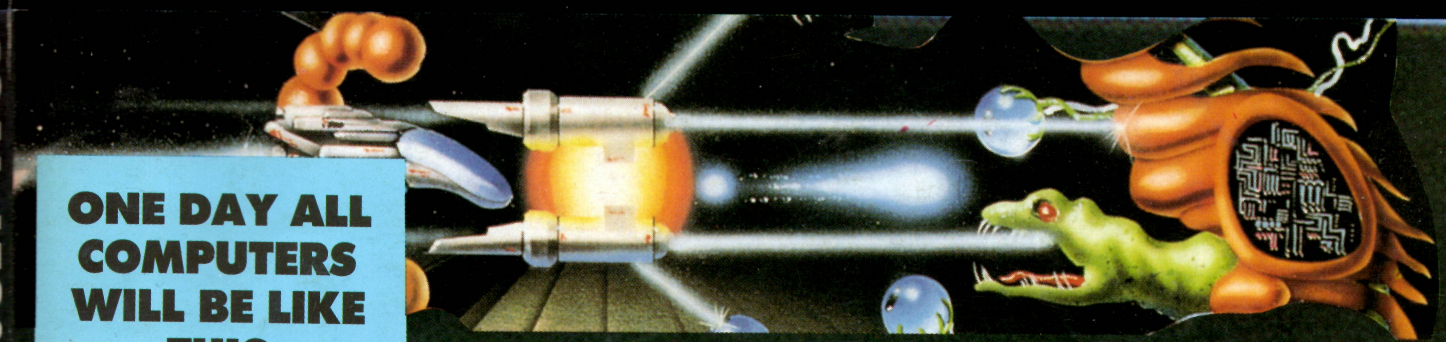
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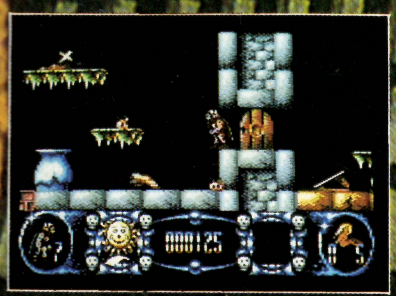


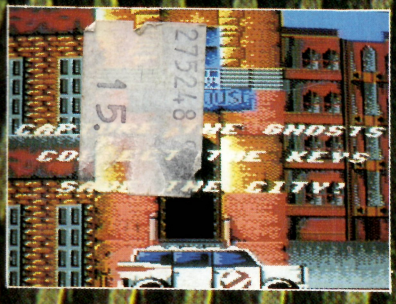
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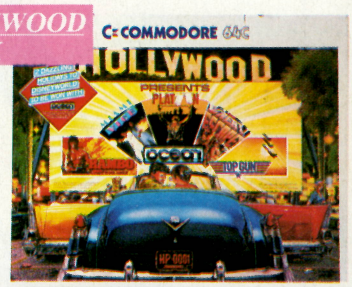
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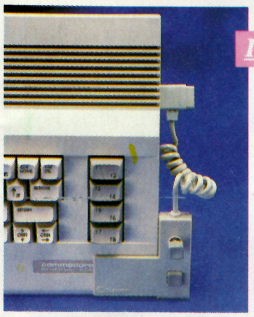
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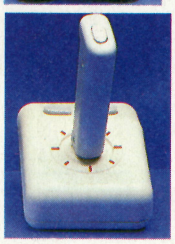
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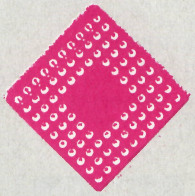
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JULY 1989 Volume 7 No. 11



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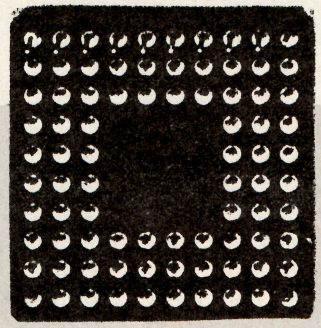
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CCI View

Dear CCI Reader,

In this month's CCI we have a major investigation into the Transputer. "What has that got to do with my C64". Some readers may ask. The answer is that in CCI, we don't only like to look at what is happening now, the present, but also what will happen, the future as it affects computing, especially Commodore computing. In our view the Transputer will be one of those factors that will influence a growing area of computer activity. Commodore alredy plans to sell a transputer-based Amiga later this year. Of course, the present costs of computers using transputers is far beyond what the average CCI reader would be able to afford, but electronic industry prices fall with astonishing rapidity and technological progress spreads very quickly. So we thought it both interesting and relevant to take a close look at this exciting development.

Technological progress is also very noticable in CCI's C64 Game of the Month Stormlord from the Andrew Hewson stable. Andrew has been called the King of the Shoot 'em Ups and he goes on producing games of outstanding quality. Both he and another well-known personality in the software world, Tony Rainbird, just read somewhat wryly a further major story we report: the takeover by MicroProse of Telecomsoft.

Andrew Hewson's company was recently involved in litigation with Telecomsoft when Hewson disputed the right of Telecomsoft to sign up the leading programmers which his company used. The case was settled but judging from the brilliance of the programming of Stormlord, Hewson's loss was not great, nor from the fate of Telecomsoft was its gain.

Tony Rainbird whose software clubs are covered in this CCI, left Telecomsoft, with one of its major labels still bearing his name, from among other things, he says frustration at its bureaucracy, can hardly be too upset at his erstwhile employers demise.

In this CCI we also cover a game about to be released by yet another major force in international software, U.S. Gold. Forgotten Worlds is hailed as U.S. Gold's best game in ages. For some time the Birmingham-company has been not at its best and it is good to see it producing outstanding software again.

This issue of CCI is not however all about high technolgoy and software companies and their gossip-worthy goings on. We try to keep a balance for all interests and there is a fascinating article about a monitor that becomes a TV and even a story of a relative failure — Peter Gerrard unable to get inside his 64! Even CCI has its defeats. Now that's not something we report often!

Antony Jacobson

Antony H. Jacobson
Managing Editor and Publisher

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Commodore "dominates the high street"

Commodore tells us it has been moving forward in all of its product sectors on the consumer front.

The major chainstore group Allders has taken on Commodore's PC10 Series III machines on the strength of the Amiga 500's performance in their shops over Christmas. They will also be stocking Commodore's price-beating PC10 Series III bundle (which includes a dot matrix printer and reails for under £600).

Laskys will now be stocking the PC1, the C64 and the Amiga 500 in 32 of its stores. It will also be running the PC10 and PC20 Series III in six of its largest stores.

Last Christmas' major marketing and TV advertising campaigns for the Amiga 500 — which resulted in Commodore's best ever end of year period — has prompted the John Lewis group to stock the Amiga in 20 of its outlets. And the high-street multiple Tandy will be selling the Commodore 64 Hollywood Pack in every one of its UK stores.

The world-famous toy shop Hamleys — on London's Regent Street — will be selling both the C64 and the Amiga 500. Among the catalogue companies Grattens, Argus, and Littlewoods have decided to stock Commodore products.

Dean Barrett, Commodore Business Machines' Marketing Manager, commented: "These signings are, of course, great news for both Commodore and the shops stocking our products. We are particularly pleased to see the PCs attracting so much attention — we look set to give the other consumer PC manufacturers a hard time in the coming months".

Micronet Challenges Chancellor

The Government claims Micronet has taken the first step towards total taxation of the press by imposing VAT on the electronic computer magazine, Micronet.

The change in VAT status, announced at the time of the budget, means that residential consumers are now being charged VAT on news and features, and appear to be penalized because of the innovative way they are accessing the information.

"There is no excuse for this," commented David Rosenbaum, Micronet Product Manager. "Either the Government is preparing the ground for the general imposition of VAT on the press or they have made a serious error. We're taking a stand because we don't believe there should be a tax on information and we won't believe there should be different rules for electronic media."

A petition, collected electronically, and 'signed' by over 3000 Micronet members, has been presented to Nigel Lawson, the Chancellor of the Exchequer.

Despite the change in VAT status Micronet's annual tariff remains at the pre-VAT price of £79.95 until June 30th 1989. This includes a free GEC Datachat modem.



The petition to the residence of the Chancellor of the Exchequer

Mindware

Mindware International, Canadian developer of Amiga desktop presentation and animation software has announced **PageSync.** powerful new tool for creating sophisticated, timed interaction between Amiga-based graphics and professional quality audio, including MIDI.

PageSync allows external MIDI events and computer animation to control one another. Used in conjunction with a MIDI instrument, **PageSync** lets a computer animation advance, stop or reverse based upon signals generated by that MIDI instrument. For example, a MIDI drum machine could advance a computer animation by one frame per drum beat, keeping the animation in perfect time with the music.

PageSync could also do the opposite: an animation running on the Amiga could literally play a MIDI instrument while running the animation. In addition, **PageSync** will synchronize computer graphic events and digitized sound samples.

PageSync can be used in a diverse range of applications, including music, corporate sales presentations, training, animation and home video.

PageSync will also make it possible to integrate computer graphics and music with video, through the use of additional hardware. For example, anyone could make their own home music video by sending synchronized graphics and music to a standard video cassette recorder. In addition, live images from a video camera could be merged with graphics into a single picture using a genlock. This picture, along with a synchronized music, could then be directed to videotape.

PageSync costs $100.00 and will work in conjunction with two other Mindware products: **PageFlipper Plus F/X** and **PAGErender 3D.** Contact Mindware International, 33 Alliance Blvd., Unit 1, Barrie, Ontario L4M 5K2, CANADA, or call (705) 737-5998.

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More CBM News

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BBC Emulator
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National Union of Students
Following Commodore's agreement with the NUS that resulted in Commodore's products being offered through Midland Bank's student finance scheme to all the union's members at preferential prices. Commodore is pleased the scheme has been a notable success with sales of both Amigas and PCs growing month by month (Contact: Ken Spencer 04574-68003).

Joint Projects
A lecturer from Norfolk College has just finished a project entitled "Textile Designing on the Amiga". As a result of the success of this venture Commodore is looking for more joint-project work in the education sector. The company is now calling for requests from individuals in education who have serious proposals for joint-projects. (Joint-project ideas should be mailed to Peter Talbot, Nationala Sales Manager for Education, at Commodore House, The Switchback, Gardner Road, Maidenhead, Berkshire SJ6 7XA).

The Primary Project
The beginning of January saw the start of a pilot scheme called The Primary Project with the purpose of evaluating the Amiga and related software in the classroom environment; to find out how Primary School children related to the Amiga 500; and to assess how the computer can be blended with the National Curriculum. The counties involved are: Somerset, Norfolk, Humberside, Berkshire and Cheshire.

Reports on the initial findings of The Primary Project will be available in the next two weeks.

CD Menaces Online

The online information undustry in North America is under threat from the massive growth of CD-Roms, according to a report from Information Markets Indicators.

Martha Williams, president of IMI, said: "CD-Rom is eroding the revenues of online databases the way online retrieval eroded sales of the corresponding printed resources. We are finding, particularly in the academic market, that CD-Rom is replacing online media."

The survey reports that 80% of universities have installed CD-Roms, with users acquiring 3.23 titles at an average of $3,000 each.

Although searchable CD-Rom databases have only been available for four years, the survey of 257 major users of online services found that 47% are using one or more CD-Rom titles. "The penetration of the online marketplace among large users outside academia appears to be about 30%," said Williams.

The survey, *CD-Rom's Impact on the Database Industry*, is available from Learned Information and costs £450.

Blue Ribbon Evens the Odds!

Do you enjoy an occasional flutter? Do you get frustrated when you back a loser? Do you wish you could beat the bookies more frequently? (Don't you wish people wrote less questioning press releases?) Here's your chance to even the odds with **Turf-Form**, the latest release from **Blue Ribbon Software.**

Turf-Form is a horse racing forecaster that can help predict Form for both Flat and National Hunt races on UK racecourses, so Blue Ribbon claims giving you a better chance come Derby Day, or even the Grand National. (Wanna bet?)

Using Form data **Turf-Form** utilizes an accurate prediction routine to produce both speed and fitness ratings for each horse you input, giving the horse's chances of victory on the course chosen.

Turf-Form is available for the C64 and (hooray!) the C16/+4 price £2.99.

High Steel

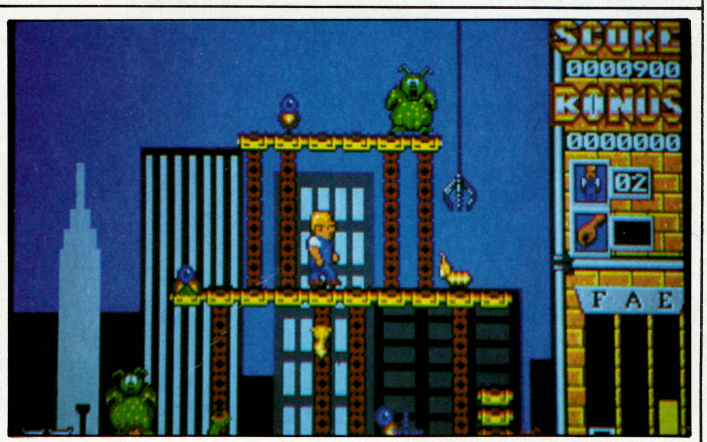
This is no time to feel dizzy. (I beg your pardon, I never touched her! Ed) As you balance precariously on a narrow steel girder, hundreds of feet above the hard concrete below, a head for heights is a must. There's a skyscraper to be built, (Does Ian Stewart know about this?), and the Spitters, Crawlers and metal-munching Gremlins are in hot pursuit. You step over the slippery remains of your workmates' lunch, hurl your spanner at a menacing shadow, and curse the day you became a high steel worker.

The sixth floor is complete. The huge crane delivers the next girder, just as a brick smashes into your hard hat. Things might not be so bad if you could just find your sandwiches. (Keep them away from the Spitters! Yuk!)

Can you overcome all obstacles and dangers confronting you to tower above the city streets below, or will you end up splatting the pavement like raspberry jam? (And the sandwiches?)

Screen 7 claim High Steel is 'a completely original arcade game that will keep you hooked to your computer for hour upon hour of frantic high altitude addictive fun'.

They also tell us it has very good graphics, sampled sound and a great sense of humour. (If you don't stop feeling dizzy her boyufriend might charge you more than £14.99 (D) or £9.99 (C) or even £19.99 for his Amiga).



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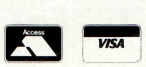
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Sales of the BBC Emulator have just gone over the one thousand mark. It has received a good deal of praise for the quality of its emulation.

National Union of Students
Following Commodore's agreement with the NUS that resulted in Commodore's products being offered through Midland Bank's student finance scheme to all the union's members at preferential prices. Commodore is pleased the scheme has been a notable success with sales of both Amigas and PCs growing month by month (Contact: Ken Spencer 04574-68003).

Joint Projects
A lecturer from Norfolk College has just finished a project entitled "Textile Designing on the Amiga". As a result of the success of this venture Commodore is looking for more joint-project work in the education sector. The company is now calling for requests from individuals in education who have serious proposals for joint-projects. (Joint-project ideas should be mailed to Peter Talbot, Nationala Sales Manager for Education, at Commodore House, The Switchback, Gardner Road, Maidenhead, Berkshire SJ6 7XA).

The Primary Project
The beginning of January saw the start of a pilot scheme called The Primary Project with the purpose of evaluating the Amiga and related software in the classroom environment; to find out how Primary School children related to the Amiga 500; and to assess how the computer can be blended with the National Curriculum. The counties involved are: Somerset, Norfolk, Humberside, Berkshire and Cheshire.

Reports on the initial findings of The Primary Project will be available in the next two weeks.

CD Menaces Online

The online information undustry in North America is under threat from the massive growth of CD-Roms, according to a report from Information Markets Indicators.

Martha Williams, president of IMI, said: "CD-Rom is eroding the revenues of online databases the way online retrieval eroded sales of the corresponding printed resources. We are finding, particularly in the academic market, that CD-Rom is replacing online media."

The survey reports that 80% of universities have installed CD-Roms, with users acquiring 3.23 titles at an average of $3,000 each.

Although searchable CD-Rom databases have only been available for four years, the survey of 257 major users of online services found that 47% are using one or more CD-Rom titles. "The penetration of the online marketplace among large users outside academia appears to be about 30%," said Williams.

The survey, *CD-Rom's Impact on the Database Industry*, is available from Learned Information and costs £450.

Blue Ribbon Evens the Odds!

Do you enjoy an occasional flutter? Do you get frustrated when you back a loser? Do you wish you could beat the bookies more frequently? (Don't you wish people wrote less questioning press releases?) Here's your chance to even the odds with **Turf-Form**, the latest release from **Blue Ribbon Software.**

Turf-Form is a horse racing forecaster that can help predict Form for both Flat and National Hunt races on UK racecourses, so Blue Ribbon claims giving you a better chance come Derby Day, or even the Grand National. (Wanna bet?)

Using Form data **Turf-Form** utilizes an accurate prediction routine to produce both speed and fitness ratings for each horse you input, giving the horse's chances of victory on the course chosen.

Turf-Form is available for the C64 and (hooray!) the C16/+4 price £2.99.

High Steel

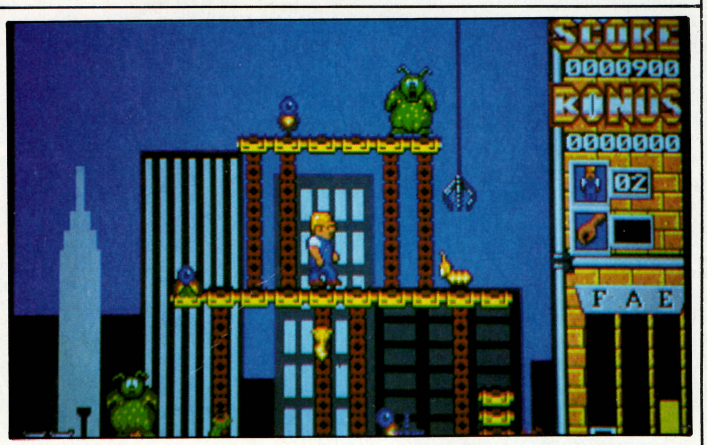
This is no time to feel dizzy. (I beg your pardon, I never touched her! Ed) As you balance precariously on a narrow steel girder, hundreds of feet above the hard concrete below, a head for heights is a must. There's a skyscraper to be built, (Does Ian Stewart know about this?), and the Spitters, Crawlers and metal-munching Gremlins are in hot pursuit. You step over the slippery remains of your workmates' lunch, hurl your spanner at a menacing shadow, and curse the day you became a high steel worker.

The sixth floor is complete. The huge crane delivers the next girder, just as a brick smashes into your hard hat. Things might not be so bad if you could just find your sandwiches. (Keep them away from the Spitters! Yuk!)

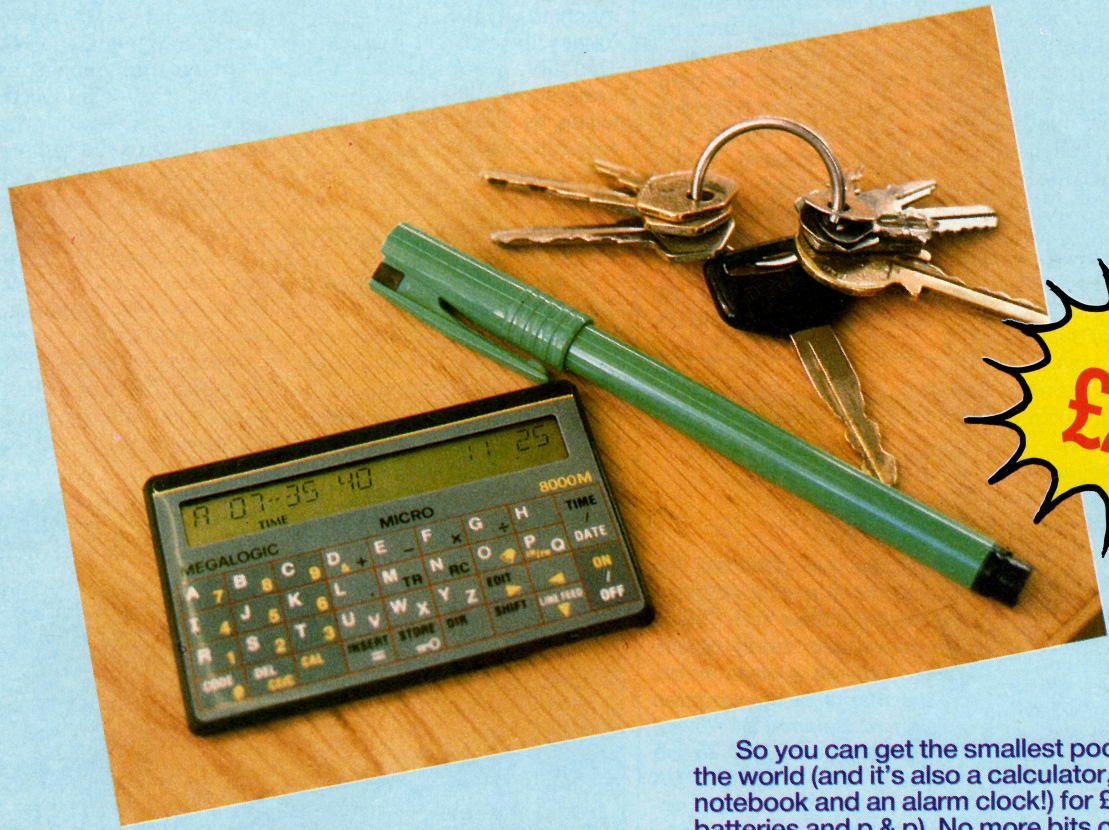
Can you overcome all obstacles and dangers confronting you to tower above the city streets below, or will you end up splatting the pavement like raspberry jam? (And the sandwiches?)

Screen 7 claim High Steel is 'a completely original arcade game that will keep you hooked to your computer for hour upon hour of frantic high altitude addictive fun'.

They also tell us it has very good graphics, sampled sound and a great sense of humour. (If you don't stop feeling dizzy her boyufriend might charge you more than £14.99 (D) or £9.99 (C) or even £19.99 for his Amiga).



"The SMALLEST pocket computer in the world"



ONLY £22.95

Keep your whole address book and lots more vital information on a computer just credit card size! Make sure that phone numbers, addresses, dates and other information you need are always at your fingertips with the DataStar 8000M Electronic Notebook.

This mini-miracle – yes, it *is* no bigger than your cheque or credit card! – lets you store up to 8k of information. It even has a special code to keep your data absolutely private. Megalogic, its manufacturer, tells us that the 8000M is the smallest pocket computer in the world! The 8000M may be very small, but it's also very powerful, with a 20-digit alphanumeric display and 7951 characters for programming.

The recommended retail price for the DataStar 8000M is £24.95. However, through this special offer, you can buy it for only £22.95 – saving more than 10%, and postage and packing is FREE!

So you can get the smallest pocket computer in the world (and it's also a calculator, electronic notebook and an alarm clock!) for £22.95 (including batteries and p & p). No more bits of paper, with the DataStar 8000M, wherever you go, you'll have bytes of vital information right in the palm of your hand.

Commodore Computing International
40 Bowling Green Lane, London EC1R 0NE

Please send me ☐ DataStar 8000M Electronic Notebook(s) at the special price of £22.95 including VAT and p&p.

Please make cheques payable to Croftward Ltd., or debit my Visa ☐ or Access ☐ Card No (indicate the account by marking the appropriate box):

Signature.....Exp. date.....

Name.....

Address.....

.....

Please allow 28 days for delivery C9072

Dialcom's Four

Dialcom have launched four new magazines on Prestel/ Micronet.

Newsday Magazine — headline news, special features, small business news, 24 hour weather and intelligent informed comment on the issues of the day — continuously updated throughout the day.

Look! Magazine — packed with information to help you get the most out of your leisure time with health, food and wine features, wide and varied Arts coverage and much more.

SportsEye Magazine — features and results on major sports nationally and internationally — a must for players and armchair enthusiasts alike, covering major and minority interest activities and details of many local sports associations and events near you.

Games City Magazine — the ultimate games metropolis, featuring IQ tower for great minds, the end of the pier for fun, quizzes and prizes, and down through the dangerous alleyways in the heart of the City to the land of Shades.

Dialcom tells us that you just log on to page 1: access to all four magazines is already included in your current subscription! (If you have a subscription, that is!)

U.S. spends more

The European Community lags far behind the US in public spending on computers, according to a recent study.

The study was carried out by market researcher Eurostrategies and the organisers of France's Sicob 1989 trade fair.

It shows that annual computer spending by EC public administrations totals US$7bn — 0.57% of average national budgets — compared to estimated US spending of $20bn — 1.6% of the national budget.

The study shows that the Netherlands takes the EC lead with an investment in computers amounting to 1.7% of its national budget. The UK is in third place (0.68%) below Greece (1.52%). Belgium spends least, at 0.2%.

According to the report, there are only 76,500 computer specialists in the EC compared to 102,000 in the US.

Mindscape times it right

Mindscape has attained the unusual honour of a software review in the New York Times. This newspaper rarely covers games but ran a large article on the merits of the updated version of Balance of Power. Trying very hard not to be outdone, Mindscape's UK management team has apparently been seen offering copies of the game around The Times and The Guardian's and other distinguished editorial departments ... Even CCI's!

Clearer Laptops

The poor resolution of laptop screens may soon be a thing of the past. Chips & Technologies has developed the 82C455 VGA Flat Panel CRT Controller which the firm claim is the missing link between the VGA graphics standard and 640 by 480 resolution flat panels. The controller can drive LCD, gas plasma, electroluminescent and CRT displays and provides four, eight and 16 levels of grey scaling with no flicker.

A smart map function provides intelligent colour to grey scale conversion, ensuring colour legibility on monochrome flat panels in text mode. Internal compensation schemes stretch display sizes to fill available screen areas, while built-in colour support provides for the arrival of colour LCD display technology.

According to Mike Swavely, vice president of sales and marketing at Compaq, the first colour laptops will come out in the next 12 to 24 months although prototype LCDs on laptops were recently shown by Sharp, NEC, IBM and Toshiba.

Jaws bites back

The box office smash hit film of the 1970's is soon to be available for the small screen of the home computer.

The terrifying epic which captured the attention of the public with its no holds barred, fearful tale of a killer great white shark is the first release of a brand new software company SCREEN 7. (Though among the developers you will recognise a certain David Martin of Martech as its boss.)

JAWS, the computer game, plunges you into a desperate fight against the evil of a killing machine which has no respect for any life form (No, it isn't Mrs Thatcher, we believe). All it understands is capturing and killing its prey, which it does with ruthless efficiency.

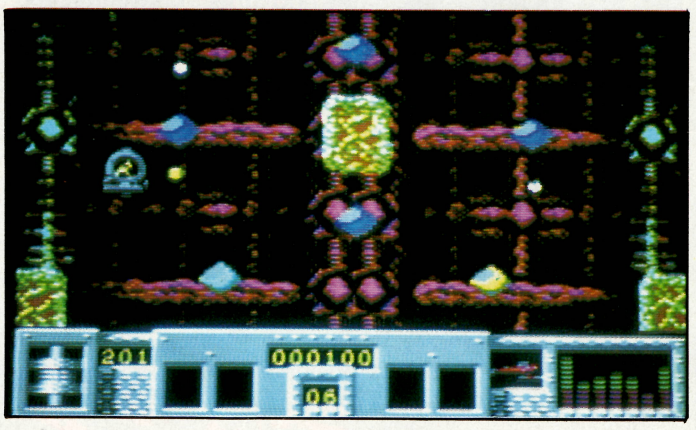
A gruesome discovery confirms the worst — it's out there somewhere. (Probably lurking among the programs!)

In an attempt to safeguard their vital tourist trade, Amity Island's Mayor Vaughn engages a professional shark killer from the mainland. Unfortunately, en route, a fierce storm wrecks his boat, and the means of JAWS' destruction is scattered throughout the caves and chasms of a menancing sea world. In desperation, Mayor Vaugn turns to you, Police Chief Brody. With your two colleagues, Hooper, the shark expert, and Quint, the manic shark hunter, you set off to retrieve the lethal weapons from the sea bed and kill the unwelcome intruder. Unfortunately, JAWS has other ideas.

Whilst JAWS roams the clear water bringing a swift and horrible end to unwary swimmers, you must undertake hazardous deep sea dives into a world teeming with hostile life and full of unforeseen dangers. To make matters worse, Major Vaugn is getting impatient. As the death toll rises, the beaches, essential for the island's tourist trade, get closed. Pretty soon, you may find yourself out of a job. Can you rid Amity Island of its malevolent visitor before it's too late?

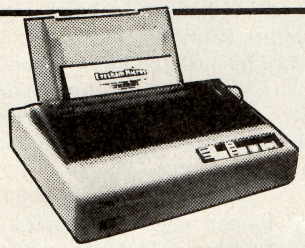
JAWS, one of the greatest box office attractions in the history of motion pictures, surfaces for the first time on a computer screen near you. (Perhaps you'd better sit well back from your monitor. And no, Jaws' mate is not named 'Nadia').





Evesham Micros

All prices include VAT/delivery



star LC-10
Best-selling CBM ready printer

Now the established market leader in this price category, the LC-10 incorporates many advanced features for such a low price. Its facilities, not normally available in this price range, include 4 NLQ fonts (with 96 combinations) and paper parking (use single sheets without removing tractor paper). Good value 7-colour version also available, which will also accept standard LC10 black ribbons. LC10 available either in '64/128 ready form or as parallel version for Amiga users. Please state your computer type when ordering.

Only £199.00

Colour version also available,

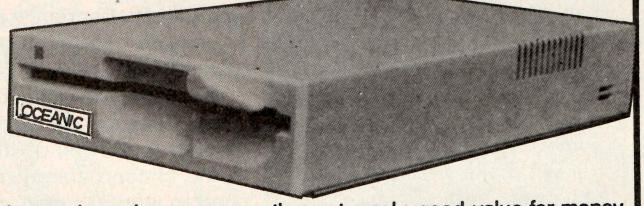
Only £249.00

Prices include two extra black ribbons free of charge

OCEANIC OC-118

NOW WITH NEW 'JIFFY DOS' !

Previously sold as 'Excelerator Plus'



A superb package representing extremely good value for money, combining the Oceanic OC-118 disk drive (previously sold as 'Excelerator+') and the sophisticated GEOS system. Said by COMPUTE's Gazette to have "dramatic improvements over the 1541 in quality and reliability", the drive is a stylish and attractive compact unit featuring a direct drive motor and its own external power supply. GEOS brings the power of a graphic interface and integrated disk turbo to your '64 and includes geoPAINT, a graphic workshop, geoWRITE, a WYSIWIG word processor and many Desk Accessories. Many more extensions available - see below.

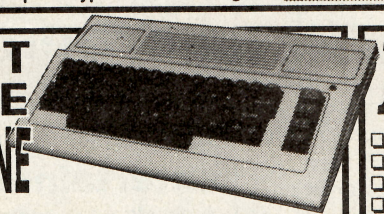
Oceanic OC-118 & GEOS £129.95

Oceanic OC-118 & GEOS plus *Freeze Machine* £149.95

GEOS Applications

GEOS 64 VERSION 2.0	£32.95	GEOPUBLISH 64/128	£32.95
GEOFILE	£24.95	GEOPROGRAMMER	£32.95
GEOCALC	£24.95	GEOS 128 VERSION 2.0	£39.95
DESKPACK+ 64/128	£21.95	GEOWRITE WORKSHOP 128	£32.95
GEOWRITE WORKSHOP	£24.95	GEOCALC 128	£32.95
FONTPACK+ 64/128	£16.95	GEOFILE 128	£32.95
GEOSPELL	£16.95		

GET THE SLIMLINE '64



Your '64 could look like this!

Why put up with an old fashioned looking computer? Fit this smart and modern looking new case to your '64 - it will look and feel like you are using a brand new computer. This high quality injection moulded case is simple to fit and gives a lower keyboard height. Reject the old image and order one *now*.

Only £19.95

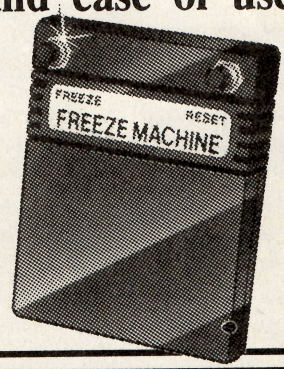
FREEZE MACHINE
for speed, power and ease of use

- Unstoppable Freeze
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- Lazer and Turbo fastloads
- Integral reset button
- Tape turbo facilities
- 12 second disk format
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- Selectaload
- many more useful features!

Only £28.95

For speed, power and ease of use it has to be Freeze Machine, probably the most effective backup cartridge on the market! Incorporating two types of fast load routines you can SAVE and reLOAD your favourite games in as little as 10 seconds and no more than 18. Numerous invaluable facilities available, including a built-in reset button. Utility Disc V3.0 also available to complement usage of the cartridge. It allows complete transfer to disk of many tape-based programs that load extra parts, eg. Gunship, Last Ninja, World Games, Supercycle. A very useful add-on.

Utility disc only £7.95



Selected Products

DOUBLER '64 ..... Makes perfect tape backups every time. Consists of hardware and software. Requires access to two data recorders. Very easy to use, only **£12.95**

ICONTROLLER ..... Natty little keyboard mounted cursor controller, ideal for icon-driven applications like GEOS **£11.95**

DATA RECORDER ..... CBM compatible, same as C2N/1531 but cheaper and includes pause control button **£24.95**

DOLPHIN DOS ..... Parallel operating system for use with 64/128 and 1541 disk drive. Fantastic speed increase on LOAD and SAVE whilst maintaining CBM disk format. Many extra DOS & BASIC commands, includes built-in monitor and Centronics printer driver **£69.95**

RENEGADE DISK BACKUP ..... The most powerful on the market today **£19.95**

1541 PHYSICAL EXAM ..... Consists of digital alignment disk and drive fault diagnosis software to check and correct 1541 head alignment. Includes quiet drive stops **£39.95**

1541 QUIET DRIVE STOPS ..... Silences 'knocking' noise with 1541 drives **£4.95**

AZIMATE 3000 KIT ..... Kit to check and adjust data recorder head alignment **£6.95**

AMIGA 500

NEW SPECIAL OFFER AMIGA PACK

Contains Amiga 500, TV modulator, Mouse, Joystick, Mouse Mat, 'Zynaps', 'Return of the Jedi', 'Custodian', 'Powerplay', 'Mercenary', 'Eliminator', 'Hellbent', 'Bubble Ghost', and 1 extra free game (while stocks last) *plus* 5 disks of public domain software!

All this for only £399.00

Amiga 500 with TV modulator **£359.00**

Philips CM8833 (Colour monitor suitable for Amiga 500) **£229.00**

Philips CM8852 monitor as above, but higher resolution **£299.00**

Cumana external 5.25" floppy drive 40/80 track 'Transformer' compatible . **£159.95**

Disks & Boxes

25 bulk packed 5.25" DS/DD disks with sleeves, write protect tabs and labels. Good quality and fully guaranteed, only **£13.95**

25 disks + box. Disks as above plus 50 capacity lockable storage box, only **£22.95**

25 disks + 100 box. As previous offer but with 100 capacity locking box **£24.95**

50 capacity box. Lockable storage unit for 5.25" disks with smoked perspex top **£10.95**

100 capacity box. Larger version **£13.95**

How to order from Evesham Micros

VISA ACCESS

Phone us with your ACCESS or VISA card details on : ☎ 0386-765500

All prices include VAT and delivery. Express Courier delivery £5.00 extra.

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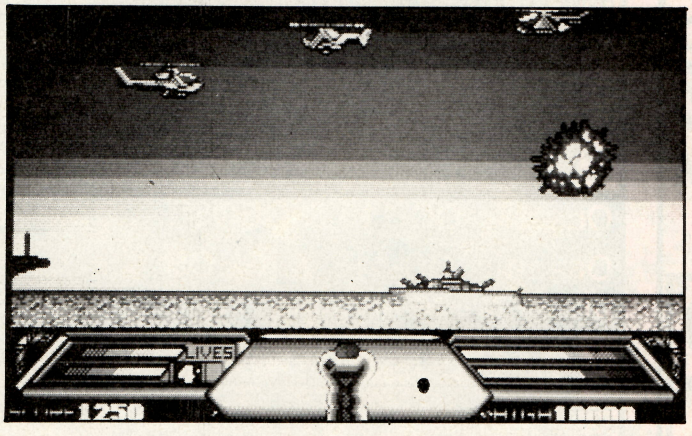
Govt., educ. & PLC orders welcome
Same day despatch whenever possible
All goods subject to availability, E.&O.E.
Open to callers 6 days, 9.30-5.30

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✆ 0386-765500
fax 0386-765354
telex 333294

Also at: **1762 Pershore Rd., Cotteridge, Birmingham B30 3BH Tel: 021 458 4564**

Steigar

Marauder. Soldier of Fortune. Hit man. His business was death — other people's of course — and his currency was gold. (No, his name is not 'Computer Journalist'). If there is a problem — any problem — someone else's problem, Steigar will make it his problem — at a price.



No island fortress was secure. No Embassy was safe. If the gold was right — the job got done. Where he came from, no-one dared ask, but Steigar was bound for Hell. Then came capture. The interrogation.

"Too useful to erradicate" the CIA said.

Drafted into the US Navy, Steigar is trained to be a hit-and-run helicopter pilot. Only the Senior Command know that Steigar is no ordinary recruit. It may be a terrorist training camp that needs wiping out. It may be a military dictator de-stabilising the area who needs attention. It may be a disaster struck magazine company in Ludlow.

When the odds seem impossible, Steigar is let loose, dealing death and destruction to the chosen enemy. Steigar used to work for gold, now he works for orders — the job's the same.

Steigar, says Screen 7, is 'the kind of arcade, multi-level, multi-weapon death or glory blast 'em up that wrecks joysticks. Dangerous big screen action for the mercenary in you!' Everyone has his price and Steigar's is £19.95 Amiga, C64 (D) £14.99 and (C) £9.99. Does that seem enough for the mercenary in you?

M.A.S.T. comes to Europe

M.A.S.T (UK) Ltd., are launching in Europe their range of hardware peripherals for Amiga A500/1000/2000 computers.

The "Match Box Collection" features the "Micromeg" 512K expansion board for the A500. This comes fully populated with 1 met hi-tech zip dram's and a battery backed clock. Micromegs use a fraction of the power of boards populated with the old style 256 drams chips.

"Minimegs" is small enough to fit into a jacket pocket. The M.A.S.T upgrade policy means that users are able to increase the memory at any time by simply returning the unit to the U.K. address. There are no computer warranty problems with "Minimegs" — it just plugs into the A500 or A1000 expansion port.

The "Unidrive" and "Twindrive" floppy drives with many features unique to M.A.S.T products will be joined by the "Tiny Tiger" range of high performance SCSI hard disk drives. These small units have storage capacities of 30, 42 and 84 Meg. For the first time anywhere in the world M.A.S.T will have the new 50 meg "Tiny Tiger"..

"Jumpdisk" (George Thompson Services who represent M.A.S.T in Europe) are launching "Doslab" a new interactive method of learning about Amigados and the CLI. At £14.99 for the two disk set, this program takes into account the years of experience jumpdisk and G.T.S have had in helping customers with problems related to the Amiga operating system. And "Mypaint" a 'paint program just for kids'. It features sampled sounds for each picture, animated icon drawing tools, special effects and much more.

They are also doing a first for the launch of "AMI ... alignment system". This is a precision floppy drive head alignment and performance monitoring system for the Amiga range of computers. Easy to operate, it will give Amiga owners the opportunity of checking the performance of their disk drives.

Digipro

An upgrade path for Amiga 1000 owners is being offered by DIGIPRO Limited. In conjunction with Commodore UK, they are offering to all owners of the original Amiga 1000 the opportunity to part exchange the machine against the cost of a new Amiga 2000 (model B).

DIGIPRO will exchange for any working Amiga 1000 and £649.00 + VAT a new 1MB Amiga 2000. The only stipulation is that the 1000 must be at least a 512K model.

A DIGIPRO spokesman said "This is an ideal chance to show that the A1000 owners have not been forgotten and we can now offer them the chance to upgrade to the flagship of the Commodore range."



Get one in part exchange

Screen 7

A new force in entertainment

'A new force in computer software entertainment' has announced itself: SCREEN 7.

SCREEN 7 claims already to have lined up a 'superlative host of new products'.

SCREEN 7's first product will be a computer version of the blockbusing cinema hit of the 1970's — JAWS. JAWS will be released across all the major 8 and 16 bit computers, including PC.

"We have looked long and hard at the type of products on the market today" commented a company spokesman. "We believe we have the right ideas and the right products for today's computer game enthusiast — you can be sure that you'll see some great products from SCREEN 7."

Other titles on the way in June are Steigar — an arcade blast, based on the exploits of a mercenary helicopter pilot, and High Steel — in which the player must overcome all obstacles and dangers to construct the steel framework of a huge sky-scraper.

...news...news...news...news

Music while your PC works

Dutch-based Spase may not help office productivity with its new board that adds FM stereo radio to PCs. The PC Radio comes on a full-length card that plugs into an ordinary expansion slot.

A few keystrokes bring an on-screen radio window that allows the radio to be tuned-in and the volume settings adjusted. Stations can be selected automatically or manually by using the numeric keys to enter the frequency.

The radio offers a frequency range of 87.5 to 108MHz, 4 watt output on each speaker channel, a signal-to-noise ratio of 66dB, a stero/mono indicator and a mute key. PC Radio costs £90.

Super Base 4

The latest release of the Superbase 4 database — Version 4.02 — includes LIM/EMS support, giving users maximum memory for their databases. It requires a Version 3 or greater expanded memory driver which conforms to the Lotus-Intel-Microsoft specification.

Other features in the new release include extra communications protocols; enhancements to the programming language; and five new keyboard shortcuts to toggle quickly between open files or indexes within a file.

Superbase 4 is bundled with Digital Research's Gem 3, which provides drivers for VGA displays and Postscript printers.

It costs £525. Users of Versions 4.0 and 4.01 can upgrade for £34.50. Contact Precision Software on (01) 330 7166.

Professor DOS

Individual Software's Professor DOS 4 has a computer-based package which simulates DOS and teaches the user features such as how to partition hard disks, use the graphic shell pull-down menus found in DOS 4 and run programs with a mouse.

Through the use of practical examples, graphic illustrations and a self-paced program, the Professor provides experience with DOS while allowing users to progress at their own speed. Pull-down menus enable the user to bypass or repeat any topic at any time during the program. Advanced DOS training includes redirecting input and output and creating batch files.

Smartguide for DOS, a terminate-stay-resident program providing on-line assistance, is bundled with the Professor.

Professor DOS costs £59.95.

No more Bugs

The leisure market's longest surviving and most highly regarded fanzine The Bug is to cease publishing.

Its last issue will appear later this summer — commemorating five years in the market. It is expected to be the biggest ever.

The Bug has had a circulation of around 300. This did once get perilously near 1,500 after a deal with a distributor in 1987.

The decision to cease publication has come as a result of The Bug losing its driving force — co-editors Jaron Lewis and Jeffrey Davy — to Higher Education. One day perhaps, 'Son of Bug B.Sc.'!

Chinese W/P

Matsushita is to market a laptop personal word processor with an artificial intelligence dictionary able to convert roman characters into Chinese ideograms.

The new word processor, the Panaword U1, is priced at 165,000 yen. It has an AI dictionary of 34,000 words, and will contain specially designed large-scale integration chips for speedier conversion.

Value Added Resellers?

Recently police in the US have cracked several large prostitution rings, all heavily dependent on micro-computer systems.

These computers held large databases of names and addresses of clients, billing methods, sexual preferences, and the name of the prostitute servicing their needs.

A recently busted prostitution ring in San Jose, in the heart of California's Silicon Valley had over 50,000 customer names in its computers.

We're keeping a look out for applications software.

Atlantis

Mike Cole, Managing Director of budget pioneer Atlantis Software, today announced that they had signed an agreement with Novagen Software to re-release the Novagen 'clasic', "Encounter". Cole said "Whilst we are still committed to our policy of releasing mainly new and original games, the opportunity to re-issue a game of the quality of "Encounter" was just too good to turn down".

Originally released at a retail price of £9.95, "Encounter" is the game that launched Novagen to instant fame. Atlantis's price for C64 casette is £2.99

Anti-Radiation shields

Shields which protect against radioactive waves from VDUs have been introduced by BL Distribution.

The firm claims the Norad shields reduce radiation by 60 decibels over the entire frequency range of 20KHz to 200MHz.

Two types are available. The 19-inch Megashield is designed for high resolution colour, monochrome and grey-scale VDUs — the type normally used for desktop publishing.

The standard flexible shield for 12- 14-inch screens is designed to conform with the curvature of screens. Models are available for most monitors.

The Megashield costs £195 and the standard shield £95.

Contact BL Distribution: Tel 0753 29961.

Award for Portable Computers

Protective Carrying Cases for portable computers, mobile telecommunications and other portable electronic office and test equipment manufactured by Targus Group are becoming so popular abroad that last year the company exported some 80% of its production. Export sales have been so successful that Targus has won the Queen's Award for export achievement 1989.

Targus produces a broad range of carrying cases to accommodate virtually every laptop computer, mobile phone and portable facsimile.

To handle the record volume of exports, Targus has office and warehouse facilities in London, New York, Los Angeles, Toronto and Sydney. Future expansion plans include offices in France, Germany, and Tokyo

Contact: Targus Tel 01 943 0794

01 for Amiga

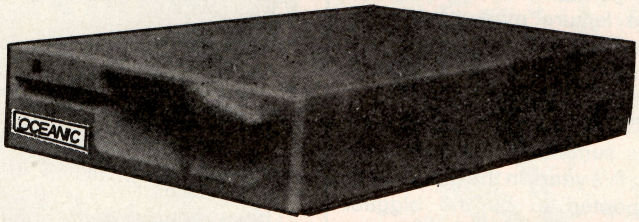
There is now a bulletin board for London Amiga users.

It is called The Amiga Meditators. Membership of the group will cost £20 a year.

There will be free access to the bulletin board, with a special section for subscribers with a modem, in addition to selection of disk based PD software taken from the board will be available for a nominal fee to all users.

Contact: 01 for Amiga, 1 Maples Place, London E1 1BJ. Tel: (01) 377 1358 (10am - 5pm weekdays)

WIN! WIN! WIN!



Win an OCEANIC DISK DRIVE — or even two!

In this issue of CCI. Peter McDonald is reviewing an oldie but goodie for the disk owners among you. But we thought that all those poor old cassette users should have a chance to get their sticky fingers onto a disk drive which, as any self respecting Commodore owner will tell you, is in a different class to stuffing cassettes into a data recorder which was really designed to be playing Michael Jackson or Madonna tapes. So this month we have competition which will give you the chance to win a great Oceanic OC-118 Disk Drive. In fact two of them because some kind company whose name we cannot reveal but you can find out from the Peter McDonald's review have given us two Oceanic OC-118s for the first two all correct entries pulled out of the Comp Bag by the delicate white fingers (she wears rubber gloves to handle the postcards) of Teresa the Comp princess. Oh, and both the winners will also get one copy each of the product that is being reviewed.

But first you have to find the review then answer three questions on it and then find out who supplies the product in question and look up their advertisement for the answer to the next three questions. Hands up who said this was too difficult for any cassette owner to follow!

1. Name two ways commercial software producers use to protect programs.

2. How many 'items' are there in the program to allow you to copy disks?

3. Does Disk Detector allow you to stop further data being written to a disk?

4. What was the previous name of the Oceanic OC-118 Disk Drive?

5. What is the Physical Exam?

6. With what would you silence the knocking noise in a 1541?

There really difficult isn't it? So okay, you cassette recorder owners, show you can be as bright as the disk drive crew, and get those replies flowing in.

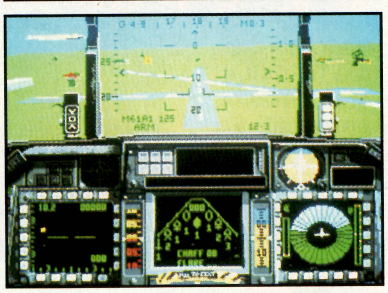
Answers on a postcard, please, by September 1st 1989 to: CCI/Oceanic DD Comp, 40 Bowling Green Lane, London EC1R ONE



It is daybreak. You join the other pilots in the squadron crewroom to discuss objectives for the day ahead. Tactics, combat manoeuvres; all are captured completely by F-16 COMBAT PILOT. During your pre-flight briefing you instruct the ground crew on weapon loading and plan your attack...

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F-16 COMBAT PILOT



Atari ST screen.

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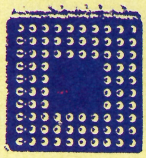
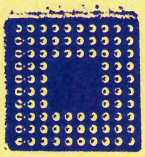
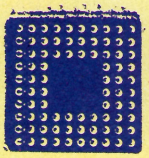
BLACK BOX SIMULATIONS

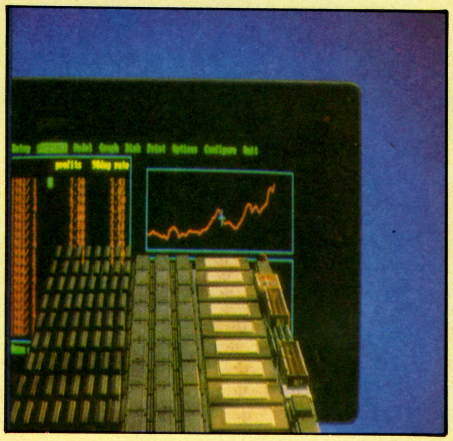
Digital Integration
The Real World of Simulation

Digital Integration Limited,
Watchmoor Trade Centre,
Watchmoor Road, Camberley,
Surrey GU15 3AJ (0276) 684959.

Amiga version – available end of June £24.95 inc p&p. Available now – IBM PC (CGA, Hercules or EGA, 5.25″ or 3.5″ discs). Atari ST.

One Day All Computers Will Be Like This



Looking out toward the horizon of electronics, a new form of processor is beginnning to exert an influence on the development of computing. The transputer is a remarkable and innovative design in processsing technology. Anthony Mael and John Tode investigate

TRANSPUTERISED ...

At the PC User Show, just ended in Londons Olympia, there was a lot to interest the serious business buyer of IBM compatible computers. If you wanted to run your Lotus or SuperCalc speeded up or examine the latest laser printer, it was the right place to be. For anyone else there was not a great deal to be thrilled by in cheaper and smaller MSDOS machines, bulky portables and rechargeable batteries.

But among the spreadsheets and the lookalike 386s, there was one area, tucked unspectacularly away at the side of the hall, that did contain something exciting - or at least potentially extremely exciting. It was called The Transputer Village. A paradoxical name - village, for it contained the most advanced, the most sophisticated, the outstandingly brilliant technical achievement present at the Show. Indeed, the transputer is probably the most notable development in computing in the last decade.

In The Transputer Village some ten organisations showed... well, very little. Partly because the transputer physically is very small and rather unimpressive, and partly because not too much has yet been done with the transputer that could been shown. But each of the organisations was professionally involved in a field that made the vaunted OS/2, the latest flavour of the month IBM PC, even the as yet unreleased 486-based machines look as slow and outdated as the early Sinclairs, the ZX80, would look to the 64 user.

Yet in the time since it was conceived in the seventies, the transputer has barely survived. For, like most innovative scientific developments, very few believed it would work or prove to be a commercial success and even fewer were willing to support the years of losing money its development was to take.

Picking Winners?

INMOS, the company that created the transputer, was set up under the scheme that the then Labour Government financed with the idea of encouraging the "white heat of technology" to thrust a lagging, scientific Britain into the forefront of the industrial world. Companies with with what seemed like good, commercially exploitable concepts were supported and given help to establish themselves especially in regions where there was a need for investment.

INMOS went to the west of the U. K. and started to develop the transputer - the complete computer on a single chip. As is usually the case, it took much lomger to create and develop the required product than had been anticipated. And the costs rose steeply. £50 million goes fast when you are in the electronics business. . .

The Government changed. The Conservatives pointed out that in their opinion the function of the Government was not to try to "pick winners" but to let the private sector take its own risks and make its own gains and losses. The trouble with that is that in developments of the complexity and cost of high tech electronics, few companies have the combination of ideas, creativity and

finance to be able or willing to take on projects like the Transputer. So when the Thatcher Government decided to sell off INMOS, it did not find it easy to get a buyer. It helped out by writing off the INMOS debt of many millions of pounds and eventually got Thorne-EMI to take it over for what was really a nominal amount of cash.

Soon, however, Thorne-EMI had its own troubles and found the loss-making INMOS a burden, So it, in its turn tried to sell off this troublesome set of people who just couldn't seem to get their wild idea into any commercial shape.

The problem mainly came from the dificulty in manufacturing the wondrous chip and not getting too many defective chips in each batch to make the whole operation unprofitable. Thorne hawked INMOS around without finding any serious takers.

Gradually INMOS was getting it right. The magic chips began to appear, were tested and started to work with pleasing regularity. Other companies took them seriously and initiated projects that allowed them to write to transputers. Perihelion, a company led by Dr Tim King, who had been closely involved with the development of Intuition for the Amiga, created the basis for an operating system. Both the Amiga and the Atari ST were announced as being given a transputer version. Multinational organisations, like Commodore, in need of a glamourous technological initiative picked on the transputer.

Bigger Things

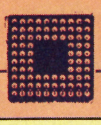
That little village at the PC User Show is the herald of much bigger things to come. In spite of the lack of governmental support, as such a project would have received in Japan or the U. S., the transputer has survived. Its uses will multiply and it will, with the enormous power it offers in an economic and easily usable form, have a profound effect on the whole development of the computer - and the computer, apart from the automobile and the TV, has already has the most profound effect on today's lifestyle.

INMOS has already become one of the most important chip makers in the world. But had you heard of INMOS? Have you heard of the British Government taking note of it and supporting other scientific projects that might turn out to be the winners that we as a nation and the world needs? From a little company ekeing out and existence on begrudged taxpayers money to becoming an influence on our lives. Probably in any other country in the world that would be regarded as a success story to boast about. — there must be a lesson in there somewhere. Let's hope the powers-that-be and who have *our* our money to spend will learn it.

A. M.

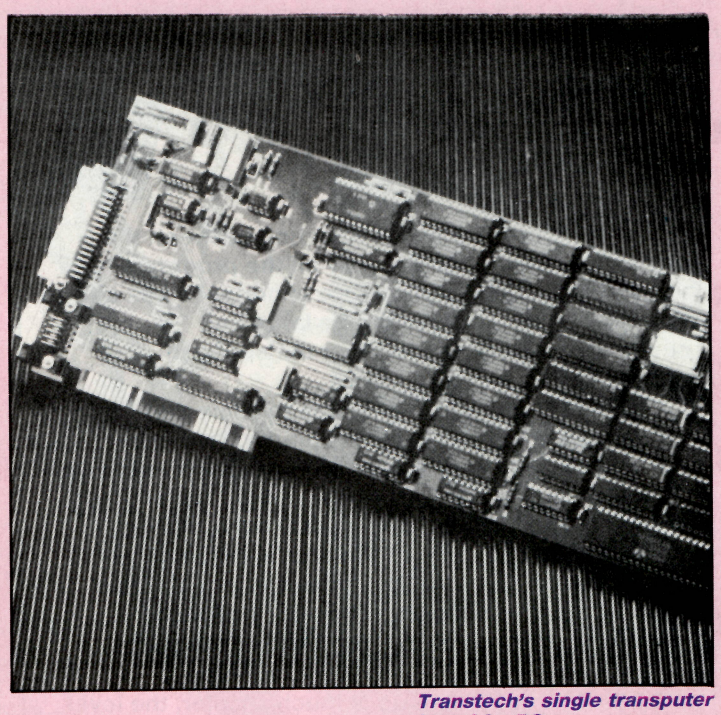
The Transputer

The transputer, in one chip, contains a very fast 32 Bit processor, a quantity of fast memory to keep a record of results as it goes along, a double precision arithmetic unit, a scheduler to allow it to chop and change between jobs without delay and communication links that let it talk to four neighbouring transputers. All on one chip, one chip. . .



Parallel Processing

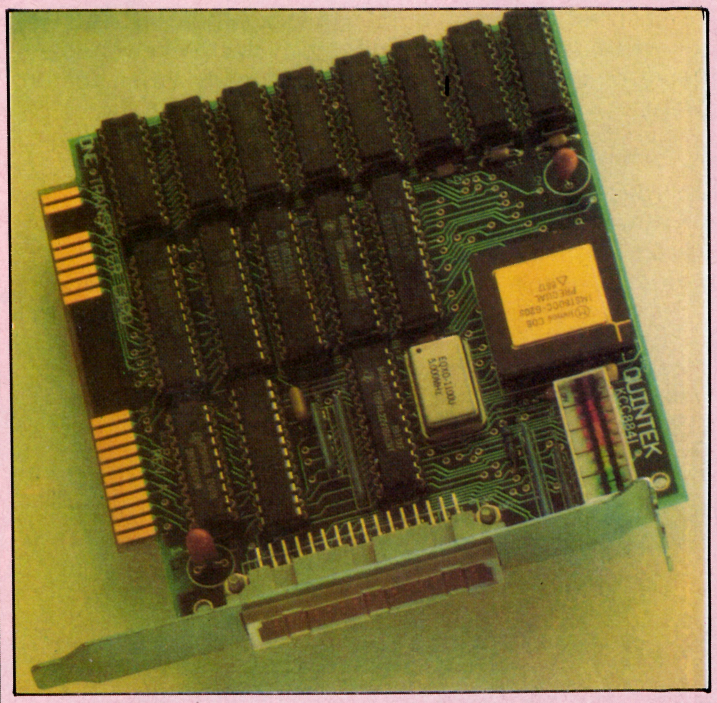
Parallel processing is one of the major advantages offered by the transputer. Parallel processsing is the technique of using many processors together, arranging for each to perform a separate portion of the task. In this way tasks can be completed very quickly through being simplified by being broken up into separate modules for each of the processors to manage. By dividing up data or programs with a transputer even a conventional PC can be speeded up by as much as 100 times.



Transtech's single transputer board for PCs

What has gone before.

The traditional approach to programming since the invention of the computer by Babbage has been to follow a series of sequential instructions; better known as the program. As we all know, technologial advances have enabled information processing to reach a stage that the inventor could never have envisaged. However this age-old technique has encountered limitations. The most fundamental of these is speed and so what was needed was a fresh approach.

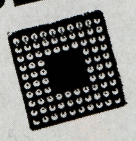


The problem is that in conventional computers a single processor executes a list of instructions upon a set of data. In computing terms this follows the SISD model (Single Instruction stream, Single Data stream).

cont. on next page

continued from page 19

TRANSPUTERISED



because there is no communication between the processors, and consequently all the programs have to be self-contained. Therefore experience has shown that these programs tend to be large and cumbersome, again restricting the speed of processing.

The next step on from this was to allow the processors to run different programs. The large programs encountered in SIMD computing would be split into smaller parts. These would be run on individual processors and would receive their own sets of data. This is the MIMD model (Multiple Instruction stream, Multiple Data stream) and has become the most effective form of parallel processing. Unfortunately this has introduced problems of its own.

Since the prograsm size is much smaller, the level of variable dependancies to be satisfied. A hardware inter-communication network would allow this, but there still would need to be some control placed on the sharing of the value of the variables between the programs. The network itself actually places restrictions on the communications speed between the processors, another potential bottleneck.

The need for this control is primarily due to the programs running at different speeds. A value of a variable may well be required from another program while it is still being processed. This leads to the wrong value being used. To solve this, many different approaches have been tried and tested. The most significant of these has been message passing. This is where the program wanting the value of the variable is made to wait until that variable is ready. When this happens, the programs are synchronised and the value (or message) is passed between them.

This has been the basis of a new integrated hardware and software approach. Instead of using hardware and software used originally for SISD programming, as are most of today's processing devices, new integrated circuits and languages were designed specifically for MIMD programming. The opportunity existed for a totally new start. This time, instead of looking first at the hardware and letting software catch up, again as in the case of SISD computing, both were considered together.

"The language has keywords which are similar to those found in other languages, but it has four others which are crucial to its successful operation."

What was wanted was a computing system which supported both the MIMD model and message passing, without the potential bottleneck that the intercommunication network could introduce, and enabled programs to be written without consideration of the hardware that the software would be run upon.

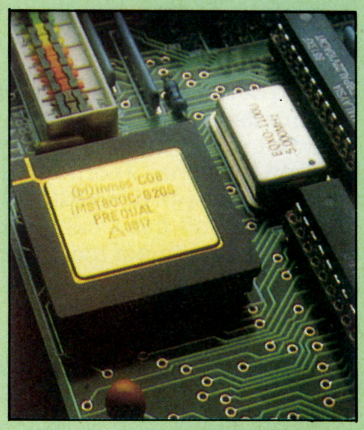
Power Never Comes Cheap

Prices of transputers - on circuit boards - for you need some way of plugging them into a computer - range from about £500 to around £5000. Commodore has not yet announced any prices for its transputer-based Amiga but it is thought that it will aim at around the £4000 mark.

U.K.-based Cesius have created a real-time frame grabbing board which can handle 16 million colours and is broadcast standard for use in TV. Cesius also have a transputer card that can be inserted into a PC which will give 1200 by 1024 pixel resolution.

Sension have fibre-optic boards that link transputers in PCs with those in larger networks.

The transputer's communications links are independent of processing. Conventional microprocessors do not do this for they use their normal memory interface to handle communications as well. That is why unlike normal microprocessors, two transputers can work at double the speed of one, or five at five times the speed and, we are told, 100 at 100 times the speed. .



The transputer uses very little space so companies like Bristol-based Quintek can fit nine processors on one circuit board where manufacturers employing other chips can fit two at best. When combined, as on Quintek's Fast9 circuit board, processing power of 10 Vax mainframe computers can be achieved.

No Problem?

How can the tremendous power of the transputer be used when most software has been designed to run on just one microprocessor? A technique called flood-fillinmg has been developed. This is where software automatically routes tasks generated by a master program to the worker processors — 'farming it out'. Hence some transputer boards are called 'farm cards'.

This occurs at a rate determined by the speed of the processor and the swiftness at which the memory can be accessed. Eventually, one of two situations will arise. These occur when either the memory cannot supply the processor with the data it needs fast enough, or the processor cannot handle the data load. This is known as the Von Neumann Bottleneck.

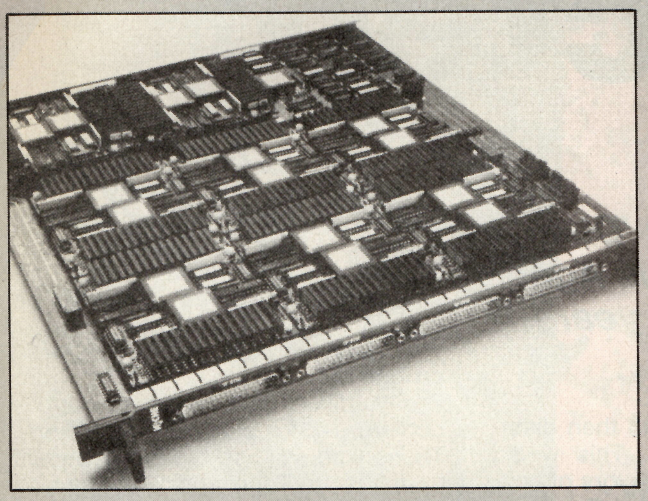
To increase the potential speed of any given computer faced with this bottleneck, the obvious solution is to spread the data load between a number of processors. When this was done, the programs would be downloaded to all the processors in the computer. These would then receive and process seperate streams of data, corresponding to the SIMD model (Single Instruction stream, Multiple Data stream); the beginning of parallel processing. Thus the processing power of the computer was greatly increased. Even so, this method is confined in its use

With this in mind the software language Occam, a name devised from the term "Occams Razor", and its hardware component the Transputer, were designed.

What is happening now.

Essentially, all programs can be thought of as a number of small sequentially executing programs or processes operating in parallel. All of these processes would communicate via message passing along software channels. This process model forms

the basis of the Occam language. The language has keywords which are similar to those found in other languages, but it has four others which are crucial to its successful operation. These are:
SEQ — from this point in the process all the instructions execute in sequence;
PAR — from this point in the process all the instructions execute in parallel;



Transtech's 17 transputer board offers immense power for complex tasks

S.channel name! variable — when the process on the other end of the channel arrives at the corresponding ? sent the value of the variable to that process otherwise wait until this can happen.
D.channel name?variable — when the process on the other end of the channel arrives at the corresponding ! send receive the value of the variable from that process otherwise wait unitl this can happen.

This introduces a clear language which can be used to successfully implement the MIMD model. The programs written can be written without consideration ofthe underlying hardware since this is design specifically for the language. The program with all of its processes and channels can be mapped onto the hardware by the use of a configuration file.

The hardware is the Inmos Transputer. The transputer was created by some scientists of vision in the late seventies and early eighties in the U.K. with money from the then Labour government. It was a major achievement but nearly failed with the present conservative administration withdrew its support.

The transputer is a device that fully supports everything which is needed by the Occam language. The Transupter is a complete computer on a single integrated circuit. It is a high performance 32-bit processor which takes much from the work done on the new RISC (Reduced Instruction Set Chip) architectures. In addition to this processor there is some internal high speed static RAM, a configurable external memory interface, and four high speed communication links and link controller for communication with other Transputers. The internal RAM stores the variables which the processes interact with. The channels are also contained in this memory. In message passing the value of a variable of one process is placed in a memory location until it is picked up by another process. This is important since the way channels are handled virtually the same four processes communicating with one another on-chip and off-chip. The difference is that when processes communicate off-chip the link controller takes over so that the processor can carry on with other work. Consequently, the software can be designed without consideration for the way the hardward is interconnected.

The interconncetion network of the Transputers does not suffer from the problems of conventional networks as the links can handle communication at a rate of 20 million bits per second.

Due to the design of the Transputer, many of these processors can be linked together to give a potentially huge processing power. 10 to 20 of these running a suitably structured program can get into the computational range of a Cray at a fraction of the cost.

So it is no surprise that Commadore, among many other computer companies, are now incorporating transputers into their hardware. For what the transputer offers is a super computer in a desktop form at prices that mean we are not far from those SF dreams of everyone being able able to tap in to amazing power and speed in ways and for purposes that are no longer limited except by our imagination.

J.T.

A Few Simple - sorry - Sample Tasks

In financial modelling - testing out possibilities for changes in taxation, for example, the Second Sight spreadsheet, using transputer power calculates relationships between different sets of financial data to make a targettted forecast, in other words what you have to do to reach your desired goal, like making a million pounds in very changeable financial climates.

Perihelion have just released their operating system Helios version 1.1. This supports networking between transputer boards in interconnected PCs.

Speaking the Language

While the transputer was developed originally only with Occam (created by Intel) in mind, Pascal, Fortran and Parallel C compilers are now available with Modula-2, Basic and Ada due to be released shortly. A debugger is also available in Parallel Pascal.

Late News

Plessey, the U. K. s largest chip manufacturer has closed its Gallium arsenide chip factory. Gallium arsenide, as CCI has reported before, is the material forecast to replace silicon as the basis for future computer chips. Plessey is afraid of being taken over and is trying to save money. Closing the factory chops 375 jobs but, of course, puts Plessey and maybe Britain too out of the gallium arsenide business. INMOS' survival to produce the transputer in a country like the U. K. , is, some would say, as great a miracle as the development of the transputer itself.

FINAL NOTE

INMOS, the company that invented the transputer is up from 32 Bit to 64 Bit architecture.

The U.K. Government has at last woken up to the immense potential of the transputer and has begun providing money for The Transputer Initiative which among other things is intended to foster the growth of the U.K. as a centre of expertise in transputer technology. Included in its activities is the establishment of a pool of transputer hardware and software for use in academic institutions. They have also set up a National Transputer Software Library. So if you want to borrow the equivalent of a super computer. . .

'Disector Dissected'

Peter McDonald

The 'Golden Oldie' is Evesham Micro's 'Disc-Disector' version V5.0, written by Angus Ager and Les Allan. Though launched some years ago it is still available.

Disc Disector is a very useful collection of utilities for the C64. The items which appear in the MENU when you type LOAD"D",8,1 are:

1 *Nibbler Menu*
2 *Fast File*
3 *Fast Copy*
4 *Fast Format*
5 *Select Menu*
6 *Scratch*
7 *Rename*
8 *File Copy*
9 *Disc to Tape*
10 *Discmon+*
11 *Disc Orderly*
12 *Index*
13 *Directory Change*
14 *BAM Allocation*
15 *Unscratch*
16 *View BAM*
17 *Track Reader*
18 *Disc Rescue*
19 *Disc Protect*
20 *Novatrans*
21 *Double Back-up*
22 *Disco* and
23 *Trans QD.*

In fact the numbers 10 to 23 inclusive are not used in the Menu; letters are used instead. But I have numbered them so that you can check that there are 23 items on this disk. (Actually, there are more than two dozen altogether because a selection of copying programs, not listed above is obtainable via the Nibbler Menu.)

My bet is that most people who buy this program do so because they want to be able to copy commercial software which has a greater or lesser degree of protection installed. As long as it is legitimate to make back-ups of commercial programs for the purchaser's own use, it must be moral to sell copying-programs like this. Personally, I can see that it would be wrong if I used *Disc Disector* to take copies of commercial software and then distributed them to friends. This would deprive writers and purveyors of software of their rightful reward. But I have never felt the least guilt when taking a back-up copy for actual use, so that I can keep the original in perfect condition. Some software producers leave their disks free from protection but require you to use a dongle, or other device. Amongst these one could mention Hack-Pack (reviewed in ***CCI*** recently) and *VizaWrite Classic*. One might almost say that the producers of these programs *intend* you to take back-ups.

" Altogether there are five ordinary items ('nibblers' and copiers) which are capable of copying a whole disk of protected software."

So what about *Disc Disector*? Does it successfully copy *all* commercial disks? Well, that would be a bold, not to say impossible, claim to make. Suffice to say that I cannot recall it ever having failed me completely, though one has to try various items, sometimes, before finding the correct one. And *Disc Disector* is more temperamental on some drives than others. (A commercial disk directory program, which threatened to write a self-destruct instruction into any back-ups, was true to its word, but one can hardly blame *Disc Disector* for that.) Altogether there are five ordinary items ('nibblers' and copiers) which are capable of copying a whole disk of protected software. Some are more powerful than others, but sometimes the powerful ones fail and the less-powerful ones succeed. There is also a collection of parameters, and a method of adding one from the disk you are copying, if the 3 min Nibbler is followed by a prompt 'parameter copy required'. You will be unlucky if you cannot copy most of your disks with one or other of these programs.

In addition there are two 'double' copiers (i.e. for use with two drives). Those who still use tapes will benefit from 'Disc to Tape' and 'Disco' (which works the other way round, with normal speed load software) and 'Novatrans' (tape to disk).

Before we leave copying, there are two programs which list files on a disk and allow you to choose which ones you want to copy to another disk. 'File Copy' does this perfectly well; 'Fast Copy', as the name implies, covers the same ground but at top speed. Although these worked O.K. for me with a C64 and a 1541 drive, this was not so with a C128 in 64 mode, using a 1571 drive.

There is a clutch of items for the clinically-minded who love to delve into tracks and sectors, to view and allocate BAM, and so on. 'Discmon+' is a monitor/editor program which could be useful to the type of enthusiast who understands these things and wants to change or repair a disk.

For the less expert, there are some useful items like 'Unscratch' (which enables you to restore a scratched file); 'Disc Rescue' (it comes to your aid when the disk's directory has been 'newed') and (since prevention is better than cure) 'Disc Protect' which stops further data being written to a disk, even though the write-protect tab is off.

More run of the mill, but useful, are items enabling you to fast format a new disk; to scratch files selected from the disk's directory (and to validate the disk afterwards); to rename individual files; to make changes to the directory.

I have left to the last a set of items which I use often, usually in conjunction with each other. First there is 'Index' which enables you to get a print-out of the directory on a disk. This works with the STAR LC-10C, if all

'Disector Dissected'

the dip-switches are up. It has a facility for adding the date and it prints out the disk name and the files on it. It seems to me to print very slowly: perhaps I have missed something. However, it is useful if there are so many files that you cannot get them all listed on the screen at the same time.

Either using 'Index' or otherwise, study the items on a disk. Scratch any you do not need. Note ones which are not themselves programs but are sub-programs of another. The idea is to make a fast-booting menu system so that you can run the programs from the menu.

First of all, use the *Disc Disector* program 'Disc Orderly' to re-arrange your files into some logical order ... e.g. alphabetical (which you can do more or less automatically) or another which suits your particular purposes better.

Next use 'Select Menu' to prepare a menu of the items on your disk. The program asks you in respect of each item to say whether or not you want it to be included in the menu. This is where it is useful to know which are the main programs and which are merely sub-programs, and are loaded from inside a main program. Obviously you would only include the main programs on the menu.

Once you have made your choice, the program gets to work, eventually putting the menu on screen so that you can test it. Like *Disc Disector's* own menu, it lists the items with the numbers 1 to 9, and then letters, against each one. You simply type the corresponding figure or letter and the chosen program loads and runs.

O.K. Now for a wrinkle. After terminating a program with RUN STOP-RESTORE, you can get back to the menu, either on *Disc Disector* itself, or on any disk which has a menu created by *Disc Disector*, by the simple action of typing SHIFT/RUN STOP. I did not realise this when I first bought the program, and I wasted a lot of time adding 'RETURN TO MENU (Y/N)?' routines at the end of my programs. It isn't worth it!

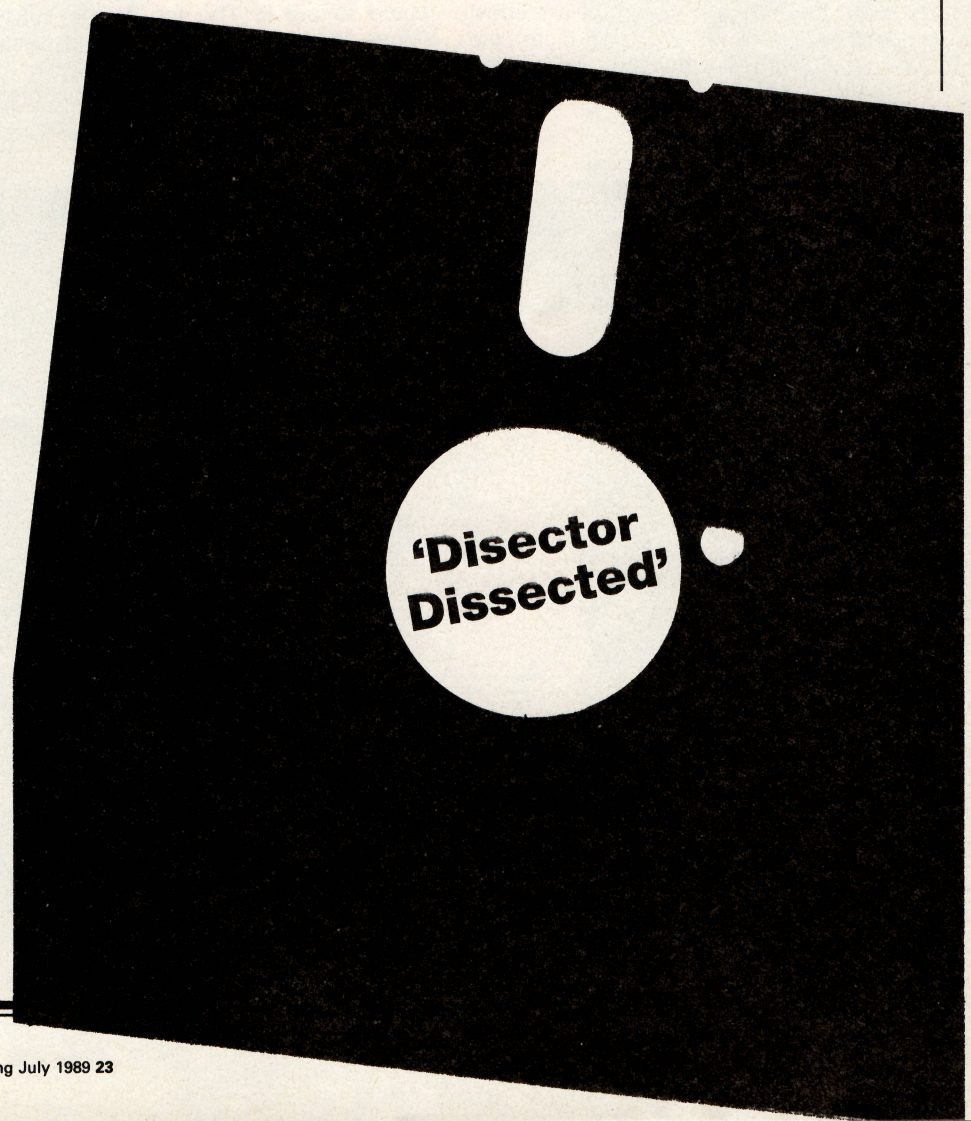
If you have followed the procedure so far, you have a disk where you can obtain the menu by typing LOAD-"MENU",8 and RETURN. If you want to go a little further, you can use the program 'Trans QD' which enables you to create a fast boot menu system as used on *Disc Disector* itself. This will only work when there is a menu on the disk. After applying the QD system to the disk you type LOAD "QD",8,1, press RETURN, and after a few seconds of the familiar flashing lines pattern on the screen, the menu loads and runs. (What if you want to use it to create a fast boot system to another program, on a disk which carries no menu? Re-name the chosen program: 'menu'; and then apply 'Trans QD' to the disk.)

If *Disc Disector* is mainly for those who want to copy disks, why have I concentrated on the other aspects? For two reasons. First, there is nothing much one can say about copying programs, save that they work. Second, I believe that the other utilities in themselves make *Disc Disector* worth buying, and I have had a lot of use out of the 'Disc Orderly' and 'Select Menu' items. Again (though the facility is available elsewhere) I like the 'Scratch' program on *Disc Disector*. It is much easier, for instance, to decide which items to scratch, and then scratch them all at once, instead of having to scratch each one individually as on (say) *VizaWrite Classic*.

It might be retorted, truthfully, that some of the facilities on *Disc Disector* are already available, in a different form, on the Commodore Test/Demo diskette. But there is much more here, and it is convenient to have it all together on one disk.

That leads me to the final point: yes, you can use *Disc Disector* to copy many 128 programs, though not to copy a two-sided disk. Price? £19.95 from Evesham Micros, 63, Bridge Street, Evesham, Worcs. WR11 4SF. I've certainly had *my* money's worth from it.

P.M.



PHILIPS MONITOR TUNER

Does your computer monitor have a dual identity? Peter Lee's does – he Explains . . .

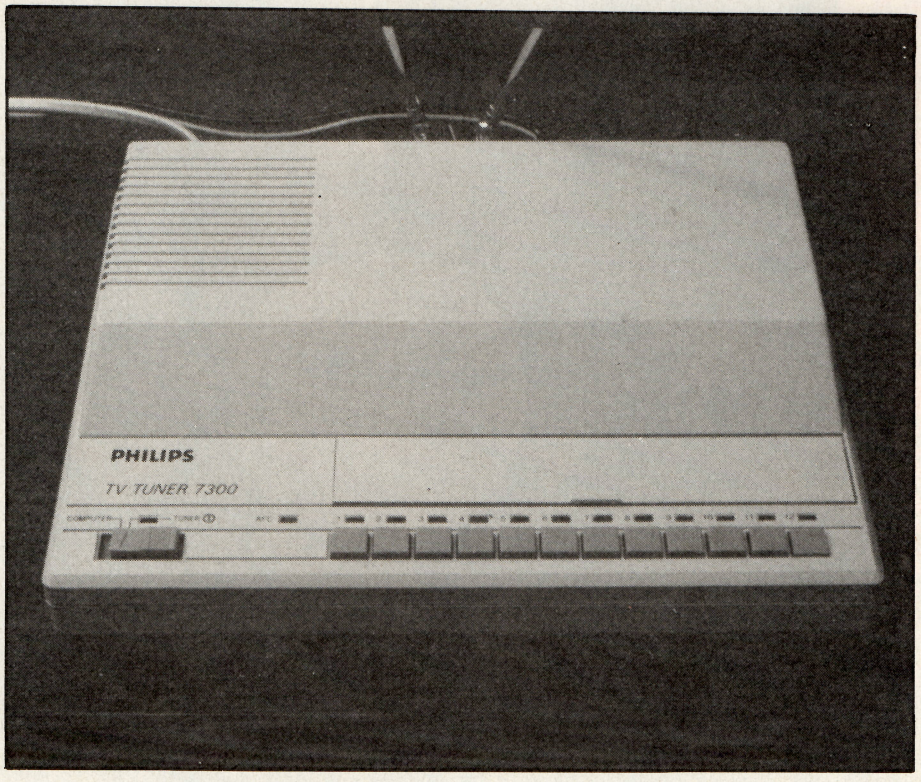
A home computer monitor's average use is likely to be around a couple of hours a day. Considering how much they cost, they must be one of the most under-used resources around.

Being the dedicated beast it is, there is little you can do with one when the computer is switched off. Maybe stick a clock or a photograph on top? Apart from that they just sit there gathering dust and depreciating . . . Luckily there is no need to worry about the cost-efficiency of your investment any longer thanks to the introduction of a hi-tech add-on which will convert the monitor into a television set – at the flick of a switch.

The Philips AV7300 is a small TV tuner about the size and weight of a modest hard-back book (25 × 19 × 5.5 cm); the tuner under test came in a light beige plastic case and was put through its paces using an Amiga 1000 and Commodore 1081 monitor. The mains-powered tuner will work with any monitor which has CVBS and audio IN connections and has a pass-through to enable the computer's signal to enter. A sliding switch on the front panel selects either computer or tuner mode.

The unit is supplied with the appropriate leads for connecting to the monitor and comes with twin telescopic aerials which provided excellent quality pictures in my part of the country but which can be replaced by your own antennae if you live in a poor reception area.

The tuner took literally five minutes to set up, with the biggest headache being where to put it! The top of the 1081 slopes and in any event I could not bear to stare at a screen which looked like one of those quaint TVs from US TV sit-coms.



If you have an outdoor aerial, you can just as easily put a splitter on the cable and run an extension to your computer haunt, giving possibly a crisper picture and also allowing a more discreet positioning of the tuner.

"The tuner took literally five minutes to set up, with the biggest headache being where to put it!"

The power cable is a generous length – but unfortunately the leads which connect to the monitor are around a metre long, which restricts the siting unless you buy a couple of extension leads. As channel selection is by means of a push-button front panel, you cannot put the tuner too far away. In fact it is something of a logistical nightmare trying to cram a tuner on a desk already cluttered with drives, modems and printers – take my wife's word for it!

Up to 12 chanells can be set by tuning the control dials hidden under a flap, which also activates the automatic frequency control when it is closed.

The quality was all you could expect and was even an improvement on some TV sets I have seen thanks to the 1081 monitor's excellent display qualities. It goes without saying that you do not need your computer switched on while using the monitor (which has to be on) as a TV and in fact problems of interference do arise if you have the Amiga running simultaneously. The monitor's brightness, colour, contrast and volume controls are all active on the TV picture, so in effect for £69.95 you have got a first rate TV receiver.

My only problem is – where on earth is the tuner going to sit. ***P.L.***

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Rainbird Flies Again

Originality is always in short supply. It is easier to steal someone else's idea than produce something new. If this is true in the computer industry as a whole where both hardware and software are normally ripped off just as soon as clone designers can get their fingers on to an original to copy it is certainly true of the retailing where one shop or mail order house is soon so very much like another all that can be seen as the difference between one and the other is a cheaper price. So it is very agreeable to see that even in the harsh and competitive world of mail order selling, someone has the creativity and guts to come up with an idea that offers buyers a little more than just cheapness.

Tony Rainbird is a well-known, liked and respected name in the entertainment software business. For one thing, it is his surname that is carried by what is arguably the most successful label that Telecomsoft (now owned by MicroProse, see story in this CCI) has produced. Don't be confused though by their other labels that also bore the 'bird' names. Tony Rainbird set up that part of Telecomsoft and it remains an area of excellence, especially with the adventures created by Anita Sinclair's Magnetic Scrolls — of whom and which, more later.

Rainbird, the man not the label, left Telecomsoft just over two and a half years ago. He was, he says, frustrated by bureaucracy, the pecking order and the sheer futility of arguing for logic to prevail, and very nearly feels his previous two and a half years there a waste of time.

There are others who would disagree. He certainly helped such excellent products as The Pawn to emerge and he impressed the astute Anita Sinclair enough to take him as an associate of her company.



He is now applying some of the other ideas he must have had during that time in a way whch is clearly being seen as very interesting by growing numbers of games players, especially in the adventure field.

Everybody Loves a Bargain

In under a year, Tony Rainbird has emerged as a force in an area different but allied to the creation of games – the selling of them by mail order. He has started two separate but connected clubs Official Secrets and Special Reserve. Both of these offer software at what are, for anyone walking into Boots or W.H. Smiths to buy entertainment software, extraordinary bargains, really low prices, some less than half the cost of exactly the same game available in those chain st res. It isn't surprising that the Rainbird organisation is beginning to prosper.

However, Tony Rainbird would maintain that his successful operation, reputed to be already one of the largest software retail organisations in the UK., is not founded on price alone, but on communications. For not only do members of the Special Reserve and Official Secrets clubs get software at bargain prices they also receive other privileges such as a very thorough catalogue and a newsletter. This latter is called Confidential and unlike most private publications is well worthwhile reading. It looks as if it were produced on a DTP set-up but it clearly aspires to the status of a magazine. Some of its articles are certainly of professional magazine quality, including in the latest issue an interview with erstwhile CCI columnist Jeff Minter.

Confidential has something that could be appreciated by some, the tone of a fanzine but many may find its unremitting facetiousness a bit too school magazine-ish for their taste. And Commodore readers might think its listing of forthcoming events which mentions the Atari Show but not the Commodore equivalent has its emphasis in the wrong place.

This is surprising for it is clear that Amiga products, including the Official Secrets number one seller, F16 Falcon, substantially outsell ST and C64 games are also a notable part of the clubs' offerings. Nevertheless, it is encouraging to see that a mail order house is coming up with a service which is reputed to take a mere seven days, low prices and also adding value by giving a genuine publication which has particular interest to adventurers.

Myth

It is with this mind that Rainbird is adding an even bigger incentive to new, and old, members of his Special Reserve Club. he is giving away, free, a mini-adventure called Myth written by none other than Magnetic Scrolls (surprise, surprise!). This game takes Greek mythology and embodies it in an adventure which, Anita Sinclair tells us, is not really 'mini' at all.

"It's actually just as good as one of our full length games. it needs just as much skill but it should take you less time," she says. Anyone who has played the brain-teasing adventure like the Pawn and Corruption and Fish that have come out of the fertile minds of the Magnetic Scrolls team will know what that means and no doubt be looking forward to an opportunity to try their latest production.

Tony Rainbird thinks that to give away Myth will be just as big an attraction as the bargain prices his clubs offer. It also is a pointer to the originality that Rainbird brings to his business and how that quality benefits his customers.

He however must be a little wistful to read that the label, owned by Telecomsoft, which bears his name has just been sold off. When he worked for Telecomsoft, he may have been frustrated and defeated by bureaucracy but now with his software clubs and their creative approach to selling he has the cheerful look of a winner about him.

A.M.

ANDY MOSS PLAYTESTS 'MYTH', THE EXCLUSIVE ADVENTURE CREATED BY MAGNETIC SCROLLS FOR OFFICIAL SECRETS MEMBERS ONLY

It isn't easy being a god, especially when you are Poseidon, god of the sea, and you can't even SWIM! Now there is a sight, how can you look godlike wearing red water wings for heaven's sake. It is into this unlikely character that you step when you play MYTH the adventure written soley for Official Secrets Members by none other than Mag Scrolls. All the usual Scolls trademarks are present including the now standard quality graphics and powerful parser along with a high degree of exceptionally witty text.

You can only get into the game by quoting your name and membership number, not forgeting your personal code, and when this is entered you are transported in Zeus' garden party in the sky. Apparently Christianity is on the up and up, which is not good news if you are a God and Zeus in his wisdom has decided that this party is to commemerate a new era for his assembled throng. Pot bellies are a thing of the past, you are told, and fitness is the order of the day. So each God is set a task to prove his mettle, and guess what, you're first off.

Yes, you, as Poseidon, have to steal the Devils Helmet of Invisibility from his Palace in Hades, and before you can say 'ye gods' you are zapped downstairs to the Gates of Hell to begin your task. The puzzles are there right from the off, as you are faced with a fearsome nine headed Hydra guarding the gates to the north, and a strange garden to the east that contains of all things a lamb, a tree, bearing forbidden fruit (sound familiar?) and poisonous flowers and two stones. I am convinced that you need to poison the fruit using the stones to ground out the mixture, before giving it to the Hydra to eat thereby getting through the gates, but for some reason it just will not work.

One things for sure, you can have a lot of fun trying. The Scrolls humour runs throughout the adventure, especially when you try something daft or plainly insane to overcome a problem.

Make no mistake, this adventure is not a sales gimmick, it is a worthy addition to your Scolls collection, with just as much attention to detail as their commercially available product. Now just what the hell does that lamb have to do with anything?

A.M.

More Power to the 64

In part III of his series, Peter Gerrard takes up the screwdriver and goes on to examine the peripherals vital to your 64

Welcome to part three of our grand tour of the Commodore 64. Saying that almost makes me feel like a tourist guide, but there you go. Our first trip covered the keyboard, that was in the May issue, then in June we had a look at all those wonderful pins and sockets that go to make up the outside of the 64. Cartridge slots, joystick ports, all that kind of thing, clever use of which can really expand the 64 in all sorts of directions that I'm sure even the manufacturers never thought of. I know it's asking for the impossible, but I wish there weren't two different types of 64. No, I don't mean the casing, but the American 64s and ours. This is due, as I'm sure most of you know, to the difference in the television systems, the NTSC and PAK being wonderfully incompatible. The first 64 I ever had my hands on was an American one, back in the Autumn of 1982. It wouldn't connect up to a television set, the only monitor we had was black and white and had no sound, which was a marvellous position to be in when reviewing a computer that relied to a great extent on its graphic and sound capabilities. Showing true journalistic resolve the reviews were written, and then re-written when we managed to lure a British 64 out of the clutches of Commodore.

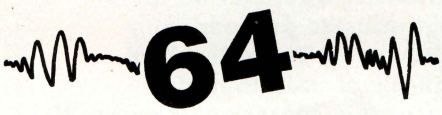
"I took hold of my brand new 64 (grey case having gone to the great computer repair shop in the sky) and sat down with a screwdriver, ready to take action."

However, we find that the casing does make a difference. This month I was going to talk about the inside of the 64, what all the chips are, what that strange silvery thing is that you can see through the air slots underneath the machine, and so on. I had a nice little opening prepared about the difficulties of getting all the screws out and keeping them safe, since one of them almost always seem to jump to freedom and roll under a settee, never to be seen again. All this was from memory, having taken my old 64 with dark grey case apart many, many times. Introduction written, I took hold of my brand new 64 (grey case having gone to the great computer shop in the sky) and sat down with a screwdriver, ready to take action. What?! Only three screws, what's happened to the rest of them? Why can't I unscrew any of them? Why can't I get into the wretched thing?!

I don't trust memory that much, so the inside of the 64 will have to wait for another month. I just can't get into the beast at all, at least not in the time allowed between illustrious editor rin ing up and this having to go in the post, so I shall keep my nice new 64 intact for another couple of weeks and have another go at getting into it later. In the meantime, we'll swap articles three and four around and look at some of the more popular peripherals that can be connected up to the 64 (dark grey case or otherwise), as well as seeing why some might considered essential by some people and totally unnecessary by others. One man's cassette deck is another man's disk drive, and all that.

We'll start with that which allows the user to see what's going on, namely the television set. Most people that I know have their 64s connected up to a TV, rather than a monitor, as they see no real need for spending the extra money on a dedicated monitor. If you do, Commodore's own is as good as any, and there's no denying that the clarity is improved, but a television is still good enough for most of us.

Years ago, before I hit the high spots of sunny Wigan, the only TV set I possessed was connected up to the 64. I had no television license, because I never watched television at all. Times have changed, but then I really don't watch television. This did not stop the man from the license company coming round to check up on me, but when he saw the television surrounded by things computer, with a spaghetti jungle of wire looped all around it, he belived me. Only when I got a video recorder and a second television did I get a license.



So, if you want to use a television exclusively with the 64, you do not need a license. If you watch a television program (as opposed to a computer one) for the merest second, you do. Some monitors exist that allow you to do both, and the first time I saw such a beast was at John Ryan's house: his name has been mentioned in these pages before. At the flick of a switch, a boring 64 loading screen could transform itself into Dynasty. A nano-second later, we were back to the boring 64 loading screen. A very useful device, if you want to spend the money. Other options include a monitor that allows you to flick from a full colour display to a green and black one. Phillips make such a monitor. This is useful if you're going to be doing a lot of word processing, since green on black is very restful on the eyes. It also helps if you're doing a lot of adventure game playing and reading vast amounts of text for hours on end, but that really is taking computing into the luxury class.

If you're happy with your television, keep on using it. If you want to check the clarity of the picture, just about any arcade game with lots of wonderful graphics will do the trick. Or, try running a short program that prints up reverse field spaces in different colours. For sound, you could again just run a game of some sort that features a

More 64 Power

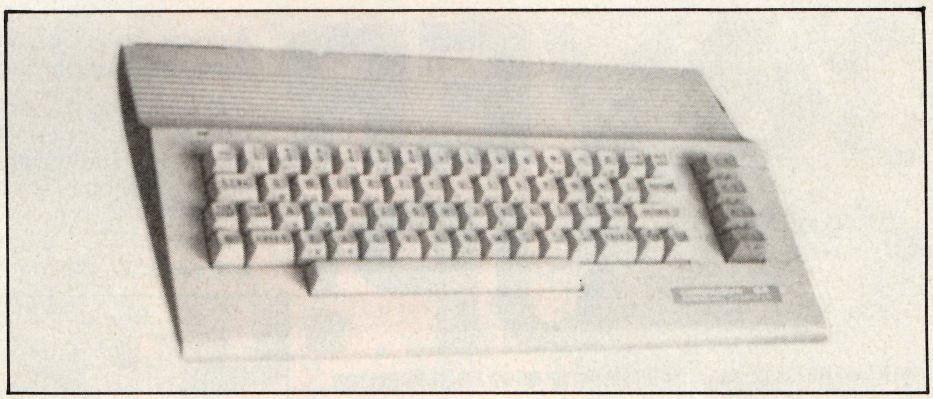
sound track, and tune the television in to perfection as it's playing.

But, with TV sets, a word of warning. This happened to me a couple of months ago, and cost me ten pounds to get sorted, 64 connected up to TV working happily away, end of session, disconnect 64 and re-install television aerial, turn the TV on to check the picture and wham! Nothing, no picture, no sound, just a Tuner snowstorm and no way back. I tried re-tuning the stations, but nothing happened, so fearing the worst the engineer was summoned. About five minutes and ten pounds later, we had the answer. If your television has a reset switch on it (usually underneath the tele), pressing that would have solved the problem. Ours didn't, so the engineer had to reset every station and tune them all in again to the right frequency. I know what the frequencies are now and can do it myself if it should ever happen again, but at the time I didn't have a clue. So, if this should ever happen to you (and according to the engineer it can happen at any time) save yourself a tenner and either reset your television or just tune all the channels in again. I speak from experience!Another peripheral that is commonly encountered is the cassette deck. Nowadays most 64s seem to be sold in packs of some sort (game pack, music pack, that sort of thing) and included in the pack is a cassette deck. Since it's supplied with the computer you might as well use it, especially as you usually get a number of free programs thrown in which are supplied on tape. Indeed, the very first Commodore PETs had an integral cassette deck, so this particular peripheral has a long and honoured tradition as part of the Commodore furniture.

The great thing about Commodore cassette decks is that they shouldn't need adjusting. No fiddling about with volume and tone controls until you get it right and actually manage to load a program, as is the case with other, less fortunate, computers. Then, when you've got the setting right for one program, another requires a completely different one. So, bless the Commodore deck for its reliability at least. This reliability is usually only called into question when certain types of turboloader are being used. They, after all, are doing something that neither deck nor computer were designed for.

"If you want to check the clarity of the picture, just about any arcade game with lots of wonderful graphics will do the trick. Or, try running a short program that prints up reverse field spaces in different colours."

Most of the time, though, the deck works perfectly happily. You can easily test your own deck by just writing and saving a short program (and verifying it as well, if you want), or saving a sequential file of data and reading it back in again. Tapes saved on your own deck should always work, and if they don't (as happened to me) then it is usually the tape that is to blame rather than the cassette deck. Some tapes are more expensive than others, but as is usually the case the more you pay the better quality you get, and I'd sooner spend a few extra pence than lose a vital program.



In theory, if you remove the tabs at the top of a cassette tape, you cannot then save a program onto that tape. A good way of protecting things, you might think. If that is the case, can anyone explain how I managed to save a program onto just such a tape? The tabs had gone, there was nothing covering them, and yet I somehow managed to save a program onto it! The tape had been left in the deck by accident, another tape should have been there instead, and nothing vital was lost, but how did it happen? Intriguing, Watson, a two pipe problem.

That same sort of problem has never occurred with disks. If the little notch at the side of the disk jacket is left covered up, then I have never managed to write to the disk. Remove the protective tab, and the disk is free for use. It's also an easy matter to cut a notch in the other side of the disk, by placing two disks back to back so that the exposed notch on one disk is resting against covered material on the other one. Using that as a guideline you can carefully (very carefully!) cut a hole in the other disk and use both sides of it, I wouldn't recommend keeping your most important programs on the reverse side of a disk, although I've never lost anything yet, but as a way of backing up a disk it seems as good an idea as any. Backup one side onto the other side of another disk, and vice versa, then if anything should happen to either side of either disk you've still got a copy of everything somewhere.

Something that I definitely wouldn't recommend doing is taking the disk out of its protective jacket. Only once have I seen this done on a working disk (by Martin Maynard of Audiogenic, when disks were a novelty at Commodore and there were not that many of them about — he was just curious as to what the disk itself looked like) and, amazingly, it still worked minus its protective jacket. It didn't look very healthy though, so don't do it with anything important if, like Martin, you can't restrain your curiosity.

Whether you actually need a disk drive or not is, of course, another matter. It all depends what you want to use the machine for, and plenty of 64 owners quite happily survive without a disk drive. If you don't have one and intend getting one, then you probably have some sort of specific purpose in mind. So, I would recommend checking the program that you intend to buy on something like Evesham's fast drive, and if it works then that's the

cont. on next page

MORE 64 POWER!

continued from page 29

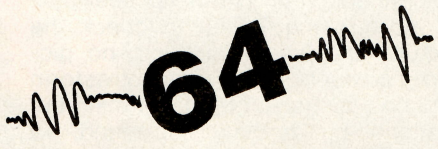
drive for you. It's cheaper than Commodore's own, it is much, much faster, and seems to be compatible with 99 per cent of software. But, someone will now go and buy one for a specific program and find that it won't load, so do check first before you part with your cash.

"I would recommened checking the program that you intend to buy on something like Evesham's fast drive, and if it works then that's the drive for you."

Disk drives can be linked in tandem, which is rather handy as nobody seems to have produced a double disk drive specifically for the 64, and if you graduate from cassette deck to disk drive you soon find that you wish for a double disk drive. The only solution is to get a second single drive and change the device number of one of them, but at least it works.

Somewhere at the end of this chain of peripherals there usually lies a printer. Again, whether you buy one or not is up to you, it all depends on what you want to use the 64 for, and as with disk drives there is an amazing choice of printers on the market. You don't have to stick to Commodore ones, although there is always the problem of getting the correct interface with anything that is non-Commodore. Still, what's another collection of wires, plugs and sockets?

If you do buy a printer, there is the added problem of deciding which one to choose. Commodore's own are all very well, but the quality is usually a bit suspect. That's a minus point, but on the plus side you can usually manage to print out the Commodore character set. So, if you're just happy to be listing out programs or playing Infocom games and getting a transcript of your progress then there's nothing wrong with a Commodore printer. If you want to write snappy letters and do all manner of desk top publishing tricks, then you'd probably need to spend a few more pennies and get something more suited to the job. As with the disk drive, try before you buy. It's your money, not the salesperson's, so only get what you want, not what they want you to get.



Well, that just about covers most of the commonly found peripherals for the 64. Obviously there are many more (joysticks, cartridges, etc.) but they will have to wait. Now, screwdriver in hand once more, here we go for next month's article ... bye!

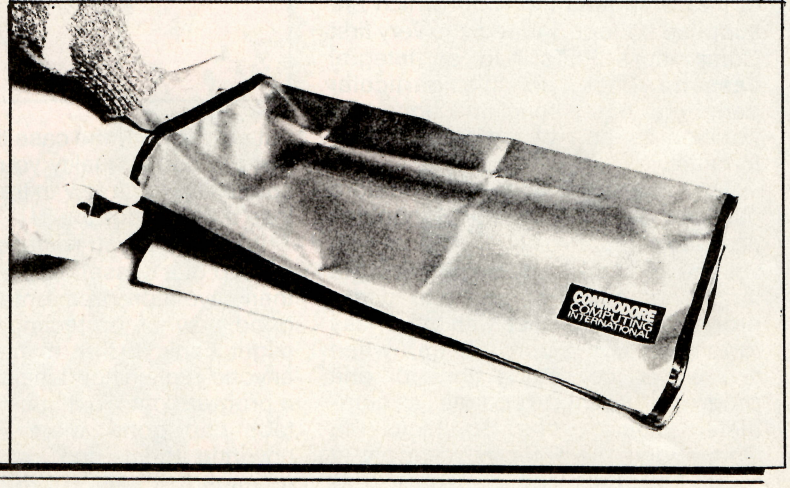
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CBM launches The Primary Project

"All the children have been extremely enthusiastic. Children with quite severe learning difficulties are suddenly on an exciting par with their peers. So far the Amiga 500 has brought out qualities in some children that I did not know existed"

Richard Adams, a teacher at Holway Community Junior School, commenting on his class of eight and nine year-olds' reactions to working with an Amiga computer.



Commodore Business Machines has launched The Primary Project, in which the preliminary stage — lasting nine months — assesses the potential of the Amiga 500/2000 as a teaching tool in primary schools. A pilot project has been running since January this year in Somerset, Norfolk, Humberside, Berkshire and Cheshire. The Primary Project is being extended to further regions on LEA request.

The Primary Project will be looking towards issues such as the National Curriculum and how computers fit in with its requirements. A study running alongside will look to the implications of LMS on school administration.

The project is being supervised by Commodore's Wiesia Okon — of their Education Division — who has brought her experience as a teacher to the running of the programme. Peter Talbot, National Sales Manager for the Education Division, said of The Primary Project's aims: "It came into being to evaluate the Amiga and its schools related software. The most important element was to find out how the children got on with the Amiga so that we can make it as easy as possible for teachers to blend it with their everyday teaching practices".

The Amiga 500s have been supplied to the schools with 1Mb of memory together with open "toolbox" software, such as wordprocessing — the sort of software currently being recommended for use in Primary Schools.

The two main programs being used are Electronic Arts' Deluxe-Paint II and The Disc Company's wordprocessor — Kind Works — which can be used together to combine text and graphics allowing for simple DTP to support the children's work in the primary classroom.

Following the formal launch of The Primary Project, Ian Hollingsworth, the Headmaster of Tivetshall County Primary School in Norfolk said of the school's initial findings on the Amiga 500: "I have found the children to be less inhibited than adults in their use of the computer. The Amiga's mouse has made it very accessible for pupils with the art package — Deluxe-Paint II — creating a discussion point for lessons".

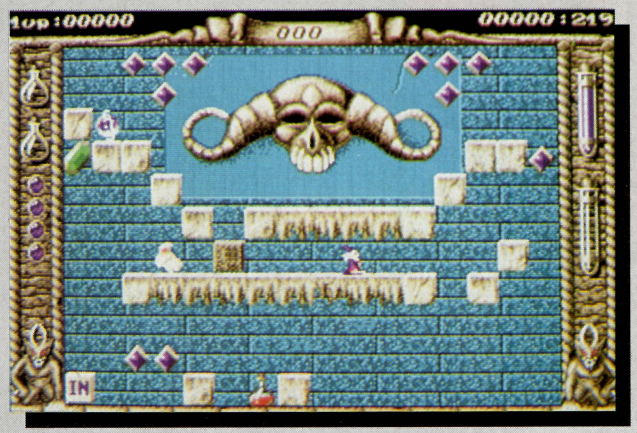
Ian Hollingsworth has also been using Commodore's BBC Emulator so that the school can continue to use its BBC software on the Amiga 500. "We have roughly 250 BBC programs in the school and that represents a sizeable investment which we do not want to lose", says Ian Hollingsworth. The BBC Emulator allows the Amiga to emulate the BBC Micro and run BBC programs.

Tivetshall Primary School has also been using Gold Disk's Moviesetter to create simple animations. Ian Hollingsworth notes that the animation package has generated a lot of interest among the school's older children.

Wiesia Okon said of the Amiga's impact in the classroom: "I have found that the children are expressing themselves through the computer on a number of levels — as well as actually doing something such as painting on the Amiga — there is always a lot talking and discussion going on around the machine. The stimulus that the Amiga can give to encourage group work fits in well with the IT philosophy of Primary Education. The computer enhances and complements the work already down by teachers and pupils in the classroom".

Spherical

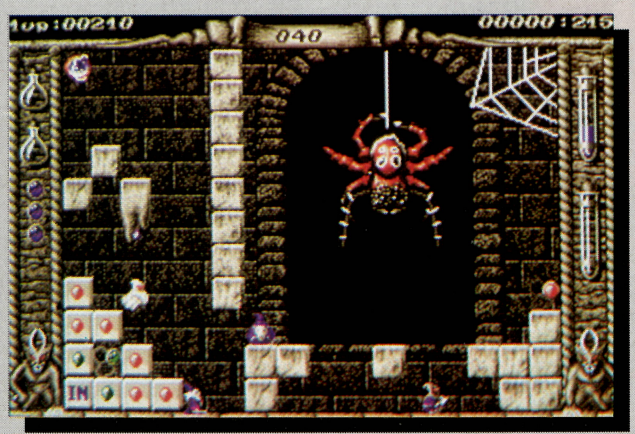




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MICROPROSE FLYING HIGHER



Major Bill Stealey and Stewart Bell, Microprose high flyers.

Microprose, once known only for its simulation style games and the piloting and publicity talents of its co-founder Major Wild Bill Stealey has now flown up to an even bigger role in world computer entertainment by buying Telecomsoft, the British Telecom-owned software company.

One of the U.K.'s biggest games houses and previously run by Paula Byrne who has not joined Microprose 'by mutual agreement', Telecomsoft has generally been regarded by software industry observers as amounting totally to much less than its separate parts. Even with excellent products such as the highly-awarded Sentinel, the world-famous Elite and their Rainbird label's Oskar-winning Pawn and Guild of Thieves, plus the immense resources of British Telecom, one of the largest corporations in the world, Telecomsoft was always a disappointing company which many thought, should have achieved leadership of the software industry.

In some cases, it was worse than disappointing. Star Trek, boosted to the stratosphere never even appeared on all formats - and was a flop on those that did come out. That was typical of the Telecomsoft which never seemed to know where it was going or what identity it was seeking.

There have been rumours for some time that major changes were afoot for Telecomsoft but the denials were frequent. There was a story that the U.S. subsidiary, Firebird Licencees attempted to buy itself out but that was squashed by its closure and the distribution of Telcomsoft's games in the U.S.A. handed over to Activision. Many scratched their heads at that for was not Activision one of Telecomsoft's major rivals?

Then came the rumour that in the U.K. the team led by Paula Byrne had tried to buy the company from Telecomsoft but had not been able to raise the cash. More denials. . .

Finally comes the announcement that Microprose, a company that was hardly known of on this side of the Atlantic a few years ago has stepped in and resolved Telecomsoft's fate. It is reputed to have a paid something under £2,000,000 for the privilege and Stewart Bell, Microprose U. K. boss who will run the expanded operation must be chortling for the inherent value of the product list that Telecomsoft possesses with world renowned games like Elite which offer all sorts of opportunities for exploitation far beyond simple computer games must be immense.

BIG TIME

Microprose, having acquired Telecomsoft, which is estimated in 1988 to have achieved, in spite of its problems, over £10,000,000 turnover now has become one of the big time world powers in the entertainment software business. As one of the top three, with U.S. Gold and Ocean, in the U.K. , it eclipses Activision who are still suffering from corporate losses of substantial proportions and there is no-one else who can challenge it.

For those in the software industry who are admirers of the way that Microprose dedicates itself to bringing out quality products even at the expense of time and money and of the way that the Stealey-Bell partnership has built the Microprose organisation in Europe, the U.S. and Australasia (even in Japan, there is Microprose office now) without compromising that quality, the take-over of Telecomsoft can only be regarded as a good thing. It is not some American company grabbing a piece of British heritage like moving the old London Bridge out to the Nevada Desert. Microprose can now be considered a local organisation that will, by its expansion, enable better standards and more enjoyable games to be produced at reasonable prices for distribution worldwide. Now that can't be a bad thing, can it?

Z. M. S.

"Microprose Magic"

"This is, by far, the biggest deal in Microprose history ..." Microprose president Bill Stealey said. "The addition to Telecomsoft from British Telecom will double the size of Microprose Europe, making it the second or third biggest entertainment software publisher in Europe, It also has the potential to increase the growth of Microprose U.S.A. by 40% — and that's over and above the normal growth rate we've projected for this year."

Stealey says that Microprose will market between 6 and 12 products from Telecomsoft design teams every year and six to eight during the remainder of 1989. "We'll put the Microprose marketing and sales magic into them and give them the attention they deserve."

Back To Commodore Basics Part II

By now you should have lines 280 to 360 of the first program in the suite we will be covering in this series of articles safely stored away on disk. Tape users can also follow the series, but changes will have to be made. We will describe those when we come to them. This first program is called MENU, for it is this one which will allow the user of the database that we are building up to select whatever option he or she requires. The screen display that we are aiming for eventually is something like as shown in figure one.

Although we only entered nine program lines last time, you may well have made one or two typing errors while doing so. Such simple mistakes as missing out the R in PRINT are spotted by the computer, and any attempt to run the program will cause the Syntax Error message (literally, an error in your syntax as far as the computer is concerned) to appear. At the end of last month's article I suggested that you simply re-type the line if you've spotted any mistakes, but there is an easier way.

To edit a program line we use the keyword LIST if it has vanished from the screen. Alternatively we can use the cursor keys if it is still there and move the cursor so that it is lying over the line. If you load the program into your computer's memory with load "menu", 8 and list it with the keyword LIST, we can see all nine lines of it. To list a specific line, say line 310, you would enter LIST 310 and press RETURN or ENTER as usual. Suppose we had made a mistake in line 310 and wanted to correct it. By typing LIST 310 you will see line 310 appear as before, with the cursor (the little flashing blob) sitting underneath it. The cursor movement keys are the arrowed ones over on the right hand side of the keyboard, and we can use these to move to any part of the line. Then, if we wanted to insert some additional text, we would just hold the shift key down and press the DEL key to make some space, then type it in (SHIFT + DEL means INS or insert). To delete some text we would use the delete key to delete characters to the left. Experiement by altering line 310, pressing the RETURN key when you are satisfied with your changes. Just ensure that it is back to its original form before we carry on!

By running our nine line program you will see that a box is drawn on the screen before printing it, and fortunately there is a command in Commodore Basic for doing just that. What we would also like to do is to change the colour that is currently being displayed by the 64. That is, the colours of the main window, the border that surrounds it, and the text that is being displayed on the screen. The standard colours that come on when we switch on the 64 ar very drab, and a few changes are usually called for. We'll do all this by adding a few lines, and explaining them afterwards.

Type these lines in now, adding them to those already in the computer's memory, and when you have done so save this revised version of the program with SAVE "Menu",8. The old version will be replaced on disk with this new one, although we are still some way from finishing it.

There are the four variables, in two program lines, with an additional line to give our program a name:

```
20 REM MENU for Commodore Database
30 CL$=CHR$(147):CH$=CHR$(19):PRINT CHR$(158)
40 REV$=CHR$(18):ROF$=CHR$(146):POKE 53281,0:POKE 53280,0
```

What we have done here is to define, in line 30, a variable for clearing the screen *CL$* and one for moving the cursor to the top left hand corner of the screen *CH$*. This is followed by printing CHR$(158) for changing the text colour to yellow: the value of 158 comes from the manual accompanying your 64. Line 40 gives us two additional variables for turning reverse print mode on *REV$* and turning it off again *ROF$*. We will make use of these later on when we add some more lines to our program. At the end of the line there are two unfamiliar POKE commands.

POKE allows us to alter the content of various memory 'locations' within the 64. Some of these locations are quite important, so make sure you type the numbers in exactly as shown above. Memory location 53281 allows us to alter the colour of the screen, 53280 does the same for the border. By using a number in the range 0 to 15 we can thus choose any of the standard set of 16 colours that the 64 is supplied with. Try experimenting with different numbers until you find a set of colours that takes your fancy.

Before carrying on with some more of this first program we need to explain an important programming concept, and that is the concept of arrays.

So far we have only discussed two types of variables, numeric and string. There are others which we shall discuss when they crop up, but all maintain one distinction: they are single variables. Thus we might have x=25, name$="fred", x1=26, and so on, but they are all single variables. This is where arrays come in. Often it would be convenient to have, say, ten different variables with x as the opening letter, referring to ten different situations. We might have **x0=25, x1=26, x2=27,** upto **x9=34**. But, as I'm sure you can appreciate, manipulating

continued on page 39

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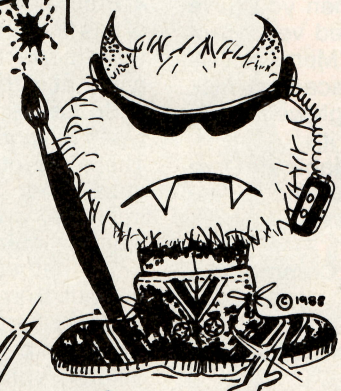
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Back To Commodore Basics

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this many variables can become tedious in the extreme, which is why we have arrays.

Before we can use one, we must first of all dimension it. That is, tell the computer how much room the array is going to take up in memory. If you remember our box analogy from the first article in this series, what we are doing when we dimension an array is to set aside some room at the right hand end of our box, room which other variables cannot encroach on. The syntax for doing this is:

DIM array(number)

where array is the name of our array, and number is the number of different variables that are going to make up the whole array. So, to replace our ×0, ×1 etc. mentioned earlier, we would:

DIM ×(9)

and now we could have ×(0)=25, ×(1)=26, up to ×(9)=34. Now, if we wanted to increase the value of each variable in the array, or element as they are known, we could do this with a single FOR ... NEXT loop. Like this:

FOR I=0 TO 9:X(I)=X(I)+1:NEXT

Far easier than saying:

X0=X0+1:X1=X1+1:X2=X2+1:X3= ...

Note that we can have a numeric variable X, a string variable X$, and an array x( ) all at the same time. The computer knows to differentiate between all three of them.

One of the computing 'rules' governing an array is that you only have to use the DIM statement if the array is going to ×(10) or beyond, so in the example given earlier, strictly speaking we did not need to use the dimension statement. Less than this (going up to ×(9) for instance) and you don't have to bother, as the computer sets aside space for a maximum of ×(9) unless you tell it otherwise. Just to add to the confusion, the computer regards the first element of an array as being ×(0); ×(1) is the second element as far as it is concerned. This need not confuse us, however, for in the program lines that we will be getting to shortly we will have an array name$ containing ten string variables. We will refer to the first one as name$(1), leaving the computer to worry about name$(0). We will not bother with it.

Obviously we are going to have to have some information to put into our array, and in the case of our menu program this will consist of the names of the options available to the user of it. Selecting the options, and the BASIC commands associated with that, will have to wait until next month. For now we will content ourselves with producing a screen display that looks like figure one.

In computer-speak, information is often referred to as data, and therefore you may not be surprised to learn that the keyword associated with data is DATA.

One example of its use is in three further lines to add to our program:

```
450 DATA "DEFINE RECORDS", "DISPLAY RECORDS", "ADD RECORD", "DELETE RECORD"
450 DATA "AMEND RECORDS", "SEARCH RECORDS", "SORT RECORDS", "SWAP RECORDS"
460 DATA "PRINT RECORDS", "QUIT"
```

That should tell you about just some of the things that we will be covering during this series of articles, but the mysteries of searching and sorting records, filing them away on disk for later use, using different print formats to display them, and more, must wait for future months.

Data statements need not necessarily be of the form shown here. For string variables, everything is enclosed with quotation marks because that is the form requried by the computer. If we were going to use some sort of punctuation: **"Define, or Alter, Records".**
Letters without punctuation don't matter, so we could have had:

```
440 DATA DEFINE RECORDS, DISPLAY RECORDS ...
```

and so on, but it is good practice to get into the habit of using quotation marks whenever string data is being set up, otherwise errors can easily creep into your programs. If we were using numeric variables, then no quotation marks are required and we could have something like:

```
440 DATA 1,2,3,4,5,6,7,8,9
```

or whatever. If you have altered line 440 at all, get it back to its original format and we will consider the Basic keyword that allows us to read this data into the necessary array.

We said that we were going to be reading data, and since this language is known as Basic, after all, the keyword we will use is READ. Like this:

```
370 FOR I=1 TO 10:READ NAME$(i):NEXT
```

As a temporary diversion, without really realising it we are witnessing here another important fact about line numbers within a program. We can type these lines of program code into the computer's memory in any order we choose, but it will always sort them out into strict numerical order, as the LIST command will quickly reveal.

Back to READ. We could have entered line 370 in a slightly different way, by having something like:

```
370 READ NAME$(1),NAME$(2),NAME$(3) ...
```

etcetera, but that is wasting the power of arrays. What it does illustrate, though, is that data **must** be read into the array in the order in which it is found in the data statements.

Many errors are caused by reading string data into a numerical array, or the other way around, and errors of that sort are often very difficult to track down. Try to keep your data statements at the end of your programs, so you can always study them if an error should arise, and try and keep those parts of the program that read the data grouped closely together, again so that you can check and compare both READ and DATA to find out where the error may lie.

In this instance the data is indeed at the end of the program, and our READ statement is in the next to last subroutine, also near the end of the program. The last what?

To explain what a subroutine is, we shall now add three lines to the start of our program. After typing these in, save the latest version of this program to disk with **save "menu",8** before carrying on. It would be a shame if a power failure happened to coincide with reading this article, and you lost all the additions that we have so far made ...

```
50 DIM NAME$(10)
60 FOR I=1 TO 24:CR$=CR$+CHR$(29):CD$=CD$+CHR$(17):NEXT
70 GOSUB 230
```

Line 50 is the dimension statement for the array name$, since we are going to be using ten elements of an array and we must dimension it. Line 60 helpfully sets up two variables which we will be using in line 430.

Then we have line 70: GOSUB 230.

Back To Commodore Basics

This means stop obeying computer instructions in order of line number, and go to the subroutine (or short sub-program) which commences at line 230. When, and only when, you reach the end of the subroutine can you come back here and carry on at whatever comes after line 70. As we shall see next month, this is line 80. If line 70 had contained additional information, such as **70 GOSUB 230:PRINT "HI THERE!"**, on returning from the subroutine the words **HI THERE!** would be printed out. In other words, after returning from a subroutine the computer obeys the very next instruction it can find. However, our line 70 just says **GOSUB 230** and nothing more.

How does the computer know when to return from a subroutine? When it encounters the keyword **RETURN**, which in our case is in line 420:

420 RETURN

You must match GOSUBs with RETURNs. For every GOSUB there has to be a corresponding RETURN statement, so that the computer knows how to keep track of where it is currently operating within the program. In our case, we go to line 230, and this is the start of the subroutine that prints up the opening part of the screen display above the box. The computer then obeys, in numerical order, the instructions it finds after this first line, and continues to do so until it encounters the RETURN statement in line 420. Subroutines are especially useful if your program is going to be performing the same set of steps on a number of different occasions. Rather than type out the instructions again and again, you can just use one subroutine to perform the same task over and over again.

We will be considering four more keywords in this month's article, and the five further lines of code that we are going to enter will conclude the entertainment for this month. Here, you will see how it is possible to jump out of a subroutine to go to another one. As long as you are careful to match GOSUBs with RETURNs, no harm will be done.

The first keyword is concerned with strings. In order to get our nice, neat boxed display, we need to put the correct number of dots after each piece of text. So that we know how many dots to put, we need to know the length of the string. This is done using the **LEN** command, used in the form A=LEN(NAME$). If NAME$ were equal to "Peter" then the length of it would be equal to 5, since it contains the five characters P, e, t, e and r.

In our case, we want all the strings to end up as being 29 characters long, including letters and dots, in order to fit neatly into our box. If they are not 29 characters long then we need to do something about it, and just as the structure of this sentence told us that *if something then do something*, this is the form of this most important Basic decision-making set of commands:

IF something THEN do something

Adding two lines to our program should serve to illustrate this. The second one will seem complicated at first: study it slowly, and it should begin to make sense:

```
380 FOR I=1 TO 10
390 A=LEN(NAME$(I)):IF A<>29 THEN FOR J=A+1 TO 29:NAME$(I)=NAME$(1)+".":NEXT J
```

Take it one step at a time. Line 380 is clear: we are setting up a loop that will be performed ten times. At the start of line 390 we find the length of the i'th element in the NAME$ array. If this length does not equal (that is the <> symbols, somewhat to the left of the RETURN key and accessed by using the SHIFT key) 29 THEN we set up another loop. Note that the variable in our second loop is J, rather than I. We could not have two loops using the same variable, otherwise the computer would think I,I? and cause chaos amongst the two loops.

This second loop then increases the length of the I'th element in the NAME$ array, padding it out with dots until it reaches the desired length of 29 characters. Why should we start our second J loop with A+1? Try it with A, and test for the length of the string afterwards by using the LEN command.

The next program line is another complicated one, and introduces our final command for this month. This is STR$, which turns a number into a string:

```
400 X=5:Y=8+I:GOSUB 430:PRINT NAME$(I);" ";REV$;"(";STR$(I);")";ROF$
```

Again, we will go through this one step at a time. Declare the variable X to be equal to 5. The variable Y is then declared, dependent on the value of I. As I increases it will be seen that Y increases also. Then, we go to the subroutine at line 430:

```
430 PRINT LEFT$(CD$,Y)*LEFT$(CR$,X);:RETURN
```

Unlike some Basics, Commodore Basic does not have a LOCATE command. That is, given an X and a Y co-ordinate we can locate — position — the cursor at the desired point. However, we have previously (line 60) defined two variables to consist of a string of cursor downs CD$ and cursor rights CR$, both CHR$ values coming from the manual. We can now use the LEFT$ command in conjunction with these two variables to place the cursor where we wish — note those semicolons!

Back to line 400. Having positioned the cursor at the correct point within the box, we can now print our NAME$(I), suitably padded with dots, a space, turn reverse print mode on, print a left bracket, print the string equivalent of I (this is for screen clarity: try it without the STR$ command, just printing I instead, to see what happens), print a space and a right bracket, before finally turning reverse print mode off. All of this, as you can see, is printed out separated by semicolons so that it all appears on the same line on the screen.

410 NEXT i

Type all these new lines in, save them to disk with the usual save **"menu",8** command, and then LIST the program. If any of the points raised are not clear to you, go through the article again, slowly, and try and take each command at a time. One of the greatest ways of getting to grips with BASIC is by experimentation, so alter some of the variables to see what happens.

Astute readers will have realised that we have not quite finished our screen display so that it is like figure one. Add a temporary line **80 END**, which we will erase next month (keep it in until then), and RUN the program. No line 230 is there? Try and fill in lines 230, 240, 250, 260 and 270 so that your screen display matches that shown in figure one. No prizes, but we will give the answer next month. You will need to use a variable to clear the screen; you will need to turn reverse mode on and off; and you will need the keywords PRINT and TAB. Unitl next month then, get to that keyboard!

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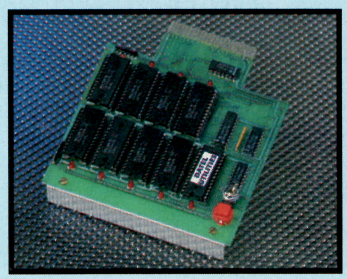
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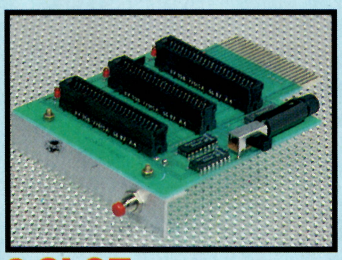
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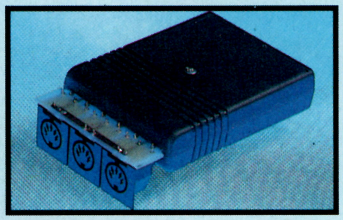


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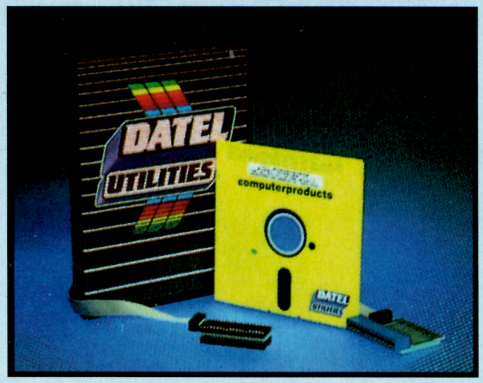
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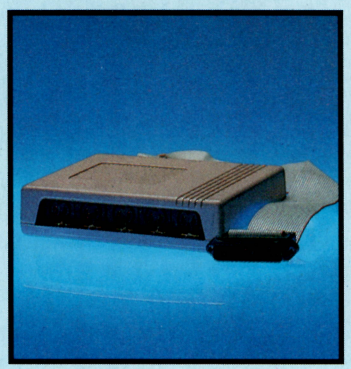
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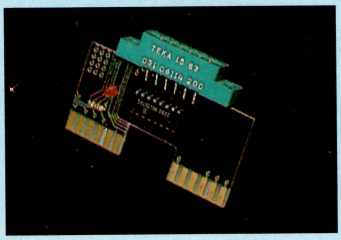
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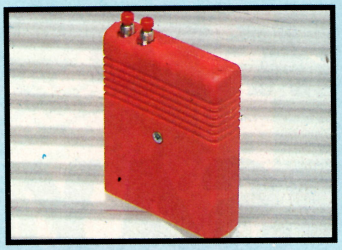


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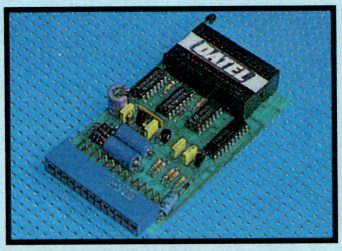
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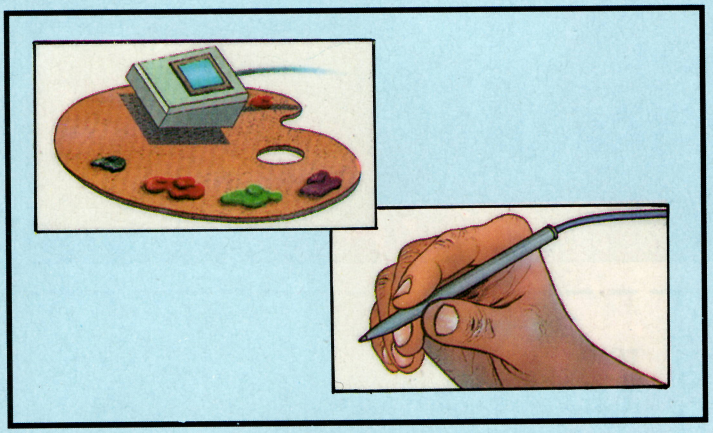
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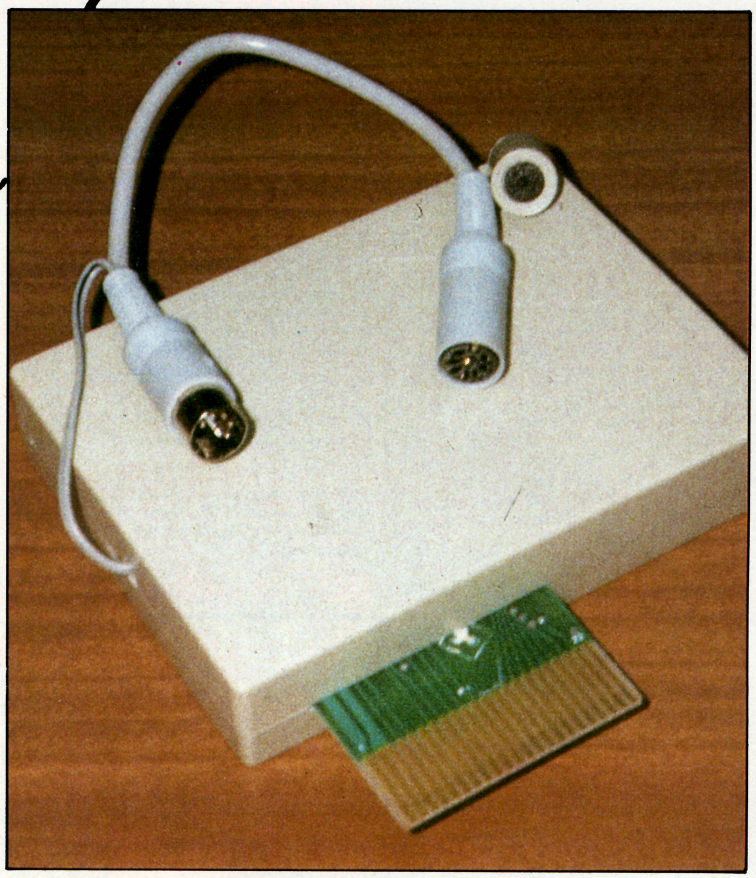
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See elsewhere in this issue for a review of Myth

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RPGs The Playing Of Them!

Peter Gerrard concludes his series on role playing with a little help from a famous friend and a recommendation for something called 'Dungeon Surf Warrier Strikes Back' ...

Aloha! That's what comes of spending a sunny Sunday morning watching a video of The Beach Boys playing a concert in Waikiki. Sun, surf, sand, Little Deuce Coupe, Good Vibrations, Fun Fun Fun and two girls for every boy ... what am I doing here sitting in front of a word processor?! Come to think of it, why doesn't someone write an RPG about surfin'? Not quite sure what the plot might be, but it would be pretty interesting trying to play it, I'm sure. And talking of playing RPGs, that's what we'll be covering in this last instalment of our excursion into the genre. Since two heads are meant to be better than one, I've enlisted th help of Sandra Sharkey. That should be a familiar name to some of your, ex-editor of *Adventure Probe* and all that, so between us let's see if we can cover everything there is to know about getting home with that brand new program, loading it up, and defeating the bad guys. There's always a bad guy in there somewhere, even The Baddest Guy of all if you play that wonderful game Populous, so let's get started.

Let's assume that you've bought a fictitious RPG called Dungeon Surf Warrior Strikes Back (or whatever), and it comes in a nice box. Inside the box we have a disk (or disks, or tape), assorted gumph relating to the game, and the manual. When I first tried to read the manual that comes with Populous I quickly gave up and just dived headfirst into the game. This is not bad think, but it really does help if you read the manual first, even if you just skim through it in order to gather the basics of the game. If there's a novella attached, read it as well, as it might contain some vital hints and clues. If it's like most such novellas then it will probably be a load of tripe, reluctant to part with cash for no apparent reason. Read, read, read, is the first point to be considered. At least you'll find the loading instructions, and then we're ready to go.

Let's see what Sandra has to say on the subject of starting to play an RPG:

Normally you get the chance to create you own character, or party of characters, before you can even begin to play the game. Study the manual that accompanies the game very thoroughly as it will provide lots of information about the qualities that different combinations of statistics will give your character (See! — P.G.). In some games there are different species of character to consider as well, and different people will be better in certain occupations than others would be. For example, elves are prone to magic, so choosing an elf as a warrior would not be a very smart decision to make.

Statistics also vary from game to game, but some of the most common are skill, strength, stamina, charm, intelligence and wisdom. It is also important that your character begins with a reasonable amount of hit points, as these reduce with each direct hit that your opposition manages to land.

No matter what the storyline, you can bet your bottom dollar that your won't be able to complete a role playing game in an evening or two as you have to build up your characters, and this takes time. If you don't have the patience to spend a few days building up your characters then don't tackle an RPG.

All this is certainly very true of most of the role playing games that I've encountered, going back as far as our old friend the Temple of Aphsai, and all the offshoots that were spawned from it. Whether you have one character or a group of characters, though, certain things remain the same.

Progress throughout these games usually depends on experience and gold, the more you have of both, the better. Skills are very important, and you must endeavour to build up the attributes quickly. Experience is gained by fighting, and defeating your opponents, and sometimes you can find useful or magical items after a skirmish. These can vary from pieces of armour to better weapons, potions or treasure.

After playing for a while, you may find that you become very attached to your party. I get very upset when one of my favourite characters meets with a sticky end, but most RPGs allow some form of resurrection for characters who have died, so that all the experience and treasure that you have worked so hard for is not lost for good.

It's true, you know, I'm the same. Somehow, that little collection of pixels moving about on the computer screen take on a life of their own, and you find yourself willing your favourite characters to win a battle, however unfair the odds might be. This emphasises the importance of both experience and the mythical 'hit points', something that confused me a little when I first started playing RPGs. Basically, the more hit points that a character has the better chance that character has of winning a fight. A character with twenty hit points should

defeat a character with only fifteen hit points, for instance, although two or more characters can gang up together at times and form what might be termed a dangerous liaison.

Another term that confused me for a while was the mysterious word 'stats'. My character has twenty four stats, people would say, leaving me somewhat baffled. But again, the explanation is simple. If points for each statistic such as strength, stamina, etc., are awarded on a one to six basis, then you could be said to have five stats for strength, four for stamina, and so on, giving an ultimate total of twenty four stats. Like all aspects of computers, the RPG son built up its own unique brand of terminology. Let's carry on.

Another facility that software companies are beginning to offer is one that allows you to save your characters from one game and load them into another. This means that you can get straight into playing the next game in a series, instead of having to build up your characters from scratch. Much as I enjoy building up the skills of members of my party, it is useful to be given the option of keeping the same group of characters, who can soon become "old friends", and are usually the product of many hours of play.

This feature is more useful than it might seem at first glance. If we look at the game Alternate Reality, for example, the basic scenario of the first game is that you just wander about the place gaining experience, fighting off baddies, getting a job, finding a safe place to sleep for the night, and all those other things that go to make up an Alternate Reality lifestyle. There are a number of add-ons planned for this particular game, centring around the original landscape but branching out from it, and to have to play the first game all over again every time you wanted to branch out would be tedious in the extreme. Fortunately one can safely assume that your character, together with all that hard earned experience, can be plonked down right at the start of any of the branches as and when they become available and start straight away on the quest in hand. Just put a in a disk and away you go. Hopefully, then, when The Dungeons (supposed to be the first), The Palace and The Wilderness appear you'll be able to go to the appropriate entrance in the city, load in your character, and take it from there.

And talking of exploring landscapes:

Mapping is sometimes, but not always, necessary, and can usually be done in much the same way as for "traditional" adventures. Most of the RPGs that I have played have had some way of teleporting from place to place once the characters have reached a certain level of skill, which is very useful as it can become very tedious trudging about what is usually a vast landscape.

Again, we can examine this in terms of those traditional adventures. In the early days of writing adventures I was a guilty as anyone else of having vast areas where problem (a) was miles away from problem (b), and the player had to trvel all the way to location (c) to get something to help solve the puzzle. This is not good game writing, although it was prevalent at the time, and adventures and RPGs now seem to have got round this (for the most part, anyway) by having these teleport systems or the adventure equivalent the GOTO location command.

Mapping can also have other uses, as anyone who has played Alternate Reality might tell you. Sorry to keep harping on about this game, by the way, but I do like it! In Alternate Reality there is a collection of locations known as Price Commons, somewhere near a Royal Walkway. If you map this very carefully, and then turn your map sideways, be prepared for a good laugh.

But there are other aspects of RPGs that we haven't even considered yet...

Magic is very often used, and must be learned. Sometimes this seems a daunting task, but it is surprising how quickly you can learn all the spells and the best way to cast them to full effect.

All very well, but learning some of these spells is a bit tricky. In Alternate Reality you're pretty much up against it until you reach the umpteenth level (well, all right, level seven or eight) when you can join a Guild and start on the long process of learning a spell. Like many RPG aspects this does indeed take a long time! Thirteen game days, in my case, and I would have had to attend extra days if I'd missed any for some reason. Despite all this, you sometimes have to learn the spells again if they should happen to wear out. After all that learning you'd think they would last forever, but they don't.

With so many differing styles of RPG coming out it is really something of an impossible task to try to give detailed guidelines to playing all of them, but the above manages to cover most aspects of the more popular types of game. Building up characters, gaining experience, fighting when appropriate and running away if necessary, getting jobs and money, all that kind of thing, do appear in most games. So do puzzles of one sort or another, but guidelines to those cannot be given any more than they can be given for traditional adventures. You've just got to use your brains!

At least there is one consolation. In the traditional adventure many problems arise as a result of an indifferent parser. You know what the solution is, but you cannot get the parser to accept it because it hasn't been programmed with what you consider to be an adequate vocabulary. This sort of thing very rarely arises in an RPG, just because they rely more on actions rather than words, and if they do have a vocabulary of some sort then you are gradually told what it is, thus negating the need to go scouring through a Thesaurus in order to find another word for PUSH, or whatever word might be causing the problem.

But don't worry, this lack of vocabulary doesn't seem to be stopping the games designers from coming up with ever more ingenious puzzles. Anyone who has tried to get the key from behind the descending gate in Dungeon Master will know the sort of thing I mean. Stepping on one panel lowers the gate, and that seems to be the only route to it. Pressing a switch opens it, but then to get to it you have to step on the panel again and close the wretched thing. It can be done, with a lot of careful thought, but it had a few of us baffled for a while. And, if a few of you fancy combining in an RPG, what about ...

Live role playing games are also becoming increasingly popular. In these you can dress up and take on the role of your character in person (I refuse to be Dimli Gloing! — P.G.). Very often these games are conducted in real cave systems and you need all your wits about you to succeed in the devilish quests that are set. You are usually a member of a party, but still need to be aware in case one of your party decides that your "death" would improve is or her own position in the game... you are always waiting for that "stab in the back" and have to make sure that YOU get the knife in first!

So if you've nothing planned some Bank Holiday weekend, why not give it a try? It makes a change from sitting hunched over a computer, and speaking of which it's about time I stopped writing about RPGs and moved on to something else. In view of such games as Alternate Reality, Dungeon Master, Populous (not really an RPG, but it's still a great game!) I feel reluctant to release my own Venture without some significant changes being made. I'll keep you posted on it, if anyone expresses any interest in the matter. I just can't hope to compete with great teams of programmers coming up with ever-more technically brilliant games, so I think it's hey ho to the local cricket ground and a bit of peace and quiet while I think about something else. Bye for now!

P.G.

The Dral Speaks

Recently Peter Hardcastle, better known to Compunet users as NETFAX or 'The Dral', took over the database editorship from Jane Firbank who had been in charge since the system was created. CCI interviewed Peter using Compunet's Courier electronic mail system. 'The Dral' tends to work late and most of his replies had a time stamp of around three in the monring.

CCI: Before becoming Compunet's new editor you were probably best known to Cnetters for your NETFAX area. Why did you start it?

Dral: *Well, when I had been on Cnet for a few months I was itching to upload something big. My first real area was Z00TV, a TV related area, which included SEOUL, a massive Olympic area. I spent many an hour (at 5am) late last summer, uploading Olympic results and reports. It listed every British medial winner of the past and EVERY single result from Seoul. It was the first publication after BBC1 to report Ben Johnson's Drug scandal.*

After that I did HNEWS which was an upload every few days to hi-light the best uploads on the net. This was part of -METNET-'s NETREV area. I soon wanted to be independent and knew I could do lots more so I started NETFAX. To my amazement people loved it. If they hadn't I wouldn't be editor now.

Other areas were DRAL, a general magazine with many different subdirectories including my home made software which is now at DRALH in the 'Hall of Fane' and TODAY a day by day diary of happenings on that days date from years gone by.

CCI: Do you have a particular passion for any of Compunet's 'added value services' such as Federation II, PartyLine etc?

Dral: *I'm not a FED player. Diesel gave me a guided tour once but it didn't get me hooked. PartyLine is a different story. I'm one of it's biggest users after midnight. Where else could users get such easy access to the man with his finger on the button? (Or his head on the block?)*

CCI: Do you use any online services other than Compunet?

Dral: *Yes, I use Prestel and Micronet a lot. I've been a subscriber on there for about three years. My wife uses it a lot too. I was known as 'Par' on there. Don't ask me what a 'Par' is!*

CCI: which computer hardware and software do you use to access Compunet?

Dral: *I use my trusty CBM 128 and 1541 disk drive which is acting up something terrible at the moment. Oh, and the Commodore Modem of course. I use ALL the utilities that are available for use on Cnet.*

CCI: What does the editors job entail? On my visits to 'Compunet Towers' in the past I was always amazed by the vast range of jobs being worked on by Jane simultaneously.

Dral: *I'm specifically the 'Network Editor'. That is, I look after the 'online' side of things only ...*

I answer queries by electronic mail, sort out rows, help new users get started, look out for bad language and abuse and generally keep things tidy by moving uploads around or erasing them from the system if they are dated.

I'm also there to keep the users informed by uploading news flashes. But most importantly I try to be noticed, to show the users I'm there, online, every evening, throughout the evening. So if they need information I can usually reply within five minutes.

CCI: Tell me about your typical working day ... (or night?)

Dral: *My typical working day starts late in the afternoon with a telephone conversation with all of the 'departments' in the Cnet office. I am a 'remote' editor working almost three hundred miles away from the office, so all my queries, complaints and problems from the previous night (which couldn't be sorted out instantly) are dealt with next afternoon.*

Any work on the 'net (new Gotos, Banners, moving items into different areas etc.) is also done late in the afternoon before most of the users arrive online at 6pm. I also gather information for all the 'departments' to use for that nights 'System News'. I upload the news in time for the main bulk of the users arriving and then it's just a case of being there in case I'm needed. Once again — answering queries, keeping the 'net alive and motivated!

Some nights I find I can't get out of my mailbox till about 9pm due to the amount of queries and requests (and friendly chat of course). From 9pm onwards I look around the 'net and even manage a few uploads myself. From midnight onwards I chat on PartyLine and answer any new mail before logging off around 2am. It sounds a long day but remember, I can do it in bed if I want to. The 128 has a nice long power lead!

CCI: You said you were making changes to the way that the Compunet database is structured — could you tell us a little about them?

Dral: *Yes, it's nothing drastic. When I was just a humble user I found the front page a bit formal and not very informative. Also lots of the areas beneath the front page were in a bit of a tangle. What I am to do is tidy things up. Make the front page more informative and give novice users a better change to get going quickly.*

New banners and alpha-gotos will also make the system prettier and easier to navigate.

CCI: What is the future of the C64/128 on Compunet?

Dral: *You could say that it depends on the users. If people don't sell off their trusty friends for the glamour of 16 bit machines there should be no problem.*

We're going through a change of trends at the moment. The online coders are concentrating less of demos and more on utilities, especially utilities to help people use Compunet.

There are major plans going on to enhance the 64's online software so there is certainly NO question of us trying to shove it out of favour. Other computers will arrive but we won't forget the machine that Compunet was made for.

continued on page 64

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STAR LC-10 COLOUR

Has the age of the colour printer finally arrived? Alastair Statham tries out a new contender for the low price crown.

There was once a time when colour printout from a personal computer was well beyond the scope of most people's equipment or, more importantly, their budgets. Today, that is thankfully just a bitter memory. There are now several printers, costing between £150 and £300, which are capable of delivering reasonable quality colour output. The Star LC-10 is one such printer.

Based on tried and tested dot matrix technology, the LC-10 provides both colour and near letter quality text. By making multiple passes over each line it can print characters using up to 18 by 23 dots. Bit-image graphics in quad density have a resolution of 240 dots per inch. Print speeds vary between 120 characters per second in draft pica and 30 characters per second in near letter quality pica. While graphics and near letter quality text are printed in only one direction, the draft setting can also operate in bi-directional mode.

The four-colour fabric ribbon is contained in an easy-load cartridge and has an expected life-span of around one million characters per colour. The black, red, yellow and blue coloured bands of ribbon produce seven different colours. Mixing pairs of the red, blue and yellow bands produces the three intermediate colours of green, violet and orange.

This standard configuration includes: A Centronics compatible interface (uses 7 or 8 eight bit data) and an 8k printer buffer, although this is reduced to one line of text when downloadable characters are used. A simple switch setting determines whether the LC-10 will emulate an Epson LX-800 or an IBM Proprinter II. The Epson JX-80 driver supplied in Workbench Preferences seems to work with the Epson setting.

The standard character set contains ninety-six ASCII characters while the IBM compatible set contains two hundred and forty-four including ASCII, international characters, symbols and simple block graphics. The fourteen international character sets include French, German, English, Danish, Swedish, Norwegian, Italian, Spanish, Latin-American and even Japanese. If all this is insufficient then up to one hundred and ninety-two characters can be downloaded in draft mode. This figure drops to seventy-eight when printing in near letter quality.



In draft mode there is only one type style that may be used with or without an italic slant. The near letter quality mode, however, allows three type styles, each of which are also available in italics. The styles are Courier, Sanserif and Orator. Both Pica and Elite print pitches may be used in either normal or condensed mode and proportional spacing can be selected for all four resultant pitches. Extra large characters can also be printed using double height, double width, both together, or even quadruple height and width. Line spacing defaults to one sixteenth of an inch but is also programmable in eighths, seventy-

STAR LC-10 COLOUR

seconds or two hundred and sixteenths of an inch. A print width of eight inches allows the printing of between eighty characters per line using Pica and one hundred and sixty with condensed Elite. Normal Elite gives ninety-six and condensed Pica one hundred and thirty-seven characters across the line.

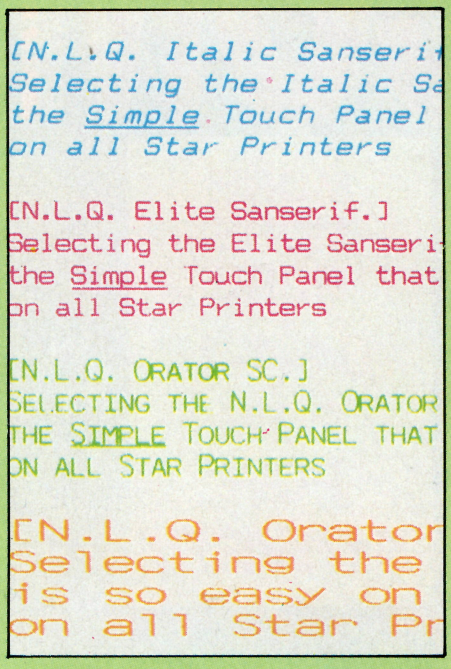
'One of the attractive features of this printer is the clever paper parking mechanism'

Single-sheet paper measuring five and half to eight and a half inches wide is easily accommodated in a neat single-sheet feeder. Loading may be either manual or semi-automatic. The semi-automatic mode accurately feeds the paper ready for printing. Fan-fold tractor fed paper can also be used. This can vary between five and ten inches wide and up to three-ply multi-part. One of the attractive features of this printer is the clever paper parking mechanism. This relieves the need to remove Fan-fold paper from the tractor mechaniam in order to produce the odd friction-fed single-sheet document. Parking is achieved by setting the printer offline and then pressing both the paper feed switch and print at the same time. The paper is automatically withdrawn from the platen. Moving a release lever now selects single-sheet feed. Unparking is even easier as it only requires you to move the paper bail and set the release lever to its former position. Once the Fan-fold paper has realigned itself the bail is replaced and printing can resume using the tractor feed. This is as simple and effective a system as I have ever seen on this class of printer.

The controls of the LC-10 are well thought out and easy to use. With the exception of twelve DIP switches under the top cover which are used to select the rarely changed settings, all of the controls are on the top right face of the printer. The DIP switches control functions like default page length, character set and whether the buffer RAM will be used as a print buffer or to hold a downloadable character set. International character set selection and emulation mode setting is also by DIP switch. Using these controls it is also possible to disable automatic carriage returns, the auto-sheet feeder and paper-out detection. Orator type style can use either small capitals or true lower-case letters. These are selected by another simple switch setting. The front panel controls are used to select more frequently changed settings. The controls consist of four membrane switches with ten small rectangular LEDs which indicate the settings selected. The four switches are marked Online, Paper feed, Print Pitch and NLQ type style although combinations of these switches do perform other functions such as the parking action

'The LC-10 is packed with features and is probably the quietest dot matrix printer I have heard for a long time'

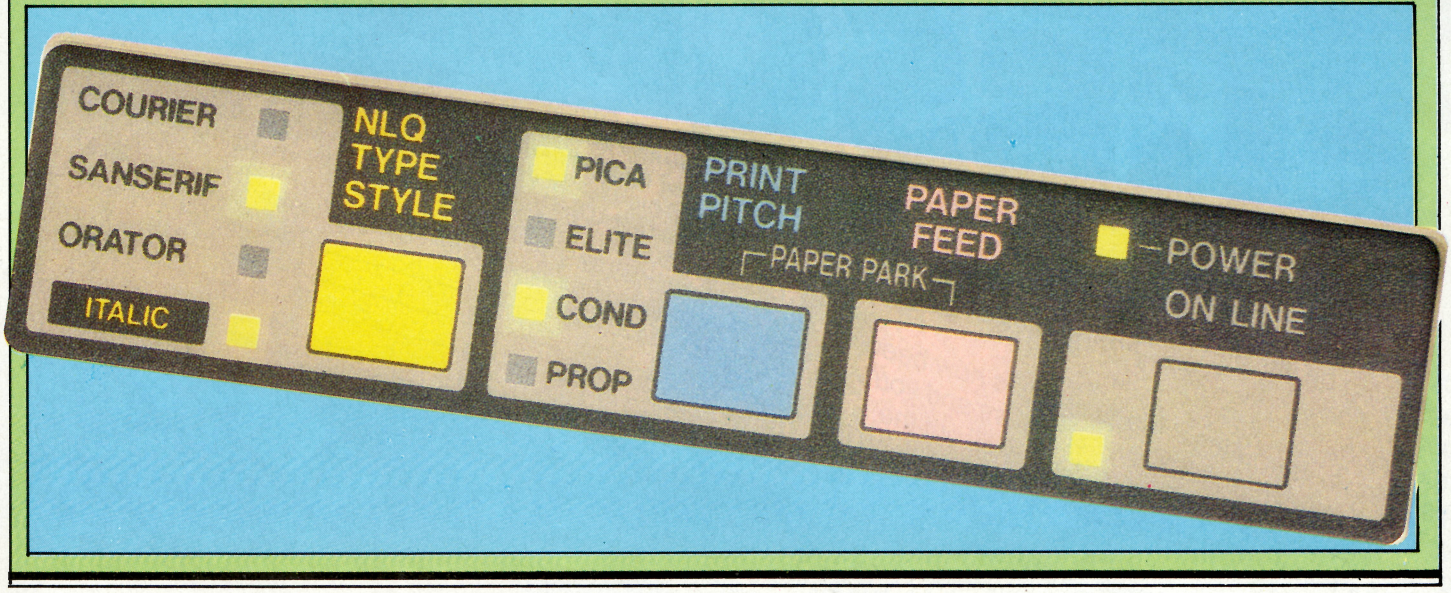
mentioned earlier. All except the paper feed switch beep when pressed and the adjacent LEDs indicate their current status. One of the LEDs lights to indicate that the power is on, as controlled by a rocker switch on the left front face. The style indicators show whether courier, sanserif or orator style is selected and whether it will print in italics or not. Four more show whether the pitch selected is Pica or Elite and whether or not it is printing condensed or using proportional spacing.



Despite its budget price the LC-10 is packed with features and is probably the quietest dot matrix printer I have heard for a long time. Even the test-mode selectable at power-on by holding down the appropriate front-panel switches provides both long and short test options. All of the expected highlighting features such as bold, underlined and overlined text are available together with both subscript and superscript. The repertoire of commands available though escape codes is enormous and includes page formatting, character control and most of the front panel operations. The quality of the NLQ text is superb. The colour printing is probably more suitable for producing colour text, charts and graphs than high quality artwork but if all you need is a good quality NLQ printer and the ability to produce the odd colour hardcopy then the STAR LC-10 could well be the machine for you.

A.S.

Price: £299.95.



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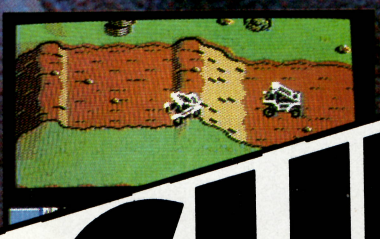
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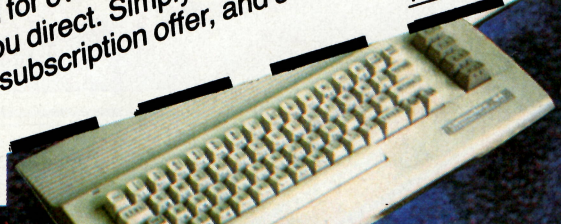
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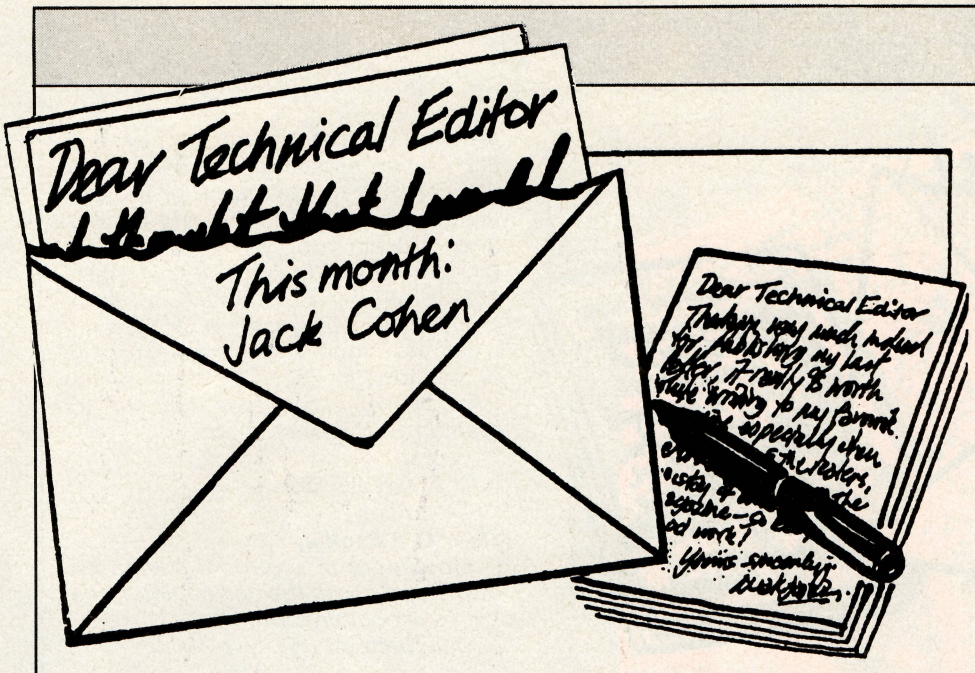
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Dear Technical Editor,

Like your reader Gary Voelovfirth, I have also unexpectedly been given a CBM+4.

I want to use it to learn BASIC programming on rather than for games; although I'm not averse to using it to play games on.

Unfortunately, though, I have no leads, to connect it with either cassette or disk drive, to store programs on.

Could you give me an address of any suitable dealer(s) who could supply me with the necessary lead(s) and related hardware for the +4? Also do you know where I could get the manual for the +4? At the moment I'm using other Commodore manuals for general info about Commodore computers, but would prefer something aimed at the machine itself and can't find anything on the +4.

Yours,
Gareth Hughes

Dear Gareth Hughes,

Suitable leads can be obtained from Meedmore Distributors Ltd of Liverpool on 051 — 521-2202.

Computer Manuals Ltd who have a 24 hour Mail order book service on 021-706-6000 may be able to help with your manuals.

Dear Technical Editor,

I have a few questions and opinions that I hope you can help me with.

1) Is it possible to have multicolour UDGs on a Commodore 64? If so, how?

2) What are 'software sprites' and how are they different from hardware sprites?

3) Would you recommend me to buy the 'Commodore 64 Programmer's Reference guide'? Where would I be able to get a copy from?

4) Where can I find Rae West's book 'Programming the Commodore 64' as the publishers, Level Ltd., cannot be traced by British Telecom?

Yours,
C.D. John, Gloucestershire

Dear C D John,

1. Yes it is possible.

First enable Multicolour mode with POKE 53270,PEEK(53270)OR 16 Then to enable any particular character set the value in the corresponding colour RAM location.

0 to 7 = ordinary mode and 8 to 15 for multicolour mode so that bit 3 in a colour RAM location determines in which mode the character will appear.

This means the screen can display different characters in either mode at the same time.

2. I think that what is meant by software sprites as opposed to hardware sprites is that the hardware maintains up to 8 sprites at a time automatically (by the VIC II chip), but software sprites can be generated by using Raster interrupt special techniques.

3. Try a good bookshop and get them to order the book by quoting the ISBN number 0-672-22056-3, either in the UK or the States.

4. The official distributors for Rae Wests' book are Biblios Dist Ltd. Star Road, Partridge Green, Nr Horsham West Sussex RH13 8LD

Phone:- 0403-710971

Dear Technical Editor,

Each day I pass a dowdy second hand shop and on the shelf was a Commodore +4. I felt sorry for it so I went in and bought it. The chappie in the shop let me have it the cost, the price of the tape recorder. So what was the mystery. I took it all home and it all worked with the few tapes and the integrated software.

So I went out and bought your magazine to find out why it was going so cheap, then it all came to light. The user's manual stated 64K Ram but you cannot use Commodore 64K Software only 16/+4 and that has gone off the market. Now a little about myself. I am a Sinclare 48K+ microdrive user and up in the loft I have my first computer Vic 20. Would it be best for me to put +4 up in loft or would it be worth buying a Commodore disk drive.

Yours,
Brian Nash

Dear Brian Nash,

A user group such as ICPUG (see advert in this issue) have a fair amount of C16/PLUS4 software of the PUBLIC DOMAIN kind (that is non copyright) available to members and there is no charge for the copying (only post and packing and medium).

There is certainly enough of it to get you started and perhaps help you create your own software.

If you dont feel like programming then by all means put your PLUS4 in the loft and buy an Amiga instead.

You will find lots of Amiga software advertised in CCI.

Dear Technical Editor,

I'm a French reader of CCI (the best!!!). I have a C128 and a 1571. The last one (the 1571) gave a lot of problems. I can't load a game correctly. The drive makes strange and unhabitual noise, and that's all. Sometimes the drive loads but that's about it. It stops load when the soft goes over 30 blocks. I think that it's a problem with the alignment of the head ...

I hope you have understood my problem and you have a magic solution ...

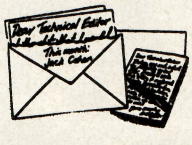
With all my thanks
Fahice

Dear Barral Fabrice,

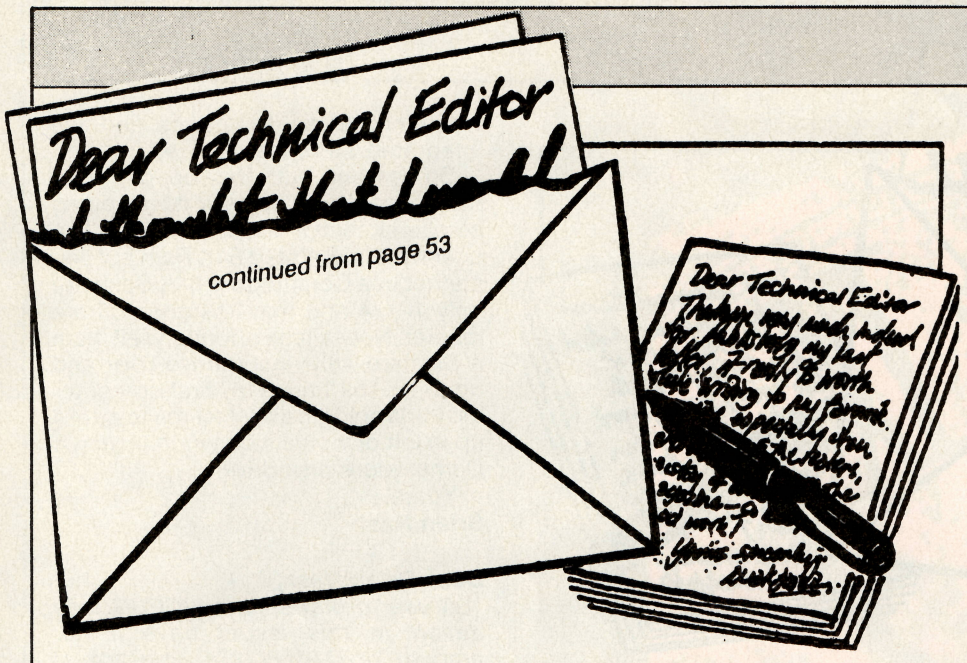
From your description the problem is most likely to be misalignment of the heads.

Can you load your own recent programs but not those from commercial diskettes, or older programs of your own creation, because if so then that is another indication of misalignment.

Contact a local repairer if possible, otherwise see our Magenta pages.



cont. on next page



Dear Technical Editor,

I am trying to print off Prestel use a Compunet modem + CBM 64/128 A Mustang Disk (s.2 Turbo version) with a Citizen printer + A Super-G Interface. I can use the above to print out on compunet alright. Also just with the computer. But not with Prestel.

All the people I have asked said you have to set the printer Dip Switches right. I have tried alsetting but if it prints it just print numbers and graphics. Can you tell me how I can get it to print OK?

Yours,

A. Jones

Dear A Jones,

You have not mentioned what procedure is being used to try and print Prestel frames.

The Mustang software menu incorporates a 'select devices' choice.- Have you tried all the combinations?

Ignore the names of the printers etc in your experiments.

Activate after selecting a frame with C= and p in Viewdata mode.

One of the choices should work without dip switch alteration since printing of Compunet frames is ok.

It is possible that the Super G interface is being upset by Prestel control characters and this is the reason for trying different menu choices.

If other readers have this particular combination I will be interested to hear about your solution.

Dear Sirs,

1) I was interested to read the ad on page 7 of your April issue in which it was stated that the advertiser "stongly condones" piracy. This was such a refreshing change from all those boring old nybbler disclaimers in which piracy is either "strongly condemned" or "not condoned'.

Do they also strongly condone bouncing checks? (or "cheques" as they spell it in limey land).

2) In the same issue (p.84, col.3), in the technical column, the 1581 command "U0760" was mentioned. This is like the 1571 comment "U07M0" which locks the drive into 1541 mode — except that with the 1581, you only shut off burst mode, rather than also shutting off double-sidedness.

(1581 owners might want to read the designers' "secret" messages — errors 79 and 7a. To read message 7a:

```
10 open 1, dv, 15: rem dv = 1581 device
20 print 1, "m-w" chr$(0)chr$chr$(5)
chr$(169)chr$(122)chr$(76)chr$
(63)chr$(255)
30 print 1, "m-e"chr$(0)chr$(3)
40 input 1,e,e$,t,s
50 print e;e$t;s
```

Some early 1581' are supposed to need a different floppy controller chip and a bleeder resistor — check with Fred Bowen at Commodore USA.

Yours,

Joel M. Rubin, USA

Dear Joel M Rubin,

As you say this is a good example of a Freudian slip and makes one wonder what he meant to say!

Joel also has some ideas for Andy (April 89 issue) to think about.

Dear Sirs,

I have just picked up a copy of your excellent mag from my local news stand, and found it to be very informative, so I now put in a regular order for CCI each month.

Perhaps you gents of infinite wisdom and oracle of great knowledge of things technical could help with a problem I am experiencing. I have a Commodore 64C which about 1 year old, and recently I've managed to acquire an Olivetti PR1370 Printer (Dot Matrix) I wonder if you can throw any ligh on how I could get the 64 to drive the PR1370, the printer is on a floor stand with a lot of interfacing boards and power supply inc, when its plugged into the mains it does all that it should ie carriage return to start position all L.E.D.s light up. So How do I get the signal from the 64 to the printer, food for thought? Keep up the good work, and I look forward to reading your next column.

Yours,

C. A. Grellis, Dorset

Dear C A Grellis,

Meedmore of Liverpool should be able to help with the correct interface for your combination.

Call them on 051-521-2202.

Dear Technical Editor

In the May 1989 issue of your mag, in the write-in section you got a letter sent to you asking about one of those "RESET CARTRIDGES". Well I have one. The point of this letter is that you told the other writer how to use the cartridge, but I tried typing and while the game is suspended and tried getting a menu but nothing happened. Could you please tell me what else I can do! I would be very pleased if you could help me.

Yours,

Paul Taylor, Ilkeston

Dear Paul Taylor,

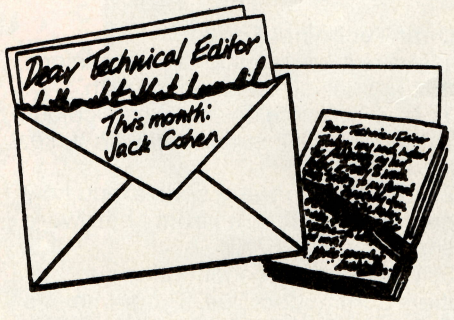
It is assumed that you have a RESET button on your cartridge.

When the game is running press the button and a MENU should appear.

Use the cursor keys to position over the MONITOR command and press RETURN.

Either 1. make necessary alterations in memory and then use button to retrieve the MENU, position cursor over CONTINUE and press RETURN.

Or 2. type X to return to BASIC and make the necessary POKES and again press RESET button and CONTINUE as above.



WOMEN AS DEMONS

by TANITH LEE

(The Women's Press. £4.95)

There are only a few writing genres in which women authors are seen to be considred equal to men and in which their books are read by both sexes with equal enjoyment. One of those categories is science fiction and one of SF's finest exponents is Tanith Lee. In 'Women as Demons' she demonstrates her talent to perfection.

This collection of stories shows Lee at her best. Most of them have, in fact, previously been published in SF or Fantasy magazines but all can be re-read again and again and something new found with each reading.

As in all collections there are some stories which stand out. For me, in 'Women As Demons', these included 'The Unrequited Glove', (a cross between Edgar Allen Poe and 'The Beast With Five Fingers'), in which love-'em-and-leave-'em Jason Drinkwood loves and leaves once too often. His discarded 'amour', Alys, though seemingly accepting his rejection is not as complient as she may appear and not as innocuous, either, for Jason finds he is hounded by Alys's mauve glove which, like a malicious spider, follows him wherever he goes. With eventual dire consequences.

Women as demons, as sorceresses, as witches, as heroes, (yes, heroes, not heroines, which is something else again), Tanith Lee writes with brilliance of them all. She has a marvellous way with a descriptive phrase and can write in any form, as man or woman, serious or with humour, as a soldier of fortune in times past or a male 'purser', (link between passengers and crew in the excellent 'You Are My Sunshine'), on a solar spaceship of the future.

Winner of several awards for short stories and of the August Derleth Award for her novel 'Death's Master', Tanith Lee's 'Women As Demons' is a bargain at £4.95 and the Women's Press is to be commended for launching a SF series which brings, in addition to Lee, at least nineteen other female SF writers to the fore.

D.M.

HIGH-TECH SOCIETY by TOM FORESTER (Basil Blackwell Ltd 108, Cowley Road, Oxford OX4 1JF £12.95)

'High (or 'Hi')-tech' is now an everyday word in our society. It covers a multitude of electronic concepts from the first electronic digital code breaking computer, Colossus, built in 1943 in Bletchley Park, Hertfordshire to today's (almost here) fifth generation state-of-the-art wonders which will incorporate every modem technological achievement. In 'High-Tech Society', Tom Forester records the story of this revolution that is transforming our lives. And what a story it is.

When Colossus and its American counterpart ENIAC were first presented to the world only in science fiction were foreseen the enormous changes the computer would generate within forty years.

Tom Forester is a Lecturer in Computing and Information Studies, he is also an erstwhile journalist, which is probably why this book is so easy to read. He knows the advantage that line drawings have in emphasising a point and is ably served by David Austin's witty cartoons.

The rivalry between the U.S.A., Japan and, to a lesser extent, the U.K. to produce more and better computers has never been more fierce than now. The 'neural' computer, which can recognise and talk back to the operator, is already here; graphics that can reproduce themselves as three-D models from a solidified liquid have recently been demonstrated; the talking 'map' is already being installed in automobiles. No matter what interests modern man or woman it's almost certain that somewhare, at sometime, a computer has improved it. *(Excepting at least one thing I can think of. Ed)*

Forester goes into the microchip world in all its detail. From those (comparatively) humble beginnings through mainframes, micros, information technology, artificial intelligence, personal computers, word processors, et al. If it's to do with high-tech you'll find it in this book.

But it's not dry as dust information. Everyone knows about robots but how many know that the term was coined, in 1921, by Czech playwright Karel Capek? He took the name from the Czech word *robots*, meaning forced or slave labour, and called his play *Rossum's Universal Robots*. The first time the word was ever heard.

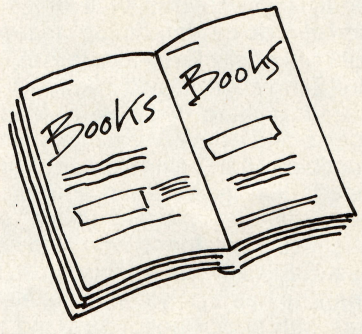
The engineering scientists of 1921 probably expected that by 1991 everyone would have their own personal robots. One to do the day-to-day domestic chores and another to take the drudgery out of their working lives. How wrong they were. Housemaid's knees — believe it or not — are the rocks on which personal robots have foundered. As marvellous as the micro-chip is, on-one has yet been able to duplicate the intricate flexibility of the human knee joint in a metal counterpart. Have you even seen a robot going upstairs? The latest designs incorporate a tank-like tractor mechanism which is proving more efficient as a robotic 'foot'. But even that is still in the testing stage.

As for the electronic office, Forester says that although the advent of the microchip 'brought forth an avalanche of new products ... many of the predictions made in the late 1970's about the pace of developments in office automation were wide of the mark'. In fact a paper published in 1985 found that less than 50% of office workers had any kind of electronic assistance. And that the nearest most employees got to automation was a telephone, a calculator and a coffee machine!

Incidentially, Forester mentions that when the 'long-awaited' Amiga hit the market in 1985, along with the Atari ST, retailers were wary of stocking either of them due to the lack of software support. But while the ST languished the Amiga has, as we all know, gone from strength to strength, not least because of 'an acknowledged technical superiority of the Amiga's chip-set graphics'.

The advances in microchip technology will affect all of us, no matter what we do or who we live. 'High-Tech Society' is invaluable as a chronicle of our technological times, how it came about and what we can (possibly) look forward to in the future.

D.M.



cont. on next page

continued from page 55

'PEOPLEWARE' by Tom De Macro & Timothy Lister (Dorset House Publishing Co./John Wiley & Sons £18.25)

'Flow' is a condition of deep, nearly meditative, involvement which is necessary for mental work to go well. If, while you're working — or trying to — your phone rings incessantly, the paging system keeps calling for Joe Bloggs and the guy/girl at the next desk is chatting up the newest member of the workforce, you are in a 'non-flow' situation. So a job that should perhaps only take a matter of hours might possibly take days.

This circumstance happens very often to staff in open-plan offices so, contrary to what has been thought by many, open-plan offices are not always a good idea. They are, and I quote, 'a plague upon the land'.

In 'Peopleware' (Dorset House Publishing/John Wiley £18.25) Tom De Marco and Timothy Lister take shots at other modern icons, too.

'Paging', they say, should be done away with; every office should have at least one window; money spent on high-fashion decor is a waste; uniformity of dress isn't important. Human interactions, in fact, matter more than any other aspect of work.

What they advocate may seen tantamount to heresy to many manages. But then many managers, it seems, have no ability or aptitude for management anyway.

For optimum efficiency, particularly in a job that needs teamwork, the team needs to jell and a natural manager has a subconscious feel for what's good for the team. If members of the team, collectively or individually, are unhappy about their work environment, about other people in the team or just at the way in which a project is developing, the jelling process is affected to the detriment of the whole scheme.

De Marco and Lister, who have lectured, written and are now consultants on the subject of productivity, show how to make the most of the human resources at the command of most managers.

Office environment, obtaining the right people in the right way, (some managers don't even ask to see a sample of a prospective employees work and, as the authors say, 'you don't hire a juggler without first seeing him perform'), 'growing' productive teams. Everything in fact to help the administrator get the best out of everyone.

'Peopleware' treats a serious subject in an entertaining way which, nonetheless, puts its lessons over. This is a book for any administrator or manager, in no matter what field, who would like to improve the productivity of his workforce and benefit not only his company but, just as importantly, the people who work for it.

D.M.

TIMELAPSE by DAVID NIGHBERT (Headline Publishing Co. £3.50)

Anton Stryker was six when he was deserted by his mother and, not surprisingly, it left an indelible effect on his psyche. The other great trauma in his life was that, in his twenties, he was killed, chopped into no less than thirteen pieces, on the orders of his deadly enemy, Jacob Tessarian. Unfriendly thing to do? Well that's the kind of cookie crumbling that one might not easily forgive or forget.

In 'Timelapse' David Nighbert has created a hero who is a kind of super-bionic man. Practically indestructible, after being rebuilt, from a cloned cell taken from one of the frozen thirteen pieces, (by a convenient scientist friend who also hates Tessarian. All pals together this book!), he has a polytitanium skeleton, joints with shock absorbers and mechanically assisted muscles. All gift-wrapped in a monomolecular membrane which is impenetrable to all but very high-caliber (sic) projectiles.

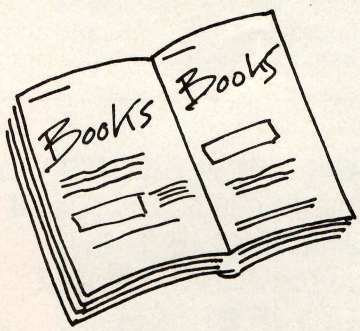
In addition to which he discovers that he has the capacity for thought-transierence, too. Which comes in very handy as it seems that Jacob Tessarian is none too pleased when he finds out that the guy he was sure was mince (or rather chopped) meat is now whole again, better than ever, and out for revenge.

Stryker not only bears a grudge because of his own death but also because he suspects that his mother's disappearance was organised by Tessarian, too.

Dr Wen, the scientist friend, discovers a plot by Tessarian to conquer the United Planets and knows that in Stryker he has the ideal weapon with which to assassinate the would-be dictator.

Of course, all is not plain sailing — or should it be 'spacing-travelling'? — because word is out that Tessarian himself is due to be cloned into another body soon. Tessarian's new body will be as good, if not better, than Stryker's which presents a problem. After all, what happens when two bionic men meet?

Tessarian may have a fleet of space ships and an army of troopers to do his bidding but Stryker, not surprisingly, manages to recruit a few helpers for the cause. Admittedly they are a motley bunch. Hersule Al-Ahmdi M.D. Ph.D, drug merchant, was previously involved in a set-to with a group of alients called the Hellcats who were finally massacred. Unfortunately for him one survived and Hersule who had fallen out with his partner — an implant specialist — during the enterprise wakes, after a fight with him, to find his mind has been transferred to the body of the remaining Hellcat. All Hellcats were nine feet tall, with sabre-teeth, long snake-like tentacles protruding from the corners of their mouths, a flap of skin instead of a nose and had blood red eyes with no pupils Hersule was, to put it mildly, shocked at his own new appearance.



Stryker's other two allies are a small girl named Sabrina and Hersule's space ship, Nefertiti, which is controlled by a computer who has a nice line in sexy talk. Oh, there is also Mara. She's the love interest, in more ways than one.

If found a few of the scenes a little too bloodthirsty, for David Nighbert belives in going into every gory detail, but this might be because I'm too squeamish and it is, after all, a small niggle.

'Timelapse' is this author's first novel. It's well-written, fast-moving and the way in which he draws together all the strands of what is quite a complicated plot to achieve a satisfactory ending makes the expenditure of £3.50 well-worth while.

D.M.

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The Mun

The Muncher, that fifty foot tall dinosaur from the Chewits ad, has managed to chomp his way into a computer game. As you might expect, the result is not far from the original monster-mayhem coin-op Rampage.

A bunch of Japanese explorers have dug up a batch of dino eggs and taken them back home, assuming the species was extinct. In fact, these giant reptiles are still around, but keep a very low profile. That was until now. An angry dinosaur can be a lot of trouble, as Japan is about to discover.

You play the beast on his quest for the missing eggs. No-one stands in the way of The Muncher, apart from a few suicidal solidiers with popguns. (Would you put up your fist to a fifty foot pink dinosaur? You would?) Obviously a relative of Godzilla, you emerge from the primeval slime of the deepest oceans to begin your day of destruction. A few hysterial beach-goers make for a tasty breakfast. Alternatively, you could let them have it with a blow from your tail, or just jump! The army turn up soon enough, but are nothing more than a hindrance in the opening stages. In fact, the first level can be completed by simply walking to the end of it. (You've got big feet!).

The next level loads in briskly and the city's defence is stepped up. Tanks open fire and helicopters drop sticks of dynamite while the soldiers take shots at you from close range. In true King Kong style you can climb up the side of a building, punch and kick in the windows, and swipe out at the choppers buzzing around your head. Tempers are flared further still by the occasional appearance of a second prehistoric monster which acts as a kind of end of level guardian.





Clearly a good deal of thought has gone into the make-up of the main character. The range of moves is far greater than those found in Rampage, and while The Muncher is primarily a raging beast, he does have a cute side which shows through as he cups his hands in anticipation of a tasty passer-by. His stomping is complemented by some good sounds, unfortunately overshadowed by some more prominent crude effects. Some nice ideas have been added to the basic formula, such as the fuel trucks



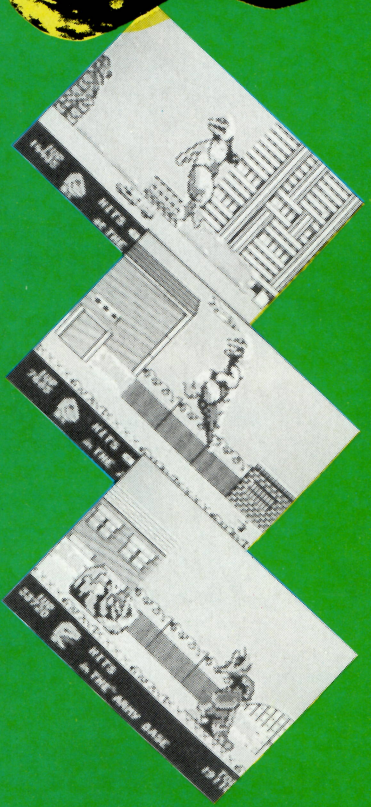
We should be so smart ...

Dinosaur, literally translated means 'fearfully great lizard', and is the name given to the family of the largest animals ever to walk the Earth. The biggest of the predatory dinosaurs was the Tyrannosaurus rex, measuring over 18 feet tall and 35 feet long. The most brainless was the Stegosaurus, a 30 foot long animal whose brain was the size of a walnut, accounting for only 0.004% of its entire body weight. The story is that they disappeared because they lacked intelligence but they lasted 60 million years — thirty times the period that man has existed. Perhaps they weren't as stupid and at least they left us the ozone layer undamaged.



Watch Out For Me On Your T.V.!

cher



which need to be eaten to keep your firey breath topped up, but as in Rampage, the novelty wears off all too quickly.

Look beyond the bland, somewhat blocky graphics and the hopeless options screen, and there is a lot of fun to be had. Whether you will be playing it next week is another matter, which puts its value for money into question. But the size of The Muncher is something to be seen. We're all becoming a bit flasé from looking at dazzling Amiga graphics. Not so long ago The Muncher would have been a huge sensation on the 64. And even now, if you haven't been spoilt by the 16 Bit wave, you'll probably have a good time with it. Check it out.

B.V.

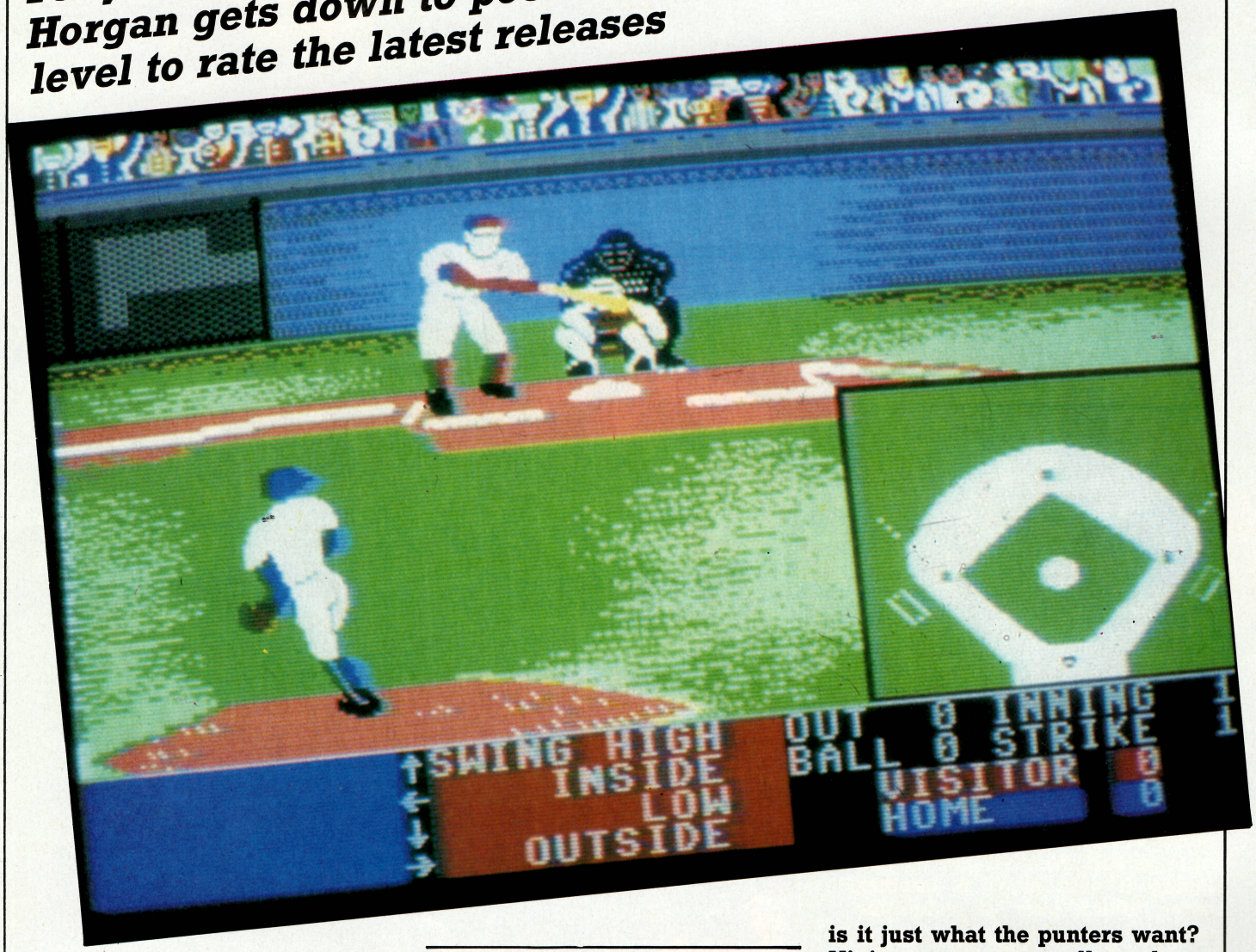


Graphics: 53%
Sound: 65%
Playability: 60%
Overall: 58%

Price: £9.99 (c)
£14.99 (d)

Bargain Bucket

Tony ('£1.99 is £1.99 too much') Horgan gets down to pocket money level to rate the latest releases



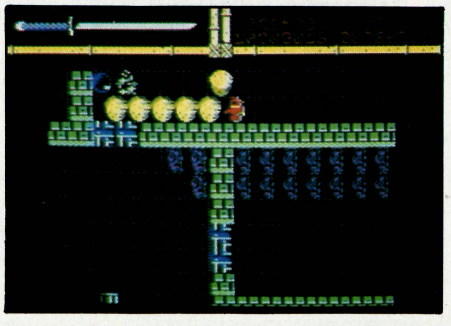
Hardball (Kixx)

Winner of an "Awesome" rating on its initial release in 1986, the baseball simulation Hardball looks just as good today. Giant multicolour hi-res graphics are used in the batting screen. The fielding screens are less spectacular but equally well done. Team statistics allow for a touch of strategy, although the game can get along fine without any manipulation of the line-up. Definitely not one to miss.

Rating: 9

Ninja Masacre (Codemasters)

A parody of the state of budget software you might think, or is it just what the punters want? Ninja games are usually a clone of one game or another, and in this case that game is Gauntlet. Monochome sprites and similar Spectrum-emulation in the sound effects are not the things great games are made off. I could pick holes in the spelling mistakes on the score panel ("strenght" but that would be petty (And people who live in glasshouses ...). What counts is the gameplay, which by now is not so much a familiar idea as a recurrent nightmare.



Rating: 3

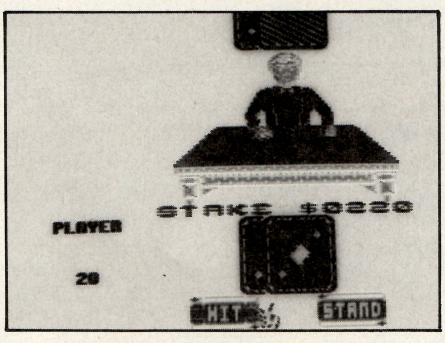
Bargain Bucket

Las Vegas Casino (Zeppelin)

Four ways to lose a lot of money have been included in Zeppelin's single-load compilation: blackjack, craps, baccaret and roulette. Zeppelin's usual standard of glossy in-game presentation fronts them all, together with a typical cheapo soundtrack.

Computerised card games are unavoidably plain. Blackjack and baccaret are spruced up with an animated dealer. The roulette uses an over-complicated system for placing bets, and the wheel is numberless. After you have watched the ball roll around the blank wheel the computer tells you where it ended up. Craps shows just how little fun can be had with a couple of dice.

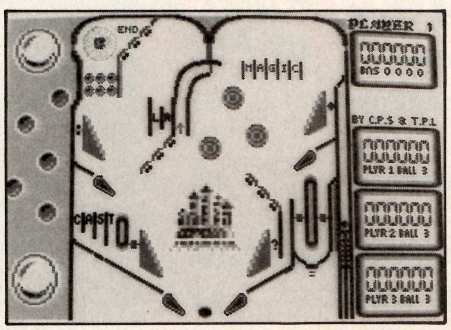
Rating: 5



Advanced Pinball Simulator (Codemasters)

One very conformist table is not what I would call "advanced", but then I am not Codemasters (But then who is?). All the familiar features are there, but little else besides. Like most pinball simulations, the game tends to follow a predicatable pattern. The table design is unadventurous, emphasising the repetitive ball movement. On the good side, it does have a realistic feel, and for that it is worth a look for pinball addicts.

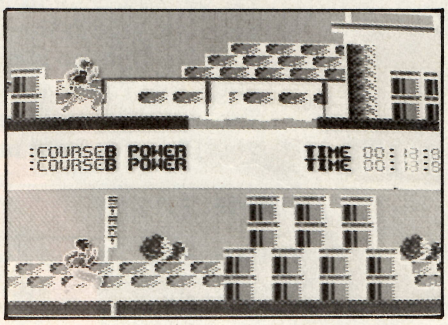
Rating: 6



Para Assault Course (Zeppelin)

It may be a blatant clone of Combat School's assault course, but it is a good blatant clone. There are four knee-grazing courses to test your stiff upper-lip (Don't you kneel on your lip?) which can be attempted at one of three skill levels. Each is a combination of walls, water jumps, logs, ramps, and the death-slide. You can preview any course and practice a succession of a particular obstacle. A split-screen two player mode has also been included. Graphics are very much in the style of Ocean's Combat School conversion, with similarly detailed sprites. Just a simple joystick waggler at heart, but not bad for the price.

Rating: 7

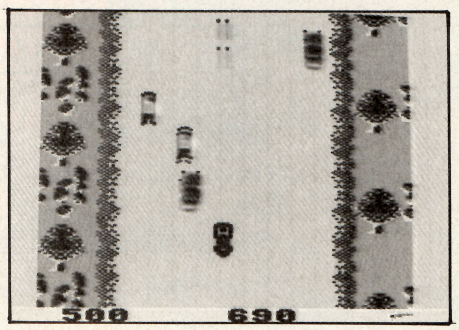


Spy Hunter (Kixx)

Spy Hunter looks and sounds every bit its age (practically senile), but strangly I still quite like it. It takes the form of a vertically scrolling shoot 'em up with a generous scoop of reckless driving thrown in. Most of the game is spent in your armed sports car, blowing enemy cars off the road, ejecting oil slicks and smoke screens, whilst avoiding the civilian traffic. Graphics and sound are very plain, except for the occasion tune. There is nothing much to aim for apart from score, but that does not seem to matter.

Well worth a try.

Rating: 7



Charts

Chart Chattering Events

For the 40th — sorry — 4th month in a row the half man/half cop stalks the mean streets of computer gamesland slaughtering the opposition and holding on to the proud Number One Spot. Even Ocean must be getting bored with dragging all that cash to the bank. Especially as their compilation In Crowd is edging up to Number Three. The bank manager will be annoyed again with the work they're giving him ... U.S. Gold's Denaris hoists itself up a place to Number Two (USG's swoon-worthy Danielle says it's absolutely great, so of course it must be!)

There are four new entries with the top honours going to Imageworks' Blasteroids which comes blasting in at Four. Real Ghostbusters (Tony Horgan doesn't like it but apparently you lot out there do) looks like a real challenger for that coveted Top Spot sliming in at Five. Gremlin, out of the Charts for too long, have new entry with Butcher Hill — a must for the growing number of vegetarians among you.

On the Amiga front, there is a straight-in-at-the-Number-One biggie, E.A.'s fantastic Populous. Seems that scads of you want to play God (Don't we all?) Rumours are that Electronic Arts have already sold 30,000 of this heavenly game and its only been out about five minutes! Sword of Sodan goes up and down like a yo-yo and climbs a place this month. While Mindscape who introduced Defender of the Crown to the U.K. way back when, have the other new entry with the world-renowned Balance of Power.

In the Cheapo list, Ghostbusters climbs on the Real G's bandwagon and holds onto One. There are though two newies: Turbo Esprit and the appallingly named Treasure Island Dizzy (and we'd rather not find out what that one's about, thank you!) See you next month — if I can get Stormlord off my screeen, that is! *Z.M.S*

GAME TITLE	COMPANY	LAST MONTH	PRICE	RATING
1. Robocop	Ocean	(1)	£9.95	Mega
2. Denaris	U.S. Gold	(3)	£9.95	Mega
3. In Crowd	Ocean	(9)	£9.95	T.B.A.
4. Blasteroids	Imageworks	(-)	£9.99	Crisp
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5. Werewolf of London	Mastertronic	(3)		

HORGAN'S HINTS

I had hoped to include a map of Hewson's graphic extravaganza Stormlord this month. Unfortunately we only just had time to squeeze the review in this issue, so the you can look forward to the map next month.

Thunderblade
From R.V.D. Slot of Holland, this routine gives disk users infinite lives. Load the game and reset on the hi-score screen. Now type:
POKE 44,32:POKE 8192,0:NEW (RETURN)
With that done, enter the following listing. If you wondered just how it works, it places the hex value $EE in memory location $2000 in part one, $1ECB in part two, $1EED in part three and $1DDC in the final section.

```
1 FOR X=2052 TO 2107:READ Y:POKE X,Y:A=A+Y
2 NEXT X
3 IF A<>4851 THEN PRINT "ERROR IN DATA":END
4 SYS 2052
5 DATA 169,17,141,196,12,169,8,141,197,12
6 DATA 76,0,11,172,51,8,192,8,208,2
7 DATA 160,0,185,52,8,141,46,8,200,185
8 DATA 52,8,141,47,8,200,140,51,8,169
9 DATA 238,141,0,0,76,0,16,0,0,32
10 DATA 203,30,237,30,220,29
```

Target Renegade
Some bugs wormed their way into the listing we published some time ago, but Mr Slot has been good enough to provide me with a new, totally operational listing which gives infinite lives and stops the clock. Enter it before loading the game.

```
1 FOR X=2592 TO 2626:READ Y:POKE X,Y:A=A+Y
2 NEXT X
3 IF A<>3875 THEN PRINT "ERROR IN DATA":END
4 SYS 2592
5 DATA 32,44,247,160,17,185,49,10,153,74
6 DATA 3,136,208,247,56,76,108,254,169,0
7 DATA 141,133,135,96,72,152,72,32,75,3
8 DATA 169,173,141,121,141
```

Automania
Observant readers will have noticed from the REM statements that the following pokes come from Andrew Thomas. Enter this before loading the game for infinite lives.

```
0 REM HACKED BY ANDREW THOMAS
3 FOR A=3000 TO 3049:READ B:POKE A,B:C=C+B:NEXT
4 IF C<>6391 THEN PRINT "ERROR IN DATA!":END
6 SYS 3000
8 DATA 169,1,170,168,32,186,255,169,0
9 DATA 32,189,255,32,213,255,162,0,189
10 DATA 216,11,157,163,8,232,224,18,208
11 DATA 245,76,13,8,96,169,76,141,137
12 DATA 87,169,145,141,138,87,169,87
13 DATA 141,139,87,76,241,9
```

Nite Rider
Enter the following and load the game with infinite lives.

```
0 REM HACKED BY ANDREW THOMAS
3 FOR Z=673 TO 699:READ X:POKE Z,X:C=C+X:NEXT:PRINT CHR$(147)
7 IF C<>3616 THEN PRINT "ERROR IN DATA!":END
8 PRINT "HACK ACTIVATED"
9 PRINT:PRINT "NOW LOAD GAME NORMALLY"
10 DATA 120,169,2,141,21,3,169,174,141
20 DATA 20,3,88,96,169,234,141,221,206
30 DATA 141,222,206,141,223,206,76,49,234
31 SYS 673
```

Hektik
Reset the game and enter the following for infinite lives:

```
POKE 23392,76
POKE 23393,101
POKE 23394,91
SYS 22177
```

Magic Carpet
Reset and enter these for infinite lives:

```
POKE 52957,234
POKE 52958,234
POKE 52959,234
SYS 11770
```

Red Max
Reset and enter this, changing X to the the required number of lives (1-255):

```
POKE 5224,X
SYS 2064
```

I Ball 2
Reset and enter the pokes for infinite lives:

```
POKE 38861,76
POKE 38862,210
POKE 38863,151
SYS 4050
```

AMIGA
Outrun
At last, here's that cheat I promised a few months ago! Start the game and forget about driving the car. Type in RED BARCHETTA including the space, to enter the cheat mode. Now press:
T - for an extra ten seconds
S - to move on to the next stage
B - for an extended play bonus

That's all from me this month, but remember, fame and freebies await the suppliers of the best pokes and maps. Here's the address:

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CCI
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Tony Horgan.

OPINION

JOHN COOK

John Cook is a journalist who has also worked as a computer product manager and games designer.

Converting coin-ops onto home formats is starting to get, well, shall we say, tricky — even when writing for the 16-Bit machines. Nowadays, when programmers go into arcades, instead of the rustle of notebooks and pens there's slap of the hand against forehead and the clunk of jaws hitting floors — take Metal Hawk as the perfect example.

Realtime expansion, compression and (wait for it) rotation of a screen made up of many, many sprites, fast. Anyone that can do that on an A500 could name their price to any game company — trouble is, no-one can. No, Sir, not even you!

The problem is easy to define — the game boards of almost every coin-op are getting bigger and more sophisticated ... while 8 and 16 Bit computers aren't. It's that simple.

The major headaches occur when it comes to sprite games — take for example perhaps the two most hand-over-the-mouth-muffled-giggle jobs of recent times, Outrun and Afterburner.

Play the coin-op ... then play the conversion. Near is not the word, but there again neither is close, proximal, thereabouts or resemblance. Before we get too clever "though, how can you expect a humble 64K or even an 512K and a single 68000 to complete with a stand-alone coin-op with a world allocation of silicon on-board? The answer is that you can't — as Arcade has found out to its cost.

Remember a few years back when Mastertronic announced the launch of the Arcadia coin-op label. the theory was flawless. Take an Amiga with a few add-on bits. Put it inside a video cabinet. Write arcade quality games. Flog them to the arcade owners — with the added advantage of being able to change games by simply buying a new disk instead of a whole new board. Wait for the money to come rolling in — then make a second mega-killing by releasing a mildly cut-down (but essentially the same) version on home format. A kind of DIT coin-up licence.

What Mastertronic failed to realise was the pace of change within the industry. With the coin-up business possibly worth more in revenue terms than the movie business in the USA, was the technology used to produce the games likely to stay still?

Who really knows how Arcadia has done in pure financial terms, but the fact that the chances of you finding an Arcadia machine in a UK arcade are as remote as Jason from Neighbours walking and chewing gum at the same time indicates something. And if a sensible company dedicated to producing coin-op games on the Amiga can't originate state-of-the-art product on the thing — how can you expect convertors to cope?

At this point, enter the 16 Bit games consoles. These are the babies that can deliver when it comes to arcade conversions — as anyone who has played R-Type on the PC-Engine will tell you. Can you imagine what's going to happen in two years time when it's retailing at £299 with a CD Rom Drive?

The 16 Bit Sega console can do some very impressive stuff — and good reports are heard of the 16 Bit Nintendo. The simple fact is that the dedicated consoles can product results that the 16-bit computers can't — because all they are designed to do is play games. Period. In that sense, they are a sterile media.

Your computer has been designed to be flexible and allow you to do any number of things with it: graphics, music, programming, productivity. Games are only an ancilliary concern.

What I'm saying is make the most of that versatility — because if you bought it as a games machine only and don't learn to get the most out of your machine, it'll have been your cash down the tubes. Because the consoles are coming. And that means the writing is on the wall for the computer as The Ultimate Games Machine.

The Dral Speaks

continued from page 48

CCI: Are Compunet continuing to encourage new users amongst C64/128 owners?

Dral: *Yes, a very definite Yes.*

CCI: Are facilities likely to be added to Compunet that are accessible to Amiga owners but not to those using the C64/128?

Dral: *It's bound to happen. But Compunet is famous for it's user input. We don't have a massive staff of coders. Most new facilities over the years have come from users. So, as more and more Amiga users join us, more and more facilities for those users will appear.*

Like the 64, the terminal software for the Amiga is being redeveloped at the moment.

CCI: What percentage of users log in with C64/128s? How does this compare with the figures for the Amiga and ST?

Dral: *The vast majority of users are C64/128 owners. The Amiga percentage is growing fast, the ST not quite so fast.*

CCI: The Compunet host machine is in the process of being upgraded. Could you tell us a little about the upgrade?

Dral: *The upgrade has meant a vast jump in memory and storage space. We've jumped well out of the megabyte league and way into the gigabyte league (something like four times the original amount of storage).*

This means there's lots of room for new uploads, new facilities, new users and even new computers not previously able to access Compunet. All in all the future looks good. I'm excited to have joined the Compunet team at a time when we're growing after a short period of stagnation. J.L.

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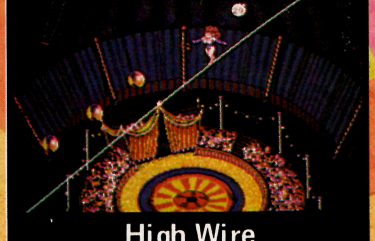
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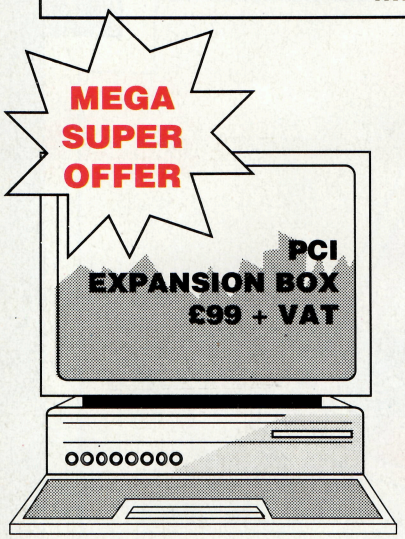
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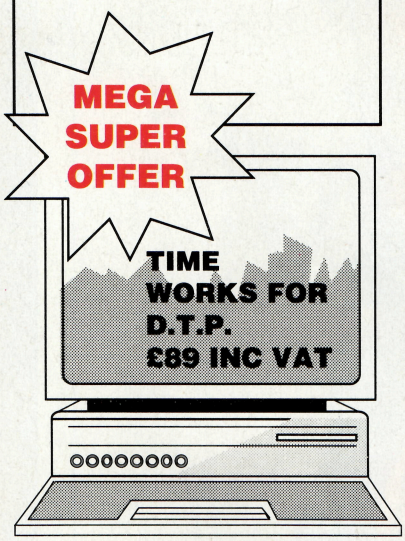
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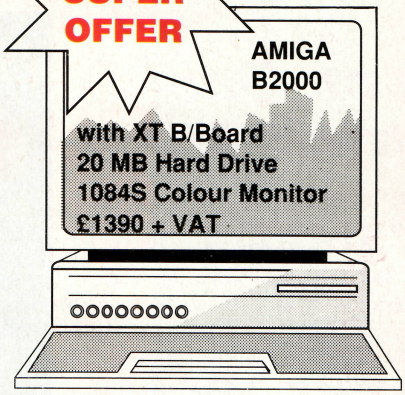
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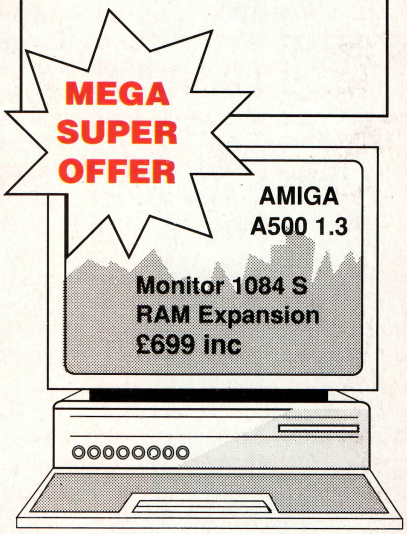


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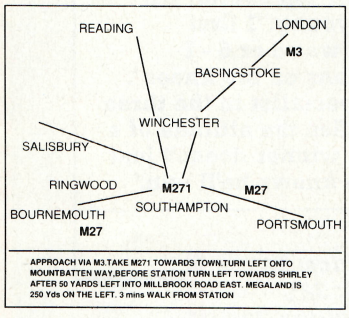
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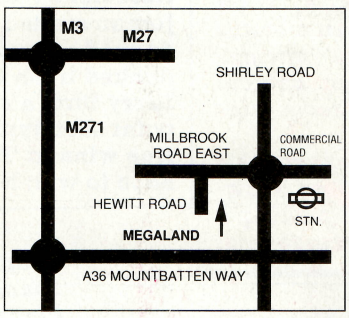
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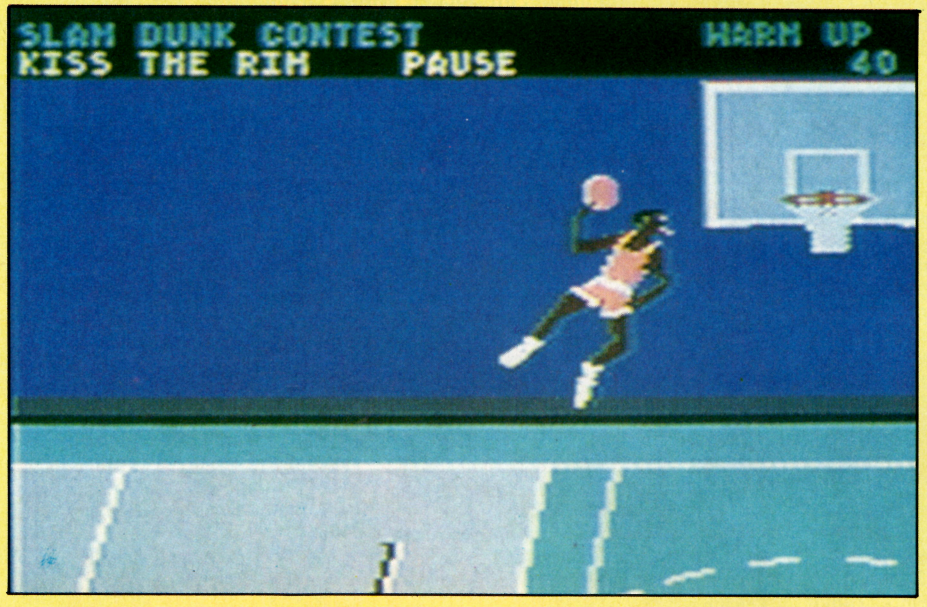
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One on One
Electronic Arts



Many moons ago I remember playing a game called One on One, programmed by Electronic Arts. In this version were two characters with the names of Jordan and Bird, you could choose who you wanted to be represented by then play a one on one against either the computer or human opponent. EA's latest edition, Jordan vs Bird is based on the same idea but has far more options and has gone through a general face-lift.

Throughout the game there will never be more than two players on the court, therefore only one end of the gym is used. When playing a one on one game you will control either Jordan or Bird, the idea is to score as many points as possible against your opponent in the given time limit (you can choose how long you want for each quater). Or you can play without a time limit, the winner being the first to score 11 or if selected, 15.

The computer opponent has varying levels of difficulty to suit your ability, the easiest level starting with Recreational then Varsity (whatever that may mean) to College and finally Pro. The control system is quite straightforward, simply push the joystick in the direction you want to run. To take a shot at the basket press the button then take it off at the right moment to release the ball. Different moves can be made in accordance to your position at the basket. Other shots such as the dunk shot can be made if you push up on the joystick a moment before you jump.

The slam dunk contest and 3-point shoot out are separate from the one on one event and give the game a bit more variety and humour than it had in the original. I say humour because the slam dunk contest has some of the most amusing animation I have seen. You can pick a total of three dunk shots out of ten. The varying dunk shots all have different names such as the Air Jordan or Two Hand Hammer or my favorite Kiss the Rim. If you choose to play a one player game the computer will go first to show how it should be done. After an attempted dunk shot five judges will appear on the screen and each give you a mark out of ten.

Up to four players can compete in both the slam dunk contest and the 3-point shoot out. In the 3-point shoot out you are given sixty seconds to score as many 3-point baskets as possible. The balls are laid out in 'bins', (similar to benches) with five in each. Every time you get a successful shot you are awarded one point, apart from the last ball in each bin which is worth two (the max. score being thirty).

All events have warm up options which enable you to do just that if you want to practice. When playing a one on one game there are various rules to be obeyed, or if your of a violent nature, (perish the thought!) you can select no rules at all. Some of the rules included are *Travelling*, if you jump in the air with the ball and land again without shooting you will be penalized, or if you have the ball and charge into the back of your opponent a foul will also occur.

Both players, Jordan and Bird have individual abilities and weaknesses. The computer knows these but you'll have to find out for yourself (unless you already know from watching them on T.V). After each quarter you are given a status screen which displays various things like your shooting percentage, amount of rebound recoveries and so on.

At the end of a one on one game a winning screen will appear showing either Jordan or Bird making a spectacular shot with a message at the bottom either in congratulations or comiserations depending on how well you did.

On first impressions I thought that One on One was a very basic and rather repetitive game, due to it only using two players and half a court, however after playing it for a couple of hours I realised that I found it a fun and enjoyable game.

The graphics don't look too impressive at first sight, but wait until you see the animation if you want a laugh. Unfortunately the sound is almost non-existent using only a couple of sound effects throughout the game.

Basketball is about the only sport that I don't normally like playing, but having played Jordan vs Bird (and the slam dunk contest) I quite fancy a game. Not a masterpiece, just good fun.

D.H.

Basketball is one of the top three sports in the U.S.A. and is growing in popularity in the U.K. and elsewhere.
Michael 'Air' Jordan, is renowned for his unrivalled slam dunking ability. Rookie of the Year in 1985, U.S. National Basketball Association 1987 top scorer, Air Jordan started young: 'I first dunked when I was 5 or 6 - I dunked trash cans on my knees.'. Larry Bird, a specialist in the three point shot, typifies the attitude of a true winner: 'A winner doesn't just hope to win; he knows he'll win.'

Graphics: 78%
Sound: 32%
Playability: 73%
Overall: 72%

Adventure

BY ANDY MOSS

JULY ADVENTURE COLUMN FROM ANDY MOSS

Welcome back to the most comprehensive adventure pages you'll find anywhere. This month sees reviews of some great new adventures that are soon to be released. How about a delayed GALDREGONS DOMAIN (due to unloadable software) a truly memorable home grown adventure called TIME THIEF and last but by no means least another Sierra game, MANHUNTER. But first, an adventure report on the European Computer Show held last month in London. The good thing about this particular show was that all the exhibitors had the same size stand, with no huge monolithic attention grabbers to take your mind off the one thing that we were there for... sizing up the new software. Activision had a video of a number of items including PROPHECY, which features one of the largest weapon inventories of any RPG. The plot concerns the evil Krellane, who rules the Gendorian Empire. The people of Criss Cross, a little village, dream of the day a hero will come and vanquish Krellane, so guess what, you are the answer to their dreams, albeit an unarmed one at the start. All the usual RPG effects are here along with some new features, such as a 'hands on' combat sequence, a creative spell system that lets you mix spells differently to achieve other effects, all of which are shown in animation, and 20 animated individually rendered monsters. Also on show was some early shots of Infocom's JOURNEY and SHOGUN both blockbusters I can tell you. Next stand along was Infogrames, and news here of a sequel to Murder on The Atlantic (remember?) called MURDER IN VENICE. No real deails yet except the only working copy is in French! Also on the drawing board is a strange one for a Gallic company, a recreation of the American Civil War entitled NORTH AND SOUTH. Alongside here was Electronic Arts, parading some newies from SSG such as GOLD OF THE AMERICAS a fame, fortune and exploration game, and FIRE KING where you have to battle through enchanted forests, ancient temples etc and face fully animated monsters of Chaos. POPULOUS of course was selling like hot cakes, what a winner they have in that one. Mindscape were showing tit bits of DEJA VU II IN LAS VEGAS the sequel to that fabbo one about you waking up in a strange building with a case of severe memory loss. Looking forward to seeing that one, I can tell you. On the Mirrorsoft stand, LORDS OF THE RISING SUN was prominent (review next month) , FTL the creators of Dungeon Master were unveiling their new release schedule, including CHAOS STRIKES BACK, the sequel to DM and a new adventure based in Space. This will be every bit as devious as DM we are informed with some outragously complex puzzles. Cinemaware have IT CAME FROM THE DESERT nearly complete, which is a send up of the old horror bug movies of the 1950's. It is set in the sleepy desert town of Lizard Breath in Arizona where a meteor crashes nearby. After that strange things begin to happen. You play a young scientist who investigates these disappearences and stumbles onto Giant Ants!! Look here for the first review.

A shorter news desk this month due to all that info at the Show this month.

NO DUNGEON MASTER FOR AMIGA 500

After many differing stories and much soul searching at FTL the absolute official and definitive decision on the 500 version of Dungoen Master is NO GO. FTL have reached this decision due to their policy of single disk one load only product. To compress

More Adventure!

the game into one load and on one disc would mean substantial changes in design, graphics and gameplay which would make the product inferior. If you hear anything to the contrary its clap trap. Andy Moss has spoken.

INTERCEPTOR HAVE ADVENTURES FOR SALE

Interceptor have informed me that they have a series of adventures, all packaged, printed and complete to sell as a product range to any sofware publisher who would like it. As Interceptor's labels are arcade only, adventures do not figure in their plans. Anybody interested please contact me.

ELECTRONIC ARTS IN BARGAIN BUY SALE

Electronic Arts have announced the release of SOFTWARE CLASSICS, an exciting new range featuring established award winning titles at a budget price. There are a number of adventures included in the deal like Bards Tale and Legacy Of The Ancients. For £3.00 you can't go wrong can you?

ADVENTURE MAILBAG

Dear Andy

At present I am playing BARDS TALE III and have completed the first task in Arboria. In certain places you need to answer a riddle to proceed further. I am certain that this is in the form of spell casting. I would be grateful for the spells required to gain access to the Towers

S Turbull Tyne and Wear

Wrong! The riddles solutions tend to be one or two word answers and not spells. Try finding a logical word to the clues given. AM

Dear Andy

This is the first time I am writing to a magazine and I would be grateful if you would help me enter the castle in Kentilla and cross the sea in the boat with out drowning. I have just finished Heroes of the Lance, and think it is superlative. The only fault I could find is that that it is simply too small and easy to complete. If only it were more difficult and more complex. The end is disappointing, you just get Congratulations you have completed your quest'.

Here are some tips for it. All the gaps can be jumped using the magician. Save points by using 'heal light wounds' rather than any other heal spell. To kill the dragon get Flint the dwarf to run under his head then push the dragon against the wall. You will find the discs of Miskhail, pick them up and face the dragon. Now select Golmoon and cast the spiritual hammer spell. Press fire, and he will throw the staff at the dragon, killing it. I think your section is great, how about more space.

Klaus Conrad

The castle is entered in Kentilla by befriending the eagle who will carry you into it. The boat is kept afloat by the 'bale boat' command, usung the bucket. Thanks for your tips, and all your kind words. AM

Dear Andy

Firstly congrats on such a brilliant Adventure section, we keep up with it every month (even if it is a couple of months behind over here). Your news, reviews and monthly Bards Tale specials have helped us to no end. As hardened adventure fans and out of much appreciation for the fab work you do we bring you an exclusive CCI Mega tips special. It took many weeks before we worked our way around the bits and pieces, but we finally made it for our favourite adventure column. Best wishes

Robbie and Ed Noorday

Moree Australia

Thanks boys for your praise , a humble hack is much appreciative. Thanks also for some great tips which I have included a bit later on. It seems CCI is going down great down under what with The Gerkin and you guys, I only wish there were more Aussie software houses like SSG that we could feature. AM

BARDS TALE SOLUTION PART FOUR.....

THE DARK DOMAIN LEVEL FOUR

Traps! The party has wandered through these deadly corridors and mazes for what seems to be an eternity. 1) Finally discovered a door that leads us into the other main section of the dungeon. But the entire area is blanketed by darkness. Andreas has decided to explore the area thoroughly, after all why would someone cast a darkness spell everywhere unless they had something to hide? 2) sure enough, he found a door that led to a square of magic regeneration. Later on we also found another teleport square that got us to a part of the dungeon inaccessible by any other means (4). 5) Going North we came to a deep chasm, where our winged companion offered to carry us across. North still further, and we came to a set of double doors, Andreas remembers a clue and plays Watchwood on his horn..... we pass through and find .... THE DARK LORD! After a tremendous battle we defeated him and his foul followers,(7) we walk on and find (8) a princess. Nearby was another teleport room (9) where we found ourselves next to the stairs (10). We exit the dungeons and return to the wizard. He casts a spell on us and thanks us. The review board increased our rank and spells, and bidding farewell to the winged creature, we departed for the wilderness.....TO BE CONTINUED NEXT MONTH

MEGA TIPS SPECIAL (courtesy of the Noordy brothers in Aussie)

QUESTRON 1

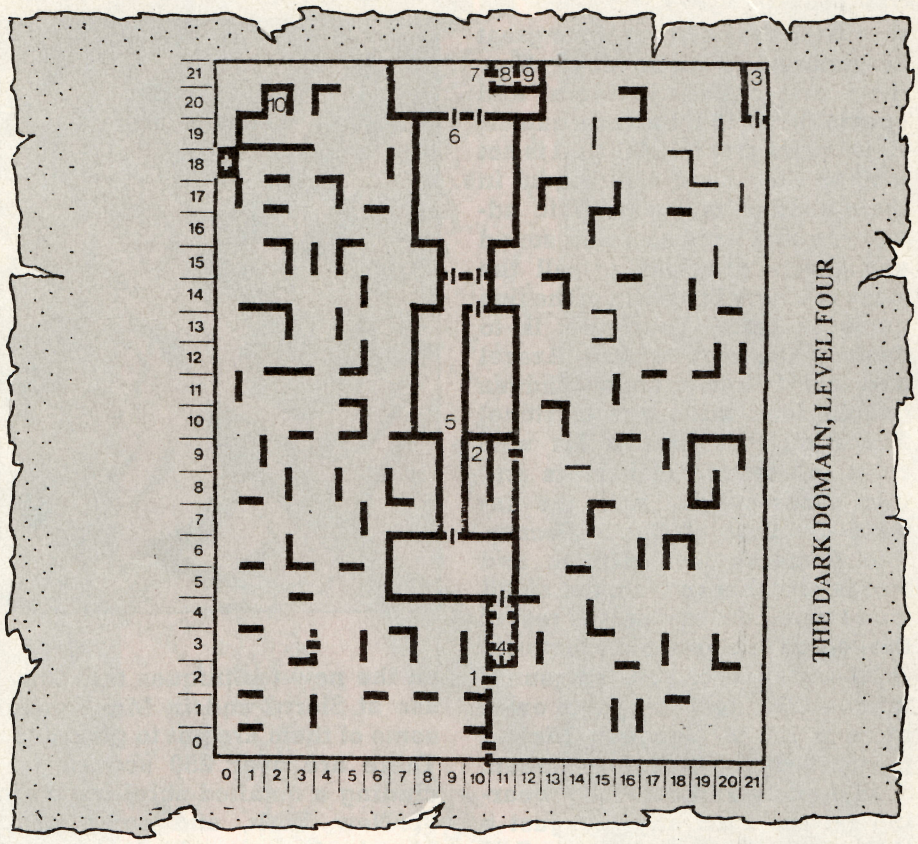
Map the dungeons very carefully, buy plenty of back up armour,buy an eagle, buy a couple of ropes and hooks,(for climbing up dungeons with no stairs!) How do you kill Mentor? What was the second use for Mesrons magic powder.

More Adventure!

continued from page 70

BARDS TALE 1
TO REPRODUCE ANY ITEM
What you need is a spare formatted disk with a copy of your character on it. Enter Garths shop and sell him your newly acquired magic item (this will now stay in his inventory). Insert your back up copy and buy the magic item. This will now be removed from Garths back up inventory but will still be on the original disk. Reinsert the original disk, and the old inventory from the shop will still be in RAM. remove it by trying to add a character that does not exist. Attempt to 'buy' something and the inventory is read from your original disk which includes all your magical items sold to Garth. Follow these steps and you can get as much magic as you like.
THE REVIEW BOARD
Save your character just before you enter the Review board, so that if the increases are not enough, reload and try again, as the increase in stats are not the same each time. These tips also work for BARDS II AND III.
POOLS OF RADIENCE
REPRODUCING MAGIC (OR ORDINARY) ITEMS.
Formatt a blank disk, load game and go to training room. Answer YES to question, and an options menu appears. REMOVE each character to save them to disk, load them back, and trade an item from one to another. REMOVE the itemless character onto your blank disk , then load him back from your permanent character disc, and he will have everything he had before.
MAKING LOADSAMONEY
The 'manual' can be found in the library, and its worth 50,000 gp's. Reproduce it as often as you like using the above method.

NEXT MONTH, HOW TO GET AS MUCH EXPERIENCE AS YOU LIKE



ADVENTURE REVIEWS

TIME THIEF C64 £5.00 BIG SKY SOFTWARE 39 Old Evanton Road Dingwall Ross-Shire IV15 9RB

Don Macleod sent his game to me with the words 'here's an item of considerable rarity, a good home grown adventure.' And never was a truer word spoken. This has all the hallmarks of a story woven out of time taken not only to get the puzzles in but create a fantastic scenario with truly atmospheric words of real beauty. Take this extract for instance...' you stand beside a white pillar at the top of a hill. Rolling moorland surrounds the hill with dollops of grey mist curling in the deeper hollows. With its grassy top and forested slopes the hill is like a green froth-capped bubble in a dull frozen sea. A pale sun ladders the eastern sky with pillars of airy light.' Doesn't that just want to captivate you and take you right there? The adventure is crammed full of these long descriptive passages, complemented by a novelette in the package.

The plot is about time. Kedrigern the Wizard is in trouble, his time share travel business is facing ruin. Why? because certain travellers are returning dead, just dry husks withered with age to be precise. Now this will not do. Someone is stealing his clients time, where he allows them to go forward and sample their retirement time in their youth. Jocasta your twin is still missing out there somewhere, you just have to find her somewhere in time. You enter the portal and arrive you no not where. This is how the story opens, and goes on into a strange house with ghostly visions and strange creatures and all manner of wonderful things. There are three ram saves available to you, an oops command, and verbose or brief text a la Infocom. This game reminds me of the all text Level 9 games that were, which is high praise indeed, and it comes in two parts on disk only, so cassette owners sorry! Well done, Don for a memorable adventure, please send me some more quickly.
PERSONAL RATING 10/10

GALDREGONS DOMAIN

Pandora Amiga
Remember Interceptor and how

cont. on next page

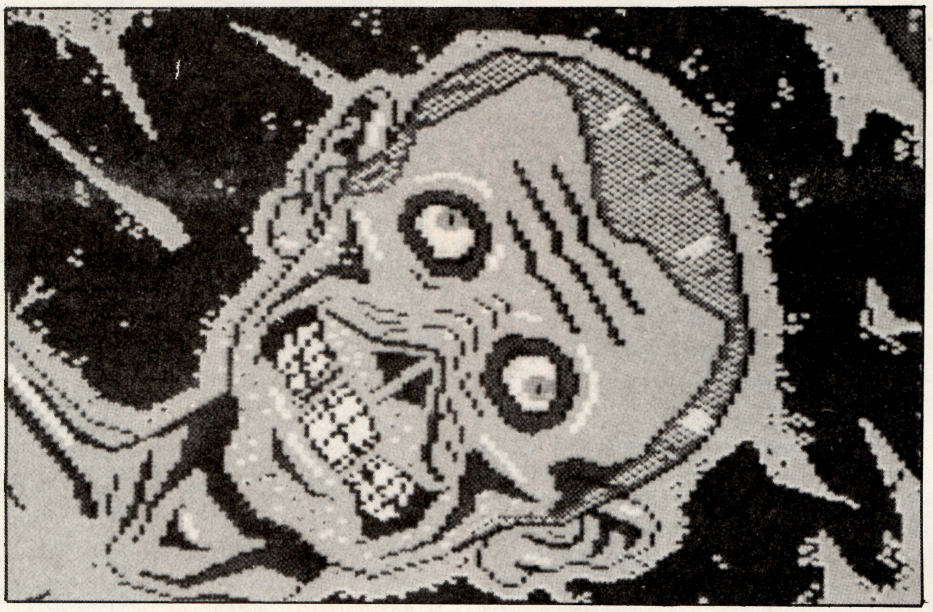
continued from page 71

they used to churn out some great adventures in their day? Now they are called Pandora and specialise in 16 bit arcade games. How the mighty fall. Still, all is not lost, as they have a rare gem in their saddle bag, a graphic adventure that uses sampled sound and pretty graphics to tell the story of a hero in search of the five gems of Zator. Your task is to destroy the evil wizard Azazel and his fellow creeps Medusa (whose look turns you to stone) The High Priestess of Set who rules the temple of horrors and then cross swords with the undead dwellers of Castle Secnar. The game is icon driven, and words are chosen from the small menu using the mouse, the rest of the screen is given to the pictorial representation of your surroundings in 3D. I feel the game owes quite a bit to Dungeon Master particularly the inventory screen. This depicts a Man's body wearing (at the start anyway) just a loin cloth. As you buy or find extra armour he will wear that item. Rather fortunate really, I mean you can't fight goblins and werewolves in just a loin cloth now can you. All-in-all Galdregons Domain is a fairly simple game, you just need to kill the five guardians of the gems and return them to the king to win, what makes it more complicated is that most of the guardians live in the centre of some wicked mazes that need certain mapping or death. There is a sequel planned that has animated monsters and characters and full dialogue rather than the limited parser that now exists. Till then I would recommend this one as a lively bit of fun.

PERSONAL RATING.....7/10

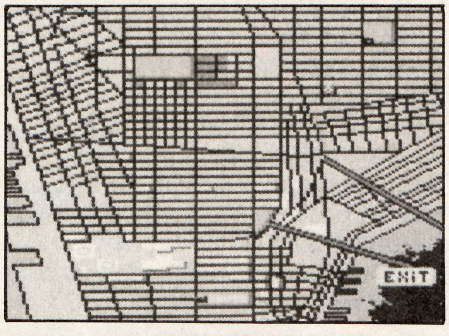
MANHUNTER NEW YORK
SIERRA/ACTIVISION £19.99

Sierra are fast making a name for themselves now that they have diversified away from the Kings Quest series into other realms of adventure writing. MANHUNTER heralds a new Orwellian horror theme that goes a long way to justifying the enormous expense that Sierra have invested in their new writing system. My interview with Al Lowe touched



on the new techniques that they use at Sierra and in Manhunter some of them are put to good use. There are over 250 scenes, including a detailed scrolling map of New York, and some neat visual effects such as horrific close ups of eyes getting bitten away, nose to nose with some pretty unsavoury creatures, zooms and windowing and even a number of games within games. MANHUNTER is set in New York in the future, where, after an alien invasion and conquest, you are employed as a detective tracking any human activities and reporting subversive actions. As the story progresses, you will have to choose between allegiance to good or evil , a choice that will ultimately chamge the outcome of the game.

You begin the game in your room, when upon being woken by an alien droid you are commanded to seek out a human that has been spotted near the Hospital. Using your portable mini computer, you teleport to the scene and explore the area. Amongst other things, you come across a bombed wall at the side of the hospital and climbing through finds you in the morgue. Strange things are afoot, and I do not recommend examining one of the bodies you find there! Further tracking and teleporting finds you in Central park with your human disappearing down a toilet. Dare you follow. Other locations include a creepy carnival in Coney Island, a visit through a post holocaust Manhattan and a weird bar where your initiation is to throw four knives between a hooded punk's fingers!



If you thought Sierra was only about Pixies and Fairies forget it , with Manhunter they have well and truly entered the horror genre in a novel and unique way. Using their now standard design of 3D movement Sierra get you on your way via the manual with a 'walk through' getting you about a quarter of the way in, after that you are on your own. Miss this at your peril.

PERSONAL RATING 9/10

SO WE COME TO THE END OF ANOTHER CHAPTER IN THE CCI ADVENTURE CHRONICLES. NEXT MONTH I HAVE REVIEWS OF INFOCOM'S JOURNEY, SHOGUN AND BATTLETECH, NOT TO MENTION ANOTHER SIERRA GAME ,GOLDRUSH, AS WELL AS ALL THE NEWS AND VIEWS OF THE ADVENTURING WORLD, SEE YOU NEXT MONTH.

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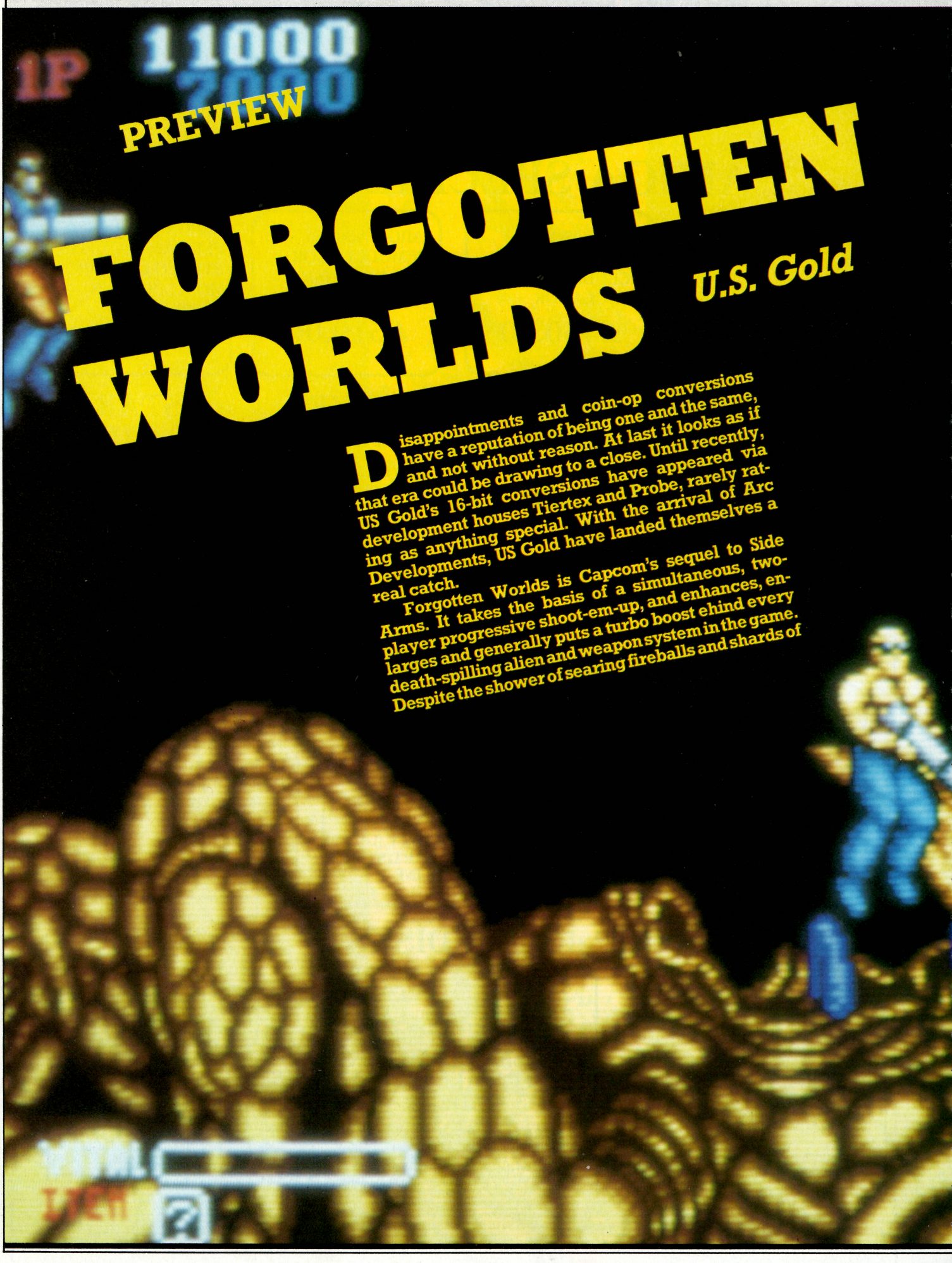
PREVIEW

FORGOTTEN WORLDS

U.S. Gold

Disappointments and coin-op conversions have a reputation of being one and the same, and not without reason. At last it looks as if that era could be drawing to a close. Until recently, US Gold's 16-bit conversions have appeared via development houses Tiertex and Probe, rarely rating as anything special. With the arrival of Arc Developments, US Gold have landed themselves a real catch.

Forgotten Worlds is Capcom's sequel to Side Arms. It takes the basis of a simultaneous, two-player progressive shoot-em-up, and enhances, enlarges and generally puts a turbo boost ehind every death-spilling alien and weapon system in the game. Despite the shower of searing fireballs and shards of



slashing steel, the two heroes enter the battle topless. A wierd new kind of control mode gives you sixteen directions of fire with the full roam of the screen.

As you can see, Arc Developments are no novices when it comes to graphics. None of those fancy



borders and scaled-down scroll windows here: what you get are two planes of overlaid parallax scrolling across the entire NTSC screen. On top of that you can expect a swarm of aliens and missiles, laced with guest appearances from humongous mega-monsters.

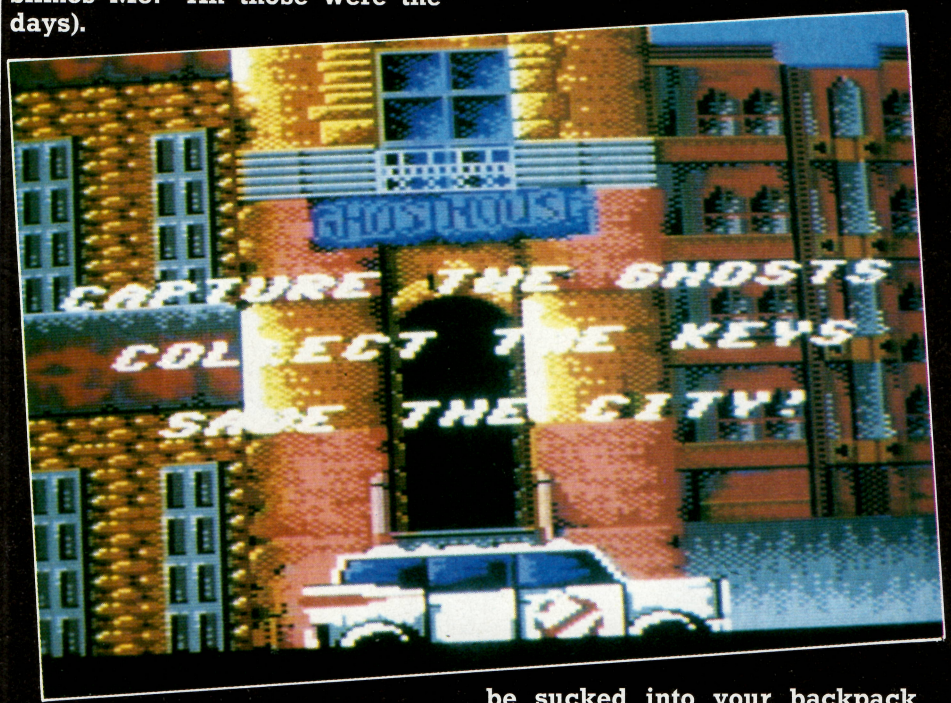
Programming is in the final stages, but unlike some exclusive-obsessed mags, we will only pass judgement on the version you buy. Make sure you don't miss the next CCI for the full story on the complete game.

T.H.

Activision

The Ghostb

Going on the immense success of their recent re-release of Ghostbusters (the game of the movie), and now The Real Ghostbusters cartoons and all their associated merchandise, it looks as if Activision should be laughing all the way to the bank with the release of their second ghostbusting tie-in, assuming of course that the quality of the game has no connection to its sales figures. (There used to be a plaque on the wall of CCI. Towers that thanks CCI for helping Activision to sell 250,000 of the original game. It must have been our headline 'Ouch! He Slimes Me!" Ah those were the days).



An epidemic of phantoms has broken out, and your monopoly of the de-spooking market means you get the job of cleaning up the lot, single-handed or with a second player. Imagine Commando with ghosts instead of troops and you will have some idea of what to expect. Each of the ten levels is based on the same idea, which is to zap your way to the top of the scrolling backdrop. Your ghostbusting equipment consists of two types of gun: a standard single-shot weapon and a proton beaqm projector. Shots from the puny zapper are unlimited but ineffective, while the beam runs off a small power supply. Either weapon can be used to shoot the spooks which can then be sucked into your backpack with the beam.

Shooting such oddities and oildrums and wheelbarrows reveals bonus icons. Pick these up for slight weapon upgrades, a shield or a friendly slimer who floats around destroying anything he touches. The end of every level is haunted by the usual guardians, which in this case are all pretty insignificant and something of an anticlimax. Defeating these brings on a feeble sequence of the ghostbusters discharging the spooks collected from the last level, as the corresponding bonus points clock up. The game continues much as before on the next multi-loaded level, except for a change in the background graphics.



The Ghostbusters theme plays the whole time. I could bear Ray Parker Jnr.'s original in short quantities, but in '89 the tune is on its last legs, especially in this whiney 64 format. A confusing bird's eye viewpoint with a 3D slant gets the graphics off to a bad start, followed up by some totally indistinguishable sprites.



To be fair to the programmers, the original coin-op was not up to much. I would have liked to see Activision come up with their own design instead of converting the arcade game; the Ghostbusters tie-in would still have worked, and the game itself would also have had a chance of turning out a lot better. If you never bought the first game, I suggest you pick that up in its budget form and pencil in the word "Real" on the cassette.

Real usters

Graphics: 35%
Sound: 82%
Playability: 49%
Overall: 39%

Price: £9.99 (c)
£14.99 (d)

AMIGA

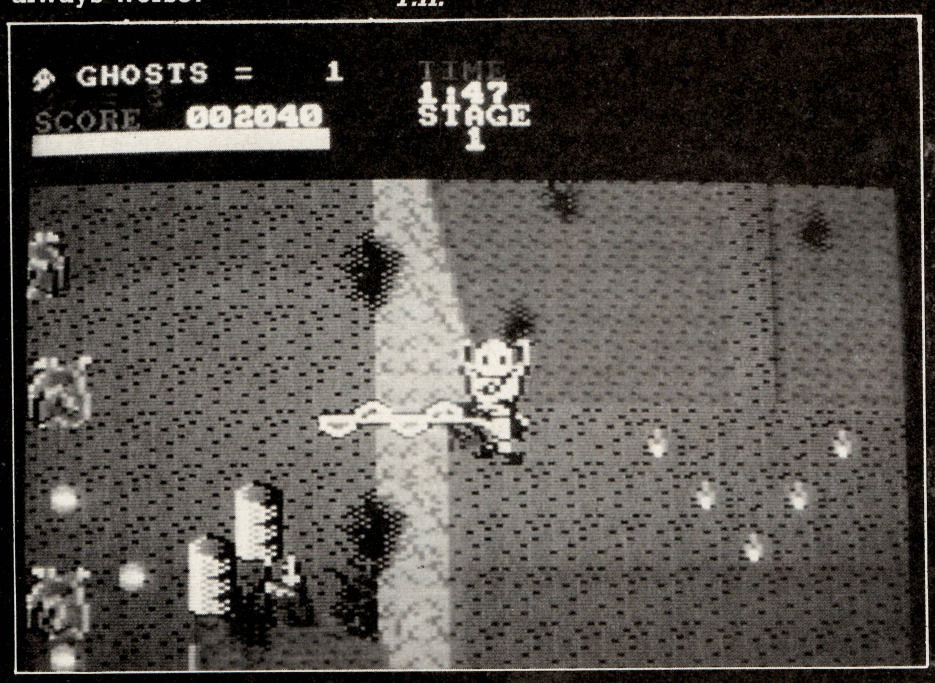
The 16 Bit graphics are on a marginally larger scale, but lose out in the quality of the scrolling and an extensive over-use of alternate-pixel shading. Again, that music constantly irritates, while the proton beam drowns out any other sound effects. Gameplay on the Amiga is worsened by inaccurate collision detection. Oh dear, what a pity that the original excellent movie has been let down like this. Who said that a sequel is something that follows a success and is always worse? *T.H.*

Graphics: 50%
Sound: 46%
Playability: 38%
Overall: 35%

Price: £24.99

Successfully sliming it

Ghostbusters is one long success story as far as merchandising and tie-ins go. It began with the feature film, backed up with a star cast and state-of-the-art special effects. Ray Parker Jnr.'s chart success with the theme song got everyone humming the title, and before long the official home computer game was launched and sold in immense quantities and continues to do so at a budget price. With the reappearance of The Real Ghostbusters in the cartoon series, there was more demand than ever for the new line of ghostbusting dolls, toys and clothing. Data East bought the rights for the coin-op. It is thought the sales of the Ninento version will exceed 1,000,000 in the U.S. alone. Data ???? sold the home computer rights to Activision who released the original Ghostbusters.





Software houses seem to be releasing more compilation programs, and re-releases than original software these days at least on the 64.

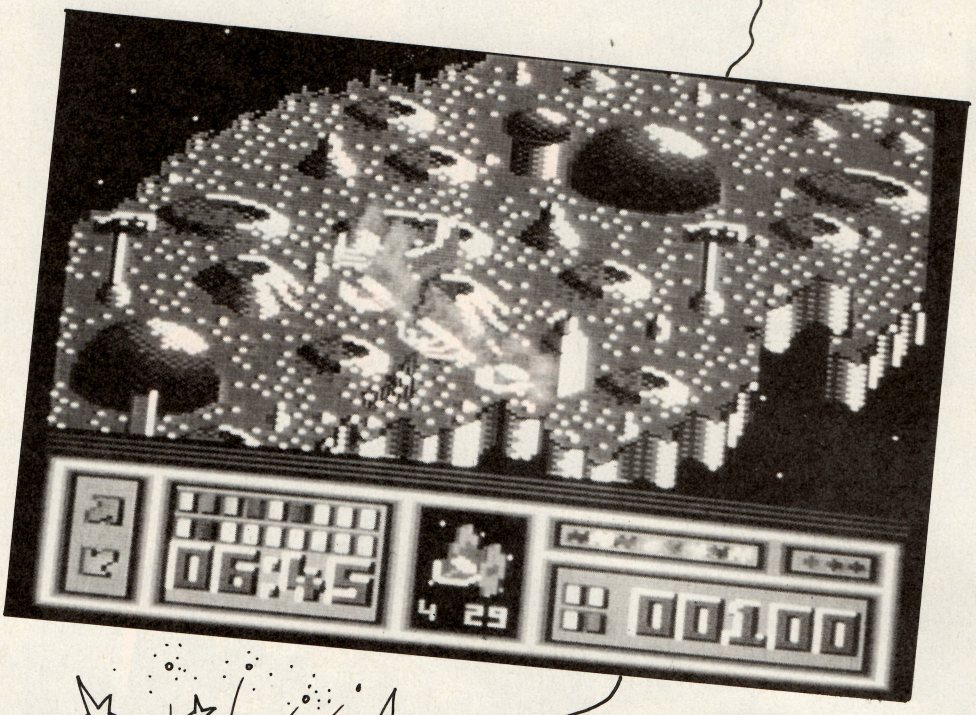
This is not all bad - they offer good value for money and plenty of varied entertainment, but is it worth waiting those extra few months for them to come out in one big pack?

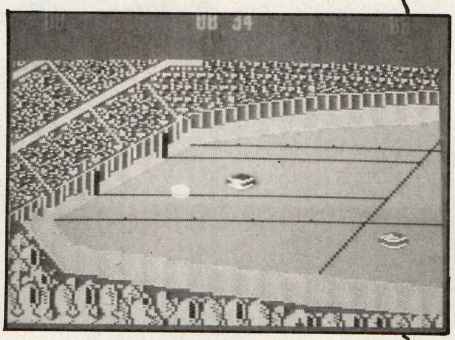
First off is *Xeno* - a futuristic sport simulation using a pitch, three pucks and two goals. The idea of the game is to push the small puck through your opponent's goal using your large puck. Both players have a large puck each, and take turns sliding their pucks into the smaller one to make them collide, and hopefully cross the goal line. Graphics and sound are both no more than average but the gameplay is fun for a short while.

Leviathan puts you in control of a powerful flying ship set out to destroy enemy ships that you will find across three different planet zones. *Levithan* looks and plays very similar to that of Zaxxon, an age old shoot 'em up. You start with five lives, limited fuel and missiles. You can collect extra fuel by landing near the fuel pods or by shooting the spinning cubes. The game has a very colourful look to it and the music is quite catchy. On the whole not a bad game but there are better around.

Next comes *Armagedon Man*, your role, as the title suggests, is to prevent the end of the world. Your main objective is to keep the world in good working order, there are 16 countries in the UNN which you must help. They will ask for advice, guidance and approval and you must give it as you are the Supreme Commander. Every war game I have played has bored me rigid, and I have to say this is no exception. The music is the games best point, but the graphics are unimaginative and dull.

Mercenary was a huge hit a few years back using vector graphics in this explorational arcade adventure. It also has a bit of a flight simulation involved as well as all

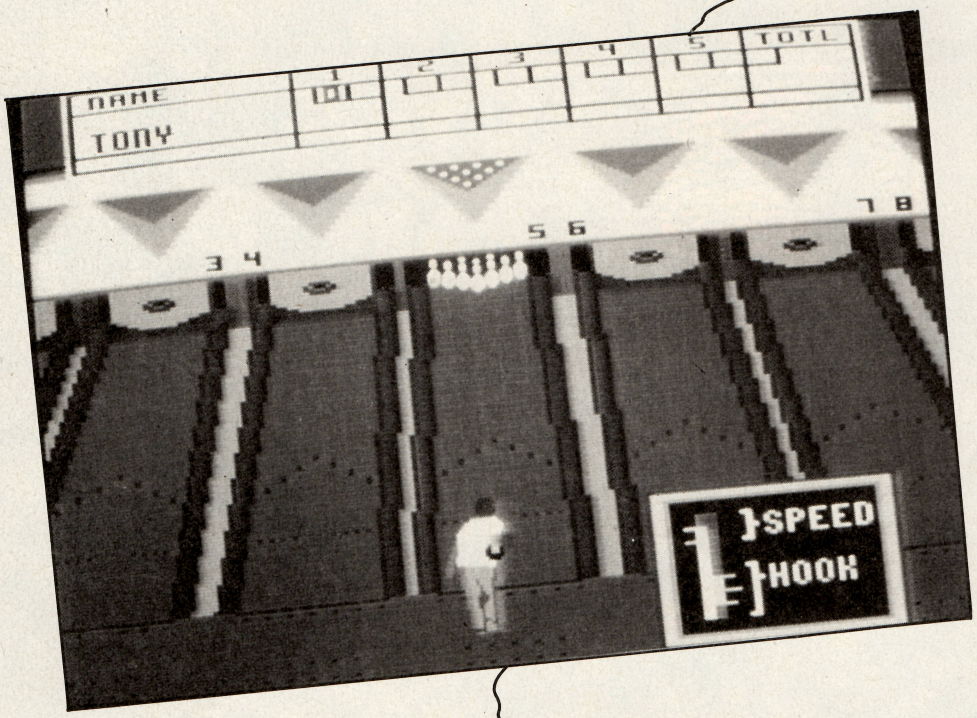




the rest. You have crashed landed on a planet and must make money by becoming a paid soldier fighting only for money. This still stands up well to many other take offs and doesn't look dated considering how long it has been out

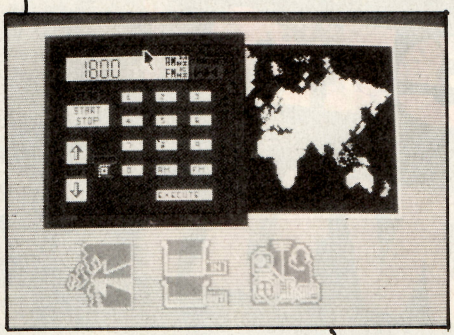
Cholo on the other had is quite the opposite. It uses the same style of graphics but plays a great deal more slowly and the vectors haven't been drawn nearly as well. You are on ground only and have to find misguided robots, hack into them and re-program them. Cholo is an old game and it shows, it wasn't a good

Comm
Perfor



game when it first came out and it seems even worse now.

Now for a change of scene with *Trantor*. You are the last stormtrooper equipped with the very latest in flame throwers. Find the eight letters located in the eight terminals to find a computer related word, then find the security terminal and enter this word. Your main sprite is very large and well defined (although rather colourless) and the sound is also high quality stuff. All in all, a good well balanced game with lots of action, which should have more success on its original release.



Shackled is another Gauntlet variant now out on a budget label. Your friends have been captured and thrown into dark and dingy cells. Guess who has to save them? That's right, you. The game is played over a range of floors, each making up the dungeon. Collect keys to open doors and also pick up items that guards drop when destroyed. Sound is O.K. on the title screen but the rest is below average. The sprites are very small and badly defined and the gameplay is pretty naff.

Producing a bobsleigh game has to be the daftest idea a programmer could have thought up. *Bobsleigh* puts you in the drivers seat, the idea is to guide your sleigh around numerous courses avoiding crashes so you don't have to pay any unnecessary bills. This is one of the worst games in the pack and wouldn't hold anyone's interest for long.

On a higher note is Accolade's *Hardball*. A real quality baseball game using giant lifelike sprites for one or two players. Choose your type of spin if you're bowling or get ready to steal those bases if you're on the batting side. Still a great game considering its age, in fact a real classic.

Last on the list is another sports simulation with the name of 10th Frame. A slick and well programmed ten-pin bowling game for up to eight players. Access, well known for their superb golfing range of games have a very high reputation in the animation department as well as in the gameplay, and *10th Frame* is no different. Also out on budget, this is the best game in the package.

Most of the games on the compilation are either average or below apart from a couple of exceptions. My advice is to buy the best games separately on their budget labels and forget about the rest.

D.H.

Overall: 57%
Price: £12.99(c) £14.99(d)

mand mance

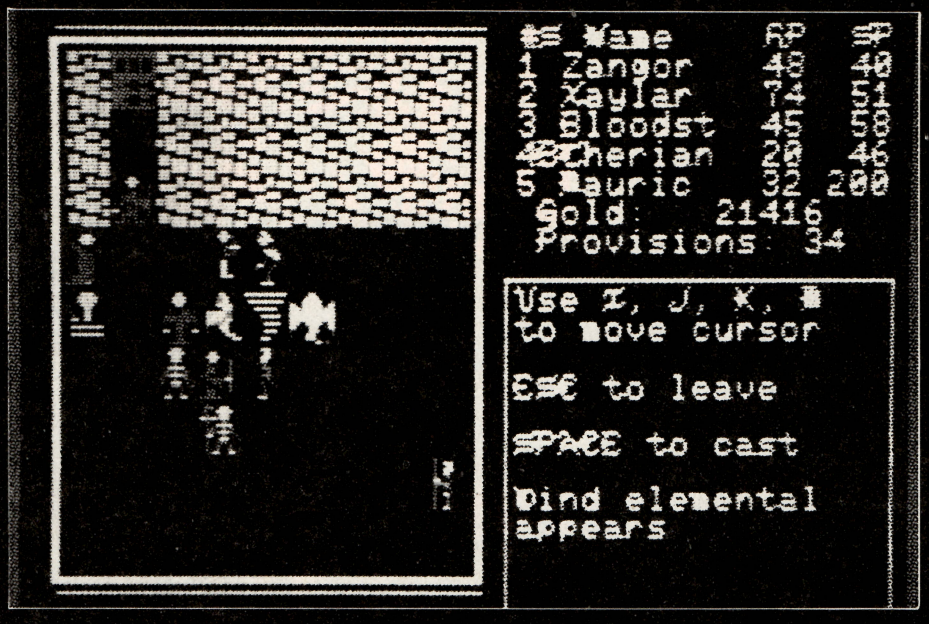
U.S. Gold

Computerized Fantasy Role Playing Games (FRPG) are big business nowadays and it comes as no surprise to find that all the major software houses are currently trying to snap up the rights to the more famous 'brand name' fantasy games.

However, while all the other companies were originally dithering about performing in depth background research, SSI were busily pulling off a major coup by persuading TSR to sign on the dotted line.

TSR own the rights to the most popular FRPG in th world — Advanced Dungeons and Dragons — and when SSI computerized it, in the guise of the Pools Of Radiance, *the game sold over 150,000 copies in the USA on the C64 format alone, making it one of the biggest selling computer games ever released.*

SSI, quick to realise that they were onto a good thing, had no hesitation in getting two top American programmers together to create their own computerized FRPG.



Demon's Winter

US Gold

A long time ago the peoples of Ymros were harried and persecuted by an evil demon called Malifon. He performed all kinds of horrific acts upon population and it seemed Malifon was to be dictator of the world, as there was no-one who was brave enough to oppose him.

However, just when it looked like Malifon was going to take command, five brave adventurers appeared on the horizon and did battle with the evil demon. After a long and bloody fight, the adventurers eventually captured the demon and entombed him in a dormant volcano with a magic so strong that he could never escape.

During this period Malifon planned his revenge casting one mighty spell that covered the earth in a deep frigid winter and turned all the seas to blood.

In the ensuing chaos, Malifon's supporters are actively searching for ways to release him and the aim of the game is to stop this happening, defeat the minions of Malifon and secure him in his underground jail.

Initially the player has to create a party of five characters and any readers who are familiar with SSI's previous releases will find this a very simple task. That said, the key to the game is getting the balance of the party right from the outset. A player must first choose what race they want their characters to be and they have the choice of either Human, Elf, Dwarf, Dark Elf and Troll — each, apart from the human, has special innate abilities that have to be taken into consideration when making your selection.

"Human, Elf, Dwarf, Dark Elf and Troll — each, apart from the human, has special innate abilities that have to be taken into consideration when making your selection."

The next thing to do is to generate your characters nine Traits, namely; Speed, Strength, Intellect, Endurance, Skill, Level, Hit Points, Spell points, and experience. These are selected randomly by the computer and give you a good indication how your character will be able to fight with weapons, cast spells and generally survive in the hostile environment on Ymros. Once that is done you have to allocate your character a class. There are ten classes in all, each of which have their own special abilities, they are; Ranger, Paladin, Barbarian, Monk, Cleric, Thief, Wizard, Sorcerer Visionary and Scholar. Once again, careful consideration must be given to the composition of your party. If you choose too

many warrior types, you will have a group of adventurers that can fight tremendously at close quarters, but will be very vulnerable to magical attacks. If too many magicians are selected then they will fight excellently from afar, but will be slaughtered in hand to hand combat.

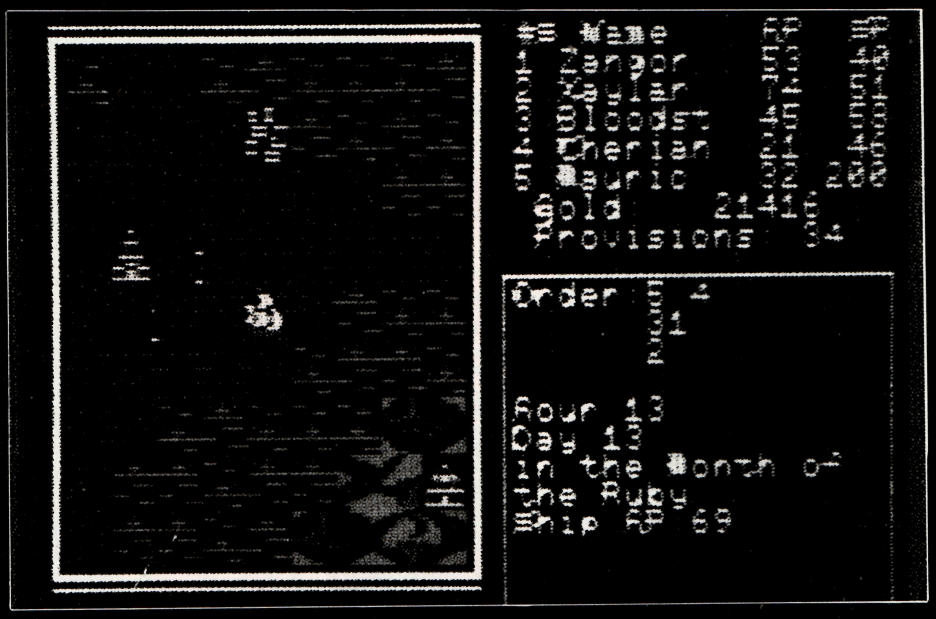
My advice here is to read the 30 page rule book thoroughly and take the tips it gives you into account when you make your initial selection. Also don't be afraid to make outrageous selections.

"I created a Troll who specialized in the martial arts and I ended up with a character who was a cross between Bruce Lee and Arnold Schwarzenegger."

I created a Troll who specialized in the martial arts and I ended up with a character who was a cross between Bruce Lee and Arnold Schwarzenegger. He could do more damage with his hands and feet than most of my other characters could do with their weapons!

Once your party is complete, they can begin their long, hard journey to eleminate Malifon's forces. Exploring the land will reveal that each day on Ymros is 36 hours long, while each month consists of 34 days.

Ymros has a varied terrain, each of which house their own special dangers. The plains contain hostile bands of marauding Magic Users and their hired violent thugs, as impressed with the games graphics. Your forces travel around the well depicted country in the shape of a solitary humanoid. When you meet hostile forces you are automatically put into a combat situation, which entails your character being transfered to a combat screen, where your character quickly divides up into the five characters making up your party. Each character is controlled individually and you move them one at a time. The movement phase of the game is very quick and adds to the overall excitement, as unlike some other games I could mention, you don't have to sit and wait for your characters to crawl slowly across the screen. Combat continues until either your party are killed, your opponents are killed or you manage to move all of your characters off of the screen through one chosen exit square. You lose nothing by running away and it is advisable to take this option especially when you are out numbered and out spelled from the outset.



Demon's Winter is very much an exploration game. Initially you just wander the land engaging various creatures in combat for nothing much more than dinner money. However, once you have got to grips with the combat system, which is impressively fast and can be totally controlled from the joystick, you begin to pick up various rumours and pieces of information which lead to several important quests.

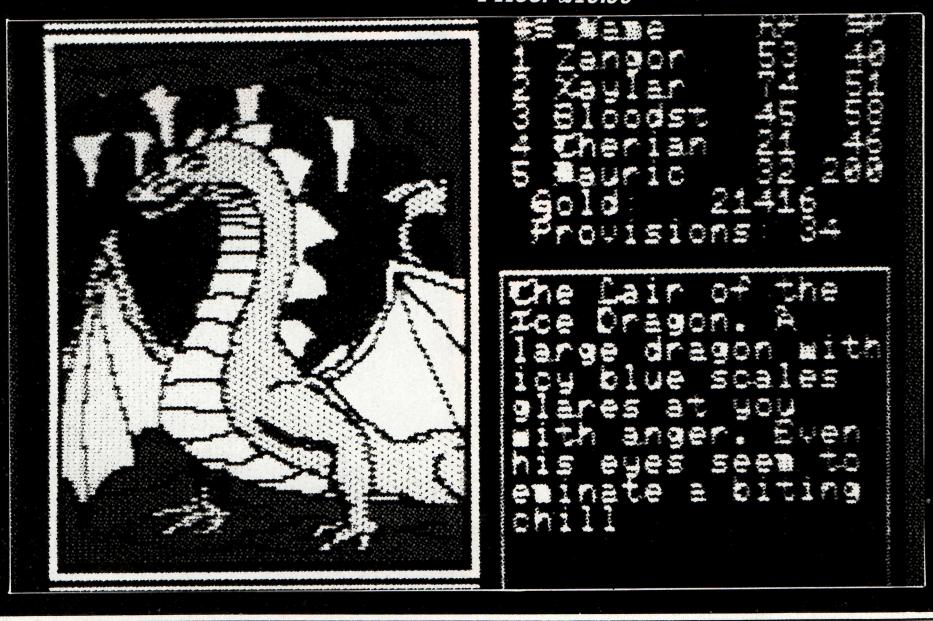
It is then up to you to piece together the information you obtain and ultimately you will discover where Malifon is located. All you have to do then is destroy him. Taking into account some of the monsters I have already engaged in combat – this is easier said than done.

Overall *Demons Winter* is a highly enjoyable game, which runs both quickly and smoothly. It contains a whole heap of challenges which range from making strategic combat decisions to piecing together many small fragments of information, which when placed together in the correct fashion unravels a complex plot.

I have played this game for more than 25 hours and I can believe SSI when they claim that it has over 80 hours playing time. I don't think that I have done much more than scratched the surface so far. Recommended.

W.

Rating: Awesome
Price: £19.99



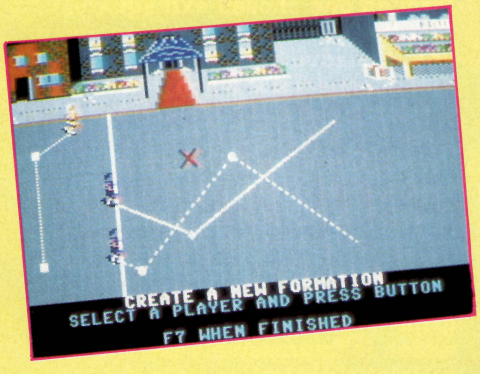
Street Sports Football

Epyx

Baseball, basketball and soccer have all been given the Street Sports treatment by Epyx, once the kings of the computer sports field. Football (American style) follows the Street Sports theme very closely, leaving the big league stadiums for carparks and wasteground where gangs of kids play the game their own way.

" Selecting the playmaker allows you to edit any of the plays or create some from scratch."

Inkeeping with the rest of the series, there are a few choices to be made before you start the game. First is the option to enter the playmaker. The program comes with 32 plays for use in the game, all of which are described with diagrams in the instructions. Selecting the playmaker allows you to edit any of the plays or create some from scratch. Next is a choice of two playing fields, each with its own particular assortment of oil slicks, crates and the like littered about the place. Next you pick your team from a line-up of nine kids. Some catch well, others are fast and some are good all-rounders. Once the computer is completely sure you are happy with your team, it



lets you get on with the game (after giving you access to a few more game variables).

Your team consists of the bare minimum of players: just two receivers and a quarterback. Pressing fire cycles through the team, highlighting the player under your control. The quarterback starts under computer direction, running along his predetermined path until you decide to take control. If you decide to pass, the selected receiver then comes under your control for the rest of the play. Often the best idea is to run it with the quarterback, as the defence tends to be quite slow on the easier skill level.

You could not hope for a wider range of plays to choose from, but the series of similar sequences punctuated by regular pauses could do with a bit more excitement. Just three players per team



gives it all a very small-scale feeling, and tends to lead the game into a repetitive cycle. Putting the game into a more everyday setting with kids instead of pros is a good one, but in this case, the result is a drab version of what is usually an extremely colourful sport.

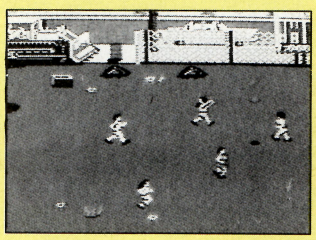
" Graphics are not necessarily important in a sport simulation (look at International Soccer for example), but flowing gameplay is"

While the sprites are small, they are animated well, and the option selection screens are attractive. Graphics are not necessarily important in a sport simulation (look at International Soccer for example), but flowing gameplay is, and that is something of which Street Sports Football has a shortage. One for American football fans, but few else.

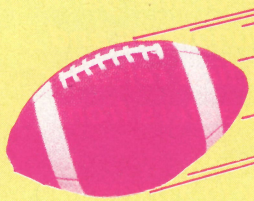
T.H.



Graphics: 65%
Sound: 30%
Playability: 67%
Overall: 67%









Call it Murderball ...

The origins of American football, and even soccer for that matter, lie in a game known as mob football. The game of mob football was traditionally in England a huge event, with almost the entire male population of small towns taking part. Wide goals would be placed at opposite ends of the town and the participants split into two teams. The object was to get the 'ball' (usually a stuffed pigs bladder) into the opposing team's goal by any available means. There were no rules to speak of, and the ball could be kicked, headed or just carried. As you can imagine, it was a far cry from the rules and regulations of modern day football. Similar games are played on a smaller scale today, often called murderball, though the original game, in all its chaotic glory is still played occasionally in some parts of England. For example at Eton where the Wall game often goes on for years without a goal being scored. Like a public school education in England — for masochists only ...

(DON'T) Beware of Demons!!!!
And you can win a CD player!

SSI/U.S. Gold's new smash hit in the role playing games style, Demon's Winter has aroused big, big interest from the RPG crowd. Wayne, co-editor of G.M. magazine raves about it as you will see from the review in this issue of CCI. So do U.S. Gold's luscious PR lovelies Danielle and Tracey (We asked them what kind of non-computer role playing games they liked best but they wouldn't tell us!)

But they have given us a smashing portable Crown CD player each as prizes for a Demon's Winter competition.

So all you CD playerless readers here's your chance to grab yourself one and lord it over the world as you speed down the street. You can also of course, connect it to your elephant-sized loudspeakers and blast the blues away too, if the neighbours can stand it ...

All you have to do is answer the questions, correctly of course! You can get some excellent clues in the review of Demon's Winter on pages 80 and 81.

Except for question 6. Tracey, who is a big heavy metal fan says that loads of RPG players love that loud, loud noise stuff and there ought to be a question that needs a bit heavy metal brain in it. So she set question 6 and we are going to try to get her to add a signed photo of her in her really snazz heavy m.leather minigear to send to the winner.

1. What was the name of the game that was the computerised version of Advanced Dungeons and Dragons?
2. What machine was it first released on?
3. Who are the five characters from which your chose in Demon's Winter?
4. How long is each day in Ymros?
5. How many classes of characters are there?
6. Name an album of Celtic Frost and where the Sugar Cubes come from.

That's all you have to do, folks ... Answers on a postcard must reach us by September 1st, 1989 (Aussie readers have been asking us for longer lead times as they don't get the magazine so quickly — or do they just read slowly?)
Send to; CCI/Demons Winter Comp., 40 Bowling Green Lane, London EC1R ONE

Oh yes, Danielle says that the ten runners up — and the two winners with the first all correct entries out of the Comp Bag — will get U.S. Gold T Shirts — with USG's brand new flash logo on them. (And even Tony Horgan hasn't got one of those yet!)

Accountant III

Alan and Ray Barber C128

Accountant III is a home accounting system for the C128 that does standing orders as well as monthly outgoings, including cash and check withdrawals providing you with a complete financial data base each month. After you have loaded and run the program, type Y when asked if it is the first run. Then select menu 1. The programme will ask for the month — input the first 3 letters of the month and the date. To access standing orders, press 2 when the menu appears. Menu 3 must be accessed after Menu 1.

```
10 Q$="Y"
20 S=54272:FOR Q=S TO S+23:POKE Q,0:NEXT
30 DIM A$(16),A(16),B%(16),C$(16),C(16),C%(16),E$(32),D(32),D%(32),E%(32),F
$(16):DEF FNR(X)=INT(X*100+.5)/100
40 SCNCLR:Z=0
50 COLOR4,7:COLOR5,2:COLOR0,7
60 PRINTSPC(18)"┌─┐ ┌─┐┌─┐┌─┐ ┌[SP2]┐ ┌[SP2]┐┌─┬─┐┌─┐ ┌[SP2]┐┌─┬─┐"
70 PRINTSPC(18)"├─┤ │[SP2]│[SP2]│[SP2]│ │[SP2]│ │└┐ │ │ ├─┤ │└┐ │ │ │"
80 PRINTSPC(18)"│[SP2]│ │[SP2]│[SP2]│[SP2]│ │[SP2]│ │ └┐ │ │ │[SP2]│ │ └┐ │ │"
90 PRINTSPC(18)"└[SP2]┘ └─┘└─┘└─┘ └[SP2]┘ ┴ └[SP2]┘ └[SP2]┘ ┴"
100 PRINTSPC(32)"[CD]┌─┬─┬─┬─┐"
110 PRINTSPC(33)"│[SP2]│[SP2]│ "
120 PRINTSPC(33)"│[SP2]│[SP2]│ "
130 PRINTSPC(32)"└─┴─┴─┴─┘"
140 CHAR1,26,10,"BY ALAN & RAY BARBER"
150 CHAR1,26,12,"[SP4]FOR THE C128"
160 CHAR1,24,20,"PRESS SPACE TO CONTINUE"
170 GETKEY X$
180 IFX$<>CHR$(32)THEN170
190 GOTO2400
200 GOTO1830
210 SCNCLR:RESTORE:Z=1
220 GOSUB2140
230 PRINTCHR$(14)
240 SLEEP1.5
250 SCNCLR
260 GOSUB420
270 DOPEN#2,"ACCOUNTANT 1"+STR$(PH),D0,U8,R
280 FORR=1TO16:INPUT#2,A(R):NEXTR:INPUT#2,D$:DCLOSE#2
290 Q$="Y":T=0
300 PRINT"[CLR][CTLN][YEL][REV][SP32]♠──┌─┌╱│ ♠╱│  ╲╲╲[SP34]":REM REGULAR MONT
HLY OUTGOINGS
310 PRINT"[CTLN][LGRN][CD2][SP3]▁▔│ ▗▙♠▁ ╲┌╱│ │▙ │ ┌┌╱│ │┌╲╱│ ♥[SP18]▔ATE:[LBLU][
SP2]"D$
320 PRINT:FOR R=1TO9:PRINT"[LGRN][SP2]"R".[SP3]"A$(R)".....£ [LGRN]"TAB(B%(
R))A(R):NEXT
330 FORR=10TO15:PRINT" "R".[SP3]"A$(R)".....£ [LGRN]"TAB(B%(R))A(R):NEXT
340 PRINT"[CD] "R".[SP3]│♠▙♠/─▔ ▔♠▁▁╲▔▔ ▁┌▁o♠▁▔"A$(R)"..£ [LGRN]"TAB(B%(R))
A(R)
350 PRINT"[CD][CTLN][YEL][REV][SP29]│Y ♠LAN & ▁AY │ARBER[SP30]"
360 FORR=1TO15
370 IF ABS(A(R))=>1 THEN B%(R)=33-LEN(STR$(INT(ABS(A(R)))))
```

cont. on next page

```
380 IF ABS(A(R))<1 THEN B%(R)=31
390 NEXT
400 GOTO530
410 PRINTCHR$(14)
420 FOR R=1TO15:READ A$(R):NEXT
430 DATA"\ONTHLY \NCOME......","\ORTGAGE............"
440 DATA"_ATES..............","oATER..............."
450 DATA"¬LECTRIC............","|AS..................."
460 DATA"|ELEPHONE...........","\NSURANCES.........."
470 DATA"|OUSEKEEPING........","¬NTERTAINMENT......."
480 DATA"|OLIDAYS............","¬ETROL..............."
490 DATA"XEHICLE |AX.........","|UDGET ♠CCOUNT......"
500 DATA"\ISC................."
510 GOSUB 1740
520 RETURN
530 IFQ$="N"THEN730
540 PRINTSPC(46)"[CU19][LGRN]|RANSACTION ( |//) "
550 GETKEY Q$
560 IFQ$="Y"THEN580
570 IFQ$="N"THEN720
580 T=T+1:IFT>0THEN D$=DD$
590 PRINTCHR$(14)
600 PRINT"[HOM][CD6]"
610 PRINTSPC(46)"[LGRN]\NPUT \ONTHLY ♠MOUNTS "
620 INPUT"[CR46]♠MOUNT ";A:INPUT"[CR46]\NTO oHICH ♠CCOUNT ";L
630 REM 46 SPACES TO THE RIGHT < CRSR RIGHT >
640 IFL=1THENGOTO650:ELSEGOTO660
650 A(16)=FNR(A(16)+A):A(L)=FNR(A(L)+A):GOTO680
660 IF L>15 OR L<1 OR L-INT(L)>0 THEN600
670 A(16)=FNR(A(16)-A):A(L)=FNR(A(L)-A):GOTO300
680 GOSUB300
690 PRINT"[HOM][CD5]"
700 Z=0:FORR=1TO15:Z=Z+A(R):NEXT
710 IFABS(Z-A(16))=<0.01THEN
720 GOTO300
730 PRINTSPC(46)"[CU19][LGRN]♥UM OF ♠CCOUNTS = |OTAL |ALANCE ":GOSUB1780
740 DOPEN#1,"@ACCOUNTANT 1"+STR$(PH),D0,U8,W
750 G$=CHR$(13):FOR R=1TO16:PRINT#1,A(R);G$:NEXT
760 PRINT#1,D$;G$
770 DCLOSE#1
780 PRINTSPC(46)"[CD2]|AD"T"|RANS.":Q$="Y"
790 PRINTSPC(46)"[CD2]/EW -ILE ¬ONE."
800 PRINTSPC(46)"[CD2]¬O |OU oISH ♠NY \ORE |RANS ?":GETKEYX$:IFX$="N"THENGO
SUB1830:ELSERESTORE:GOTO210
810 PRINT"[CLR]":T=0
820 PRINTCHR$(14)
830 SCNCLR
840 DOPEN#2,"♥TANDING ⌐RDERS ",R
850 FORR=1TO16:INPUT#2,C(R),C$(R),C%(R),F$(R):NEXT:INPUT#2,D$:DCLOSE#2
860 PRINT"[CLR][CTLN][YEL][REV][SP35]♠——⌐ //| ♠/| \\\[SP31][ROF]":REM ACCOUN
ANT III
870 GOSUB2070
880 PRINTSPC(52)"[CU19]|RANSACTION ( |//) "
890 GETKEY Q$
900 IFQ$="Y"THEN920
910 IFQ$="N"THENGOSUB1830
920 T=T+1:IFT=1THEN D$=DD$
930 PRINTCHR$(14)
940 PRINT"[HOM][CD6]"
950 PRINTSPC(52)"[LGRN]\NPUT ♥TANDING ⌐RDERS "
960 INPUT"[YEL][CR52]|O oHOM ¬AYABLE";C$
970 REM 47 SPACES TO THE RIGHT < CRSR RIGHT >
980 INPUT"[CR52]oHEN ¬AYABLE";F$
990 INPUT"[CR52]♠MOUNT ";C:INPUT"[CR52]\NTO oHICH ♥LOT ";L
1000 REM 46 SPACES TO THE RIGHT < CRSR RIGHT >
1010 C(16)=FNR(C(16)+C):C(L)=FNR(C(L)+C)
```

```
1020 IFABS(C(L))=>1THENC%(L)=32-LEN(STR$(INT(ABS(C(L)))))
1030 IFABS(C(L))<1THENC%(L)=31
1040 C$(L)=C$
1050 F$(L)=F$
1060 IFL>15ORL<1OR-INT(L)>0THEN930
1070 GOSUB2070
1080 PRINTCHR$(14)
1090 PRINT"[HOM][CD17]"
1100 PRINTSPC(52)"[CU14]|RANSACTION ( |//) "
1110 GETKEY Q$
1120 IFQ$="Y"THEN930
1130 IFQ$="N"THEN1160
1140 IFQ$<>"Y"OR"N"THENGOTO1110
1150 T=T+1:IFT=>1THEND$=DD$
1160 GOSUB1780
1170 DOPEN#1,"@♥TANDING ΓRDERS ",W
1180 G$=CHR$(13):FOR R=1TO16:PRINT#1,C(R);G$;C$(R);G$;C%(R);G$;F$(R);G$:NEX
T
1190 PRINT#1,D$,G$
1200 DCLOSE#1
1210 PRINTSPC(52)"[CD]|AD"T"|RANS.":Q$="Y"
1220 PRINTSPC(52)"/EW -ILE ⁻ONE."
1230 PRINTSPC(52)"♠NY \ORE |RANS ?":GETKEYX$:IFX$="N"THENGOSUB1830:ELSEGOTO
810
1240 SCNCLR:K=0
1250 DOPEN#2,"CASHBOOK "+STR$(PH),D0,U8,R
1260 FORR=1TO20:INPUT#2,D(R),E$(R),D%(R),E%(R):NEXT:INPUT#2,D$:DCLOSE#2
1270 D(32)=A(16)
1280 Z=0:FORR=1TO30:Z=Z+D(R):NEXT
1290 FORC=1TO20:D(32)=D(32)+D(C):NEXT
1300 IFABS(D(L))=>1THENE%(L)=53-LEN(STR$(INT(ABS(D(L)))))
1310 IFABS(D(L))<1THENE%(L)=52
1320 PRINT"[CLR][CTLN][YEL][REV][SP29]♠⟵Γ⁄/| ♠/|  ↘↘↘[SP37][ROF]":REM ACCOUN
TANT III
1330 PRINTSPC(5)"[CTLN][LGRN][CD]-HEQUE & -ASH ♠CCOUNT"SPC(16)"-ATE:[LBLU][
SP2]"DD$
1340 A=0:B=0
1350 PRINT: FORR=1TO10
1360 A=B+1:B=A+1:PRINTSPC(6)"[BLU]"A"."E$(A)""TAB(31)"£ "TAB(D%(A))D(A)""TA
B(41)""B"."E$(B)"[SP4]"TAB(66)"£ "TAB(E%(B))D(B):NEXT
1370 IFFNR(Z+A(16))=<0.01THENPRINTSPC(42)"[CD]|♠L♠/-⁻ Γ- ♠⟵Γ⁄/| [SP6]£"TAB(
D%(32))"[RED]"D(32):GOTO1390
1380 PRINTSPC(42)"[GRN][CD]|♠L♠/-⁻ Γ- ♠⟵Γ⁄/| [SP6]£"TAB(D%(32))D(32)
1390 IFK=1THENRETURN
1400 PRINT"[HOM]"
1410 PRINTSPC(5)"[PUR][CD14]|RANSACTION ( |//)"
1420 GETKEYQ$
1430 IFQ$="Y"THEN1450
1440 IFQ$="N"THENGOTO1640
1450 T=T+1:IFT=>1THEND$=DD$
1460 PRINTCHR$(14)
1470 INPUT"[CR5][CD]-HEQUE/-ASH ♥LIP /O. (☆☆XXX)";E$
1480 INPUT"[CR5]♠MOUNT";D
1490 INPUT"[CR5]↘NTO ◎HICH ♥LOT";L
1500 IFL>30ORL<1ORL-INT(L)>0THEN1460
1510 D(32)=FNR(D(32)-D):D(L)=FNR(D(L)-D)
1520 E$(L)=E$
1530 IFABS(D(L))=>1THEND%(L)=23-LEN(STR$(INT(ABS(D(L)))))
1540 IFABS(D(L))<1THEND%(L)=22
1550 IFABS(D(L))=>1THENE%(L)=53-LEN(STR$(INT(ABS(D(L)))))
1560 IFABS(D(L))<1THENE%(L)=52
1570 K=0:K=1:GOSUB1320
1580 Z=0:FORR=1TO30:Z=Z+D(R):NEXT
1590 IFFNR(Z+A(16))=<0.01THENPRINTSPC(42)"[CU]|♠L♠/-⁻ Γ- ♠⟵Γ⁄/| [SP6]£"TAB(
D%(32))"[RED]"D(32)
1600 PRINTSPC(5)"[PUR][CU]|RANSACTION ( |//)"
```

```
1610 GETKEYQ$
1620 IFQ$="Y"THEN1450
1630 IFQ$="N"THENGOTO1640
1640 PRINTSPC(5)"[CD]—O  ÌOU oISH ÌO ♥AVE ÌHIS —ATA?":GETKEYX$
1650 IFX$="N"THENGOSUB1830
1660 PRINTTAB(5)"¬RESS ♠NY ↗EY ÌO ♥AVE —ATA."
1670 GETKEYX$
1680 DOPEN#2,"@CASHBOOK " +STR$(PH),D0,U8,W
1690 P$=CHR$(13):FOR R=1TO20:PRINT#2,D(R);P$;E$(R);P$;D%(R);P$;E%(R);P$:NEX
T
1700 PRINT#2,D$;P$
1710 DCLOSE#2
1720 PRINTSPC(5)"[GRN][CD]ÌAD "T" ÌRANS[SP8]/EW —ILE —ONE"
1730 PRINTSPC(5)"—O oISH ANOTHER ÌRANSACTION ( Ì//)":GETKEYX$:GOTO1830
1740 PRINTSPC(7)"[CD]¬RESS ♠NY ↗EY TO LOAD —ATA"
1750 PRINTSPC(7)"[CD]¬RESS ♠NY ↗EY TO LOAD —ATA"
1760 GETKEYX$
1770 RETURN
1780 PRINTSPC(52)"[CD]♥AVE ÌHIS —ATA? ( Ì//)":GETKEYX$
1790 IFX$="N"THENGOSUB1830:END
1800 PRINTTAB(52)"¬RESS ♠NY ↗EY ÌO ♥AVE —ATA."
1810 GETKEYX$
1820 RETURN
1830 REM INSTRUCTION ROUTINE
1840 IFDS=63THENPRINT"[GRN][CU7]ACCOUNTANT III HAS ALREADY BEEN INITIALIZED
.[SP3]PLEASE RERUN PROGRAMMME AGAIN BUT ANSWER (N) TO QUESTION":END
1850 PRINT"[CLR]":PRINTCHR$(142)
1860 IFT>0THENGOTO1880
1870 PRINTSPC(5)"[CD2]WELCOME TO ACCOUNTANT III. PLEASE SELECT THE MENU YOU
 WISH TO VIEW:"
1880 PRINTSPC(20)"[CD][LRED]┌──────────────────────────────────────────┐"
1890 PRINTSPC(20)"[LRED]Ì[LGRN] 1: MENU 1 : MOUNTHLY OUTGOINGS[SP5][LRED]Ì"

1900 PRINTSPC(20)"[LRED]Ì[LGRN] 2: MENU 2 : STANDING ORDERS[SP8][LRED]Ì"
1910 PRINTSPC(20)"[LRED]Ì[LGRN] 3: MENU 3 : CHEQUE & CASH ACCOUNT[SP2][LRED
]Ì"
1920 PRINTSPC(20)"[LRED]Ì[LGRN] 4: EXIT[SP28][LRED]Ì"
1930 PRINTSPC(20)"[LRED]Ì[SP36]Ì"
1940 PRINTSPC(20)"[LRED]Ì[SP36]Ì"
1950 PRINTSPC(20)"[LRED]Ì[SP36]Ì"
1960 PRINTSPC(20)"[LRED]Ì[SP36]Ì"
1970 PRINTSPC(20)"[LRED]└──────────────────────────────────────────┘"
1980 PRINTSPC(22)"[YEL][CU3]GO AHEAD: "
1990 GETKEY W$
2000 IFZ>0THEN2020
2010 IFW$="3"THENPRINTSPC(17)"[CD5][LRED]THIS MENU IS ONLY ACCESSIBLE THROU
GH MENU 1":GOTO1990
2020 IFW$<"1" OR W$>"4"THEN1990
2030 IFW$="1"THENGOTO210
2040 IFW$="2"THENGOTO810
2050 IFW$="3"THENGOTO1240
2060 IFW$="4"THENSCNCLR:END
2070 PRINT"[CLR][CTLN][YEL][REV][SP32]♠——┌╱Ì ♠/Ì  ╲╲╲[SP34][ROF]":REM ACCOUN
TANT III
2080 PRINT"[PUR][CD]♥Ì ♠/¬╲/Ì  ┌_—¯_♥[SP37]—ATE:[SP3]"DD$
2090 PRINT:FOR R=1TO9:PRINT"[RED][SP3]"R" ."C$(R)"[SP2]"TAB(25)"£"TAB(C%(R)
)C(R)""TAB(38)"[LBLU]"[SP2]F$(R):NEXT
2100 FORR=10TO15:PRINT"[RED][SP2]"R" ."C$(R)"[SP2]"TAB(25)"£"TAB(C%(R))C(R)
""TAB(38)"[LBLU]"[SP2]F$(R):NEXT
2110 R=16:PRINT"[PUR][CD] ÌOTAL OF ♠LL ♥TANDING ┌RDERS IS £ " C(R)
2120 PRINT"[CD][YEL][REV][SP28]ÌY ♠LAN[SP2]& _AY ÌARBER[SP31][ROF][PUR]"
2130 RETURN
2140 INPUT"[CD6][CR11]WHICH MONTH IS REQUIRED: (JAN,FEB ETC.) ";M$
2150 IFM$="JAN"THENPH=1
2160 IFM$="FEB"THENPH=2
2170 IFM$="MAR"THENPH=3
```

```
2180 IFM$="APR"THENPH=4
2190 IFM$="MAY"THENPH=5
2200 IFM$="JUN"THENPH=6
2210 IFM$="JUL"THENPH=7
2220 IFM$="AUG"THENPH=8
2230 IFM$="SEP"THENPH=9
2240 IFM$="OCT"THENPH=10
2250 IFM$="NOV"THENPH=11
2260 IFM$="DEC"THENPH=12
2270 IFPH<1THENGOTO2300
2280 IFPH>12THENGOTO2300
2290 GOTO2310
2300 INPUT"[RED][CD][CR11]PLEASE RE-ENTER MONTH AS (JAN,FEB,ETC)";M$:GOTO21
50
2310 INPUT"[YEL][CD2][CR11]PLEASE ENTER TODAY'S DATE: (XX/XXX/XX) ";DD$
2320 FORK=4TO6
2330 IFASC(MID$(DD$,K,1))<65GOTO2360
2340 IFASC(MID$(DD$,K,1))>211GOTO2360
2350 NEXTK:GOTO2380
2360 INPUT"[CD][RED][CR11]RE-ENTER DATE IN XX/XXX/XX FORMAT";DD$
2370 GOTO2320
2380 CHAR1,31,20,"[GRN][CTLO]THANKYOU"
2390 RETURN
2400 INPUT"[CD][CR41]IS THIS THE FIRST RUN OF ACCOUNTANT III (Y/N)";ZZ$
2410 IF ZZ$="N"THENGOTO1830ELSE2420
2420 FORR=1TO16:A(R)=0:NEXT:D$=STR$(A)
2430 FOR PH=1TO12
2440 DOPEN#1,"ACCOUNTANT 1"+STR$(PH),D0,U8,W
2450 G$=CHR$(13):FOR R=1TO16:PRINT#1,A(R);G$:NEXT
2460 PRINT#1,D$;G$
2470 DCLOSE
2480 DOPEN#2,"CASHBOOK " +STR$(PH),D0,U8,W
2490 P$=CHR$(13):FOR R=1TO20:PRINT#2,D(R);P$;E$(R);P$;D%(R);P$;E%(R);P$:NEX
T
2500 PRINT#2,D$;P$
2510 DCLOSE#2
2520 NEXTPH
2530 DOPEN#1,"*TANDING ORDERS ",W
2540 G$=CHR$(13):FOR R=1TO16:PRINT#1,C(R);G$;C$(R);G$;C%(R);G$;F$(R);G$:NEX
T
2550 PRINT#1,D$,G$
2560 DCLOSE#1
2570 GOTO1830
2580 FORR=1TO16:PRINTA(R):NEXT
```

★ Program Submission Procedure ★

DO NOT submit any program or routine that you do not either own or have property authority to do so.

ALWAYS include your name, address and the date on all material and any enclosures.

Do not forget to make it clear exactly which computer/s your program or article is applicable to.

Include ROM or DOS versions wherever they are pertinent.

If you have to submit work which is hand-written then you must make sure it is printed clearly.

Number all pages.

Never use staples. Use paperclips if necessary.

If you are saving your program to tape then save it AT LEAST twice on each side.

When you save a program on disk save it twice and call the second file "BACKUP".

Remember to label all tapes and disks with your name and the title of the program. Label tape or disk with your name and the name or title of the program.

Always ensure that disks are well packaged. They should ideally be sent in a commercial disk mailer or at least packed between two pieces of hardboard or rigid plastic.

Please allow at least 8 weeks for acknowledgement as all programs have to be thoroughly tested and made into a suitable format.

Enclose a self-addressed stamped envelope or package if you would like your program to be returned.

★ Programming tips ★

If you can, use CHR$(x) type commands instead of those hard to read graphic symbols.

If necessary renumber your program on completion a many readers use auto number utilities to ease typing in.

Try to keep instructions within the program itself at a sensible level. You can expand on them within the accompany text if necessary.

TEST your programs before submitting them or even better get a friend to test them for you.

If a program contains machine code data please use decimal and not hex as there are fewer digits to be confused. Try and keep the same number of data statements in each line. Please add some form of error checking if your program contains more than five lines of data.

cont. on next page

Storm

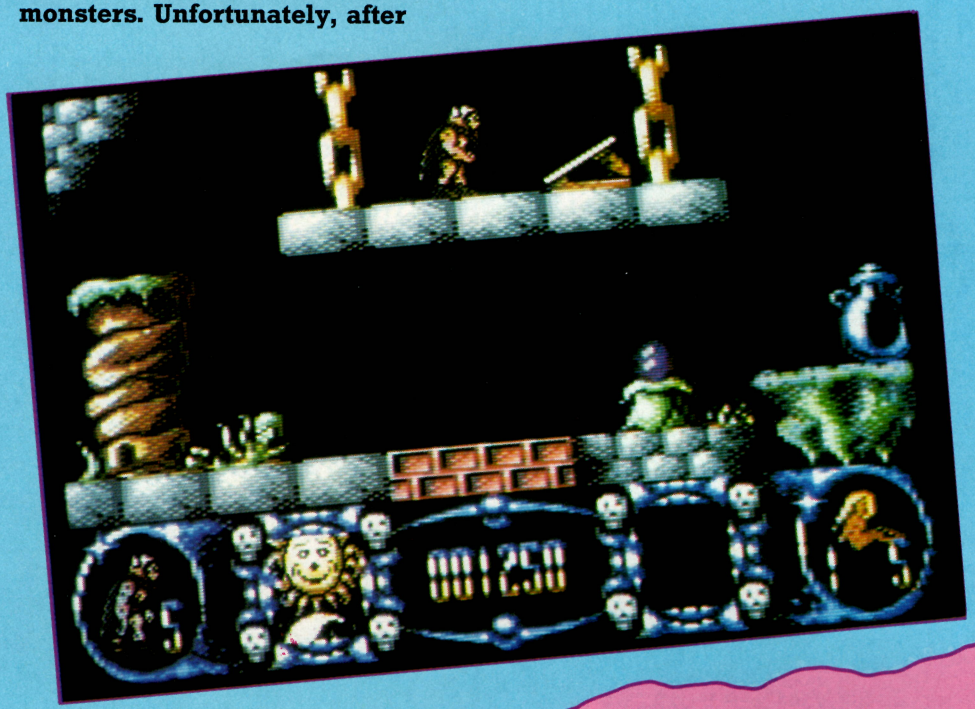
As more and more stunning graphics begin to appear in 16-bit games, their 8-bit brothers are having a real fight to keep up with them. This time last year, many respected figures in the computer industry were saying that the 64 had been pushed to its limits, that there was no further ground the 8-bit programmers could cover. The arrival of Stormlord shows, at least in the graphics stakes, just how wrong they were.

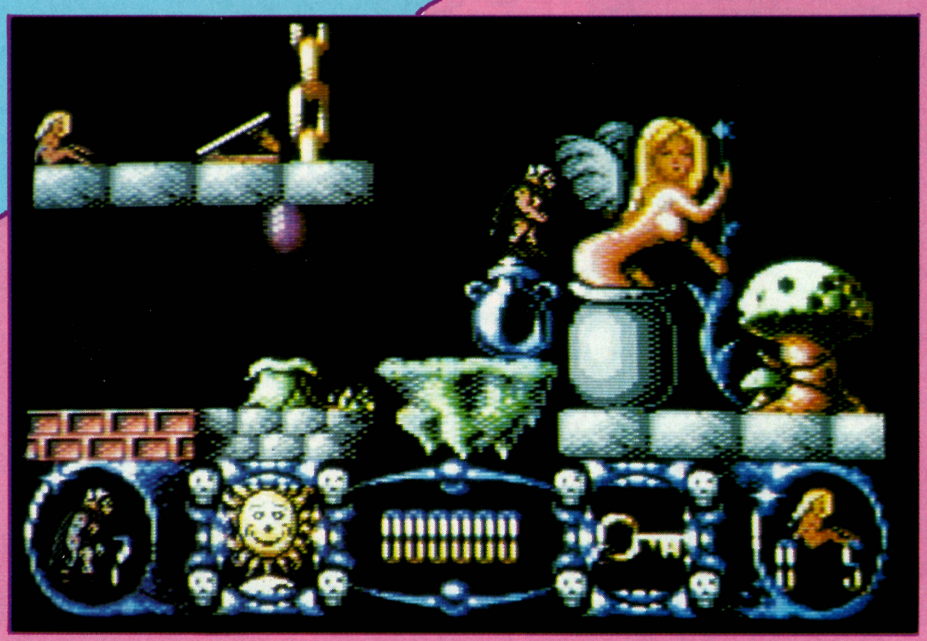
Stormlord, as well as being the name of the game, is the central character in this fantasy arcade adventure. This caped, squat barbarian-cum-sorcerer has found his country under siege from a wicked queen. She has rounded up the local fairy population and imprisioned them around the land. If no-one steps in, she will carry out her plans to destroy them all before taking power herself.

"It seems the Queen's evil has already begun to take effect, as your once powerful homeland is now rife with crazed demons."

As the fairies have all been locked up, rescuing them poses more than a few problems. It seems the Queen's evil has already begun to take effect, as your once peacful homeland is now rife with crazed demons. The flora has also sprung into poisonous life, so you will have to watch your step. Sighting the fairies on the horizontally scrolling levels is not too hard, but actually getting to them is. Most are hidden behind locked doors, or trapped in suspended enclosures. Unlocking doors is a simple matter of finding a key. Others can only be reached with the use of the spring-boards. These act as teleports, shooting you through the air to a predetermined destination.

Object manipulation comes into the game substantially. As there are only a few different objects to pick up, finding out what they are used for is no real problem. As for the baddies, the predictable bouncing balls are easy enough to avoid, as are the initial attacks from airborne monsters. Unfortunately, after the first couple of levels, those monsters start appearing in often overwhelming numbers.

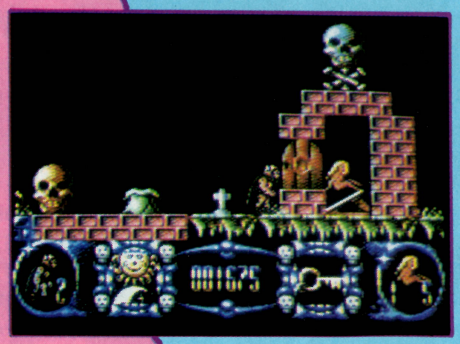




nlord

Hewson

Hewsonians ...
Stormlord was designed by Raffael Cecco in conjunction with Nick Jones. As was the case with Exolon and Cybernoids I and II, the game was originally developed for the Spectrum, with Nick Jones programming the 64 version. Hugh Bins supplied those gorgeous graphics, whilst the soundtrack was a joint venture from Jeroen Tel and Charles Deenen. Let's hope we have not seen the last from this successful team.



Between each level you get a chance to win an extra life. Fairies fly around above you, while you blow kisses at them. Any you manage to hit fall in love with you and drop a tear. If you can catch ten of these falling tears within the time limit you get your extra life.

"An incredible use of colour in the background graphics has gone towards crafting some of the best scrolling screens ever seen."

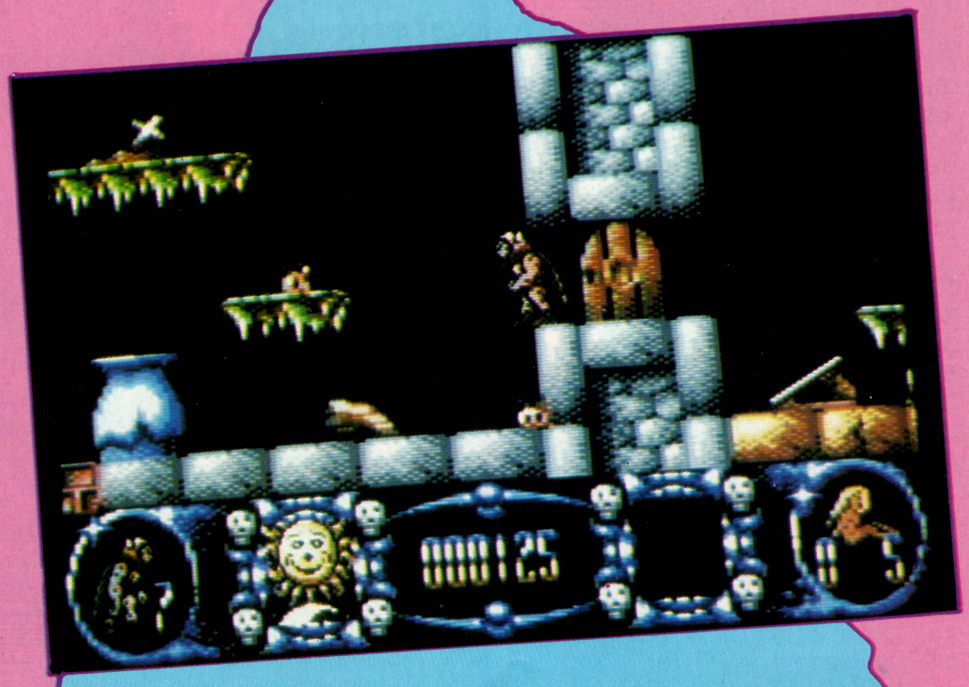
Graphics: 95%
Sound: 80%
Playability: 79%
Overall: 81%

Price: £9.99 (c)
£14.99 (d)

The gameplay is not particularly original, based around a traditional platform arcade adventure frame, but it really does the business when it comes to graphics. Stormlord is superbly drawn and animated with multi-colour hi-res sprites. An incredible use of colour in the background graphics has gone towards crafting some of the best scrolling screens ever seen. The toadstools, wine casks, lush greenery and the score panel are brilliant, and that curvy topless fairy is something else! There are no sound effects, which is a shame, but the soundtrack fills in well.

It is unfortunate that the difficuly level is stepped up so drastically in the later stages, as it detracts from an otherwise highly playable game. If you can bear that, Stormlord will serve you well. My only other reservation is that each game has to be played just as the last, and playing right through from scratch after dying on the fourth level may not go down too well. Decent arcade adventures have not been in abundance recently, and if just for the graphics, Stormlord deserves your attention (and probably your cash too).

T.H.



Digital Logic

Darren Yates

+4, C16, C128

We continue our powerful programming series with a simple tutorial on logic gates. A logic gate, hundreds of thousands of which your computer contains, responds to two levels of electrical voltage. These levels are the positive high voltage and zero-voltage (or ground), much the same as the two ends of a common battery. These are also called '1's and '0's. Simply type in this program to learn more!

```
1 REM **********************************
2 REM *    DIGITAL LOGIC COURSE I      *
3 REM *       DARREN YATES 1988        *
4 REM **********************************
5 GRAPHIC1,1:GRAPHIC0
6 COLOR1,2:COLOR0,2,4:COLOR4,1
7 PRINT"[CLR][CD6][SP6]BASIC DIGITAL LOGIC COURSE I[WHT]"
8 PRINT"[CD5]THIS COURSE WILL TEACH YOU THE BASICS OF"
9 PRINT" THE SIX MOST COMMON GATES AND HOW THEY"
10 PRINT"[SP7]WORK IN A PRACTICAL MANNER"
11 PRINT"[CD4][SP9]PRESS A KEY TO CONTINUE"
12 CIRCLE,50,50,6 :SSHAPELO$,44,44,56,56
13 PAINT,50,50:SSHAPEHI$,44,44,56,56
14 PAINT0,50,50
15 GETKEYAN$
16 GRAPHIC1,1:GRAPHIC0
17 PRINT"[CLR][CD2]THESE SIX GATES ARE:....."
18 PRINT"[CD2][SP2]1...NOT"
19 PRINT"[SP2]2...OR"
20 PRINT"[SP2]3...AND"
21 PRINT"[SP2]4...NOR"
22 PRINT"[SP2]5...NAND"
23 PRINT"[SP2]6...XOR[SP3](EXCLUSIVE-OR)"
24 PRINT"[CD4][SP10]PICK A GATE.....(1-6)"
25 GETKEYAN$
26 I1=0:I2=0
27 IFASC(AN$)<49ORASC(AN$)>54THEN25
28 ONASC(AN$)-48GOTO29,49,75,97,124,146
29 REM ** NOT **
30 COLOR1,1
31 DRAW1,120,20 TO120,100TO200,60TO120,20
32 CIRCLE,203,60,3
33 DRAW,120,60TO56,60:DRAW,206,60TO256,60
34 COLOR1,2
35 GSHAPEHI$,43,54
36 GSHAPELO$,256,54
37 GRAPHIC1:CHAR,16,15,"NOT GATE"
38 CHAR,1,17,"THE OUTPUT IS THE OPPOSITE OF THE INPUT"
39 CHAR,1,18,"I.E IF THE INPUT IS HIGH (LIGHT ON),THE"
40 CHAR,6,19,"OUTPUT IS LOW (LIGHT OFF) ETC"
41 CHAR,4,21,"PRESS <1>..CHANGE INPUT"
42 CHAR,4,22,"[SP6]<RETURN>....RETURN TO MENU"
43 GETKEYC$:IFC$="1"THEN45
44 IFC$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
45 CN=NOT(CN)
46 IFCN=-1THENGSHAPELO$,43,54:GSHAPEHI$,256,54
47 IFCN=0THENGSHAPEHI$,43,54:GSHAPELO$,256,54
```

```
48 GOTO43
49 REM ** OR **
50 COLOR1,1
51 CIRCLE,80,60,30,,30,150
52 DRAW,95 ,34TO160,34
53 CIRCLE,161, 94,60,,0,55
54 DRAW,95 ,86TO164,86
55 CIRCLE,161, 26,60,,125,'80
56 DRAW,60,45TO105,45
57 DRAW.60.75TO105.75
58 DRAW,209,60TO250,60
59 COLOR1,2
60 GSHAPELO$,47,40:GSHAPELO$,47,70
61 GSHAPELO$,250,54
62 GRAPHIC1
63 CHAR1,16,14,"OR GATE"
64 CHAR,0,16,"THE OUTPUT IS HIGH IF ONE OR MORE OF THE"
65 CHAR,0,17,"[SP5]INPUTS IS HIGH ELSE IT IS LOW"
66 CHAR,0,19," PRESS <1> OR <2> TO CHANGE THE INPUTS"
67 CHAR,0,20,"[SP7]<RETURN> TO MENU"
68 GETKEYZ$:IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
69 GOSUB171
70 OT=I1ORI2
71 IFI1=0THENGSHAPELO$,47,40:ELSEGSHAPEHI$,47,40
72 IFI2=0THENGSHAPELO$,47,70:ELSEGSHAPEHI$,47,70
73 IFOT=0THENGSHAPELO$,250,54:ELSEGSHAPEHI$,250,54
74 GOTO68
75 REM *** AND ***
76 COLOR1,1
77 DRAW,100,20TO100,80TO180,80
78 CIRCLE,174,50,30,,10,170
79 DRAW,100,20TO180,20
80 DRAW,100,32TO50,32:DRAW,100,65TO50,65
81 DRAW,205,50TO260,50
82 COLOR1,2:GSHAPELO$,45,27:GSHAPELO$,45,60
83 GSHAPELO$,260,45:GRAPHIC1
84 CHAR,16,14,"AND GATE"
85 CHAR,0,16,"[SP2]THE OUTPUT IS HIGH ONLY IF BOTH THE"
86 CHAR,0,17,"[SP13]INPUTS ARE HIGH"
87 CHAR,0,19,"[SP2]PRESS <1> OR <2> TO CHANGE THE INPUTS"
88 CHAR,0,21,"[SP8]<RETURN> TO RETURN TO MENU"
89 GETKEYZ$
90 IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
91 GOSUB171
92 IFI1=0THENGSHAPELO$,45,27:ELSEGSHAPEHI$,45,27
93 IFI2=0THENGSHAPELO$,45,60:ELSEGSHAPEHI$,45,60
94 OT=I1ANDI2
95 IFOT=0THENGSHAPELO$,260,45:ELSEGSHAPEHI$,260,45
96 GOTO89
97 REM ** NOR **
98 COLOR1,1
99 CIRCLE,80,60,30,,30,150
100 DRAW,95 ,34TO160,34
101 CIRCLE,161, 94,60,,0,55
102 DRAW,95 ,86TO164,86
103 CIRCLE,213,60,3
104 CIRCLE,161, 26,60,,125,180
105 DRAW,60,45TO105,45
106 DRAW,60,75TO105,75
107 DRAW,217,60TO250,60
108 COLOR1,2
109 GSHAPELO$,47,40:GSHAPELO$,47,70
110 GSHAPEHI$,250,54
111 GRAPHIC1
112 CHAR1,16,14,"NOR GATE"
113 CHAR,0,16,"THE OUTPUT IS HIGH ONLY WHEN BOTH INPUTS[SP18]ARE LOW"
```

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```
114 CHAR,0,18,"PRESS <1> OR <2> TO CHANGE THE INPUTS"
115 CHAR,0,20,"[SP6]<RETURN> TO RETURN TO MENU"
116 GETKEYZ$
117 GOSUB171
118 IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
119 OT=ABS(NOT(-(I1ORI2)))
120 IFI1=1THENGSHAPEHI$,47,40:ELSEGSHAPELO$,47,40
121 IFI2=1THENGSHAPEHI$,47,70:ELSEGSHAPELO$,47,70
122 IFOT=1THENGSHAPEHI$,250,54:ELSEGSHAPELO$,250,54
123 GOTO116
124 REM *** NAND ***
125 COLOR1,1
126 DRAW,100,20TO100,80TO180,80
127 CIRCLE,174,50,30,,10,170:CIRCLE,208,50,3
128 DRAW,100,20TO180,20
129 DRAW,100,32TO50,32:DRAW,100,65TO50,65
130 DRAW,212,50TO260,50
131 COLOR1,2:GSHAPELO$,45,27:GSHAPELO$,45,60
132 GSHAPEHI$,260,45:GRAPHIC1
133 CHAR,16,14,"NAND GATE"
134 CHAR,0,16,"[SP2]THE OUTPUT IS LOW WHEN THE INPUTS ARE"
135 CHAR,0,17,"[SP4]HIGH OTHERWISE THE OUTPUT IS HIGH"
136 CHAR,1,19,"PRESS <1> OR <2> TO CHANGE THE INPUTS"
137 CHAR,1,21,"[SP6]<RETURN> TO RETURN TO MENU"
138 GETKEYZ$
139 IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
140 GOSUB171
141 IFI1=0THENGSHAPELO$,45,27:ELSEGSHAPEHI$,45,27
142 IFI2=0THENGSHAPELO$,45,60:ELSEGSHAPEHI$,45,60
143 OT=ABS(NOT(-(I1ANDI2)))
144 IFOT=0THENGSHAPELO$,260,45:ELSEGSHAPEHI$,260,45
145 GOTO138
146 REM ** XOR **
147 COLOR1,1
148 CIRCLE,80,60,30,,30,150:CIRCLE,70,60,30,,30,150
149 DRAW,95 ,34TO160,34
150 CIRCLE,161, 94,60,,0,55
151 DRAW,95 ,86TO164,86
152 CIRCLE,161, 26,60,,125,180
153 DRAW,60,45TO 95,45
154 DRAW,60,75TO 95,75
155 DRAW,209,60TO250,60
156 COLOR1,2
157 GSHAPELO$,47,40:GSHAPELO$,47,70
158 GSHAPELO$,250,54
159 GRAPHIC1
160 CHAR1,16,14,"XOR GATE"
161 CHAR,0,16,"THE OUTPUT IS LOW IF THE INPUTS ARE THE"
162 CHAR,0,17,"SAME & HIGH IF THE INPUTS ARE DIFFERENT"
163 CHAR,1,19,"PRESS <1> OR <2> TO CHANGE THE INPUTS"
164 CHAR,1,21,"[SP6]<RETURN> TO RETURN TO MENU"
165 GETKEYZ$:IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
166 GOSUB171
167 IFI1=1THENGSHAPEHI$,47,40:ELSEGSHAPELO$,47,40
168 IFI2=1THENGSHAPEHI$,47,70:ELSEGSHAPELO$,47,70
169 IFI1<>I2THENGSHAPEHI$,250,54:ELSEGSHAPELO$,250,54
170 GOTO165
171 REM *** SUBROUTINE ***
172 IFZ$="1"THENI1=ABS(NOT(-I1))
173 IFZ$="2"THENI2=ABS(NOT(-I2))
174 RETURN
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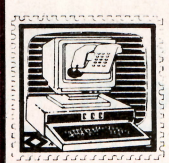
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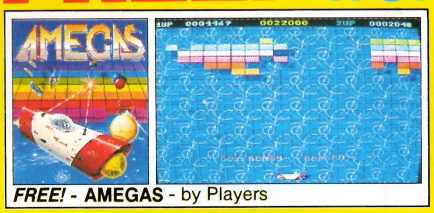
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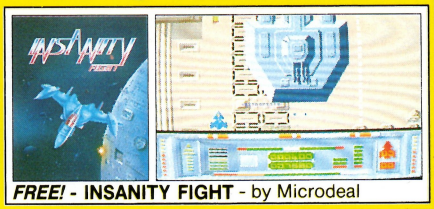
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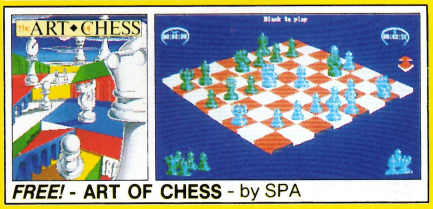
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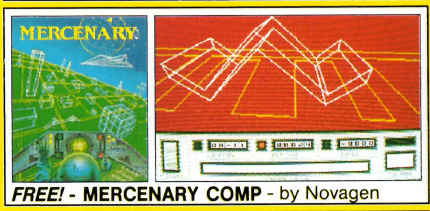
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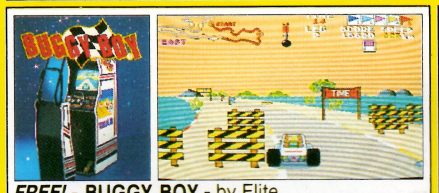
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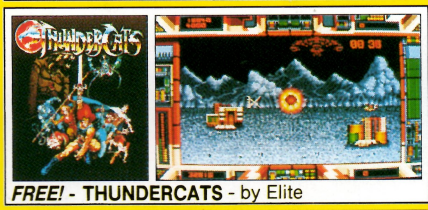
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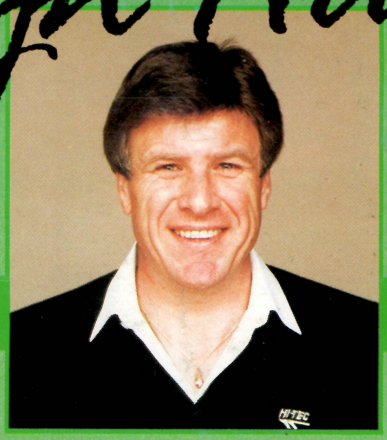
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