (undeletes files from hard disks).
- **WORD 1a,b** (2 disks) PC Write 2.7, a powerful word processing system. w/spell checker.

Other brand named software available at up to 20% discount. S.A.E. for lists.

Catalogue £2.50
3.5" format add £1.25 per disc

MicroCom Systems

MicroCom Collection TM
authorised dealer

**CRIFFELL
SERVICES LTD.**
PO Box 108, Northampton.

Phone orders 0604 31613

This is only a small
selection of our
extensive library



(635)

COMLEX

NEVER BEATEN ON PRICE

Amstrad 1640 20Mb Tandem £949 + 10 discs of public domain software
Amstrad 1640 32Mb £999 + 10 discs of public domain software
Comlex floppy discs DS/DD £7 per box of 10 + 50p P.&P.

AMSTRAD PC	
1DD Mono	£379
2DD Mono	£478
1DD Colour	£519
2DD Colour	£619
1640 20 meg ECD	£1099
1640 DDCD	£839
1640 EDC	£748
Tandem PCA20	£1299
Mini Scribe 30 Meg card	£275
Tandem 20 Meg upgrade	£199
Tandem 20 Meg business card	£199
20Mb Upgrade for Amstrad PC (fitted if required)	£245

ATARI	
520STFM	£235
520STM + mono monitor	£359
520STFM + Philips colour 8833	£459

COMMODORE	
Amiga 500	£439
Amiga 500 modulator	£25
Amiga I	£949
Amiga II	£1049
Amiga 2000 1Mb	£116

GOVERNMENT AND EDUCATIONAL ORDERS WELCOME.
EXPORT ENQUIRIES WELCOME
STANDARD DELIVERY £7.50 AND NEXT DAY £9.50 — ADD 15% TO ORDER TOTAL
Comlex House, 28 Bradgate Road, Hinckley LE10 1LA
(0455) 635583. Manchester 061-976 3763

(342)

ASHCOM

Atari hardware

520 STFM, keyboard/mouse/0.5 meg drive	£259.95
1040 STF keyboard/mouse/1 meg drive	£439.95
1040 STF plus colour monitor	£799.95
SF 314 1 meg drive	£169.95

Commodore Amiga range

A500 + Offer Pack + modulator	£435.00
A1010 disc-drive	£249.95
3.5 inch discs DD/DS guaranteed (packed in 10s)	£12.00
25 bulk packed 3.5 inch discs DS/DD guaranteed	£25.00

Free public domain software on request with discs. All products fully guaranteed
Amazing prices on peripherals and all software. All prices include VAT at 15% and P&P on UK mainland. For more information call us on (0530) 411485 or send SAE for full price list. To order send cheques/PO or Visa/Access details to the address below or phone with credit card.

ASHCOM

10 The Green, Ashby de la Zouch, Leicestershire LE6 5JU

(437)

3 SCOTLAND

AIRDRIE

J.C.S.

☆ Atari 520 STFM — £299
Including starter pack

☆ Amiga A500 — £449
Including starter pack

☆ Sega Master Systems — £94.95

ALL HARDWARE AND SOFTWARE AVAILABLE
NOW!!

MAIL ORDER OFFER

4 Graham Street, Airdrie,
Scotland ML6 6BU
Telephone: (0236) 69874

(546)

EDINBURGH

The **AMIGA**
CENTRE SCOTLAND
Commodore Business Centre
Amiga Specialists since 1985

Amiga A500 and A2000 now available.
Technical and software support to our customers. Full range of AMIGA software and peripherals.

Send S.A.E. for our software catalogue

4 Hart Street Lane
Edinburgh EH1 3RN

Tel: 031-557 4242 (24 hrs.)

(379)

GLASGOW

**GLASGOW
COMPUTER CENTRE**

Atari appointed dealer
and Service Centre
Specialists in Atari ST Computers

WE'VE MOVED TO:
122 WEST NILE STREET
GLASGOW G1 2QZ
TEL: 041-332 8246

(136)

Birkenhead's New Computer Store

All hardware and software
at cut prices

Hardware examples:

Atari 520 STFM	£289.99
Amiga A500	£489.99
Atari 130XE complete kit	£138.75
654C complete kit	£277.95

Software examples:

RRP	OUR
£29.99	£24.99
£24.99	£19.99
£19.99	£17.99
£14.95	£12.99
£9.99	£8.99

Wargames, Adventure
Simulation
Specialists!

Run by Enthusiasts
for Enthusiasts!

We stock:
Atari/520, Apple,
Commodore, Amiga
IBM, Amstrad PC

Mail order anywhere or visit our retail store
Send large S.A.E. for free price list and games stocked



Call in for coffee and a chat!

COMPUTER ADVENTURE WORLD

1A Charing Cross, Birkenhead, England L41 6EJ
Telephone: 051-666 1132 (Mon.—Sat. 10am—5pm)

(623)

The slow decline of adventure games

A few years ago, adventure games were a growth area.

Today this is not so. Adventure games no longer sell in anywhere near the numbers of any moderate arcade game. The major software houses no longer accept adventure games of any traditional format. It has been a slow process but an inevitable one. First, the text adventures were dropped to be replaced by graphics and text. Now it is difficult to sell any standard adventure game in any numbers, the only exceptions being the spoof games of Delta 4 and games with a license behind them.

The first reason it has happened is a reflection of society and overall standards of basic education and literacy.

The second reason is also to do with standards - of programming, presentation and content. The adventure game market was given a boost when *Quill* and other adventure game designers were introduced. It also caused the death of the standard adventure game.

With the *PAW*, successor to *Quill*, it is possible to produce a text and graphics adventure with comparative ease. It led many people to the belief they could create a text adventure and now the market is

flooded with them. As the poorer games failed to sell, distributors and shops became wary of all but the big-name adventure games on the bigger machines.

Adventure game producers never seem to have been able to adapt to new styles and forms of game in the way arcade producers have done. Most of the adventure games crowd seem happy to plod along with the same old, tired format and to stagnate.

Everything must adapt and I feel that unless the adventure game does, it will soon become a quiet backwater.

Mike Lewis

PUZZLE

I have just finished reading the latest bestseller. I began the book last Sunday and read a certain number of pages each day until I finished it on the following Friday; a total of six days.

On each day after the first, I read as many pages as indicated by the sum or the digits of the page number reached the previous day.

If this sounds complicated, let me explain:

Suppose that on the first day I had read to page 84, the following day I would read 144 more pages, since 144 is equal to the square of eight plus four. This would take me to page 228, which is where I would continue on the third day.

In fact, I found that when I reached Friday, the quota of pages I had set myself to read brought me exactly to the final page in the book.

If there were 411 pages in the book how many did I read on each of the six days?

The answer will be in next week's issue.

Solution to puzzle 3-9 Dec

Answer: The correct distances for each of the nine days were: 157, 162, 98, 113, 93, 98, 65, 101 and 122. They total 1,009 miles.

Solution: The estimates for each of the three men on the nine days of the race is held in the two-dimensional array M(9,9). The values are read into the array from the DATA line at 1000.

Each day is represented by one of the nine loops A to I. As no man was correct on two consecutive days, certain values can be eliminated from the test. This is done in the IF/THEN part of lines 50 to 120. As each man was correct three times out of the nine there must be three values of '1', three of '2' and three of '3' in the loops. Thus, the product of values A, B, C, D, E, F, G, H and I must equal 216. The order of the numbers will not affect this total but will indicate each of the men having three correct guesses. Finally, the grand total is assessed - line 150. If this equals 1,009 the results are printed-out.

```

10 DIM M(9,9)
20 FOR T=1 TO 9:FOR D=1 TO 3
30 READ X:M(T,D)=X:NEXT NEXT
40 FOR A=1 TO 3
50 FOR B=1 TO 3:IF B=A THEN 250
60 FOR C=1 TO 3:IF C=B THEN 240
70 FOR D=1 TO 3:IF D=C THEN 230
80 FOR E=1 TO 3:IF E=D THEN 220
90 FOR F=1 TO 3:IF F=E THEN 210
100 FOR G=1 TO 3:IF G=F THEN 200
110 FOR H=1 TO 3:IF H=G THEN 190
120 FOR I=1 TO 3:IF I=H THEN 180
130 T=0:F=A*B*C*D*E*F*G*H*I
140 IF F<>216 THEN 180
150 T=T+M(1,A)+M(2,B)+M(3,C)+M(4,
D)+M(5,E)+M(6,F)+M(7,G)
+M(8,H)+M(9,I)
160 IF T<>1009 THEN 180
170 PRINT A;" ";B;" ";C;" ";D;"
";E;" ";F;" ";G;" ";H;" ";I
180 NEXT I
190 NEXT H
200 NEXT G
210 NEXT F
220 NEXT E
230 NEXT D
240 NEXT C
250 NEXT B
260 NEXT A
1000 DATA 144,124,157,197,162,155,
98,107,76,100,113,125,93,72,85,107,
115,98,65,
33,50,88,101,92,134,157,122
    
```

HACKERS



NEW LOW PRICE ST!



£260

+VAT=£299

SO MUCH FOR SO LITTLE!

There is nothing that can compare with the incredible value for money offered by Atari's 520ST-FM. For only £260 (+VAT=£299), you can purchase a powerful 512K RAM computer, with a 95 key keyboard (including numeric keypad), MIDI interface, GEM, a palette of 512 colours, mouse controller, and a 512K built-in disk drive. The 520ST-FM has a TV modulator built-in, and comes with a lead to allow you to plug it straight into any domestic colour television set. The mains transformer is also built-in to the keyboard, so there are no messy external boxes. You couldn't wish for a more compact, powerful and stylish unit. Atari ST computers are now firmly established in the UK, there are nearly 500 software titles already available for a wide variety of applications and the list is growing all the time. And that's not all. When you buy your new 520ST-FM (or any Atari ST computer) from Silica Shop, you will get a lot more, including a FREE Silica ST Starter Kit worth over £100. Read the ONLY FROM SILICA section on the left, to see why you should buy your new high power, low price 520ST-FM from Silica Shop, the UK's No.1 Atari Specialist. For further details of the range of Atari ST computers and the FREE Silica ST Starter Kit, complete and return the reply coupon below.

ATARI 520ST-FM NOW ONLY £260 (+VAT=£299)
 520ST-FM with 512K RAM & mono monitor £399 (inc VAT) Upgrade from 512K RAM to 1024K RAM £100 (inc VAT)

ATARI 1040ST-F - NEW PRICE

We are pleased to announce a new reduced price point on the 1040ST-F which is now available for only £499 (inc VAT). The 1040 is a powerful computer with 1Mb of RAM and also includes a built-in 1Mb double sided 3 1/2" disk drive. The 1040 has been designed for use on business and professional applications most of which require a high resolution monochrome or colour monitor. It does not therefore have an RF modulator for use with a domestic TV set. Modulators can be fitted for £49 (inc VAT).

1040ST-F Keyboard - Without Monitor £499 (inc VAT)
 1040ST-F Keyboard + High Res SM125 Mono Monitor £599 (inc VAT)
 If you would like further details of the 1040ST-F, return the coupon below.

MEGA ST's NOW IN STOCK

For the user who requires even more RAM than the 520 or 1040 ST's offer, the new MEGA ST computers are now available. There are two MEGA ST's, one with 2Mb of RAM and the other with a massive 4Mb. Both new computers are fully compatible with existing ST's and run currently available ST software. The MEGA ST's are styled as an expandable Central Processing Unit with open architecture and a detachable keyboard. They are supplied with GEM, a free mouse controller and all extras as with the 520 or 1040. Prices are as follows:

MEGA ST 2Mb Keyboard + CPU £299 (inc VAT)
 MEGA ST 2Mb Keyboard + CPU + SM125 Mono Monitor £399 (inc VAT)
 MEGA ST 4Mb Keyboard + CPU £499 (inc VAT)
 MEGA ST 4Mb Keyboard + CPU + SM125 Mono Monitor £599 (inc VAT)
 If you would like further details of the MEGA ST's, return the coupon below.



ONLY FROM SILICA

Finally, there's a personal computer that not only solves problems like other computers, but also solves the one problem that other computers have created. Affordability. Silica Shop are pleased to present the ST range of personal/business computers from Atari. The ST was designed utilizing the most recent breakthroughs in semiconductor technology, producing a personal computer that performs tasks with fewer parts. Which means it costs less to make. And less to buy. The latest ST computers now include built in power supplies and built in disk drives. The TOS operating system and GEM window environment are now on ROM chips which are already installed in the ST keyboard. This enables automatic instant booting when you switch on. Silica Shop are pleased to offer the complete Atari ST range. Our mail order department is situated in Sidcup and we have 3 retail outlets at Sidcup, Lion House (Tottenham Court Rd) and Sellridges (Oxford Street). We have eight years experience of Atari products, longer than any other UK company, and are well established as the UK's No.1 Atari specialist. With a group turnover of over £3 million and in excess of 50 staff, we offer you unbeatable service and support. We provide several facilities which you will find invaluable during your Atari computing life and most of these facilities are available ONLY FROM SILICA. We suggest that you read through what we have to offer, before you decide where to purchase your Atari ST.

FREE STARTER KIT - Only From Silica

When you purchase any Atari ST keyboard, you will not only receive the best value for money computer on the market, but you will also receive the following from Atari Corporation as part of the package:
 * BASIC Language Disk * BASIC Manual * ST Owners Manual * TOS/GEM on ROM

If you buy your ST from Silica Shop, you will also receive:
 * NEochrome Sampler - colour graphics program * 1st Word - Word Processor
 In addition, we at Silica would like to see you get off to a flying start with your new computer, so we have put together a special ST STARTER KIT worth over £100, which we are giving away FREE OF CHARGE with every ST computer purchased at our normal retail prices. This kit is available ONLY FROM SILICA and is aimed at providing users with a valuable introduction to the world of computing. We are continually upgrading the ST Starter Kit, which contains public domain and other licensed software, as well as books, magazines and accessories all relevant to ST computing. Return the coupon below for full details.

DEDICATED SERVICING - Only From Silica

At Silica Shop, we have a dedicated service department of seven full time Atari trained technical staff. This team is totally dedicated to servicing Atari computer products. Their accumulated knowledge, skill and experience makes them second to none in their field. You can be sure that any work carried out by them is of the highest standard. A standard of servicing which we believe you will find ONLY FROM SILICA. In addition to providing full servicing facilities for Atari ST computers (both in and out of warranty), our team is also able to offer memory and modulator upgrades to ST computers.

1Mb RAM UPGRADE: Our upgrade on the standard Atari 520ST-M or 520ST-FM keyboard will raise the memory from 512K to a massive 1024K. It has a full 1 year warranty and is available from £24 at an additional retail price of only £88.96 (+VAT = £100).

TV MODULATOR UPGRADE: Silica can upgrade the 1040ST-F to include a TV modulator so that you can then use it with your TV set. This is an internal upgrade and does not involve any untidy external boxes. A cable to connect your ST to any domestic TV is included in the price of the upgrade which is only £49 (inc VAT). The upgrade is also available for early 520ST computers at the same price.

THE FULL STOCK RANGE - Only From Silica

We aim to keep stocks of all Atari related products and our warehouse carries a stock of over 1/2 million. We support many software titles direct from the USA and you will find that we have new releases in advance of many of our competitors. Unlike dealers who may only stock selected titles, we have the full range. In addition, we carry a complete line of all books which have been written about the Atari ST. A range as wide as ours is something you will find is available ONLY FROM SILICA.

AFTER SALES SUPPORT - Only From Silica

After we have sold you your Atari ST from Silica Shop, you will be fully supported. Our free mailings keep you up to date with the latest releases and developments. This will help to keep you up to date with new software releases as well as what's happening in the Atari market. And in addition, our sales staff are at the end of a telephone line to service all of your Atari requirements. If you purchase an ST from Silica and would like any technical advice, we have a full time technical support team to help you get the best from your computer. Because we have both the staff and the systems specifically dedicated to providing after sales service on Atari ST computers, we are confident that our users enjoy an exceptionally high level of support. This can be received ONLY FROM SILICA.

FREE CATALOGUES - Only From Silica

At Silica Shop, we recognise that serious users require an in-depth information service, which is why we mail free newsletters and price lists to our ST owners. These are up to 48 pages long and are crammed with technical details as well as special offers and product descriptions. If you have already purchased an ST and would like to have your name added to our mailing list, please complete the coupon & return it to us. This information service is available ONLY FROM SILICA.

FREE OVERNIGHT DELIVERY - From Silica

Most orders are processed through our computer within 24 hours of receiving them. Most hardware orders are sent by the overnight GROUP 4 courier service FREE OF CHARGE to customers within the UK. This method helps to ensure minimum delay and maximum protection.

PRICE MATCH - Only From Silica

We hope that the combination of our low prices, FREE UK delivery service, FREE Starter Kit and FREE after sales support, will be enough to make you buy your Atari equipment from Silica Shop. If however, there is something you wish to purchase, and you find one of our competitors offering it at a lower price, then please contact our sales department, providing us with our competitor's name, address and telephone number. If our competitor has the goods in stock, we will normally match the offer (on a 'same product - same price' basis) and still provide you with our normal free delivery. We realise that we are not the only company who will match a competitor's price. However, if you come to us for a price match, you will also be entitled to our after sales service, including free newsletters and technical support. This means our price match promise rather than a special, something you will receive ONLY FROM SILICA. We want you to go anywhere else for your Atari products. So shop at Silica, the UK's No.1 Atari Specialist.

SIDCUP (& Mail Order) 01-309 1111
 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

LONDON 01-580 4839
 Lion House (1st floor), 227 Tottenham Court Rd, London, W1P 0HX

LONDON 01-629 1234 ext 3914
 Sellridges (1st floor), Oxford Street, London, W1A 1AB

To: Silica Shop Ltd, Dept PCWK 1087, 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

PLEASE SEND ME FREE LITERATURE ON THE ATARI ST

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode:

Do you already own a computer
 If so, which one do you own?



You're cool, the engine's hot, the girl's gorgeous,
a tank full of gas and an open road.... the rest is up to you..!

Screenshot from Amstrad version.



Screenshot from CBM 64/128 version.



Out Run™

START



Screenshot from Spectrum version.



Screenshot from Atari ST version.

The ultimate experience in motor sports simulation, the absolute challenge to nerve and reflexes. Feel the wind in your hair and the pull of the G-force as you power your way along the highways and byways, a girl by your side, and open country before you. Experience the exhilaration and excitement of driving a high performance sports car in this teasing time trial where your co-ordination and nerve will be tested to unbelievable limits. Out Run the coin op starred as an arcade sensation. Out Run the computer simulation mirrors this exciting all action spectacle.

CBM 64/128
CASSETTE £9.99 DISK £11.99
SPECTRUM
CASSETTE £8.99

AMSTRAD
CASSETTE £9.99 DISK £14.99
ATARI ST
DISK £19.99

INCLUDES ORIGINAL
'Sound Track'
FROM COIN OP
VERSION

The machine becomes a home computer reality on December 10th.

*Atari ST version will be available later in December.

SEGA

U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 356 3388.

