

COMMODORE

MEGA ISSUE

AUGUST 1987

MAN DOMINATES MACHINE

**COMMODORE
SHOW REPORT**

**64 MUSIC
POWER**

**GAMES!
MEGASTARS**

MARKET LEADER
M·A·G·N·E·T·I·C S·C·R·O·L·L·S

**RAINBIRD'S
ADVANCED ART!**

HINTS & TIPS!

PROGRAMS GALORE!

Top Action Games

- COMPUTATION SPECIAL ▶ HEAD OVER HEELS
- ▶ WORLD LEADERBOARD ▶ METROCROSS
- ▶ AARDVARK ▶ 1-BALL ▶ EAGLES
- MILK RACE ▶ TWIN TORNADO ▶ TERRANOVA
- MAG MAX ▶ PLASMATRON ▶ THE DOUBLE
- THING ON A SPRING ▶ TREASURE ISLAND
- ▶ TEMPLE OF TERROR ▶ FAERY TALE

AND **AUTO-DUEL**

AND MUCH, MUCH
MORE

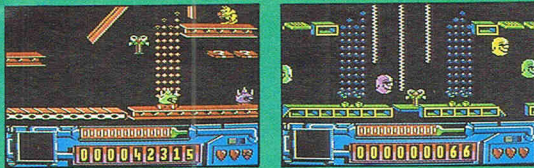


DENIS LOUIS
£1.10
 USA \$3.25
 CANADA \$3.50
 GERMANY DM7

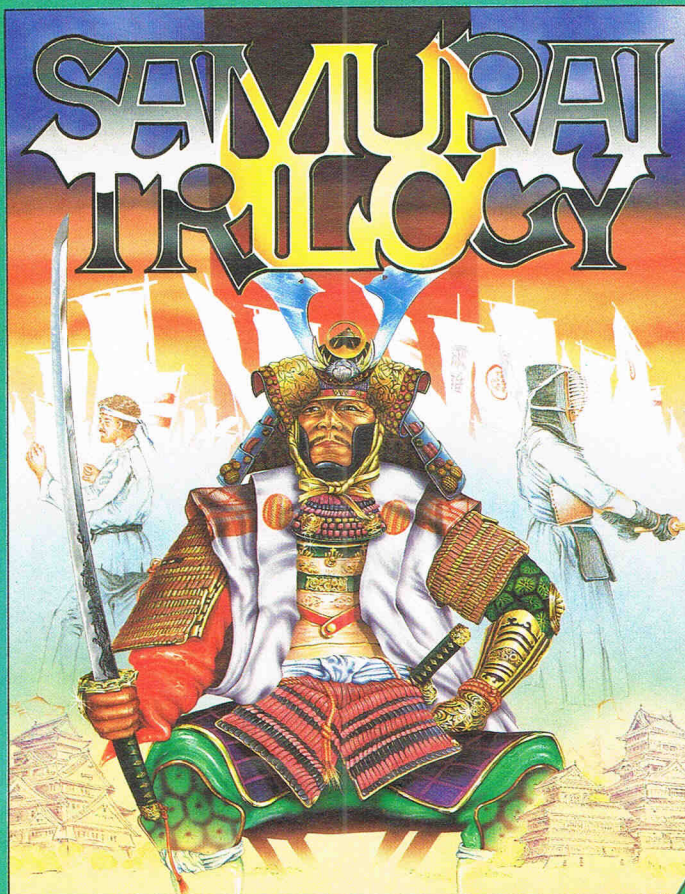
WIN!

**AN EXCELLERATOR DISK DRIVE ▶ A MONTY HAMPER ▶
LOADS OF SOFTWARE ▶ AND MUCH, MUCH MORE!**

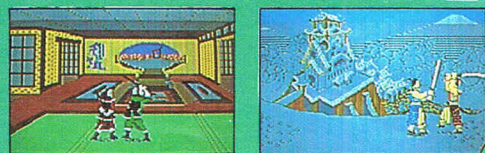
Software...



Gremlin's springiest star is set to bounce straight back into a new adventure. Following his world saving exploits against the evil toy goblin and his monstrous toys, Thing's enjoyed his much needed recuperation, oiled his springs and is now raring to go. What next?... he must finish the job properly and halt the factory computer auto producing these hideous toys. A quick hand and dogged determination are needed if you're to get anywhere with Thing in his latest escapade.



In an age in which honour was revered, from a time when grace and beauty were virtues, a class of warriors set themselves apart to dedicate their lives to a perfection in combat that in itself was an artform, to a discipline of mind that became a religion. The attaining of such excellence required an extraordinary diligence in self-denial and training in order to achieve the ultimate accolade 'War Lord'. Kendo, Karate and finally Samurai are the tests that must be mastered before such honour can be bestowed.



Monty the Mole is still on the run on his most exciting and exacting journey to date, a whistle stop tour of the capitals of Europe, acquiring more than just the local scenery on the way. With Intermole and the local gendarmes hot on his tail Monty must fill his booty bag with enough continental treasures and currency to effect an escape to his dream island ... Montoss.



that's
out of
this world

GREMLIN

THING BOUNCES BACK
CBM 64/128 £9.99 Tape £14.99 Disk
AMSTRAD £9.99 Tape £14.99 Disk
SPECTRUM 48/128K £7.99 Tape
MSX £7.99 Tape

AUF WIEDERSEHEN MONTY
CBM 64/128 AMSTRAD £9.99 Tape
£14.99 Disk. SPECTRUM £7.99 Tape

SAMURAI TRILOGY
CBM 64/128 AMSTRAD £9.99 Tape
£14.99 Disk. SPECTRUM £7.99 Tape

The best value Commodore magazine in the Universe!

COMMODORE
COMPUTING
INTERNATIONAL

Inside

Stuck in Strike

Force 55

Coin Op 56

Mega Games 78/79/80/82

Special Offers 40/84/85/

86/87/88/89

Music 118/120

Compunet 128

...REVIEWS

O.P.C. Art Studio	10/11
Book Reviews	45/46
Film Reviews	46
Micro-Rhythm	77
Supra Drive	96
Faery Tale	98/99/100
The Very First	103
Trivia Trove	104
Super G	125
Purrfect Protection	127

...CONSTANT FACTORS

CCI View	5
News	6/8/13/14
Rae West Letters	16
Jeff Minter	24
Readers Letters	38/40
Mini Office	42/43

Charts 61

Competitions 62/83/106

CCI Subscriptions

Coupon 64

Super Felix 70/71

Amiga User Group 111

Amiga Subscriptions

Coupon 114

Amiga Letters 117

Hints and

Tips 30/32/124

ICPUG 125

Programs 132/143

Classified

Advertisements 144

Advertisers

Directory 145

...FEATURES

Market

Leaders 18/19/20/21

Show Report 26/27/28/29

GAMESWORLD

MEGA REVIEWS

Adventure	34/35/36/37
World Class Leaderboard	50
Mag Max	52
Konami Coin Op Hits	52
I. Ball	53
The Double	54
Twin Tornado	55
Eagles	58
Thing Bounces Back	59
Head Over Heels	60
Compilations	66/67/69
Metro Cross	72
Star Paws	74
Terra Nova	76
Plasmatron	76
Aardvark	77
Deja Vu	93/94

SAVE THIS VOUCHER

II

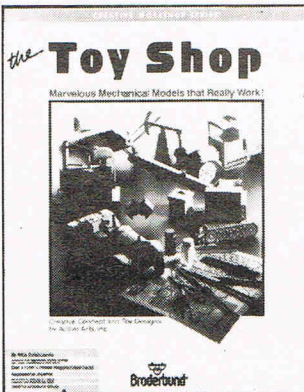
FREE SOFTWARE II



Send this voucher together with vouchers I and III and you receive a free cassette or disk of software. See our next issue for the contents of the software cassette/disk.

CREATIVE WORKSHOP SERIES FROM

Broderbund Software®



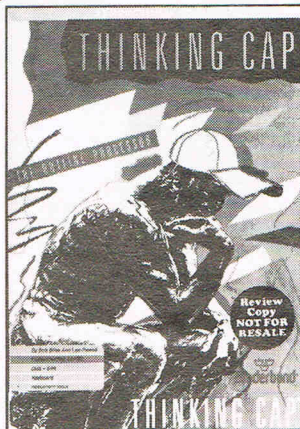
Toy Shop

MAKE MARVELLOUS MECHANICAL MODELS!

With your Commodore 64, printer and The Toy Shop you can create a steam engine, a jet dragster, an antique carousel... a total of 20 mechanical paper-made models that really work! The Toy Shop's easy-to-use software contains the detailed designs needed to build all the models and toys.

You can add custom patterns, graphics and text to the standard design... emblazon your name on an antique truck, display the company motto on a balancing jet... you can even use graphics from The Print Shop as decals on any of the toys. Once the model is customized, it's time to print the precision parts and mount them on the special adhesive cardstock included in the package. Then you simply cut out and assemble the model. The Toy Shop includes everything you need: wire, wooden dowels, rubber stripping and balloons, and there's no limit to the number of each toy you can make! Every toy does something - from telling the time to floating on the head of a pin!

Commodore disk **£44.95**



THINKING CAP

THE POWER OF MIND OVER MUDDLE!

Thinking Cap is the first and best outline processor for Commodore machines. Whatever you're writing, Thinking Cap helps you organize your ideas, compose your thoughts and produce perfect outlines automatically. You start by listing your main topics. Don't worry about the

details. Then add information wherever you please. Thinking Cap organizes your notes in a single keystroke. Thinking Cap even includes templates for common outlines including speeches, memos and reports of various types. Thinking Cap tackles writer's block because it helps you get your mind moving. Built-in text editing makes it a short step from first outline to final draft, so when you're ready to polish your notes, Thinking Cap can produce the final document.

Weather your brainstorm with Thinking Cap!

Commodore disk **£39.95**

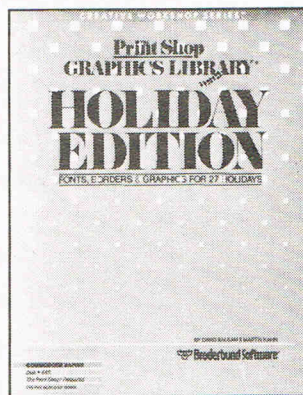
SUPER-G

- Parallel Printer Interface
- Keyboard Graphics
- Fast Graphics Dumps
- Compatible with Most Software and Printers
- High-Speed Graphics Buffer
- Plugs onto Serial Bus
- True 100% Compatibility with a Wide Selection of Printers
- Dip Switch Control of the Following:
 - Commodore Emulation
 - Text-Only Mode
 - Transparent Mode
 - Hex Mode
 - Command Mode

The Super-G is a high-speed centronics parallel printer interface for Commodore computers. It features the ability to print the full Commodore character set, including all graphics, reversed text, and reversed graphics characters. Its built-in buffer allows it to print screen graphics faster than most other Commodore interfaces available today.

The Super-G features software and DIP-Switch control over many of its advanced features, including its 100% true emulation of the Commodore 1525 printer. This allows the Super-G to be compatible with more software and printers than other interfaces.

SUPER-G INTERFACE **£34.95**



THE Print Shop GRAPHICS LIBRARY HOLIDAY EDITION

Celebrate your favourite holiday occasions with The Print Shop!

Customize your holiday signs, cards, letterhead and banners with 10 new fonts, 70 graphic elements, 14 borders plus 12 all new full panel designs.

Celebrate Mothers' Day, Fathers' Day, Valentine's Day, Easter and 23 other family and holiday occasions with a creative flourish!

Commodore disk **£19.95**
Requires The Print Shop

Other Print Shop products for the Commodore 64:

- The Print Shop **£39.95**
- Print Shop Companion **£29.95**
- Graphics Library Disk 1 **£19.95**
- Graphics Library Disk 2 **£19.95**
- Graphics Library Disk 3 **£19.95**

Ring for our New Catalogue of Commodore products



Available from your local dealer or directly from
Precision Software Ltd. 6 Park Terrace,
Worcester Park, Surrey KT4 7JZ
Telex 8955021 Precis G
01-330 7166

ORDER FORM Mail to: Precision Software Limited, 6 Park Terrace,
Worcester Park, Surrey KT4 7JZ

Please send me

Add £1.40 per item postage and packing. Free postage and packing for three or more items

Cheque enclosed Visa Access/Mastercard

Expiry Date: _____ (Credit Card Number)

Name: _____ Address: _____ Signature: _____

Post Code: _____

Dear Reader,

We have decided for the first time for five years that the price of CCI has to rise. The reason for the increase is simply the cost of paper which has risen by some 50% in the same period. Many other costs have also increased. The extra 10p, we believe, most readers will find acceptable considering the size and value we provide. We hope you agree.

One of the most amusing stories that has reached us recently was about the attempt by the retail chain Boots to stop the sale of the computer game Barbarian. The reason was not that it contained scenes where opponents heads are chopped off and bounce around the floor but, believe it or not, because the packaging featured the ample pin-up girl Marie Whittaker. A photo of her and a Mr Universe equivalent were on CCI's cover last month and that cover aroused some controversy too.

Boots refused to stock the computer game and Palace Software had to produce a toned down package. The funny part of the story is that Boots staff managed to mix up the two different versions and the "banned" Barbarian got sold anyway. The resulting publicity will certainly do no harm to sales of the game.

Our cover came in for criticism as "sexist". We take that word to mean biased toward or against one sex. Yet on our cover there was both a man and a woman — roughly of the same physical type. So sexist it was not. Is there to be a condemnation of using people or even animals or inanimate objects to illustrate magazine covers? One feminine complainant of the name of Tiffany told us she objected because the girl was "abnormal". The man? Oh he was "normal". Apparently she knows many male computer users with 56 inch chests!

The prices of the Amiga, even the 500, at least for the foreseeable future will ensure a bigger and somewhat older gamesplaying audience. Is that group, say late teens and twenties, likely to be shocked or corrupted by the photo of a girl in a bikini? Should computer magazines covers be

confined to juvenile cartoons or illustrations of hardware — was the case when we took over CCI?

The stupidity of Boots and parroted, unthought-out ideas like "sexist" are one of the symptoms of the double standards that exist throughout society. You can show a man but not a woman. See a bikini on a beach but not a computer magazine cover. Rent a vicious, violent video from your corner grocery store but a computer game is banned not for its violence but for its package.

The hypocritical attitudes that create these standards are both repressive and stupid. Computer users are just young or old people. They are influenced by and enjoy or dislike things no more than or different from anyone else. For some their computers are the major factor in their lives. For most, computing is just one aspect of many — which must be assumed to include a reasonable interest in men or women.

Censorship in any form is a difficult and dangerous affair. Who shall decide what you may see or play? And what are the standards and who decides them? Should you decide what you want or should it be some Big Brother — or Sister — who is probably, if you will excuse the pun, too big for his — or her — Boots?

A real event — not a non-event like Miss Whittaker's size of body — was the Commodore Show. A member of ICPUG told us that the User Group has been going now for more than ten years. A lot of Commodore water has flowed under London Bridge in that time — the PET, VIC20, C64, SX64, Plus/4, C16, the PC, and now the Amiga 500. Our special Amiga section this month coincides with the launch of the 500. As our Show report says, the Commodore world is entering a new era which will be dominated by its 16 bit machine.

In this issue, Jeff Minter in his usual contentious style takes to task our last month's review of the 500. Jeff's familiar Llamasoft stand was not unfortunately at the Show. Everyone at the Show must have been aware of the surge of enthusiasm for the Amiga 500 both from the public and the industry. It may have changed Jeff's mind about the Atari 16 Bit machine — the 500's main competitor

It is unwise to take only the UK viewpoint. The UK is just a small part of the world computer market and virtually everywhere, especially in Germany, the largest market outside the US, the Amiga is far and away the bigger seller. In Scandinavia for example the Amiga outsells the Atari by 10 to 1. The UK is a unique market and we must be careful not to let this special picture deceive us. The Sinclair Spectrum sold more machines in Britain than the C64 but worldwide the only global brand is Commodore.

This magazine regards its audience as more than only UK based and it will be interesting on an international scale to see which 16 bit machine dominates the market by the end of next year.

By the way, Barbarian is already available for the Amiga 500 — but ironically it does not come from Palace Software. It comes from a company called Psygnosis and is a totally different game. It has got a dinosaur not Maria Whittaker on the box. Maybe Boots will try to ban it as "Dinosaurist". They will probably, true to form, mix it up with the other Barbarian and sell both. And we'll bet that at least one of the Barbarians will get to number one by this time next month!

Your sincerely,

Antony H. Jacobson
Managing Editor and Publisher

Managing Editor and Publisher	..... Daphne Moss
..... Antony Jacobson	..... Tony Horgan
Features Editor	Anthony Mael
..... Jeff Minter	..... Andy Moss
Editorial/Production	..... Ian Waugh
Controller Romyne Jesudason	..... Rae West
Subscriptions Controller	..... Tina Milan
..... Sandra Gallagher	..... Margaret Bennett
Marketing Manager	..... Len Keighthly
..... Max Jacobson	..... Keith Howell
Senior Advertisement Manager	..... Jonathan M. Littlewood
..... James Mack	..... Tom Hingley
Advertisement Manager	..... Tim Arnott
..... Billy Brown	..... Ian Bennett
Advertising Assistant	..... Peter Gerrard
..... Krotoa Moses	Telephone
Finance Director	..... 01-278 0333
..... B.J. Lewis M.Sc. F.C.A.	Editorial ext: 274
Consultant Art Editor	Advertising ext: 280/266
..... Graham Baldock	Subscriptions ext: 274
Artwork	Published by Croftward Limited
..... Paul Cummins	Finsbury Business Centre
Magnetic Scrolls Illustration	40 Bowling Green Lane
..... Martin Farrer	Lonon EC1R 0NE
Photography ..	Distributed by: Comag, Tavistock
..... Paget Joseph	Road, West Drayton, Middx UB7
..... Rob Moss	7QE
Research	Printed by Chase Printers Group
..... André Jacobson-González	Typesetting: Carlton Barclay
Contributors	© Croftward Limited 1987
..... Zack Mule Skinner	
..... Courtney King	

Ninja Hamster CRL's Karate Hero

CRL say that their Ninja Hamster promises to be very different from all previous karate games. Ninja Hamster, their hero, returns home from foreign conquests. He finds his village in the evil grip of his arch-enemies Sinister Rat

and The Lizard of Death — to name just two his adversaries. Then, "in some of the finest martial arts sequences ever seen on a home computer," Ninja Hamster launches his quest to rid his village of evil, in a frenzy of flying fists, gnashing teeth and kicking feet. This black-belted rodent has, they claim, to be seen to be believed. (Is this the sort of game to be played with a mouse?)

Citizen - a Class of its own?

Citizen Europe is giving UK schools a free limited edition of an easy-to-use "Getting Started" manual. The 16 page guide has been specially produced for use in schools with Citizen's entry level computer printer, the Citizen 120D, which costs £229 (plus VAT) including interface. In addition, Citizen has produced a classroom utilities software disk, primed with a variety of standard classroom worksheets, which accompanies the manual.

More than 50% of county councils, district councils and educational establishments

now use the Citizen 120D as their standard computer printer.

Robin Marriott, Manager of Citizen's European marketing, makes the point: "The education market is very important to Citizen, not only commercially but socially as well. We recognise that there are an awful lot of schools with little experience of computer technology and the easy to read "Getting Started" manual and utilities disk has been produced specifically to help teachers and children make the most of all the features of the 120D."

In addition, the teachers' utilities disk will produce standard work sheets, word-search, mathematical tables and print out lined or dotted paper.

New Printer Buffer

Frontier Software has announced the release of the 'MicroStuffer' printer buffer for Centronics printers.

Manufactured by Supra Corporation of the USA, the 'MicroStuffer' operates in much the same way as a normal printer buffer except that it is a separate hardware device which does not take valuable memory from the host computer. The 'MicroStuffer' will operate with any

computer already attached to a Centronics printer. The 'MicroStuffer' is simply connected between the computer and printer and thereafter automatically buffers any data sent to the printer, freeing up the computer for other work.

The 'MicroStuffer' includes a self test which checks its internal 64K of RAM when it is switched on and a Repeat button which allows the contents of the buffer to be printed more than once — ideal for mail shots.

'MicroStuffer' costs £49.95 inc VAT. Contact Frontier Software on (0423) 67140.



New Online Home Shopping

Comp-U-Card the UK home shopping service, is announcing a new, online facility for members who own home computers or Prestel sets. From 1 May, subscribers can be able to dial-up the Comp-U-Store OnLine service at local call telephone rates throughout the UK.

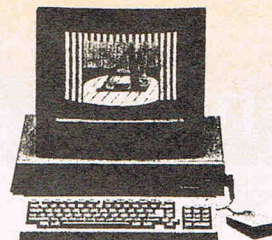
The service, available through the public switched telephone network, is part of a £1 million investment in new computing and communication facilities. As a further incentive, new members are being offered a 3 month free trial.

The OnLine service has two separate presentation methods to suit different user requirements. For those with services such as Prestel, Micronet etc the system provides a viewdata format (a

paging system in colour, using hash as a command terminator). Alternatively, for home computer users preferring to use the scrolling capability of their equipment, an ASCII service (a monochrome scrolling system using return as the command terminator) is provided.

John Slater, general manager of Comp-U-Card United Kingdom, says: "This additional service now offers our membership even faster more direct access to our database of over 20,000 top name products, all guaranteed to be of lowest available prices. A feature of the Comp-U-Store OnLine service is the ability of the member to browse through our database at any time to suit his or her convenience. Purchase instructions can be input with payment confirmed immediately by credit card. A subscriber in John-O-Groats can use the new system as economically as someone in our home town of Windsor".





FOR ALL YOUR COMPUTER REQUIREMENTS

COMMODORE AMIGA 2000 SERIES

Amiga A2000 C.P.U.	£1095.00
Amiga A1081 Colour Monitor	£349.00
Amiga A2010 Internal 3.5in Drive	£199.00
Amiga A2052 2mg Ram Expansion	£399.00
Amiga A22860 AT Bridge Board + 5¼in Drive	£699.00
Amiga A2058 8mg Ram Expansion	P.O.A.
Amiga A2090 Hard Disk & Controller	£599.00
Amiga A2092 PC 20mg M.D.D.	£599.00

★ Complete range of software & accessories

COMMODORE AMIGA 500 SERIES

Amiga A500 C.P.U.	£499.00
Amiga A1081 Colour Monitor	£349.00
Amiga A1010 External Disk Drive	£249.00
Amiga A501 512K Ram Expansion	£99.00
Amiga A521 TV Modulator	£21.73

★ Complete range of software & Accessories

COMMODORE P.C. SERIES

Commodore PC10 CPU/Keyboard/Monitor	£997.00
Commodore PC20 CPU/Keyboard/Monitor	£1397.00
Commodore PC40/20 CPU/Keyboard/Monitor	£2247.00
Commodore PC40/40 CPU/Keyboard/Monitor	£2797.00

COMMODORE

Commodore 128D CPU/5¼in Disk Drive	£390.00
Commodore 1901 Colour Monitor	£239.00
Commodore MPS100 Dot Matrix Printer	£215.00
Commodore 1541C Disk Drive	£164.00

Commodore 64C + Cassette Recorder
+ Mouse + Six Games

£699.00
+ VAT

PSION ORGANISER

PSION Organiser II CM	£86.00
PSION Organiser II XP	£120.00
PSION Organiser 128K Data Pack	£147.00
PSION Organiser 64K Data Pack	£69.00
PSION Organiser 16K Data Pack	£30.00
PSION Organiser 8K Data Pack	£17.00
PSION Organiser RS232 Link	£41.00
PSION Organiser Formatter	£39.00

★ All Organiser software & accessories in stock.

AMSTRAD PC1512 SERIES

Amstrad PC1512 Single Drive Mono System	£435.00
Amstrad PC1512 Single Drive Colour System	£599.00
Amstrad PC1512 Dual Drive Mono System	£542.00
Amstrad PC1512 Dual Drive Colour System	£699.00
Amstrad PC1512 20mg Mono System	£860.00
Amstrad PC1512 20mg Colour System	£1035.00
Amstrad 8512 Word Processor	£470.00
Amstrad 8256 Word Processor	£373.00
Amstrad DMP4000 Printer	£349.00
Amstrad DMP3000 Printer	£169.00

★ Complete Range of software & accessories

Amstrad PC1512 Dual Drive Mono
+ DMP3000 + Wordstar + Super Calc

£164.00
+ VAT

ATARI

Atari 1040STF 1mg Computer & Monitor	£565.00
Atari 520ST ½mg Computer	£210.00
Atari 520STF ½mg Computer & Drive	£322.00
Atari SF314 1mg Disk Drive	£173.00
Atari SF354 ½mg Disk Drive	£129.00
Atari SM125 B/W Monitor	£129.00
Atari SC1224 Colour Monitor	£346.00
Atari SH204 Hard Drive 20mg	£599.00

★ Complete range of software & accessories

PRINTERS

Juki 6100 Daisywheel 18CPS	£259.00
Micro P MP40 Daisywheel 40CPS	£349.00
Micro P MP26 Daisywheel 26CPS	£259.00
Micro P MP165 Dot Matrix NLQ 165CPS	£173.00
Citizen LSP 10 Dot Matrix	£155.00
Star NL10 Dot Matrix	£207.00
Epson LX86 Dot Matrix	£207.00
Canon PJ1080 Colour Printer	£390.00
Canon PW1080 Dot Matrix	£230.00
Q.M.S. Lazer Printer	£1560.00
Zerox Colour Printer Ink Jet	£1300.00
Panasonic KXP1081 Dot Matrix Printer	£155.00

WE STOCK COMPLETE RANGE OF SOFTWARE ACCESSORIES FLOPPY DISCS ■ PRINTER PAPER ■ STORAGE BOXES ■ CABLES ■ INTERFACES RIBBONS ETC.

Trade, Export, Educational enquiries welcome. All prices are excluding VAT

G&B Computer
Electronics

13 Tottenham Court Road
London W1P 9DP
Tel: 01-636 9154

G&B Computer
Electronics

At Galaxy
230 Tottenham Court Road
London W1P 9AD
Tel: 01-580 3702

G&B Computer
Electronics

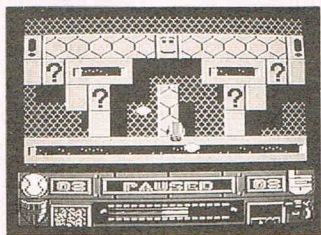
At Budget Sound Systems
242 Tottenham Court Road
London W1P 9AD
Tel: 01-636 6500

Gremlin on the Re-bound

Bbbboulder is bbbback! The tennis ball that doesn't play tennis is returning to the games scene — not to brandish a racquet but to star in his very own sequel.

Imaging a 3D world of colourful hexagonal slabs, collapsible floors, high speed bouncing and superb sound punctuated with impenetrable walls, mystery bonuses and super-intelligent waves of aliens who hunt in fleets.

Bounder, as you'll remember from the first program to feature him, is a highly intelligent tennis ball. With your help he must hurtle through 18 levels of enemy infested scrolling platforms in an attempt to reach the Master Alien. Many obstacles have to be overcome along the way — fleet aliens of ever increasing intelligence must be shot



and war must be waged on the sentinel who waits at the end of each level. Bounder's pressure must be monitored as if it is ignored, it will cause him to deflate. On the other hand, re-pressurising Bounder too highly will result in a burst ball!

Self-protection comes in the form of designer armour plating and this along with the all important fire power can be swapped or bought at specialist shops, dotted throughout the course of the game.

Simply continuing to exist in the face of all this danger is an uphill task. In Re-Bounder there are energy orbs, smart bombs, flashing bricks, vicious aliens and doubtful surfaces. Nothing is what it seems but every question mark must be explored and every alien fought to the death.

Gremlin tells us Re-Bounder will be as fiendishly addictive as its predecessor. Bbbbrilliant, we bbbbelieve!

N.n.nineteen "19" N.n.nineteen

"19" — the No. 1 hit for Paul Hardcastle is to be used as a theme for Cascade's new computer game.

The game is to break new ground in that it follows closely the theme of a successful record' and secondly, the game will combine two games into one.

The player takes the role of the 19 year old draftee — he is given the choice "Will you fight the war or the draft?" If you decide to fight the war the game will proceed with an arcade type action game, if you decide to fight the draft the game will change into a text/graphic adventure with you joining the Peace Corps and campaigning against the war. However, if you make a mistake the game automatically switches to you being drafted immediately to Vietnam. The final sequence will not only provide a 'high score' table but a summary of performance.

The graphics throughout are very detailed and the soundtrack of the game is by Roy Hubbard and includes a coded version of the single.

Once again Cascade has shown it is not frightened of slightly controversial issues in order to produce originality. They have also managed they tell us to achieve an action adventure game which does not glorify conflict. If the excitement of ACE and the uniqueness of Sky Runner appealed to you then "19" will be a winner.

GAC's Double Gold

GAC has launched a new label to complement the Gold Medallion label, under which the best GAC's adventures are released.

Double Gold will feature TWO Gold Medallion adventures for the price of one. Double Gold adventures are expected to sell at £7.95. The first releases are due soon.

'Watch Out' — It's a new RPS Promotion

Never miss that important appointment again with the new RPS designer wrist watch — stylish Swiss-made quartz watch — available to purchasers of RPS High Focus disks.

Customers purchasing ten boxes of High Focus 3½in,

5¼in or 8in diskettes will receive either a ladies or gentlemen's watch — available in grey or white — free of charge. The watch — the latest design for the fashion conscious — is also water proof to three atmospheres.

In addition to the watch, customers are guaranteed a unique high quality, isotropic coated diskette.

Contact: RPS, High Street, Houghton Regis, Beds. LU5 5QL. Tel: 0582 867222.

The Tube — Quicksilva's first major release of the year

The latest — and they say most exciting — game from Argus is 'The Tube'. Due to be released on the Commodore 64, priced at £8.95 on cassette, and £12.95 on CBM disk.

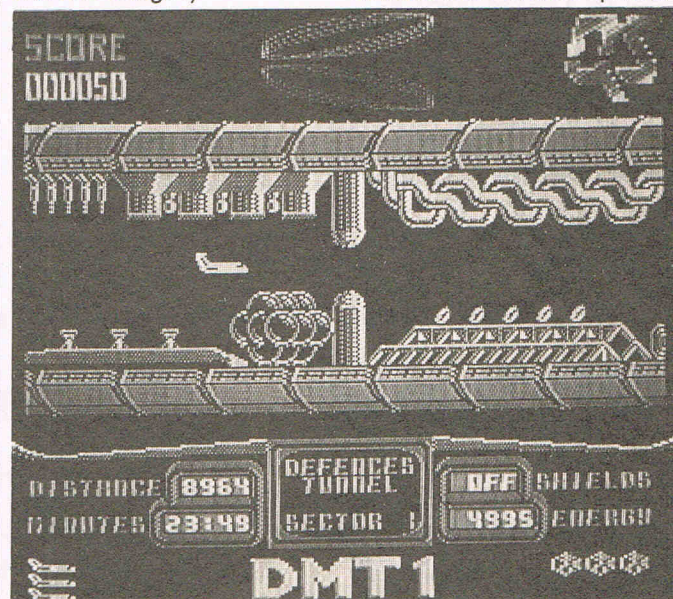
Programmed by Cannon Designs, based in Scotland, this game has many new features which have been incorporated in an innovative way — both the Commodore version is said to have pushed the hardware to its limits — 'The Tube' is almost the ultimate in machine capability. 'It is' they say sure to 'knock everyone's socks off!'. (Isn't that like Amiga?)

The music for all versions was written by David Whitaker who received wide acclaim for his work on Glider Rider. All versions have a catchy main tune, as well as around 15 separate sound effects.

Features

A control panel remains on the screen at all times, giving such information as the Time, the Distance, the Energy, and how many Shields you have.

The Commodore version has had the top and bottom borders removed — and there are some fascinating graphics in their place — fascinating because of the way they move. You will see two 'flattened circles', when the game is running, they move in and out of themselves constantly, the result is mesmerising! Even the "QS" symbol in the top right hand corner is made up of more than 40 hard sprites.



THE ADVANCED

Ian Waugh drawing lessons from an upgraded graphics package from Rainbird

Another art program you cry! No, it's another two because the Advance OCP (Oxford Computer Publishing) Art Studio package also contains the standard Art Studio disc plus instructions. The Art Studio was released last year. It was pretty good but not quite mega. The AAS has bigger and better features — and more of them. We'll concentrate on the AAS because that's really what you'll be forking out your money for.

You can use it with a joystick, a mouse, a Koalapad or from the keyboard. If your joystick has a hair trigger the first thing you'll do is slow down the speed (Misc on the Menu line) — a nice option.

The top three lines of the screen hold the menu choices which are activated by moving an arrow onto them and 'clicking' or pressing the fire button on the joystick. This activates a series of pull down menus — very state-of-the-art. If you use this system for any length of time it'll make you lazy — there's just no other way.

Upon booting the disk the program gives you a page number, a line number and a word number and asks you to enter that word from the manual (thumb nose at priates who haven't a photocopier) but the routine becomes a bit of a nuisance after a while especially as you don't need the manual after a first read through.

Let's work our way through the menu options. First is Print and this gave me my first problem — well, my only problem actually. I could easily produce a screen dump from the Art Studio but not from the Advanced Art Studio. I use an Epson printer and one of those awfully clever interface things which make the computer think it is connected to an MPS801. Actually, it wasn't so clever because it didn't work but I suspect this is the fault of the interface and not the program. After several tries and re-bootings — and word searching through the manual I did what all good reviewers do — I gave up. I missed out on 48 sizes of

screen dump so I will try again — or look for another interface. The AAS has a resolution of 160 x 200 pixels and the X and Y co-ordinates are shown in the top right of the menu bar. This helps enormously when trying to align corners and edges although a grid would have been a nice addition, too.

Onto colours. The screen is divided into cells each one containing 4 x 8 pixels and each cell can contain four different colours.

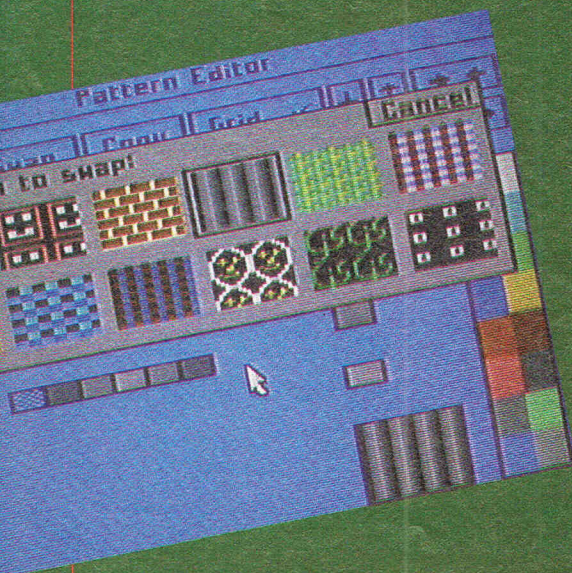
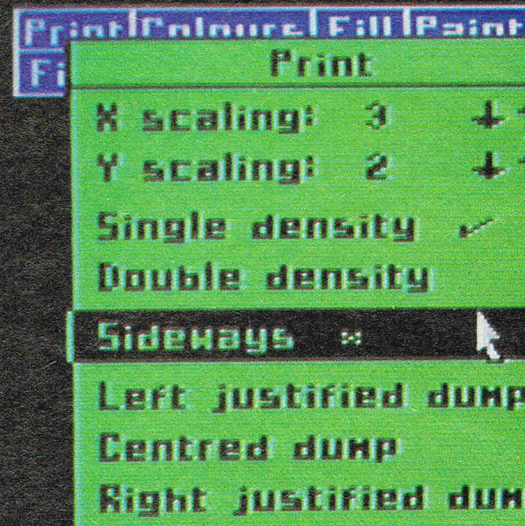
Ink and Paper colours are selected from the Colour menu and you can set up two lists which determine how the colours behave. The Exclusion list, as its name suggest, excludes colours from operations. For example, if blue was on the exclusion list, drawing with a brush containing red, green and blue would result in only the red and green colours appearing. Yes, you can draw with a multi-colour brush.

The Priority list gives one colour a priority over another and can be used to draw a foreground figure then fill in a background later — without going over the edges. The Colour menu can be called from most of the other menus, too, for convenience.

There are three kinds of fill — solid, pattern and wash — and you can edit the patterns. The Pattern Editor is very comprehensive. You can flip, copy, swap and scroll patterns and you can save and load them to disc or cassette.

Paint is wher you plaster your colours on the screen. You have a choice of 16 pens, 8 spray guns and 12 brushes and you can edit the patterns, too, of course.

The Text menu lets you add text to the screen. You can select bold or italic text, alter the spacing between characters and orientate the text left to right, right to left, downwards or upwards. You also alter their size with X and Y scaling options.



OCP ART STUDIO

You can define your own fonts, of course — you've come to expect nothing less with this package — and the Font Editor is as comprehensive as the Pattern Editor. A Copy ROM function copies the 64's character set into the Editor for editing. It's a breeze to use.

File handling is comprehensive — are you starting to get the picture? You can load, save, rename and delete files and you can clean up (validate), clear and format the disc. Selection is with the joystick and you just point to the file you want to access then select the option. You can reset the drive and alter the device number, too.

The file handling system catalogues the drive and shows the files that are associated with the operation it has been called from, eg patterns, fonts, pictures, etc. Although the files from the standard Art Studio are different, the AAS will load them, too. You can also merge one picture by loading it on top of the one in memory and here the priority lists are used to resolve conflicts.

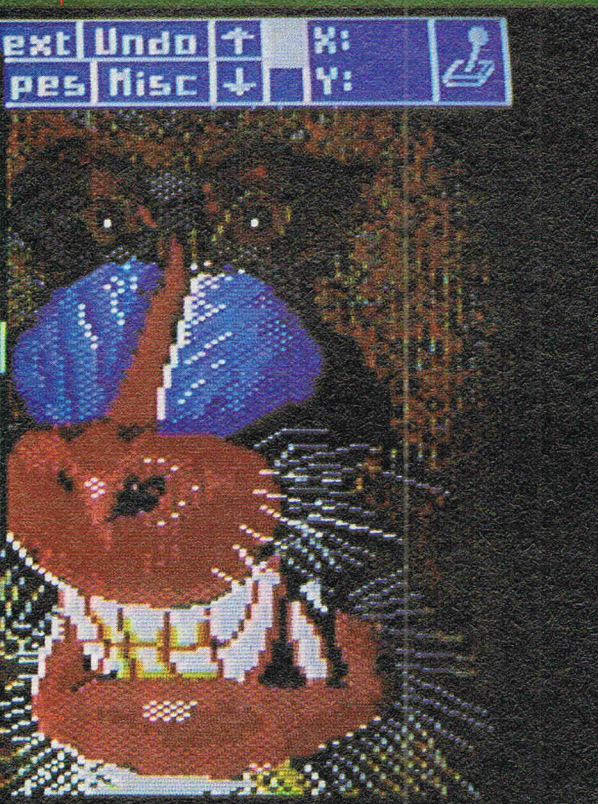
Windows are an important part of any drawing program and the Window menu lets you define a window, select the whole screen as a window or use last one defined. Having done that you can clear it, re-scale it to any size, flip it, rotate and cut and paste it. A multiple function lets you make multiple copies of a window easily.

You can save windows too, and the disk contains a collection of rather super windows which turns out to be a build-it-yourself castle kit, complete with moat. I had lots of fun with this!

The Magnify menu is essential for any detailed work, in fact this is where all the hard work is usually done. You can select x2, x4 and x8 magnification and superimpose a grid on the screen. Once in magnify mode you can select the other degrees of magnification and scroll around the screen. Pixels can be cleared, plotted (set to a specific colour) or cycled where they are given one of the four colours currently allocated to their cell one at a time.

The Shapes menu pulls down points, lines, continuous lines, rectangles, triangles, circles and rays. All fairly straightforward and easy to use.

The final menu is Miscellaneous which brings together options to view the whole screen, clear it, change one colour to another, alter mouse speed, save



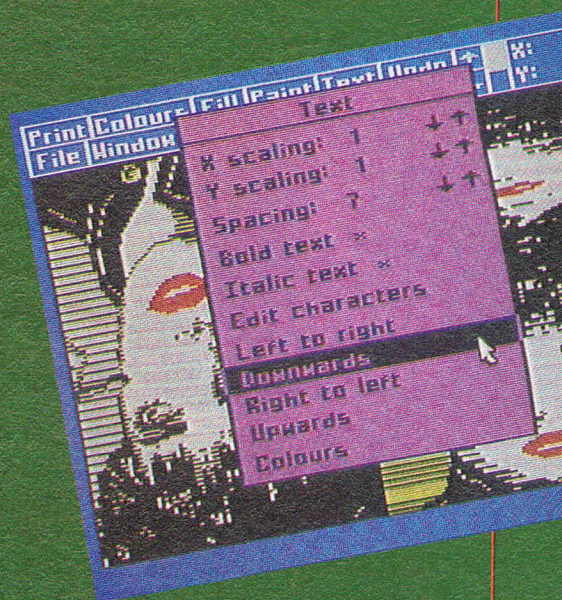
program setup information such as scaling factors, colours, Priority and Exclusions lists, etc. the program will automatically load these the next time you boot it.

In case you don't have an MPS801 printer — or an interface that works — you can run a printer driver routine which, again, the program will load automatically when booted. The disk also contains a BASIC program which lets you load and display a series of pictures.

Most options have an Undo function which should be compulsory in all drawing programs. How many times I've spoilt a drawing with a leaky fill I don't know. Not with AAS, though.

The manual is excellent with screen shots of all the menus. The standard Art Studio manual is excellent, too, and includes a 'worked example' which probably wasn't necessary but it's fun to work through this sort of thing anyway. The disk includes a brilliant picture of a baboon which must have kept the artist in the pixel editor for ages.

That's the trouble with art programs — you need some artistic talent to start with and although none I've seen — so far — give you that, the Advanced Art Studio does let you make the most of what you have. If you don't buy the Art Studio then buy this, it's one of the best. At £24.95 it's a lot cheaper than art lessons, too.



Could this be the greatest collection of American games ever assembled in one pack?

EDDY EPICS



CASSETTE

£9.99

DISK

£14.99

CBM 64/
128

IMPOSSIBLE MISSION



32 Different Rooms
90 Different Robots
Superb Animation

The very best in espionage action!

BREAKDANCE



Perform the Moon Walk, Head Spin, Back Spin and more. Over 100 different steps, complete with music.

SUMMER GAMES



8 different sports events, compete against an opponent or the computer. Superb animation.

PITSTOP II



Thrilling head to head motor racing. 6 different circuits, each with on screen map and pit facilities!

It's certainly the greatest value for money!

Mega-help by Martech?

Martech are in the final stages of developing Mega-Apocalypse, a game they claim will be the 'shoot 'em up' of the year — but they have hit a major problem.

The game is so fast, furious and addictive that it has literally 'blown the mind' of its poor, unfortunate programmer, Simon Nicol, who has been working on the game since finishing Crazy Comets in 1985.

The game, initially for the Commodore only, is a one or two player, incredibly fast blast 'em up, zap 'em down and shoot everything out of sight and it incorporates several features never been seen (or heard) on a Commodore 64/28.

The graphics are being designed by Bob Stevenson whose graphics for The Pawn were highly acclaimed and Rob Hubbard has promised his most outstanding sound track and sound effects to date.

It's all too much for Simon, who said: 'Aarargghagh — its too mega!' and then collapsed.

Martech therefore, urgently need highly skilled shoot 'em up playtesters to help push the game to its limits. If you would like to help and be invited to a secret location (along with various well-known shoot 'em up freaks) and risk permanent brain damage, send a letter to the following address:

Mega-Apocalypse, Martech, Martech House, Bay Terrace, Pevensey Bay, East Sussex BN24 6EE, marking your envelope with CCI — State within the letter your genuine hi-score for at least three of these classic shoot 'em up hits of the past:

1. Crazy Comets (Martech)
2. Uridium (Hewson)
3. Delta (Thalamus)
4. Dropzone (US Gold)

All those invited will have their numbers immortalised forever in the 'Galactic Hall of Fame.'

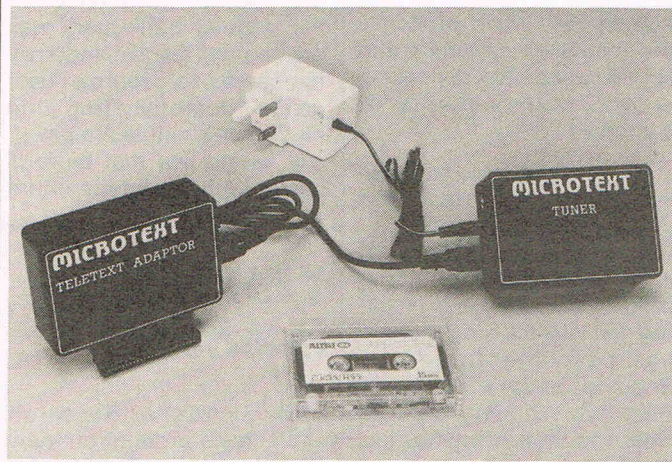
Teletext on the 64

A Video recorder is no longer required to receive Teletext such as Ceefax or Oracle on the Commodore 64/128. The Microtext Tuner is now available for use in the UK. Designed specially for use with the Microtext Teletext Adaptor, it uses an advanced tuning system, and it tunes itself in. The system allows Teletext pages to be saved to disk/cassette or printed out and advanced users can

access Teletext from their own programs. The Teletext services provide hundreds of pages of up to the minute information free.

Existing Microtext users can purchase the Tuner as an add-on — Price £48.85. The complete system consists of a Teletext Adaptor, Tuner, Power supply, software on cassette (easily transferred to disk), connecting lead and a manual and costs £114.80 inc p/p (Plus £8.50 for 128D version).

Contact: Microtext, 7 Birdlip Close, Horndean, Hampshire. Tel: 0705-595694.



Can VDU's Damage Your Health?

An enormous amount of applied research has and still is being done throughout the world on possible health risks arising from the use of VDUs. One known fact is that VDUs give off low level radiation in various forms and this can manifest itself in operator eye strain, blurred vision, headaches, heightened sensitivity to stress, general fatigue and loss of concentration.

Awareness of potential health hazards is steadily growing amongst employers and workers alike, as well as those using VDUs at home for business or enjoyment (especially in the case of computer games).

VDUs can be screened against potentially harmful emissions and one such new product recently introduced from France is the Screenshield from Kareware.

Screenshield is portable and can be installed in seconds. In appearance it resembles a high-tech roller blind which is discreetly attached to the VDU casing above the screen. Screenshield has a specially designed diagonal filter system to effectively combat glare and screen reflection whilst maintaining maximum visibility.

Screenshield's metallised surface is earthed to drain away electrostatic charges which are believed to cause increased sensitivity to stress through the disturbance of the natural ion balance in the atmosphere. This facility also protects microchipequipment which can be enjoyed by the build up of static in a computer environment.

Screenshield is available in a range of standard sizes compatible with almost all micro computers or VDU units and prices range from £55 (exc VAT) to £74.50 (exc VAT) depending on model. Contact Kareware (KAI Ltd), Unit 1, 7 Cubitt Street, London WC1. Tel: 01-608 0082.

Armageddon is Coming!

Don't be too scared, it's not entirely the end of the world — yet! The Armageddon Man from Martech is a new game announced for a 64 release in August. The Armageddon program is no simple shoot 'em up, Martech tells us, but combines the entertainment of computer action with tactics and mental energies, more in keeping with a game of chess. The Armageddon Man will cost £12.95 on cassette, £14.95 for disk.

The year is 2032 AD. The world's nuclear arsenal has greatly expanded over the last thirty years. There are now 16 nuclear superpower nations, each with the capacity to trigger the final destruction of mankind. Armageddon.

As The Armageddon Man you must reduce the chances of war between enemy countries by maintaining an equal balance of power and resources. If the unthinkable does ever happen, you will have to deploy laser defence satellites to reduce civilian casualties to a minimum. Your relationship with the leader of each of the 16 superpowers is also of crucial importance.

The Armageddon Man features icon-control, with all activity governed by the selection of the five main icons. The package also comes complete with a colour vinyl map of the world (2032 AD edition) and vinyl re-usable flags of each nation to assist you in your vital task of monitoring any changes in the alliances between the superpowers.

Frankenstein

CRL's follow-up to Dracula, Frankenstein has been awarded a 15 Certificate by The British Board of Film Classification.

The decision was based on the combination of horrific and atmospheric text and gruesome, digitised graphics. It was felt that children under 15 may find it disturbing.

CRL say they found it impossible to capture the true essence of the original Mary Shelley novel without the inclusion of these elements.

B-24 Combat Simulator

U.S. Gold will be bringing out a flight/combat simulator entitled B-24 for the Commodore 64/128.

You command the lead B-24 Liberator, which will determine the course of action for an entire formation of 40 B-24's. There are single mission and 19 mission scenarios with rules covering the flying of the aircraft, mechanical/engineer failures, bombing accuracy, flak, enemy fighters, fuel usage, bailing out and falling out of formation.

One sobering fact U.S. Gold tells us is that the 60 aircraft that the 460th Bomb Group historically started with, only 4 survived after the first fifty missions.

Coming Soon From S.S.I.

U.S. Gold will be shortly releasing several new S.S.I. titles including their first conversion to the Amiga.

War Game Construction Set is due to be released for the Commodore 64/128.

Kampfgruppe which has done well on the Commodore 64, will soon be available for the Commodore Amiga, following later will be Amiga versions of Roadwar 2000, Phantasie and the new fantasy role-playing adventure Phantasie III — The Wrath of Nikademus, as well as the Amiga version, Phantasie III will also be available for the Commodore 64/128.

The sequel to the U.S. Civil War simulation Gettysburg, Rebel Charge at Chickamauga will be simultaneously released on the 64/128.

War in the South Pacific, as the titles suggest, simulates 3 historic scenarios from World War II (1942-43) and will be available for the Commodore 64/128.

64 Defender

When CCI broke the news about Defender of the Crown on the Amiga, the reaction for many was envy of disgust — that it was only for the privileged Amiga owners. Now Mirrorsoft have taken pity on the 64 world and released a Defender of the Crown just for Commodore's worldwide 7 year old leader.

The creators of Cinemaware, have achieved what some said was the impossible and produced a version for the humble 64 which stretches the machine's graphics and sound capabilities to the limit — and there's plenty of gameplay too!

If, however, you've been living in a cave, here's an idea of what you can expect:

Defender of the Crown is set in the age of chivalry — a time of lusty wenches and black-hearted villains. King Richard has been murdered and England thrown into civil war. Amidst the ringing clash of steel and thundering hooves, the Saxon knights have chosen you to lead their battle against the hated Normans. To restore Merrie England to its former glory, your skills both as a swordsman and as a military leader will be severely tested — but if you succeed, you'll win the crown of England and the love of many a beautiful damsel.

Defender's features include: Heart-stopping action as you rescue your fair lady from a foul Norman dungeon Majestic tournaments where you must joust for fame, fortune, and land Heroic battles led by your castle-shattering giant catapult. It's more like being in a movie than playing a computer game — except that you have to buy your own popcorn!

£14.95 on disk only for Commodore 64/128.

Contact: Mirrorsoft, 01-377 4837.

Downunder Report

Though there is a campaign to sell the Commodore PC5 at A\$1495.00 and its bigger brothers, the PC10 and PC20, there was no company representation at the PC Show! Last yer, Commodore set up a huge display featuring the sound and graphics of the Amiga. The imposing stand was supported by a separate display arranged by a local Commodore dealer. However, this year the only mention of the popular trade mark was on the small stand manned by members of a suburban user group demonstrating the charms of a single Amiga.

It would see that there is some doubt about the future

of the Commodore 64 and the 128. They are still readily available in stores, but there is very little promotion these days. The Vic 20 is long gone and the Plus/4 has been cleared out at A\$99.00. Though the C64 Family Pack is commonly marked at A\$399.00 it has been seen at clearance sales priced at A\$199.00, and hundreds were sold very quickly at that price.

With no Commodore representation amongst 200 stands at the annual Personal Computer Show. All existing machines being offered at reduced prices. No physical sign of Amiga 500 and 2000. Supporters of the most popular trade mark must be forgiven for showing concern for the future of Commodore in Australia.

YER New Interface

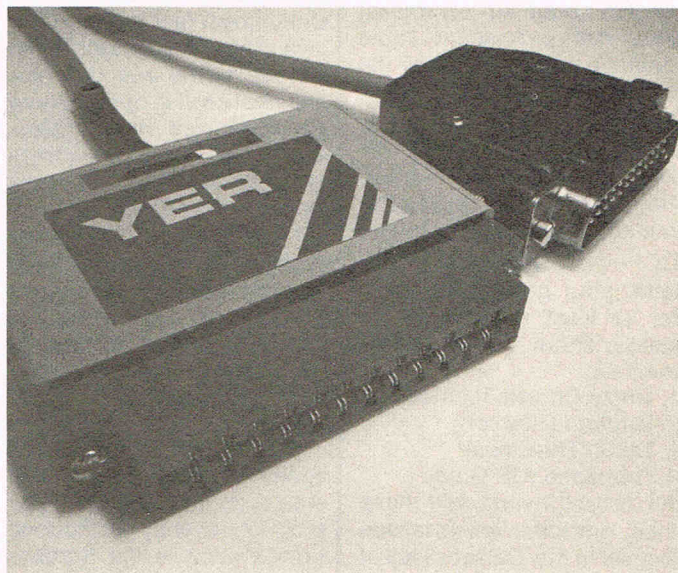
York Electronic Research (YER) have brought out new RS232 interface cartridge for the C64. It is supplied with a cable, 4000 word manual and a disk or tape of utility software including a terminal emulator. Price £29.99 inclusive VAT.

New 64 Assembler

YER is also offering a new editor/assembler which eliminates the usual frustrations of

the edit — assemble — test cycle. It is available on tape or disk at £12.99 and supports both tape and disk filing. In resident mode code may be repeatedly edited, assembled and executed without waiting for file accesses. This is a particular bonus for cassette users. Source files are word processor compatible and may be chained together enabling very large programs to be assembled — up to 38k in one go.

Contact: York Electronic Research, The Fishergate Centre, York. Tel: (0904) 610722.



TRILOGIC

DO IT AGAIN!



LIMITED PERIOD ONLY! ACT NOW!

Now ONLY **£29.99** (inc VAT) **POST FREE**

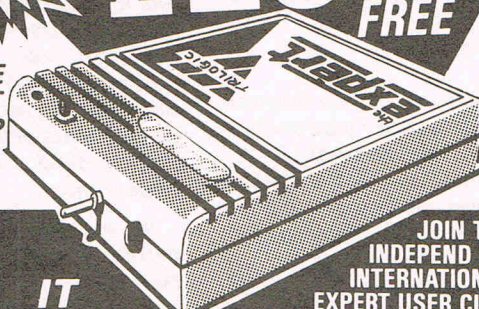
SPECIAL ANNIVERSARY CELEBRATION PRICE!!!

ONLY AVAILABLE FROM US AT THIS PRICE

MUCH MORE THAN JUST A BACK-UP UTILITY

FREE CATALOGUE SEND 18p STAMP

the **expert** WITH ESM
CAN IT DO ALL THIS?



JOIN THE INDEPENDENT INTERNATIONAL EXPERT USER CLUB.

IT ALSO...

- SAVES PROGRAMS IN ONE FILE - (excl multipart ones)
- COMPACTS PROGRAMS used by leading software houses.
- RELOADS, DECOMPACTS & RUNS ANY PROGRAM WITHIN 35 secs.
- THE EXPERT IS NOT NEEDED FOR RELOADING.
- COMPATIBLE WITH THE PHANTOM, & ALL CBM64/128 DISK DRIVES.

1 PROGRAM PARALYSER Stops even the most heavily protected programs and defeats All "anti-freeze" techniques.

2 BACK-UP GENERATOR TAPE - DISK, DISK - TAPE, DISK - DISK, TAPE - TAPE Transfers memory resident programs whether loaded from disk or tape.

3 SPRITE EXTRACTOR Displays the sprites for you to edit, and then save, or RESTART the game using your customised ones. You can view the animation too.

4 SPRITE IMMORTALISER This feature disables the sprite collision detection - prolongs active sprites...

5 HIRES SCREEN GRABBER Save a HIRES screen and then alter it using one of several utilities widely available.

6 CHEAT MACHINE The easy way to enter cheats and "pokes". Gain extra lives, or infinite energy etc etc.

7 CODE INTERROGATOR A truly professional machine-code monitor, operating over all 64K Ram, with disassemble, compare, transfer, fill, assemble, hunt, search, modify, jump, number conversion commands etc. PLUS, B command lists BASIC & R restarts a program.

8 THE ONLY PROGRAMMABLE CARTRIDGE FOR THE 64 & 128 (64 MODE) You'll NEVER need to return the cartridge for upgrading. - simply send for the latest software - only £2.00 exchange disk or tape. We calculate that you could buy an EXPERT and several upgrades for what it will cost you to upgrade rival products.

• FAST MAIL ORDER SERVICE • PROMPT DESPATCH
• ALL PRICES FULLY INCLUSIVE PLUS 10 DAY MONEY BACK GUARANTEE ON ALL BACK-UP DEVICES.
ORDERING: WRITE OR PHONE/
PAYMENT BY CASH, CHEQUES PAYABLE TO TRILOGIC/
BY POSTAL ORDER OR ACCESS • ADD £1 EXTRA FOR EXPORT ORDERS. PAYMENT IN STERLING ONLY PLEASE

10 DAY MONEY BACK GUARANTEE!!!



Tel (0274) 684289
CALLERS 329 TONG STREET BRADFORD BD4 9QY

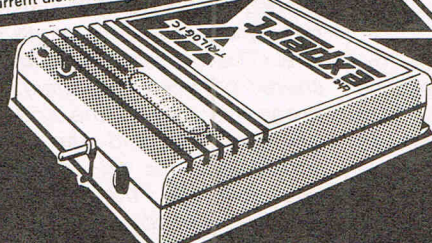
- RGB INTERFACES... 128 TO FERGUSON 128 TO FIDELITY 128 TO PHILIPS 128 TO HITACHI 128 TO SONY
- MONITOR LEADS... 64 TO FERGUSON 64 TO PHILIPS 64 TO HITACHI 64 TO FIDELITY 64 TO SONY

- NEW PRODUCTS... MAINS CONTROLLERS RELAY OUTPUT UNIT CBM 64 POWER UNIT
- TAPE BACK-UP UNITS DCL1 DCL4 DCL4A

EXPRESS DELIVERY ADD £1.95

NEW THE EXPERT UTILITY DISK No.1
• Specific multi-part back-up utilities.
• Additional operating systems.
• Fast file copier etc. etc.
• Monitor with print command. ONLY £5.95

UPGRADES
Existing EXPERTers can send for the latest V2.10 operating software as detailed in this ad for £3.50 handling charge, or £2.00 + your current disk/tape (must be in good condition).



EXCITING NEW HITECH PRODUCTS FOR YOUR C64 / 128 JUST ANNOUNCED.

- NEW!** SOUND SPLITTER, STEREO CONVERTER WITH REVERB - HEAR IT TO BELIEVE IT...
- NEW!** THE PHANTOM - PARALLEL DISK DRIVE ADAPTOR - LOAD / SAVE UP TO 40 TIMES FASTER
- NEW!** EPROM PROGRAMMER - FOR 2716, 2732, 2764, 27128, 27256 EPROMS
- NEW!** DUAL SWITCHABLE ROM CARTRIDGE BOARDS - MAKE YOUR OWN CARTRIDGES
- NEW!** 256K SOFTWARE SWITCHABLE EPROM BOARD, TAKES 8 EPROMS.
- NEW!** HEAVY DUTY POWER UNITS - MADE BY TRILOGIC, 2AMP OUTPUTS.
- NEW!** POWER UNITS WITH MAINS SUPPRESSORS FITTED - HEAVY DUTY 2AMP OUTPUT.

THE EXPERT ORDER

Please send me Expert ESM SPECIFY DISK If you do not have a disk drive
OR TAPE please state "Tape version required."

Name _____ I Attach P.Order/cheque £29.99

Address _____ Access No. _____

Post off to ► Trilogic Dept CCI
29 HOLMELANE BRADFORD BD4 0QA

This month your letters are answered by Rae West. Rae is the author of three large reference books on Commodore computers; the latest is Programming the Commodore 64, following Programming

the VIC and Programming the PET/CBM. All are published in the UK by Level Ltd. Rae is also published in the USA by Compute! Books.

Dear Rae...

MINI-SHEET. A DEBUGGING EXERCISE

Dear Rae,

'Like Mr Perkin (May CCI) I have spent many hours trying to unravel "Minisheet" (Sept. '86 CCI). Presumably I have made a mistake somewhere. I am sending a tape and a copy of the listing I followed.' Please "sort me out!"

M.J. Lacey, Bromsgrove

Thanks for the tape. As you surmise, there are mistakes in your tape version. Let me explain my findings in the sequence I found them — the method should be interesting to many readers as an entirely typical debugging session, so I'm answering at some length.

1. First, try to run the program. In this case, you'll find that not much happens unless you press C (to clear the spreadsheet), then Y (in response to the program — to confirm you're sure you want to clear everything). Now the empty spreadsheet is drawn on the screen, and we're in business, ready to try keys to see what happens.

2. We look for simple typing errors. Usually these will show up with a Syntax Error or similar message. In your case, line 350 had a > in place of a >; line 450 had W4 instead of W\$ (you missed the shift key); and line 1650 had VAL\$ in place of V\$. All these caused Syntax Errors and were quite easy to find. More tricky was SYS 6552 in place of SYS 65520 in line 1430; the program crashed out of BASIC, which is a sign of machine-language activity, and by Stopping the program just before the relevant point I found this error.

Obviously, other readers typing this, or any other, programs in, will make different mistakes, but the trial-and-error process of correcting them is similar.

3. An important error — not the fault of any reader! — is caused by the listing itself: the printer has been set to output pound symbols (£) rather than hash symbols (#). This doesn't matter too much with, say, the page turning feature, where £ or # can just as easily be used to move through the spreadsheets, preventing the spreadsheets loading, saving, and printing out! So each of these £s MUST be replaced by #.

A similar problem often happens with graphics characters; see below.

4. At this stage we can test the program itself for bugs. I soon found that the F2 command — which computes

values — and which I thought had a bug, in fact worked as the author intended. It evaluated the entire spreadsheet, from A1 through P4, by imitating direct mode commands, by printing lines on the screen and poking return characters into the keyboard buffer. (Because of this use of BASIC, you'll get results like 1E-3 for .001, and so on).

This is a relatively slow process, and explains why, when a formula is entered, the screen simply shows a ?. It simply would take too long to recalculate on each new entry. Given the limitations of the method the programmer has used this is reasonable, but is unusual compared to most spreadsheets, and looks strange at first.

Minisheet does however have a genuine bug in its listing; a semicolon has crept onto the end of line 750, and this should be removed to tidy up the screen appearance.

In a non-commercial program, a certain amount of toleration is likely to be necessary in small ways.

Here, the input is not error-trapped, allowing you to cursor up and down out of the proper position, something which should be prevented. And the option allowing a figure to be borrowed from a different 'page' of the spreadsheet (eg A1#4 takes element A1 from page 4) has limitations — the scanning system doesn't things like A1#4*A2#4. But this sort of thing isn't too serious, provided you're aware of it.

5. If you've followed me so far, your program should be working. We could consider minor improvements to the program, something feasible in BASIC though much harder in machine language.

For example, try modifying lines 1080 and 1090 so that (say) + and - keys allow stepping backwards too, not just forward.

PRINTER ENHANCER

Dear Rae,

'I need help with this program from Nov. '86 CCI. (1) Do I need to enter the wordprocessor program and then feed the Printer Enhancer? (2) I would like instructions for entering the print commands I've marked on the listing.

Khem Dokarry, Ashford, Kent

(1) I don't think you've quite understood how the program works. When you run it, it asks for the name of a file of text, which it then reads through and prints out in an attractive typeface, albeit rather slowly. The file of text could simply be printed directly, using, for example, OPEN 1,1,1,"Name" to tape, then PRINT#1,"Text"; followed by PRINT#1: CLOSE 1. You don't really need a wordprocessor at all.

(2) The graphics were printed on a non-Commodore printer, which can't produce exact equivalent of the screen appearance. They are handwritten versions of reverse on and off, screen clear, and home commands.

TURBO 64. ANOTHER DEBUGGING EXERCISE

Dear Rae,

'Let me congratulate you on an excellent magazine. Now, in October '86 you published a listing for "Turbo-64" in two parts — BASIC and monitor. I found the BASIC program simple enough to type in, and it cuts the loading time by about 2%, but when it came to typing in the monitor I almost took up skydiving. Lines 1000-1160 give 'Syntax error' whenever I hit return. What's wrong?'

Andy Melville, New Zealand

Nothing's wrong. You haven't grasped that the monitor listing is only an explanation of what the BASIC program does. The huge amount of DATA in BASIC is exactly equivalent to the machine-language listing. For example, the first two numbers, 169 and 11, are, in hexadecimal, A9 and 0B. These are interpreted as LDA#0B in machine language, and this is the start of the machine-language listing. You've wasted your time typing in the monitor listing as though it were BASIC.

C16/PLUS 4 DLOAD PROBLEM

Dear Rae,

'The manual states that "DLOAD can be used within a BASIC program to find and RUN another program on disk." I thought, wonderful! I can write a menu program to chain my programs on disk, but alas it doesn't work! The programs are a garbled mess ...'

B.R. Martin, Eastbourne

That's right. This happens with most Commodore computers, because, simply, the computer thinks the new program is the same length as the old one. (The idea is to allow variables to be shared between programs). If the new program's longer, the end of it gets chopped off and the listing gets scrambled. For 64 users, my book 'Programming the Commodore 64 (Revised Edition)' explains why. (0403-710971 for details).

The simplest cure is to pad out your menu program with unused lines until it uses as many blocks on disk as the longest program; this isn't all that satisfactory, as the menu program takes longer to load, and also it may cause some programs to run out of memory, but it's easy. Incidentally, the 128 doesn't have this problem; its variables are stored in a separate bank of 64K from BASIC.

Stop Press! What's so special about The Amiga, The Mac, The Atari St., Windows and Gem?

It's no surprise that nearly all new 16 bit 'state of the art' micros now come with a Mouse and Wimp environment (Windows, Icons, Menus and Pointers) as standard.

With the COMMODORE 64 you already own one of the classic micros and by simply adding the 'AMX Mouse' and 'Stop Press' you can achieve the same ease of use, freedom and versatility of much more sophisticated computers.

The AMX Mouse with Desktop Publishing software – it's what you and your COMMODORE micro have been missing!

WORKS WITH
KEYBOARD
JOYSTICK
& AMX MOUSE!



AMX MOUSE PACKAGE 5 1/4" DISC £69.95

There's not much joy in a joystick and keyboards can be all fingers and thumbs. Acclaimed by the press as 'the best input device', already over 50,000 micro users have adopted an AMX Mouse. The AMX Mouse combined with Stop Press puts you right at the heart of the desktop publishing revolution.

At long last you can produce newspapers, posters, leaflets, notices and handouts in your own school, home or office. We're not talking about amateurish results, but extraordinarily professional work with crisp text and exciting graphics. Available for the Commodore 64, 64c and 128.

STOP PRESS
& CONTROL
(ONLY)
£39.95

MENU DRIVEN PROCESSOR



Provides easy access to all the 'Stop Press' modes. A comprehensive and versatile filing system that makes management a joy! Powerful graphic and full proportional text options enable you to give your documents the professional look with the minimum of effort. Allows windowing, copying, re-scaling, and all the printer options at the touch of a button.



FONT AND PATTERN DESIGNERS



Allow your creativity to really come to the fore. Use the built-in designer to create your own fonts or change any of the 50 fonts supplied. You can also design your own patterns to use with the amazing spray and paint options.



PROCESSOR ACCESSORIES



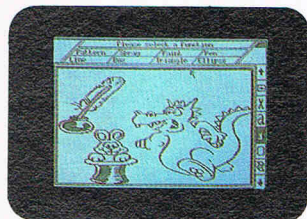
A fast preview facility that displays the full width of the document. Provides an ideal way of viewing the composition of your masterpiece. An innovative 'kwik-klik' window makes changing graphic options unbelievably easy. Allows full page scrolling with one click of the button.



CLIP ART



Over 150K of clip-art is supplied with 'Stop Press' covering a wide variety of subjects including sport, music, transport, cartoons, technology, and a host of miscellaneous items. Alternatively areas of your page can be "cut" to disc, building into your own unique library of clip-art. Cut-outs can be "pasted" into any page, at any position, preventing the need to re-do headers and footers, etc.



FULL PIXEL EDITING



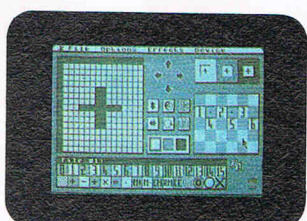
The most advanced pixel editor available on the Commodore 64 is provided with stop press. Any area on the screen can be brought into close-up and altered. Intelligent continual pixel 'set/unset' and real time scroll, while zoomed-in, make this an extremely powerful editing tool.



MOUSE CONTROL SYSTEM + ICON DESIGNER



Write your own mouse driven programs using the powerful basic extensions. The Mouse control system adds over 30 commands to Basic, including Windows, Icons, Menus, Pointers, line drawing, memory load and save. The Icon designer is a sophisticated icon editing program developed entirely using the extra commands provided by the Mouse control system and shows the high quality of program that can be achieved using this system.



This superb product is available now from all good computer dealers or direct by cheque, Access or Visa. All prices include VAT and post and packaging.



FOR INSTANT ACCESS/VISA ORDERS TELEPHONE (0925) 413501/2/3



AMX SOFTWARE

IMAGINATION AT YOUR FINGERTIPS

ADVANCED MEMORY SYSTEMS LTD. 166/170 WILDERSPOOL CAUSEWAY, WARRINGTON, WA4 6QA. TELEX 628672 AMSG. FAX 0925 58039. TUBELINK ON PRESTEL PAGE 2582182 SUPPORTS THE AMX MOUSE AND ALL AMS SOFTWARE

Macintosh is a licenced trade mark of Apple Inc. Atari St. is a trade mark of Atari Inc. Amiga is a trade mark of Commodore Business Machines Inc. Windows is a trade mark of Microsoft Inc. Gem is a trade mark of Digital Research Inc.

ANITA SINCLAIR

Queening The Adventure World



Magnetic Scrolls - Market Leader

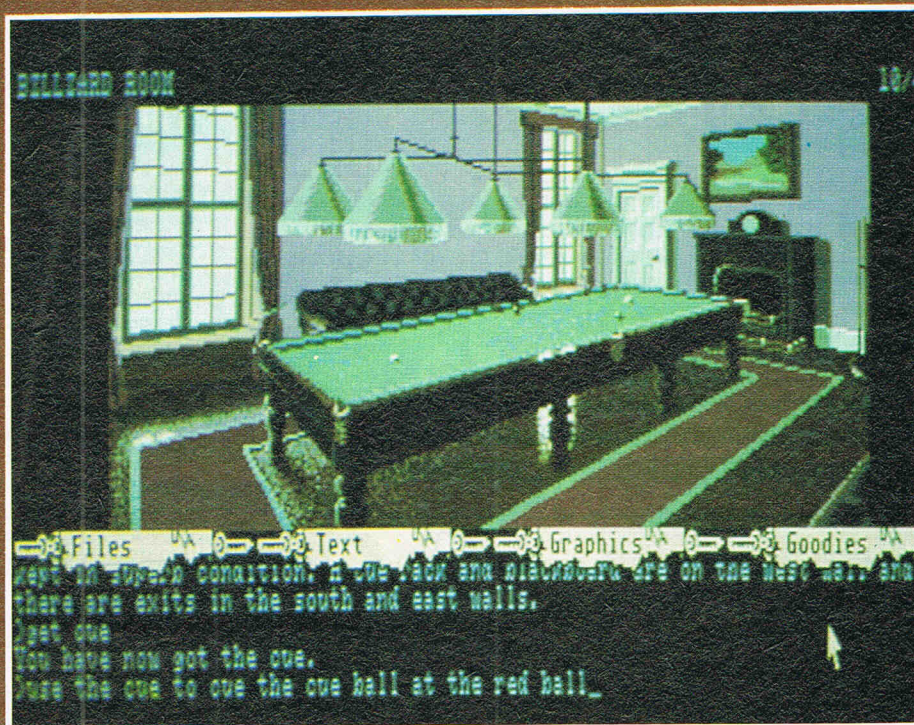
It is sometimes claimed that 90% of computer games players are male. That is probably an underestimate. It is possibly even more of an underestimate to say that of those who *write* computer games 99% are not female. Certainly, the computer world, especially the computer game field, is as masculinely-dominated as football or cricket. Yet in this apparently macho area, there is one woman who is now recognised as a strong international influence. Interestingly that recognition is founded on relatively little foundation. In fact on just two games, only one of which has had time to reach a wide audience. That one computer game, significantly perhaps, is based on chess, a game in which the most powerful figure is feminine — the Queen — an all powerful commanding figure. The game is called *The Pawn* and the woman is Anita Sinclair whose company, Magnetic Scrolls, created it.

The Pawn, like *The Guild of Thieves*, the second game released by Magnetic Scrolls, is not a muscle-flexing, power-dream boys' own shoot 'em up but an adventure game. The adventure game is no less challenging than kill the aliens joystick bashing but requires more the use of the intelligence than of the reflexes. Adventure gaming is puzzle-solving and with games like *The Pawn*

and *Guild of Thieves* is very high level puzzle solving indeed. It is also a part of computer games playing that is gathering popularity, possibly because as the 13 or 14 year olds who were caught up in the first home computer boom at the beginning of the 1980's reach their twenties they want computer entertainment of a more sophisticated kind than updated Pacman or Space Invaders. And they have the disposable income to spend on higher priced products . . .

Adventures are also a field that is reputed to attract a larger female audience than other forms of computer games. It presents the intriguing picture that out there in the prosperous quiet of Commodoreland, thousands of wives and mothers surreptitiously forsake the chores and sidle into the back bedroom where the 64 stands — awaiting the familiar fingers of husbands and sons. They switch on, dip into the complicated question and answer tortuosities of *The Pawn*, forgetting to put the dinner on . . .

But that is not how Anita Sinclair got started in the computer games business. It was in 1980, when she was 17, that she got her first computer. It was UK101. A what? "Well, it was before Sinclair hit the scene." She says. That Sinclair was, of course, the ineffable Sir Clive. As Super Felix would say, "No relation" but with



Bank of Kerovnia

Sir David Muchmore

106 10 BOE

The adventure game is no less challenging than kill the aliens joystick bashing

whom his namesake Anita is reputed to have had a close relationship. It could have been he who recommended her to "Get a list of parts, a 6502 chip, a debugger and a "Ohio Super Board" and put together a computer."

She was at that time already off and running with a business career. She had become co-boss of a glass company in fashionable Hampstead, London. She and a friend imported glass from Europe and the U.S. and supplied "a clientele of night club owners". She had got involved because with a boring secretarial job on the floor above the glass company, she kept coming down and telling the owner how to run the business. She got put in charge of the administration.

She kept coming down and telling the owner how to run the business

She had left school two years before. She was clearly a strong-willed girl who at eleven ended up at a school in Normandy where she spent the next four years. She liked it.

"For two and a half days a week you could do whatever you wanted. Go karting, criminology, anything. I got a lot of maths and science out of it. It had been boys only. I was the second girl there."

At 15 she left and took a secretarial diploma, worked in a typing pool, tried to mend her typewriter "and got thrown out of the union."

". . .like a nuclear collision"

She went to a travel agency "I was terrifically shy . . . but I started to think my boss was doing things wrong . . . I subtly told him." She grimaces ruefully. "Subtlety with me is like a nuclear collision!"

After 18 months in the glass business, her partner got cancer and was told to retire or die. They sold the business.

She got a Vic 20. "It had colour! You could do lovely things with it!" She started writing simple games. She sold

six. She got involved in a computer shop in Edgware Road. "That's how I met most of the people who are important to Magnetic Scrolls . . . We illegally sold BBC's that had three feet! . . . We sold 20

first program to put my name on the screen in machine code took three months but I never perceived it as difficult . . . I got dreadfully bored doing business programs . . . I had met Ken Garden and Hugh Steers . . . "They are now her trusted confederates in producing games like The Guild of Thieves." I knew I wanted to do something in computers that was big . . . I'd milked myself for everything I could get out of myself . . . I knew my limitations . . . of knowledge . . . I wanted to get back into graphics . . . games . . . being able to do everything was greatly appealing . . ."



```
which extends to the north and east.  
Northeastward is an entrance to the ice  
tower. A snowman is here.  
>say hello to the snowman
```

BBC's a day, every fourth one with four feet! We also sold complete Apple systems . . . 2.5K . . . Two a day . . . People came from places like Denmark just to play for one hour on a computer!"

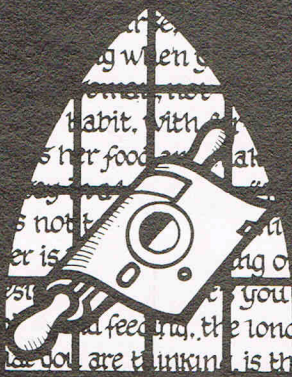
Her partner in the shop "went off to involve himself in lasers" and she started writing programs on commission. "The

"The Willy Affair"

She had discovered she had a natural talent for chess. "By female standards I'm very good. I had something in mind like DeJa Vu." She screws up her face contemptuously. "What we would have done was boring . . ."

Garden and Steers were in the middle of their A level examinations. There is a confused and somewhat scandalous story, that Sinclair does not deny, that they sat up right through the night, before the two men were to sit the computer science exam, creating a computer game in which a limp and then subsequently erect "willy" played a large part. Apparently "The Willy Affair" interested and convinced Sinclair to create "the system".

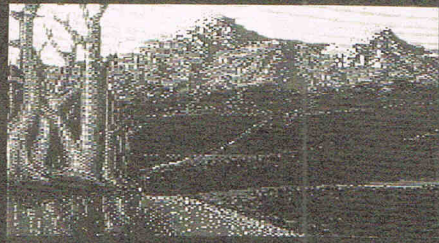
Sinclair explains, "If we wrote a game, we'd need as much time to write another — perhaps thirty man years. By creating a system first, Guild of Thieves took only five man years. We've enhanced the system, too. We listened to people's comments."



Magnetic Scrolls
Adventure Guide

Out of the system came the Parser that made *The Pawn* such a success worldwide. The Parser was sufficiently well designed to allow a wide range of questions to be asked and the computer to be able to understand and deal with them. This Parser has been even more greatly enhanced for "Guild of Thieves" which can mage 147 verbs yet it was written in 64K.

Sinclair realises that *Magnetic Scrolls*' games may not be to everyone's taste. "Most people's idea of creativity is not subtle. We allowed people to work out



West is a dying forest. Eastward is a vast, grassy plain and the path also continues southward.

the concept. Maybe it was too sophisticated for our market. A lot of parts in *The Pawn* no-one has got yet," she adds thoughtfully.

She believes that many adventure players will prefer "Guild of Thieves". Some have raved about it, she claims in a way they never raved about *The Pawn*. "The *Pawn* I could finish in an hour," she declares forcefully. "Guild is a lot bigger. It would take me 3½ hours . . . It has an extra 12K of code . . . You get a wonderful sense of reality . . ." She thinks the average player will take at least 10 days to finish it.

"The Pawn has seven different solutions"

When she speaks of them, she gives her games an oddly personal feeling, as if they had assumed for her the personalities of familiar beings, children perhaps. "The *Pawn* has seven different solutions" she comments with a kind of pride. "You are not important to *The Pawn*. You do not have a role. The game will go on without you. All I am is a pawn . . . and there is no queening move. It's not that sort of a game . . ."

But how did a game of such complexity — more likely to frighten the usual mass market oriented compute games company than enthuse it — ever get published?

It happened through Sinclair — Sir Clive. "I'd written some arcade games for the QL". And she started the game for that machine. She met Tony Rainbird, then a leading executive at B.T. "He's wonderfully astute." She says. "He encouraged and aided *Magnetic Scrolls*

team to develop *The Pawn*. It was a case of publisher and programmer working together". She says. "He had faith in us.

That faith must have been a little shaken when he was about to leave for the first showing of *The Pawn* at the Consumer Electronics Show in the U.S. on the 6 O'clock plane and a 4 O'clock Sinclair and Co were still writing code . . .

The success of *The Pawn* is now approaching the legendary. Outside Infocom's adventures which Sinclair generously acknowledges as "the best", it probably sold more than any other of its kind. And not just in Britain. "We sell well all over. In Germany probably as many as in the U.K. She refutes very forcefully a recently publicised comment by a senior B.T. executive that there is no market in the U.K. for high quality, high priced software. "You *can* sell good quality! You need to attract the people! You need proper marketing! Most people who played *The Pawn* had not played another adventure. We sold 20,000 in the U.K., including the IBM version, 150,000 worldwide . . . We like the Amiga . . . The next generation is targeted at 512K but the 64 is still our main market . . ."

"By this time next year we'll have four games out . . . by the year after, seven"

She is not worried about piracy. "If people are seriously interested in playing games, they'll buy it. If the disk had been so write-protected. I don't think that we'd have sold that much more." She shrugs, "I tape all my records. I'm doing something illegal . . ."

Magnetic Scrolls has a projected game called "Upon Westminster Bridge" but Sinclair will not reveal details yet. "And we're looking at a follow-up of *The Pawn*. There were so many bits that the whole thing got too large. It would be really nice to do a follow-up that ties it all together. And there is a 32 bit idea that is a 'shot in the dark' . . . very innovative."

By this time next year we will have four games out . . . by the year after, seven."

She intends to release three or four a year. "If we tried to do more, the things we find nice about our games would not be there . . ."

She predicts that in the future a lot of new people will be playing. The games will not all be like *The Pawn* or *Guild of Thieves*. "We are working on totally new ways of doing things. The present format is totally geared up for today's machines. "Westminster," she says "will be almost like reading a book . . . The story line is a most fantastic plot' . . . We're working at games that appeal to the adult. That's why you're spending £24 on one of our games not £9 for a quill-written adventure.

"The kind of thing that sits me down at a computer and won't let me up again"

It can take you 150 hours . . . It has real gameplay . . . the kind of thing that sits me down at a computer and won't let me get up again!"

Magnetic Scrolls — though Tony Rainbird is no longer with the company that bears his name and still publishes Sinclair's adventure — has a contract with B.T. to provide six adventures over two years. But *Magnetic Scrolls* could go elsewhere with other games. Sinclair still has the creative staff who worked on *The Pawn*. It is a very unstructured organisation "People come at eleven in the morning." She comments. "And work till eleven at night . . . You don't need many people to do good things. "She has around a dozen, not all of them housed in a workshop style establishment by the Thames not far from where stood Shakespeare's Globe Theatre. He would probably have appreciated the coded complexities of their adventures even if he would not have understood the powerful DEC Vax minicomputer to which a variety of other computers are connected to allow the "system" full rein.

Anita Sinclair is slim, sophisticated, articulate and attractive. She exudes nervous energy, crushing out cigarettes, gesturing excitedly and shaking the dark hair from her eyes. She says she would like to have children but admits to no present romantic association likely to bring them quickly. "I have two good friends — men — I can rely on . . ." She is also rumoured to have been close, at one time, to Chris Curry, the founder of Acorn Computers who manufacture BBC machines. "I love my books and music . . . piano. I like thrillers and beautiful books. Gabriel Garcia Marquez' 100 Years of Solitude . . ." She stares defiantly. "I do what I want when I want . . . A lot of women are insecure. I don't have that insecurity . . ." She leads a company that has set new standards of creativity in adventure games. It has given them a dimension that may more logically move toward the complex 16/32 bit machines than simple arcade games. It has possibly opened up a "mainstream" audience that might not otherwise have bought computer games. Can she continue to inspire *Magnetic Scrolls* talented team to leading edge innovation? Will their games become just too intellectually demanding for a mass market? Can the determined and forceful Anita Sinclair go on carving out a successful share in a tough male-dominated field? These are questions that not even the subtle parser of a *Magnetic Scrolls* adventure could answer yet.

Evesham Micros

THE EXCELERATOR+

FEATURES

- Ultra compatible
- Very quiet
- External 8/9 switch
- Direct drive motor
- Handles disk turbos
- Doesn't overheat
- Compact size
- Super reliable
- Year guarantee
- Great value

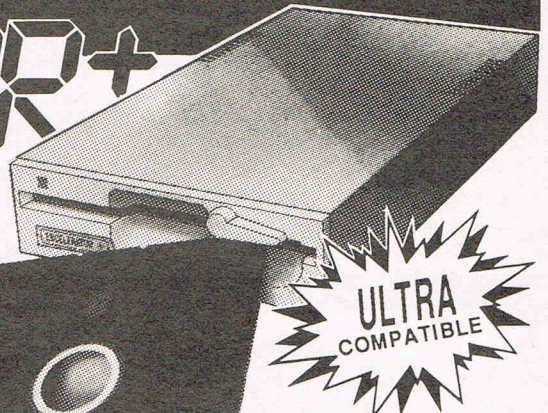
FOR COMMODORE COMPUTERS

Don't buy a 1541C when you can buy this compact, reliable & modern drive for less money!

GUARANTEED
MORE compatible than 1541C

SEE RAVE REVIEWS
IN ALL THE MAGS

One reviewer said, "the only thing I could find wrong with it was that the sticker was on crooked".



**ULTRA
COMPATIBLE**

TWO PURCHASE OPTIONS

1. SPECIAL INTRODUCTORY PRICE
£ 159.95

2. COMBINATION OFFER:
Excelsior+ & latest Freeze Frame
£ 179.95

THE Star

PRINTERS FOR BUSINESS

NL-10
"WHICH"
MAGAZINE
BEST
BUY!



ONLY
£ 249.00

This is the class printer in it's price category. The perfect choice for Commodore owners because the interface is changeable. So buy with the 64/128 cartridge then if you change computer at a later date just buy a new cartridge!

In a group test with other popular printers in the price category such as Epson, Citizen & OKI What Micro described the NL-10 as "THE ROLLS ROYCE OF THIS GROUP". Evesham Micros has now sold over 1500 of these and still only had three faulty! Need we say more!!

- Auto single sheet feed
- Tractor & Friction feed
- "Front Panel" mode selection
- Interchangeable i/face cartridges
- Double & Quad height characters
- Low cost cut sheet feed
- Superb "NLQ"

Selected Products

DISK NOTCHER. Double your disk capacity, allows you to easily & accurately cut a second write protect notch. £ 5.95

POWER PACK. Replacement power pack to suit 64/128. £ 24.95

AZIMATE 3000. Check and adjust CBM cassette head alignment. Easy to use. £ 6.95

MOTHERBOARD. 4 slot with either all upright or with one straight thro' for modem use, please state type when ordering. £ 28.00

XETEC SUPERGRAPHIX. The best centronics i/face for 64/128. 8K buffer downloadable fonts etc. very good. £ 69.95

DATA RECORDER. CBM compatible type. Same performance etc. as C2N/1531 but cheaper and with pause. £ 24.95

1541C DISK DRIVE. We will sell you one but why not buy an Excelsior, less money and many advantages. £ 189.95

We have a good stock of Commodore related equipment. If you don't see what you want please give us a call

SPECIAL OFFER: PRICE NOW INCLUDES DOLPHIN COPY

DOLPHIN DOS

THE EFFECT IS STAGGERING.



Best Hardware
Utility of year

SOME OF THE FEATURES

- LOAD speed 25x normal (PRG)
- SAVE speed 12x normal (PRG)
- LOAD speed 12x normal (PRG)
- SAVE speed 8x normal (SEQ)
- LOAD/SAVE 3x normal (REL)
- Easy & fast DOS commands
- Format 40 tracks (749 blocks)
- Monitor built in
- LOADs 202 blocks in 5 secs
- Enhanced screen editor
- Drives centronics printer
- Extra BASIC commands
- Compatible with standard DOS
- Can be switched out

Disks & Boxes

- 25 bulk packed DS/DD disks. With sleeves, w/p tabs and labels. Good quality & fully guaranteed. £ 13.95
- 25 disks + box. Disks as above plus 50 capacity locking storage box. £ 22.95
- 25 disks + box. As previous offer but with 100 capacity locking box. A very popular offer. £ 24.95
- 50 capacity box. High quality lockable disk storage. Smoked perspex top. £ 10.95
- 100 capacity box. Larger capacity version of above. £ 13.95

The established standard parallel operating system for the 64/128 and 1541 disk drive. Now in use with most of the top software houses including Gremlin, Software Projects, Thalamus, CRL, Alligata, Superior etc. etc. as well as many of the top independent software programmers. The speed and efficiency is incredible, who would believe that the humble old 1541 could load 202 blocks in less than 5 secs. It is compatible with the majority of commercial software and can be switched out when necessary. One of the real pleasures of using this system is to use it with the likes of EasyScript & Superbase to speed up both the normal loading and the sequential files. It is important to point out that this is achieved using standard CBM disk format and not a special system, therefore you can still use your existing disks.

INSTALLATION

Fitting involves fitting two sub assembly boards, one in the 64/128 and one in the 1541. Normally these just plug in but some '64s need a small amount of soldering.

EXTRAS AVAILABLE

- User port expansion card £ 14.95
- Kernal for '128 in '128 mode £ 9.95
- Second drive assembly £ 44.95
- Dolphin Copy (selection of copiers includes very powerful nibbler, extra fast unprotected and selective file) £ 7.95

ONLY
£ 69.95

TRANSFORM YOUR '64

THE SLIMLINE '64

Now you don't have to put up with an old fashioned looking computer. Fit this smart & modern looking new case to your trusty '64 and it will feel like you are using a brand new computer.

- Lower key height
- Modern styling
- Easy to fit

This high quality injection moulded case really will transform your '64, so why put up with an old fashioned image, order one now.



Only
£19.95

FREEZE FRAME STRIKES BACK

FREEZE MACHINE

Combines Freeze Frame MkV and Lazer MkII

NOW WITH...
"SINGLE PART SAVE"

From reviews of Freeze Frame/Lazer

Don't take our word for it

"...far outstrips the opposition on both price and performance ..."

Commodore Review

"...the most exciting and lightning fast I have ever used..."

Commodore Computing International

Speed, Power & Ease of Use

The three keys to the operation of the "Freeze Machine".

This is our latest and most effective backup cartridge. But the speed of operation is the staggering feature. Imagine being able to SAVE & reLOAD your favourite games in as little as 10 seconds and no more than 18. No other "device" can remotely match these figures...remember these facilities are *built in*. Don't be misled by bitchy outrageous advertising claims, buy the "Freeze Machine" and see it in action, if you don't agree that it is the most formidable cartridge you can buy return it within your statutory 28 days for full refund

ONLY
£28.95

"F.F." Utility Disk V3.0

Latest and most advanced version of our utility disk. Designed to allow the complete transfer to disk of multi-load games that cannot be handled by the standard cartridge. Now includes **over 30 routines** for many of the latest popular programs. State model of Freeze Frame when ordering.
Upgrade fee: £2.00

ONLY **£7.95**

• Freeze...

Totally unstoppable Freeze facility from the originators.

• Fast Save...

Saves in as little as 15 seconds. Nothing else can match this

• Multiple Save...

Make as many saves as you want once frozen, in different styles if you wish.

• Ultra Compact...

The most efficient compacter? Our tests indicate this, as many as 5-6 games per disk.

• Game Killer...

Incorporates an effective routine to disable collision detection.

• Independant...

Even produces stand alone Lazer files that reload in as little as 10 seconds.

• Ease of use...

Always a strong feature, now even more enhanced.

• Multi-Load...

Standard cartridge handles many games of this type. With the utility disk even more!

• Fast Format...

Formats your disks in about 12 seconds.

• File Copier...

Built in fast file copier will handle files up to 248 blocks long and is really easy to use.

• Two Fastloads...

A normal disk turbo at 5-7 times normal PLUS the astonishing Lazer at 20+ times normal...BUILT IN.

• Selectaload...

Just use cursors to scroll to the program you want to load and press a function key.

• Reset...

Built in, so you can enter pokes for more lives etc.

• Tape Turbo...

For quick save/reload on tape.

ROCK SOLID PERFORMANCE GUARANTEE

We are confident that nothing will outperform "Freeze Machine" If you purchase from us and feel that our claims are not justified return it within your statutory 28 days for full refund

UPGRADES
MkI, II, III, IIIB... £19.95
MKIV..... £ 7.95
Lazer..... £ 2.00

QUICKDISC + Disc Disector V5.0

Our highly popular fast load and save plus utility cartridge has received many favourable reviews.

- * FAST LOAD (5 to 7 times improvement)
- * FAST SAVE (5 to 7 times improvement)
- * FAST FILE COPY (up to 248 blocks)
- * RESET BUTTON (unstoppable)
- * CENTRONICS PRINTER DRIVER
- * FAST FORMAT (20 seconds)
- * FAST BACKUP (4 minutes)
- * EASY DOS COMMANDS
- * HELPS MENU
- * USES NO MEMORY
- * 128 COMPATIBLE ('64 mode)

ONLY
£19.95

1541 Quiet Stops

Cure for ever the dreaded 1541 drive head "hammering"

- * Easy to fit
- * Detailed instructions
- * One kit does two drives
- * Helps prevent misalignment

ONLY
£4.95

Not suitable for "turn lever" type drives

The fifth version of the country's leading disc backup utility program. This latest version includes many "PARAMETERS" to handle the latest highly protected discs. This includes the latest American and English software. Be warned if you want to back up software by Ocean, Gremlin, Hewson, Domark, and even U.S. Gold whose protection schemes are NOT always the same as the American versions, then you **MUST** have "D.D.". At press date, we are sure **NO** other advertised product will handle all these, be it American or German.

INCLUDES THE FOLLOWING

- * EVESHAM 3 MINUTE NIBBLER
- * EVESHAM 8 MINUTE NIBBLER
- * MANY PARAMETERS (The vital code for the protection schemes)
- * DUAL DRIVE NIBBLER
- * MENU MAKER (with select facility)
- * DISC ORDERLY
- * FAST FORMAT
- * FAST FILE COPY
- * UNSCRATCH
- * DISC RESCUE
- * DISCMON+
- * ETC., ETC., ETC.

Upgrade fee: £7.95
Most routines CBM 128 & 1570/71 compatible
Perfect operation with Excelerator+

ONLY
£24.95

DOUBLER

Many thousands of this popular product have been sold and sales continue to flourish. Why? We think because it is the best product of its type. Consisting of hardware and software it uses a unique method controlled by the software that allows you to produce perfect backups of your tape software.

It is very easy to use and very successful.

Our tests have proved that Doublor can achieve 100% success

ONLY
£12.95

1541 Physical Exam

Have you got... Alignment problems

If so, you need this package. Contains digital alignment disc and drive fault diagnosis software that allows you to check and correct head alignment.

- * CHECKS RADIAL ALIGNMENT
- * CHECKS SPEED
- * CHECKS BELT AND CLAMPING
- * THOROUGH INSTRUCTIONS
- * INCLUDES QUIET STOPS

ONLY
£39.95

Evesham Micros

How to order

Send cheque/P.O. or Access/Visa details
By phone with Access/Visa no.
Government, educational & PLC orders welcome
Same day despatch whenever possible
All offers subject to availability. E.&O.E.
Callers welcome, open 6 days 9.30-5.30
Next day delivery on any item £5.00

Evesham Micros
63 Bridge Street
Evesham
Worcs. WR11 4SF
TEL: (0386) 41989

TELEX: 333294 EMICRO

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



FIGHTING WORDS

The Jeff Minter Page

Pin back your lug 'oles, I have some words to lay on you. The general consensus of opinion, certainly throughout CCI as far as I can see, is that now Commodore have done the decent thing and released the A500, so Atari are going to curl up and die and pose no more threat to Amiga at all.

Well, that very definitely Ain't So. If Amiga is going to make it big, even make it as well as the ST already has in this country, then there is mucho work to be done. You see, the positions of the ST and Amiga at the moment are analogous to the positions of the C64 and the Atari 800, way back in '82. If you'll cast your mind back you'll doubtless remember the scene. We had the Atari 800, arguably the best 8-bit micro ever put together, with graphics unequalled by anything else before or since (except perhaps the ill-fated Enterprise, which had a very similar display architecture). You have 128 colours and the most flexible screenhandling around; you could construct screens of numerous different resolutions, mix text and graphics modes, generate raster-interrupts incredibly easily compared to the Commodore method, and scroll whole lines, screens even, merely by altering two bytes in the Display List. (All this display virtuosity is hardly surprising when you consider the fact that the '800s graphics chip was designed by none other than Jay Miner — the guy who worked on Amiga's goodies). Add to this a reasonable Basic which allowed you to program these graphics with nary a Peek or Poke in sight, a decent four-channel sound generator and a good solid keyboard, and you have what should have been the definitive 8-bit micro. Unfortunately there was the question of the price — around £800 at the time of launch and well out of reach of most people. Just like our old friend the A1000. Everyone knew it was great; no-one could afford it.

Then, along comes Commodore, with Uncle Jack at the helm, and launches the C64. The C64 is in no way as powerful as the '800 — it has only 16 colours, an awful outdated Basic which gives you no access to the machine's hi-res graphics or sprites, an admittedly good sound chip, but again, no support for this from Basic. Not a bad system, but a ways behind the '800 from Atari.

However, the C64 has one thing going for it — it's cheap. So, before you know what's going on, UK software bods are getting beyond that awful BASIC, getting inside the machine, and starting to make it work. Before long there's a good software basic for the new machine, and a lot of users out there.

So, Atari look at the C64 and say 'But our machine is much better! If we reduce the price just a bit, surely people will pay just a little more for the extra facilities, and we'll blow Commodore to bits, no sweat'. So they drop the price on the '800, and what happens?

Well, the prospective buyer looks at the two machines, and sez to himself, 'Sure, the Atari is more powerful than that Commodore 64. I wonder if I ought to spend the extra, and buy one?' But then he goes and looks at the software available for the machine. But then he goes and looks at the software available for the machine. He looks in the Commodore section and sees a LOT of companies releasing a LOT of games, and they're about seven quid, maybe less. Then he goes to the Atari section, and looks at the game there. They're all American imports, and they all cost about £20!! At which point he gets out his wallet and ladles over the dosh for the C64.

Now, unless Commodore are careful, we're going to have the same sort of scene between the Atari ST and the new A500. Everyone accepts that the A500 is brilliant, technically quite a bit better than the ST. The difference is that the ST has already got a large following of good UK hackers, and lots of exciting things are happening with it. You can pick up stunning games for £10-£20; really useful utilities and nifty hardware add-ons. All available now, and fairly cheaply. Music, DTP, graphics, wordpro, CAD, spreadsheets, etc., etc. Now look at the typical Amiga list. With one or two exceptions, the software is all US-imported and very little is under £30. I mean, Defender of the Crown is a great game, stunning visuals, but £40?? Deluxe Paint is perhaps the best paint program ever, but the price — over £100! When the machine only cost you £500 in the first place, these prices are very unrealistic . . . And look at hardware, too. You can get a good, reliable 20-meg hard drive for the St for £500. Amiga one

will cost you nearly twice that. Why? And stuff like Genlock, which lets you merge TV video and computer graphics, and was touted as one of the Amiga's special talents at the launch, will cost you £450 for the Amiga. ST Genlock, now available despite the machine not having been designed for this in mind, is available for a touch under £300 — and by way of a bonus, the ST genlocker will also perform real-time frame grabbing — so you've got a powerful digitiser too.

So, you see, the ST is a people's machine, the Labour Party of the micro world, whereas the Amiga, despite being more powerful, is a lot less accessible, and will cost you a fair bit more to get into. If Amiga is truly to threaten ST, it needs cheap software that actually works; good distribution; and support from the users — which is where you come in. I think that the best thing Amiga has going for it is not the extra tech goodies, or anything like that — it's the loyalty of Commodore users, which is an amazing thing. Many of you won't have bought STs just because of one thing — it has 'ATARI' written on it rather than 'COMMODORE'. If Amiga succeeds in this country, it'll be due at least in part to all you C64 owners who've waited patiently for the Big 'A' to fall to a decent price level. Now, it's down to the likes of you to persuade software authors that there are enough of you out there to make it worthwhile supporting the machine. The ST is already well-supported by the likes of US Gold, with conversions appearing regularly — what you want is to see the magic word 'AMIGA' appearing on the availability lists along with C64, Amstrad, Spectrum and ST . . .

The point I'm trying to get across is that although I agree to a certain extent with last month's review of the A500, I don't necessarily agree with the closing paragraph, where the reviewer says he feels sorry for all those people who have already bought the Atari ST machines. Such a comment is far too audacious, given the circumstances.

No, my message to the new Amiga-followers is not to pity that large and enthusiastic band of people who own the ST and are making it perform ever-more amazing feats of programming. Do not pity the Atarians. Fear them.

Mini Office II



6 powerful home and business programs in just **ONE** package – at a price that simply can't be matched!

Voted Business Program of the Year – 1985 AND 1986
Popular Computing Weekly

'This package is incredible value'
Daily Mail Home Computing Guide

WORD PROCESSOR

Compose a letter, set the print-out options using embedded commands or menus, use the mail merge facility to produce personalised circulars – and more!

SPREADSHEET

Prepare budgets or tables, total columns or rows with ease, copy formulae absolutely or relatively, view in either 40 or 80 column modes, recalculate automatically – and more!

GRAPHICS

Enter data directly or load data from the spreadsheet, produce pie charts, display bar charts side by side or stacked, overlay line graphs – and more!

DATABASE

Build up a versatile card index, use the flexible print-out routine, do powerful multi-field sorting, perform all arithmetic functions, link with the word processor – and more!

COMMS MODULE

Using a modem you can access services such as MicroLink and book rail or theatre tickets, send electronic mail, telex and telemessages in a flash – and more!

LABEL PRINTER

Design the layout of a label with the easy-to-use editor, select label size and sheet format, read in database files, print out in any quantity – and more!

ORDER FORM

Please send me Mini Office II for the Commodore 64/128

- £16.95 cassette
 £19.95 5¼" disc

I enclose cheque made payable to Database Software, or debit my Access/Visa card:

□□□□ □□□□ □□□□ □□□□

Exp. date

Signed

Name

Address

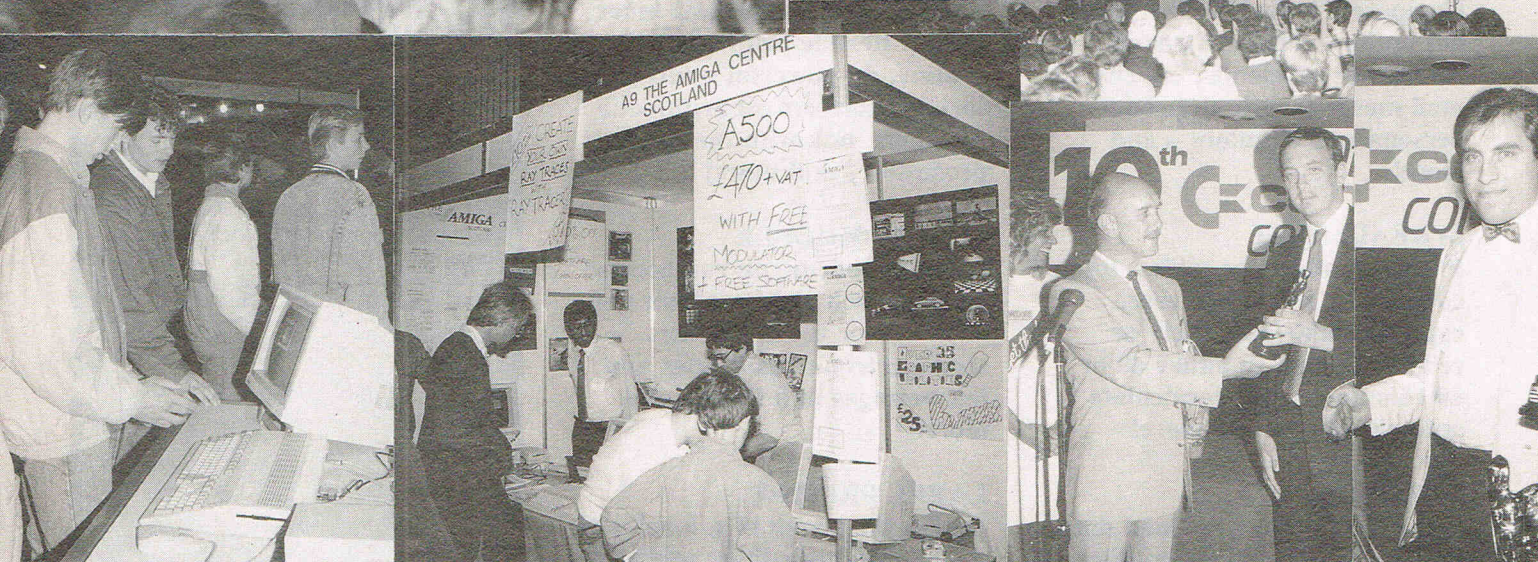
ORDER HOTLINE:
TEL: 061-480 0171

SEND TO: Database Software,
Europa House, 68 Chester Road,
Hazel Grove, Stockport SK7 5NY.

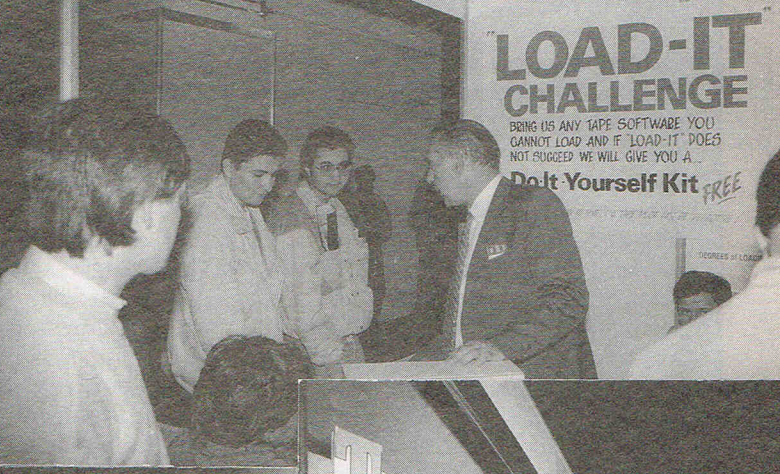
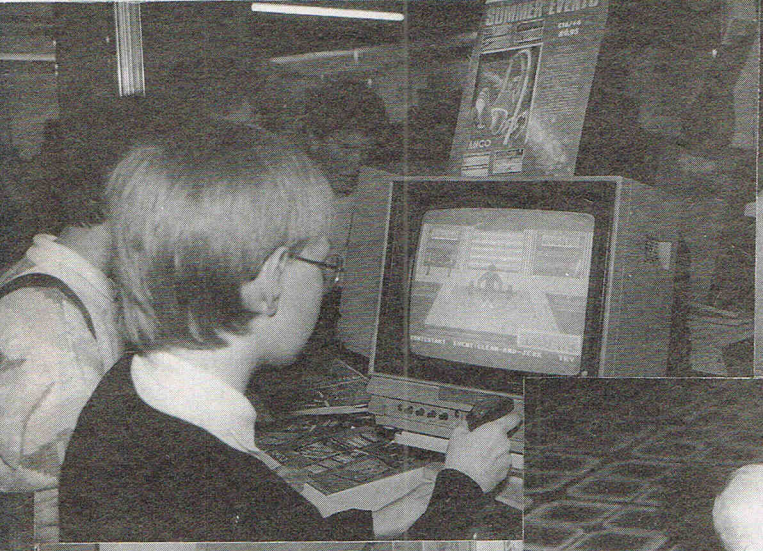
DATABASE SOFTWARE

Europa House, 68 Chester Road,
Hazel Grove, Stockport SK7 5NY

CCL 7 87



SCENES FROM



THE SHOW!

A new era has begun for the Commodore world and it started, for the U.K. at the 10th Commodore Show. The 64 — with close on 8 million the world's biggest selling computer, possibly never to be surpassed, still dominates the minds of most Commodore owners. But today's Commodore computer is the more powerful, the more exciting Amiga. And the crowds at the 10th Commodore Show witnessed this growing and unmistakable division of interest. It is not only the 512K Amiga 500 power that makes the difference but the simple fact that the 64, excellent machine that it has been, now no longer has the capability to provide what the sophisticated home micro user is beginning to believe is his or her natural due. It is like the propeller driven aircraft being overtaken by the jet plane. It is inevitable. Nothing, someone has said, is as

stand gazing at it with what we will generously assume to be technical interest.

Low prices

Even though the Amiga was the major influence on the Show, it must not be thought that the 64 owner was not catered for. In fact there was a great deal that any Commodore computer user would enjoy — especially the prices. One major aspect of the Show was the amount of discounted software that was available. Recent games like Martech's Tarzan and their own Strip Poker of Samantha Fox were selling well at only £3.00. On one stand, Postronix were, believe it or not, giving away a free camera with up-to-date games priced around £8.00. Adamsoft had very low priced educational software and products such as disks and books could be bought well below the usual prices.

programming company who created for Anco the smash C16 hit Winter Games, gave CCI a special demonstration and we were highly impressed at the exceptional quality of the new game. From CCI's 1986 Oskar-winning Programmer of the Year Udo Gert.

In the Theatre

Database, the Show's organisers seem to have made great strides in the running of the Show. Everything was professionally smooth and the crowds moved about with considerably more ease than at the same time last year. They, and Commodore, had clearly spent a great deal of time this year planning just how to make it all work and the results of that hard effort showed in every aspect from the catering to the theatre. The hall size Bourg Suite at the Novotel had been set up as a

The Commodore Show

strong as an idea whose time has arrived. And at this Commodore Show — though you could still buy more software and peripherals for the 64 — it was the Amiga that starred and it clear that from now on the Amiga, especially the 500, will be the major focus of the Commodore world.

The Amiga dominated the Show. There was a substantial number of new products for the Amiga that were being introduced at the Show, ranging from high level business products like the X Cad computer-aided design system that for a few thousand pounds offered a system that could cost £35,000 on another computer to classic simple shoot 'em up games from Anco at £9.95. Yes, £9.95 for games software with all the Amiga graphic sharpness thrown in.

There was also a great deal of other interesting Amiga material, including what probably got the prize for the most looked at by the largely male thousands of visitors, Robtek's Hollywood Poker, a strip poker package that really does use the Amiga's almost pin sharp graphics quality to highly provocative advantage. There was always a crowd around Robtek's

There were of course many familiar names at the Show — names that in many cases have been present at all the Shows of recent years. Supersoft was there with a new accounting program called Cashbook. Evesham Micros did a roaring business in their swish Slimline case to turn the C64 into a 64C lookalike. Datel had its Action Replay cartridge and Disk Demon parallel disk system. The AMX mouse on the Advanced Memory Systems stand attracted considerable attention, as did Trilogic with its Expert Cartridge. A somewhat surprising success was the "Load It" datasette modification, which, we hear, is also to be applied to sound cassettes in what is reputed to be a million pound deal.

New products

Wigmore House produced two new products: a GEOS compatible mouse and a mouse interface for the C16 and Plus/4. Two market leaders did provide something for the clearly fading C16 market with Spy versus Spy from Tynesoft and the first public showing of Anco's long awaited Summer Games.

Kingsoft, the German

full scale theatre and there were presentations running right through the three days the Show lasted. The major role was taken by Commodore U.K. itself which made many presentations of the brilliant graphic qualities of the Amiga which were seen to excellent advantage up on a big screen and with monitors around the hall. Tom Hart, CBM's Consumer Sales Director, revealed himself as possessing a touch of real show business talent in the presentation — an impressive performance. With the help of the non-stop work of Commodore's glamorous Marketing Services Manager, Amanda Cridge, and a pop promo style video from the German band 16 Bit, there were plenty of admiring gasps from the packed audiences at the Amiga marvels. Precision Software also made a strong impression with the presentation of their new Superbase Professional for the Amiga as did Haba Systems with their Amiga products. Other presentations were made by Electric Software and Micronet who are now extending the Plus/4 offer they made through CCI to Amiga users.

CCI helped organise "Computer Power" a special music presentation featuring the Amiga that was sponsored Gremlin Graphics, whose Ben Daglish, composer of the music for Aufwiedersehen Monty, was one of the stars. "Computer Power" was created and directed by CCI's Marketing Manager, Max Jacobson-Gonzalez and will be shown at the Edinburgh Festival. So anyone who missed it at the Show can catch up with it there.

On the first night of the Show at a party held in the theatre. CCI presented its 1986 Oskars to the worthy winners. Gremlin's Tony Kavanagh collected it their three Oskars and three went to Anco. Firebird's Sentinel took the best game of the year award and is still, we heard doing well in sales throughout the world.

However, even outside the Theatre there was the sense that something special was happening. The Show was originally planned for May but postponed to June to allow it to coincide with one event — the public launch of the Amiga 500. At the same show last year, it has then been the turn of the unveiling of the Amiga 1000. Enthusiasts, and CCI has been counted among them, hailed this new Commodore computer then but the Amiga 500 is special in another way. This time there can be no mistake that it is a home micro. Commodore call it "The Ultimate Home Micro", which we take to mean the latest not the last...

Juggler

The Commodore Show reflected that sense of a whole new dimension opening up for the Commodore world. Yes, it was great last year to have sparkling pictures of King Tut on the Amiga's screen but how many home users could afford the Amiga 1000's then price tag of around £1500? But now the 500 is within reach and already at the official price of £499.00 you could get it with a monitor and other goodies at no extra price. The Amiga 1000's price has plummeted too and the Amiga Users Group had 1000's on sale for £449.00 including VAT.

It was that sense of the

exciting and very close potential of the Amiga that made the Show. It brought some of the outstanding products shown there deliciously near even to the largely 64 audience. Extraordinary things like Scicom's touch screen Amiga that will work through 10mm thick glass; the Word Perfect professional level word processor that can be run either as the Amiga version or the MSDos version on the same Amiga 2000 — and the Amiga version is £150.00 cheaper than the IBM compatible one... a sign or things to come perhaps, and many others. There was all over the Show the now famous Juggler 3D Amiga demo that stunned the crowds. We at CCI have seen it many times but have not published pictures of it because we have considered that on paper there was no way of doing it justice. But at the Show on CCI's stand, it drew as many watchers as Bulletin 1000 did and clearly amazed thousands of visitors. But better than the demo, brilliant though it was, was the package that the Edinburgh Amiga Centre is marketing. It is a program written by the creator of the Juggler to let you do the same thing with your own designs on the Amiga and it costs... just £10! Another extremely encouraging move was the fall in the price of Amiga software. Games like Mindscape/Mirrorsoft's Defender of the Crown have come down from above £35 to below £30 and many other games for the 500 were dropping below the £20 mark. And, of course, there was that surprising £9.95 Anco Amiga games range. The talk at the Show was that by Spring 1989. £9.95 will buy you lots of full price Amiga software and for the 64 normal price will be around the £5 level.

Although the 500 offers 512K, the hunger for memory of Amiga users was also being satisfied by new and small drives from Robtek and other companies at well below the £199.00 price which the 3½ inch drives originally commanded. One half-height drive was being offered at £99.00 — cheaper even than those available for the 64!

Many among the crowds leaving the Show — unusually there appeared to be more people at the Novotel on the Sunday than the

Saturday had the now familiar Amiga 500 boxes being taken home under the visitors' arms. And there were surprisingly young buyers considering that, even at £499 the 500 still isn't yet pocket money level. So what was this time last year a dream is beginning to seem very far along the road to becoming a reality. The 64 owners who arrived in one computer dimension were carried into another, leaving with a new picture of what their own computer future was likely to hold.

This Commodore Show was like no other since the VIC 20 was overtaken by the 64. It presented an image of the future that was undeniable even by the most dedicated 64 owner.

However, the biggest bargain advertised in the Show Guide, sadly turned out to be a myth. A virtually empty rather enigmatic stand which didn't seem to have any real products was, it seems offering Digiview, Newtek's video digisers for the Amiga for £1.99! But when hopeful buyers approached — Digiview sells for nearly £200.00 — they were told it was all a big mistake. Some people seemed to believe that the whole thing, company and all, was some kind of a practical joke.

'Selling like hot cakes'

Whatever else was taken lightly, the Amiga is now a serious factor in the whole of the Commodore world. One German visitor told us that the Amiga 500 was "selling like hot cakes at prices as low as £400 including Vat". It is believed that in the U.K. every 500 CBM has been able to supply is already sold. Every software house represented at the Show was already committed to Amiga products and seeking more programmers to provide extra Amiga power software — no easy task to find.

There is to be no other Commodore Show until next year. And by 1988, at the Novotel, the Amiga will have taken command. The 11th Show may not be called it, but it will be in reality the 1st Amiga Show.

See you there!

Scrolling up and down

"Ain't no jail strong enough to lock me, ain't no man big enough to stop me, never..." , sorry, must stop listening to J. J. Cale records while preparing material for CCI.

This series of articles on interrupts is taking on all the ingredients of an arcade game. From our first steps with using the function keys to change the colours of the screen, to moving sprites around the screen under interrupt control, to scrolling the screen left and right and now, in this article, scrolling the screen up and down as well. This doesn't mean that we're going to end up with a finished game, nor that all the independent pieces of code are going to be compatible when put together, but the baseline has been established and you can fiddle about with assemblers to your heart's content to try and get something working.

The good news, however, is that this up and down scrolling routine is totally compatible with the left and right scrolling one presented earlier. They live in different parts of memory (the 4K block from \$C000 to \$CFFF, or 49152 to 53247) on the Commodore 64, and can be called up independently of each other, as we shall see. Both routines are fairly short (about 350 or so bytes each) and both allow control of some 240 by 15 characters of information. In other words, six screens when scrolling from left to right, and about nine and a half when scrolling up and down.

Why 240 by 15? Well, 240 was first selected for horizontal scrolling because

six screens of information seemed to be a reasonable amount to have scrolling around, and 15 lines of a screen looked like a decent window sized area for displaying that information. When the time came to write the vertical cousin of that horizontal routine I saw no reason to change those parameters, and so you will end up with a 240 by 15 character window scrolling up and down the screen. You can change the width (15) reasonably easily, but the length is a different matter, and I would suggest that you leave that as it is. Six screens ought to be enough for anyone.

Now unlike the previous horizontal scrolling routine we don't need to worry about raster interrupts this time. The moving of a screen up and down looks smooth enough without having to resort to that, and since we can increase the speed of scrolling to a ridiculous amount no one's going to notice whether it's smooth or not: it will just scroll past out of sight so fast that you won't be able to see what's happening!

The only way in which interrupts might come into play is if you wanted to make the whole scrolling section of your 'game' interrupt driven as well as the rest of it. I leave that up to you, but if you do try and do that you will need to worry about the rate of interrupts as well as the particular types of them.

As Rae West tried to tell us in the April issue, but as unfortunately beset by a typing error, you'll need to POKE 56325 with something in order to alter that interrupt rate. Lower values speed up

the rate, so that the 64 is going off to check on interrupts much faster than its usual once every fiftieth of a second or so. POKEing that value with a one produces a strange 64, believe me. POKEing it with anything over about sixty produces a very slow interrupt rate and slows the whole thing down dreadfully.

Starting to scroll

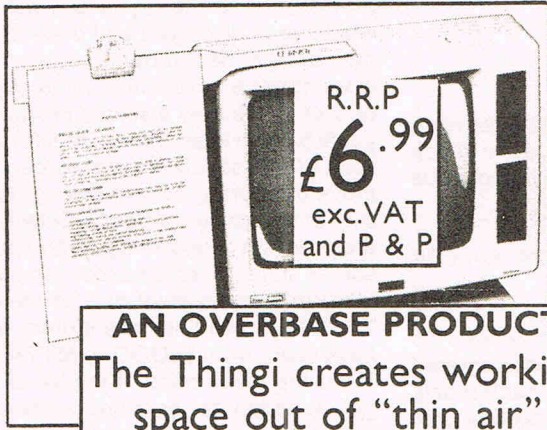
Where to begin writing such a program? Obviously we're going to need a routine that will (when scrolling up) take the row of characters on the second line of the screen and store them on the first line, take the row on the third line and store them on the second line, and so on. If we weren't looking for up to 240 characters of data this wouldn't be too difficult a task, but when we reach the bottom line of the screen (row 24) and scroll that up to row 23, we then need to find out where the data is going to come from that will fill up that bottom line.

Ditto when scrolling down. Put the data on the twenty third line on to the twenty fourth, the data on the twenty second line on to the twenty third, and carry on until all the data on line one has been shoved down to line two. Where then do we get the data that has to go on line one?

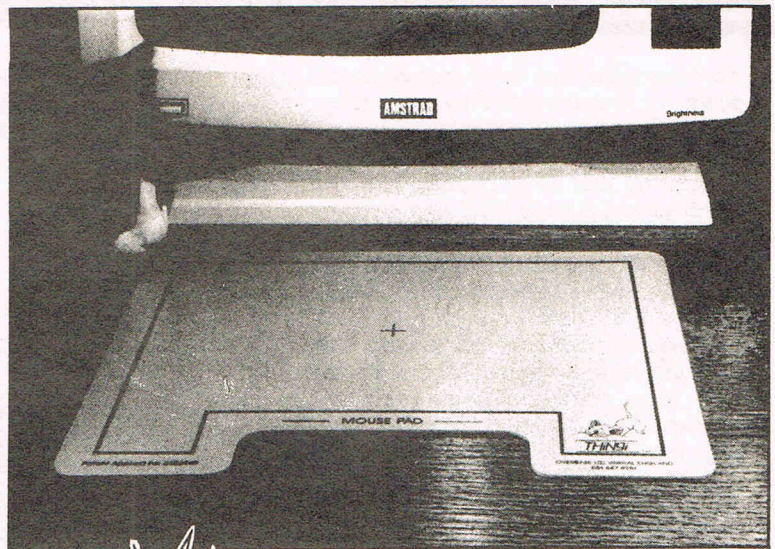
Both problems are solved in the same way, by having a memory location storing the current line of information that has to be displayed. Since we're shunting 240 lines of data around this memory location will obviously contain a value in the region of zero to 239, and could be

THINGI

computer copy holder



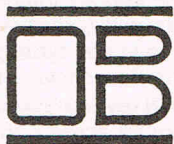
AN OVERBASE PRODUCT
The Thingi creates working space out of "thin air"



THE MOUSE PAD - PROTECTION FROM HOSTILE ELEMENTS

OVERBASE
Mouse pad. Low bounce anti static, anti magnetic, protection from hostile elements
R.R.P. £5.99 ex VAT + P&P

Your nearest stockists:
OVERBASE LTD.
1st Floor Trace Building,
176 Conway Street,
Birkenhead, Wirral L41 3JB
England
Tel: (051) 647 8981 (6 lines)
Telex: 265871 MONREF G Ref 72: Mag 20290



Award winning Innovation

Overbase Limited

AMAZING NEW 'TOTAL BACKUP' CARTRIDGE FOR COMMODORE 64 AND 128 (IN 64 MODE)

NEW ACTION REPLAY V.3 FROM DOSOFT UNSTOPPABLE 'TOTAL BACKUP' CARTRIDGE

OUR NEW INNOVATIVE HARDWARE AND SOFTWARE COMBINATION
GIVES YOU MORE POWER, MORE FEATURES, MORE FUN!!

Action Replay V.3 is now **more** powerful, has **more** features and will back up **more** programs than any competing cartridge! It handles the latest protected games! Just plug it into the expansion port then press the Magic Button! Our new hardware design makes this absolutely unstoppable. Now you are in complete control. Tape to tape. Tape to disk. Disk to disk.

to disk. Disk to tape. No special knowledge is required. It tells you exactly what to do. It's so friendly—and it's a lot of fun too!

Become invulnerable! Action Replay V.3 now has a **SPRITE KILLER**. Play weird games! The unique **SPRITE MONITOR** lets you save sprites from one game and load them in another! The mind boggles!

Nothing else offers all these features at this price!

■ Mega-Freeze

Freeze and save ANY working program—the Magic Button is unstoppable—unlike other cartridges. Also it is now undetectable by software!

■ Independent

All programs reload without cartridge—and at turbo speed—tape or disk.

■ Extra Fast

Make all backups at Turbo Speed—much faster than rival cartridges. Dual speed Tape Turbo is up to 3 times faster than commercial Turbos 10 times faster than Commodore.

■ Super Compact

Intelligent compacting techniques minimise program size into single files. Save 3 or more per disk side.

■ Multistage Saves

Transfers MORE multistage loaders from tape to disk than any other. And all parts Turbo load—another feature unique to Action Replay.

■ So Easy to Use

Action Replay V.3 is a delight to use. All functions described on screen. No user knowledge is required.

■ Sprite Control

Unique Sprite Monitor lets you disable them. Save them! Change them!! Customise your games!!!

■ Picture Save

Unique! Save ANY Multicolour Picture, including title screens. Compatible with Blazing Paddles, Koala, Graphic Slideshow etc. Built-in Slideshow for tape users.

■ Disk Fastloader

Superb bonus feature loads five times faster. Takes up NO memory.

■ Code Inspector

Look at whole memory—program, registers, etc. Everything you need.

■ Compatible

Fully compatible with Commodore 64, 64C, 128 and 128D in 64 mode, 1541, 1541C, 1570, 1571 and Enhancer Drives, CBM compatible tape recorders, FastDOS, and Turbo ROM—can the others say that???

£29.99 GET MORE FOR LESS!
Buy Action Replay with DiskMate in ONE cartridge ONLY £39.99



DiskMate Cartridge V.2

This is the way Commodore should have their DOS. Single keystroke commands: e.g. LOAD and RUN straight from directory, and much, much more!

Works with all drives: 1541, 1570 and 1571.

- 2 minute complete Backup
- Very fast disk functions
- Invisible Toolkit
- 10 second Format
- Powerful 'Floating' Monitor
- SAVE "@@" bug cured
- Takes up NO memory
- Unstoppable reset

£14.99 TERRIFIC VALUE
Buy DiskMate with Action Replay in ONE cartridge ONLY £39.99

Graphics Slideshow

View pix from games, graphic packages or loading screens singly or in sequence 16 pictures per disk. Turbo load. Disk only.

LOOKING GOOD AT £4.95

SPECIAL OFFER!

Enhancement and Slideshow on one disk ONLY £11.95

100% SUCCESS? WE ASK: WHO'S KIDDING WHO?

Action Replay V.3 will back-up ANY program which ANY other cartridge can—and much more! It also has unmatched features. For instance, 'Freeze Frame' uses more disk space, saves SLOWER, has a SLOWER tape loader and has NO built-in disk fastloader, NO picture, NO Sprite, NO restart-features, yet costs £10 more!!! So, come on, who's kidding who? If Action Replay V.3 doesn't live up to our claims, return it within 7 days of receipt and you can have your money back!

Enhancement Disk

Get even more from Action Replay with this Bonus Disk to back up the new non-standard multi-stage loaders.

GREAT VALUE AT £7.95

Our cartridges carry a twelve month guarantee against mechanical failure.

How to get your DoSoftware

Please send cash/cheque/P.O. with order for fast despatch (SAE only for full details). Send off now to: DoSoft (Dept Y), 2 Oakmoor Ave, Blackpool, FY2 0EE

UK Postage included. Europe add £0.75, or £2 if order includes Blank Disks. Overseas add £1.50 for Airmail, or £3.50 if order includes Blank Disks.

DoSoft
You'll Do it Better with DoSoft

SUPER SOFTWARE SALE

Buy NOW and SAVE! SAVE! SAVE!

The DoSoft Collection

UNBEATABLE OFFER! The latest versions of MegaTransfer, MegaUtility, MegaTape and ProSprite ALL on One Disk

HALF PRICE £12.50 WOW!

DoSoft Super Disk Kit

AS ABOVE but with 12 Xidex Precision Boxed Disks. A great start to get your programs on disk at a giveaway price!

SAVE! SAVE! SAVE! £19.99

Mega MegaTape Savings

OUR FAMOUS Tape-to-Tape utility for one Datasette at an unbeatable price.

BUY NOW \$5 BRILLIANT!

Xidex Precision Disks

From the WORLD'S LEADING SUPPLIER—12 Double Sided, Double Density 5 1/4 Disks complete with sleeves, labels, tabs and FREE high impact plastic storage box

TWELVE FOR ONLY \$8.50!

DISK TO DISK • DISK TO TAPE • TAPE TO TAPE • TAPE TO DISK

HARDWARE TRANSFERS MULTI-PARTS • DUMPS HI-RES SCREENS

FAST DISK UTILITIES • LOADERS • 2-MIN DISK COPY • FAST DISK FILE COPY • FAST FORMAT

Hints and Tips

incremented by one every time we scroll down, or decremented by one every time we scroll up, in order to keep track of where we currently are.

Knowing that we're on, say, the one hundred and twenty third line of data, another routine must be written that will tell the main one where the data for that one hundred and twenty third line is kept. It's all very well storing it in memory somewhere, but unless the program is informed of where it's all kept then nothing but garbage will appear on your screen. Scrolling garbage maybe, but still garbage.

Finally, we'll need a routine to tell us not only where the data is kept, but where it has to be put on the screen. We do not, for example, want the data for the one hundred and twenty third line to be stored at the top of the screen if we happen to be scrolling up at the time. It might look pretty, but it would also look pretty stupid.

These last two routines are quite short, and the final two blocks in the program contain all the data necessary to tell the main program a) where the data for all the screen displays has to be stored on the screen, and b) where it is all being held in memory. You may recall the horizontally scrolling routine held its screen data in memory locations \$6000 to \$6FFF. In order to be compatible with that this vertical scrolling stores its data in locations \$5000 to \$5FFF. It doesn't actually take up the whole lot, but better safe than sorry and we might as well stick to numbers that are easy to remember.

The routine itself

In all its glory, the up and down scrolling routine.

As with the horizontal scroller BASIC loader this one is divided up into a number of different blocks as the various parts of the code are shoved into their correct places in memory. Unlike

that loader, however, there are only four blocks to this one, and the data block count for each one is as follows:

Block #	Count
1	24844
2	27485
3	3941
4	3450
	59720

The start and end locations for each block are stored in line 100, so to check block one you could have a line of code like:

```
B=O:FOR I=50656 TO 50829: A=PEEK(I): B=B+A:NEXT:PRINT B
```

and provided B was equal to 24844 then the data for block one has been entered correctly. Do the same for each block, and SAVE the program to tape or disk before we actually try and use it. Now, to scroll a screen up, we can enter SYS 50912, and to scroll everything down we enter SYS 50656. This, as you will see, scrolls all 240 lines of the thing. If you want to scroll just one line at a time you'll need to disassemble the code and change a JMP to somewhere into an RTS. It's in there, all you've got to do is find it.

You might feel that the screen isn't scrolling fast enough, in which case you will need to:

```
POKE 50807, O:POKE 50809, 254.
```

to give you the fastest possible scrolling speed in the downwards direction, and:

```
POKE 51063, O:POKE 51065, 254
```

to do the same for the upwards direction. Using other numbers will obviously alter the rate of scroll as you can find out.

All well and good, but the only thing being displayed on the screen is gibberish, and so the following small program does the same for vertical scrolling as the tiny drawer program did for horizontal scrolling in the other article.

Type it in, save it, and then run it. The program will stop, and by using the ordinary cursor keys you can wipe out whatever is displayed and draw in your own design, remembering that you are working on a screen that is 15 characters wide. It's only a simple program so you'll have to keep track of that for yourself. When satisfied with screen one, move the cursor over to the right hand side of the screen and type CONT to let the program take over again and put the screen data (reverse spaces are a good idea) into the correct part of memory. The whole 240 lines are stored, as we have seen, from \$5000 to \$5FFF.

On the other hand, if you've already got a horizontal scrolling screen that doesn't employ graphic characters and uses just plain reverse spaces instead, the following program will turn everything on its head and save you typing in a whole new lot of stuff. It won't work for anything OTHER THAN reverse spaces.

Load in your horizontal screen, then load and run this small program. Then you can save off both screens together, using an assembler of some kind.

Conclusion

As with the horizontal scroller, this was mainly written to show John D. "give me a broken motorbike and I'll return you a dream machine" Ryan, and you'll be pleased to know that he was suitably impressed with the results. He also expressed an interest in background music, saying that "that Hubbard bloke" always has ten minute musical soundtracks AT LEAST in every game. Background music? Ten minute soundtracks? Another article? I feel an interruption coming on!

P.G.

SCROLLING UP AND DOWN

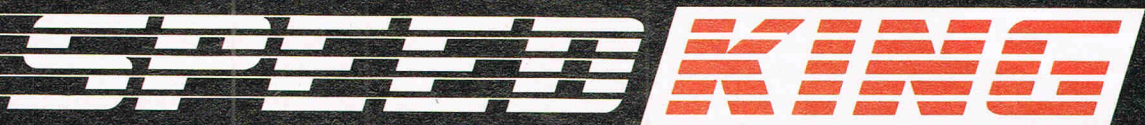
```

10 FORI=1TO4:READS(I),E(I):NEXT
20 FORJ=1TO4
30 FORI=S(J)TOE(J)
40 READA:POKEI,A
50 NEXTI,J
100 DATA 50656,50829,50896,51085,52128,52183,52384,52415
200 DATA174,032,197,224,240,208,001,096,162,025
210 DATA142,032,197,076,240,197,174,032,197,232
220 DATA142,032,197,224,240,208,005,096,000,255
230 DATA000,255,162,048,189,160,203,141,034,198
240 DATA189,161,203,141,035,198,202,202,189,160
250 DATA203,141,031,198,189,161,203,141,032,198
260 DATA160,000,185,012,004,153,052,004,200,192

```

CONTINUED ON PAGE 124.

KONIX



VROOM! CAN YOU HANDLE THIS MUCH POWER? POW! BLAT!

The **KONIX SPEEDKING** packs more punch. That's why it's fast overtaking ordinary joysticks to become one of the world's most popular hand control.

As it's name suggests it's built for fast handling to give you lightening fast control. Micro switches await your slightest movement, and fly into action - ZAP, POW, SPLAT, BLAM - giving you instant reactions to every command. Tough, rugged and made in Britain to the very

ZAP!

highest standards, the **KONIX SPEEDKING** comes with a twelve month guarantee.

Available for:- Spectrum and Spectrum Plus, Commodore 64, 128 Vic20. All Atari Computers, Electron, M.S.X. Computers, Amstrad and Oric at **£12.99**. Also:- BBC, Commodore C16, Plus 4, and Dragon at **£14.99**.

Trade and export enquiries contact Wayne or Sandra on **049525 5913**.



Please send me _____ Speedkings at **£12.99** each.
_____ Speedkings at **£14.99** each
(Price includes postage and packing in the U.K. Overseas orders please send **£2.50** per Speedking.)
Computer make and model _____
I enclose a Cheque/Postal Order for _____ made payable to **KONIX**.
Please charge my Access/Visa No. _____
Card holders can telephone on **049525 5913**.

Signature _____
Name _____
Address _____
Postcode _____ Telephone _____

Send to Konix Computer Products, Unit 13, Sirhowy Hill Industrial Estate, Tredgar, Gwent NP2 4QZ. U.K.

Comment

Your hero is back with another welcome and all the chat, gossip, news and reviews in the world of Adventure. Let's kick off with another round of name dropping, because I attended yet another little get together not so long ago, this time on behalf of Microprose and Origin Systems, who have announced a marketing and distribution tie up.

Microprose as you know are famous for Gunship and some wonderful strategy games culminating in Vietnam, a truly huge simulation of that terrible conflict. Origin, as well as producing the Ultima series, which we all know and love have quite a stable of other role playing games (one of which called Moebius, was reviewed in the June CCI). The venue was a boat on the Thames where lunch and drinks were had by all, along with a lot of nodding of heads and shaking of hands and all the other things you do at these things. During all this controlled mayhem I managed to interview two people who were responsible for the whole show, Stuart Bell MD of Microprose and Robert Garriott President of Origin. Robert, whose younger brother Richard was responsible for creating and writing the Ultima series, is very positive about his company; "we at Origin" he said "believe that our products take from 50 to 80 hours to complete, and so the value compared to an arcade game is incomparable. Each game takes around 3 years of man hours to produce, and when you think of all the bits that make up the package as well it makes us proud to be able to have a product like that". Pure American marketing spiel that, but he does have a point, in that all their games (like Infocom) have some nice extras that must make all the difference. He told me that there are five new releases planned for this year, Ultima V, (you'll read about it here first I promise) Ogre, Space Rogue, Auto Duel (see the review in this issue) and Moebius. All these titles are role playing interactive games and are disk only. They are also writing their first text only adventure entitled Rager, and it's written by Mike Berlyn who was responsible for Infocom's Suspended. As a parting word,

Robert said that they will also release rewritten versions of Ultima I and II which have been updated with better graphics. With a "see you at the PCW show", he was off to do some more shaking of hands.

Stuart meanwhile, was enthusing over Pirates, and how it will change the face of strategy simulations as we know it. He was also oozing marketing signals over their new follow up to Gunship, which will be another flight simulation that has "such state of the art graphics that you won't believe what you are seeing!"

Anyhow, a good time was had by all, and at close of play, I returned grasping a copy of Auto Duel, to enlighten you on its merits.

This month there is as promised a large hints section in which I hope you find something to help you on your way, it is not in code so you have been warned, however if you feel that the hints should be disguised so as to not let you inadvertently look at a clue you didn't want to write and let me know.

Adventure News

Two New Adventures from Infocom

It seems that since Activision's takeover Infocom have been more prolific than ever, and are releasing new adventures at a rate of knots. **THE LURKING HORROR** is a tribute to classic horror writers like Steven King and H.P. Lovecraft and is dedicated to such novels as *The Shining* and *The Exorcist*. It is in fact Infocom's first interactive horror story, written by my old buddy Dave Lebling. In the story, you have enrolled in the George Edwards Institute of Technology, and are baffled by the stories about the old campus basements and storage rooms. You have heard about the decrepit underground

tunnels, and have vowed never to go near any of it. But of course you do, as a strange force draws you into the dark nether regions of the institute. (pause for effective screaming).

The other new title is a sequel to **PLANETFALL** which has been written by the original author Steve Meretzky and is called **STATIONFALL**.

The unforgettable robot Floyd joins you for an adventure in which the survival of the entire galaxy rests in your hands. You are enlisted in the Stellar Patrol, your heroics in **PLANETFALL** earned you a promotion to Lieutenant First Class on the paperwork task force. Your life is as tedious as ever. You hear that you have been assigned to travel to a nearby space station to pick up a supply of forms, and are set for a very boring journey when you discover that your companion is mischievous Floyd! When you get there all is not well, the place is deserted save for an ostrich a balloon creature and a robot named Plato. The captain's log describes a breakdown of machinery and even Floyd begins to act oddly.

Both games show a new line of packaging for Infocom, gone is the library book look and the grey pinstripe covers, to be replaced by a slide-in box and bold cover design. All the usual bits and pieces are present though and will be reviewed in full next month.

Nuclear War Game from Activision

Activision are set to release a game called **High Frontier** which is a strategy wargame based on the construction and use of the proposed American Strategic Defense Initiative (otherwise known as SDI or Star Wars). You are in

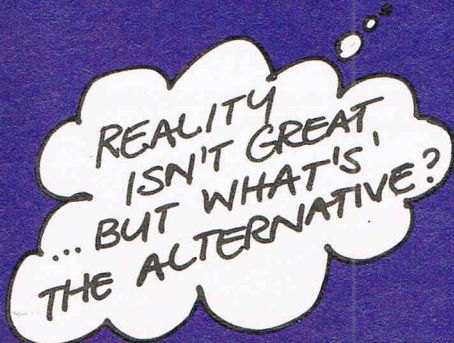
charge of the development and use of the SDI system. Eventually, depending on how effective your preparations have been you will be required to repel a Soviet nuclear attack.

Classic Quests Arrive

Classic Quests believe that adventures with graphics are like crosswords with pictorial clues, that's why their adventures are pure "unadulterated text". Every Classic Quest comes with a sealed clue envelope and useful memory save facility. Each adventure is graded in difficulty, so a beginner can work through the range starting with the easiest and finishing with the most frustrating. As soon as Classic Quests send me the range, I'll let you know.

Intellicreations Joins Electronic Arts

Remember Alternate Reality? Well the producers of that fine game, Intellicreations, have joined with Electronic Arts in a major distribution deal, that will mean that their follow up Alternate Reality — The Dungeon will be available in Britain shortly. In Dungeon you continue your journey in an underground world beneath The City. There you will travel through four levels of dungeons meeting fearsome apparitions and consulting with powerful wizards who will lead you to solve the mystery of the Alternate Reality.



Letters

Dear Andy

I have writing to you as a last resort. I am searching for the address of a software company called Severn Software. (I have written to no avail). The text adventure game I am playing is called Mystery of Munroe Manor. If anyone knows of their whereabouts, or who has succeeded in completing the game I'll be very grateful.
Carla Perkins, Royston

Does anyone have the answer? Sorry Carla, that is one adventure I have never played although I have heard of it. However if someone does know the solution, write to me, and I'll forward the letter to Carla.

AM

Adventure Hints

CASTLE OF TERROR

Constantly getting burnt to death? — move the sack out of the way.
Can't find the locking pin? ... The rung deserves a closer look.
Is the Old man sulking? ... Talk to him first, then buy him a drink.

MINDSHADOW

On England
End of alley off Baker Street and search sleeping man. Take hat and money. Go to fisherman and buy pole. Fish debris at pier and catch newspaper, examine it and think "Arcman". Go to tramp on Airport Way and buy "Byword". Go to Ricks

and give hat to woman, go east to bar and examine drink the waitress brings. Follow man. In restroom think "Tycoon". On way out get hat and examine it. Go to store and say "Chandralt" to clerk. Buy passport and take it, go to airport and board plane to Luxembourg.

THE PAWN

Get some lead? ... You need the help of a sharp instrument.
The Alchemists ... just do what they ask you to do.
Stuck in the Paper wall room ... try ripping the wall, you'll need to climb down a rope.
How to Kill Kronos ... The bottle needs to smash, nothing that a little bit of muscle wouldn't cure.
Getting past the Dragon ... He is blind really, point out to him the humanoid shadows lurking in the shadows. He may think you are Kronos if you wear his clothes.

BORROWED TIME

Keep getting killed at the start? ... go east, hide behind chair, run north, lock the door, run up stairs, break window, get shard of glass, go out window, cross wire, cut wire, go east.
Goons chase you when you dig up suitcase? ... Run north, run west, run west, run west, hide in trash, search trash, throw bone to barking dog, then run east away from goons.

To win you need the suitcase, report, folder and scrap of paper as evidence to arrest Farnham.

LAPIS PHILOSOPHORUM

In order to cross the river in the west, you must make the ferryman aware of your presence. Get dry faggots (from the depression south of the mountain) and fresh leaves (south of the raft back in the forest) and you make a fire at the ferry hard. The leaves produce such thick smoke that the ferryman crosses over. The path on the other side leads to the monastery, which you enter by using the key, which was cast from the key mould found in the try by the bridge.

Adventure!

Adventure... CONTINUED

TASS TIMES IN TONETOWN

At the Well... (if Ennio says "I smell snarlmeat" don't go down, wait 15 times) go down, west (wear mask) west (do not press button) read plaque,n,n,n, go up,e,n,unlock gate (do not open it) then go s,w,d,s,s,s,e,e,e,u,e,s,w.

SORCERER OF CLAYMORGUE CASTLE

To open the stone door, squeeze towel, and cast the seed spell. The lava will get your towel back into shape.

ADVENTURE QUEST

To defeat Dracula, save eating the onion until he attacks you.

SPELLBREAKER

In the dark room, down is the only way out. Stuck at the lava? You should figure out how you can use the gold box. It does have an interesting property that you might be able to use. Try leaving it behind.

Can't get the vault door open? The cube from the outcropping will enable you to do a "rezrov" spell which will open the door.

THE HOBBIT

to get from the dark windy passage to the ring, go sw,d,wait for goblin,n,se,e,take ring. To go from ring (lake) to Beorns house go n,sw,n,se,w,n,d,s,w,e,u,e,e.

with \$200 and just your legs for transport, which in Autoduel is decidedly unhealthy, so you need to get cash quick to buy your first car and then begin your Duelling career. New recruits start in the arena on "amateur night", where you get given a car to use on the track, against five other hopefuls. If you manage to defeat them all you win \$1500, and it's with this bounty that you get to create your own vehicle.

As in all role playing games, your character develops as you progress into the game, and in Autoduel the same applies. In each city you visit there are a number of locations to enter, where you can listen for rumours of new driving jobs, or stay for the night, or get repairs, sell some spoils from cars you have defeated in the form of salvage, and buy new weaponry.

You can even visit the FBI and become an outlaw chaser, clearing the highways of all the rogues and bandits lying in wait for other cars.

This is a world that was created in the first instance by Steve Jackson, in a board game he devised called "Car Wars", and Origin have used the Ultima team to convert it into a computer adventure Project.

I was impressed by the package, which comes with a detailed manual, full colour road map of North America, and even a mini pack of real tools (for all those little breakdowns).

The only flat tyre on the landscape for me was the dreadfully sloooow disk operation used between practically every feature. The drive clunks and clinks at every opportunity resulting in tedious delays and frustrating

playing.

If you can stand that then Autoduel has to be thoroughly recommended.

Personal Rating 7

TREASURE ISLAND

Mastertronic £1.99

There is so much detail in this adventure it's hard to realise that it is only a budget cheapie. It is a graphic/text game played in real time where in addition to all the usual adventure commands you can run or walk, or swim or wade. Each take up different amounts of energy which must be replaced by eating or sleeping at the most opportune times. Also the amount of objects you can carry differs according to the weight of each item, so careful selection of objects is vital.

The actual storyline is about the quest for some extra treasure that you believe to be still buried on the Island, after Long John Silver et al carried off Captain Bloods first lot in the book. You play Jim Hawkins who along with our old friend Long John has returned to see where the extra treasure is hidden. You don't trust him, you don't have much food, and to cap it all there are some other pirates around with the same thing on their minds!

All you have to go on is your original map and the knowledge that dotted around the island are your previous caches of food and tools. You just have to work it all out.

An excellent game, full of atmosphere, and with so many little bits there isn't room to point them all out.

This is a must for your collection.

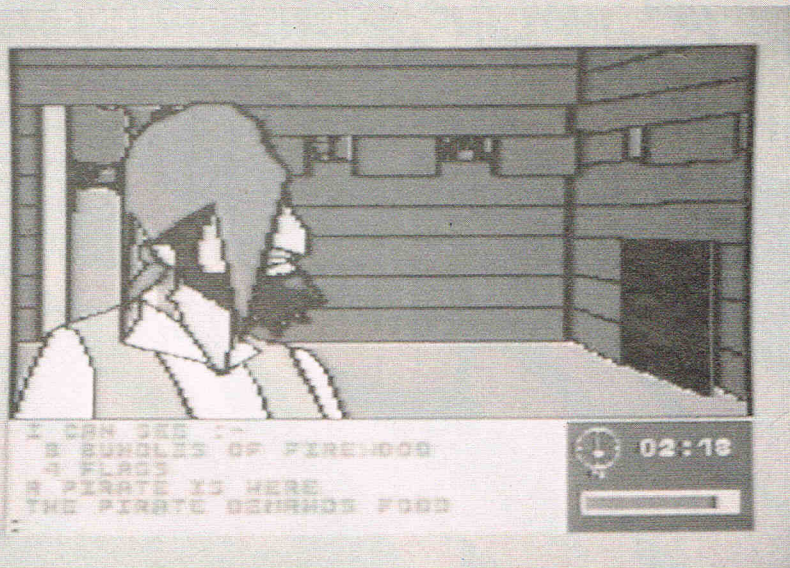
Personal Rating 9

Reviews

AUTODUEL

Origin Systems £14.99

Imagine a world where the only form of employment is driving an armour plated car full up to the brim with weaponry along hostile roadways fighting any other driver on the road, in order to deliver cargo from one city to another. Then, as a relaxation do battle in a city's arena pitting your car and driving skills against many other for a prize of fame and fortune. This is the world of Autoduel. You begin



Adventure...
CONTINUED

MURDER ON THE ATLANTIC

Infogrammes £14.95

Infogrammes is building up into a software house that is trying very hard to launch innovative and creative adventures in this country. Both Vera Cruz and The Sidney Affair have been well received, even in this column, which is a bit more critical than most. With *Murder on the Atlantic* they have gone one better and really put some thought into the packaging.

David Croweller, head of their British operation tells me that they had a bit of a problem convincing W H Smith to stock it as they felt it was "over the top" in size, but this is all nonsense. What you get is a Vera Cruz style box roughly 5 inches square, packed to the brim with documentation a la Infocom but better. For the detective in you it's paradise come true as there is a set of business cards, a torn up photo, a piece of string, a micro dot, a match, a bullet casing, a ships passenger list, a telegram, 7 letters, two photos, a newspaper, a message in brail, a coded message, a top secret envelope containing two items, a map of the ship, and the faces of the 40 guests on board. Quite astonishing. What about the game itself though? Well in the true tradition of Infogrammes the gameplay is different from the norm, with little windows for the action and a side on view of the ships rooms. You move from room to room come across suspects to interview or evidence to examine, and do the necessary. Set in the 1930's it's a game of detective work mixed with international espionage, and as far as I am concerned gets my vote as best thriller of the year.

Personal Rating 9

THE SHADOW OF MORDOR

Melbourne House £9.95

It's here! Oh the joy, the bliss, the looking forward to, the excitement, the putting the tape into the machine, the loading, the disappointment.

It seems that Melbourne House don't know when they are on to a good thing. There they were, with the rights to a story that began the adventure game as we know it, and with the computer buying public salivating at the prospect of getting the game... they blew it. Lord Of The Rings is a classic tale, a mighty work, and one which has hit written all over it. So what happened; Lord Of The Rings Part 1 was slow, bug ridden and a horror to map. It was also expensive as a copy of the book came with it (one of the stipulations from the Tolkien estate).

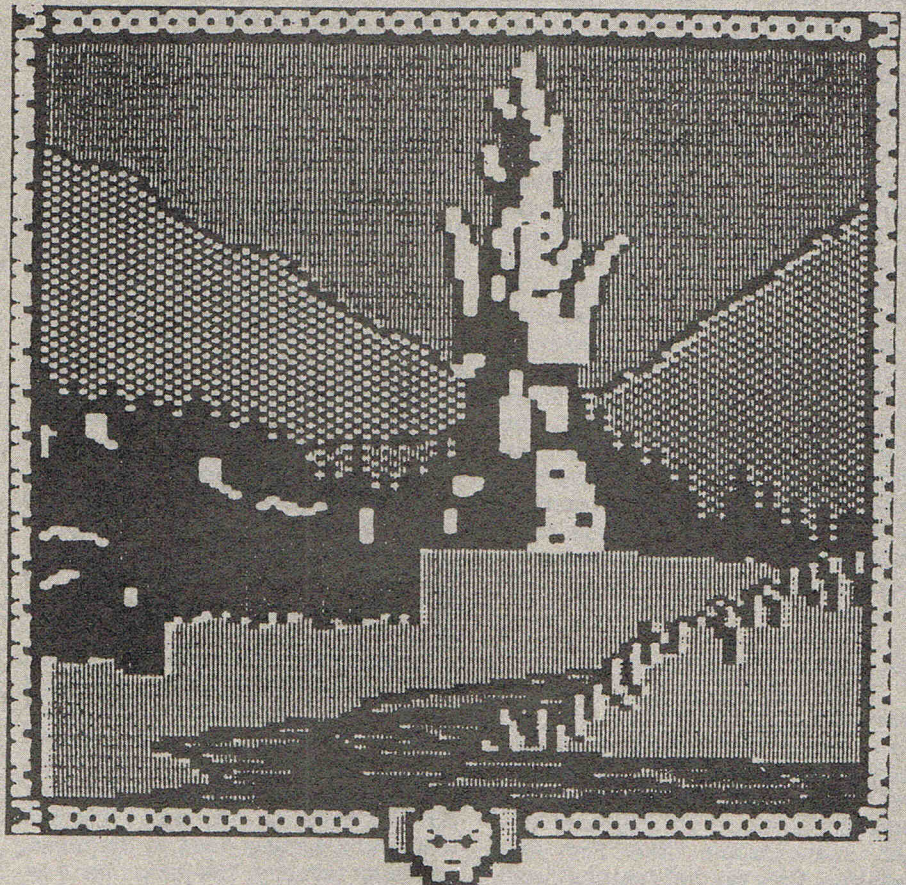
With mixed reviews, but mostly towards the lower end on a scale of ten, the game sold with the promise that well, the next part will be better. In truth, the bugs are gone this time around thankfully, but the

implementation is certainly the same, slow response times, horrific mapping, and graphics that you can either have at the start or not. There is no facility to turn them off and on at will, which for some people is a must, including me. I began with having graphics obviously to check them out, very pretty, nothing startling but better than Part 1. A long wait while the picture is read in, so go and make a cup of tea. OK, I've seen the graphics but I want to play in earnest now so to quicken it up I'll turn them off. No way José, you have to load it all in again and say "n" to graphics when asked.

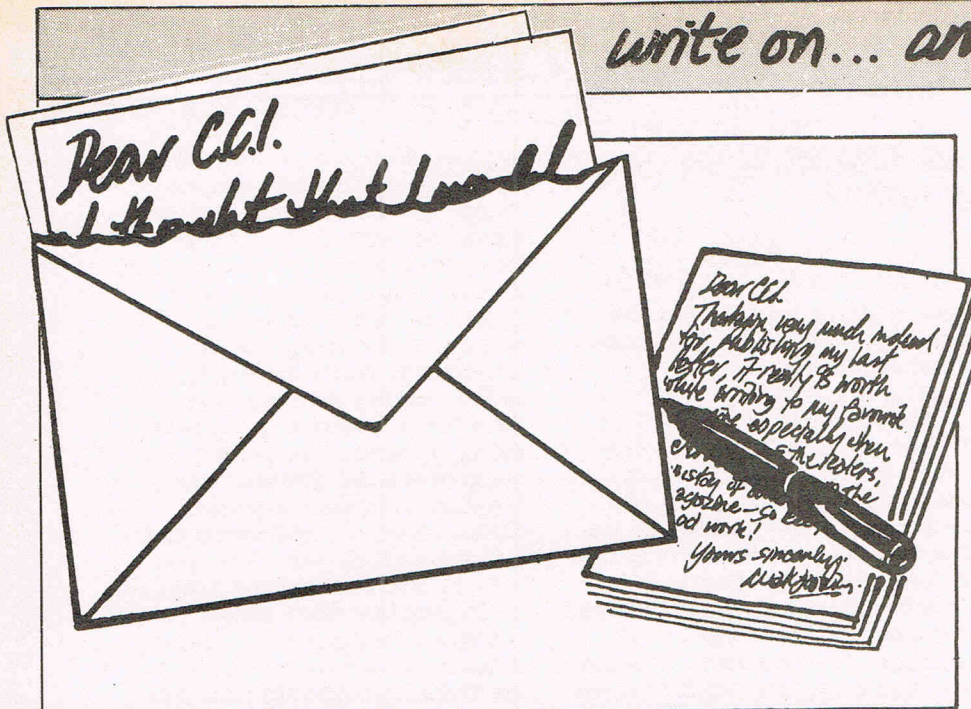
Anyway for the record, this part takes up the tale of the Hobbitises (as Gollum would say) after they reached Loth Lorien and lost Gandalf in Part 1. This time they are at the edge of Lake Nen-Hithoel from the journey down the river Anduin. Just Frodo and Sam remain from the party having secretly gone on alone.

I cannot hide my disappointment at this average game, as I expected a lot more from the team that led the way with the innovative Hobbit but such is life.

Personal Rating 3



That's all for this month, keep solving those puzzles and sending those letters, see you next issue.



16 bits will be done. Home users will buy Amigas, and will be able to afford the software.

As for the Magazine. It's good, but it could be better. If you are going to have games reviews, a colour screen shot is better than none at all which is better than a cartoon scribbled in 3 minutes, which is better than a pack shot. If you are going to do something, at least do it well. Put a bit of pride into the magazine. Revamp the rating system.

When I originally subscribed to Commodore Horizons, there was an Amiga section in the mag. I now am subscribed to CCI, and find that if I want to find out about Amigas, I need to splash out more money. Don't waste valuable pages in the magazine.

I hope that you can find some valuable space to print this letter in your magazine. Perhaps you could cut out a few drawings to do it.

Yours faithfully
Simon Hewison

Dear Simon

You are not the only one who thinks the Amiga is probably too expensive but your comparison is very interesting. Your comment on the cost of software however does not take into consideration that the development cost of games on the 68000 is at present for higher than on, say, the 64, where the programming expertise is spread world-wide. For example one person can program a reasonable 64 game in under 6 months. For an Amiga it can sometimes take 2-3 years hence the increased cost. As for the magazine, we have a great deal of pride in it. We believe it needs the kind of balance of articles you mention. It also needs a balance of visual entertainment and that includes screen shots and cartoon style illustrations. Revamp the ratings? Okay, any suggestions?

Dear C.C.I.

Just a note to say congrats on the mag. It gives something for everyone even a 33 year old like me.

Any chance of extending some of the competition deadlines? We get the mag about 2 months after the closing dates (do it as an Aussie Bicentennial gift).

Yours sincerely
J. D. O'Connor, Wallsend, Australia

Dear J. D.

Sorry it takes so long to get CCI to you. Maybe we'll send Lady Romayne Downunder, our Production Princess over each month carrying it. As a special Bicentennial gift we will extend the deadlines for the next month's competitions to give you a chance. And if we can, next month we'll run a special Australians only comp. That suit you, Bruce?

Dear C.C.I.

I have been the owner of a Commodore 64 for some time now having upgraded from a Sinclair ZX81 (16K).

One job which I use my machine for is to keep track of my current Bank account. In this respect, the ZX81 was ideal when used with Sinclair's 'Bank Account' program. This program, although very slow, was extremely good in that it could store data sufficient for one complete years banking. It took standing orders and automatically updated without needing a further input of the same order. I found the program to be easy to use and it provided me with all the facilities that I required of a Bank account program.

I now require a similar program for the 64 but am unable to find one that has exactly the same facilities as the Sinclair program. I have tried Commodore's 'Money Manager' and found this to have too many facilities for just running a current account. This makes it difficult to use when one does not require to keep the type of record available on the program. I have also tried 'Checkbook Balancer 2' from Green Valley Publishing. This is the nearest program to my requirements that I can find. The only drawback to it is that it does not automatically update standing orders.

I would be grateful if you can perhaps tell me if a program of the type that I require is available and from where.

Yours sincerely
M. J. Hill

Can anyone help M. J. Hill?

Dear C.C.I.

Having just flicked through some old issues of CCI, I can't help but noticing that there are a great deal of letters complaining about your magazine. It is true. Some people don't like your magazine. They say that they don't want

to hear about the Amiga, that they want more games reviews, and all sorts of nasty things.

I am not that sort of person. I get your magazine because I want to read about future developments, the Amiga, interesting applications of the computer, and putting the computer to use doing something sensible. Before people start thinking that I am a boring businessman, with plenty of money, I am not! I am a 17 year old 6th former. I like playing games, but I am choosy. I know that instead of spending £10 on an over-hyped game, I could spend that money on something that will probably give me more enjoyment — going out etc. I wish to find new and interesting applications for my 64. I like hearing of silly peripherals, like shoes that can interface to a computer. I like reading about developments in the Amiga world, because I am seriously considering the Amiga 500. Before I do this, I want to know what state the 68000 scene is in. At the moment, it is caught in a vicious circle — The computers cost too much. The software houses set prices of £25+ per program, the computers came down in price so more people would buy them, but the software houses didn't follow suit. Therefore, home users will not upgrade because they will not be able to afford the software. Think of it like this:

Commodore 128, disk drive, Dolphin Dos, GEOS 128, mouse, Centronics interface, RAM expansion . . . Price . . . about £570. Average software cost . . . £8.

Amiga 500 (with 880k disk drive, mouse, 512k RAM, decent O.S. decent interfaces — a heck of a lot better than a 128) . . . Price . . . about £570 incl VAT. Average software cost £30.

When will Mastertronic bring out Amiga games for around £5? This will really be a turning point in the home computer industry. The jump from 8 to

The 64 Software Centre

1 PRINCETON STREET LONDON WC1R 4AL TEL 01 430 0954

The specialist centre for Commodore 64, 128 and Amiga

Selected items from stock

Software for CBM64/128 d=disk r-cartridge t-tape

ACCOUNTS

Anagram	Sales Ledger (64 or 128)	d £35.00
	Purchase/Nominal Ledger with journal	d £35.00
	Cashbook	d £35.00
Fieldmaster	Sales Ledger	d £35.00
	Purchase Ledger	d £35.00
Sage	Popular Accounts (128)	d £90.00
	Payroll (128)	d £69.00
	Invoicing (128)	d £69.00
	Supercombo (Account, Invoicing, Payroll)	d £190.00
Studio	Payroll 64	d £44.00
	Payroll 128	d £44.00
Dell	Invoice Generator	d £20.00
Fieldmaster	Home Accounts	d £10.00
Timeworks	Money Manager	d £15.00
	Sideways (64 and 128)	d £35.00

STOCK CONTROL SYSTEMS

Anagram	Stock Control (64 or 128)	d £35.00
Practicorp	Inventory	d £12.00

DATABASE FILING SYSTEMS

Cardco	Mail Now	d £30.00
	File Now	d £39.00
Digital	Pocket filer 64	d £36.00
Fieldmaster	Record Card	d £10.00
Precision	Superbase (64)	d £40.00
	Superbase (128)	d £60.00
	Superbase Starter	d £20.00
Timeworks	Data Manager 2 (128)	d £50.00
PSI	Fleet Filer 64/128	d £39.00

WORD PROCESSORS

Broderbund	Bank Street Writer	d £49.00
Cardco	Spell Now	d £29.00
	Write Now	r £49.00
Digital	Pocket Writer 64	d £36.00
	Pocket Writer 128	d £44.00
	Pocket Writer 64/128 v.2	d £49.00
Precision	Superscript (64)	d £49.00
	Superscript (128)	d £60.00
PSI	Fleet System 4 (WP, Database)	d £75.00
Supersoft	Word Perfect	t £10.00
Tasman	Tasword 64	d £19.00
	Tasword 64	t £17.00
Xetec	Fontmaster II (64 or 128)	d £60.00

SPREADSHEETS

Cardco	Calc Now	d £30.00
Digital	Pocket Planner 64	d £36.00
	Pocket Planner 128	d £44.00
	Superpack (Filer, Writer, Planner for 64)	d £75.00
Fieldmaster	Worksheet	d £10.00
F.P.	Powerplan	d £40.00
Practicorp	Practicalc II	d £30.00
	PS Spreadsheet	d £15.00
Spinnaker	Better Spreadsheet	d £30.00

AIDS & UTILITIES

Access	Mach 5 Fastload	r £20.00
Abacus	Chartpak 64	d £24.00
	Chartpak 128	d £39.00
	Cadpak 128	d £49.00

	Cobol 64 or 128	d £49.00
	SuperC 128	d £49.00
	Basic 64 Compiler	d £39.00
	Basic 128 Compiler	d £49.00
	Super Pascal 64	d £49.00
Berkeley	Geos	d £45.00
	Fontpack 1	d £24.00
	Deskpack	d £27.00
	Writers Workshop	d £38.00
	Geodex	d £29.00
Broderbund	The Printshop	d £33.00
	Graphics Library (1, 2 or 3)	d £18.00
	Holiday Graphics	d £18.00
	The Printshop Companion	d £33.00
Cardco	S'More (22K extra Ram, Toolkit)	r £49.00
CSM	1541 Disk Drive Alignment Program	d £44.00
Crystal	Zeus Assembler	d £14.00
	Zeus Assembler	t £10.00
Evesham	DolphinDos	r £69.00
	Freeze Frame IIIB	r £39.00
F.P.	Pascal 64	d £15.00
Hesware	Forth	r £49.00
Incentive	Graphic Adventure Creator	t or d £20.00
Oasis	Laser Basic	d £19.00
	Laser Basic	t £15.00
	Laser Compiler	d £25.00
	Laser Compiler	t £19.00
	Laser Genius	d £20.00
OCS	Oxford Pascal 64	d £34.00
	Oxford Pascal 128	d £49.00
Orpheus	Cad 64	d £20.00
Practicorp	64 Doctor	d £12.00
Precision	Supertype	d £15.00
	Supertype	t £15.00
RW	Merlin 64 Assembler	d £49.00
	Merlin 128 Assembler	d £69.00
Springboard	The Newsroom	d £49.00
	Clip Art 1	d £25.00
	Clip Art 2	d £27.00
	Clip Art 3	d £27.00
Skyles	Victree	r £30.00
Supersoft	Zoom monitor	d £12.00

MUSIC SYNTHESIZERS

Access	Master Composer	d £39.00
Broderbund	Music Shop	d £49.00
EA	Music Construction Set	d £15.00
Firebird	Music System	d £17.00
	Music System	t £15.00
	Advanced Music System	d £39.00
Supersoft	Music Master	d £10.00

CHESS

CDS	Colossus 4	d £14.00
	Colossus 4	t £10.00
SC	Chessmaster 2000	d £33.00

BRIDGE

Artworx	Compubridge	d £29.00
	Bridge 4	d £29.00
Bridgemaster	Bridge tutor	t £17.00
GGP	Bridge Baron	d £35.00

EDUCATIONAL

Dell	Essential Italian	d/t £14.00
Broderbund	The Toyshop (20 working models)	d £60.00

INTERFACES

Xetec	Supergraphics Senior	r + cable £80.00
	Supergraphics Junior	r + cable £50.00

**WAR, SPORTS AND BUSINESS SIMULATIONS — FLIGHT SIMULATIONS
ADVENTURES (PHANTASY, GRAPHIC, TEXT) — ARCADE GAMES
a wide range stocked.**

**United Kingdom - Prices include VAT, Add £2.00 for P&P
Europe - Prices as above. Price exclude VAT but no charge for P&P
Other countries - Prices exclude VAT but add 20% to above prices (air)
Software is not sold in a trial basis**

Dear C.C.I.

I own a Plus/4 and I am very grateful for the effort you put in for this computer. Every month there are more and more C16/Plus/4 game reviews which is very good.

I get quite a few magazines mainly CCI (the best), Commodore User and Computer Gamer but when I read the reviews they are totally opposite. In March's issue there was a review of The Way of the Exploding Fist and it was rated Awesome and in CU it was only 5/10. I bought the game and you were right it was awesome. That has happened so many times that I haven't known whether to buy it or not so in future I'll take notice of you. Last of all thanks for a great mag (again!) and keep it up!

Yours sincerely
B. R. Parrott

Reviewing games is a very personal view of what makes a good game. At CCI we try to get a range of opinions that will tell our readers what they want to know about a games. We get quite a few letters these days like yours. So we must be doing something right!

Dear C.C.I.

I am a Plus/4, and when looking I find seven magazines publishing the C16

and Plus/4 and most had 3/4 of their magazines on the 64 and 128, all except yours. If there were a medal for the best magazine, I would not give you one but half a dozen.

Please tell me something, the book for the 1351 cassette unit I found something of interest, it said of a Commodore Computer called the 116, yes the 116, and this is most like the Plus/4 except for the user port, and it's smaller, please tell me why, I have never seen this computer. I am a real professional programmer of 12 years old.

S. Steven, London, Lewisham

Dear S. Steven

The 116 is an upgraded version of the C16 only available in West Germany — which is one reason why C16 software is so popular there and really top programs like Udo (Summer Games) Gerz work on the machine.

Dear C.C.I.

When I first bought CCI I thought it was one of those big, long, boring computer magazines aimed at people who all the time spent it on programming. But it wasn't it was aimed at younger computer addicts. I was amazed to see all the things I was missing so I buy CCI every month.

The first software catalogue I got was, yes you guess it! it was CCI Softpost. I

spent ages looking at deciding what to buy. My dad bought me Transformers (Activision Edition), Konami Coin-op hits, and got a free ASL Grandmaster Chess. But I a problem, in Transformers, when the Decepticons are at the Shuttle base they steal, what look like energy rods. I blast them but then how do I collect them. Also I have a problem on the Park, Energy thingies come down and the screen says Energy Bonus 1500 or something like that, and I can't collect them? Please help, I have been thrashed 150,6000 to 1545!

Emm, sorry about this, I have another problem, nope, it's not a game, its sprite programming. After spending months on end, trying to make a sprite appear, I now have this frustrating result. No matter what design it always, turns out like a balloon basket! I enclose my program. Perhaps Rae West can help.

Before I sign off, I would like to congratulate you for producing a great magazine. Keep up the good work.

Yours sincerely
Christopher Chung

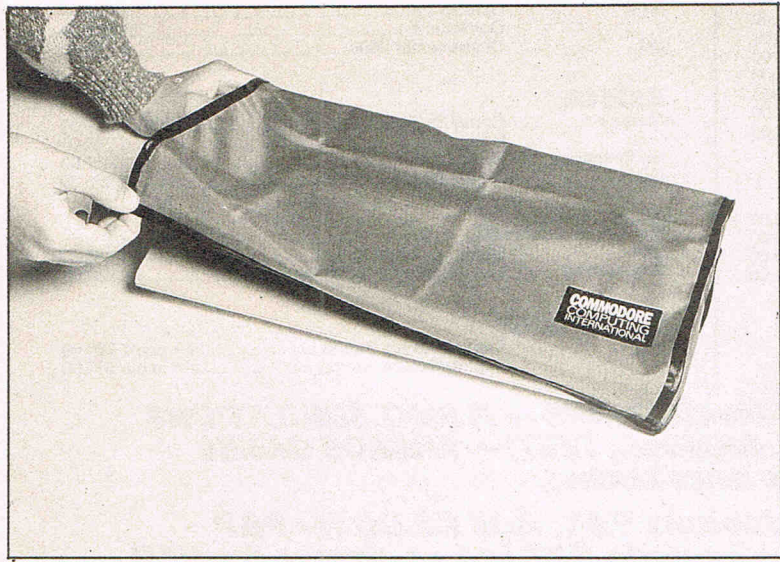
P.S. I'm only 11, so if I'm to learn machine code which age would you recommend?

Any help for Christopher from all you brilliant gamers out there? And Christopher the correct age for learning machine code is always right now!

COVER UP!

A cover for your Commodore computer will protect it from dirt and damage.

CCI is making a special offer of strong, goodlooking covers to fit Commodore computers: C64, C16, Plus/4 and C128. The covers are designed in a cool grey with a neat yellow on black logo. They are of the highest quality and manufactured in smooth plastic to first class standards. CCI covers... Protect your Commodore computer with a touch of style.



Only £3.99
for the C64, C16, C18,
Plus/4, C128 and 64C
(all + 75p P+P)

Please send me covers for my
C64 C16 Plus/4 C128 64C
I enclose cheque/P.O. payable to Croftward Ltd
for £.....
Please charge my
Access Acc No
Name
Address
Postcode
Send to: CCI Cover Offer 010
Commodore Computing International
40 Bowling Green Lane
London EC1R ONE Allow 28 days for delivery

The 64 Software Centre

1 PRINCETON STREET LONDON WC1R 4AL TEL 01 430 0954

The specialist centre for Commodore 64, 128 and Amiga Amiga Software

Selected items from stock

BUSINESS

Grafox	Logistix	£170.00
Maxisoft	Maxidesk	£60.00
	Maxiplan Spreadsheet	£130.00
	Maxicomm	£50.00
Mycosystems	Scribble Wordprocessor v.2	£80.00
CDA	Lex Check speller	£35.00
Precision	Superbase	£120.00
Gold	Pagesetter Desk Top Publishing	£120.00
Northeast	Publisher 1000	£170.00
New Horizons	Flow Idea Processor	£80.00
	ProWrite	£110.00
Sedona	Money Mentor Personal Finance	£30.00
Meridian	Zing	£70.00
Commodore	Textcraft v.1.1	£30.00
Taurus	Acquisition Database	£245.00
VIP	VIP Professional	£160.00

HOUSEHOLD

EA	Financial Cookbook	£30.00
----	--------------------	--------

UTILITIES

AC	Fortran	£250.00
Aegis	Images	£50.00
	Images Artpak	£46.00
	Animator	£110.00
	Draw	£140.00
	Draw-plus	£200.00
	Sonics	£70.00
Applied V	Futuresound	£160.00
Commodore	Amiga Term	£49.00
	Amiga C	£139.00
	Amiga Enhancer	£14.00
	Amiga Assembler	£79.00
EA	De Luxe Paint II	£120.00
	De Luxe Print	£30.00
	De Luxe Print Data Disk 2	£30.00
	De Luxe Video Constr.Set	£80.00
	Instant Music	£35.00
	Music Construction Set	£90.00
Easy!	Graphic Tablet	£399.00
Infinite	Galileo (Planetarium)	£80.00
Modula	Modula 2 (Developers)	£130.00
Manx	Aztec C Compiler (Developers)	£250.00
Metacomco	MCC Pascal	£75.00
	Amiga Toolkit	£39.00
	Macro Assembler	£80.00
Microillusion	Dynamic Cad	£475.00
Mindscape	Keyboard Cadet Typing Tutor	£39.00
NewTech	Digiview	£160.00
True Basic	Developers Toolkit	£39.00
Unison	Printmaster Plus	£39.00
	Printmaster Art Gallery (1 or 2), each	£29.00
Zuma	Fonts 1,2,3 / each	£29.00
	TC Text	£30.00
Access	Alegra 512K Memory Expansion	£330.00
	Alegra 2MB Memory Expansion	£550.00
Progressive	Megaboard 2 Memory Expansion	£475.00

EDUCATIONAL

FB	Math Talk	£39.00
	First Shapes	£34.00
Microillusion	Discover Spell	£24.00
	Discover Math	£34.00
Sierra	Winnie the Pooh	£20.00
Unicorn	Fraction Action	£39.00
	Decimal Dungeon	£39.00
	Animal Kingdom	£39.00
	Maths Wizard	£39.00

SIMULATIONS

Sublogic	Flight Simulator	£40.00	
Access	Leaderboard Golf	£29.00	
Accolade	Mean 18 Golf	£36.00	
	Mean 18 Data Disk	£20.00	
	Shanghai (Mahjong)	£24.00	
Activision	Balance of Power	£29.00	
Alert	Bridge 4	£29.00	
Artworx	Gridiron Football	£54.00	
Bethesda	Championship Basketball	£44.00	
Gamestar	Championship Golf	£34.00	
	Championship Football	£34.00	
	Silent Service	£25.00	
Microprose	EA	Chessmaster 2000	£39.00
EA	Grand Slam Tennis	£39.00	
Infinite	Kampgruppe	£46.00	
SSI			

GAMES

EA	Archon	£30.00
	Bards Tale	£39.00
	Golden Oldies	£29.00
	Stylox	£29.00
	Marble Madness	£39.00
	Arctic Fox	£29.00
	Adventure Construction set	£29.00
Cosmi	Superhuey	£34.00
Cygnus	Starfleet	£44.00
Epyx	rogue	£39.00
	World Games	£24.00
	Winter Games	£24.00
Mindscape	Halley Project	£39.00
	Racter	£39.00
	Brataccus	£34.00
	Defender of the Crown	£39.00
	Sinbad	£39.00
	SDI	£39.00
	Deja Vu	£29.00
	The Uninvited	£29.00
Activision	Borrowed Time	£24.00
	Hacker II	£29.00
	Mindshadow	£24.00
	Little Computer People	£45.00
	Portal	£34.00
Unicorn	Diablo	£24.00
Rainbird	Pawn	£24.00
Insight	financial Time Machine	£34.00
Other Valley	Monkey Business	£24.00
	Delta Patrol	£24.00
Polarvision	Oo Topos	£29.00
	Transylvania	£29.00
Origin	Ultima III	£44.00
	The Ogre	£39.00
Sierra	Space Quest	£39.00
	Kings Quest	£39.00
	Kings Quest II	£39.00
	Kings Quest III	£39.00
Synapse	Mindwalker	£39.00
Infocom	Leather Goddesses of Phobos	£29.00
	Hitchhikers Guide to Galaxy	£29.00
	Moonmist	£29.00
	Bureaucracy	£35.00

BOOKS

Addis Wesley	Amiga Reference Manuals (set of 4)	£104.00
	Amiga Dos Manual	£25.00

DISKS

	3.1/2 in., ss, box of 10	£25.00
	3.1/2 inc., ds, box of 10	£29.00

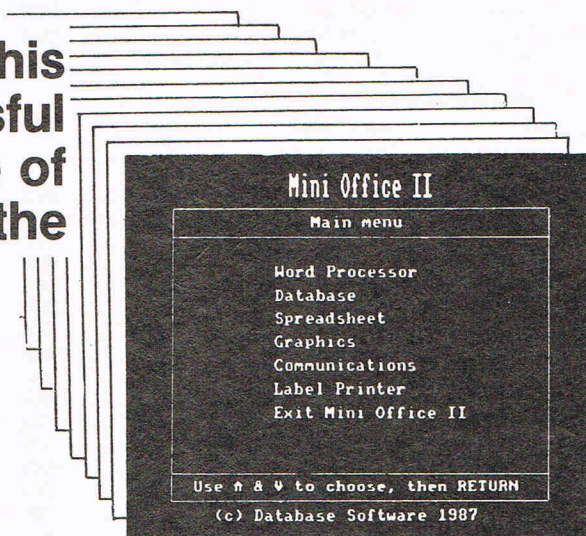
All prices include VAT —

Add £2.00 for P&P (UK and Europe). Add 20% for other countries.

Software is not sold on a trial basis. Software sold by mail order in the UK may be returned within 7 days of receipt, provided that it is not damaged, marked or soiled, in which event the purchaser may claim a refund.

Mini Office II

Richard Franklin concludes his series of articles on the successful Mini-Office package — now one of the best selling products on the Commodore 64.



This is the final article about the use of Mini Office II and in it I will be throwing some light on the Spreadsheet and Graphics programs but first a big of news about the package:

There are a few problems that have come to our attention and hopefully will be dealt with soon. There are:

1, Loading files on the spreadsheet: When loading large files, there is a problem with the program crashing. This can be temporarily cured by selecting a large sheet size (try 100 * 40) before loading the large size file.

2, Spreadsheet colours: on old ROM machines, the colour for the cells on the spreadsheet does not appear. This is due to the ROM screen clear routine which used to store the background colour into each location of the screen but now stores the current cursor colour instead.

3, Brother HR10 printer: When used in conjunction with the Label Printer it is not recognised (supposed to be MPS compatible).

Spreadsheet:

Setting up your sheet:

The first thing to do with a spreadsheet is to set up the way that it will be displayed. This is done via the Alter Spreadsheet option in the main menu.

The spreadsheet allows a maximum of 4000 cells with column and row maximums of 120 and 99 respectively. Each column can be set to a specific width and number of decimal places or all columns can be set globally.

Other settings that can be changed to suit your needs are:

Justification of text cells (Left, Centred, or Right). This setting can be overridden for individual cells.

Line spacing. Sets whether the spreadsheet is displayed with a blank line between each row.

Negative values. Allows you to choose whether negative numbers are displayed with a preceding '-' sign or enclosed with brackets.

Fixed fields. You can choose whether column AA or row 01 or both are always displayed no matter which cell you are currently on.

Ready Empty cells as: Zero or empty. This is for use in formulae where empty cells are included in ranges etc. If set to empty, an error will be produced for that formula.

Using the Spreadsheet:

When you have set how the data stored in the sheet is going to look, you can start entering the numbers/text etc. This is done via the Edit Spreadsheet option and takes you to a new screen showing part of the sheet and additional information at the top. The column and Row axes are displayed in a different colour to the main sheet area to make them apart.

The contents of the cells can be in five different states:—

Blank, Number, Text, String, and Formula. The text can be justified to the left, right or centred. Strings are longer forms of text that can take up to about 90 characters and will be automatically displayed over any columns that they overflow into.

Text or numbers are entered by just typing the first character of the contents (i.e. any number [0-9] will cause the program to assume a number and any Alpha character assumes text in the default justification). Formulae are entered by first pressing F5 then entering the actual formula. The formula will be checked for Syntax errors before being accepted.

Formulae can consist of constants,

references to actual cells (i.e. AA01), and some arithmetic operations:

+ — Add,
- — Subtract,
* — Multiply,
/ — Divide,
^ — Raise to the power,
ABS — absolute value,
COS — Cosine,
SIN — Sine,
EXP — Exponent,
SQR — Square root,
TAN — Tangent,
LOG — Log to base 'e',
LOG10 — Log to base 10.

All the above will work with constant or single cells. The four other functions (**MIN, MAX, SUM, MEAN**) work on a range of cells. The range is not limited to part of just a row or a column but works on a block of cells (i.e. **SUM[AB04:AC07]** will sum cells **AB04:AB07** and **AC04:AC07**).

Parenthesis may be used to alter the normal arithmetic evaluation orders.

The manual states that formulae are calculated in the order from top left to bottom right of the sheet. This is in fact incorrect as the formulae are evaluated on a multiple pass basis and therefore you do not have to worry about where they are placed in the sheet.

There are options available when in edit mode that allow you to move around the sheet and make other changes to the way the data is displayed. These commands are obtained from the function keys or from other keys used with either the Control key or the LOGO key (the two are linked whilst in edit mode). These commands are for such things as changing the width or number of decimal places of a single column, editing, or wiping the contents of the current cells, inserting or deleting rows and columns, goto a specified cell, inserting or deleting rows and columns, goto a specified cells, cell AA01, or the bottom left cell of the used area and changing the colours of the display parts.

Other commands which I will go into more details are:

Save sheet — Take you directly to the save sheet option of the main menu,

Copy cell, row, or column — Allows you to copy the current choice to a different part of the sheet. Formulae may be copied exactly as they are or cell references may be altered on just the row, column or both relative to where they were. This option picks up the current choice and allows you to move the cursor around pressing return where you want to copy it to. You can make as many copies as you like and pressing STOP returns to normal.

Lock cell, row, or column — allows you to lock out specific data from being changed or deleted.

All of these options can be displayed

by pressing **CTRL-H** (help).

Printing out the sheet:

Printing can be done to the usual printer devices and there are few parameters that may be altered to change the final printout.

Headings allows you to choose whether the cell references will be included in the printout.

Paper width allows you to change the width of the paper you are printing to (main use would be to 132 and put the printer into condensed mode, Epson only).

Printer codes allows up to 128 codes to be sent to the printer before printing. The main use would be to send a condensed mode command to the printer to allow more information per line.

You may print the whole of the spreadsheet or just a part of it by specifying column ranges and low ranges.

Listing Formulae:

You may list all formulae in the sheet to the screen or printer.

Saving and loading:

As in the Database and Label printer, the tape storage is done using a turbo routine for speed and reliability. You can also save spreadsheet data in a form that is readable by the Graphics program. This option allows you to choose whether to save the data in columns or rows and which to use for the labels (if any). Up to 5 graphics data sets can be saved in one file. The graphics data save routine is slightly complicated to use but gives good results. I will not go into it here as the manual includes a fairly good example under 'Graphics Tutorial' on page 64.

Graphics:

This program allows you to display numerical data in a more understandable form. There are three display modes: Bar chart, Line graph, or Pie chart.

The data is arranged in sets of 20 values. There is a maximum of 20 sets available and they all use the same labels. You can enter the values directly, load previously entered sets or load data saved from the spreadsheet.

Also associated with the sets are the default set values. These three values specify the actual sets that will be used when displaying the charts.

The three chart display options go to a Hi-res screen with icons down the right hand side that you may choose by moving the highlight up or down then pressing return.

Bar chart:

This option displays the data in vertical bars on the screen. You can use just the default set one or all three

default sets. The bars will be displayed along side each other and if the multiple set option is chosen, the bars will be from alternate sets. A third option is for displaying the three sets of data in a stacked way: That is, the first value of the first set is added to the first value of the second and third sets and a bar of that height is displayed. The same is done for the other values. Horizontal grid lines are available if required and the bars may be displayed with a simple 3D effect.

Once the chart has been plotted, you will be request for any text to add to the display to make it more readable. The text may be up to 24 characters long and can be underlined. Once the text is positioned (using the cursor keys), you will be prompted for more text. The text option is also available in line graph and pie chart modes.

The other options are available in the other display types as well. These are for saving, loading, and printing the picture out. These options use the settings in the Hardware Options menu.

Line chart:

This option displays the data as points connected by straight lines. Again, this can be done with just one or all three data sets. The third option on this choice is to display the cumulative graph of default set one.

Pie chart:

This option displays the data as a pie chart (segmented circle) Each value is given a different pattern with which the area is filled. After the chart is drawn, an index is drawn down the side of the display.

The pie chart can be displayed as a circle or with all or some of the segments pulled out slightly from the circle's centre. The other display option allows you to select the pattern for each segment before it is drawn.

Editing the data is done in a very similar manner to the data edit in the database and is very easy.

The data can be loaded and saved to tape or disk and again uses a turbo for tape 10.

The printouts of the display are graphic dumps to either Commodore MPS (801/803/1000 tested) or Epson and compatible machines. With MPS selected. The image is double size and with Epson it is triple size and is printed out on its side in both instances. This means that most of one normal fanfold page is take up by the dump.

That's all for our series of articles on Mini Office II. It is, we believe, a very complete package and we hope our 'mini-series' has helped those who have bought Mini-Office to use it to the full.

R.F.

The D-Channel

Later in the 1980's, a new network, ISDN, will replace the current telephone system with the U.S., and new types of peripherals and adaptors will be required to interface with the telephone network. According to a recent 144-page research report, most of the attention to date has focused upon the uses for B channels, the main transmission channels for voice, data, image and text. The report, by the U.S. International Resource Development Inc., asserts that on the other channel 'D' also remains an important resource for both the telephone companies and the users. The interfaces to access this 'D' channel represent a unexplored market opportunity.

The D channel's original purpose was to carry telemetry data, including alarm signals, and its primary function is one of network signalling; that is, there will always be at least one D channel to each subscriber to maintain network control. But the 16 Kbps D channel has far more capacity than signalling requirements

will require, leading one to speculate what additional uses can be made of it.

According to Leslie Townsend, senior analyst at IRD, the D channel will provide a means of low-speed data transport for applications such as telemetry, security and alarm signalling, and remote meter reading. Envisioning both business and consumer applications, Townsend states that "the D channel primarily will provide packet-switched services including access to public-switched networks such as Tymnet and Telenet. It can also provide a means of electronic banking and funds transfer, electronic mail, energy management, facsimile, some personal computer networking, and, if it has a future, videotex." She goes on to state that "On the consumer side, the D channel may be used to provide at-home medical monitoring services, home security, utility meter reading, and stock market quotations."

Initially, it is believed that the ISDN D channel will compete with the so-called derived channels (data-over-voice,

data-under-voice, and spread spectrum). According to IRD, switched digital ISDN channels, such as the wider B and H channels, will also compete with the D channel. The outcome of demand for D channel competition will depend ultimately on price as well as final technical specifications.

Townsend anticipates that D channel usage will begin on a field trial/experimental basis during 1988 and that its usage will expand to a very limited number of business customers by 1990. "I do not see this market getting well underway until 1994-1995. The years of high growth should be toward the latter end of the next decade, say, 1995 to the year 2000."

Further details on the \$1,650.00 report (#713), entitled PERIPHERALS FOR THE ISDN D-CHANNEL, including a free table of contents and description, are available from IRD at 6 Prowitt Street, Norwalk, CT 06855 U.S.A.; Telephone (203) 866-7800; Telex 64 3452.

Kodak's Filmless Camera

KODAK has announced a black and white electronic camera for industrial applications with an information gathering ability claimed to be some six times greater than similar, currently available systems.

The camera, called Megaplus, takes pictures at about 10 frames a second, it doesn't use film or a conventional TV picture tube. It has a matrix of 1.4m tiny light sensitive elements on a "chip" measuring only 9 x 7mm.

When the picture image is focused on the chip surface, each pixel registers the light level at that point and generates a small, corresponding electric charge. The chip uses charged-coupled device (CCD) technology which means that the 1.4m electric charges representing the image can be read out of each horizontal line in turn, amplified and stored in an electronic memory. At any time they can be retrieved from the memory and used to build up a picture line by line in a fraction of a second on a monitor set and can immediately see the pictures.

The fact that each picture element is stored individually means that each can be accessed and processed to give particular effects. For example, blurred edges can be sharpened by turning grey levels above and below a certain density into white and black respectively.

Such processing is usually essential in machine vision applications where objects, on a production line for example, must be positively examined for faults. After image enhancement, the associated computer can more readily say if the fault is there or not.

Some cameras used in industrial automation use a line scan camera, basically a line of the small light sensitive devices (photodiodes) moved at right angles to itself across the field of view, scanning one line at a time as it goes.

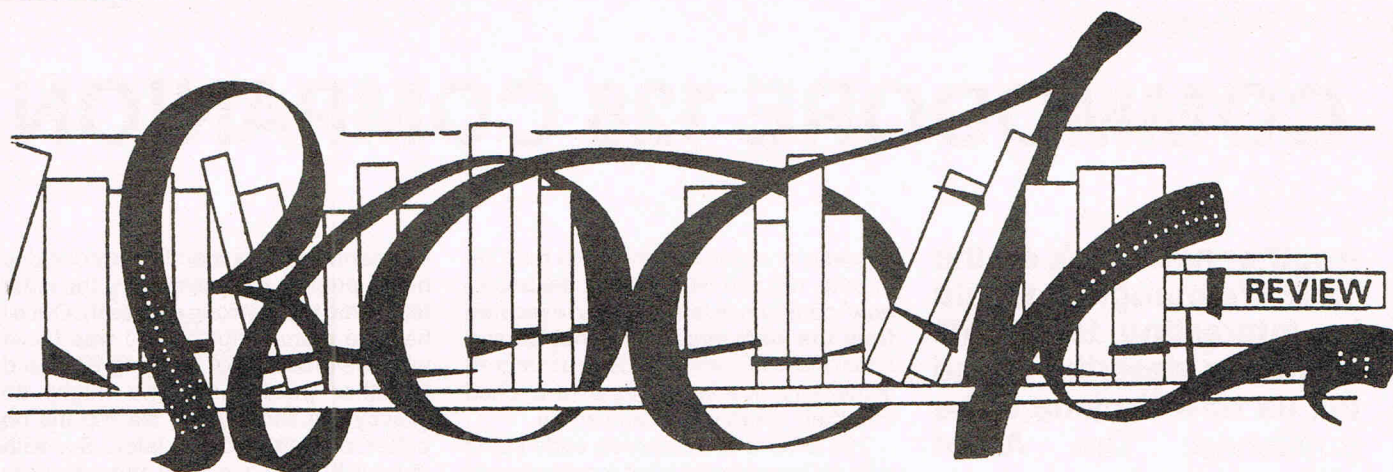
"Frame at a time" cameras are faster and although an ordinary TV camera can produce similar results, the CCD systems are much more compact and robust and do not need high voltages for operation.

Kodak has scored by greatly increasing picture definition. Apart from reducing their size, the company has crammed in more pixels by reducing the isolation space between them and making them square rather than rectangular.

Megaplus will be used where measurements on images have to be made in instrumentation, and on production lines where, by using a wider angle lens, larger fields of view can be accommodated for recognition and placing of objects in automation systems — without losing to much accuracy.

Although Kodak refuses to comment at the moment the CCD development, which came out of the Eastman Kodak research laboratories in the US, could eventually be the basis of a no-film consumer product camera of the kind announced several years ago by Sony and Panasonic. These store the images on a small magnetic disk.

Such cameras will film and develop. Each time the shutter clicks the image is stored in the camera's memory. The user plugs the unit into the back of a TV



'Evil Water' — Ian Watson — £10.95

Ian Watson's latest collection of short stories, his fourth, confirm that he is one of the more inventive SF authors. Ten taut tales, each entirely different from the others but all showing an imaginative turn of mind — and phrase — which would not disgrace any of the masters of the genre.

All the stories have previously appeared in various prestigious science fiction magazines, now Gollancz have brought them together in one volume, and very welcome they are, too.

'Cold Light' has a Conan Doyle feel about it which enhances the eeriness of the tale. It is the story of a Bishop slowly being blinded from within by a devilish light and could almost have been written in the 19th, instead of the 20th, century. Whereas the title work, 'Evil Water', a long short story, is obviously from the pen of a modern author, for it includes

sex, four-letter words and descriptions of the innermost intimate feelings of the principal character which only a contemporary writer would use.

Sex is, in fact, the main theme of another of the stories, 'When The Timegate Failed'. The captain of a starship is ordered to find out how a species of aliens called Tworfs — short for Those Who Run Faster — have managed to construct a 'gate' that speeds up time travel and todo this he has — for reasons too complicated to explain here! — to mate first with one of the aliens and then with one of his own crew, a nubile brunette. How he succeeds and the results of his endeavours turn a decidedly odd tale into a very absorbing one.

'On The Dream Channel Panel' about advertisements for ambrosia-style food and nectar-like drinks, beamed from

another world which is reached by a Jacobs-ladder appearing through a hole in someone's ceiling, is quite hilarious. In complete contrast is, 'Wire Around The World', in which all the military might of nations is kept within the confines of a compound, surrounded by a wire fence which needs human fuel to keep it working. It's a kind of Greenham Common situation with people prepared to die for their beliefs and willingly becoming human sacrifices to keep the wire in position and peace in the world.

Perhaps the story that illustrates Ian Watson's talent best is the shortest, 'When Idaho Dived'. An 'after-the-nuclear-holocaust' with a difference. In seven pages the author manages to combine humour, pathos, horror, and adventure a microcosm of the book itself, which is well worth adding to your collection.

D.M.

'Gollancz Classic/VG' — Science Fiction Series

The big news is that they have now introduced another imprint, called VGSF, (I assume this stands for Victor Gollancz Science Fiction, although it could just as well be Very Good Science Fiction), again very reasonably priced at between £2.50 and £2.95, which will include many of the most famous SF's authors' best known books. Eight titles were published in May including 'Witch World', by Andre Norton, 'Hegira', by award-winning author, Greg Bear, Robert Silverberg's 'The Masks Of Time' and Arthur C. Clarke's short story collection 'The Other Side Of The Sky'. Two more follow every month.

So, at last, it seems that SF buffs can

go to their local bookshop each month content in the knowledge that at least one publisher realises that somewhere out there is a loyal public (some of whom don't want — or can't afford — to spend £10/£12 on a book) for whom science fiction is required reading. That public, who have until now been pretty well neglected, will I'm sure justify the faith Gollancz has placed in them.

Whereas a 'best-seller' can sell by the hundred thousand, if a SF novel sells by a tenth of that it's reckoned to have done extremely well. On the other hand, that much-trumpeted 'best-seller' can, after a couple of years, disappear from the bookstores shelves never to be seen

again while the humble little SF story goes on selling steadily and regularly.

Victor Gollancz Books seem to have woken up to this fact. As well as their hardback science fiction books they have a 'Classic SF' imprint which is a collectors dream, a *numbered* paperback series of some of the best in SF, which includes such time-honoured stories as Arthur C. Clarke's 'A Fall Of Moondust', (No. 9), Algis Bundry's 'Rogue Moon', (No. 11), and Frederick Pohl's 'Man Plus', (No. 12). The series is bi-monthly, two new titles appear each time and all of them are priced at either £2.95 or £3.50.

COMMODORE 128 COMPANION

Another new book on the 128? We thought it would be interesting to ask its author to describe it and tell us how it came to be published. Tim Arnot obliges.

Before I start, I had better declare my interest in this product. You see, I actually wrote the book, and I also own the company that publishes it. However the powers that be within C.C.I. seem to be of the opinion that that makes me the ideal person to review it. Publicity is publicity, as they say, and who am I to argue?

OK, seriously, what is this book about? Starting at the beginning, in a chapter called 'Basic BASIC'. It deals with every statement and reserved variable available to BASIC 7.0. To make it easier to find the information you require, each command is started on a new page; thus the chapter takes up almost 200 of the 340 pages in the book. At the top of each page is a header, giving the name of the keyword, its function, abbreviation, token, and the locations in ROM for its entry in the keyword table, dispatch vector and the start of the actual keyword code. The information is given for both 128 and 64 mode where appropriate. The rest of the page merely tells you about the command, how it works and what its strengths, weaknesses and limitations are.

The chapter, 'Advanced BASIC' looks

at memory organisation within the 128, in both 128 and 64 modes. It deals with how commands are directly executed from the keyboard, how variables and lines of BASIC program code are stored in memory, how keywords are crunched into their token values and so on.

The chapter on machine code starts with a discussion of what machine code really is, and moves swiftly on through a look at the 8502 microprocessor and built-in machine language monitor to the heart of the chapter, which is an in-depth look at the routines that go to make up the Kernal, Basic and Editor jump tables. The Kernal is a system whereby a routine in ROM are made available to programmers through a series of consistent jump vectors.

For hardware enthusiasts, there is a chapter devoted to the nuts and bolts and chips that make up the 128, including pinouts and technical descriptions of all the major ICs. Finally the appendices contain a complete set of memory maps for both operating modes.

Some people have asked me why this book does not deal with CP/M. This is a fair comment, and by leaving it out one third of the machine's potential is left uncovered. However, I feel that CP/M really deserves a whole book to itself, and one or two chapters really wouldn't do it justice. Apart from that, when I wrote the book, I didn't know CP/M. Ah nothing changes!

It's not every writer who publishes his own work, so why didn't I let a more established publisher do all the work? I have to admit that I originally wrote it for another publisher, but after they'd had

the manuscript six months they decided not to publish (they even sent the letter telling me to the wrong address!). Once I had the manuscript back, I was faced with the prospect of hawking it around to other publishers, who might do exactly the same thing, leaving me no better off a year or so later. So, with cheque book in one hand and very large overdraft in the other, I set up BitStream Publishing and did it myself.

The thing I like most about publishing is quality control. My first book, published by a 'professional' publisher was an absolute disaster, set in 'draft mode dot matrix' (not my favourite font at any time) and full of publishing blunders. However, what I write now is produced exactly how I wrote it, and exactly how I want it, even down to the paper (which was specially chosen to allow the book to lie flat when open without having to break the spine).

Finally, though, how does my book compare with other similar books on the 128? Firstly, it's one of the cheapest. It's also one of the most accurate — I haven't been able to find any factual errors (yet!). Also there is only one spelling mistake, and one small typo (I challenge you to find them!). The subjects covered are covered extremely well. Would I recommend you to buy it? yes, without hesitation; and not just because I need the storage space, but this really is a good book.

T.W.A.
'Commodore 128 Companion' — Tim Arnot. Published by BitStream Publishing, 26-28 Osborne Road, Southsea, Hants. PO5 3LT. ISBN 1 870381 00 9,

Film Review — Lethal Weapon

If you're one of those people who think that car chases, shoot out, good guys and bad guys, are the ingredients for an entertaining movie then 'Lethal Weapon' is the film for you.

'Lethal Weapon' starring Mel Gibson as Martin Riggs and Danny Glover as Roger Murtaugh, highlights the long-term effects the vietnam war has had over two L.A. cops. Riggs is young, impulsive, and unstable to the point of being suicidal due to the loss of his wife. His new partner Mautaug, on the other

hand, has just reached his 50th birthday, has an unblemished work record, and is cast as the stable family man. Together these two contrasting characters work together to solve the mystery of what starts out as a suicide, but then extends onto an action thriller that involves international drug-smugglers, which in turn involves their personal lives.

The film gets off to a slow start but soon unleashes a wealth of tough guys, excitement and violence, making it deserve its 18 rating. For those who

enjoy the vibrant sound of machine guns, fast cars, and watching the good guys fight off crime in L.A., this film is thoroughly recommended. If not, we would still recommend seeing this film as the plot is totally unpredictable. If you are like us, you will be hanging onto the edge of your seat, trying to guess what happens next, and finding out your guess was 100% out from the truth. On the whole, 'Lethal Weapon' gets the four thumbs up from us.

K.M. & R.J.

**HSV COMPUTER SERVICES LTD.
ALL OUR PRICES INCLUDE VAT &
CARRIAGE - NO EXTRAS TO PAY!!!**

**** Special prices for Commodore users ****

RIBBONS

DPS1101 — £2.95	4023 — £3.95
MPS802 — £3.95	1526 — £3.95

* COLOURED RIBBONS — Red: Blue: Green: Brown: Purple: Orange: *

Commodore MPS801	Colours: £3.95	Black: £2.95
Commodore MPS803	Colours: £3.95	Black: £2.95

UNIVERSAL DISKS

Universal disks are suitable for 40/80 track drives and have 2 notches and 2 holes.

	10	20	30	40	50	100
	£8.95	£17.00	£25.00	£33.00	£40.00	£75.00

BRANDED — ATHANA/MAXELL

	3 1/2 SS/DD	3 1/2 DS/DD	5 1/4 SS/DD	5 1/4 DS/DD
Maxell	£23.95	£31.95	£11.95	£14.95
Athana	£21.95	£26.95	£7.95	£8.95

HSV UNBRANDED DISKS

All bulk disks are supplied in cardboard boxes with write protect tabs and labels.

	10	20	30	40	50	100
3 1/2 SS/DD	15.50	30.00	44.00	57.00	70.00	135.00
DS/DD	17.50	34.00	50.00	65.00	80.00	155.00
5 1/4 SS/DD	5.95	11.00	16.00	21.00	25.00	45.00
DS/DD	6.95	13.00	19.00	25.00	30.00	55.00

*****NEW*****

MAKE FILING EASIER BY COLOUR CODING YOUR SYSTEM
HSV COLOURED DISKS — Red: Blue: Green: Yellow: White:
BOXED TEN: £9.95

CONTINUOUS STATIONERY Micro-Perf All Edges

	250	500	1000	2000
9.5" x 11" 60 GSM	2.95	4.95	8.95	14.95
True A4 90GSM	5.25	8.75	14.95	
True A4 100GSM White Bond	6.50	9.95	16.25	
True A4 100GSM Colours**	7.25	13.50	25.50	

*** Colours available: — CREAM: BLUE: GREY:
Matching Envelopes (not continuous) 100 = £5.95

LABELS — CONTINUOUS:

3.5" x 1.5" (1 across)	2.95	4.95	9.50
4.0" x 1.5" (1 across)	3.25	5.50	10.50
4.0" x 1.5" (2 across)	3.75	6.50	11.95
2.75" x 1.5" (3 across)	2.75	4.50	8.50

RIBBONS

	Cols	Black
Canon PW1080A	£3.95	£2.95
Panasonic KXP1080/1090	N/A	£3.95
Epson FX/MX/RX80	£3.95	£2.95
Taxan Kaga	£3.95	£2.95
Star SG10/15	£2.50	£1.50
Epson LX80/86	£3.95	£2.95

DISK STORAGE

50 x 5 1/4 Hinged lid	£6.95
50 x 5 1/4 Hinged lid lockable	£7.95
100 x 5 1/4 Hinged lid lockable	£11.95
120 x 5 1/4 Hinged lid lockable	£12.95
30 x 3 1/2 Hinged lid	£7.95
40 x 3 1/2 Hinged lid lockable	£8.95
80 x 3 1/2 Hinged lid lockable	£12.95

PRINTER STAND — 80 COLUMN £14.95 — suitable for rear/centre feed

Tilt 'N' Turn Monitor Stands 12in £12.95 14in £14.95
REXEL Binders — Blue/Red (please state) £2.50 each

HSV COMPUTER SERVICES CREDIT CARD HOT LINE

*** 0256 463507 ***

HSV COMPUTER SERVICES LTD.,
23 HAMPSTEAD HOUSE,
TOWN CENTRE,
BASINGSTOKE, RG21 1LG
ALL PRICES INCLUSIVE VAT & CARRIAGE — NO EXTRAS TO PAY

AMIGA
FROM £529!

- Amiga A500 with 512K RAM, 880K 3.5" disk, mouse, software **£529**
- Amiga A500 TV with A521 TV/composite modulator **£549**
- Amiga A500M with A1081 high-res colour stereo monitor **£849**

ALL PRICES INCLUDE 15% VAT, FREE DELIVERY TO YOUR DOOR, AND FULL ONE YEAR WARRANTY

- Amiga A2000 with 1MB RAM, 880K 3.5" disk, mouse, software **£1099**
- Amiga A2000M: with A1081 hi-res colour stereo monitor **£1399**
- Amiga A2000 XTM As above, plus PC XT bridge board & floppy **£1899**
- Amiga A2000 HDM As A2000M plus 20MB AmigaDos hard disk **£1999**

1 YEAR ON-SITE MAINTENANCE WITH EVERY A2000 AMIGA SYSTEM... PLUS
FREE GOLDEN KEY CARD!
stay at over 200 top hotels as often as you like for a year, and for each night's stay, just pay for breakfast and dinner!

AMIGA PERIPHERALS

- A501 plug-in RAM/clock 512K **£105**
- A502 TV/composite modulator **£25**
- A1081 stereo colour monitor **£335**
- A1010 3.5" external disk drive **£249**
- A2010 3.5" internal disk drive **£195**
- A2052 2MB internal RAM **£399**
- A2058 8MB internal RAM **£2195**
- A2088 PC-XT bridge board with 5.25" internal disk drive **£525**
- A2286 PC-AT bridge board with 5.25" internal disk drive **£925**
- A2090PC 20MB internal hard disk with MS DOS controller **£525**
- A2090 20MB internal hard disk with Amiga DOS controller **£625**
- MegaBoard 2MB add-on RAM **£469**
- Xerox 4020 colour printer **£1219**
- HP LaserJet laser printer **£1995**
- HP LaserJet Plus **£2995**

AMIGA CREATIVITY

- VizaWrite DeskTop **£139.95**
- Page Setter **104.95**
- LaserScript **39.95**
- Scrbble II **89.95**
- De Luxe Paint II **£119.95**
- De Luxe Print / Video **79.95**
- De Luxe Music **84.95**
- Aegls Images **44.95**
- Aegls Animator **99.95**
- Sophus stereo sound digitiser **139.95**
- SoundScape Pro Midi Studio **154.95**
- Genlock video controller **449.95**
- DigiView TV digitiser **189.95**

AMIGA PRODUCTIVITY

- SuperBase Personal **£89.95**
- LogiStix **139.95**
- Analyse II **94.95**
- CLI-Mate **29.95**
- True Basic **129.95**
- True Basic libraries **£49.95**
- K-Seka Assembler **64.95**
- MCC Pascal **74.95**
- A/C Fortran **259.95**
- Lattice C 3.1 **144.95**
- Aegls Draw Plus **214.95**
- Dynamic CAD **419.95**
- X-Draw **324.95**
- Cherry A3 Digitizing Tablet **549.95**
- Easly A4 Drawing Tablet **414.95**

128 64C

- Commodore 128D computer **£499**
- Commodore 128 computer **£249**
- NEW 512K expansion RAM **£149**
- Commodore 1571 disk drive **£249**
- 1901C colour monitor **£275**
- 64C computer **£189**
- 1541C disk drive **£189**
- 64C Connoisseur Collection **£245**

PRICES INCLUDE VAT, DELIVERY AND ONE YEAR WARRANTY. ADD £10 FOR OVERNIGHT DELIVERY

UNBEATABLE SUPERBASE & SUPERScript BARGAINS!

SuperBase 128 99.95 £54.95	SuperBase 64 & Plus/4 79.95 £37.95
SuperScript 128 89.95 44.95	SuperScript 64 69.95 34.95
SuperBase: The Book 11.95	SuperBase Starter 64 39.95 19.95

MORE SOFTWARE BARGAINS FOR YOUR C64 AND 128!

VizaWrite Classic 128 99.95 £79.95	GEOS 64 V1.3 49.95 £44.95
VizaWrite 64 (disk) 59.95 39.95	SwiffCalc 128 59.95 54.95
VizaWrite 64 (cartridge) 99.95 69.95	Data Manager 128 59.95 54.95
VizaStar 128 129.95 99.95	WordWriter 128 59.95 54.95
VizaStar 64 XL8 99.95 79.95	Pocket Planner 128 49.95 44.95
VizaStar 64 XL4 79.95 69.95	MicroClerk 128 99.95 94.95

COMMODORE 128 and 64... PROGRAMMER'S CORNER

PetSpeed 128	The Basic 128 compiler, from Oxford Systems	49.95 £42.95
Oxford Pascal 128	The complete J & W Pascal for your 128	49.95 42.95
Super C 128	Complete C language, with extensions	59.95 42.95
Cobol 128	The complete COBOL package from Abacus	34.95 32.95
Hack Pack 128	All-in-one Programmer's Toolkit & Ram-Disk	39.95 36.95
RamDos 128	Lightning fast Ram-Disk for 512K expansion RAM	32.95 32.95
BrainBox IEEE	Supports PET/IEE disks & printers etc. (128 & 64)	79.95 79.95
Anatomy of the 128	The 500 page insider's guide to the 128	12.95 11.95
Matrix 128	Run 64 programs on your 128 - in 128 mode!	49.95 32.95
Simon's Basic 64	Programmer's cartridge from Commodore	50.00 39.95
PetSpeed 64	The standard 64 Basic compiler from Oxford	34.95 19.95
Oxford Basic 64	All-in-one Basic compiler, toolkit, compressor	34.95 29.95
Oxford Pascal 64	The complete J & W Pascal for your 64	49.95 34.95
Oxford Pascal 64 (tape)	Pascal for 64 tape users, as above	22.95 19.95
Super C 64	Complete C language, with extensions	59.95 42.95
Cobol 64	The complete COBOL package from Abacus	34.95 32.95

IF YOU WANT IT TOMORROW... CALL US TODAY! ON 01-546-7256

Prices are POST FREE & include VAT. Order by phone with your credit card, or send cheque/PO or your credit card number. Official orders welcome. We despatch same day by FIRST CLASS post. If our lines are busy, why not try our 24-hour recorded order service, on 01-541-5185. Ref. A48



FRANKENSTEIN

"FRANKENSTEIN COMPETITION" **EEK! SHRIEK! SCREECH! YOWL!**

No, it's not Princess ('Sharpened Teeth') Krotoa advancing on you, it is Frankenstein. Horror of Horrors and Terror of Terrors, and according to CRL's totally believable PR person Lesley Headlines, it is the game of games too. It will, she says frighten you to death darling, and just to make the point, we are having a Frankenstein Competition, Horror of Horrors!

All you have to do is say...

1. Who created Frankenstein?
2. Who played Frankenstein?
3. Who was young Frankenstein?



The two winners get an absolutely frightful Horror Pack which contains videos — Frankenstein, of course — and some Stephen King books to keep you awake shaking right through the night.

The next twenty trembling contestants get shocked by CRL's Frankenstein game which has got a 15 certificate.

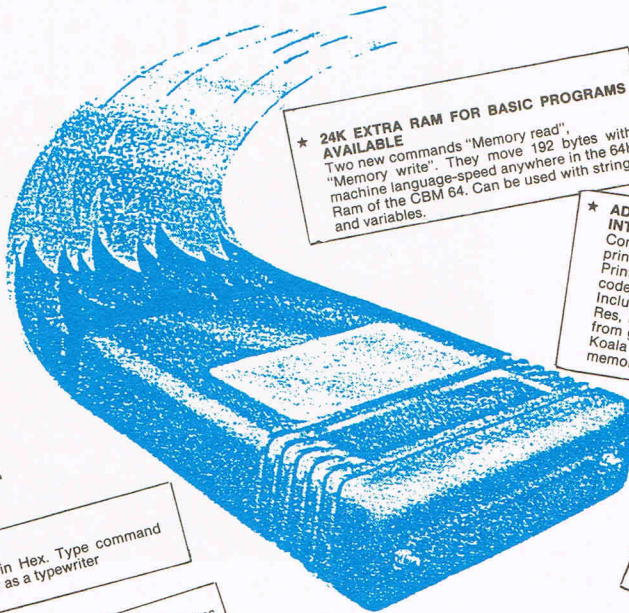
Answers on a post card please, and send by September 15th to Frankenstein Comp, Commodore Computing International, 40 Bowling Green Lane, London EC1R 0NE.

Enter this competition if you dare. PS What was that voice you just heard behind you, and that shadow on the curtain????

THE FINAL CARTRIDGE II®

THE GREATEST UTILITY EVER FOR THE COMMODORE 64/1281

NOW EVEN BETTER
VALUE AT **£30.00**



FREEZER

- ★ **MENU DRIVEN**
18 SUB MENUS
Colour Changes
4 resets
Centronics/serial screendumping
Print vector setting
Tape to disk. Back up
Disk to tape. Back up
Disk to disk. Back up
Back ups are packed files on tape or disk,
including their own fast loader and starter
- ★ **GAME KILLER**
Kills sprite to sprite and or sprite to
background collision
- ★ **COMFORT TABLE EXTENDED M.L.
MONITOR**
INCLUDING:
Relocated load. Scrolling up and down.
Banks switching. printing
MONITOR DOES NOT RESIDE IN RAM!
INCLUDES DISK DRIVE MONITOR
- ★ **FREEZER SWITCH**

- ★ **24K EXTRA RAM FOR BASIC PROGRAMS
AVAILABLE**
Two new commands "Memory read",
"Memory write". They move 192 bytes with
machine language-speed anywhere in the 64K
Ram of the CBM 64. Can be used with strings
and variables.

- ★ **PREPROGRAMMED FUNCTION KEYS**
Run, Load, Save, Catalog, Disk commands.
List (removes all list protections)

- ★ **ADVANCED CENTRONICS
INTERFACE**
Compatible with all the well-known centronics
printers and Commodore printer programs.
Prints all the Commodore graphics and control
codes (important for listings).
Including screen-dump facilities. Prints Low-
Res, Hi-Res and Multicolour. Prints Low-
from games and paint programs, like Doodle,
Koala Pad etc. Searches automatically for the
memory address of the picture.

- ★ **DISK TURBO**
6 times laser disk access — loading and saving
- ★ **TAPE TURBO**
10 times faster — compatible with standard
turbos

- ★ **KEYBOARD EXTRAS**
Pokes and Syscalls in Hex. Type command
operates your printer as a typewriter

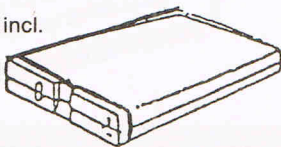
- ★ **RESET SWITCH**
Resets all protected programs

- ★ **BASIC 4.0 COMMANDS**
like Dload, Dsave, Dappend, Catalog, etc.
- ★ **KEYBOARD EXTRAS**
with Auto, Return (incl. Goto and Gosub),
Find, Hel, Old, etc.

BLUE CHIP DISK DRIVE

The Blue Chip BCD/5.25 is a 100% Commodore compatible Disk Drive. Works with Commodore C64, C128, SX64, Plus 4, and Vic 20. With its external power supply you will no longer lose your programs due to overheating. Smaller, quieter and more efficient. Runs 1,000's of programs written for Commodore Computers. Compatible with Final Cartridge II.

ONLY £177.00 incl.



H & P MOUSE

When is a mouse not a mouse? When it acts just like a joystick. The H & P Mouse can do everything a joystick can do only better and with more accuracy. Works with nearly all games and graphics programs that use a joystick. Once you have used the H & P Mouse you will not want to return to a joystick. Microprocessor controlled for greater accuracy.

ONLY £52.95 incl.

CENTRONICS PRINTER CABLE

Commodore 64/128 user port to centronics printer cable. The cable is fitted with a line feed switch for use on Epson type printer. No more taking the printer apart to change the line-feed. Recommended for use with the Final Cartridge. Compatible with Superscript and Superbase etc.

ONLY £15.00 incl.

FLOPPY DISK BARGAINS

Have we gone crazy??? Just look at these prices! Top quality 5.25 floppy disks with a 100% Guarantee. Complete with labels and write protect tabs.

JUST £6.00 per box of ten. OR £10.00 for twenty. Hurry while stocks last.

3.5 disks only £25.00 per box of ten. OR £48.00 for twenty.

EPROM PROGRAMMER

Now an Eprom programmer that's within the reach of most pockets. The Micro-Prommer V.1.0 fits neatly into the cartridge port of the C64/C128. It will program 2716 (2KB), 2732 (4KB), 2764 (8KB), and 27128 (16KB) Eproms. Complete with software and instruction.

ONLY £53.45 incl.

Eprom Eraser to go with the Micro-Prommer. Can erase up to 30 Eproms in 3-4 minutes.

ONLY £52.45 incl.

SERIAL EXTENSION CABLE

Extend your Disk Drive or Commodore Printer cable by up to 2 meters.

1 Meter Cable £6.00 incl.

2 Meter Cable £8.00 incl.

DISK NIBBLER

Use both sides of your disk. Save the cost of the nibbler with just one box of disks even at our prices.

£5.00 incl.

EPROM CARDS

Internal switchable 3 Eproms and 1 Kernal ROM card. £30.00.

External 2 Eprom Card. £20.00.

MOTHER BOARDS

5 slot Mother Board. Takes up to 5 Cartridges all switchable. With reset switch. £42.50.

2 Slot Mother Board. Takes 2 Cartridges (switchable) with reset switch. £19.95 incl.

CITIZEN 120D PRINTER

Fast 120 cps in draft mode and 24 cps in NLQ mode. Supports both Epson and IBM Graphic characters and modes. We recommend this printer for use with the Final Cartridge. We supply the 120D complete with Centronics interface and printer lead for Commodore C64/C128 computers. Up to 240 dots per inch in Bit Image Mode.

ONLY £230.00 OR Complete with Final Cartridge II £260.00. Please add £5.00 for carriage.

H&P COMPUTERS LTD
9 Hornbeam Walk,
Witham,
Essex CM8 2SZ
Tel: (0376) 511471

C64

MEGA

World Class Leaderboard

World Class Leaderboard is the next update in the Leaderboard series. As you probably know, Leaderboard is a top high quality golf simulation. Where as the original Leaderboard was played on groups of small islands in a lake, World Class Leaderboard is played on more conventional golf courses, with rough, trees, bunkers and ponds.

One major difference in World Class Leaderboard is the course designer. Although it has four in-built courses, the designer allows you to make your own courses, thus not getting bored with the same ones (a major criticism of Executive Edition).

As with its predecessors, World Class is viewed from behind the golfer in 3D. The screen starts off bare, and the trees, bunkers etc. are drawn in amazingly quickly. The golfer is controlled by selecting the club, aiming the shot with a cursor, then holding down the fire button for the right length of time for the power of the shot. A second press of the button decides the amount of hook or slice which will make the ball veer left or right. Good timing is the key to success here. If the ball hits a tree, it bounces off and falls to the ground very realistically. Playing a shot into the water will result in the same shot being played again, with one being added to your score.

World Class Leaderboard isn't that different to its forerunners, and features the same excellent animation, but with improved, more interesting graphics.

Up to four players can compete together, which makes it a lot more enjoyable amongst a few friends. There is also a choice of how many holes you play — 18, 36, 54 or 72, although its appeal maybe will tarnish a little after the 70th hole. Per-



haps a nine hole option would have been more useful. There are three skill levels — kids, amateur, and professional. 'Kids' has no hook and slice or wind to worry about. 'Amateur' has hook and slice but no wind, and 'professional' has the lot.

Each hole has a 'par', the number of shots allowed for each hole. Scoring is in the form of a positive or negative number, or 'E' if you're on par eg. if you take five shots on a par four hole, your score will be +1. Scores are carried from hole to hole and adjusted accordingly.

There are very few sound effects in the game, although what there is, are very realistic.

World Class Leaderboard is a multi-load and could possibly be a

little tiresome on cassette. World Class Leaderboard is a definite improvement on its predecessors, and comes heartily recommended if you don't have the others. If you do, however, think carefully before buying, as it is very similar. Highly recommended.

T.H.

Graphics: ★★★★★
 Sound: ★★
 Playability: ★★★★★
 Price: £14.95 (disk)
 CCI Rating: MEGA



C64

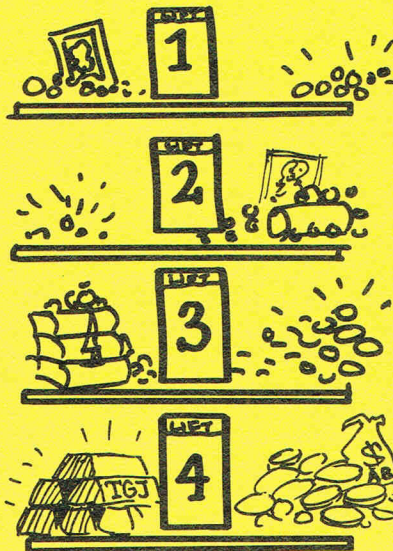
MEGA

INTO THE EAGLES NEST

Into The Eagles Nest — Pandora

Pandora have been very quiet since their formation as a label, and like so many other good ideas from leading houses — Reaktor (Ariolasoft), Monolith (Beyond) and FTL (Gargoyle) — they have struggled to maintain the flow of games necessary to gain true recognition (those houses wishing to see how to successfully establish a new brand need look no further than Telecom's Rainbird though they have their troubles too). Eagle's Nest, however, is a slick product and by rights should make Pandora a name to be reckoned with.

The plot is pretty standard WW2 — break into the Nazi stronghold, rescue your colleagues (3 in this case) and blow it to bits. The execution, however, is better than most combining the perspective and gameplay of Gauntlet with the simplicity of Green Beret. You view the action from above with your hero looking a bit like one of those miniature table-top robots; shapeless, noisy and slow. When he fires his gun the sprite makes a strange unrealistic stabbing movement and after a shot or two the enemy falls. Your opponents don't seem to fire back, but if they touch you your 'HIT' counter goes up by one. 50 hits and that's the end of you. There is also a counter for ammunition (which can be replenished at 5 units per time up to 99) and one for the number of keys you carry. Some doors can be opened with a shot, others need a key to open. You pick up objects by passing over them and they are



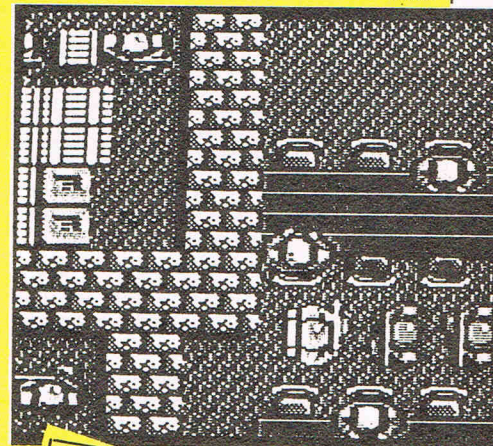
used automatically where appropriate. Access to other floors is by a lift which must be found on each of the 4 levels and opened with a lift pass. Nazi treasures are also dotted around and should be collected for points.

My initial impressions of Eagle's Nest were mixed. The animation, while cute, is jerky, the 4 missions are progressively harder but the layout of the stronghold is identical, and the sound was unconvincing at best. In play, however, it is fiendishly addictive and there is a real feeling of heroic struggle as the Nazis pour towards you from all directions.

In pinching the frenzied activity of Gauntlet, changing the sprites and improving the 4-way scrolling, Pandora have found a much more exciting formula. For my money shooting Nazis is a lot more

worthwhile than any poorly defined arcade nasty, and there is a text window that keeps you informed of major events in the game as you go. While seeing all the ways Eagle's Nest could have been a better game, I still found myself playing it into the small hours in the hope of finding my colleagues or discovering the hidden detonators necessary to blow the place to bits. Definitely one for addicts!

T.M.



Price: £8.95 (c) £12.95 (d)
 Sound: ★★
 Graphics: ★★★
 Playability: ★★★★★
 CCT Rating: Mega

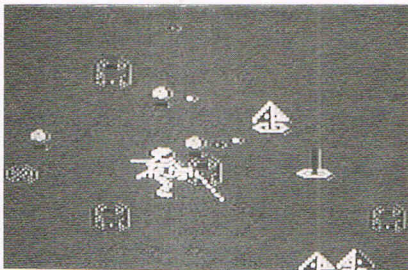
C64

MEGA

Mag Max — Imagine

Mag Max is the next game to be released by Imagine, who made their name by making conversions. This isn't the easiest job in the world and many of their games don't live up to expectations, but here, they have made a conversion to be proud of.

You are Mag Max, a prototype robot, who has been hidden by a group of scientists, just before the earth was finally destroyed. Now, as the earth lies in rubble and ruins, you 'awaken' and start to attack the invaders. You must take control of Max, and guide him across the surface, and underground, the earth collecting components to make yourself strong enough to get your own back on the aliens. These



components come in the form of legs, head and a lance, and though you don't need them to beat the usual cannon-fodder. There are large metallic dragons at the end of each level which need a good blasting to pass.

The game is played at quite a slow pace but as you progress over the landscape, things hot up; if you leave just one thing firing at you, as you go past it is likely to get in a sneaky shot at you — if it doesn't kill you it will take your head or legs off though!

Underground you have none of these worries as the battle is carried out against, squids, birds and even invisible minions. These come at



you in single waves and their graphics are really incredibly good. There are drawn in metallic style and are animated excellently. The land graphics are drawn in a more cartoony style but are no less impressive for that.

This is a good blast, though it's nothing special in concept. It is very well programmed, imitating its arcade cousin beautifully. A distinctive oriental soundtrack goes with the title screen, but there are only sound fx in the game. High recommended.

Price: £8.95
 Graphics: ★★★★★
 Sound: ★★★
 Playability: ★★★
 Rating: Mega

C.K.

Konami Coin-op Hits C16

Konami Coin-op Hits — what can I say? An excellent compilation on the '64 and now it's on the C16.

Ping Pong what a brilliant game this is. Character graphics, white noise and a total lack of playability. This is one of the biggest no-no's out and I don't know how Imagining could have released it.

Green Beret — pre basic. This game could have been good, because if they really wanted to get a good game they could have given it to some other place to program for them. Anco managed a good version in Bridgehead didn't they? I'm sure they did. So couldn't Imagine have got the idea from that and made at least a playable version? No they couldn't. The pits.

Hyper-Sports — naff. This game is an improvement, but it is still

terrible. The swimming is made up of bad graphics and bad sound. Speed is always just about the same no matter how fast you move the joystick, and you have four other competitors who are very, very slow. You have to wait for them to finish before going on to swimming, and this is where I almost cracked up, it was so mind numbingly boring. Street shooting was bad as well — proving to be so difficult that I only got the required score once. I proceeded onto the Long Horse and the computer crashed. Arrgh! All that for nothing! Oh no! Noooooo!

Yie Ar Kung Fu. At last sanity. A good game. Whoopee! not as good as Fist or Way of the Tiger, but still good. I gave it a crisp, but on this tape, it's awesome compared to the rest of this trash. And Imagine have the cheek to release this for 10 pounds.

Rating: Naff

C.K.

MEGA

I, Ball

I, Ball is the wacky new game on Firebird's Silver range. Taking the part of I Ball, you must rescue your spherical pals Lover Ball, Eddy Ball, Glow Ball and No Ball from the evil Terry Ball who has kidnapped them (did I hear someone say this is a load of balls?)

Armed with only your bubble gun you must make your way through sixteen zones, rescuing a friend every fourth zone. These zones are full of obstacles — walls, electrified walls, doughnuts, roulette wheels, and microwave ovens. As you progress, the screen scrolls down, with nasties appearing that flash at first, allowing them to be shot, but without them harming you.

However, if you hang about for too long, they sto flashing and will kill you on contact.

Every so often, a power disk will appear. Be careful not to shoot these, as when collected, they give you a weapon such as horizontal laser, smart missile, or the ultimate weapon — rainbow ripple laser. The power disk also give such things as turbo boost, electro-shield, and extra points.

The best thing about I Ball is the sampled speech. on loading, you're greeted with "I Ball! I-I-I I Ball!" If you touch a nasty in the game, a cheeky voice shouts "Oh no!" At the end of the game the same voice declares "Game Over!" The expression of the speech is just right, and makes the game much more fun to play. The game over speech is really good, and somehow makes you feel satisfied.

The graphics in the game aren't particularly imaginative or pretty, but the scrolling is easy on the eyes.

The music is nothing special, but the sound effects are lively.

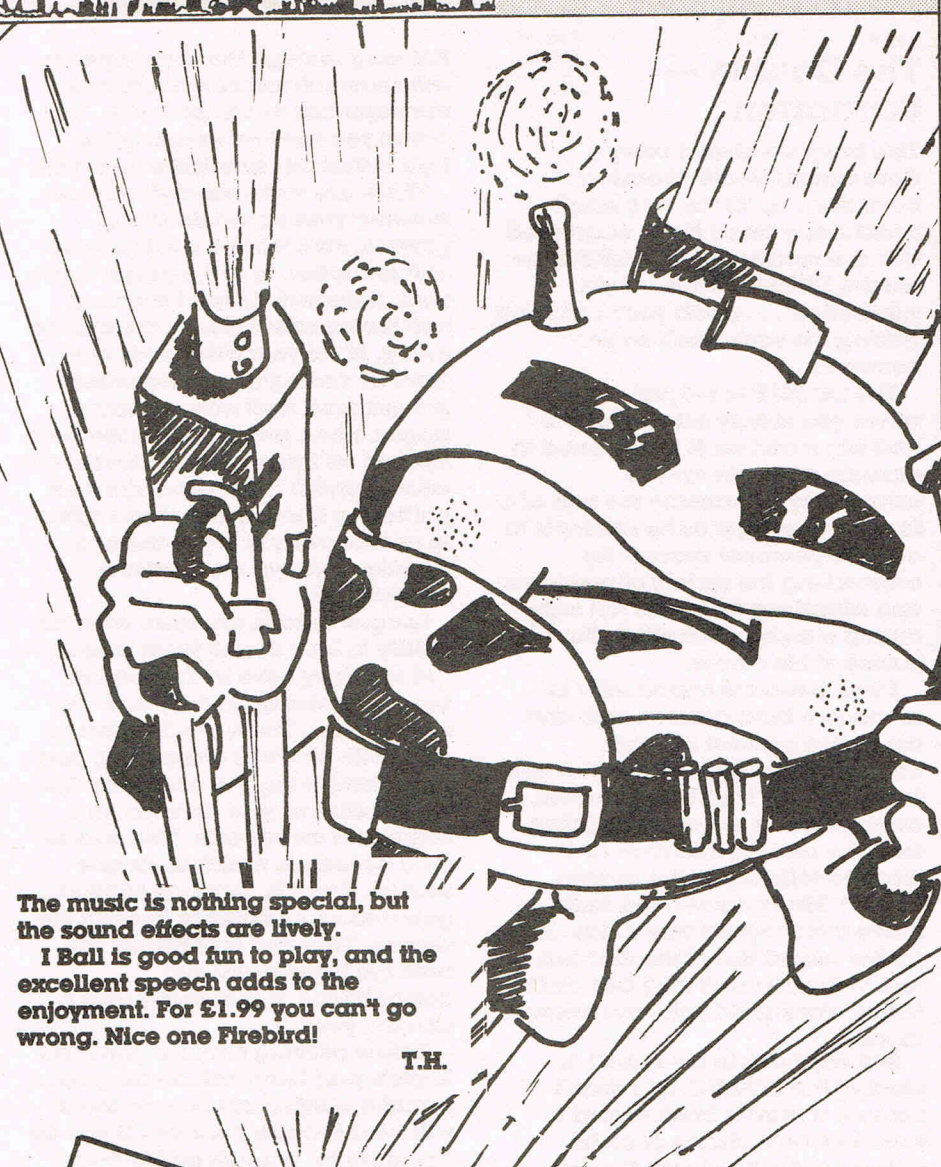
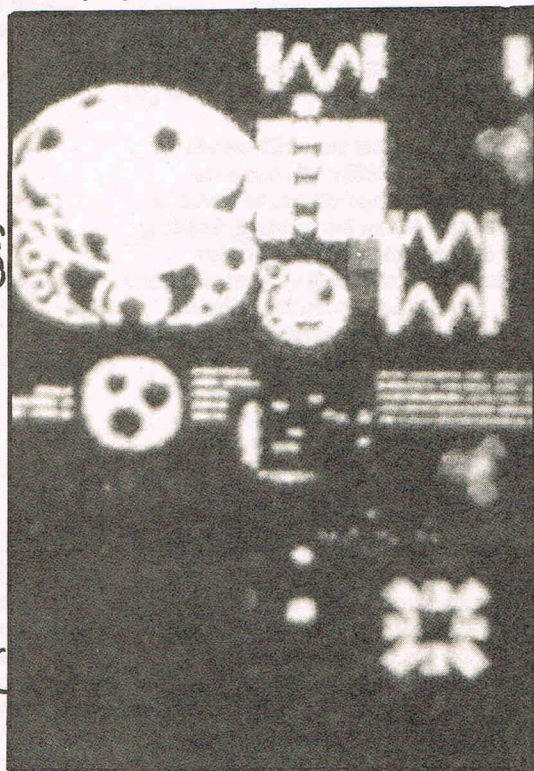
I Ball is good fun to play, and the excellent speech adds to the enjoyment. For £1.99 you can't go wrong. Nice one Firebird!

T.H.

Price: £1.99
 Graphics: ★★
 Sound: ★★★★★
 Playability: ★★★★★
 Rating: Mega

NO BALL
 EDDY BALL
 GLOW BALL
 LOVER BALL

A LOAD OF
 BALLS!



The Double — Scanatron

This program should carry a Government Health Warning!! I have been up 'til the very small hours many many times engrossed with the challenge to complete the elusive DOUBLE. I haven't yet succeeded . . . could you? I did find getting the sack much easier however!!

The DOUBLE is not just a game where you simply select players and win matches. It is designed to emulate accurate and as extensively as possible the role of a football manager as he attempts to achieve personal success by overcoming the variety of problems and situations that arise not only during a season but within the course of his career.

I was given the opportunity to manage a third division club and competed against 65 other computer managed clubs. The data for each club, individual players, average gates etc, were all taken from the real life situation as it stood leading up to the season 1985/6. Many names and facts make this program true to life. Just for the record Gary Lineaker was still at Everton so it may be possible to buy him should you have enough money!

Anyway back to the reality of playing the DOUBLE. As I didn't possess a proven track record I wasn't given a choice of clubs. Rather a take it or leave it offer. However, if you are able to convince other clubs that you have something to offer you may decide your future would be better elsewhere if you get an offer.

This game has no skill levels. It judges your ability to compete against the other clubs, to build a successful team by buying, selling and competing in the transfer market. This will test any manager's skill, handling financial affairs, coping with injuries and attempting to improve your squad with the 1,050 players available each with their own individual abilities, transfer values and wage requirements.

You are given the choice to employ a physiotherapist and 2 scouts. You can send your scouts away to report on any team or any player to enable you to assess a particular player you might think would be an asset to the squad.

The program is menu driven with three sub-menus. The ability to save the program is essential as will become clear in a moment.

Running through the menu options will show you just how much a real manager has to contend with. This shows you just how exacting the task is that this simulation sets you.

There are your own club records showing your squad details of players, their wages, goals scored and an option to sell a player if you wish. A financial report showing how the business side of the club is doing. All of your overheads are there including travel, expenses, ground rent, staff wages, players wages, fines, ground improvements, interest on loans etc etc. Players get injured and it is your decisions on particular treatment that will either speed recovery or if you make a mistake a player may suffer a relapse.

League details are there with the ability to look at any team to see just who they have in their squad. League tables up to date and the next fixtures. There are 3 divisions each with 22 clubs competing. Just as the real thing you must play the other teams in your division on a home and away basis. This makes for a 42 league matches for one season. The F.A. Cup competition gets underway halfway through the season. Your aim is of course win both the league and cup competitions. A real heavy task I can tell you!!

Before playing a match you have to pick your team, inform the police if you're playing at home so there will be adequate policing. If you do not allow for enough police there could be crowd trouble and a heavy fine from the F.A.

the proceedings if you want to become a successful manager.

Here I found my two main criticisms, the first is the terrible graphics though this is due to the limitations of available memory. Scanatron, I hope, should seriously think about writing a version for the 128 and improve upon this situation. The animation is a bit of a joke! The other criticism is the length of time it takes to complete a season. As I said earlier the ability to save to disk or tape is essential. This is because the game is so realistic and the task so exacting that this is the end result. Time however is not on your side. The length of time to watch a match is around 20 minutes so you see that along with all the other preparatory tasks not to mention the transfer market each game can take at least 30 minutes. A full season will last several sessions at your computer and annoy every other member of your household and make you feel like kicking the dog!!

A couple of excellent points are the facilities for printing out the team sheets or the league tables and indeed most anything that goes on screen can be printed out to paper. The other is that you can buy a booklet for £1 called the FACTFILE, into which you can record all your triumphs and failures, this is a nice touch because when you buy a copy of this program you are going to be playing it for many months. The only other way to experience what this game gives you is to become a football manager for real!!



A manager can decide to watch his team play, or if you choose you can watch any of the other 32 matches being played. Each of these matches carries a running commentary at the top of the screen so you're able to see any weakness or strength in a particular player. Watching a match can be a bit tedious but it is an essential part of

If you like a challenge then this is for you! The DOUBLE took two years of work to write and I must say that I can see that it shows hard work in its rewarding complexity and excitement.

Price: £10.95

Twin Tomado — by Doctor Soft C64

Over the years two player games have been restricted to the Sports simulations or by each player being pitted against the computer individually. However, this the latest in a long line of flight simulations now provides the player with a 'real' combat situation. The simulation uses the Tornado aircraft as its basis and the two player aspect is achieved by using two machines linked by a cable in the serial port. This was first brought out for BBC equipment and has now been converted to Commodore equipment. Each machine runs the same program with the enemy plane movements being supplied by the opposite computer. Apart from the Two-player two-machine option, there is the now standard training and single combat modes, using the computer as opponent.

The cockpit view uses vector graphics for ground and opponent movement which is very smooth. The instrument panel is as usual displayed in the bottom third of the screen and again is very smooth in operation. The actual flight

simulation is initially kind to the beginner and it is quite easy to takeoff, however, landing the aircraft is a very different story. This can be learned as in the training mode the function keys can be used to help in the approach and landing. Once these aspects have been mastered the other controls of the aircraft can be addressed. These are quite extensive and include such things as the sweep of the wings and the reheat frequency resonance settings. Two joysticks can be used, the primary in port two for the actual control of the aircraft and the secondary in port one for throttle control. Although the throttle can also be set to automatic except on landing.

It should be noted that the cable used to connect the two machines is non-standard and the two player mode will not work with the standard Computer-Printer/Disk Drive cable. The cable can be purchased from Doctor Soft for under ten pounds. However, the package contains a voucher for three pounds against the purchase of the cable. Two of these can be used to reduce the price to under four pounds. The assumption in this

is that two people could purchase the software but only one cable is needed between them.

Also a word of warning the program will not work in the two player mode on a machine that includes an integral disc drive such as the SX64 or 128D.

As far as aircraft simulations go this is up with any of the others available. However, it is worth adding to your collection for its two player mode alone and therefore deserves its Mega status. My only addition to the game would be to include a different type of aircraft as part of the package, to be flown on the other machine.

L.K.



Stuck in Strike Force Harrier? C64

Strike Force Harrier seems to be giving some readers difficult problems. With the co-operation of Mirrorsoft we have some tips to help you extend your flying hours and meet that "ultimate challenge".

Landing Sites

To survive for any length of time, you must look after your landing sites. The rules are simple, but it is easy to forget them when you've got three MiGs on your tail.

Firstly, if a tank moves on to a landing site, the site is destroyed. You will hear an explosion and a new landing site will become available at HOME BASE (where Q landing site starts off). Secondly, if a tank moves on to HOME BASE, the game ends. The screen goes red and will stay that way until you act dead (take your fingers off the keyboard). So if you hear explosions or get the red screen when everything seems under control, you've probably forgotten your landing site. You're particularly vulnerable when a landing site is destroyed and you get a new one at HOME BASE, because tanks are targeted towards landing sites.

Tip 1: As soon as you're airborne, destroy the four tanks to the east of landing site Q.

Tip 2: Move your landing site every 15 minutes or so.

Hills

If you get red screen when you're completely under control and your landing sites are safe, you have probably met a mountain whilst performing a steep dive or turn. You should be able to avoid this if you keep an eye on the collision detection equipment.

Tip 3: Don't perform steep dives or turns near mountains until you know your limitations as a pilot!

Avoiding Missiles

Timing the release of chaff and flares is crucial — they will not have the required effect if they are released too early. If your decoy has been unsuccessful, the missile alert will continue, but a successful decoy will be rewarded by silence and a report of your remaining decoys. If the attacking missile is in front of you, evasive action will be more effective than decoys.

Tip 4: If a missile approaches from behind, don't release the decoy until it overprints the plane on the combat radar.

Tip 5: When you see a missile approaching, keep changing direction until the alert stops and the missile is no longer on the combat radar screen. If all else fails, take cover in the clouds!

Calling up a Landing Site

If you call your ground forces up to a new landing site and they don't arrive, it may be that they cannot prepare the ground around you, but they will be nearby.

Tip 6: If you don't get the message 'over gs' when you call up a landing site, take off again vertically. Pinpoint the landing site again using the HOMER and land. Remember that you must take off vertically as the ground is unrepaired.

Air Combat

Enemy planes often hunt in packs of three — but you only have two Sidewinders. These missiles are deadly, so don't waste them on easy targets.

Tip 7: Don't engage an enemy squadron unless you have a full complement of Sidewinders. Make your first kill using cannon.

Mirrorsoft has set up a Harrier Hotline. So if you have any further problems, call the Harrier Hotline on 01-377 4900.

COIN OP COUNTDOWN

Andrew Cash, we believe, has no home. He lives in bright places, with noisy games machines that blare. His pockets are filled with the coins needed to feed these hungry computerised money swallows. He has been known to stand mesmerised for 36 hours non-stop playing a single challenge. We tore him away and interrogated him on the latest buzz in the coin-op world. Where possible we give the company that has bought the home computer conversion rights.

Coin-ops seem to be the flavour of the year for software houses so far. Companies who haven't had a hit in months are snapping up as many as they can carry in a desperate bid to turn the tide, while the old stalwarts like US Gold and elite are more sedately skimming off the cream and keeping relatively quiet about it. So if you want to know which of the big games are really worth buying when they finally appear on the 64, and you don't happen to live in Blackpool or London, check out this page for a comprehensive and unashamedly subjective view of what's what in the arcades at the moment.

FLYING SHARK: Not to be confused with 'Slap Fight', 'Tokyo', 'Mission XXX' or 'Tiger Hell' this newly from Taito is apparently doing great business all round the country. A vertical-scrolling bomb-and-blast-em-up that steals elements from all the others yet still comes up look fresh and playing beautifully. Your single fighter-plane moves up the screen blasting away with panache of a '1942' veteran, and picking up those precious and spectacular smart-bombs that wipe out the whole screen at once. The formations of planes that swoop down from all angles get increasingly hard to avoid, as do the tanks that crawl across the terrain beneath you. Shooting some formations give you extra firepower — but be warned,

you'll need it! Expect to see Aircraft-carriers, gun-boats, armoured vans, trains and massive bombers in this excellent dose of mayhem. Forget originality, check this out! (8/10) Conversion — Firebird.

ALIEN SYNDROME: Believe, it if there's one game out there that will be as influential as a 'Nemesis' or a 'Gauntlet' it's this. Sega borrow a few routines from 'Gauntlet' to produce a fun shoot-em-up that is simply unbeatable. The plot is basically 'Alien' with a set number of comrades to be rescued on each level before the 'impregnation' is complete. Sega have discovered a new graphic style that has to be seen to be believed; big, dayglo sprites that explode when hit in a quite repulsive manner and have the pulpy appearance of real slime! The mother aliens awaiting at the end of each of the 6 levels have such features as exploding heads, mutating limbs, and double-jaws that shoot out and bite your man in half. Sounds too tasteless? No at all, this is spoof sci-fi at its best and once again puts Sega in a class of its own. The action is viewed in 'Gauntlet' perspective, but the emphasis is on blasting rather than strategy and the range of firepower that you can pick up from hidden wall-caches is formidable. Find one of these machines and play it to death!!! (9/10)

That's all for this month. See you in 3D.

GRAYZOR: A little like 'Soldier of Light' but a well-defined game that takes your Rambo-like mercenary horizontally across a swamp-land shooting foes and collecting weapons. If you like 'Green Beret' you'll find this similar but 10 times better. (6/10)

SUPER HANG ON: Yawn... New landscapes, slightly different graphics on crashes and skids but basically the same game. Sega can do better and did with 'Out-Run'. (5/10) Conversion — Activision.

SIDE-ARMS: OK, so it's 'Nemesis' with frills, but what frills! Plays like an E-type 'Jet-Pac' with your man picking up some frightening weapons like something out of 'Centurions'. There's real excitement in the speed of the gameplay and the definition of the graphics, and the switch between vertical and horizontal scrolls keeps you on your toes. In 2-player mode you can pick up an icon that allows both players to join together to form a single killing machine, but it won't be long before you're back on your own again. I was disappointed in the 'mother ships that await you at the end of levels, but it's incredible how quickly Capcom have adopted and improved on Konami's house style. This is a class shoot-em-up that sadly has been underrated by just about everyone. (9/10) Conversion — Softek.



EAGLES



EAGLES is the new electrifying fighter game from Hewson. If you've got killer instinct, this is the game for you. Eagles will stretch every nerve in a fast and furious shoot-em-up set where you can blast your opponent out of the sky in an exciting dog fight sequence - Get your wings . . . with Hewson.

HEWSON

Hewson, 56b Milton Trading Estate, Abingdon, Oxon OX1 4RX.

As part of our continuing development of innovative software we are always happy to evaluate software sent to us with a view to publication.

Available on
Commodore
Price £8.95 Cassette, £12.95 Disc.

For Mail Order send the full P.O. to Hewson Consultants Ltd, Order by Credit Card, VISA or Access. You will receive a play card number and you will see a specimen signature. Don't forget to enclose your name and address.

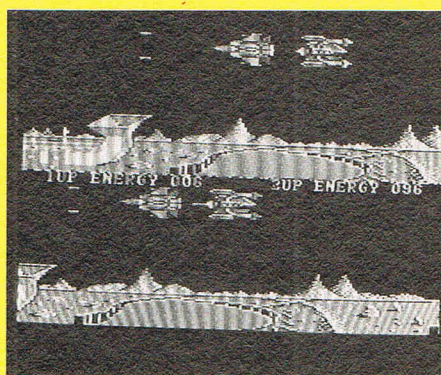
Eagles C64

CRISP



Eagles from Hewson is yet another addition to the already vast selection of scrolling shoot 'em ups. Set in the year 2846 during the three hundred years war, you are called upon to save the world from attacking aliens (again!) With a fellow eagle pilot, you must fight off wave after wave of aliens, with a confrontation with a Zeta fighter after each wave. As well as blasting the aliens, there are message droids to be picked up and dropped into a pipe leading to your base. Collecting five of these gives you a devastator device which works like a smart bomb, killing everything on the screen.

Eagles is displayed in a horizontally split screen showing an independent view for each player. Both planes fly over the same area, and can choose to either work as a team, or against one another with a dogfight after each wave.



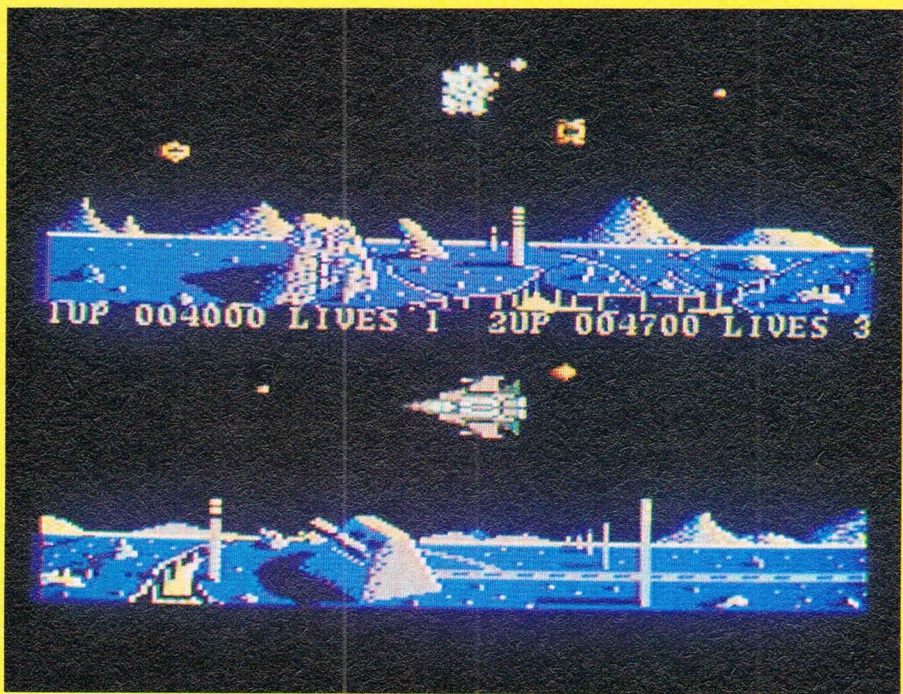
The planet surface is very well drawn, with some similarities to Dropzone, and scrolls very nicely at four different speeds.

Eagles is very well presented, with a clever high resolution multi-colour title screen, and all the graphics moving smoothly. The title screen music is quite good, but not something you would want to listen to for long. Unfortunately, the sound in the game isn't too hot, with just a few basic effects.

The playing area is quite small, which gives a slightly claustrophobic feel. I would have preferred a full screen for each player, although this would rule out the simultaneous two players option.

Eagles has obviously been very cleverly programmed. It has that dis quality that Hewson creates. But in gameplay it boils down to a simple defender variant which perhaps lacks the extra something to keep you playing over and over again. Nevertheless a very likeable game.

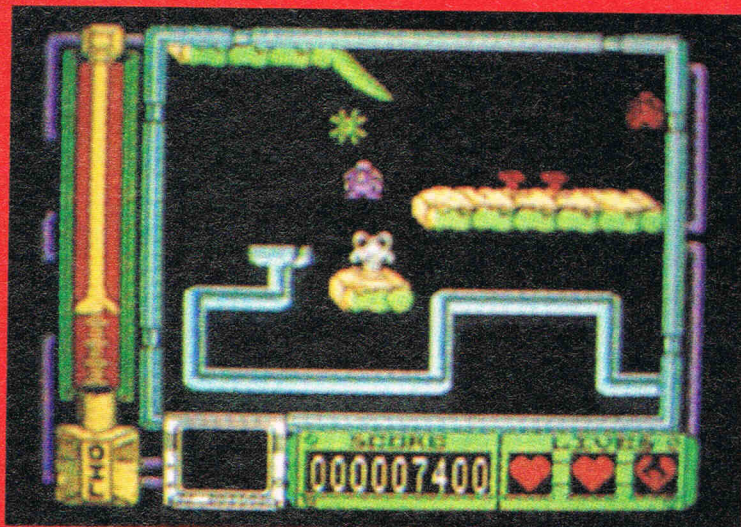
T.H.



Price: £8.95 (c) £12.95 (d)
Graphics: ★★★★★
Sound: ★★★★★
Playability: ★★★★★
Rating: Crisp

C64

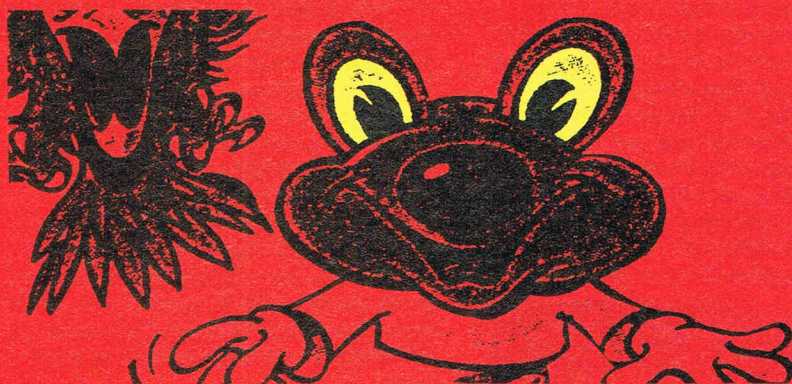
MEGA



Thing Bounces Back

Yes! That cute little green bouncy Thing is back! Just when he thought it was safe to go back into the toy cupboard, after having dealt with the evil toy goblin who was planning to take over the world, he realised the factory computer was still making these killer toys. Once again, Thing must venture into the factory, and put a stop to it for ever.

Thing Bounces Back is a platform game with many original touches, like the suction pipes that squeeze you along, and shoot you out the other end. It's not just timing jumps and dodging sprites. 'Thing II' is played in a number of rooms, each



As well as the conveyor belts, platforms, and slides from the original Thing of a Spring, there are mystery bonus platforms, lasers, doors, and platforms that can be adjusted in height by bouncing on or under them.

Thing Bounces Back is quite similar to its predecessor, graphically and in game play, although thankfully, a bit easier. New nasties guard the factory now. Gremlins, froglets, blue meanies, and flying eggs that hatch any one of those or other nasties.

The title screen music is like a remix of the original Thing music with lots of added bounce. However, the sound effects in the game are fairly standard.

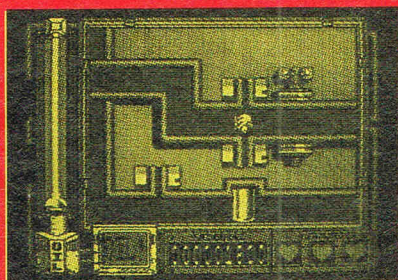
Some of the sprites are very good, like the goblins and Thing. Everything moves about very smoothly, and the scrolling is very fast at times. I liked the way Thing isn't totally defenceless against the nasties, being able to squash them by jumping on them.

Although platform games are getting on a bit these days, Thing Bounces Back is really good fun. It will be adored by fans of Thing on a

room layouts are different, with new security devices, and a maze of pipes connecting the rooms. Each room in the factory contains objects needed to re-program the computer. These are a disk, a program listing, a cassette, and a ROM chip.

Spring and by plenty who are going to meet him — and love The Thing for the first time. A terrific game and worth every penny!

T.H.



made of a few screens of scrolling action. Thing is a strange creature, consisting of a head with big eyes and a red nose, arms, and a spring with two feet at the bottom. His spring can be used to good effect enabling high jumps, and cushioning high falls. Thing can summersault left and right, jump straight up, and hop around (his way of walking).

Since Thing's last visit, the factory has undergone some changes. The

Graphics: ★★★★★
 Sound: ★★★
 Playability: ★★★★★
 CCI Rating: ★★★★★
 Price: £9.95

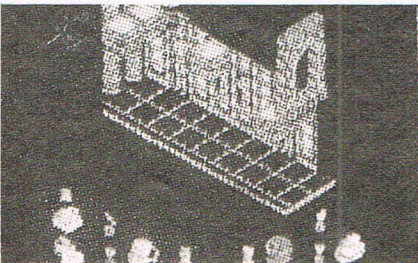
Head Over Heels —Ocean

C64

CRISP

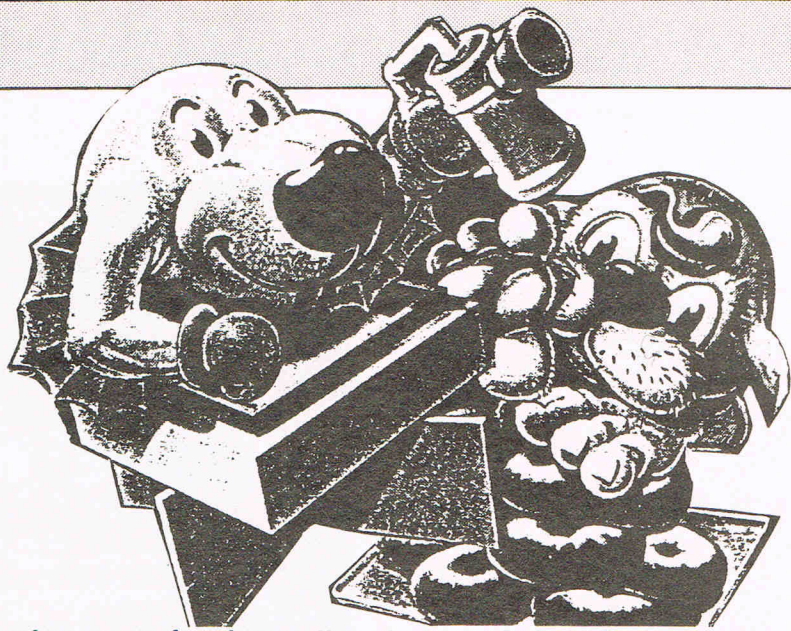
While shoot 'em ups are still easily the most common computer games, more and more arcade adventures are being released. And it's becoming very difficult to come up with something different. Ocean have tried by creating two very odd creatures indeed. *Head Over Heels* — Head is descended from a breed of flying reptile, and still has two small wings that allow him to jump twice his own height, and guide himself through the air. Heels has no arms, but powerful legs and can run very fast. The strangest thing about Head and Heels is that they can form a team and act as one, if Head jumps onto Heels' back!

Taking the part of Head and Heels you must first escape the castle of Blacktooth where you have been imprisoned, and then either



escape back to freedom or teleport to one of the planets enslaved by the evil Blacktooth empire. These planets must be liberated by finding the crowns lost in the Blacktooth invasion, which will then start a revolution of the enslaved people.

At the start of the game, you control Head, and must find a way to team up with Heels and escape. At the press of a button, you may swap control to Heels who starts in a nearby room on the opposite side of a wall. Around the castle you will find such things as springs, switches, conveyor belts, and teleports which can be used to help explore the locations. As well as these, there are some more unusual items, for example, cuddly rabbits, reincarnation fish (who love to be eaten), hush puppies (who never wake up), and a hooter that shoots ring doughnuts! All of these can help you in your quest by giving you



extra powers, freezing nasties, etc.

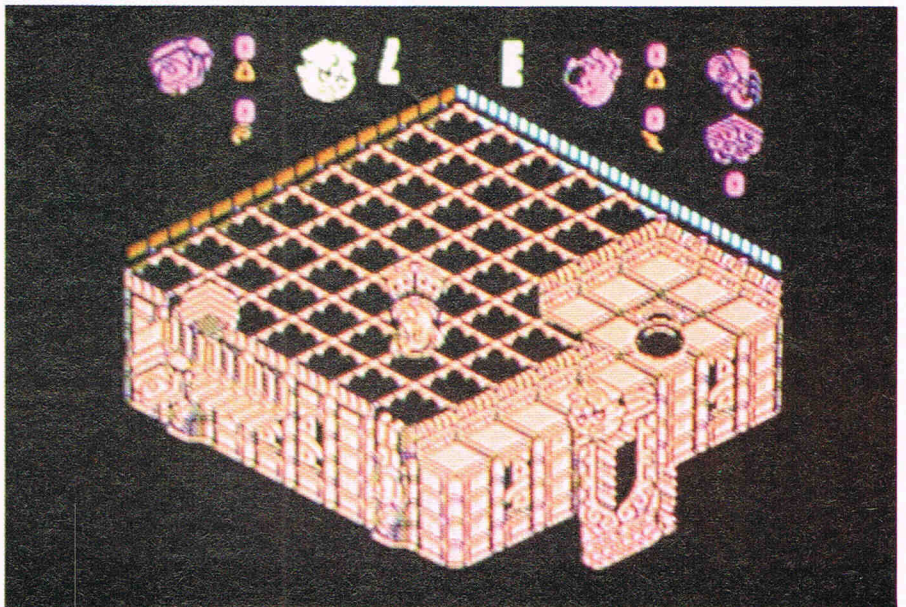
Head Over Heels was designed by Jon Ritman, author of the best selling *Batman* which never made it to the 64 and features the same cute graphics, 3D viewpoint, and similar gameplay. The bulk of the gameplay consists of timing jumps from one platform to another, and dodging robots — all good fun, but I can't help thinking I've seen it all before. The graphics, apart from the main play area being only two colours, are very good, with nicely drawn sprites and interesting detailed rooms. There are a few good sound effects, and some short tunes that could become annoying, although there is an option to turn them off.

Head Over Heels is certainly a well programmed game but has obviously been converted from a Speccy and to fit in its graphic limitations has been drawn mainly in its colours.

As the 64 doesn't have these limitations, I think it's a shame there isn't more colour as it would have made the game far more attractive. The Commodore 64's four colour mode would have allowed this with a slight loss in resolution, and I'm sure the addition of more colour would compensate for this. I think that would have been worth it. If you haven't got a game like this yet, then take a look, you could find it well worthwhile.

T.H.

Price: £8.95 (c)
Graphics: ★★★★★
Sound: ★★★★★
Playability: ★★★
Rating: Crisp



TOP TWENTY

Chart Chatter

Elite's 6 Pak (no, it's not beer!) stays Number 1 for the second month running. Enduro Racer enters at number 2 and Palace's controversial Barbarian hits the number 3 spot — with the support of Miss Marie Whitehouse's ample charms.

C64

GAME TITLE	COMPANY	Price (£)	Rating
1 Elite 6 Pak	Elite	↑ 9.95	Mega
2 Enduro Racer	Actavision	★ 9.99	T.B.A.
3 Barbarian	Palace	★ 9.99	Crisp
4 Auf Wiedersehen Monty	Gremlin	↑ 9.99	Mega
5 Mag Max	Ocean	★ 8.95	Mega
6 Big Four	Durell	★ 9.95	T.B.A.
7 Milk Race	Mastertronic	★ 2.99	Dodgy
8 Gunship	Microprose	↓ 14.95	Mega
9 Eagles	Hewson	★ 8.95	Crisp
10 Head Over Heels	Ocean	★ 8.95	Crisp

Bubbling under and likely to hit the surface shortly:

- ★ US Gold's Metrocross
- ★ Palace's Stifflip and Co.

C16

Woe to the poor C16's. Everybody says the market's dying, though no doubt you will tell us differently. It's becoming difficult even to form a C16 chart and so we'll come down only to the top five.

1 Paper Boy	Elite	★ 7.95	T.B.A.
2 Battle	Mastertronic	↑ 1.99	T.B.A.
3 Footballer of the Year	Gremlin	★ 6.95	Mega
4 Storm	Mastertronic	↑ 1.99	Iffy
5 Way of the Tiger	Gremlin	★ 6.95	Mega

WIN! WIN! WIN!

A TERRIFIC EXCELERATOR DISC DRIVE!

or Slimline cases for your C64!

Win an Exceleator disk drive and ten terrific slim line 64C cases. For some lucky reader a terrific Exelerator disk drive is going to land on their door step, softly we hope, because that clever C.C.I. reader has been able to list the following features in the order which the totally unbiased judges — the Editor of C.C.I., Richard Austin of Evesham Micros, and Romaine the C.C.I competition controller have decided are of most importance.

- Compact Size
- Quiet operation
- Ultra compatible
- One year guarantee
- External device 8/9 switch
- Direct drive motor

The first card with all correct answers drawn out by Romaine's gentle hand from the C.C.I. Comp Sack will win that terrific Exceleator disk drive.

The next ten pulled out are not going to be unlucky, but very lucky because they are going to get one of Evesham's Slimline 64 cases that turn your nasty old C64 into a swish new 64C look-a-like.

Answers on a postcard please, and send by September 15th to Exceleator Comp.

Commodore Computing International
40 Bowling Green Lane
London EC1R 0NE

START Systems

AMIGA A500

A500 Pack (512K Ram, 880K Drive, Mouse, Software, Dust Cover)	£499.95
A500 Pack + Modulator	£519.95
A500 Pack + A1010 880L Disk Drive	£689.95
A500 Pack + Modulator + A1010 880K Disk Drive	£709.95
A500 Pack + A1081 Colour Monitor	£779.95
A500 Pack + PHILIPS CM8833 Monitor	£759.95
A500 Pack + A1010 880K Drive + A1010 Monitor	£999.95
A500 Pack + A1010 880K Drive + PHILIPS CM8833 Monitor	£989.95
A500 Plus (Same as A500 Pack + Extra 512K Ram)	£589.95
A500 Plus + Modulator	£609.95
A500 Plus + A1010 Disk Drive	£779.95
A500 Plus + Modulator + A1010 Disk Drive	£799.95
A500 Plus + A1081 Colour Monitor	£869.95
A500 Plus + PHILIPS CM8833 Monitor	£849.95
A500 Plus + A1010 880K Drive + A1010 Monitor	£1079.95
A500 Plus + A1010 880K Drive + PHILIPS CM833 Monitor	£1069.95

AMIGA A1000

A1000 Pack (512K, A1081 Monitor, Drive, Mouse)	£929.95
A1000 Pack + A1010 Disk Drive	£1159.95
A1000 Plus (Same as A1000 Pack + Extra 512K Ram)	£1019.95
A1000 Plus + A1010 Disk Drive	£1249.95
A1000 Super Plus (Same as A1000 Pack + Extra 2MB Ram)	
A1000 Super Plus + A1010 Disk Drive	

AMIGA A2000

A2000 pack (1Mb Ram, A1081 Monitor, 880K Drive, Mouse)	
A2000 Pack + 2nd 880K Drive	
A2000 Pack + 20Mb Hard Drive	
A2000 Pack + Bridge Board + 5.25 Drive	
A2000 Plus (same as A2000 Pack + Extra 2Mb Ram)	
A2000 Plus + 2nd Disk Drive	
A2000 Plus + 20Mb Hard Drive	
A2000 Plus + Bridge Board + 5.25 Drive	
A2000 Super Plus (Same as A2000 Pack + Extra 8Mb Ram)	
A2000 Super Plus + 2nd 880K Drive	
A2000 Super Plus + 20Mb Hard Drive	

AMIGA PERIPHERALS

A1081 Colour Monitor	£339.95
PHILIPS CM8833 Colour Monitor + Amiga Lead	£289.95
A1010 2nd 880K Disk Drive	£239.95
A1050 512K Ram Board	£99.95
A2052 2Mb Ram Board	Phone
A2052 8Mb Ram Board	Phone
A2088 XT Bridge Board + 5.25 Drive	Phone
A2286 AT Bridge Board + 5.25 Drive	Phone
A5060 20Mb Hard Drive + MS-DOS Controller	Phone
A2090 20Mb Hard Drive + Amiga-Dos Controller	Phone
DIGIVIEW Digitizer	£119.95
GENLOCK	£399.95
CHERRY Tablet Pack + Cables & Driver	£549.95
MEGABOARD 2Mb Ram Expansion	£449.95
EASY 1 Graphic Tablet	£399.95
ECE Midi Interface	£48.95
XEROX 4020 Colour Ink-Jet Printer	£1059.95
SUPRA 20Mb Hard Drive	£649.95
SUPRA 60Mb Hard Drive	£1299.95

AMIGA SOFTWARE

Modula 2	£79.95
Modula 2 (Developer System)	£129.95
MMC Cambridge Lisp	£109.95
MMC Pascal	£74.95
MMC Assembler	£54.95
True Basic	£129.95
True Basic Runtime	£129.95
True Basic Complete	£189.95
Superbase Personal	£119.95
VIP Professional (UK Version)	£109.95
SDI	£23.50
Defender of the Crown	£23.50
Sinbad	£23.50
Starglide	£19.50
Flight Simulator II	£37.95
Flight Simulator II Plus (includes extra disk)	£54.95
Guild of Thieves	£19.50
The Pawn	£19.50
Silent Service	£23.50
Skyfox	£19.50
Arena	£23.50
Bratacus	£29.95
Chessmaster 2000	£34.95
Music Studio	£29.95
Delux Paint II	£109.95
Delux Print	£64.95

MAIL ORDER DEPARTMENT

If you can't see the System, Peripheral or software you want, then ring now for our new low prices or send SAE for mailing list.

For any order just send a cheque, bankers draft or postal order made payable to START SYSTEMS to the address below and we will despatch your order to you within 14 days.

Send to:

START SYSTEMS
209 Telegraph Road,
Deal, Kent CT14 9DR

For all enquiries and the latest prices phone (0304) 36366
We deal with a wide range of users from Business and Educational to Professional and Home with prices and a service second to none.

All prices include VAT and Securicor/Postal Charges
These prices supersede all previous advertised prices
All prices correct at the time of going to press

YORK ELECTRONIC RESEARCH

Commodore 64 Products

6502 ASSEMBLER £12.99

- ★ Full symbolic assembler
- ★ Supports tape and disk filing
- ★ Built in text editor
- ★ Chaining of source files
- ★ Rapid edit-assemble-test cycle in resident mode by eliminating disc accesses
- ★ Produces self-relocating/auto -running object programs
- ★ Object modules are RUNable and SAVeable from BASIC
- ★ New extended manual

Please specify tape or disk

Z80 EMULATOR £10.99

- ★ Run Z80 code on your C64
- ★ Compiles Z80 source code text into optimised 6502 code
- ★ Includes powerful editor, compiler and saver
- ★ Handles all but 20 out of 688 Z80 operations
- ★ Supports interrupts and calls to 6502 routines
- ★ Comprehensive manual and example programs on disk

BI-DIRECTIONAL RS232 INTERFACE ... £29.99

The CBM64 KERNAL already supports RS232 via the user port. Our interface provides the necessary voltage conversion for direct connection to RS232 PRINTERS and MODEMS etc. It is supported by Easyscript, Superscript etc.

The unit is supplied with:

- ★ 1 metre of cable terminated in a 25-way D connector
- ★ Support software including:
 - Terminal emulator
 - File transfer utilities
 - A menu driven port initialisation program to set up baud rate etc.
 - A transparent printer driver which vectors the KERNAL to re-direct device 4 printer output to the RS232 port.
- ★ Comprehensive manual explaining the above software, RS232, and how to use the port in your own programs.

Longer cables: add 75p per extra metre.

Please specify disk/tape, and male/female RS232 connector.

Manuals available separately at £1.00 each

All prices are fully inclusive. Overseas orders add £2.50

YORK ELECTRONIC RESEARCH

The Fishergate Centre, 4 Fishergate, York YO1 4AB
Telephone: (0904) 610722

MIDCOMM
INTERNATIONAL

COMPUTER REPAIRS

MIDCOMM INTERNATIONAL LTD IS A COMPANY THAT SPECIALISES IN COMPUTER REPAIRS AND CAN OFFER YOU THE FOLLOWING 5 STAR SERVICE:-

- ★ REPAIRS CARRIED OUT TO MANUFACTURERS REQUIREMENTS USING THE MOST UP TO DATE DIAGNOSTIC AND TEST EQUIPMENT AVAILABLE.
- ★ SKILLED TECHNICAL STAFF.
- ★ MODERN CUSTOMIZED WORKSHOPS.
- ★ 4 HOUR SOAK TEST ON EACH REPAIR.
- ★ ALL REPAIRS GUARANTEED.

FOR A FAST, EFFICIENT, RELIABLE AND PROFESSIONAL SERVICE, CALL WITH OR SEND YOUR COMPUTER, TOGETHER WITH A BRIEF DESCRIPTION OF FAULT TO:-

MIDCOMM INTERNATIONAL LTD

UNIT F

BIRCH INDUSTRIAL ESTATE

WHITTLE LANE

BIRCH

HEYWOOD

LANCS OL10 2RB.

TEL 0706 625166



★ Programme Submission Procedure ★

DO NOT submit any programme or routine that you do not either own or have proper 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 programme or article is applicable to.

Include ROM or DOS versions wherever they are pertinent.

Number all pages.

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

Never use staples. Use paperclips if necessary.

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

When you save a programme 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 programme. Label tape or disk with your name and the name or title of the programme.

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 programmes have to be thoroughly tested and made into a suitable format.

Enclose a self-addressed stamped envelope or package if you would like your programme 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 programme on completion as many readers use auto number utilities to ease typing in.

Try to keep instructions within the programme itself as a sensible level. You can expand on them within the accompanying text if necessary.

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

If a programme 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 programme contains any more than five lines of data. There is a suitable routine at the end of this article.

Commodore – Subscription Order Form

To Subscriptions Manager, Commodore Computing International,
40 Bowling Green Lane, London EC1R 0NE. Tel: 01-278 0333 Telex: 267247 FINSEC

Please send me 12 issues of *Commodore Computing International*

Cheque enclosed

Please debit my Access

Card No.

Subscription rate U.K. £15.00

Expiry date: _____

Europe £25

Cheques should be made payable to:
CROFTWARD LIMITED

Outside Europe £38

Name _____

Address _____

County _____ Post Code _____

Telephone (home) _____ (business) _____

Signed _____ Date (Subscription to commence) _____



Don't miss out!

L A R R Y H A R M O N S

Laurel & Hardy



COMMODORE 64

(C) £9.95

(D) £14.95



ADVANCE • SOFTWARE • PROMOTIONS • LIMITED

UNIT 1 • HAROLDS CLOSE • HAROLDS ROAD • HARLOW • ESSEX CM19 5TH

TELEPHONE • 0279 412441

Compilations

Compilations are becoming increasingly popular these days, perhaps the quality of games they include or simply because they often provide such excellent value. Prices of games are tending to fall — due, of course, mostly to the budget labels and the competition they are giving the full price games companies. Still very often if you can buy for about £10, 4 or 5 full price games then you are getting them at more or less the same price as the budget level. And most people simply don't get the chance to play *every* game just when it comes out. So plenty will welcome the opportunity to spend less but get more 'bangs per buck'.

Today's compilations, on the whole, are made up of at least one hit game and a handful of older or not so good games. Some people do complain that no sooner than they have bought a game it appears on a compilation — which maybe an error on the original company's part.

There is however usually a gap of at least six months before this happens, so why begrudge others who either couldn't afford it or decided against buying the first time round, the chance to get it with a few more games for the same price?

To help you decide what to go for, we've put together the following guide of the latest compilations for your guidance.

5 Star Games (volume 1)

5 Star Games includes *Spindizzy*, *Equinox*, *Zoids*, *Batalyx*, and *Scarabaeus*.

First off, we have *Spindizzy*. This takes the Marble Madness idea, and puts it into a 'flip screen' format as opposed to a scrolling landscape. You are Gerald, who must explore every location of this new world and make a map to take back to base where you will be awarded promotion. On your way, you will have to negotiate ramps, water, and ice, as well as avoiding the void below. The graphics are colourful and Gerald moves

realistically at a fair speed.

The lack of any music or frequent sound effects does spoil the game a little as it is played virtually in silence. But CCI classed it as *Awesome* when it came out and it is well worth that rating. *Spindizzy* is in my mind, the best game on the compilation.

Equinox is an arcade adventure cum shoot 'em up set in a colonised asteroid. Radio active canisters lie exposed in the mines, and it's your job to dispose of them. You control a spherical disposal droid armed with a laser that comes in very handy for zapping those little energy-sapping aliens. Collecting and using objects allows you to gain access to canisters and other parts of the mine.

Equinox is quite similar to the *Starquake/Nodes of Yesod* type of game with agreeable graphics and sound.

Batalyx is a typical Jeff Minter game, incorporating six sub-games. The games feature the usual characters, Cippy, Rory, and, of course, the mutant camels. The games are: *Hallucin-Bomblets*, *Attack of the Mutant Camels*, *The Activision of Iridis Base*, *Cippy on the Run*, *Syncro 2*, and *Psychedelia*. All the visual and sound effects are here, together with lots of blasting — not one of my favourites, but will not doubt appeal to Minter fans.

Zoids is an icon driven adventure game, featuring the toys of the same name. Your mission was originally to land in the Red Zoid's city, and with Zoidzilla, find and destroy Redhorn the Terrible. However, whilst landing, an unidentified object collided with your ship. As you bailed out, you saw your ship explode, scattering Zoidzilla about the landscape. Now you must find the eight parts of Zoidzilla before seeing to Redhorn the Terrible.

Zoids is played rather like *Shadowfire* — selecting icons which open up menus.

A soundtrack by Rob Hubbard plays in the background, though it's not one of his best.

Zoids is a game that would

appeal to fans of the toys more than anyone else, and will be enjoyed by those who like this type of game.

Scarabaeus is a 3D maze game set in an Egyptian tomb. Your task is to enter the Pharaoh's tomb. First, nine hieroglyphs must be found by catching ghosts in the maze. Together, these form a key which allows further access to the tomb.

As you progress, you must collect medicine, solve puzzles, and avoid spiders and poison.

The 3D graphics, although fairly simple, work well.

There is a choice between some quite atmospheric music, or the sound of your heart beating, and your breathing, which is done very well.

Scarabaeus should keep arcade-adventure/puzzle fans happy for quite a while.

5 Star Games (volume 1) has a balanced mixed of arcade-adventure and shoot 'em ups and is good value, although I must say I preferred volume 2. But *Spindizzy* makes it worth the money alone.

Rating: Crisp

5 Star Games (volume 2)

The second 5 Star Games compilation is made up of *Paradroid*, *Dandy*, *Strike Force Cobra*, *Who Dares Wins 2*, and *Cauldron 2*.

Paradroid was first released in 1985 by Hewson. Written by Andrew Braybrook (author of *Uridium*), it was one of the first games to feature the now popular 'bas-relief' metallic style graphics.

The robot crew of a galactic space freighter have malfunctioned and turned against their masters. Your task is to overcome the droids and restore peace to the freighter. Starting in your influence droid, you must destroy all the mutant droids. A more powerful droid would be useful, so you can transfer to other droids by winning a head to head battle of wits. The graphics don't vary much, and the scrolling is rather slow, but there are some good sound effects. When it was

first released, *Paradroid* caused quite a stir, and is still good fun to play.

The next game, *Dandy*, is a Gauntlet style arcade-adventure for one or two players. Unlike Gauntlet, the screen doesn't scroll but changes as the player walks out of view. Alone or with a friend, you must venture on through 15 dungeons collecting treasure as you go. Not the best game of its kind, but not the worst.

Strike Force Cobra takes the 3D arcade adventure and adds several new twists. Instead of jumping around on platforms and dodging predictable sprites, *Strike Force Cobra* has you controlling an SAS style team, attempting to rescue kidnapped scientists and saving the world from a nuclear holocaust. As well as being able to run and jump, each member of the team can crouch, dive through windows and use lasers and kick down doors. You are also armed with a sub-machine gun. *Strike Force Cobra* is faster and more colourful than a lot of 3D arcade adventures, and more fun to play.

Who Dares Wins 2 is a Commando style game in which you must single handedly capture eight enemy outposts the aid of your machine gun and hand grenades. The scenery scrolls smoothly down the screen as you romp on into enemy territory, fighting off soldiers and jeeps while avoiding trains, planes, mortar bombs, trenches, and quicksand. The end of each area is heavily guarded by a crowd of soldiers who must be shot. *Who Dares Wins 2* is a good version of Commando with a fair graphics and sound.

Finally, *Cauldron 2* is a platform game in which you play a bouncy pumpkin. A wicked witch has built an enormous castle on the site of her tiny cottage in the woods. As the sole survivor of the wood, it is your job to cut a lock from the witches hair to reverse the spell, and bring peace to the wood once again. To hamper your task, the witches guards, skeletons, spiders and the like will do their best to puncture you, and save their castle. *Cauldron 2* is an enjoyable game with nice graphics and sound effects.

Given that you don't have these games, I would recommend 5 Star Games (volume 2), as it includes an excellent variety of enjoyable games, and is very good value at £9.95.

Rating: Mega

Broderbund Stateside Smash Hits

This US Gold compilation contains four old Broderbund games — *Spelunker*, *Choplifter*, *Raid on Bungelling Bay*, and *Stealth*.

First up is *Spelunker*, a sort of cross between *Pitfall 2* and *Manic Miner*. The game takes place in an old mine, full of treasure, dynamite, fire pits and bats to name but a few of the surprises. On your never-ending quest for wealth, you must negotiate the many holes and lifts in the mine as well as zapping ghosts, avoiding bats, and blasting rockfalls.

The graphics are quite basic, but there are some good sound effects. *Spelunker* is quite fun to play, but is spoilt somewhat by the multi-load, which takes time, as usual, when you would rather be playing.

Choplifter, the next game, has you rescuing hostages from behind enemy lines in your helicopter. The screen scrolls left and right as you shuttle back and forth from base to the buildings imprisoning the hostages. Enemy tanks and planes have instructions to shoot you on sight, and any escaped hostages. With simple graphics and sound, *Choplifter* is mildly addictive, but you won't find yourself coming back



to it very often.

The second helicopter game is *Raid on Bungelling Bay*. Based at your aircraft carrier in the waters surrounding a group of islands, you must take out six enemy factories that are making 'the ultimate war machine', as well as delaying the production of an enemy battleship that will attack and sink your carrier.

The screen scrolls in all directions as you fly around the islands. Defending the factories are anti-aircraft gun, fighter planes and tanks. These can be disposed of with your cannon. When you find a factory, it must be destroyed by continual bombing which will blow it up.

This was my favourite game on the compilation, although it's not that good, it's just that the others are worse.

Finally, there's *Stealth*. Viewed in 3D, your mission is to reach and destroy the Black Tower. Flying at low level, you must defend yourself against an onslaught of aliens and hazards such as fighter planes, missiles, and volcanoes. As you go, your energy store runs down slowly, with an extra ten units being used up with every shot. Energy can be collected on the way in the form of yellow energy fields, with red energy fields taking away your energy.

Although *Stealth* has the best graphics of these games, it is the least enjoyable to play, with little variation in gameplay.

None of these games stand out as particularly good, and £9.95 is rather expensive for what you get.

Rating: Ify

Hit Pak

Elite's Hit Pak is made up of some fairly new titles, including *1942*, *Sacred Armour of Antriad*, and *Scooby Doo*, all three of which have topped the charts in the not too distant past. Also on the compilation are *Fighting Warrior*, *Jet Set Willy 2*, *Split Personalities*, and a previously unreleased game called *Duet*.

Hit Pak kicks off with *Scooby Doo*. Programmed by Gargoyle Games, it bears some graphical similarities to their *Tir Na Nog/Dun Daragh* series, with large characters moving over mainly left and right scrolling backgrounds.

Your friends Shaggy, Velma, Daphne and Freddy have been captured and are being held in a spooky castle, where they will be the guinea pigs of a mad scientist's experiment. It is up to you to rescue your pals from a fate worse than death.

Running up and down the corridors, ghosts and spooky spirits will try to scare you away, knocking you over on contact. I seem to remember *Scooby* being a bit of a wimp, but he has acquired a skill for punching ghosts which comes in handy.

The animation and scrolling is not up to today's standard, it being rather jerky.

A simple rendition of the *Scooby Doo* theme tune plays on the title screen, with equally simple in-game sound effects. I don't think

SWOOPER



Superb Arcade Action
FOR THE AMIGA - ONLY £19.95

Fight your way through the hostile Wegan Forces to get the precious vaccine and save your Xenon Spaceship from the deadly pariah epidemic.



DIAMOND GAMES ARE DISTRIBUTED BY
 Robtek Ltd., Unit 4, Isleworth Business Complex,
 St. John's Road, Isleworth, Middlesex, U.K.

GOLDEN GOLDIES

20

Exciting games on one tape or disk. Try your luck in the "Biathlon", test your skill against the "Crazy Men", or pit your wits against the "Alien Attack".

COMMODORE 64/128
TAPE £9.95 DISK £12.95



DIAMOND GAMES ARE DISTRIBUTED BY
 Robtek Ltd., Unit 4, Isleworth Business Complex,
 St. John's Road, Isleworth, Middlesex, U.K.

Cut-Price Disks from Direct Disk Supplies

from only **£9.99** for 25 disks delivered to your door

Offer 1 **New Premium Universals**

Not only are all our universal disks individually certified to 96tpi but they are now prepared to an even higher specification to ensure fewer problems, high reliability and value for money. Plus, of course, our Lifetime Warranty. Disks are packed in 25s complete with envelopes, labels and write protect tabs.

£ 14.99	25 disks	★ Full spec Hlgrade disks, made to 75% clipping level
£ 26.99	50 disks	★ Life-time no quibble warranty
£ 49.99	100 disks	★ Hub-rings on 5.25" disks
£ 96.99	200 disks	★ Label sets and envelopes included
£119.99	250 disks	★ No extras - VAT and delivery included
£219.99	500 disks	
£379.99	1000 disks	



Bargain Box.

Have no doubts - these prices are the business.

Price per order (SSDD 48 or 96tpi please specify)	Approx price per disk ex-VAT (inclor only)
20 disks	£ 10.99
40 disks	£ 19.99
60 disks	£ 28.99
80 disks	£ 36.99
100 disks	£ 42.99
200 disks	£ 82.99
500 disks	£199.99
1000 disks	£389.99



DDS offer you branded SCOTCH (made by 3M) at prices below other people's plain label disks. They're certified & tested error free by 3M; branded disks in tyvek envelopes with re-inforced hubs, labels & WP tabs are also included. We only have a limited stock, and so it's first come, first served. A saving not to be missed!

Offer 3 **MEDIA 3.5" LIFE** disks in FREE plastic library boxes.

Quantity	SS (includes plastic library box)	DS
10 disks	14.99	16.99
20 disks	28.99	33.49
50 disks	69.99	79.99
100 disks	129.99	149.99
200 disks	249.99	289.99
250 disks	299.99	359.99
500 disks	589.99	699.99

Don't settle for less - get the best in FREE plastic library boxes.

Made in Japan by a leading manufacturer, our single and double sided disks are fully tested and certified to 135tpi. Don't forget - the price includes VAT, delivery and library boxes! N.B. If you don't need boxes on quantities of 100 or more, then phone and ask for our special trader prices for BULK disks.

Offer 2 **Super Savers on Single Sided**

Total Price (No extras!)	Quantity
£ 9.99	25 disks
£ 19.48	50 disks
£ 37.99	100 disks
£ 74.99	200 disks
£ 93.99	250 disks
£185.99	500 disks
£299.99	1000 disks

It'll twist your tongue, but not your pocket!

Cash 'n Carry prices on disks from Direct Disk Supplies

Don't forget - No extras

Offer 4 **'Rainbows'**

25 Universal 96 tpi coloured disks, 5 disks of each of five different colours.

£ 18.99	25 disks
£ 35.99	50 disks
£ 69.99	100 disks
£129.99	200 disks
£149.99	250 disks
£279.99	500 disks

How to order

ALL PRICES INCLUDE VAT & DELIVERY TO YOUR DOOR! NO HIDDEN EXTRAS



1. DIAL-A-DISK ON 01.979 7811, and give your ACCESS or VISA number and expiry date.
2. Send your cheque etc. to Direct Disk Supplies Ltd.
3. Official Orders, Bona-fide orders from Universities, Colleges, Schools, Charities, etc are very welcome.
4. Cash orders, no minimum value. Account orders, minimum value £30.

DIAL-A-DISK

01-979 7811

Direct Disk Supplies Ltd.

FREEPOST, 129 High Street, Hampton Hill, Middlesex TW12 1BR

Scooby Doo is a particularly good game. I found it rather annoying when a ghost appeared from behind a door without any warning and killed me.



1942 is a conversion from the arcade game set somewhere over the Pacific. In the second World War. You must fly your plane through waves of enemy planes, shooting as many as you can on the way and stopping at regular intervals on aircraft carriers to refuel. As you go, you can pick up jettisoned weapons from enemy planes you shoot down. If you are in a particularly tight spot, you can loop the loop to get out of trouble.

The islands that repeat themselves very often, scroll down the screen smoothly.

The key to playing 1942 is to remember the attack wave formations as they are the same every game.

1942 comes with new music, different to the original and some fairly weak sound effects. The graphics are not very terrific with small simple sprites and basic backgrounds. I didn't find 1942 particularly fun to play, and go bored quite quickly.

Duet, the new game on the compilation, is merely Gauntlet dressed as Commando. It's a game for one or two players, in which you must retrieve vital documents from enemy territory.

Set in a jungle, there are palm trees and undergrowth that form a maze infested with tanks and soldiers. All the features from Gauntlet are here: keys and doors, which are now barbed wire and shears, the baddy generators, all just with Commando style graphics.

There are so many Gauntlet clones about that any released now

need to be pretty good to stand out. Duet's graphics are not particularly exciting nor are the sound effects, but it by no means a bad addition to the already published other games.

Next there's Jet Set Willy 2, the rather disappointing sequel to the classic platform game. After a nasty fall down the stairs, Willy hired some builders to take the sharp edges off. There was something strange about those builders — not only did they build various extensions to Willy's mansion but they refused to accept any payment. It didn't all come up roses however, as they left a dreadful mess, which Maria, the house maid is demanding you clear up.

Jet Set Willy 2 contains all the elements of a typical platform game, the gameplay involving timing jumps from platform to platform whilst dodging weird creatures that go back and forth in a set pattern.

Jet Set Willy 2 is quite old, and it shows. If you've got room for another platform game, then it will be of interest, but most will find it fairly run of the mill and rather boring.

The Sacred Armour of Antiriad is definitely the most professional game on the Hit Pak. You are Tal, who is the last hope to save mankind against the invaders. The game takes place in three areas — the forest, with apes that reach down from overhanging trees that have a painful look to them. Further on there is a deserted castle which leads to caverns with fire breathing dragons that will toast you alive if you're not careful.



You get from screen to screen by running and jumping on platforms and flying in your suit of armour,

while shooting the aliens.

The graphics are superbly drawn, with excellent use of colour on Tal and the armour. The music is different to the usual Hubbard/Halway style, and adds to the atmosphere. The sound effects are also first class, especially when you shoot your gun.

Antiriad is a high quality arcade adventure that is great fun to play.

Fighting Warrior is a right to left scrolling beat 'em up. Your quest is to save the princess who has been kidnapped by a nasty pharaoh (oh what an original story line!) Armed with a sword, you must make your way across the desert and into the temple where the princess is being held, and fighting off various creatures with your sword as you go. You will sometimes be rewarded with a magical pot on killing an opponent. Each pot has a different effect when hit with a sword. Some take you to a different place, and some take you to the creature you killed.

The music is pretty boring, and there's just one sound effect as you hit an opponent. The sprites are large, but a bit chunky.

Fighting Warrior has only three types of hit and thus becomes boring after a short while.

Finally there's Split Personalities. If you ever played that old game Jumbly, you'll know what to expect. The idea is to complete a puzzle made up of squares that are pushed around inside a box. In the top left corner of the box is an arrow, where the pieces come out. Positioning the cursor over this and pressing the button pushes out a new piece of the puzzle which can be pushed around into the correct position. When moving the piece around, they will only stop when they hit another piece or a wall. As well as these, there are bonus items that must be pushed together, and bombs that will explode if they're not disposed of in time.

There is a time limit in which the puzzles must be completed. Each puzzle is the face of a personality or politician, and on the whole, they are very well drawn. The music and sound effects are adequate.

Split Personalities is good fun to play, and makes you want to complete the puzzle to see the next.

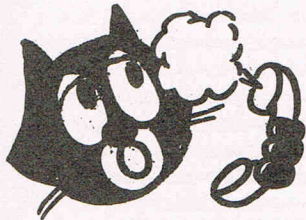
The Hit Pak is one of the best compilations with an excellent variety of games. Antiriad is the game that makes it all worth while — a very good buy indeed.

Price: £9.95

Rating: Mega

Poor Old Jo!

I didn't mean it. I only mentioned last month how amazingly difficult it was to speak to the Honourable Jod Mead of Melbourne-tronic on the telephone and how O.S.E. was so overwhelmed at being called back by this aristocratic Lady when 'pouf' (I beg your pardon! Ed) I mean 'puff' as in smoke and she



was gone! Major Billy ('My grandfather drove an armoured plated Rolls Royce') Brown claims that it was he who placed the CCI curse on the poor Jo. He apparently thought she was Stalin in disguise. She would not book a five year series of double page ads at a million pounds a month as he had politely suggested and so 'she got blown away'. Major Billy denies that fed up with President Reagan's shilly shallying about arms for the Contras, he had sent his beloved jeep as a replacement for a division of crack US combat troops who were previously staggering through the Nicaraguan jungle shouting 'Ole', 'Paella and chips' and 'David Carlos' and other Hispanic-style expressions in the hope of fooling the US Congress and the world press that they were native Nicaraguans. No, Major Billy swears his late jeep was derailed and written off by a tank trap laid in a main street in West Hampstead by 'those lefty pinkos in the Pentagon whose guts are the colour of my canaries' fanny'. He believes they want to stop him settling North London's parking problem with a single well aimed cruise missile. Frankly I'm not surprised at the late Jo Meads departure. I would do the same if I could. Viva Mastertronic Viva Nicaragua! Viva Tu Culo (whatever that may mean).

The Divine Sarah Burnt Heart

And who, I hear you cry, is the Divine Sarah? Well, the Illegible Michael Boxter (who has the Solutions if you can find the problem) confided in me most confidentially (I have sworn to tell no-one except you, my four million secret readers) that he did not feel completely up to all the tasks a really suave computer PR person has to perform. Especially if it is something that is best done by a female girl of the feminine sex — if you see what I mean. So after a recent advertising campaign (worth a mere £5 million) in *New Scientist*, *Penthouse*, *Campaign*, *Health and Efficiency*, *Dog Lover's Journal*, *Stage*, *New Musical Express*, *BMX Action Bike*, *The Lady*, and the *Liverpool Post*, and scouring the country on a tandem, he found the only real woman in the UK called Sarah (all the others I can assure you are fakes.) She is not only a brilliant Liverpool poet (Adrian Henri eat your heart out) and PR release writer she is also, I am authorised to report, a nun, the survivor of a really flaming romance, a star advertising Art Director, she fought in the Arab/Israeli Wars, and is an internationally renowned gourmet cook. She was unfortunately expelled from her convent for inventing a new kind of exposure and trying it out successfully, on the main building. for relaxation she runs a 'Help the Vagrant' service at Victoria Station making sure such well known tired and emotional wanderers as Michael Foreman Editor of *Microscope* get on the last (and wrong) train to Brighton. All this at 21 when she is still beautiful enough to be asked to pose for the centrefold of *The Optician's Gazette*. O.S.E. told me he first set eyes on the Divine Sarah at one of Lady Amanda Bariolasoff's lunchtime champagne bashes at the Rock Garden. Boozed up computer hacks and (yuk) reviewers were lying on the caviar strewn



Domark of Cain

So desperate are the producers of James Bond films to find a new 007 that they asked CCI to stage a real life shoot out in the grounds of CCI Tower among the several million applicants. 'Shoot The Living Daylights Out of Everyone' was the sole instruction. All funeral expenses were to be paid by Domark. By some amazing coincidence the two final survivors were two very criminal looking types who bore an unpleasant and, of course, completely false resemblance to Dominic Wheatley and Mark Strachan, joint Managing Directors of the aforementioned Domark. I know and you know, dear Reader, that two such famous caring people would never create or enter such a savage suicidal contest but I can assure you that everyone else even David, the Count of Monte Carlos was totally taken in by these imposters and their demands for

D & M Doppelgängers. Would you buy a second hand Aston Martin from a pair like these?

'more corpses and lots more blood!' I can prove they were only Domark clones because I heard them bawling about a terrific new event thought to be a game called 'Friday the 14th To Live and let cry Baby Bloomer Trivial Pursuit Part 17', and telling every other computer magazine that review copies were on the way (It's the easiest way of getting them pirated). But these two vicious pretenders can't fool you and me, Reader, can they? We know the gentle peace-loving joint MD's of Domark would never even consider such degenerate titles, or wear such obviously fake bowties, don't we? What worries me is what happened to the real Dominic and Mark? Buried in a shallow grave beneath the centre court at Wimbledon, I suppose. Still with their wealth, why should they care? never mind, I swear these two evil doppelgängers won't get away with it. We'll think of something yet, won't we Reader. Wait a moment while I play my violin and shoot the initial D and M in Mrs Hudson's wardrobe. See you on Wimbledon Common at midnight. And don't forget to bring your weapon — you may need it to deal with such ruthless and evil men.

floor for the Divine Sarah to walk over them. And a very eminent couple of games company M.D.'s were drinking Dom Perignon out of her solid glass wellies. The Illegible Michael just stood there looking like the cat that had swallowed the dairy. Ah yes, Divine Sarah Donovan as the songs says, no-one can stop you now. And if you need a good PR agent, I'm sure I can recommend someone...

Quinn of the Road

She can't fool us! Oh that unscrupulous Gremlin (*Games Reveal Every Monty Lives In Murenburg*) organisation (mentioning the name is tantamount of a death sentence!) is not content with taking over the UK, its tentacles are spreading and spreading. Beneath the Canadian snows it is working away to dominate the AMGA Empire and even the *pouvre* French are for it. One of G.R.E.M.L.I.N.'s most ruthless operatives, who calls herself Sue Quinn (is anybody going to believe that?) has taken over the Jaguar Company so that she can drive in the 24 hour Le Mans race. I know for a fact that her car has guided missiles behind the fog lamp, a laser in each wheel and is fitted with skids which emerge from the doors sills. (Later on it will be disguised as an Aston Martin and used in a Domark James Bond film). Lord help any of the other cars in the race when the furious Sue ('Litigation is my middle name') Quinn flashes by. They'd better get out the way fast before they get a Quinn missile up their exhaust pipe. Other games companies who hoped to compete with G.R.E.M.L.I.N. at Le Mans or anywhere else, be warned, hari-kiri is a better way out.

Ocean's Away

And who were the two distributors who wanted to 'settle it outside' at the launch of Ocean's Tai Pan? No, no Ocean isn't starting a kitchen utensil shop, it's a new game. At least I think it is. Most of the attention at the elegant Chelsea Chinese Restaurant was stolen by the two over emotional distributors who seemed to want to work out some private differences over shares of the software market by pounding each other to the fashionable pavement. There was a moment when it seemed that International Karate or the Way of the Exploding Fist were more likely titles. But enthusiasm for China swept over them finally and they

drowned their sorrows in tea and Peking duck. And Nem Yo Horengkai Ko to you, too, Teresa, Editor of Your Sinclair. These games launches, they're such fun. Never mind next time we might take a look at the game. Probably much less entertaining.

Computer People No. 1

Is there something that can be said in the favour of a games reviewer? I doubt it. We all know that frantic, lonely magazine editors go out to the lowest and seediest bars and opim dens in the east (generally around Romford, Lowestoft or Epping Forest where Lesley Headlines hangs out), and drag out anyone who looks totally depraved and immediately appoint them 'Chief Games Reviewer' — if they are sufficiently illiterate that is. Many are called but few are chosen — they are mostly just not deep enough in debauchery and all round evil to last the course. Sitting day after day in front of a monitor screen tearing to bits the months or even years of some poor programmer's work in a vicious word or two takes depths of wickedness to which few can aspire. You meet them at press launches recognisable by the grubby ingraved sneer, petrifying shreds of 501's, yesterday's dog-end (still

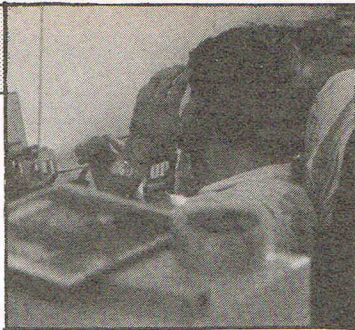
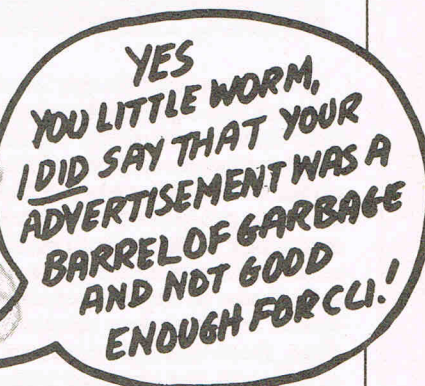
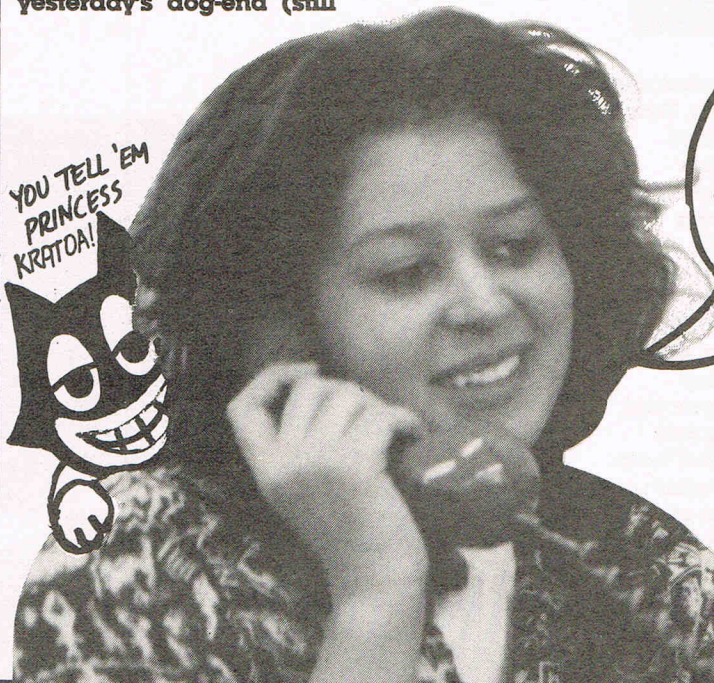
burning) behind the left ear and the knives they are wearing — in their backs. They are generally holding three drinks — one in each hand. By natural nurture, piratical, they must be no more than aged 17 but 4 million years old at least in ruthless cynicism and about three years two months in intelligence. Would anyone who has a spark of human dignity or a semblance of pride or decency spend all their time trying to find faults with some poor innocent game? They just wait scowling for a 'bug' the finding of which 'makes my day, punk!' as they so delicately put it. Games Reviewers! In the middle ages they would have been left to rot in the stocks or had their nostrils slit.

Why am I telling what you already know? It is just that CCI has gained another contemptible example of this unholy species who goes with the arrogant pseudonym of Tony 'Whopper' Organ. He also uses a multitude of other aliases, male and female in virtually every magazine (who do you think George Dural really is? And surely you don't believe 'Tony Hetherington' is a real person?) In fact Organ is personally responsible for most of the really sadistic reviews that have ever appeared in any computer magazine. All

↑ CALL THIS A MAN?
NO... ITS A GAMES REVIEWER!
YUKS!

those other names you read are just front men for this truly alarming person. (I understand the well known vampire Count Dracula is terrified of him!) He must have some malign power over O.S.E. (who wears a string of garlic around his neck when talking to 'Whopper' Organ) or why should such a horror be let loose on us all? Everyone here at CCI Tower is wearing shades to avoid seeing the frightfulness that shambles in salivating every morning and shuffles out with blood under his fingernails every night, the grotesque features alight with the evil of the day's destruction. Whisper 'Whopper' Organ to a games house these days and they just fold up their tents and steal away. Games reviewers! Yuk! Anyone got any silver bullet?

Next month I'll tell you all about other delightful computer people like Product Development Managers — if you can stand it.



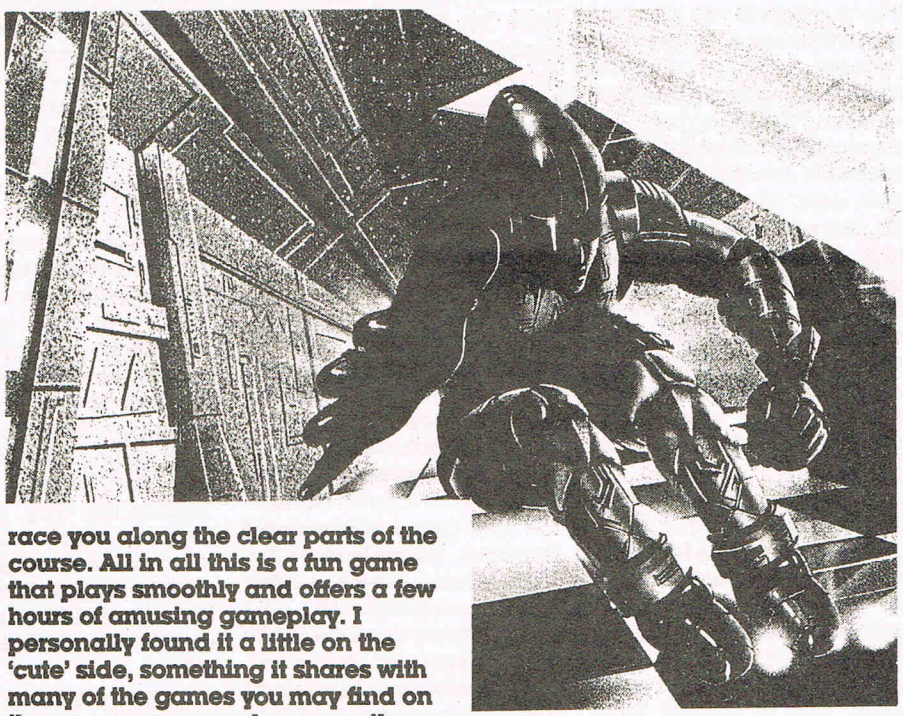
THIS COME TO MY FEELING ATTENTION THAT DAVID MOON TUCHAIKES INVISIBLE FATE ITTIE FOR ALL THINGS UNNATURAL - MISS NICHOLSON OF EASTBOURNE - WATCH IT BOG - YOU'RE ON MY HIT LIST!! MEDWWW

METROCROSS U.S. Gold C64

CRISP

Licences are now so important to software houses that some labels seem to be inventing their own. While we wait for 'Magmar' and 'Rugar' here's 'Metrocross' and I can't seem to recall the original coin-op they're supposed to be derived from. Is this all a fiendish plot to get even more money from us? I think we should be told!

Metrocross is already out on the Atari ST — one of the most disappointing U.S. Gold releases on that machine — so I can't honestly say I was looking forward to it on the CBM. It plays a bit like Gremlin's 'Trailblazer' except flipped on its side and graphically it resembles something that escaped from a Nintendo console. If you think that's a compliment, read on...



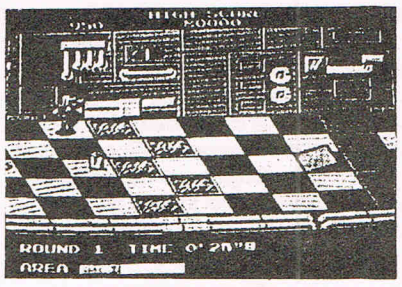
race you along the clear parts of the course. All in all this is a fun game that plays smoothly and offers a few hours of amusing gameplay. I personally found it a little on the 'cute' side, something it shares with many of the games you may find on the new game consoles currently appearing in the shops.

Such games, while technically excellent, seem to lack the hard edge that yer genuine computer gamer may have grown used to and it underlines that many of the great coin-op labels (Nintendo, Namco etc.) design some of their games with Oriental or Japanese audiences specifically in mind. Only time will tell if these games are equally attractive to us.

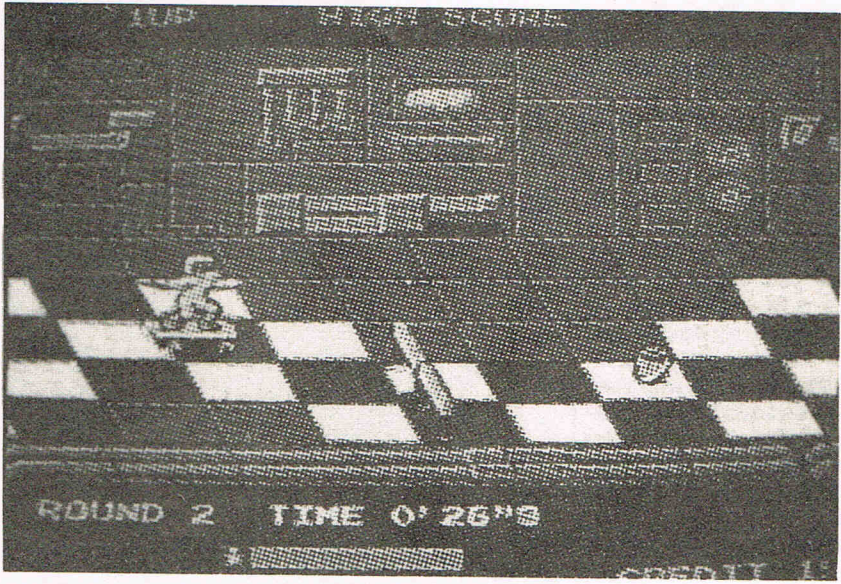
Metrocross is worth checking out, especially if you're a slightly younger player. If not, then hang around for 'Slap Fight' or 'Flying Sharks'...

T.M.

Graphics: ★★★
Sound: ★★
Playability: ★★★
Rating: Crisp
Price: £9.99 (cassette)
£14.99 (disc)



The game is basically 24 obstacle courses run against the clock. Your little man races along a grid of coloured squares (looks like a chess board) towards the finishing post, his progress marked by a small bar at the bottom of the screen. He can move up or down the screen or he can accelerate speed as the course scrolls to the right. From this side comes a series of hazards, the simplest being rolling coca-cola cans that you just leap over, the hardest being rats that attack your shoulders and have to be shaken off (ummm!). Some squares contain booby traps or springs, others have hurdles that will knock you down if you don't time your jumps, and green squares greatly reduce your speed by 1/4. If you're lucky you may use springboards or skateboards to



NOW AVAILABLE FROM ALL COMPUTER RETAIL OUTLETS

AVAILABLE NOW ON:
Commodore 64/128

TAPE **DISC**
£5.95 & £10.95

AVAILABLE SOON FOR:
Spectrum 48/128 £5.95
Amstrad 464/664/6128
TAPE £5.95
DISC £14.95



STAR PAWS



**THE FUTURE OF ALL LIFE
DEPENDS UPON YOUR SUCCESS...**



Out in the farthest reaches of our Galaxy there lives a rare creature known as the Tasty Space Griffin. Long ago this bird was acclaimed as a galactic delicacy, and acquired such value that it came to be used as an extremely valuable unit of inter-galactic currency, traded on the stock markets of the universe.

On the moon of a distant planet, a gang of unscrupulous mercenaries have been secretly breeding the Tasty Space Griffin and plan to flood the market with them, thus destabilising the monetary system of the entire universe, and allowing them to seize power.

Starfleet command intended to send Captain Neil Armstrong to destroy this evil plot, but due to an error on the notoriously unreliable series seven astro-telex, our hero, Captain Rover Pawstrong has been sent instead. Vastly inexperienced and totally unsuited for the task, Captain Pawstrong's mission is to capture or destroy every one of the Tasty Space Griffins.

You control his movements as he scours the planet, above and below ground, aided only by the occasional visit of a scout craft, dropping off essential supplies...

New From
SOFTWARE PROJECTS

Software Projects Ltd., Bearbrand Complex, Allerton Road, Woolton, Liverpool, Merseyside, L25 7SF.
Telephone: 051-428 9393 Telex: 627520.



PREVIEW STAR PAWS Software Projects

Set on a desolate planet, clad in your space suit, you must catch the speedy griffins by diving on them rugby tackle style. These tasty space griffins runs very fast, but are cheeky, and will stay just ahead of you.

There are holes in the planet surface which lead down to mine shafts where more griffins can be found. Extra light must be found in the form of lamps every now and then as well as energy displayed in the form of a turkey that turns into a skeleton. There are eight mine shafts, with a griffin on each one.

Once again CCI bring you another first: a preview of soon to be released game from Software Projects 'Star Paws'. In an attempt to put a stop to the larger companies continually raising their prices, all forthcoming Software Projects games will sell for £5.95. Star Paws is the first in their range of mid-priced games.

In the game you take the part of Captain Rover Pawstrong, who was sent, due to a mix-up with an astro-telex, on an inter-galactic mission instead of Neil Armstrong. You must now carry out the task of capturing all the 'tasty space griffins' which are a rare inter-galactic currency. Some nasty people are planning to mass-breed these birds and cause the economy to crash. Inexperienced as you are, this task must be completed before you can return home.

While on the surface, your scout craft drops off boxes containing food, weapons, and something that takes you to one of the sub-games. This is a puzzle rather like split



personalities that must be completed within a time limit of which there are four. The second sub-game has you aiming a cannon at the griffin, with only the amount of cannon balls collected from the surface and mines.

Our Editor was shown an early version in Liverpool (believe it or not at the Grand National) and came back saying he thought it was a real winner — and it wasn't the champagne he'd been drinking either (nonsense it was fruit juice! It was the game I liked! Ed.).

Star Paws is very good to look at and has an excellent sense of humour. It seems set to be a major threat to US Gold's Road Runner — especially at £5.95, which like Gremlin's mid-price brings big change in what you pay for 'full-price' games. Well done, Software Projects!

Thrust — Firebird

Thrust . . . I thought about the 64 version that became a smash hit, and was raved about by anyone who was anybody. Firebird . . . I thought about Shark, Runner, Torpedo Alley and all the other monstrosities that they released on poor unsuspecting C16 owners. I thought about the "screen pictures shown may be different machine versions of the game," shown on the inlet card. Ummmm . . . very suspect. Before I give you a verdict of the game I'll give you a rundown of its storyline.

You have been commissioned by the resistance to steal some pods — which if in the hands of the Intergalactic Empire — will become mega-powerful sources for their battle grade starships. These pods are hidden on the Empires storage planets and each planet is defended by 'Limpet' guns, powered by a nuclear power plant. The limpet guns can be taken out with a couple of shots but if you can't get at them, blast the power plant, this disables the guns temporarily. If you keep firing at the power plant the guns will be out of action for a long time, but if you fire too much, the reactor will reach a point where it gives you a countdown before it explodes. If you have your pod, you can make good your escape AND get a bonus for destroying the planet, otherwise you have failed in your mission.

You collect pods by hovering near them and activating the tractor beam. Once you have hold of it you swing all over the, as it drags you down — like a prisoner with a ball and chain. Fuel is also taken with the tractor beam but it sometimes uses up more fuel than its worth.

My verdict on this game is . . . EXCELLENT! This game is just superb! It has all the addictive qualities of the 64 counterpart and even all your fingers splayed over the keyboard is comfortable. The feeling of floating in space is the key to this games' addictiveness and it has been captured perfectly. This game is the best budget game on the C16 and it would deserve an Awesome rating, but for the fact that the sound is limited and the graphics flicker very badly.

I order every C16 owner to get this game. No-one who has a C16 could possibly live without it!

Price: £1.99?
Graphics: ★★★★★
Sound: ★★★★★
Playability: ★★★★★
Rating: Mega

Max Torque — Bubble Bus C64

CRISP

'Max what?' You ask. Not, it's nothing to do with that computerised humanoid Max Headroom, but a motorcycle racing game. ('Maximum torque' get it?)

Viewed as normal from behind and slightly above the rider in 3D, Max Torque tests your skills at racing your turbo charged motorbike over six stages of twisting, turning tracks through a variety of scenes. There are seven different riders and their bikes to choose from, each having different power and steering sensitivity. The instructions tell you they are different, but it's up to you to find out how they handle. I would have thought it more sensible to describe each rider in the instructions, as it's hard to know whether it's you or the bike oversteering.

After selecting your rider, it's on to the race. Watch the lights turn from red to amber and then to green as you rev your engine and burn rubber at green. As you accelerate you pull a wheelie, and a bit of turbo boost will get you from 0 to 60 in under a second! (Match that bikers!) You get 60 seconds in which to complete each track. The six tracks all follow on to one another without a break (as in the arcade game Hang On), with a different scene on the scrolling horizon. As the courses twist and turn, an indicator in the form of an arrow appears at the top left corner of the screen giving advance warning of bends. At the sides of the track are bollards which will cause you to crash if you touch them. The other riders must also be avoided, as time is wasted during a crash, and accelerating afterwards takes further valuable seconds.

The graphics are quite large, with a colourful, well drawn sprite, but unfortunately the other riders are lacking in detail and colour. The track scrolls smoothly and this is strong and effectively coloured, but the horizon is a little jerky. The sound effects are quite simple but certainly adequate for the game.



For most people Epyx' Super Cycle is the best of its kind around and while Max Torque may not quite come up to its standard, it is without doubt worth considering if you're on the lookout for a good racing game.

T.H.

Price: £8.95 (c) £12.95 (d)
Graphics: ★★★
Sound: ★★★
Playability: ★★★
Rating: Crisp

Snap Dragon — Bubble Bus C64

DODGY

No! Please, no more karate games! We have all surely had it up to here (where? Ed) with the same old games re-hashed with slightly different graphics and almost identical gameplay! And what's more, they all claim to be the meanest thing since Nick Cotton (who? Ed), with ace graphics and sound effects, umpteen zillion sprites, and the most realistic martial arts game ever! The truth is that plain karate games had their day years ago and nowadays must have something new and extremely original to offer, or simply sell at budget price. I'm afraid Snap Dragon neither has anything original, nor sells at budget price.

The object of Snap Dragon is to defeat all of the warriors on each level and attain the grade of Black Belt 5th Dan. The game is played rather like Kung Fu Master in a number of scrolling corridors but with fewer opponents that need more of a fight. You control your warrior with the standard eight

joystick positions with and without the fire button to access the various punches, kicks, and pole attacks. Letting go of the joystick starts the autoplay, when the computer carries on fighting your opponent.

The sprites are small when compared to other karate games but they are very well drawn. They're not, however, particularly well animated considering their size. The backgrounds are very simple, and hardly vary from level to level apart from the colour, and the scrolling is acceptable.

Snap Dragon claims to have 'super sound effects', but in reality they are very simple and could hardly be called realistic.

Snap Dragon gets boring very quickly and doesn't justify its £8.95 price tag. It commits the ultimate sin in karate games by all the opponents being able to be defeated with a continuous sweep kick. I couldn't recommend Snap Dragon as there are far better karate games on the market to choose from. It isn't that it's bad but that it is too late for this kind of game to impress anyone except absolute beginners.

T.H.

Price: £8.95 (c) £12.95 (d)
Graphics: ★★
Sound: ★★
Playability: ★★
Rating: Dodgy

C64

MEGA

Plasmatron — CRL

You are Pilot Captain Ford. Your status is expendable. Your craft — Plasmatron — a high tech shooter. Mission is reconnaissance. Destination — Loughton 2. Purpose — alien identification. You are on the Deserted Empire colony. Special considerations are 1) Plane fractured; 2) Aliens hostile; 3) Deserted base exits point.

Ford didn't stand a chance. "Good luck". "Thank you sir".

What a straight forward scenario, sharp and to the point, but giving all the details. A lot better than the reams of instructions for some games.

As you've probably guessed this is a shoot 'em up. And a good one at that. It scrolls horizontally and just shoot everything that comes at you. The aliens are varied and the graphics are excellent. Flames shoot up from buildings which give an excellent effect. Little 'tin pot' robots fly at you, sirens wail out, and all manner of things go at you, bringing down your shield power.

Graphics, as I said, are excellent, and sound isn't bad either. This is a great game that easily matches all these coin-op conversions around at the moment. One of the best shoot 'em ups available. Excellent. Well done CRL. Looks like you're back on form with this and Oink. CRL for President!

Price: £8.95
 Graphics: ★★★★★
 Sound: ★★★
 Playability: ★★★★★
 Rating: Mega



Terra Nova — Anco C16

IFfy

Terra Nova is the latest game by C16 specialists Anco who seemed to have slowed down in their output of games somewhat. (I believe they're on the Amiga trail).

You were on a routine mission to explore a planet for minerals, and the long reported that the planet was uninhabited, with traces of minerals. You set out in your craft to complete a short range scan, and guess what? The reports were wrong, the planet is inhabited, and not only inhabited by the every day average aliens, but the aggressive killer kind — and they don't like you much.

There's only one thing to do — that's blast 'em! You fly up the screen, blasting everything in sight — posts of fuel and ammo — and anything else that comes at you.

So that's about the sum of it, shoot ammo, fuel and aliens. Dodge bullets and dodge aliens. Now this wouldn't be that bad, but when you shoot, things seem to pass right

through your bullets and kill you in an instant. This is a very frustrating aspect of the game and spoils it considerably. I think that the Plus 4 version might be better though, as the C16 version seems rather amateurish and unpolished. You have to complete each level 3 times which is boring and pointless.

This game is good and the speech as it's loading is an incredible feat — it's just amazing as it says "Welcome to Terra Nova, A journey into the unknown."

This will appeal to shoot 'em up fanatics, but I found the game not sufficiently interesting and rather a disappointment.

C.K.

Price: £7.95
 Graphics: ★★★★★
 Sound: ★★★★★
 Playability: ★★
 Rating: Iffy

Aardvark — Bug Byte C16

CRISP

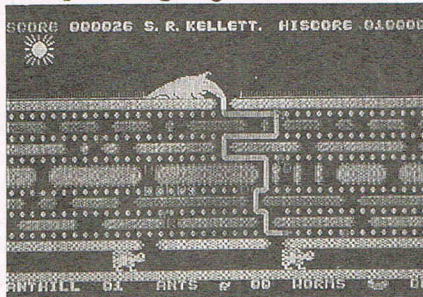
What's really, really long, wet, sticky and quick as a flash? (What's really short, and on the line? Your job if you don't watch it! Ed) Aardvark, that's what, (phew!) the new game from Bug Byte programmed by Steve "It's mean" Kellet!

You must control aardvark's tongue, and slurp your way around an ants' nest cleaning it up of all its ants eggs and any ants, worms and queens you can get your hands — I mean tongue — on oh yummy, slurp, slurp, slurp! But beware of the spider that comes out at night he adds to your troubles which come in the form of worms and ants.

I know I said that you could eat worms but only under special circumstances: Ants must be eaten head on, if you let it get the sides of

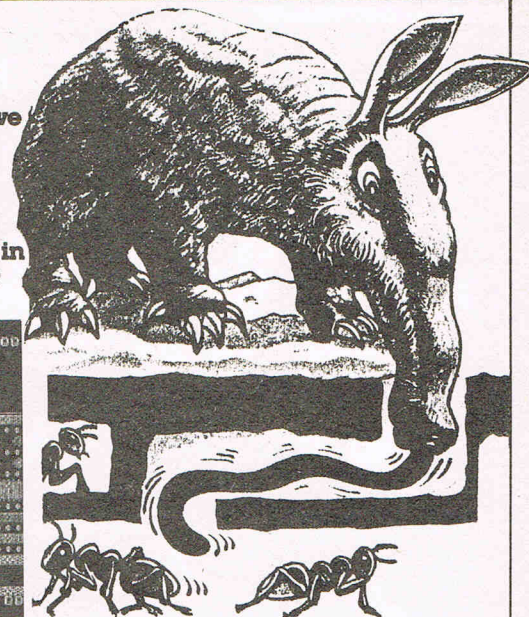
your tongue it kills you, also you can only eat the worms from behind, let them touch the sensitive tip of your tongue and bang your dead again.

The game is set out in Pac-Man style and you slither your tongue, slurp, slurp, through the ants nest in a binge on eggs, but if you too far and your tongue gets too



convoluted you might find yourself getting done in by the ants that come crawling onto the screen from the sides.

Aardvark doesn't take itself seriously, and there's not real storyline to this game either. It's just good fun at a good price. Not the best game in the world, but well worth £3. And remember aardvark never killed anybody!



Price: £2.99
Graphics: ★★
Sound: ★★
Playability: ★★★
Rating: Crisp

C.K.

MICRO RHYTHM

Have you ever thought of buying a drum machine for your Commodore 64, but have been put off by the price? If so, your prayers have been answered with Firebird's Microrhythm.

Microrhythm is a new title on Firebird's silver range that retails at only £1.99! Yes, you can have a full, digitised drum kit with thirteen sounds for under two pounds. Interested? Then read on...

Microrhythm has three modes; bar write mode, song write mode, and real time mode. In real time mode, all thirteen sounds can be played by pressing the appropriate keys. This can be quite good fun, and you get to know what sounds are available. There is a base and a snare drum, three tom toms, a rim, a

cow bell, a clap and a tambourine as well as an open or closed high hat, a crash cymbal and a gong. With the exceptions of the cow bell and the gong, all the sounds are amazingly realistic.

In bar write mode, you can put any of the aforementioned sounds (except the gong) into a sixteen beat bar. This is done by moving a cursor onto the correct part of the bar and pressing the appropriate key for the sound you want. The pitch of each sound can be altered with the +/- keys. Each sound can be echoed by simply pressing F (flam), and the time between the echo has also be altered, as can the tempo of the bar.

When you have written a bar, you may want to put it into a sequence

of bars. To do this you must enter song write mode. Once in this mode, you can look backwards and forwards through the sequence of bars, or 'song' as it is referred to, and insert your bar. When you have finished, pressing S will play the sequence from beginning to end.

Microrhythm also has the facility to save a song to tape, and also to load and save sound sets, so perhaps Firebird are planning to release some extra sound files.

With the quality of its sounds, its ease of use, and its price, it makes the hardware drum machines look vastly over-priced.

T.H.

A must for anyone who enjoys a good Bang!
Price: £1.99 (c)

MEGASTARS of '87

Some games stand out from the crowd. They are the creme de la creme — what gamers will remember as the really top entertainment. So you can remember which those stand out games have been so far this year, we have listed them with some of the comments made at the time. We can even, if you look on the pages following this feature, make it possible for you to buy those you missed — which is more than you can say for most computer shops!

C16 Classics III (Gremlin) (C16) *"Recommended Unreservedly"*

January

"The third compilation of games by Gremlin, it includes *Sword of Destiny* (rated Mega), *Jetbrix* (rated Crisp), *Gullwing Falcon* (rated Mega), and *Reach for the Sky* (Crisp) — colossal value at £9.95. Even if you have one or two of these games, unreservedly recommended. *C16 Classic III* deserves to be No. 1 in the charts. (Rating: Awesome.)"

Bridgehead (Anco C16) *"Very Playable"*

January

"*Bridgehead* is a *Green Beret* lookalike. Really a horizontal version of *Legionnaire*, it has the same casual scrolling and sound effects. Armed with a knife and a limited supply of grenades, you must fight your way through five levels infested with sentries, and soldiers with heat seeking missiles. The graphics are good, *Bridgehead* is very playable. NB. There is also a separate Plus/4 version which will work with a 64K ramboard or rampack."

Trailblazer (Gremlin C16) *"One You Shouldn't Miss"*

January

"You are a ball and must travel down a course which scrolls smoothly towards you. There are several types of squares which either help or hinder your progress. There are the blue squares which bounce you, red which slow you down, green speed you up, cyan reverse your controls and purple throw you backwards. The graphics are large and colourful, if somewhat blocky, the scrolling is ultra-fast and smooth as *Samantha Fox's*..... knee. There is a catchy theme tune and great sound effects. Overall this game is highly addictive and one you shouldn't miss for any reason whatsoever." (Rating: Awesome)

Avenger (Gremlin C64) *"Will be enjoyed"*

February

"The Grand Master of the flame, Yeamon has assassinated your father who brought you up in the way of the Tiger. You have promised to the God Kwon to avenge the act and recover the scrolls of Ketsuin that yeamon stole after the killing. The graphics are very high quality

Gauntlet style, and the music and sound effect are appropriate. Avenger is not just another beat 'em up, and will be enjoyed by a wider audience than its predecessor Way of the Tiger."

Trivial Pursuit (Domark) (C64)

"Great fun"

February

"Domark's interpretation of the best selling board game is as good as you could hope for. Up to six people can play, and players may be added or deleted at anytime in the game. The questions are asked by a little character known as T.P. The question appears in a speech bubble above his head. As well as plain questions, there are musical and graphical questions. Trivial Pursuit is great fun, especially with a group of friends."

Yie Ar Kung Fu 2 (Imagine) (C64)

"Good value for money"

February

"As you probably know from the first instalment, a gang of eight fearless fighters had to be wiped out. Well one of those eight, Yen Pei managed to survive, and has formed another gang just as deadly as the first. There's Yen Pei himself who has iron pigtails (nasty!), Po Chin who is a dab hand at fire breathing, and Li Jen who like throwing lightning bolts at you, to name but a few. The graphics are large and colourful as are the backgrounds. The sound is up to the usual Ocean standard (very good in other words). A game that is good value for money and a worthy sequel."

Future Knight (Gremlin) (C64)

"Go out and buy it"

February

"Future Knight is an excellent arcade adventure set on board a spaceship. Your man is satisfyingly immune to falls and he moves about the scrolling levels by ladders and running and jumping. He can also fire a number of weapons that can be found around the spaceship. In play, Future Knight looks like Paradroid and plays like Ghosts and Goblins. The bas-relief graphics are very effective, but some of the sprites are obviously derived from better known games. We love this game. Our advice is to go out and buy it, if only to see how an arcade adventure should be written."

Who Dares Wins II (Tynesoft) (C16)

"A Classic"

February

"Who Dares Wins II is, as you must know, a Commando style game, in which you must capture eight enemy outposts. The screen doesn't scroll, but flips quickly and smoothly. With good graphics and music by CCI's own Ian Waugh, Who Dares Wins II is a classic."

Superstar Ping Pong (US Gold) (C64)

"Should keep you amused for a long time"

February

"Smash your way into this great package from US Gold. If you played Imagine's version of Ping Pong and you thought that was good, then prepare to go crazy about Superstar Ping Pong. There are a number of useful options such as two different viewpoints, one or two players, and the choice of a semi computer controlled bat. There is also the ability to customise your strengths and weaknesses by the allocation of power points to certain shots. There are some great tunes and spot effects in the game, and the graphics are large, with the option of changing the bat and ball colours. Superstar Ping Pong is an enjoyable game that should keep you amused for a long while."

Sigma 7 (Durell) (C64)

"A very good package"

February

"Sigma 7 is divided into 3 subgames. The first is a great shoot 'em up style game, viewed and played diagonally which is very effective indeed. You must fly to the factory fighting off aliens as you go. In the second stage, you must collect all the dots from the paths rather like Pacman, whilst avoiding more nasties. As you collect the dots, a pattern will be revealed which will help in the final stage where the control unit must be reset by pressing the buttons in the pattern from Stage 2. The graphics are very good and the 3D works to good effect. The sound effects are reasonable and it all adds up to a very good package from Durell."

Handball Maradonna (Argus Press) (C64)

"Excellent speech"

March

"After the World Cup, and England's unfair dismissal by Maradonna, Argus Press hit back with Peter Shilton's Handball Maradonna. You play the team's goalie. You can either play a match or practice. In a match you must save four shots in each half. The graphics, although small, are detailed and move smoothly. There is also some excellent speech."

Footballer of the Year (Gremlin) (C64)

"A very good addictive game"

March

"Do you think you've got what it takes to become a top player/manager and win the Footballer of the Year award? Gremlin's Footballer of the Year gives you the chance."

You can choose to play for any club in the English League, and must take your team to the top of the First Division. The game is played with neat icons and menus with the chance to score a few goals now and then. Overall, a very good addictive game that will appeal to football fans."

Indoor Sports (Advance) (C64)

"Will keep you coming back for more"

March

"Advance's Indoor Sports is made up of three games. The first is a very fast and smooth airhockey — you know that game played on a table with jets of air that make the puck hover. Each player has a 'bat' and must simply hit the puck into their opponent's goal. The Bowling and Darts are also of a very high quality, and will keep you coming back for more."

Bounder (Gremlin) (C16)

"Very good value"

March

"Bounder has you controlling a tennis ball, bouncing on platforms high in the sky, and attempting to complete all of the courses. Among the hazards, there are walls, darts, and binoculoids, that will all burst you. Bounder is viewed from above, with the platforms scrolling over the ground that's a long way down. As a bonus, there's Planet Search, a Defender type game which makes the package very good value for money."

Pinpoint (Anco) (C16)

"Very addictive"

March

"Pinpoint is very similar to Spindizzy which was a variation on Marble Madness. You control a spinning top, and must guide it through ten 3D courses to a white flag. If you thought this couldn't be done on a C16, then think again. Pinpoint is very addictive and should appeal to everyone."

Shanghai (Activision) (C64)

"Will appeal"

April

"Shanghai is a version of Mah Jong, a Jong, a Chinese gambling obsession that pretends to be a board game. The game is played with tiles rather like dominoes that are stacked randomly into a pyramid. The idea is to remove all the tiles by matching up the symbols on them. Shanghai will appeal to those who go for strategic chess type games."

Way of the Tiger (Gremlin) (C16)

"A good variety of opponents"

April

"Being the adventurous type, your ambition is to become a Ninja by defeating enemies in unarmed combat, pole fighting, and Samurai sword fighting. Way of the Tiger has a good variety of opponents, but unfortunately not many moves. This is a bit of a shame, because the rest is excellent."

Jet Set Willy II (Tynesoft) (C16)

"Great fun to play"

April

"Jet Set Willy II is the sequel to the classic platform game. While in hospital, you hired some builders to make some alterations to your mansion. Unfortunately, they left a terrible mess, and you must now clear it up. The game is played over more than 80 screens of platforms and nasty creatures. Dotted around the rooms are glowing objects that must all be collected before Maria the housekeeper will let you go to bed. Jet Set Willy II has been converted very well, and is great fun to play."

Voidrunner + Hellgate (Llamasoft) (C16)

"Very good value and good fun"

April

"Voidrunner is a variation on Centipede. Written by Jeff Minter, it features loads of great graphical effects with lots of colour. Hellgate is not so good. It is played on a grid with aliens to be blasted with your guns on each axis. Together these games are very good value, and good fun."

Space Fiends + Liberator (Ariolasoft) (C16)

"Incredibly addictive"

April

"Liberator is excellent. It's a copy of Uridium with very good bas-relief graphics. If you want a Uridium style game, then get this as it's incredibly addictive and great fun."

West Bank (Gremlin) (C64)

"Great fun"

May

"Working at West Bank is not a job for faint hearted. In the wild west, it seems there are more bank robbers than innocent customers. Your job is to sort out the baddies by shooting them before they shoot you. The graphics are very large and colourful, and the music suits the game well. West Bank is great fun!"

Battle Star (Tynesoft) (C16)

"An excellent game"

May

"Battle Star is a first class shoot 'em up. The idea is to fly along an alien spaceship blasting pulse mines, shooting and dodging their bombs and weaving around the



DOC • THE DESTROYER



MELBOURNE HOUSE

COMMODORE CASSETTE £8.95 — COMMODORE DISK £14.95 — SPECTRUM £7.95

protective encasements. The graphics are quite good, and there's some great background music. This is another excellent game from Tynesoft."

Tenth Frame (US Gold) (C64)

"Will appeal to everyone"

June

"Tenth Frame is a ten pin bowling simulation written by Brace and Roger Carver, authors of Leaderboard. Tenth Frame features the same high quality animation and graphics. This game will appeal to just about everyone, especially bowling fans."

Cholo (Firebird) (C64)

"A great game"

June

"Cholo is set in a nuclear holocaust. You and the other humans are sealed in a bunker. You must find a way to blow the lid off the bunker with the help of your droid. The droid has an on-board video camera which gives you feeling of being in it. The city is displayed in 3D vector graphics which are quite well drawn. Cholo is a great game, especially for Mercenary fans."

Pod (Mastertronic) (C64)

"Brilliant"

June

"Pod has no pretentious storyline or excuse for blasting aliens. You play across an interconnecting grid of wire along which your pod moves. Shooting the aliens that come down the screen results in some of the grid being inaccessible for a while as it mends itself. There are twenty five levels with great graphics and the urge to come back for more. Brilliant for £1.99!"

Auf Wiedersehen Monty (Gremlin) (C64)

"You'll love this!"

June

"In Monty Mole's final escapade, the authorities have caught up with him after escaping from prison to France. He must now collect enough money from all round Europe to buy a Greek island called Montoss. Auf Wiedersehen Monty is similar to Monty on the Run, and has the same qualities such a graphics, music, and playability. If you like the last one, you'll love this!"

Tomahawk (Digital Intergration) (C64)

"A must for simulation freaks!"

June

"Tomahawk is a helicopter simulator with vector graphics. As well as fighting enemy helicopters, there are buildings, electric pylons, and mountains to avoid. There are

different missions, and options such as night flying, cloudy skies, crosswinds and turbulence. A must for simulation freaks."

Samurai Trilogy (Gremlin) (C64)

"A cut above the rest"

June

"Samurai Trilogy follows along the same lines as Gremlin's previous karate game Way of the Tiger. The three parts are unarmed combat, Kendo pole fighting, and a Samurai sword fight which all load separately. As well as fighting, you must train your body to obtain best results. Samurai Trilogy has very large characters, and is a cut above the rest of the oriental beat 'em ups about."

Nemesis The Warlock (Martech) (C64)

"Great"

June

"Licensed from the 200 AD comic, Nemesis the Warlock contains loads of violence. Armed with a sword, a gun and some fire balls, you must take the part of Nemesis and hack, slash and shoot your way through many levels of zombie attacks before meeting up with the evil Torquemada. Great mindless violence that gets rid of all that pent up tension!"

Shockway Rider (F.T.L.) (C64)

"A Knockout!"

June

"Shockway Rider is knockout! You've got to ride three moving walkways as if in some sci-fi city of the future. They go at different speeds and you can jump from one to another avoiding the gans that will throw bricks at you. The sprites are excellent and the scrolling is also very good. A Rob Hubbard soundtrack plays throughout the game, and adds to the fun. An excellent game."

Phantom (Tynesoft) (C16)

"An excellent game"

June

"If you're looking for a Gauntlet game for your C16, then look no further than Phantom. Once again Tynesoft have produced an excellent game, with gallons of playability. Making your way around the haunted houses, you must get rid of the ghosts with your laser. Money can't buy a spookier Gauntlet variant!"

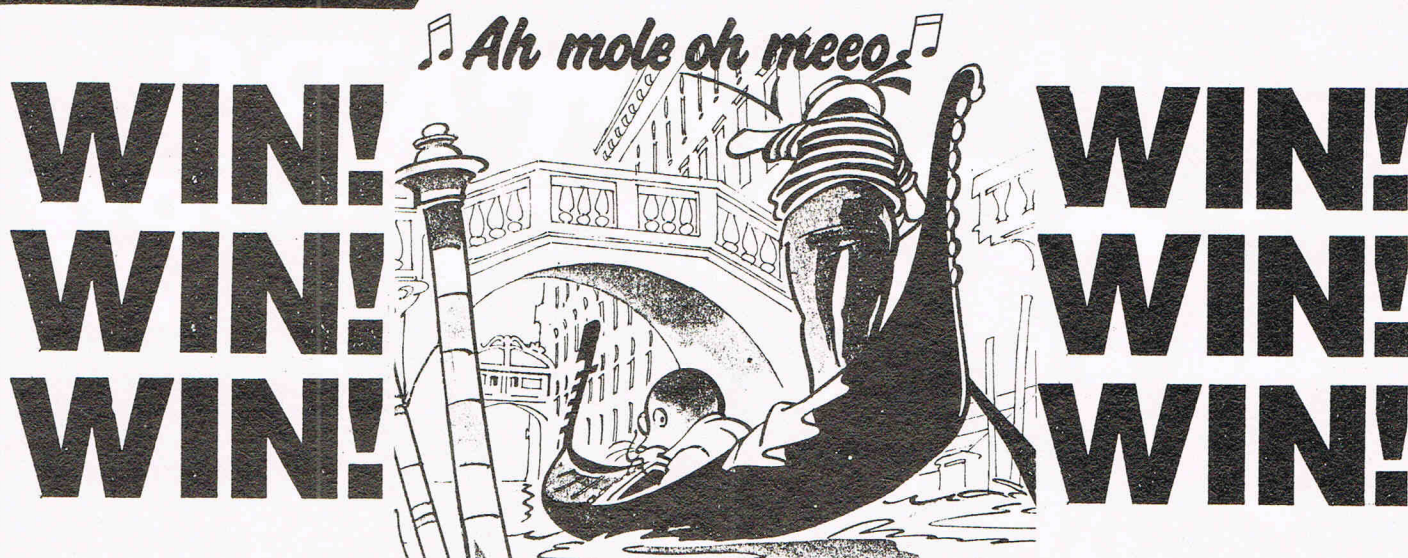
Microvalue (Tynesoft) (C64/C16)

"Amazing, great value"

June

"A compilation of four games for under four quid? Yes, amazing, but true. The C16 version is made up of Drag Racing, 3D Maze, Apollo Rescue, and Gunslinger. The C64 version has Commonwealth Games, Ian Botham's Test Match, Bombo, an World Cup II. Both versions are great value at £3.99."

Competitions



Monty, Gremlin's mischievous mole, is not just shooting up the charts waving Auf Wiedersehen, but offering to provide C.C.I. readers with an absolute feast of good things. Monty, in Gremlin's new game, runs from country to country. So we are offering a gorgeous multi-national hamper full of exciting international goodies, plus a set of delightful Monty prints, and copies of the Monty trilogy: Wanted — Monty Mole; Monty on the Run; Auf Wiedersehen Monty.

Ten lucky runners up will get a set of these terrific Monty prints, and a set of Monty trilogy.

Here is what we want you to tell us:

1. What are three meanings of the word 'mole'?
2. What was the full name of the general called Monty who fought at El Alamein? (no it was not Rom-mole!)
3. To which position has Monty run on the charts this month.

Answers on a postcard please, and send by September 15th to Monty Comp.

Commodore Computing International
40 Bowling Green Lane
London EC1R 0NE

This one's for the UK only folks. Sorry we can't send food abroad!

MEGA MEGASTARS '87

MEGA
MEGA

Do you know the really great games of '87 so far? They are the games that have gone Mega or even Awesome in the CCI ratings. They are the top releases this year. They will be played, remembered and kept for a long time to come. Have you played them all? Have you got this year's Megastars in your collection? Probably you've got some — and maybe you missed the others. Well, here's your chance to catch up on those you didn't get to play — or didn't get to own. To experience the mega thrill... We've put together a list of mega games that you can buy now — and even get them at reduced prices if you buy more than one.



You won't find most of them in the shops now. That doesn't mean they aren't great to play and you know they are all guaranteed mega rated. You can't ask for a better recommendation than that!

SPECIAL OFFERS! ONLY TO CCI READERS!



WAS £9.95
NOW ONLY
£5.75 C64
£4.60 C16

Trailblazer

This is one of the great games of recent times from the star Gremlin stable. C.C.I. gave it a Mega rating which it richly deserves.

Trailblazer is set in a fantasy world: a road through space spanning the depths of the extreme. Control your bouncing ball avoiding pits in the road surface. Use speed ships, slow strips, avoid obstacles. One of those simple but addictive games which seem to last forever...

The graphics are large and colourful, the scrolling is ultra-fast and smooth as Samantha Fox's..... knee. There is a catchy theme tune and great sound effects. Overall this game is highly addictive and one you shouldn't miss for any reason whatsoever.

It was £9.95 for cassette, special offer price for C.C.I. readers C64 £5.75 C16 £4.60.

The C16 version has **U.S. DRAG RACING, APOLLO RESCUE, 3D MAZE AND GUNSLINGER.**

The C64 version has **EUROPEAN GAMES, IAN BOTHAM'S TEST MATCH, WORLD CUP II, AND BOMBO.** Both tapes received the rating "Amazing" and "Great value for money". Normally £3.99 for 64 and 16 version.

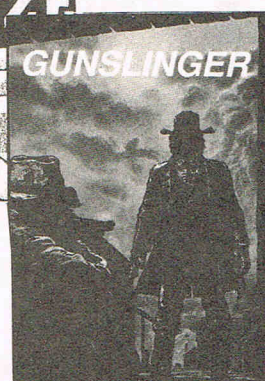
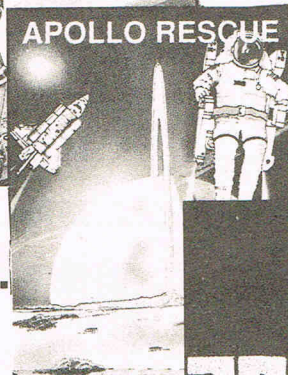
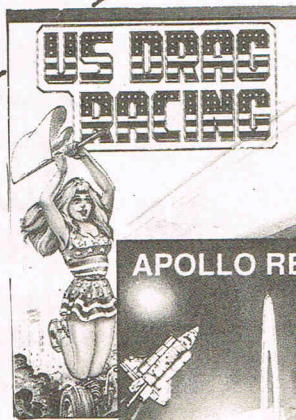
SPECIAL OFFER TO CCI READERS ONLY £3.75 C64 AND C16

If you buy both games you qualify for the free cassette offer. See page 87 for order form and offer

ANOTHER
CCI
MEGA REVIEW
OFFER

Four great games on one tape!
Really Terrific Value!

MICRO/VALUE



SPECIAL OFFERS! ONLY TO CCI READERS!

OXFORD PASCAL-C64 TAPE ONLY

**ONLY
£9.95**

- ★ Full standard Pascal + extensions
- ★ Speed... Fast to Compile, Fast to run
- ★ Resident compiler, works like a BASIC interpreter
- ★ Full disk to disk compiler
- ★ Graphics & sound extensions include:
BOX, CIRCLE, COLOUR, DRAW, VDU, GRAPHIC, LOCATE, PAINT, SCALE, RCLR, RDOT, WINDOW, RGR, WIDTH, RWINDOW, FILTER, SOUND, PLAY, TEMPO, VOL, ENVELOPE, FAST, SLOW, BANK, JOY, PEN, POT for the 128 and similar for the 64

"Well worth buying, an investment in your programming future" C.C.I.

- ★ Full Linker for separately compiled file
- ★ Compact Code
- ★ Powerful Editor, FIND, CHANGE etc
- ★ 84 page tutorial/reference manual
- ★ Stand alone compiled programs
- ★ 90 K free on the 128
- ★ More than 20,000 enthusiastic customers worldwide!

OXFORD BASIC-C64 DISC ONLY

The complete BASIC programming environment packed with sophisticated utilities

**ONLY
£29.95**

- **ANALYZER**
 - ★ Flow cross reference reports
 - ★ Data cross reference reports
 - ★ Redundant code eliminator (removes all unreachable code)
 - ★ Header file generator (changes your program to make it run faster)
 - ★ Output to screen, printer or disk
- **TOOLKIT** including
FIND, CHANGE, DUMP, MERGE, TYPE, INFO, RENUMBER, DELETE etc
- **COMPRESSOR** Like the HACK-PACK compressor, reduces your programs to minimum size
- **OPTIMIZING BASIC COMPILER**

**SPECIAL
OFFER
PRICE!**

OTHER OXFORD PRODUCTS AVAILABLE		
Computer	Product	Price
64	Petspeed	£19.95
	★ UP TO 40 TIMES THE SPEED OF BASIC ★ Compiles ALL BASIC commands	
	★ Compatible with machine code ★ Make large programs smaller	
	Oxford Pascal 64/Disk	£38.95
128	Hack-Pack 64/Disk	£24.95
	The Ultimate utility pack for the 64 and 128 — RAMDISK, TOOLKIT, COMPRESSOR	
	Petspeed 128/Disk	£44.95
	Oxford Pascal 128/Disk	£44.95
	Hack-Pack/Disk	£38.95
	Oxford Basic 128/Disk	£49.95
4000/8000	RAMDOS/Disk	£34.95
	★ All disk commands supported ★ DLOAD a 50K program in 0.5 sec! ★ 2048 blocks free on the 1750 cartridges ★ Use all or part of the expansion RAM (requires 1700/1750 RAM expansion cartridge)	
	Petspeed 4000/8000/Disk	£125.00
	Fast Integer compiler/Disk	£125.00

14.95
29.95
17.95
29.95
29.95
29.95
34.95
29.95

£75
£75

SEE PAGE 87 FOR ORDER FORM

SPECIAL OFFERS! ONLY TO CCI READERS!

**ONLY
£29.95**

'The Artist'

C64/C128 graphics package (disk or cassette) **£29.95**

The most powerful and advanced art or graphics package yet produced for the C64/C128 using mouse or joystick. Over 250,000 command combinations. Give your C64/C128 Amiga type graphics: full colour, full screen, zoo, pan, over and under weave, duplicate, CBM and Epson print dumps and much much more — you'll be amazed. Takes over where 'Cheese' leaves off.

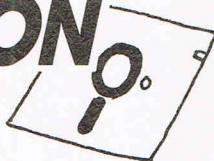
"— a very sophisticated program"
"— I would heartily recommend it" CCI

TROJAN CAD-MASTER C64/C128 Lightpen

£17.95

This most versatile light pen available for the C64 also works with the C128. Features as for the Plus 4: Freehand draw, pixel accuracy, box, circle, triangle, lines, banding, rays, five quills, thick, thin, fill, text, copy, enlarge, brush, wash, pen 1 2 3, brightness, border, background, dotted lines, save, erase, printer dump routine. Superb!

A SPECIAL OFFER ON DISKS!



TROJAN CAD-MASTER Plus 4/C16 Light Pen

£18.95

Full colour masterpiece or simple line drawing — with the CAD-master you are limited only by your imagination. Discover the fascinating world of creating your own graphics? Create your own games! Features include: Free-hand draw, pixel accuracy, box, circle, banding, lines, rays, triangle, quills, fill, text, copy, enlarge, brush, wash, pens 1 2 3, save, erase, printer dump and more. Please state Plus 4 or C16 on order form

WHICH ARE PRODUCED BY A LEADING MANUFACTURER AND ARE OF THE HIGHEST QUALITY

5.25 REVERSIBLE DISKS (FLIPPIES)

Look!! Single or Double sided 40 track reversible disks! 2 notches and 2 index holes enable you to use *both* sides of the disk on your single side Commodore or compatible disk drive!! Supplied in boxes of 10 with user and write protect labels.

QUANTITY	PRICE	TICK HERE
10	£6.95	
20	£12.95	
30	£17.95	
40	£23.95	
50	£28.95	

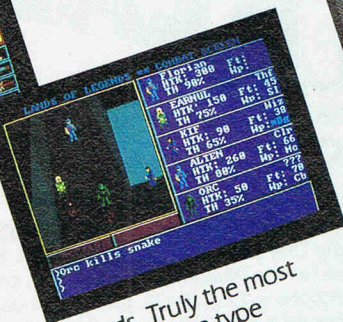
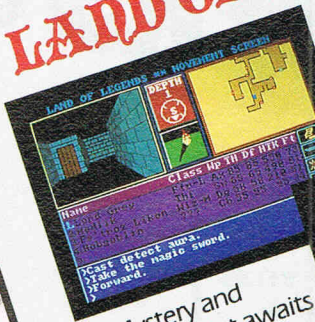
3.5 MICRODISKS FOR THE AMIGA

Double sided microdisks — 80 track. Supplied with user labels in boxes of 10.

QUANTITY	PRICE	TICK HERE
10	£16.95	
20	£32.95	
50	£78.95	

THESE PRICES INCLUDE VAT AND POSTAGE. IF YOU SPEND OVER £10 YOU WILL STILL QUALIFY FOR FREE OFFER (SEE PAGE 87). TICK WHAT YOU WANT, CUT IT OUT AND SEND IT WITH YOUR ORDER FORM (PAGE 87) TO THE ADDRESS ON ORDER FORM.

LAND OF LEGENDS



Mystery and excitement awaits your every move as you sojourn through one adventure after another in Land of Legends & Dragon type adventures.



The FAERY TALE™ Participate in the adventures of three brothers as they travel through a faery land full of vicious monsters, enchanted princesses, fearsome dragons and even a kindly wood cutter or two. Faery Tale Adventure will provide you with weeks of challenging exploration to conquer, so pick up your copy and begin today!



ONE-ON-ONE SERIES™

These three arcade style games are the first in our new ONE-ON-ONE SERIES. These exciting games feature one-on-one playability, digitized sounds & music, realistic graphics and fast action. Our reasonably priced ONE-ON-ONE SERIES will keep you on the edge of your seat, so pick up all three today!

OTHER PRODUCTS FROM MICROILLUSIONS

- **DISCOVERY™**
Now available in: Math version, Spelling version, Trivia version
- **THE PLANETARIUM™**
Available soon
- **DUNGEON CONSTRUCTION™**
The second in the "Quest Master Series" will soon be available

All of these products are now being developed for the Amiga, and will soon be available in other formats (C-64/128, IBM/PC, Apple, Atari ST).

microillusions™

Haba Systems
Pier Road
North Feltham Trading Estates
Feltham Middlesex TW14 0TT
011-44-1-751-6451

Commodore of Australia
67 Mars Rd.
Lane Cove, N.S.W.
Australia
011-61-2-427-4888

DISTRIBUTORS

Nano-Data
Ulefossveien 40
P.O. Box 830, Hjellen
N-3701, Skein, Norway
(035) 27-632/23-170

Rotec Enterprises
1/F Beverly House
93-107 Lockhart Rd.
Hong Kong
011-05-861-6168

Phase 4 Distributors
7156 St. S.E.
Calgary Alberta,
Canada T2H0W5
(403) 252-0911

M P C SOFTWARE

AMIGA SOFTWARE

LANGUAGES & UTILITIES

AC Basic	£265
AC Fortran	£265
Amiga APL	£200
Aztec C	PHONE
CLImate	£32
K-SEKA	£65
Lattice C V3.1	£165
Metacomco Macro Assembler	£65
Metacomco Pascal	£83
Metacomco Shell	£45
Metacomco Toolkit	£37
Modula 2 (Standard)	£90
Modula 2 (Developers)	£135
Quick Nibble	£35
The Mirror	£45
Marauder II (disc copier)	£40
True BASIC	£130

SOUND & GRAPHICS

Aegis Animator + Images	£110
Aegis Images	£50
Aegis Sonix	£70
Deluxe Paint	£85
Deluxe Paint II	£130
Deluxe Print	£83
Deluxe Video	£99
Deluxe Music	£85
Grabbit	£29
Instant Music	£27
Music Studio	£31
Prism	£75
Soundscape Midi Interface	£55
Soundscape Pro Midi Studio	£155
Soundscape Sound Sampler	£100
TV*Text	£90
Zuma Fonts 1-3	£30

DATABASES

DB Man (DBase 3 clone)	£125
Omega File	£90
Softwood File 2	£120
Superbase Personal	£130

WORD PROCESSING

Nancy (80,000 Wd Spellcheck)	£45
Pro Write	£120
Scribble	£90
Talker	£65
Text Craft	£45

BUSINESS SOFTWARE

A-Term	PHONE
A-Talk	PHONE
Aegis Draw	£125
Aegis Impact	£160
Dynamic CAD	£425
Financial Cookbook	£45
Gizmoz	£40
Macro Modem (SW)	£45
Mi Amiga Ledger	£90
Page Setter	£125
PCLO 1	£300
PCLO 2	£500
PHASAR (Home Accounts)	£90

LEISURE SOFTWARE

Archon	£23
Archon II	£23
Balance of Power	£38
Championship Golf	£17
Chessmaster 2000	£37
Chessmate	£27
Defender of the Crown	£40
Diablo	£39
Dr. Xes	£40
Flight Simulator II	£45
Hacker	£23
Halley Projects	£38
Leaderboard	£22
Little Computer People	£25
Quintette	£40
Racter	£35
SDI	£40
Seven Cities of Gold	£23
Shanghai	£22
Silent Service	£22
Sinbad	£40
Temple of Apshai Trilogy	£21

SPREADSHEETS

Analyse 2	£95
Logistix	£150
VIP Professional (123 clone)	£180

ARCADE GAMES

Arctic Fox	£26
Arena & Brataccus	£31
Barbarian	£22
Baseball	PHONE
Championship Football	£22
Deep Space	£31
Grand Slam (Tennis)	£40
Marble Madness	£27
Mind Walker	£45
Monkey business (Kong)	£24
One on One Basketball	£25
Skyfox	£27
Starglider	£22
Winter Games	£22
World Games	£22

ADVENTURES

Borrowed Time	£23
Deadline	£27
Deja Vu	£27
Enchanter	£27
Faery Tale Adventure	£45
Gulid of Theives	£22
Hitchhikers Guide	£25
Hollywood HiJinx	£26
Jewels of Darkness	£18
Knight Orc	PHONE
Leather Goddesses of Phobos	£27
Mind Forever Voyaging	£27
Mindshadow	£23
Portal	£30
Silicon dream	£18
Starcross	£27
Suspect	£27
Suspended	£27
Tass Times in Tonetown	£23
The Pawn	£23
Trinity	£31
Wishbringer	£25
Witness	£27
Zork I	£27
Zork II	£27

NEW PRODUCTS

Burocracy (Infocom)	£30
Guild of Thieves	£22
Publisher 1000	£135
The Surgeon	£45

HARDWARE

Soundscape Digitiser	£95
Digiview	£175
Technical Reference Manuals	PHONE
Other Books	PHONE
10 3.5" Branded discettes	£25
40x3.5" lockable discette storage box	£13
80x3.5" lockable discette storage box	£18
Mouse Mat	£6
Elite Joystick	£13
Professional Standard Joystick	£15
Quickshot IX Joyball	£10
Citizen 120D Printer & Lead	£220
Citizen MSP-20 Printer & Lead	£450
Xerox 4020 Printer	£1400
Other sound digitisers	PHONE
Battery Backed Clock Card	£50

Amiga 2000	PHONE
A500	PHONE
Genlock	£450
256K-512K memory upgrade	£90
Sidecar	£700
Printer Lead	£20
Comspec 2MB memory upgrade	£550
2MB Memory Upgrade	£470
Starboard 1MB	£360
Starboard 2MB	£540
Add on 3.5" disc drive	£260
Hard Disc Interface	£320
20MB Hard Disc	£900
Easyl Graphics Tablet	£440
Triangle Graphics Tablet	£350
Midi Interface	£55

A500 NOW IN STOCK!

Phone for details.

STARBOARD

THE memory board for the Amiga. Not only does the Starboard come in 1/2MB, 1MB and 2MB versions (supplied with or without chips), but with the addition of the multifunction module you can have all these extra features:

- 68881 (Maths processor)
- Battery backed clock

RAM cache (keep your RAMdisc or programme when you reset/crash the amiga)

Parity Logic

PRISM

Prism is the first graphics programme on the Amiga that allows you to use Hold And Modify mode allowing you to draw with 4096 colours on screen at a time!

TV*Text

Text presentation programme for the Amiga enabling you to use any number of fonts on screen at a time printed at 8 different orientations, different shading effects, mixing of graphics and text and lots more. Phone for demo disc.

M P C Software, 72, Julian Rd., West Bridgford, Nottm. NG2 5AN. Tel:0602 820106/455114

Allprices include postage and VAT. Allprices correct at time of going to press E&OE

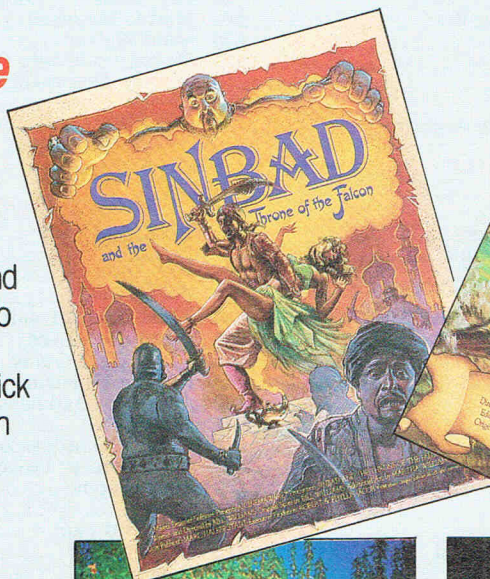
MINDSCAPE from MIRRORSOFT

FOR YOUR AMIGA

"Cineware. . . , an extraordinary and incredible use of the Amiga's graphic qualities to make a game that just leaves you stunned." Amiga User.

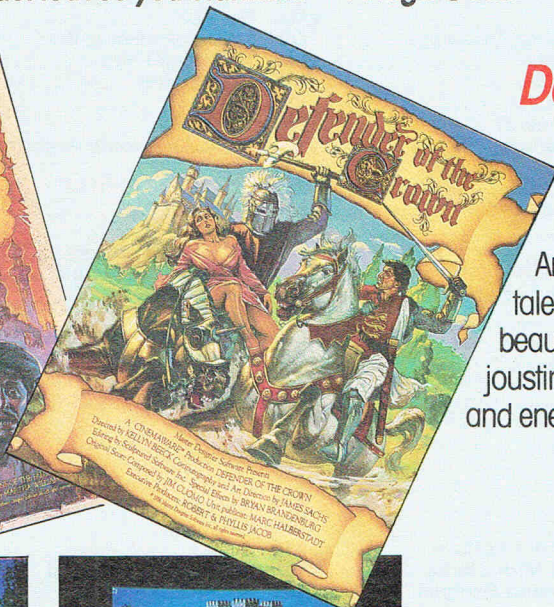
Sinbad and the Throne of the Falcon

An interactive mystery and action thriller, designed to test the player's swordfighting mettle, quick wit, and ability to perform under pressure.



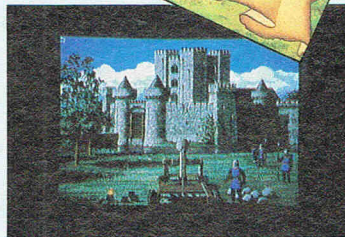
Defender of the Crown

An interactive movie tale of brave knights, beautiful maidens, jousting, swordfights and enemy castle sieges.



S.D.I.

A game of space combat with an exciting flight simulation, combined with romance, intrigue and heart-stopping action. And the fate of the world hanging in the balance. ▼



Deja Vu

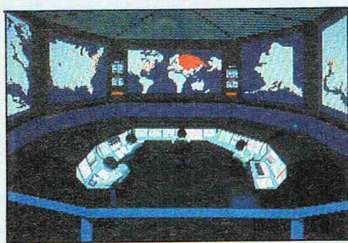
Set in a sleazy underworld reminiscent of Raymond Chandler, this game allows interaction with almost everyone and everything on screen.

Uninvited

A high resolution graphics create a compelling Gothic setting which, combined with horribly realistic sound effects and sophisticated animation, will draw you into its complex web of mystery.

Balance of Power

A strategy game of geopolitics in the nuclear age. ▼



Available from all good software dealers or direct from us – UK only.

Phone for latest prices 01-377 4644

I would like to order:-

- | | | |
|--------------------------|-----------------------|--------|
| <input type="checkbox"/> | Defender of the Crown | POA |
| <input type="checkbox"/> | Sinbad | POA |
| <input type="checkbox"/> | S.D.I. | POA |
| <input type="checkbox"/> | Balance of Power | £39.95 |
| <input type="checkbox"/> | Deja Vu | £29.95 |
| <input type="checkbox"/> | Uninvited | £29.95 |

I enclose a cheque/PO No. _____
for _____ payable to Mirrorsoft Ltd

Please debit my Access/Visa/American Express

A/c No.

Signed _____

Name _____

Address _____

Postcode _____

Tel No: _____ Date _____



Mirrorsoft Limited; Freepost (BS4382), Paulton, Bristol, BS18 5BR.

AM

"Games... that are crying out for someone to play them"

Adventures on the Amiga are starting to appear in a big way, so Andy Moss, CCI's resident adventurer puts Mindscape's Deja Vu and The Uninvited through their paces.

For any computer game to be successful there has to be a number of factors. Playability, excitement, tension, and especially in adventures a real sense of atmosphere, of being there and discovering first hand what mysteries lie before you. Packaging also plays a big part, in setting the scene for your story, and right away with these games you are thrown into a world of mystery and suspense, as the scenarios are described on the boxes in text book fashion bringing the reader right into the heart of the games immediately.

I first played these two adventures on a Macintosh and thought at the time what great games they would make on the Commodore. Imagine my pleasure when I found out that not only will they be available on the 64, but have just been released for the great Amiga. This is great news, for lovers of truly original and complex yet highly entertaining adventure software. I say original, because Mindscape (producers of the wonderful Defender of the Crown)

have perfected a way of producing interactive graphic stories with large volumes of text without the user having to type a word. It's all down to icons, a mouse, and your ability to carefully examine each picture for clues.

This playing system is unique, and can only really be utilised on machines such as the Mac and the Amiga because of their graphic screen handling capacities. But before I take you through this innovative system, let's first though have a look at each of the adventures and their respective storylines. In Deja Vu, the plot is really very simple, you wake up in a shower with a head that feels like wild horses have just run over it, and mind that it totally blank. You don't know your name, where you are, or how you got there.

What's more, you find a needle mark in your arm (sodium pentathol perhaps) and a huge bump on the back of your head.

Foul play has obviously been at hand here, if only you could remember how and why. Exploring a bit makes matters worse as you

discover a dead body slumped across a desk in an upstairs office, and that can only mean one thing, you actually killed the guy, or you're being framed for the murder! This is great stuff!

The Uninvited is a completely different type of story, one that has a distinctly gothic setting and a storyline that is nothing short of horrific.

Driving with your brother along a country road at the dead of night in a terrible storm is not the best way to avoid trouble, and sure enough it's trouble you get, as your car decides it doesn't like the road it's on and tries another direction, straight into a tree! The last thing you remember before blacking out is your brother's startled cry, and blackness rushing in. You wake up to find your brother gone, and the



EXAMINE OPEN CLOSE SPEAK OPERATE GET HIT CONSUME and a little box entitled SELF.

car about to explode, so after managing to escape that situation you arrive soaking wet at an old house, where you hope there is a telephone and a towel.

It goes from bad to worse as you enter the old house and are drawn into a frightening world of ghosts and ghouls and things that go bump in the night.

Icon Display

Both games use the same unique screen display and input system, which as I mentioned before is icon driven. You see essentially three sections, to the left of the screen is the actual graphic location drawn in beautiful 3D, in the centre is an inventory box into which you place all the items you find, and on the right is a small map of the exits available to you. Above the main picture are the action icons which consist of EXAMINE OPEN CLOSE SPEAK OPERATE GET HIT CONSUME and a little box entitled SELF.

Let's say you want to examine a coat you see in the picture, all you do is by the use of the mouse, move the cursor over the word Examine, click, and then place it over the graphic image of the coat and click again. The object you are examining will change colour and the text will scroll down accordingly, giving you your information. If you then want to say, take the coat, then click the cursor over the coat and while still pressing the button, move the

ACTUAL coat out of the screen and into your inventory box. You now possess a coat. Similarly, if you want to move in a given direction you just click on the part of the screen you want to move to, and the picture will change. Alternatively, you can just click on the exit box which doors to go through and that will suffice.

To back up the wonderful atmosphere generated by the games are some extremely lifelike sound effects which crop up from time to time, (try flushing the loo in

Deja Vu) and I can honestly say that far from turning the program into the cheap frills variety, these fx really do work for you.

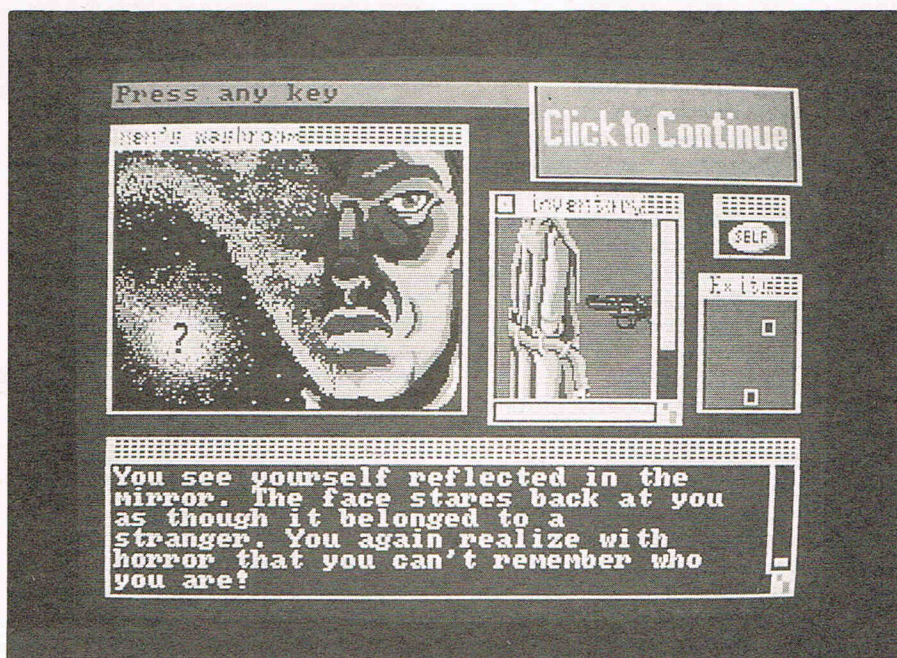
Superior to Mac

On the Amiga these games are superior to the Mac version, it's not all black and white for one thing, and the graphics are that much better, not Defender Of The Crown standard by any means but very very effective just the same.

You really have to have your wits about you, as you can examine practically everything in the pictures and something may just be hidden under something else, you just have to spot it. Some clever traps and puzzles abound with enough clues to keep you trying again and again to crack them.

Make no mistake, these are first class adventures, that while not being state of the art graphically, as far as the Amiga is concerned having a playing system that is unique and easy to use, and storylines that just cry out for someone to play them, I sincerely hope that someone will be you. These are fascinating adventures and are very highly recommended. 10/10 for Mindscape.

Deja Vu Price £29.95
Uninvited Price £29.95
UK Distributors Mirrorsoft,



Reasons to add Alegra are stacking up.

■ **Bill Volk, Aegis Corporation, Vice President Software Development:**

"The Alegra is an excellent value and speeds up operations of Aegis Draw substantially. It works well with 1.2 operating systems and brings the cost of memory expansion for the Amiga in line with the cost of memory for other computers."

Alegra is the Amiga™ Memory Expansion Unit from Access Associates available in 512k (upgradeable to 2MB) and 2MB versions. With a ¾" foot-print, Alegra is the smallest expansion package available anywhere!

■ **Greg Riker, Electronic Arts, Manager of Technology:**

"We use Alegra and have put units in the hands of all our developers so they can develop programs using external memory. We picked Alegra because it was problem-free, and will be using it for all future development on the Amiga."

Approved by the F.C.C. for Class B operation, Alegra conforms to the Commodore/Amiga Expansion Specification and works with all popular software.

■ **Larry Studdard, Micro-Systems Software, President:**

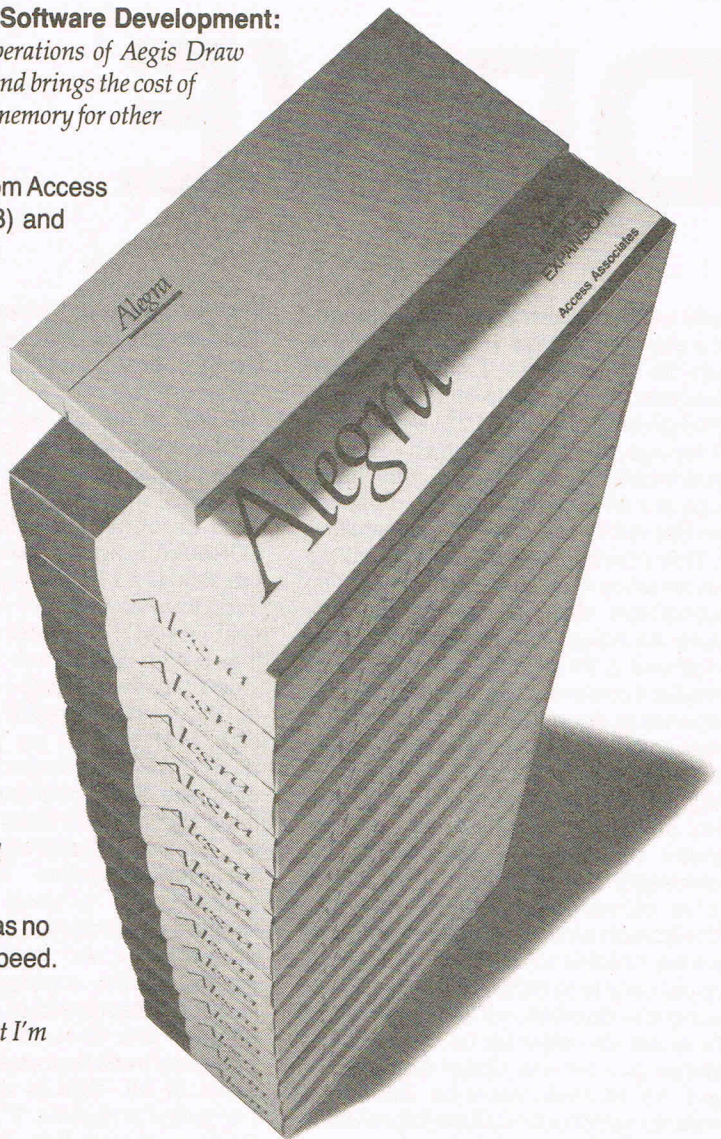
"You can quote me all over the place. They're good cards. Alegra makes and allows OnLine, Analyze, Organize, and BBS PC to be more effective. We beat our Alegras to death. One of them is in use 24 hours a day and not even a glitch."

Economically priced and highly reliable, Alegra has no wait-states, so your Amiga operates at its intended speed.

■ **Bruce Webster, Byte, Consulting Editor:**

"...it's worth the price for the added power. I know that I'm hooked."

Available at your quality Amiga dealer.



ACCESS ASSOCIATES

491 Aldo Avenue, Santa Clara, CA 95054-2303 (408) 727-8520 FAX 408-727-0792

*Amiga is a trademark of Commodore-Amiga, Inc.
Alegra is a trademark of Access Associates.

SUPRADRIVE 4x4 HARD DISK DRIVE

I was a little dubious as to the advantages of a Hard Disk drive with a capacity of only 20 Mega Bytes. I have 240 3.5in diskettes each capable of holding up to 880K giving me a total of 211 Mega bytes of storage, 10 times that which I could fit onto a 20MB hard disk drive. Still, never to be put off by small details I unpacked the SupraDrive and set about installing it. This proved to be very simple taking me no more than about 5 minutes. The SupraDrive package comes in three parts: An Amiga bus interface, the Drive itself and a 3.5in Utilities diskette. The interface press-fits onto the Amiga's bus expansion connector then the Drive is connected to the interface via a length of ribbon cable and a multiway plug. Any memory expansion or bus devices that previously occupied the bus connector can then be attached to the interface's bus extension. The SupraDrive comes pre-formatted and with Workbench already installed so all that is then needed to complete the setting up process is to MOUNT the hard drive using the SupraMount utility provided. To make life easier for us hard done by Amiga owners the Utility diskette has had its startup-sequence batch file suitably modified to invoke SupraMount when it is first booted up. It also makes the necessary assignments to ensure that the hard drive becomes the current drive. Finally it runs a program called READCLOCK which reads a battery packed up real time clock contained in the interface and then sets the Amiga's

internal clock and calendar to match. The time and date can be changed using another program called SETCLOCK. There are two remaining programs you will find on the Utilities disk. These are PARK, used to lock the SupraDrive's head prior to transit and SUPRA-FORMAT which, as its name implies, is used to format the hard disk. SUPRA-FORMAT, however, can not only format the disk as a whole but can sub-divide it into several smaller 'disks'. This is exactly what I did, I split my hard disk up into 5 4mb disks, each with a separate icon of its own. These I named DH0 up to DH4 with DH0 being my Workbench disk. DH1 became my 'work' disk containing a wordprocessor, spreadsheet, database and accounts package. DH2, I filled with all the utilities I frequently use i.e. backup programs, Cli extensions, Terminal programs, and anything I couldn't give a good label to. DH3 seemed a good place to put all my fun programs i.e. Art and animation programs, music packages, Video and audio digitisers and of course the odd game or two. DH4, however, was to be one of my most important and functional disks of all. This is where I put my Language programs, 'C', Assembler and Fortran. It was here that I began to appreciate the point of having a 'mere' 20Mb hard disk system. Compilations were significantly faster and disk swapping has almost become a thing of the past.

The most obvious difference you will

notice when you first use the SupraDrive is the speed at which Icons and directories appear. I now find it very irritating waiting for all the icons to make an appearance when I open an 'ordinary' disk. Programs like Cli and Preferences now seem to be almost instant. One other (and not so pleasant) obvious difference is the noise level. It does make a bit of a racket. Unlike the floppy drives it is constantly whirring away sounding a bit like a jet engine from a distance. Although to be honest by the time a couple of days had passed I began to feel unsettled by the silence that ensued when I powered the Amiga off a night!

Based on the information I would consider the SupraDrive to be a good buy but there's more... (where have I heard that before?) The SupraDrive's interface can itself be used to expand your Amiga's memory using quick to fit SupraRam modules. These come in various flavours in the range 512k to 4MB. It also contains a built in SCSI port to facilitate the addition of extra Hard drives.

So what would I do with a 20MB hard disk drive? Well if it was a SupraDrive 4x4... I would treasure it!

I.B.

Price: £699.99

Contact: (UK Distributor) Precision Software Ltd., 6 Park Terrace, Worcester Park, Surrey KT4 7JZ.

Finally News

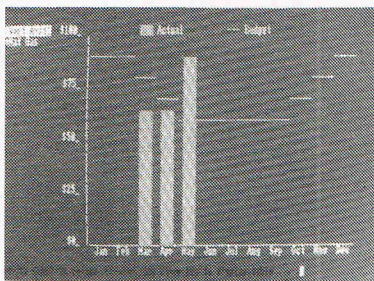
News and Information on Products from Finally Software



The Doctor Is In

Shown above, **Dr. Xes™** is a psychotherapeutic game which uses artificial intelligence techniques and speech synthesis to converse with you on topics involving your well being and mental health. More fun than a padded cell and great for parties!

Financial Favorite

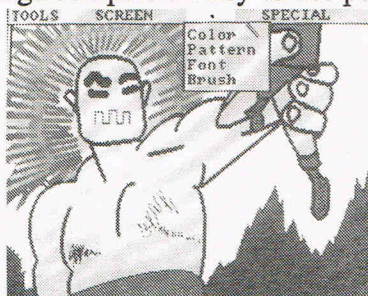


Hundreds of people across the country are using **PHASAR: The Financial Manager™** on their Amiga computers to organize their finances. Lauded as the "hands down favorite" by AmigaWorld, this program is helping people worldwide, and has rapidly become the leader in financial programs for the Amiga. It lets you sort out your finances by providing accurate tracking of multiple accounts; cash, credit, savings, payroll, deductions, medical expenses, utilities, etc. It also helps in tax preparation and prediction. PHASAR has built in intelligence which minimizes typing for quicker entry of information and transactions. It comes complete with a 100+ page manual and on-line help which shows all features and how to use them. Available now for only \$99.95.

Watch for **ComicWare™**: The audio animated Comic Book series. Coming soon from Finally Software.

Graphics For Less

Finally software just announced the recent acquisition of **B-Graphics™** from Rastaware. Finally will reintroduce the program as **B-Paint™**. This program lets you draw with low, medium or high resolution on any Amiga computer. Easy-to-use pull-



down menus give you tools to draw simple or complex images, and it reads, stores, and prints IFF files allowing you to use pictures created with other standard Amiga drawing programs as well. Best of all, the source code is included. At a price of only \$39.95, this represents one of the best values available for the Amiga computer.

Motion Commotion

Finally software is proud to announce **AmigaMotion™**, the latest in animation software for the Amiga. This frame animation software is the first of its kind. It allows you to use sources such as **B-Paint™**, **Deluxe Paint™**, or **Digiview™** to create animated sequences. Sequences can be edited then played back on your computer or stored to any VCR for feature length animation. Available now for only \$99.95.



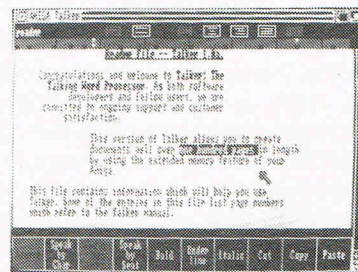
Finally Software
c/o Software Literacy
2255 Ygnacio Valley Rd., Suite N
Walnut Creek, CA 94598
(415) 935-0393

Español Made Easy

Use of Digitized Spanish is a First

The long awaited Spanish tutorial, **Señor Tutor™** is now available. It comes complete with six-diskettes chock full of lesson material. Señor Tutor leads a self-paced beginning Spanish tutorial using both digitized Spanish and synthesized English for high clarity. Señor Tutor comes equipped with its own Spanish-English dictionary. Only \$69.95.

Wordprocessing AND Speech in One



John Wagoner, President of Finally Software, conceded recently that numerous people are confused about the purpose of the **Talker™** program. "Many people don't realize that, aside from having optional speech, Talker is a full function WYSIWYG (What You See Is What You Get) word processor with bold, italic, and underline shown on-screen. It also has easy-to-use tab and margin settings as well as headers, footers and page numbering, plus more. Talker is the first word processor to take full advantage of the Amiga's special capabilities." Talker costs a mere \$69.96.

Finally Software also offers **Nancy: The Spelling Checker™**. Nancy works with Talker, and other popular word processors as well as ASCII files. It has over 120,000 words in its dictionary - the largest available on the Amiga - and you can even create your own specialized dictionaries. Only \$49.95.

Señor Tutor, Talker, Dr. Xes, AmigaMotion, ComicWare, and B-Paint are trademarks of Finally Software. Deluxe Paint, Digiview, Phasar, Nancy, and Amiga are trademarks of Electronic Arts, NewTek, Marksman Technology, The Computer Club, and Commodore-Amiga, respectively.

S

o Defender of the Crown broke the ground and Sinbad followed up. When you are talking Amiga games, you are talking Mindscape" we commented. "Change is the only constant in our lives... someone said and you can say that again!

There is now another real Amiga game to be played and you can add 'Microillusions' to Mindscape when you are talking Amiga games, too. Faery Tale has that sense of quality that only games expressly written for the Amiga show. There is no boring 'hang-over from the 64' style about it. It is without doubt the next Amiga smash to make the crowds eyes widen and force out the gasps of admiration.

And it is, as 'Defender' and 'Sinbad', marvellously original and unlike anything that has gone before. It does not Defender style smack you between the eyes with spectacular graphics though they are without doubt excellent. No, it asks you to play and work hard to solve an arcade adventure of classic quality and immense preparations, of witty ideas and frustrating complexity. It is fascinating. It is undoubtedly a challenge of tremendous depth. It is one of the most interesting and entertaining games we have ever played. Faery Tale, sound, vision and story. It is a game that no Amiga player will finish quickly — or really be happy to solve at all. For Faery Tale is no good that playing it makes one realise that this is what computers like the Amiga were made for — to bring an extra dimension into game play and to keep you going for longer and longer trying to get further into its totally absorbing story. The Amiga may be a great business machine but with games like Faery Tale to play, thousands and millions more will find terrific enjoyment from it at home. You should be among them or miss out on a really terrific gameplaying experience.

The FAERY TALE

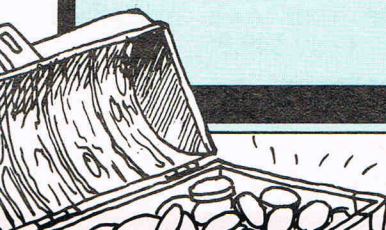
Adventure



nothing.
Insert a mitab
Please insert G
Phillip OAME
Bry: 25 Lok: 2



It opened.
He entered the tavern.
Julian was getting rather hungry.
It was midday.
Bry: 39 Lok: 5 And: 15 Wtr: 11 Wlth: 20



MEGA REVIEW

Once upon a time in a land far away, there lived three young men. Brothers they were, and they lived with their father who was their tiny village's Master at Arms. Julian, the eldest, was strong and brave, and would often practice his skills as a warrior on imaginary foes. He looked forward to the near future when his father would begin training him as an apprentice swordsman.

Phillip, the second brother, could often be found exchanging sharp wit with other townsfolk, or gambling at dice, a game at which he excelled. Although not the brave warrior like his elder brother, Phillip was lucky and had his wits about him.

Kevin, the youngest brother enjoyed nothing more than a gentle stroll across the fields and surrounding countryside, where he could be at peace with the world. During his wanderings he had made friends with the animals of the country, and would feed them from the palm of his hand.

Never had the village of Tambry for that was where they lived, ever feared the evil spirits of the land as a magic talisman with powers far greater than those of the evil ones, was kept in the village, protecting its inhabitants.

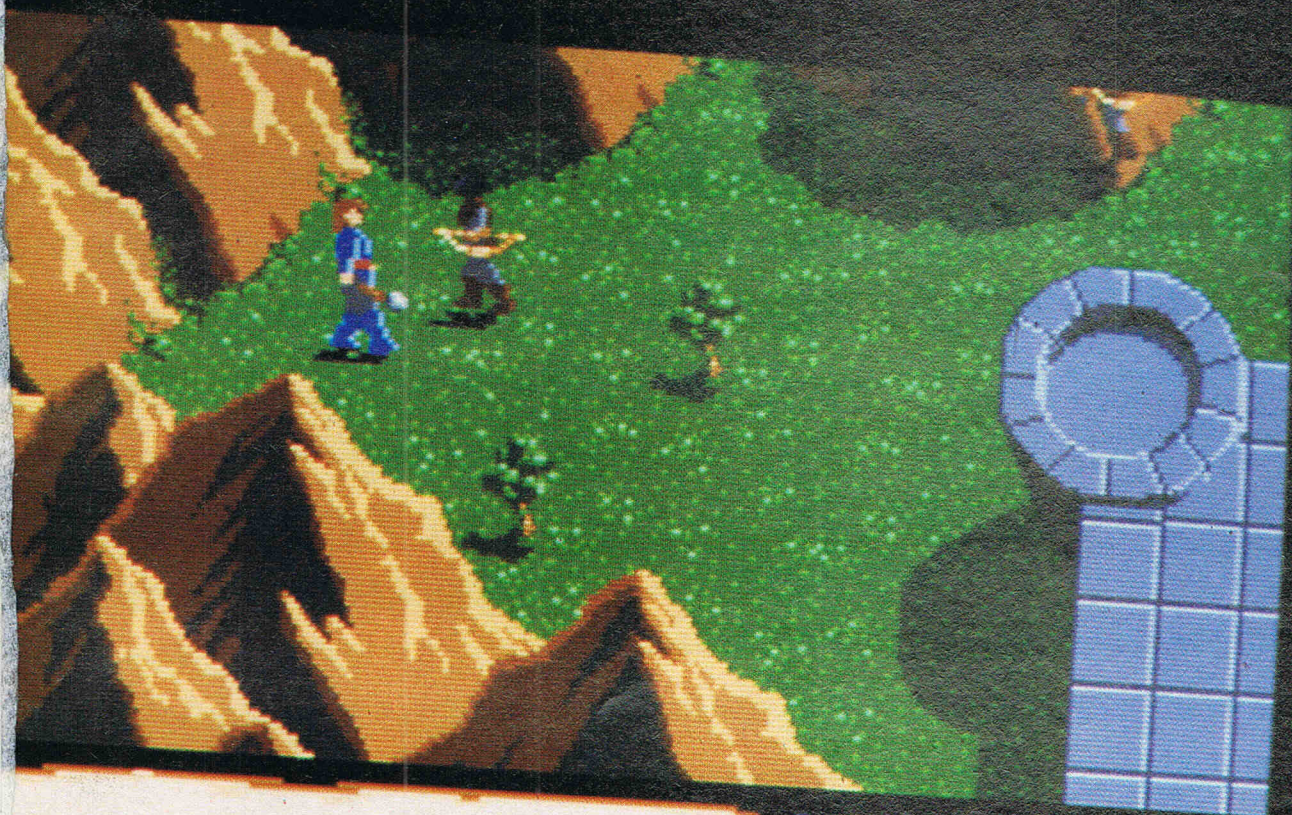
One dark night, however, some hooded figures floated into the village, followed by goblin-men and animated skeletons who

danced around the village, sending a shiver down the spine of the townsfolk.

The next morning, it was discovered that the talisman had been stolen. Without this the village would be defenceless against attacks from the evil forces. Taking the part of the three brothers, it's up to you, the player to recover the talisman and restore peace to the land once more. And, of course, everybody would then live happily after...

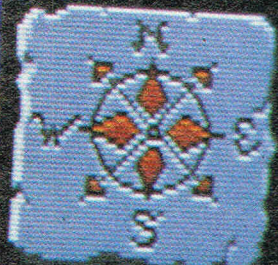
The Game

On loading, the screen shows an open book with a picture of the village of Tambry. The pages then turn to show a picture of the brothers with a description of their characters. The pages are



disk in ANY drive,
E disk.
AN old CASTLE.
5 Knds: 15 Vit: 17 With: 15

Items	Map
Talk	Buy
Game	Pause
Music	Sound
Quit	Load



CONTINUED FROM PAGE 99

very well drawn and shaded, giving the effect of an old parchment — or an old Hollywood movie.

Once the program has loaded, the game can start. Viewed from above at a slight angle, you begin as Julian, the eldest brother, in the village of Tambry. Control is via a mouse and an optional joystick for movement. The bottom third of the screen shows a scroll narrating the events as they happen. Next to this is a table of commands to be selected by the mouse, and on the far right is a direction icon/indicator.

Entering one of the buildings will show a plan view of the rooms, with rugs, tables, fireplaces and the like which can be searched. If you're lucky, you could find some useful objects to help you on your way. The largest building is the tavern where food, drink, and weapons can be bought if you have enough money.

Once equipped, you must set off and seek the talisman. Faery Tale comes with a map of the island of Holm showing mountains, paths, marshes, buildings and other features. Using the map is essential, as the playing area is made up of 17,000 screens. Yes, it must be said that games have boasted statistics like this in the past, but none has been so interestingly varied as Faery Tale, with its contrasting mountains, plains, rivers and forests.

Most important buildings, taverns, and keeps are linked by twisting paths that are a great help to navigation. On your travels, you will soon encounter ruthless ogres, goblin-men, skeletons, and ghostly monks who will attack you on sight. You start off with only a dirk (a small dagger) with which you will only be able to defeat the skeletons unless you are very lucky. These evil creatures will be armed with dirks, maces, swords, or bows and arrows. Fighting is done by holding down the joystick button, or right mouse button with a direction. This will result in him brandishing his weapon wildly,



Phillip started the journey in his home village of Tambry as had his brother before him. It was morning.
Brv: 21 Lck: 35 Knd: 15 Vir: 18 Wlth: 15



or firing arrows. If a foe is killed, its body may be searched, and its possessions and weapons taken. a substantial inventory can be acquired like this.

As well as nasty characters, there are good people, such as the Wizard and the beggars that will give you clues and help you in return for a good deed. For example, giving a certain beggar some gold will gain you a friend in the sea — a turtle to be more exact, who will take you to the Isle of Sorcery.

Starting as Julian, you have 20 luck points, of which five are deducted each time you are killed. If your luck runs out, the next youngest brother must take up the challenge, starting in the village with the land of Holm just as your elder brother left it. Phillip, being a lucky sort starts off with 35 luck points, and Kevin has 20.

The land of Holm is a very scenic place, with woods, mountains, rivers and general shrubbery. In contrast to this, there are the marshes, burning waste, Grimwood, and the Plain of Grief. All of the graphics are very well drawn, with well animated characters, and excellent use of colour, especially as night falls, and the landscape gradually darkens.

As you play, a suitable piece of music plays in the background which changes to a faster, more dramatic piece when you are under attack. We especially liked the piano sound in this section. When in combat, some excellent groaning, squelching and sword clashing sound effects are heard, which coupled with the realistic bloody wounds make fighting really enjoyable.

Faery Tale is an enormous ad-

venture which will take a long time to complete and makes excellent use of the Amiga's graphics, sound, and memory.

The Faery Tale Adventure is an excellent game. It is beautifully presented and packaged, and will keep arcade adventurers (with the emphasis on adventure) happy for many, many months to come. We do not believe that there will be anyone who plays computer games who could possibly not love Faery Tale.

It is a great game!

T.H & Z.M.S.



HI VOLTAGE

The London AMIGA Centre

NEW AMIGA A500 IN STOCK NOW!

'The Ultimate Home Computer' 512K machine with built-in 3 1/2" 880K double sided drive. Runs original Amiga software

PRICES FROM £499 + VAT
INCLUDING FREE SOFTWARE



AMIGA A1000 IN STOCK NOW!

Based around the Motorola 68000 CPU, with multi-tasking as standard along with a palette of 4096 colours.

PRICES FROM £599 + VAT
INCLUDING FREE SOFTWARE
+ ON SITE MAINTENANCE

ALEGRA 1/2 MEG
A1000 RAM PACK CAN
BE UPGRADED TO 2 MEGS
NOW ONLY **£249 + VAT**



NEW AMIGA A2000 IN STOCK NOW!

'The Only Desktop Computer You Will Ever Need' capable of running 2 x 3 1/2" disc drives, 1 x 5 1/4" drive and a hardcard with IBM Emulation simultaneously.

PRICES FROM £1095 + VAT
INCLUDING FREE SOFTWARE + ON SITE MAINTENANCE



AMIGA SOFTWARE - LOWEST PRICES

Aegis Animator	£99.95	Digiview	£189.95
Aegis Draw	£124.95	Logistix	£139.95
Aegis Draw plus	£219.95	Modula2	£79.95
Aegis Images	£49.95	Pagesetter	£119.95
Aegis Impact	£119.95	Sonix (musicraft)	£69.95
CLL-mate	£29.95	Superbase Personal	£89.95
Deluxe Music Const. V.2	£79.95	Truebasic	£129.95
Deluxe Paint V.2	£119.95	Flight Simulator II	£44.95
Digi Paint	£59.95	FS2 Scenery Disc No. 7	£24.95

All prices include VAT and UK P&P

PUBLISHER "Move over Mac"

Desk top publishing for the Amiga integrates with deluxe paint, scribble wordprocessor etc. Can produce copy in both colour and black and white

IN STOCK NOW Desktop Publishing Software **£149.95** inc VAT inc. FREE Postscript Driver

Mail Order + Export Hot Line Phone 01-686 6362

Delivery by Securicor (4 day) please add £5.75 per item. Delivery by Securicor 24 hour please add £9.95 per item.

Send off or order by 'phone quoting your Access, Visa No. 'Phone 01-686 6362. Immediate despatch on receipt of order or cheque clearance. Or Telex your order on: 946240 Attn 19001335.

EXPORT

Contact our specialist export department on 01-686 6362

EXPORT CUSTOMERS SUPPLIED TAX FREE.

PHONE FOR NEW CATALOGUE
On Amiga Hardware and Software

OPEN MONDAY-SATURDAY 9 AM-6 PM

OPEN MONDAY-SATURDAY 9 AM-6 PM

ALSO A VAST RANGE OF DISK DRIVES, JOYSTICKS, DISK BOXES, INTERFACES, SHEETFEEDERS, ETC.

Programming the **AMIGA?**

THE LANGUAGES AND TOOLS YOU NEED ARE HERE - FROM METACOMCO, THE AUTHORS OF AMIGADOS

NEW MACRO ASSEMBLER

Professional macro assembler, this is THE assembler package for the Amiga Standard 68000 mnemonics, macro expansions over 160 explicit error messages, fully formatted listings, large range of directives, absolute, position independent or relocatable code and conditional assembly.

£69.95

AMIGA SHELL

An enhanced command line interpreter to ease and speed up your development cycle. Contains Unix like features such as Command Line History, Command Line Editor, Aliases, Variables and Push and Pop directories. Also full documentation of Amiga CLI commands is provided.

£49.95

"If you do any programming you must buy Shell"
 .EXE - Jan 1987

CAMBRIDGE LISP

An integrated LISP interpreter and compiler providing a complete Artificial Intelligence development environment with rational arithmetic, trig functions, floating point arithmetic, vectors, integers of any size and much more.

£149.95

"One of the most advanced LISP systems I have ever seen"
 Amiga World - Feb. 1986

NEW VERSION LATTICE C v.3.10

Enhanced C compiler, assembler and linker, now with more library functions and includes text management utilities.

£189.95

A feature packed Developer's version is also available which includes the above compiler, Make utility, screen editor and symbolic debugger.

£299.95

MCC PASCAL

A fast and efficient ISO validated Pascal compiler generating native code, comprehensive error handling, 32 bit IEEE format floating point and full 32 bit integers.

£89.95

"The definitive Pascal compiler for the Amiga"
 Amiga User - Dec. 1986

AMIGA TOOLKIT

An invaluable suite of program development utilities. Includes Disassembler, Pipes, Librarian, Pack and Unpack, Browse and AUX CLI. A package designed by the authors of AmigaDOS to extend the power of the operating system.

£39.95

"Likely to become one of the most used programming aids for the machine"

Your Commodore - Feb 1987

METACOMCO

26 Portland Square, Bristol BS2 8RZ, UK.
 Telex: 444874 METACO G Fax: (0272) 428618

© METACOMCO 1987

MAIL ORDER HOTLINE (0272) 428781



SOFTWARE EXPRESS

COMPUTER SYSTEMS LTD

EVERYTHING FOR THE AMIGA

THE ONE STOP AMIGA SHOP

A500, A1000, A2000

WE ARE THE SPECIALISTS!

SOFTWARE - HARDWARE - PRINTERS - MONITORS - CABLES - DISKS - BOOKS - ACCESSORIES - ETC.

AMIGA MAIL ORDER - WE ARE THE FASTEST - PHONE (021-328 3585)

AMIGA SHOWROOMS - WE HAVE THE LARGEST - 9.30 to 5.30 - 6 DAYS A WEEK

AMIGA SOFTWARE - WE HAVE THE BEST!! - UK AND USA - IMPORTED

514-516 ALUM ROCK ROAD,
 ALUM ROCK, BIRMINGHAM
 B8 3HX
 PHONE: 021-328 3585

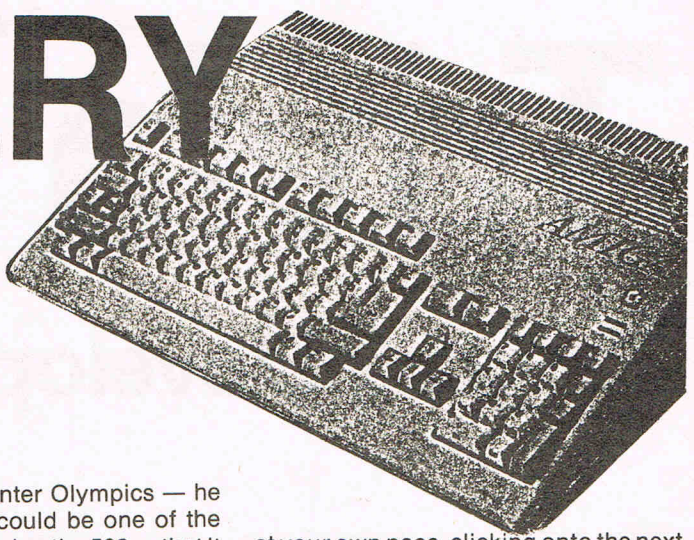
PLEASE SEND ME YOUR LATEST PRICE LIST

NAME

ADDRESS

.....
 I OWN AN A500/A1000/A2000/NONE

THE VERY FIRST



Everyone knows how to use a 64 or 128, don't they? Well, most people think they do. Yes, we know how to switch on and the basic commands that can get it up and running but sometimes, especially when we are at the beginning, we feel helplessly we don't know much more. If we do, the chances are that we learned initially from some kind of tutorial and then went on to more complicated things as we grew more experienced.

In many countries around the world, to make that first time knowledge available on opening the box, Commodore supplied a tutorial on disk or cassette for the 64 or the 128 called The Very First. Now for the Amiga 500, all over Europe, if you buy Commodore's wonder baby you will be provided with a tutorial to enable you to bring it up right and guess what this educational package is called . . . Yes, The Very First! In some other less fortunate countries you might have to buy it yourself. So we thought you would, in either case, like to know what you will be getting.



The Very First tutorial has been created, for Commodore, by the same Juan Holz who was responsible for the 64 and 128 versions of The Very First tutorials. Widely experienced in things Commodore and well-known around the world — in addition to his computer expertise he represented Chile, in ski-

ing, at the 1964 Winter Olympics — he has created what could be one of the best reasons for buying the 500 — that it will be immediately usable. For the Amiga's legendary user-friendliness is at once multiplied by the sample — practically foolproof — way The Very First presents it.

For, make no mistake, although the Amiga is genuinely user-friendly; in other words, it does not require a master's degree in computer science from the Massachusetts Institute of Technology to understand and use it successfully (some computer manuals certainly seem to!), it does have its complications and tricks, even simple ones, that will serve you well to learn — and cost you something if you don't. In The Very First, for example, one neat idea is that if you have trouble when you click on certain command, it advises you, very correctly in our experience, to try using your intuition — not the Amiga's Intuition system — and click virtually any and everywhere. That sounds pretty rough? Well, the Amiga, like all computers an occasionally cussed beast will suddenly stop and then overcome an obstacle and work — if you give it an extra chance.

Workbench and CLI

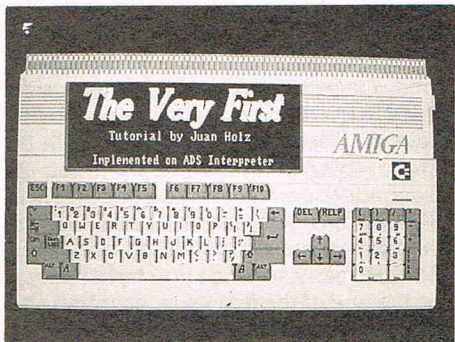
The Very First takes into consideration that Amiga owners may well be first time computer users and even need to be told why the cursor has all at once mysteriously disappeared from the screen. We get some odd telephone calls at CCI, I can tell you. Why has the cursor disappeared? Because you may have moved the mouse too far. Solution? Move it up the table a little. (Really hard that one, Rae West, wasn't it?) It also tells you never to remove a diskette while the drive light is on. Many a floppy has gone to the great disk bin in the sky from that thoughtless action.

The Very First lets you move through

at your own pace, clicking onto the next screen when you want. It has a variety of ways of going on, to stop you getting bored, including sliding screens up or down and some nice old-fashioned movie slow fades. In a few cases, it lets you go on only if you have carried out the tasks on the screen but they are not very difficult.

It covers Workbench and CLI, two of the more complex areas of the Amiga's operations, giving you the necessary information in a much simpler and immediately understandable form than any manual could do.

When it explains the Amiga's three structures or warning flashes, it uses the computer's own technology to make it clear.



For the expert programmer or the blasé longtimer user, The Very First will seem a too elementary aid but probably not too many programmers will be buying 500's anyway. The Amiga 2000 looks more their style. For the average non-technically trained Amiga 500 owner, The Very First will prove an extremely valuable help to the desired aim of sitting down and starting to use the Amiga 2 minutes after it has been delivered — which is more than has been the case with lots of computers much less powerful than the 500.

A.M.

Trivia Trove

Enigma Developments

This is definitely the one for all of us trivia fans, a thoroughly addictive game from Enigma. We are given the choice of TRIVIA TROVE or TRIVIA TROVE + which is the same game but with the answers supplied, should you get them wrong. Both versions are written in AmigaBasic.

The first level of the game consists of a Tic-Tac-Toe or noughts and crosses board. Each portion of the board is assigned a category randomly chosen by the computer and the player has to try and place his crosses in a row of three, horizontally, vertically or diagonally in order to win through to the next level. This is done by correctly answering the questions asked under the categories chosen. A correct answer also allows you the choice of the next position to play for on the board. However, if you answer incorrectly, the computer puts its nought in the square and if it gets three in a row then it wins (which it informs you with a cruel sort of laugh). Just to make things a little bit more interesting you only have 20 seconds to complete levels one and two! Points are scored for each correct answer with a bonus added according to how many seconds you have in hand at the end of the first level. A written and verbal prompt is included to tell you when it is your move. The whole game is played by means of the mouse and the left button so operation could not be simpler.

Level two is not quite as easy as level one. The board this time is made up of eight circles with four subjects which flash on and off in sequence. The idea is to stop the flashing when the subject you choose is black and then answer a question correctly. You have to select each of the four subjects in turn which becomes increasingly difficult as each subject is chosen. You are allowed one mistake only on this section so if you

select a subject that has already been answered, twice, then the computer wins. You are also allowed one wrong answer on this level. I have to admit that I found this level slightly disappointing in that stopping the circles flashing at the right time seems to be very much a matter of luck rather than skill which is a pity when you do not have very much room for error. The amount of time you have to complete this level depends on how long it took you to get through the previous one.

Something Completely Different

Level three is completely different. Here you have to simply click your mouse button on one of many squares which are constantly changing colour. The colours correspond to those used in a row of numbers at the bottom of the screen. The idea is to choose a square which represents as high a number as possible because these are bonus points which are added to your score. There is no time limit on this level.

Finally you will find yourself on the fourth level of the game. Again you have to answer questions on a multiple choice basis but this time instead of the TIC-TAC-TOE board or circles you will be faced with a grid made up of squares, some of which conceal the jumbled up letters of a capital city. At the start of this frame these answers flash, so try to remember where they are. It does not matter how many of these questions you answer wrongly but you only have twenty seconds in which to complete the frame. A correct answer will entitle you to uncover one of the square and then give you the option of either guessing the capital city or postponing your guess and answering the next question. The quicker you guess the city the more bonus points you are awarded (provided you guess correctly). If you enter the wrong capital then you lose!

Having played the game seventy zillion times and eventually made it through to the end I was just a little disappointed not to be hailed as a megahero with all due musical and/or visual ceremony but this I suppose you can't have everything.

One really nice feature of this game is that it does have a section called TRIVIAL FILER which allows you to create your own questions for use within the game. This can be great fun on a Saturday night with a few friends and a liberal supply of amber nectar. On a more serious note it can also be very useful as an educational aid.

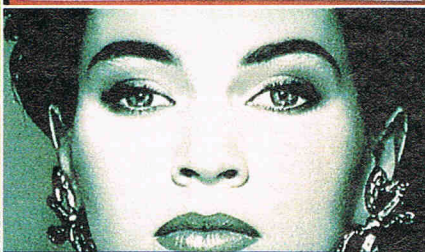
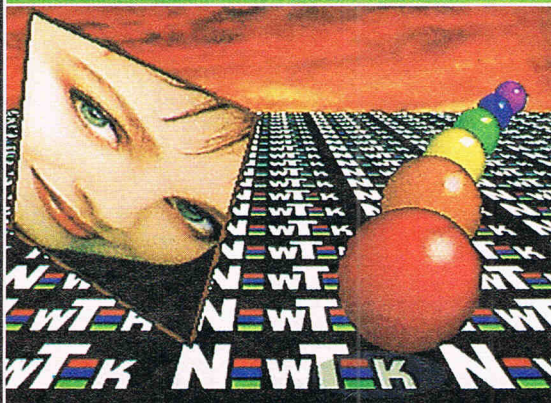
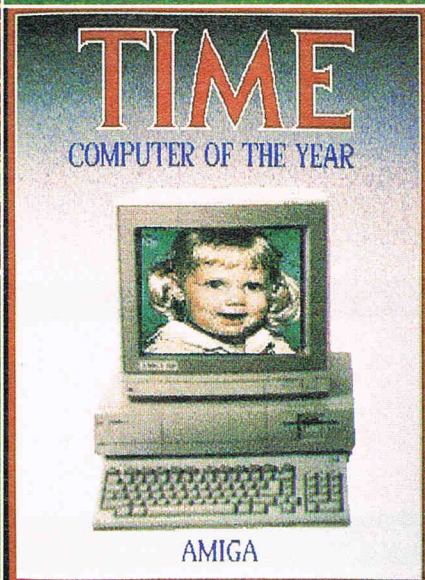
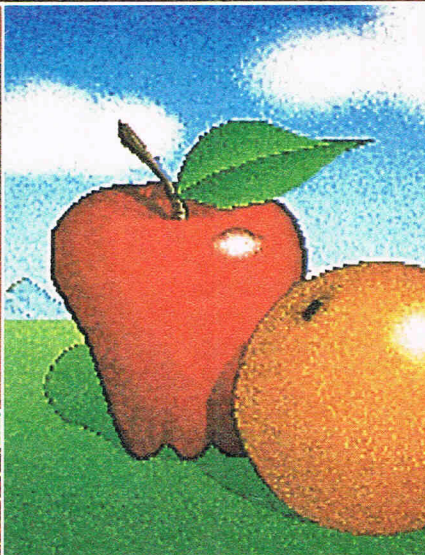
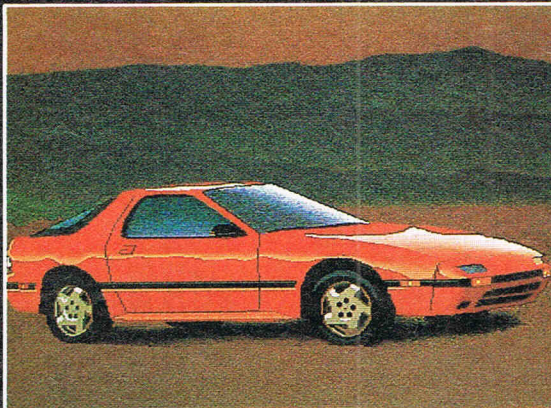
The three programs, TRIVIA TROVE, TRIVIA TROVE + and TRIVIA FILER, make up a very entertaining and educational package. With its three thousand questions I would consider it good value for money.

Enigma Developments hope to produce add-on data discs in the future including:

YOUNGSTER PACK 1: Questions for children aged 5 to 10 years
YOUNGSTER PACK 2: Questions for children aged 10 to 16 years
BEGINNERS PACK 1: Entry level general knowledge questions
BEGINNERS PACK 2: More beginners questions
BOFFIN PACK 1: More advanced general knowledge questions
TECHNOLOGY PACK 1: Questions on technology, computers etc.
T.V. PACK 1: Questions on various T.V. programmes
FILM PACK 1: Questions on films
O — LEVEL PACKS: Various subjects for revision.

These should make TRIVIA TROVE suitable for just about everyone so watch out — you may have to fight the family for your turn!

M.B.



ONLY DIGI PAINT CAN DO ALL THIS

Get the maximum graphics power from your Amiga. Create stunning, lifelike computer artwork with Digi-Paint, the first full-featured 4096 color (Hold and Modify) paint program. Break the "32 color barrier" and finally realize the potential of your Amiga with Digi-Paint's advanced features:

- 4096 colors on screen simultaneously
- NewTek's exclusive enhanced HAM mode
- Dithered HAM gradient fill
- Full screen effects including double, half size, mirror reverse and more
- Full IFF and Digi-View compatibility
- Use 320x200 or HAM hi-res 320x400 resolutions
- Fat bits Magnify mode
- Rectangle, oval, line and other drawing tools
- 12 different paint modes including blending, tinting and smooth shading
- Full lasso cut and paste with automatic edge blending
- Programmed completely in assembly language for fast, smooth response

Find out why Byte Magazine called Digi-Paint "Remarkable". Available now at your local Amiga dealer or call: 1-800-843-8934.

ONLY \$59.95

NEWTek
INCORPORATED

**TURTLE PRICES ARE THE ONES TO JUDGE THE COMPETITION BY
WE ARE SURE YOU WON'T FIND LOWER PRICES AND FREE DELIVERY
FIRST CLASS SERVICE AT FIRST CLASS PRICES**

AMIGA HARDWARE

RRP OUR PRICE

Amiga A500 Keyboard only	£573.85	£539.99
Amiga A500 + A1010 Second 3.5in Drive	£803.85	£759.99
Amiga A500 + A1081 Colour Monitor	£918.85	£849.99
Amiga A500 + A1010 Second Drive + A1081 Colour Monitor	£1148.85	£1049.99
Amiga A1000 256k + Single Drive + A1081 Colour Monitor	£1144.25	£979.99
Amiga A1000 256k + Dual Drives + A1081 Colour Monitor	£1374.25	£1179.99
Amiga A1000 512k + Single Drive + A1081 Colour Monitor	£1258.10	£1049.99
Amiga A1000 512k + Dual Drives + A1081 Colour Monitor	£1488.10	£1249.99

AMIGA PERIPHERALS

Amiga A1000 Ram Upgrade	£148.35	£123.99
Amiga A1010 Second 3.5in 880k Disc Drive (A1000 or A500)	£286.35	£229.95
Amiga A1081 Colour Monitor	£401.35	£309.95
Amiga A501 Modulator (To Connect To TV)	£24.99	£22.99
Amiga A502 512k-1040k Ram Upgrade	£113.85	£99.95
Citizen LSP-10 Printer Epson/IBM Compat. NLQ. Draft 120 CPS	£316.25	£199.95
MP165 Printer, Epson Compatible. NLQ. Draft 165 CPS	£263.35	£219.95
MP135 Printer, Epson Compatible. NLQ. Draft 135 CPS	£194.35	£169.95
MP26 Daisywheel Printer, 26 CPS. 132 Columns. Diablo/Qume Std	£299.00	£259.95
MPS1200P Commodore Parallel Printer	£286.35	£259.95
Genlock Video Controller + Software	£494.50	£449.00
SSDD 3.5in Discs + Library Case (10) — LOW LOW PRICE —	£22.95	£14.95
Quality Branded 3.5in DSDD (10) — LOW LOW PRICE —	£29.95	£19.95

SPECIALS (Limited Stocks)

Commodore 64C Connoisseur Collection	£249.99	£219.99
Commodore 64C Computer Only	£199.99	£149.99
Commodore 1530-1 Tape Recorder	£44.99	£34.99
Commodore 1541C New Disc Drive	£199.99	£189.99
Commodore 1541 Disc Drive	£199.99	£183.99
Commodore Mouse & Software (C64)	£39.99	£24.99

AMIGA 500/1000 SOFTWARE

RRP

OUR PRICE

AMIGA 500/1000 SOFTWARE

RRP

OUR PRICE

A Mind Forever Voyaging	£34.99	£26.99	Leader Board	£24.99	£18.99
Adventure Construction Set	£29.95	£22.99	Leaderboard Tournament	£9.90	£7.99
Aegis Animator	£79.99	£62.99	Leather Goddesses of Phobos	£34.99	£26.99
Aegis-Sonic	£79.95	£62.99	Little Computer People	£34.95	£26.99
American Football	£24.99	£18.99	Marble Madness	£29.95	£22.99
Archon	£29.99	£22.99	Mean 18 Golf	£29.99	£22.99
Archon II	£29.99	£22.99	Meoh Bridge	£29.99	£22.99
Arena/Brataccus Pack	£34.95	£26.99	Mindshadow	£24.95	£18.99
Arctic Fox	£29.99	£22.99	Moon Mist	£29.99	£22.99
Balance of Power	£29.95	£22.99	Music Studio	£34.99	£26.99
Ballyhoo	£29.99	£22.99	One on One	£24.95	£18.99
Baseball	£24.99	£18.99	Pawn	£24.95	£18.99
Basketball	£24.99	£18.99	Portal	£34.99	£26.99
Borrowed Time	£24.95	£18.99	Seven Cities of Gold	£29.95	£22.99
Cutthroats	£29.99	£22.99	Shanghai	£24.99	£18.99
Deadline	£29.99	£22.99	Silent Service	£24.95	£18.99
Deep Space	£34.95	£26.99	Sinbad & Throne of Falcon	£39.95	£30.99
Defender of the Crown	£45.95	£35.99	Sky Fox	£29.95	£22.99
Deja Vu	£30.95	£22.99	Star Glider	£24.95	£18.99
Faerytale Adventure	£49.95	£37.99	Hollywood Strip Poker	£19.95	£15.49
Flight Simulator II	£49.95	£37.99	Super Huey	£19.99	£15.40
Flight Simulator Scenery Disc	£24.95	£18.99	Superbase Personal	£149.95	£119.95
Golf	£34.95	£26.99	Tass Times	£24.99	£18.99
Hacker	£24.95	£18.99	Temple of Apschai Trilogy	£24.99	£18.99
Hacker II	£24.99	£18.99	Trinity	£34.99	£26.99
Hitch Hikers Guide	£28.99	£22.99	Witness	£29.95	£22.99
Hollywood Hijinx	£29.99	£22.99	Wizards Crown (Soon)	£29.99	£22.99
Kamfregruppe	£29.99	£22.99	Zork I II & III each	£29.99	£22.99

All prices include VAT at 15% and delivery anywhere on the UK mainland

How to Order

Post: Send Cheques, P.O. or Visa/Access details to the address below.
Phone: Call 0476 60488 24 Hour Service with your Visa/Access details.

Turtlesoft Dept CCI5, 35 Brook Street Courtyard, Grantham, Lincs NG31 6RY

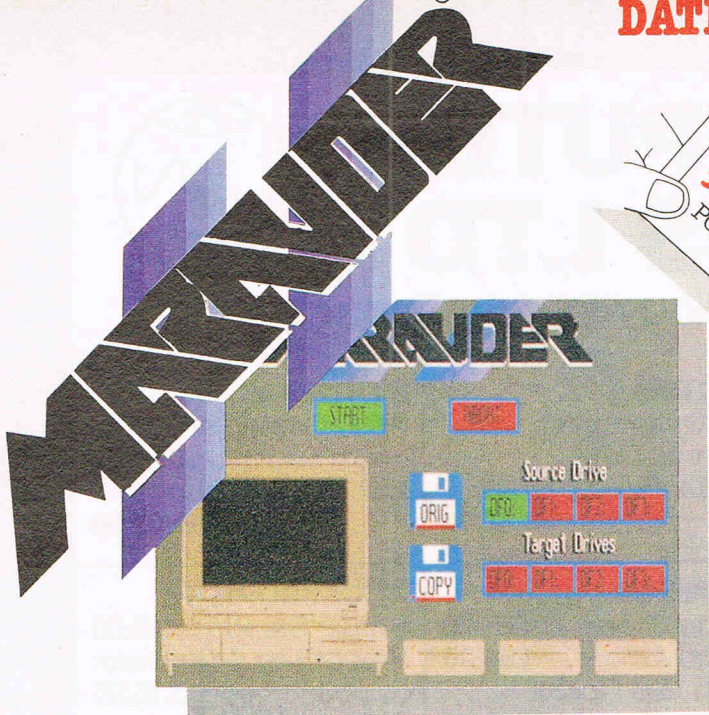
Subject to availability, all items are despatched within 24 Hrs. E&OE.

**Just because you don't see it —
Doesn't mean we haven't got it —**

Call for Details!!

**DATEL BRINGS YOU THE MOST POWERFUL,
MOST FRIENDLY, AND MOST
UP TO THE MINUTE DISK
COPIER AVAILABLE...**

**THE
Marauder 11[®]
TOTAL BACKUP SYSTEM IS HERE..**



the Amiga's multitasking operating system.

Marauder II has been designed with your future needs in mind. As protection schemes change you can update the program yourself with our unique "Strategy Files." The Strategy Files are developed as new software is released so that you can get them quickly and easily when you need them.

Compare the features of Marauder II to our competition and you'll see that Marauder II is quite simply the best copier you can get, at any price! And for only **£29.99** you can rest assured that your software investment is safely protected against damage, loss or theft. Don't wait, order now!

COMPARE THESE FEATURES

- Superfast -- Typically 80 Seconds
- Unbeatable with Periodic "Stately Files"
- Mouse driven throughout -- most friendly to use.
- Runs from workbench or C.L.I.
- Makes multiple copies from one original -- upto 4 simultaneously
- Even decrypts most encoded programs including D. Print/Video/Paint/II etc., etc.
- Supports 1 to 5 drives.

AVAILABLE NOW!

Marauder II is the most powerful copier ever produced for Amiga. It will automatically copy ALL* software released to date, and it requires no hardware modification of any kind. It produces completely unprotected copies of most Amiga software faster and better than any other copier.

No other copier can copy as much software as Marauder II.

Marauder II also has the most advanced user interface your money can buy. If you have an Amiga you already know how to use Marauder II. You never have to reboot your machine to use Marauder II, it is completely compatible with

*In our most recent tests we could not find any software that Marauder II could not back up.

PRINT & SAVE ANY SCREEN, FROM ANY PROGRAM ANYTIME!

GRABBIT

SOFTWARE

With GRABBIT you can capture exactly what you see on your screen in an instant, regardless of what programs you're running. GRABBIT works with all video modes, including "Hold and Modify." What's more, GRABBIT runs completely in the background, transparent to your other software. GRABBIT is always ready for you to use, even when you're in the middle of another program. As if that is not enough, GRABBIT requires only about 10K RAM to operate, and it supports dozens of printers. GRABBIT is truly a productivity power tool for your AMIGA!

GRABBIT is far superior to other screen-printing "programs" because of its small size and quick performance. No complicated setup is required, just install and go! Also, GRABBIT doesn't require the screen to remain visible during printing or saving, and stopping the print operation is as easy as starting it. GRABBIT supports all standard Amiga printer drivers. GRABBIT also supports full color printing. In addition to GRABBIT's printing capabilities, the package also includes a powerful utility program "ANYTIME." The ANYTIME bonus

program is a "Preferences" style palette requester that allows you to change any colors of any screen, anytime! With ANYTIME, you are NOW capable of customizing all colors to match your printer's hardcopy to the screen's colors. Once you start using GRABBIT and the bonus program ANYTIME you will want it on every disk. You get all the power of this sizzling new software for an unbelievably low **£21.99 POST FREE**

Now a Midi Interface for your AMIGA... at a realistic price

THE DATEL MIDI-MASTERTM ONLY £34.99

AVAILABLE NOW!

- Full Midi Specification
 - Mid In, Midi Thru, 3 Midi Out
 - Fully opto isolated
- Compatible with all leading Midi packages.



DATEL ELECTRONICS

USUALLY SAME DAY DESPATCH ON ALL ORDERS
SEND CHEQUES/P.O.'S TO:
UNITS 8/9
FENTON INDUSTRIAL ESTATE,
DEWSBURY ROAD, FENTON,
STOKE-ON-TRENT TEL: 0782 273815
FAX: (0782) 264510

24 HR CREDIT CARD LINE
SEE US ON PRESTEL
PAGE No. 258880000A
12 Page Catalogue + Order Page

FOREIGN ORDERS ADD £2 POSTAGE



LAN COMPUTER SYSTEMS LTD



Bringing the world of technology to your fingertips

SYSTEM 1 A500 Computer Defender of the Crown Box of Ten 3½in Discs £499.00	SYSTEM 2 A500 Computer High Resolution Monochrome Monitor £499.00	SYSTEM 3 A500 Computer 135 cps Dot Matrix Printer £569.00	SYSTEM 4 A500 Computer High Resolution Colour with Stereo Sound £695.00
ACCESSORIES External 2nd Drive with box of disks £249.00 TV Modulator £21.00 512K Ram Expansion £99.00 Monitor Stand £15.00 Colour Monitor Cable £15.00	PRINTERS LAN 135 £139.00 Panasonic 1081 £154.00 Star NL10 £199.00 Epson LX800 £199.00 LAN 200 £259.00 LAN 201 £299.00	MONITORS Mono Green £69.00 Mono Amber £69.00 High Res Colour Stereo £249.00 Amiga 1081 Colour £349.00	ACCESSORIES Printer Stand £15.00 Box of Ten 3½in Discs £16.95 Box of 2000 Paper £13.95 Storage Box Lockable 40 £13.95 Disk Cleaning Kit £13.95

LEISURE SOFTWARE — Prices Include VAT & Postage

Defender of the Crown £29.95 Barbarians £24.95 Balance of Power £29.95 Beavercra y £34.99 Deja Vu £29.95	Flight Simulator II £43.99 Guild of Thieves £24.95 Hitch-hikers Guide £29.95 Hollywood High Jinx £29.99	Leaderboard £29.99 Marble Madness £24.95 Moonmist £34.99 Nighthawk £24.95 Pawn £24.95 SDI £29.95 Shanghai £24.99	Sinbad £29.95 Silent Service £24.95 Star Glider £24.95 Terrapods £24.95 Ultima III £24.95 Uninvited £29.95 Winter Games £24.95 World Games £24.95
---	--	--	--

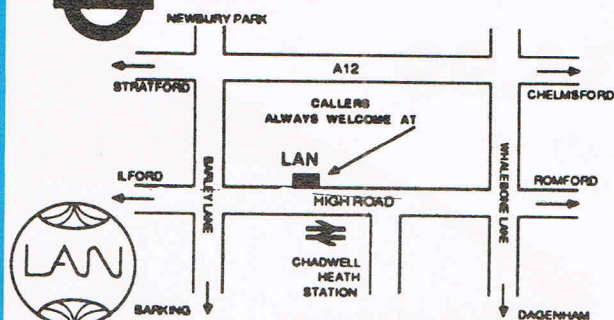
APPLICATIONS SOFTWARE

Delux Paint £79.00 Deluxe Print £79.00	Deluxe Video £79.00 Deluxe Paint II £129.00	Scribble Wordprocessor £79.00 Analyse Spreadsheet £79.00	Organise Database £79.00 UCSD Pascal £69.00
---	--	---	---

PHONE FOR OUR LATEST AMIGA CATALOGUE
 PART EXCHANGE AVAILABLE ON NEW AMIGA



COME IN AND SEE US



1063 HIGH ROAD
 CHADWELL HEATH
 ROMFORD, ESSEX
 Tel: 01-597 8851

We are open
 9-6.00pm
 Monday to
 Saturday



HOW TO ORDER

Enclose letter with cheque, postal order or credit card number for total amount including VAT and delivery charge outside UK.

Credit card holders may order by telephone. Dispatch normally in 24 hrs. Contact Sales Desk

Official Orders from Educational Establishments, Local Authorities and Government departments welcome. Contact Educ. Dept. **EXPORT HOT LINE: 01-597 8854. TELEX: 995548**

Dealer and Export Enquiries: Contact Trade Dept.

FREE DELIVERY

anywhere in the UK on Systems & Software

Prices exclusive of VAT unless otherwise stated and correct at time of going to press.

Education callers ask for

Tony Judge or Mike Brown

Verran

MICRO-MAINTENANCE LIMITED

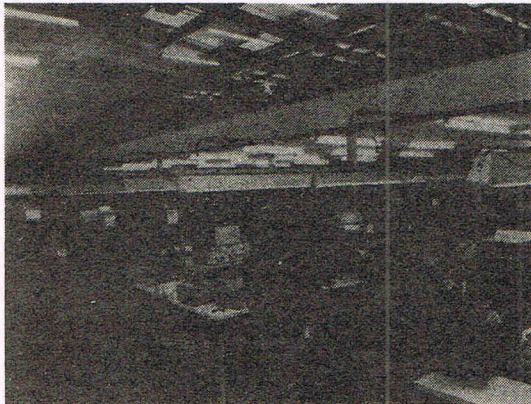
OFF ALL
TRADE PRICES
£5

EUROPE'S LEADING COMPUTER REPAIR CENTRE

TELEPHONE (0276) 66266

TRADE ENQUIRES (0276) 62677

TELEX 858199 Verran G



OVER 3500 PRODUCTS REPAIRED EACH DAY...

At our Head Office in Camberley, Surrey, we provide repair facilities for leading companies such as Amstrad plc, Commodore Business Machines, Sinclair Research, Rank Xerox, Dixons, Currys, Boots, WH Smiths, John Menzies and many more. Now we are going to offer you the consumer high quality repair services at **TRADE PRICES**.

In the UK we employ 200 staff to fulfil our customers requirements in a quick and efficient manner. Factory space of 32,000sq.ft. and offices in Switzerland and Germany now make us the largest and most advanced computer repair centre in Europe. Your computer and software is worth hundreds of pounds - send it to Verran and you will undoubtedly receive the best service available.



FULLY COMPUTERISED TEST AND PROCESSING PROCEDURES

Automatic Test equipment is used to assist in the repair of all leading computer products. Many of these have been designed and built by Verran and subsequently sold throughout the world. The advanced technology allows us to offer our repair services at rock-bottom prices to all our customers. No one can match us in performance and price.

Guaranteed reliability is one of the most important points in the selection of who should repair your computer. We are proud to offer our **SIX MONTH GUARANTEE**. Within the first three months we will repair any fault **FREE**. From three to six months only half the quoted trade prices would be charged if your computer developed a fault.

To record the safe receipt and despatch of your computer we have invested in the most advanced computer system available. Each customer unit is logged and checked before return. Whilst your computer is in our possession, or in transit to you, our insurance provides comprehensive cover.

To be assured that the service you get is the best available - use Verran. We always remember that **QUALITY IS NEVER AN ACCIDENT, IT IS ALWAYS THE RESULT OF INTELLIGENT EFFORT**.

SOAK RACK TESTING subjects your computer to a rigorous series of tests over a period of between 2-8 hours. Stringent quality procedures like the **soak rack** ensure the high standard of service our customers have come to expect.

UNBEATABLE DISCOUNT ON ALL COMPONENTS

Over £500,000 worth of components currently in stock.

Unfortunately we are unable to display our complete range, if you require items not displayed just give us a call on 0276-66266 and we will be pleased to quote including delivery by first class post.

SPECTRUM SPARES

Z80 C-P-U	2.50
ULA 6C001	7.00
Power Supply	6.50
ROM	7.00
4116 RAMS	.75
ZTX 650	.40
ZTX 213	.40
Keyboard Membrane	
Spectrum	3.00
Spectrum Plus	8.00
Metal Templates	3.00
Keyboard Mats	2.00

COMMODORE SPARES

6510 Processor	12.00
6526 CIA	12.00
6581 Sid Chip	15.00
901225 Graphic ROM	10.00
901226 Basic ROM	10.00
901227 Kernal ROM	15.00
906114 House Keeper	10.00
6569 - VIC	18.00
4164 RAMS - Memory	1.00
Power Supplies	
C64	19.50
C16X	15.00

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

FANTASTIC LOW PRICES ON ALL LEADING COMPUTERS

Spectrum
Trade Price 19.95
NOW £5 OFF 14.95

Commodore 64
Trade Price 24.00
NOW £5 OFF 19.00

BBC B Std Brd
Trade Price 30.00
NOW £5 OFF 25.00

Amstrad 664
Trade Price 30.00
NOW £5 OFF 25.00

Electron
Trade Price 25.00
NOW £5 OFF 20.00

To obtain a quotation on any other product just call (0276) 66266 quoting the advertisement reference number.

(See bottom/left)

TO OBTAIN THE BEST REPAIR SERVICE AVAILABLE JUST FOLLOW THESE STEPS:-

1. Send your computer securely packed, accompanied by cheque, postal order (made payable to Verran Micro-Maintenance Ltd) or quote your Access or Barclaycard Number.
2. Quote the special offer reference number displayed at the bottom of this advertisement for your £5.00 DISCOUNT on the trade prices.

LETTERS FROM OUR CUSTOMERS

"I really felt I must write and thank you for the excellent service I received."

Mrs. J. Gilbert, Plymouth.

"I am extremely delighted and would like to thank you again for the quick and efficient service of your company". Paul Donald, Aberdeen.



MICRO-MAINTENANCE LIMITED

UNIT 2H & 2J · ALBANY PARK · FRIMLEY ROAD
CAMBERLEY · SURREY GU15 2PL

SIMPLY MEGA!!

AMIGA WARE

ADVERSA

SOFT		SOFT		HARD	
AC Basic	130.00	Kickstart eliminator kit	95.00	AMIGA 500	440.00
Aegis Draw Plus	165.00	King's quest I	32.00	512 k memory expansion	99.00
Aegis Animator + Images	90.00	King's quest II	32.00	20 MB SCS I Hard Disc Drive	845.00
Aegis Sonix	55.00	King's quest III	32.00	50 MB SCS I Hard Disc Drive	1185.00
Balance of power	32.00	Laserscript	29.00	aMEGA Board 1 MB	405.00
Bards tale	32.00	Marauder II	27.00	aMEGA Board 2 MB	540.00
Butcher	25.00	MIDI-Interface (ECE)	48.00	Easy! drawing pad	350.00
Chessmaster 2000	31.00	Modula 2 (Regular Version)	66.00	PC-Emulator kit	470.00
CLI-Mate	22.00	Modula 2 (Developers Version)	110.00	35 MB Internal Hard Disc Drive	675.00
DB-Man	100.00	Modula 2 (Commercial Version)	215.00	2 MB Internal RAM	340.00
Defender of the crown	32.00	Pagesetter	95.00	3.5" External Floppy Disc Drive	135.00
Deluxe music construction set	76.00	Prism	45.00	Genlock Studio	1550.00
Deluxe paint II	90.00	Pro MIDI Studio	120.00	Jitter Rid	27.00
Dynamic CAD	335.00	S.D.I.	32.00	Competition Pro 5000 Joystick	
Faery tale adventure	31.00	Sindbad	32.00	(look-thru)	13.99
Flight simulator II	32.00	Sound Sampler	76.00		
Flight simulator scenery disc (East USA)	19.00	The Surgeon	50.00		
Grand slam	32.00	True BASIC	100.00		
Gridiron	45.00	VIP Professional	120.00		
Halley project	29.00	Winter games	25.00		

Prices in £ and include Postage within Europe, but exclude local VAT. More than 60 other programmes on our list!

SIMPLYMEGAWARE

UK Mailbox
SIMPLYMEGAWARE
49, Links Drive
Solihull, West Midlands
Tel. 021 705 3570

Outside U.K. + Dealer Inquiries
PDC GmbH
Louisenstr. 115
(Germany) D-6380 Bad Homburg
Tel. 0 1049 6172-24748 (Day) 6171-53863 (Evening)


It's easy
to complain about
an advertisement.
Once you know how.

One of the ways we keep a check on the advertising that appears in the press, on posters and in the cinema is by responding to consumers' complaints.

Any complaint sent to us is considered carefully and, if there's a case to answer, a full investigation is made.

If you think you've got good reason to complain about an advertisement, send off for a copy of our free leaflet.

It will tell you all you need to know to help us process your complaint as quickly as possible.

The Advertising Standards Authority. 
If an advertisement is wrong we're here to put it right.

ASA Ltd, Dept 1 Brook House,
Torrington Place, London WC1E 7HN

This space is donated in the interests of high standards of advertising.

A-TALK

Communication and Terminal Program

- KERMIT - XMODEM - XMODEM/CRC - ASCII.
- FULL VT100/VT52/H19/ANSI/TTY emulations.
- Script language. 20 function keys. CB mode.
- Concurrent printing and capture. Voice option.

A-TALK PLUS

Tektronix 4010/4014 Graphics Emulation

- ALPHA/GRAPH/GIN standard modes, plus enhanced graphics POINT PLOT and INCREMENTAL PLOT.
- All vector formats. Screen size up to 704 by 470 (NTSC systems) and 704 by 582 (PAL systems). Zoom and Pan. Retrographics VT640 support.
- Four character sizes. Printer support. Store screens in Deluxe Paint II, Aegis Draw or PLOT-10 format. All A-TALK features supported.

A-TALK lists for US \$49.95. A-TALK PLUS lists for US \$99.95. \$2.00 shipping (\$10.00 Overseas).

Felsina Software

3175 South Hoover Street, #275
Los Angeles, CA 90007
(213) 669 1497

WELCOME!

After our first article in Commodore Business & Amiga User magazine, a lot of people called us to say "What are you and what do you do?"

The UK AUG was started in July of 1986 with a handful of devoted Amiga users, who had been using a development system since November of 1985. We were so impressed by this machine that we decided to form a link with the world outside of Leicester (AUG HQ) to contact other Amiga users and developers. This was done with our bulletin board — TABBS (0533 550893 6:00pm 'til 9:00am) which is still a major function of the AUG.

Soon after that we were contacted by various users across the country with Amigas and problems! I was then decided to 'form' the AUG in October of '86.

Since that time the bulletin board has been contacted by Amiga users worldwide and our membership has grown.

The next step was to link our members

and some sort of printed matter — a newsletter was born.

The first newsletter took a week to produce with many late nights and early mornings. It wasn't a strange sight to see the milkman on his rounds as we left the office!

All that hard work was rewarded by the various comments we received from members complimenting us on a tremendous achievement.

We were lucky enough to secure links with other Amiga User Groups both in the States and other parts of the world. We regularly exchange information, newsletters and public domain software with these groups.

The public domain software consists of various programs, such as the much talked about "Juggler" demo, utilities, communication software and games. These are made easily available to members of the UK AUG, and currently stands at over 80 megabytes of software.

To give our members "hands-on" experience with the latest software and hardware, we regularly hold meetings every fortnight at the Leicester HQ. This gives members an opportunity to meet each other and discuss the latest problems caused by the much heard of, never seen GURU!

Since the AUG was formed, we have produced 5 newsletters with contributions from CBM (UK), some of the leading software houses, enthusiasts and users alike.

Our membership now tops the 500 mark with many more being added each week.

In our next article we hope to pass on to you some tips we have gleaned from various sources and also to answer some of your problems.

In the meantime if you wish to contact us — please do so on either our bulletin board, or (0533) 550993. BIX: UKAUG or COMPUNET: AUG.



NOW AVAILABLE NEW CP/M VERSION

THE BIG BLUE READER:

- Loads in 30 seconds.
- Is easy to use.
- Features Standard ASCII to Commodore or PET ASCII translation, and vice versa.
- With ASCII translation, transfers MS-DOS files to Commodore format at 12,000 bytes per minute, and transfers Commodore files to MS-DOS format at 20,000 bytes per minute.
- Includes MS-DOS backup and MS-DOS disk-formatting programs.
- Displays on 80- or 40-column screen, in color or monochrome.
- Can be used with one or two disk drives.
- Features printer output.
- Error-checking includes:
 - correct disk
 - full disk
 - proper file name
- CP/M version available as upgrade to current users.

WANT TO READ FROM AND WRITE TO IBM-COMPATIBLE FILES?

If you have a Commodore 128tm and 1571tm disk drive, you can read from and write to MS-DOS files using **THE BIG BLUE READER!** New from S.O.G.W.A.P. Software, Inc., the program allows users to transfer files generated on most IBM-compatible software to Commodore DOS files, and vice versa. Now **THE BIG BLUE READER CP/M** gives you all the standard features of **THE BIG BLUE READER** plus CP/M read and write capability!

Direct inquiries to:

S.O.G.W.A.P. Software, Inc.
611 Boccaccio Avenue, Venice, CA 90291
Telephone: (213) 822-1138

AMIGA

IN THE NORTH-WEST

GRANTHAMS specialize in
commercial graphic applications
for AMIGA including available
software, plotters, & image
input devices for the designer
printer and draftsman

GRANTHAMS

Design & Reprographic Equipment

172 Corporation St Preston

Tel: 0772 50207

TRIVIA TROVE

THE TRIVIA QUESTION AND ANSWER GAME

- Over 2000 questions on 8 different subjects
- Subjects include Filer to allow you to create your own data disks
- Multiple levels with speech
- Fun for all the family

Only £19.95



AMIGA Users Group

- ★ Bimonthly Newsletter
- ★ Technical Information
- ★ Discount on all products
- ★ Users Bulletin Board
- ★ Problem Solving — Software & Hardware
- ★ Allied with U.S.A. Amiga Groups
- ★ Special introductory modem offer
- ★ Send or call for details
- ★ Now over 600 members worldwide

AMIGA USERS GROUP

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

AMIGA CENTRE

ADV CON SET	£19.95
SKYFOX	£19.95
ARCTIC FOX	£19.95
ONE ON ONE	£19.95
LEADERBOARD GOLF	£24.95
MARBLE MADNESS	£29.95
ZING UTILITIES	£49.95
MULTI FORTH	£129.95
STRIP POKER	£19.95
STAR GLIDER	£24.95
DELUXE MUSIC	£89.95
DELUXE PAINT	£69.95
DELUXE PRINT	£69.95
DELUXE VIDEO	£69.95
DELUXE PAINT II	£129.95
SDI	£29.95
FLIGHT SIMULATOR II	£49.95
SINBAD	£29.95
DEFENDER OF THE CROWN	£29.95



AMIGA

- ✓ *Supplies of Amigas to industry, education, business and personal users.*
- ✓ *The U.K.'s largest Amiga dealer*
- ✓ *Large range of software already available over 150 including technical reference manuals.*
- ✓ *Technical support from people who have been using Amigas for over 18 months.*
- ✓ *Over 80 megabytes of Public Domain programs already available to all Amiga owners.*
- ✓ *Books, papers and disks for all models — in fact everything you need for any Commodore.*
- ✓ *The only dealer in the UK to support all Commodore products.*
- ✓ *Run by Commodore enthusiasts — at your service.*

**CAVENDISH COMMODORE CENTRE
66 LONDON ROAD, LEICESTER LE2 0QD.**

or Tel: 0533 550993



THE AMIGA SPECIALIST

- ★ A500 AND A2000
- ★ FULL RANGE OF PERIPHERALS
- ★ FULL RANGE OF SOFTWARE
- ★ RGB CONVERTERS
- ★ ONSIGHT MAINTENANCE FOR A2000
- ★ TRAINING COURSES

Phone for details
TRIANGLE TELEVISION

130 BROOKWOOD ROAD
LONDON SW18 588
Tel: 01-874 3418



ATTENTION ALL AMIGA OWNERS

— JUMPDISK —

THE DISK MAGAZINE FOR THE AMIGA IS ONE YEAR OLD IN JULY TO MARK THIS OCCASION WE HAVE MADE THE BIRTHDAY ISSUE VERY SPECIAL

WITH OVER 20 READY TO RUN PROGRAMMES AND 16 ARTICLES IT IS SURELY AN OCCASION WORTH CELEBRATING

ESPECIALLY AT £8.50 INC. VAT

NOT CONVINCED?

THEN TRY ONE AT NO RISK. IF WITHIN ONE WEEK OF RECEIVING THE SPECIAL JULY ISSUE YOU CAN HONESTLY CLAIM THAT IT DOES NOT REPRESENT GOOD VALUE FOR MONEY, CONTACT US SO THAT WE CAN ARRANGE TO BUY IT BACK. (UK ORDERS ONLY) JUST SEND CHEQUE OR MONEY ORDER MADE PAYABLE TO:

GEORGE THOMPSON SERVICES LTD.,
Old Reigate Road, Betchworth, Surrey RH3 7DR.
Telephone: 073 784 4675

PRICE INCLUDES P&P WITHIN UK AND EUROPE

*AFTER THE FIRST 6 ISSUES IN THE USA ONLY THREE CUSTOMERS ASKED FOR AND RECEIVED REFUNDS. ONE THOUGHT JUMPDISK WAS FOR THE ATARI ST!

The great AMIGA Cover Up!



Keep your AMIGA protected with a strong, top quality, fire proofed cover. Specially designed for the AMIGA 1000, it has a neat mouse pocket to keep the control device safe, too. At only £15.95 (plus 50p p&p) its a great way to keep dust and dirt off your computer. When you're not using it cover your AMIGA up and keep it safe!

**Only
£16.45
inc P&P**

To: Commodore Business and Amiga User
40 Bowling Green Lane, London EC1R 0NE

I want you to rush me a special AMIGA cover. I enclose a cheque (sterling) for £16.45 (add £1 for postage outside the U.K. and Ireland) made payable to 'Croftward Limited' Name

Address

Access

Signature

COMMODORE

BUSINESS and

AMIGA USER

OCTOBER 1986

The Unstoppable Amiga...



Amiga Marble Madness!

SUBSCRIBE!

You can keep up to date with everything that's happening in Commodore Business and with everything new on the AMIGA by taking out a subscription to Commodore Business and AMIGA User. This new and unique international magazine is presently published every other month and will be mailed to you direct. Simply fill out the coupon for this special introductory offer, and send it to us now.

To: Subscriptions Manager, Commodore Business and Amiga User
 40 Bowling Green Lane, London EC1R 0NE. Tel: 01-278 0333 Telex: 267247 FINSEC

Please send me 6 issues of Commodore Business and Amiga User

Subscription rate UK U.K. £9.00
 Europe £16.00
 Outside Europe £22.80

Date subscription to commence _____

Name _____

Address _____ (business)

County _____ Postcode _____

Telephone (home) _____

Cheque enclosed
 Please debit my Access Card No. _____

Expiry date _____ Signature _____

AND MUCH, MUCH MORE...

£1 50

Hello Neighbors!

Thank you for your support and concern for our software products.

I have gained much experience with microcomputer software design by acting as a consultant and custom programmer for several companies, including Tandy Corporation, Timex Computer Corporation, I.B.M., Epson American, Inc., and Panasonic Computers.

As founder of Micro-Systems Software, Inc., and the primary author of all our programs, it is now my intent to create practical and quality software for you, by devoting my full efforts to the MSS Research and Development Division.

Enjoy your Amiga!



Steven Pagliarulo
Vice President

Micro-Systems Software

7 Years of Quality Software and Still Growing Strong!



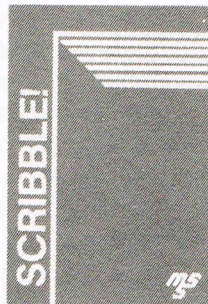
ANALYZE!

- Powerful Electronic Spreadsheet
- Full Featured Macro Language
- Graphs and Sort



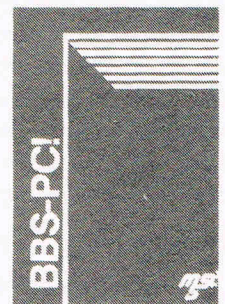
ORGANIZE!

- Professional Data Information Manager
- Powerful Mathematical Functions
- Reports, Files, Sorts



SCRIBBLE!

- Full Featured Word Processor
- Spelling Checker
- Mail Merge



BBS-PC!

- Electronic Bulletin Board System
- File Transfer System
- Custom Menu Creation

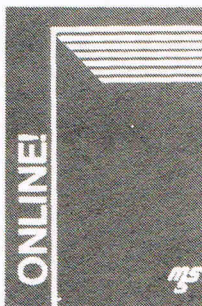
MICRO-SYSTEMS SOFTWARE, INC.



4301-18 Oak Circle, Boca Raton, FL 33063
Telephone: (305) 391-5077

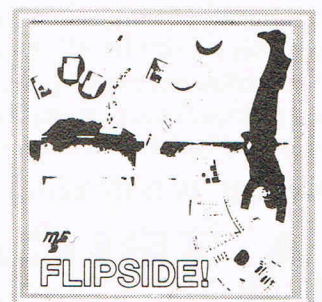
Ask for a dealer demonstration of these fine products.

For Dealer Information:
Vision Technologies Limited
Croydon, Surrey
Tel: 01-760-0013



ONLINE!

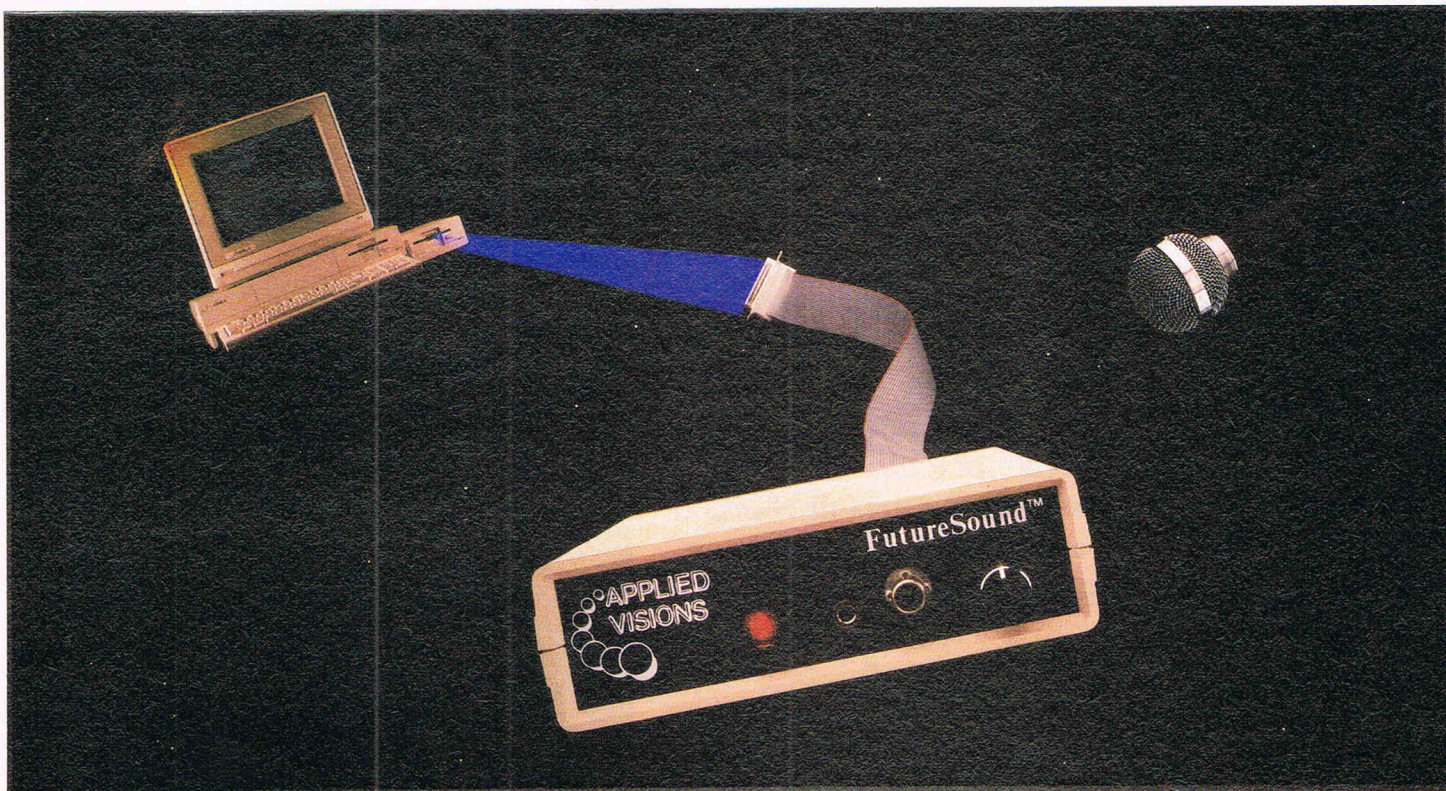
- Full Featured Terminal Program
- Unattended Operation
- File Transfers



FLIPSIDE!

- Valuable Printing Tool
- Perform Wide Side Print Magic
- Print any Text or IFF File wide

FutureSound™



“Open the pod bay doors, HAL...”

Programmers cast their vote!

Right now, leading software developers are hard at work on the next generation of Amiga® products. To add the spectacular sound effects we've all come to expect from Amiga software, they are overwhelmingly choosing one sound recording package... FutureSound. As one developer put it, "FutureSound should be standard equipment for the Amiga."

FutureSound the clear winner...

Why has FutureSound become the clear choice for digital sound sampling on the Amiga? The reason is obvious: a hardware design that has left nothing out. FutureSound includes two input sources, each with its own amplifier, one for a microphone and one for direct recording; input volume control; high speed 8-bit parallel interface, complete with an additional printer port; extra filters that take care of everything from background hiss to interference from

DISTRIBUTED IN THE UK BY:

the monitor; and of course, a microphone so that you can begin recording immediately.

What about software?

FutureSound transforms your Amiga into a powerful, multi-track recording studio. Of course, this innovative software package provides you with all the basic recording features you expect. But with FutureSound, this is just the beginning. A forty-page manual will guide you through such features as variable sampling rates, visual editing, mixing, special effects generation, and more. A major software publisher is soon to release a simulation with an engine roar that will rattle your teeth. This incredible reverberation effect was designed with FutureSound's software.



Question: What can a 300 pound space creature do with these sounds?

Answer: Anything he wants.

Since FutureSound is IFF compatible (actually three separate formats are supported) your sounds can be used by most Amiga sound applications. With FutureSound and Deluxe Video Construction Set from Electronic Arts, your video creations can use the voice of Mr. Spock, your mother-in-law, or a disturbed super computer.

Programming support is also provided. Whether you're a "C" programming wiz or a Sunday afternoon BASIC hacker, all the routines you need are on the non-copy protected diskette.

Your Amiga dealer should have FutureSound in stock. If not, just give us a call and for £195.50 in cash with order we'll send one right out to you. Ahead warp factor one!

TRI COMPUTER SOFTWARE Ltd

OFFICIAL COMMODORE AMIGA® DEALERS Tel: 01-840 6136
161-169 UXBRIDGE ROAD, EALING, LONGON W13 9AU

STOP PRESS... LIMITED QUANTITY, AMIGA A500 + AMIGA 2000 NOW IN STOCK PHONE FOR DETAILS.

Applied Visions, Inc., Suite 2200, One Kendall Square
Cambridge, MA 02139 (617) 494-5417

AMIGA LETTERS

WAIT A MOMENT

When reading through various ads in your magazine for memory expansion and similar I have often come across the term "No-wait-states" or "Zero-wait-states". What are they talking about? For all I know it could be a catastrophe not having a wait state.

Brian Lewis, Tuscon, Arizona

Memory access on most computers takes several machine cycles. If the memory of a given computer is not capable of operating at processor speed then several of the machine cycles are wait cycles during which the processor is doing nothing more productive than waiting for the memory. A memory expansion such as the Alegra uses memory capable of operating at processor speed thus eliminating delays caused by the processor waiting for memory. Hence the expressions "Zero-Waits" and "No-Waits".

WHAT A PICTURE

Is there a better icon editor than ICONED which is extremely naff?

Bernard Howell, London

Yes... Deluxe Paint! (plus a utility). First use Dpaint to design your Icon using the first four colours of the palette. Next, save it as a brush to disk. You then need to run a Public Domain program called BRUSH2ICON. This transforms the brush into a workbench usable Icon. Using Dpaint gives you a number of advantages over using ICONED:

- 1) It is MUCH easier (and more fun) to use.
- 2) Icons can be whatever size you choose.
- 3) There are lots of designs already available in Dpaint (IFF) format.

BRUSH2ICON can be found on disk 9 of the AMICUS Public Domain collection.

LOTS FOR WORDS

I am at loss when it comes to getting the SAY command working in AmigaBasic. On page 8-151 it gives an example on which I have based my program. I have thoroughly checked that what I have

entered is correct and yet seem unable to get it to work. All that happens when I try to execute the program is that I get the error message "ILLEGAL FUNCTION" with the expression "SAY A\$" flagged as the source of the problem. I feel sure that I have interpreted the instructions for the use of SAY and TRANSLATE correctly. Is the book wrong or am I just slowly losing my marbles?

Geoff Reeves, Burlington, USA

It seems you are victim of the 256k trap! From what I can gather if you are using AmigaBasic in a 256k machine it doesn't leave enough room for the Translate library. I suspect you will find the limitations of a 256k machine an ever increasing problem. I have discovered to my horror that even a 512k machine can become very restrictive. All I can suggest is that you upgrade your memory. If, in the meantime, you just fancy experimenting with the SAY command you should still be able to invoke it from the CLI by typing SAY without any parameters. Close down any other programs/windows you may have running beforehand to get as much memory as possible.

FASTER AMIGA

I believe the Faster 68101 processor is pin for pin compatible with the 68000 of the Amiga. If so does it follow that by simply plugging in a 68010 I will be able to improve the performance of my Amiga?

Peter Svarsky, Newcastle-upon-Tyne

The 68010 is indeed pin-for-pin compatible with the 68000. The gain in performance, however, is unlikely to be very dramatic although programs making heavy use of looping, multiply and divide operations have been quoted as running anywhere up to 50% faster. Although hardware compatible there are a couple of differences on the software side. First, the 68010 uses a four word stack frame against the 68000's three and secondly the MOVE SR,<ea> instruction has become privileged in the 68010. Not to be deterred by

such trivia a number of user groups have come up with software patches to help eliminate these problems. One such patch along with a complete information package for upgrading the Amiga can be found on the Public Domain Fish-Disk No 18.

KICK IN THE PANTS

I have at last got my hands on Kickstart and Workbench 1.2. Things were looking great until I discovered that not all of my 1.1 software would function properly. The problem is that in order to change the Kickstart version you are using you need to power off the Amiga and start from scratch. Is there any way I can tell the Amiga to RE-LOAD Kickstart without having to turn it off each time?

Frank Lekanger, Norway

There is a Public Domain program called ChangeKickStart which will re-load Kickstart without having to switch off your Amiga. I don't have a copy myself but I'm sure one of our fabulous readers will be able to tell us where you can obtain a copy.

HELP IS AT HAND

Heeeeelp! I have a single drive system and I can't seem to find any way of getting a directory of anything other than the Workbench disk. If I enter DIR with any disk other than Workbench it says "Please insert Workbench Disk". If I do as instructed it then goes on to give me a directory of the Workbench disk. I have read and re-read the Amiga User Guides to no avail. It's no good telling me to go out and buy another disk drive as I could only just afford the basic system.

Chaz Collis

The solution to your problem is only a question mark away. Put in your Workbench disk and enter "DIR?" (request for help). After a few moments the message DIR,OPR/K: will appear. Then insert the disk of which you would like a directory and press RETURN. Eh Voila! one directory. Most of the other commands can also be invoked in this manner.

Letters pages edited by Ian Bennett

INTERRUPTED YET AGAIN

Musical Diversions

Continuing our great interruption on the Commodore 64 and the ultimate goal of writing an arcade game, we arrive at the all important topic of musical soundtracks. Interrupt driven of course, can't have the sound interfering with the game itself. What we have also got to consider at this stage is just precisely where we are going to place the code itself. The horizontal and vertical scrolling routines, as well as occupying space in the region \$C000 to \$CFFF, also take up memory lower down as well: the data for the screen displays now takes up memory from \$5000 to \$6FFF. A logical place to put the musical routine is somewhere in that \$C000 to \$CFFF spare 4K of memory, there's probably room in there after placing the scrolling routines if we look carefully enough.

The data for the music itself is another problem. Some people boast about having ten minute musical soundtracks to accompany their games, so we can't have the loyal readers of CCI falling short of those standards. Unfortunately a ten minute soundtrack takes up a reasonable amount of memory, unless you want to play notes at the rate of one every ten seconds or so. The routine I came up with allows you to play at the far more sensible rate of about three notes a second, if you want to go for the whole ten minutes and (probably) bore everybody to death.

In the end I opted for storing the music in memory from \$4000 to \$4EFF. This still leaves us memory in the regions \$7000 to \$9FFF for various nefarious purposes that will be explained in a later article, and also leaves us with about 14K of BASIC memory, for any short driver programs that we might wish to put there. Thus, at the end of the day, we have the block from \$C000 to \$CFFF chock full of little routines for controlling one thing and another, the region from \$7000 to \$9FFF for a variety of machine code routines that will not be explained in this article, \$5000 to \$6FFF for the scrolling screen data, \$4000 to \$4FFF for the music, and finally \$0800 to \$3FFF for any BASIC routines, loaders, driver programs or whatever that you might see fit to put there. Or, summing up:

\$C000-\$CFFF : MACHINE CODE CONTROL ROUTINES
\$7000-\$9FFF : MACHINE CODE GAME ROUTINES (what a giveaway)
\$5000-\$6FFF : SCROLLING SCREEN DISPLAYS
\$4000-\$4FFF : MUSICAL DATA
\$0800-\$3FFF : BASIC AREA

That is how the 64 will be organised by the time we finish this interrupt extravaganza and have a complete (well, nearly complete) arcade game. The thing will not be a finished entity, something has to be left up to you after all, that little spark of originality, that certain je ne sais quoi that distinguishes the magical from the ordinary. I'll provide the routines, you do with them as you see fit. Having got the 64 sorted out, let's take a look at a music program now, and address ourselves to the problem of how to produce interrupt driven music anyway.

Interruptions, interruptions

You should all know by now that registers 788 and 789 (or \$0314 and \$0315) control the flow of the hardware interrupt vector, and that by altering the content of those locations we can send the HIV off to wherever we want, as long as it gets back to its original starting place (\$EA31) in the end. Looking through the 4K block of memory starting at \$C000 I found a reasonable amount of space in which to store the music driver starting at \$CED0. Thus we have to alter the content of locations 788 and 789 to point to that location, and this is achieved by POKE 788,208:POKE789,206. However, doing this from BASIC is always a bit of a tricky johnnie, and so the machine code routine has a little bit of code in it which does the job for us.

Now one voice playing on its own doesn't sound particularly melodious, and so I decided to have two voices playing something vaguely musical, leaving another one free to produce any noises that might be required by the game itself. This latter will be voice one, and so voices two and three produce the soundtrack. They can also be used to produce bizarre noises if necessary, since the interrupt routine sorts out which note they are supposed to be playing next and adjusts accordingly if they are used to make some other kind of racket. Voice control.

Rather than having both voices playing the same thing all the time, however interesting that might be if you mess about with ring modulation and synchronisation, I opted for voice two playing the main melody while voice three plays a simple background riff, a repetitive boogie sort of thing. A simple tune, I speak as one who has been quoted as having the musical ear of a Van Gogh. Consequently the data for the two tunes is stored in different places in memory, and voice three lives from \$4E000 to

\$4EFF while voice two lives from \$4000 to \$4DFF.

In theory only, however. In practise it worked out better if I didn't use up the maximum amount of space for each voice but kept a little away from it. The reason for this is simple. Voice three is playing a repetitive riff, a simple boogie thing, that repeats itself every 48 notes. It could be longer, it could repeat itself every 96 notes if you wanted, or 107 if you wanted to be perverse, but I settled on 48. Don't forget that it takes two bytes to store the data for each note to be played (low value-high value, consult those manuals), and so the amount of memory space available to us has to be divided by two in order to find out how any notes we can store. Leave two bytes free at the end of things to tell the routine that the tune has stopped and it can go back to the beginning again.

Since voice three is playing these 48 notes over and over again, it makes sense to have the main tune geared to a 48 note rhythm, otherwise everything begins to sound horribly wrong when the tunes start repeating again. Consequently, a 48 note riff should give rise to a main tune that has a multiple of 48 notes in it, 480, 940, 1536, or whatever. The 48 note tune is broken down as follows:

16 notes with C as the base note.
8 notes with F as the base note.
8 notes with C again.
8 notes with G as the base note.
8 notes with F again.
Back to the start.

So, with this sort of background riff going on it sounds a lot better if the main tune not only contains a multiple of 48 notes, but also bases itself around the sequence, C, F, C, G, F and back to C again. It sounds better.

All we need now is a routine that says a) where do I get the data for the next note from and b) where do I store it. The following is the one.

SEE DIAGRAM 'A' ON PAGE 120

Not very long, and all in one block. If you've got a disassembler you can have a look through it if you want, nothing very startling or earth shattering in the way of new ground being broken, but don't knock it: it works.

Now we need some music, and the data for this is longer than the data for the routine itself. This is because I've used the main riff of 48 notes as discussed earlier for voice three, and just to show that a large number of notes can be played before it starts repeating itself voice two has a 144 note sequence

MICRO MEDIA Computer Supplies Ltd. Dept CCI

0707 52698 or 0707 50913 Freepost, Rydal Mount, Baker Street Potters Bar, Herts EN6 3BR (NO STAMP REQUIRED)

SUMMER SALE

Special Offer Prices valid until Sept 10th 1987

5 1/4 Micro Media Brand Discs

	10	20	30	50	100
SS/DD	6.99	13.10	18.70	29.50	55.80
DS/40T	8.50	16.00	22.75	35.90	67.60
DS/80T	9.99	18.70	26.35	41.05	76.35
DS/HD for PCAT	24.15	46.25	66.25	105.25	200.10

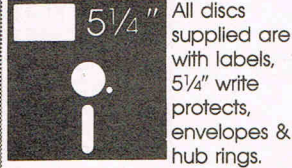
5 1/4 Reversible discs (Flippy's)

Have two write protect notches & index holes. Suitable for single sided drives.

	10.25	19.55	27.15	42.25	78.45
--	-------	-------	-------	-------	-------

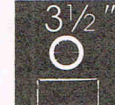
3 1/2 Micro Media Brand

SS/DD	19.99	38.40	55.50	87.25	163.90
DS/DD	21.99	42.55	61.60	96.90	182.30



Discs purchased direct from one major manufacturer. 100% certified error free - lifetime guarantee.

PRICES INCLUDE V.A.T.



5 1/4 Rainbow Discs come in five colours

	20	50	100	250	500
SS/DD	13.20	30.75	57.10	134.50	252.45
DS/40T	14.35	33.10	60.70	141.45	262.20
DS/80T	15.20	35.20	64.85	148.75	276.00

5 1/4 Unbranded Discs

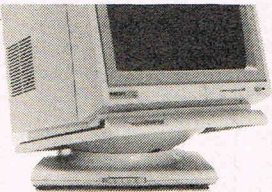
SS/DD	9.65	22.45	41.40	97.10	181.13
DS/40T	10.95	25.00	45.55	105.25	193.20
DS/80T	11.85	26.73	49.55	116.45	216.20

3 1/2 Unbranded Discs

	10	30	50	100	150
SS/DD	14.95	42.95	61.50	111.65	164.50
DS/DD	16.70	48.30	78.20	147.20	212.20

SUMMER SALE · SUMMER SALE · SUMMER SALE · SUMMER SALE · SUMMER SALE

Monitor Swivel Bases



Pan tilt revolves around 360 degrees 12.5 degrees tiltable up and down Adjustable by front mechanism.

55 x 280 x 260mm		55 x 355 x 320mm	
for 12" Monitors		for 14" Monitors	
1	13.25	1	16.70
3+	12.60 ea	3+	15.90 ea
6+	11.95 ea	6+	15.05 ea

Adjustable Copy Holder

A4 adjustable desk clamping. Magnifying cursor line.

Paper thickness adjustment. Paper height adjustable clip.

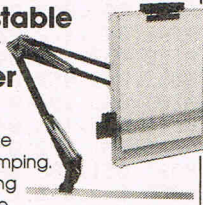
A4 Version 24.00

Desk Top Version 13.69

Holds up to 300g

A3 Version 42.45

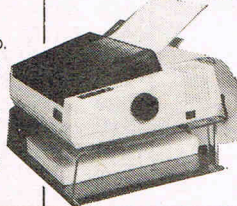
Holds up to 1400g



Printer Stand 5mm perspex

80 Column Version 400 x 310 x 100mm 22.80

132 Column Version 600 x 310 x 100mm 28.60

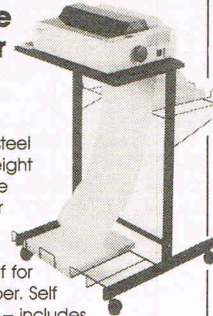


Mobile Printer Stand

Rugged steel frame. Height adjustable basket for output paper & base shelf for input paper. Self assembly - includes castors.

80 column £50.00

132 column £65.00



The Space Saver

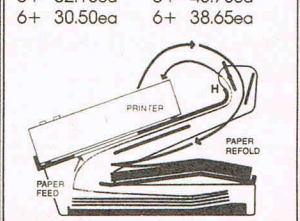
Paper feed and refold positioned one above the other. Dial controlled paper feed with adjustable deflectors ensures smooth flow and automatic refolding.

80 column 132 column
414x380x460mm 530x380x460mm

1 34.40 1 43.00

3+ 32.10ea 3+ 40.70ea

6+ 30.50ea 6+ 38.65ea



Printer Ribbons

	3	6	12
Brother HR15 MS	10.70	20.70	39.35
Fabric	11.05	21.40	40.70
Canon PW1156/1080	7.95	15.20	28.30
Centronics GLP	8.10	15.50	28.95
Colours	12.30	24.60	49.20
Commodore 1516/1526/4023			
Commodore 2022/4022	7.25	13.80	25.55
Commodore MPS 802	10.70	20.70	39.35
Commodore MPS 801	11.75	22.75	43.45
Colours	14.40	28.80	57.60
Vic 1515/1525	7.40	14.15	26.20
MPS 803	8.10	15.50	28.95
Colours	12.30	24.60	49.20
DPS1101 MS	7.25	13.80	25.55
Epson FX/MX/RX 80/85	7.25	13.80	25.55
Colours	13.20	26.40	52.80
LX/GX 80	6.90	13.10	24.15
Colours	12.60	25.20	50.40
MX/FX 105	8.80	16.90	31.75
Juki 6100 MS	7.25	13.80	25.55
Kaga KP810/910	7.95	15.20	28.30
Colours	13.20	26.40	52.80
M/Tally MT80 MS	10.70	20.70	39.35
NEC PC8023	11.75	22.75	43.45
Colours	15.30	30.60	61.20
Panasonic KXP110/1080	10.70	20.70	39.35
Colours	19.35	38.70	77.40
Shinwa CP80 MS	10.70	20.70	39.35

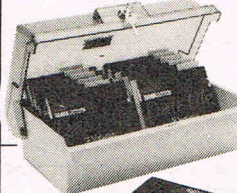
Colours available - Red/Brown/Blue/Green & Yellow

If the ribbon you require is not listed please let us quote

The above is a small selection of the 250 different ribbons we stock. We shall be pleased to find your ribbon, however old or obscure.

MD 120

1 12.55 5 1/4" x 120
3+ 11.90 each
6+ 11.35 each



MD 50

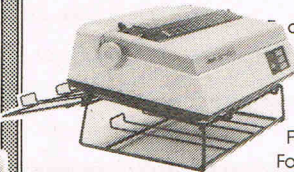
5 1/4" x 50
1 7.80
3+ 7.40 each
6+ 7.10 each



Wire Printer Stand

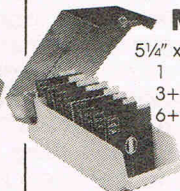
stacks print-out in document tray automatically. Suitable for most standard printers. Made of safety coated steel wire.

For 80 column £14.80
For 132 column £16.60



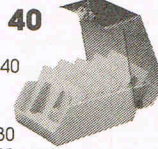
MD 100

5 1/4" x 100
1 10.80
3+ 10.30 each
6+ 9.80 each



MM 40

3 1/2" x 40
1 8.30
3+ 7.90 each
6+ 7.50 each



MM 80

3 1/2" x 80
1 10.95
3+ 10.40 each
6+ 9.90 each



Computer Labels

Continuous fanfold, sprocket fed
Price per 1,000 3,000

70 x 36	4.80	13.20
89 x 36	4.90	13.50
89 x 49	6.80	18.30
102 x 36	5.20	14.40

Please state no. of labels across the sheet (1, 2 or 3)

Computer paper

Plain fanfold, micro perf edges

Size	Weight 1000s gm	per box	Price per box 1 box 3 box +
11x9 1/2	60	2	16.50 46.80
	80	2	20.40 56.10
Exact A4			
11 1/2 x 9 1/4	70	2	27.60 73.50
	90	1	17.40 43.80

A4 Fixed tractor paper available

ALL PRICES INCLUSIVE OF POSTAGE & PACKING AND V.A.T.

MICRO MEDIA

Computer Supplies

Freepost, Rydal Mount, Baker Street, Potters Bar, Herts. EN6 3BR



Access & Visa



Out of Office Hours
0707 52698

Orders despatched 24 hrs.
Please allow 5 days for delivery.
For next day delivery, please ring for details. Postage covers U.K. only.

A Catalogue is available with a more comprehensive range of products including - 3M & Verbatim discs - a wider choice of paper labels, ribbons and accessories.

Ring or write to obtain your copy now!

Educational and HMG orders accepted. For official orders/invoice/credit orders there is a minimum order value of £15.00 excluding V.A.T. Any order under £15.00 will be subject to £3.00 handling charge.

Personal callers welcome
Weekdays 8.30am - 5.30pm
Saturdays 10.00am - 4.00pm


```

100 B=0
102 FORI=52944T053198
104 READA
106 POKEI,A
108 B=B+A
110 NEXTI
112 IFB<>37695THENPRINT"DATA INCORRECT-CHECK
    CAREFULLY":END
114 PRINT"DATA ENTERED CORRECTLY.":END
200 DATA174,207,206,232,142,207,206,224,012,240
210 DATA004,076,049,234,234,162,000,142,207,206
220 DATA174,206,206,234,234,142,206,206,234,234
230 DATA234,076,128,207,234,234,234,234,234,234
240 DATA234,234,234,234,234,234,234,234,174,174
250 DATA207,172,175,207,169,000,141,011,212,169
260 DATA033,141,011,212,185,096,207,141,035,207
270 DATA141,046,207,185,097,207,141,036,207,141
280 DATA047,207,189,240,064,201,255,240,023,141
290 DATA007,212,232,189,240,064,202,141,008,212
300 DATA232,232,234,240,240,019,142,174,207,076
310 DATA049,234,162,000,142,174,207,142,175,207
320 DATA076,000,207,234,234,172,175,207,200,200
330 DATA140,175,207,162,000,142,174,207,076,049
340 DATA234,000,255,000,000,064,240,064,224,065
350 DATA208,066,192,067,176,068,160,069,144,070
360 DATA128,071,112,072,096,073,080,074,064,075
370 DATA048,076,032,077,255,255,169,000,141,018
380 DATA212,169,033,141,018,212,174,206,206,189
390 DATA000,078,201,255,240,012,141,014,212,189
400 DATA001,078,141,015,212,076,176,207,162,000
410 DATA142,206,206,076,128,207,000,232,232,142
420 DATA206,206,136,002,232,232,142,206,206,076
430 DATA000,207,169,208,141,020,003,169,206,141
440 DATA021,003,169,000,141,174,207,141,175,207
450 DATA141,206,206,096,000
    
```

READY.

BABY DRIVER

```

10 V=54272:POKEV+24,15
20 POKEV+12,11:POKEV+13,33:POKEV+19,11:POKEV+20,33
30 SYS53176
    
```

READY.

```

10 B=0:FORI=19968T020065:READA:B=B+A:POKEI,A:NEXT
12 IFB<>6215THENPRINT"TUNE ENTERED INCORRECTLY:
    CHECK DATA CAREFULLY.":END
14 PRINT"TUNE 1 ENTERED CORRECTLY:CHECKING TUNE 2"
16 B=0:FORI=16384T016673:READA:B=B+A:POKEI,A:NEXT
18 IFB<>26302THENPRINT"TUNE ENTERED INCORRECTLY:
    CHECK DATA CAREFULLY.":END
20 PRINT"ALL PRESENT AND CORRECT : WELL DONE."
200 DATA073,004,102,005,108,006,053,007,146,008
210 DATA053,007,108,006,102,005,073,004,102,005
220 DATA108,006,053,007,146,008,053,007,108,006
230 DATA102,005,108,006,053,007,146,008,159,009
240 DATA113,011,159,009,146,008,053,007,073,004
250 DATA102,005,108,006,053,007,146,008,053,007
260 DATA108,006,102,005,108,006,023,008,159,009
270 DATA205,010,216,012,205,010,159,009,023,008
280 DATA185,005,053,007,146,008,159,009,113,011
290 DATA159,009,146,008,053,007,255,255
300 DATA075,034,149,068,149,068,188,064,172,057
310 DATA097,051,075,034,172,057,097,051,198,045
320 DATA052,043,177,025,198,045,052,043,126,038
330 DATA075,034,198,045,172,057,198,045,172,057
340 DATA198,045,172,057,198,045,172,057,075,034
350 DATA052,043,075,034,052,043,075,034,052,043
360 DATA075,034,052,043,097,051,188,064,097,051
370 DATA188,064,097,051,188,064,097,051,188,064
380 DATA198,045,172,057,198,045,172,057,198,045
390 DATA172,057,198,045,172,057,126,038,126,038
400 DATA052,043,052,043,075,034,126,038,126,038
410 DATA198,045,198,045,097,051,097,051,052,043
420 DATA198,045,198,045,126,038,126,038,097,051
430 DATA097,051,172,057,172,057,198,045,097,051
440 DATA097,051,188,064,126,038,126,038,052,043
450 DATA052,043,075,034,126,038,126,038,198,045
460 DATA172,057,172,057,188,064,188,064,097,051
470 DATA172,057,172,057,149,068,097,051,097,051
480 DATA172,057,172,057,198,045,097,051,097,051
490 DATA188,064,126,038,126,038,052,043,052,043
500 DATA075,034,075,034,037,017,037,017,177,025
510 DATA177,025,227,022,227,022,154,021,154,021
520 DATA063,019,063,019,097,051,097,051,172,057
530 DATA172,057,198,045,198,045,227,022,075,034
540 DATA126,038,126,038,052,043,052,043,075,034
550 DATA075,034,037,017,177,025,172,057,172,057
560 DATA188,064,188,064,097,051,097,051,177,025
570 DATA126,038,097,051,097,051,172,057,172,057
580 DATA198,045,198,045,227,022,075,034,255,255
    
```

READY.

B

to get through. It could have been longer of course (the demo program for the rapidly-becoming-famous John Ryan, who started all this off in the first place, contained 1728 notes), but somehow I couldn't see you typing in thousands and thousands of bytes of data.

SEE DIAGRAM 'B' ABOVE

Two blocks of data this time, one for each voice of course, and as you will see one is considerably longer than the other. Note (sorry) the values 255 stored at the end of each block. These tell the routine to stop looking for any more notes and go back to the start of the tune again. Vital, otherwise all sorts of discordant happenings will begin.

Finally we need a short BASIC driver that sets up a few parameters and gets the whole thing rolling.

SEE DIAGRAM 'C' ABOVE

On a short program, to set the volume to maximum and also set the ADSR settings for voices two and three. Could

have been done quite easily in machine code of course, but if you're not a machine code person you might as well have something to type in that makes a bit of sense. The SYS53176 by the way is the call to the routine to alter the content of memory locations 788 and 789.

So, to get the whole thing working, enter and save the three programs before doing anything else. Load and Run the 'Music Interrupt Loader' program first, followed by the 'Tune' one, then finish off with the 'Baby Driver' one. Provided that you've got the volume turned up on your TV set you'll be able to hear what's going on.

Fiddling

As I've said before the great virtue of BASIC loaders is that they can be used without really knowing how the program operates. For this particular program all you need to do are store the musical note in the appropriate place in memory as the 'Music Interrupt Loader' program does, in the traditional low value-high

value for each note (found in the manual accompanying the 64, one of the few useful things in it), and remember to stick to multiples of however many notes the repetitive riff might contain, before putting two 255s at the end to round it all off.

Now then, you might wish to alter the speed in which everything is played. POKE 52952,SP does this, with SP currently set to 12. You might not like the wavelengths I've chosen for voices two and three. POKE 53004,W2 and POKE 53126,W3 respectively to alter those.

And that's about it. We're nearly at the end of this foray into interruptions. All that remains ('all', he says) is to round everything up and provide one or two routines that could be used in a finished arcade game. Not quite finished, of course, but nearly. Close enough for you to polish the rest off yourself, anyway. For those, however, John D. Ryan and the rest of the world can wait until the next article. Bye for now.

TOTAL BACK-UP POWER COM 64/128

PERIPHERALS..THE FINAL FRONTIER..OUR MISSION..TO BOLDLY GO WHERE NO OTHER UTILITIES HAVE GONE BEFORE

CAPTAIN'S LOG...THE TOTAL SOLUTION TO ALL YOUR BACK-UP NEEDS... THE ULTIMATE BACK-UP CARTRIDGE HERE NOW !!

REPORT ON FINDINGS

Action Replay Mk III is more powerful, more friendly and will back up more programs than any competing utility by taking a 'Snapshot' of the program in memory so it doesn't matter how it was loaded... from disk or tape, at normal or turbo speeds... the results are the same - Perfect!! Amazing!!!

STARBASE UPDATE

- Simple to use: just press the button and make a complete backup: Tape to Tape, Tape to Disk, Disk to Disk, Disk to Tape. - THE PROCESS IS AUTOMATIC - JUST GIVE THE BACKUP A NAME.
- All backups will reload at turbo speed independently of the cartridge.
- Dual speed tape turbo system. Programs can load up to 3 times faster than commercial turbos - that's over 10 times normal Commodore speed.

- Freeze the action then view the program with the monitor feature. Add pokes for infinite lives etc. Then restart the game or backup - ideal for customised versions of your games.
- Picture Save. Save any multi-colour. Hires screen to disk or tape. Compatible with Blazing Paddles, Koala, Slideshow etc.
- Fully compatible with 1541, 1541C, 1570, 1571, and ehancer or any CBM compatible data recorder.
- For C64, 64C, 128, 128D (in 64 mode).
- Unique Sprite Monitor. Freeze the Action and view all the Sprites, watch the animations scroll across the screen! Save Sprites to disk or tape. Customise your games by loading sprites from one game to another - then restart the program or make a backup.

- Compatible with fast DOS and Turbo ROM systems.
- Backup process in turbo speed - faster than any rivals.
- Special compacting techniques. Each program is saved as a single file.
- Transfers multistage tape programs to disk - more than any other cartridge - even the extra stages are turbo load - a unique feature.
- Sprite Killer! make yourself indestructible by disabling Sprite collisions in games.
- Fast disk format (20 secs).
- Built-in unstoppable reset button.

ONLY £29.99 POST FREE

ACTION REPLAY MK III

PLUS Built In FASTLOADER

Action Replay III even has a built in disk fast loader which speeds up loading 5 times. Uses no memory - invisible to the system. You could pay £20 alone for this feature.

WARP 25 BREAKS THROUGH THE 10 SECOND BARRIER!

Action Replay III now comes with an amazing new

Disk Bootloader that will reload your backups at TWENTY FIVE

TIMES normal speed. The fastest disk turbo yet devised!! There are NO

CATCHES! WARP 25 works with ALL your games. Works with any disk drive. No

preload required - No hardware modifications necessary - No user knowledge required -

programs load INDEPENDENTLY. LOADING TIME - 9.8 SECONDS (for a typical game saved by

WARP 25 in conjunction with ACTION REPLAY III). This time is for the COMPLETE load process from start to

finish. Reload is entirely INDEPENDENT of the cartridge or any other hardware.

Compare these (accurate!) figures for some rival backup systems:

SYSTEM	LOAD TIME	PROGRAMS PER DISK	CARTRIDGE REQUIRED?
ACTION REPLAY MK III SAVED WITH NORMAL TURBO	25 SECS	THREE	NO
ACTION REPLAY MK III SAVED WITH WARP 25	9.8 SECS	THREE	NO
FREEZE FRAME (MK IV)	40 SECS	TWO OR THREE	NO
FREEZE FRAME (LAZER)	25 SECS	TWO	YES
EXPERT SYSTEM	30 SECS	THREE	NO

All purchasers of Action Replay III will receive WARP 25 FREE with their cartridge. Existing Action Replay III owners can obtain WARP 25 Disk turbo by sending £2.50. post free. (No need to send your cartridge). OR obtain it FREE on the Enhancement Disk (£7.95).

THE ACTION REPLAY ENHANCEMENT DISK

The best collection of tape to disk transfer routines for nonstandard multiload programs (eg Dragons Lair I and II, Championship Wrestling, Summer Games, Ace of Aces, Gauntlet, Supercycle, Marble Madness, World Games). 31 titles in all. Uses our unique parameter system. No user knowledge required. Turbo load throughout. NOTE: Standard cartridge transfers normal multiloaders eg Winter Games etc. etc. Disk includes file copy and disk backup utilities. PRICE £7.95 with FREE! Multicolour Slideshow for display of loading screens, hires pictures etc. saved by Action Replay. Great entertainment!

PERFORMANCE GUARANTEE

100% Success? Rival Claims? Who's Kidding Who? Action Replay Mk III will backup any program which any other cartridge can backup - and more! It also has an unmatched range of features. Consider 'Freeze-Frame' for example, which uses more disk space, saves at slower speed, has slower tape loader, has no built in disk fastloader, no picture, Sprite or restart features and costs £10 more than Action Replay. So who's kidding who? Buy Action Replay Mk III. If you find that it does not live up to our claims return it within 7 days of receipt and your money will be refunded.

USUALLY SAMEDAY DESPATCH ON ALL ORDERS.

datel electronics

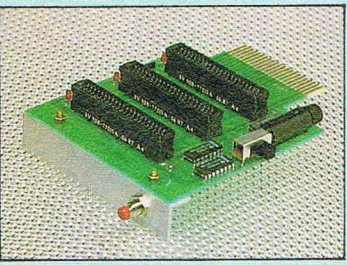
Send cheques/postal orders to:
DATEL ELECTRONICS,
UNIT 8/9 DEWSBURY ROAD,
FENTON INDUSTRIAL ESTATE, STOKE-ON-TRENT. TEL: 0782 273815
TELEX: 367257 TELSER G.

SEE OUR DOUBLE PAGE ADVERTISEMENT ELSEWHERE IN THIS MAGAZINE FOR OUR FULL RANGE OF COMMODORE ADD ONS. SEE US ON PRESTEL PAGE No 258880000A 12 PAGE CATALOGUE + ORDER PAGE.



CALL 24HR CREDIT CARD LINE
0782 273815

DATTEL ELECTRONICS



3 SLOT MOTHERBOARD

Save wear and tear on your Expansion Port

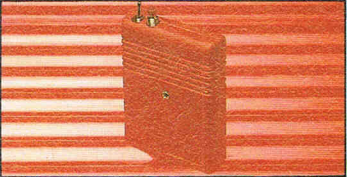
- Accepts 3 cartridges.
- Onboard safety fuse.
- Switch in/out any slot.
- High grade PCB.
- Fully buffered.
- Reset button.

ONLY £16.99

DATA RECORDER

- Quality Commodore compatible data recorder.
- Pause control.
- Suitable for 64/128.
- Counter.
- Send now for quick delivery.

ONLY £24.99



SMART CART™

Now you can have an 8K or 32K cartridge that you program like RAM then acts like ROM!

- 8K or 32K pseudo ROM.
- Battery backed to last up to 5 years (lithium battery).
- Simply load the program you require – then flick the switch. The cartridge can then be removed just like a ROM cartridge.
- Make your own cartridges including autostart types – without an EPROM burner.
- Can be switched on or off board via software.
- 1/0 slot open for special programming techniques.
- 32K version has 4 x 8K pages.
- Some knowledge of M/C is helpful – but full instruction are provided.

8K VERSION £14.99
32K VERSION £29.99

SMARTCART UTILITIES

A series of utility programs for use with Smartcart. Simply load in the program and you have a powerful cartridge. When you have a different requirement – load in another program and you have a new cartridge. The process takes seconds, and can be repeated any number of times. We intend to release a range of programs. The first available are:

DISKMATE II

all the features of Diskmate II (see ad). Loaded in seconds – with full instructions. **ONLY £9.99**



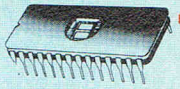
PRINTER IV

Now you can turn your MPS 801 into 4 printers in one!!

- Alternative character set ROM – fitted in seconds.
- All four sets have true descenders.
- 100% compatible with all software.
- Descender. Eclipse.
- Scribe. Future.
- Choose any set at the flick of a switch.

“For anyone who uses their printer often this chip is a must. It's quick and easy to use and the end results are impressive” – Your Commodore, Jan 87.

ONLY £19.99

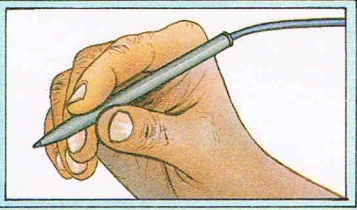
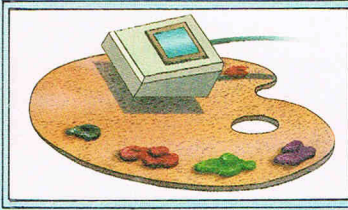


TURBO ROM II

Turbo Rom II is a replacement for the actual kernal inside your 64. It provides superfast load/save routines.

- Loads most programs at 5-6 times normal speed.
- Saves at 5-6 times normal.
- Improved DOS support including 10 sec format.
- Programmed function keys: load, directory, old, etc.
- Return to normal kernal at flick of a switch.
- FCOPY – 250 block file copier.
- FLOAD – special I/O loader.
- Plus lots more.
- Fitted in minutes – no soldering usually required. (On some 64's the old ROM may have to be desoldered).

ONLY £14.99



BLAZING PADDLES

A complete lightpen/graphics illustrator package.

- A fully icon/menu driven graphics package of a calibre which should cost much more.
- Complete with a fibre optical lightpen system for pin point accuracy.
- Multi feature software including:
 - Range of brushes ● Airbrush ● Rectangle ● Circle ● Rubberbanding ● Lines ● Freehand
 - Zoom mode ● Printer dump ● Load/save ● Advanced colour mixing – over 200 hues!!
 - Cut and paste allows shapes/windows/pictures to be saved to/from tape/disk.
- Blazing Paddles will also work with many other input devices including; Joysticks, Mice, Graphics Tablets, Trackball etc.
- Pictures can be saved from Action Replay and edited with Blazing Paddles.

Complete Blazing Paddles & Lightpen **ONLY £24.99**

Blazing Paddles available separately for **£12.99**



TOOLKIT IV

The ultimate disk toolkit for the 1540/1541



- A disk toolkit is an absolute must for the serious disk hacker. Toolkit IV has more features than most for less.
- DISK DOCTOR V2 – Read and write any track and sector including extra and renumbered tracks. Repair damaged sectors. Look underneath read errors.
- HEADER/GAP EDITOR – Decodes and displays ALL header information including off bytes and header gap. Rewrite the entire header and header gap. Renumber sectors. Also edit any sector tail gap.
- DISK LOOK – Sort directory. Recover lost files. Display file start/end addresses. Disassemble any file program directly from the disk to SCREEN or PRINTER including undocumented opcodes. Edit Bam. Much, much more.
- FILE COMPACTOR – Can compact machine programs by up to 50%. Saves disk space. Compacted programs run as normal.
- FAST DISK COPY – Copy an entire disk in 2 minutes or less using single 1541.
- FAST FILE COPY – Selective file copy. Works at up to 6 times normal speed.
- FORMATTER – 10 second format an entire disk or format any individual track or half track 0 to 41. Redefine any of 30 parameters to create or recreate unique disk formats.
- ERROR EDIT – Quickly find and recreate all read errors including extra and renumbered tracks or sectors and half tracks from 0 to 41. Even recreates data under errors and allows you to redefine any necessary parameters.

ONLY £9.99

RAM DISK

- Turn your Smart Cart into a 32K RAM/disk.
- 32K of instant storage area for files/programs.
- Load/save instantly.
- Disk type commands: load, save, directory, scratch.
- Program data retained when computer is switched off!
- Full command set with instructions.

ONLY £9.99



DIGITAL SOUND SAMPLER

- The new sampler allows you to record any sound digitally into memory and then replay it with astounding effects.
- Playback forwards/backwards with echo/reverb/ring modulation etc.
- Now with full sound editing module to produce outstanding effects.
- Full 8 bit D to A and ADC conversion.
- MIDI compatible with suitable interface. (I.e. Datel unit for £29.99, see ad).
- Live effects menu includes real time display of waveforms.
- Line in/mic in/line out/feedback controls.
- Powerful sequencer with editing features.
- Load/save sample.
- Up to 8 samples in memory at one time.
- Tape or disk (please state).
- Complete software/hardware package **£49.99**

Com-Drum software is available separately at **£9.99** to turn your Sampler II into a Com-Drum system as well as a sampling system.



COM-DRUM Digital Drum System

- Now you can turn your computer into a digital drum system. Hardware/software package.
- 8 digital drum sounds in memory at one time.
- Complete with 3 drum kits.
- Real drum sounds – not synthesised.
- Create superb drum rhythms with real and step time. Full editing. Menu driven.
- Output to hi-fi or through tv speaker.
- Load/save facilities.

ONLY £29.99 (state tape or disk)

COM-DRUM EDITOR

- 24 drum sounds supplied on disk to enable you to construct your own drum kit.
- Re-arrange sounds supplied with a Com-Drum to make new kits.
- With sound sampler hardware you can record your own kits. Load/save facilities.

ONLY £4.99 disk only

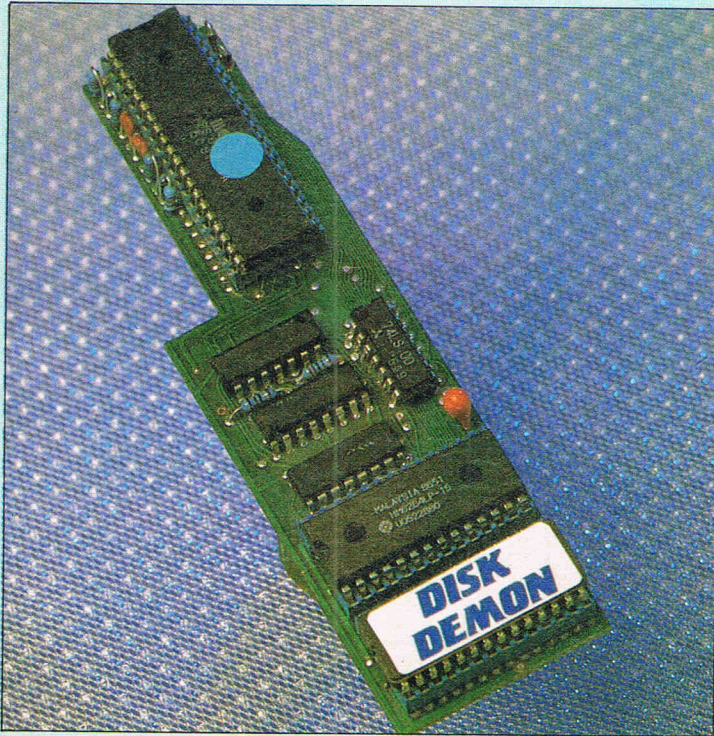
ROBOTEK 64 Model & Robot Control made easy

- Robotek 64 is a comprehensive hardware/software package which enables you to connect your 64/128 to the outside world.
- 4 output channels – each with onboard relay
- 4 input channels – each fully buffered TTL level sensing.
- Analogue input with full 8 bit conversion.
- Voice input for voice control.
- Software features: test mode/analogue measurement/voice activate/digital readout etc.

ONLY £39.99

including hardware/software/mic etc. (State tape or disk)

DATTEL ELECTRONICS



DISK DEMON £64.99 POST FREE

"The world's fastest parallel operating system"

- Loads a typical 20k block program file in under 3 seconds!
- 60x faster load (PRG files).
- 25x faster load (SEQ files).
- 20x faster save (PRG files).
- 20x faster save (SEQ files).

PLUS AN ADVANCED COMMAND STRUCTURE INCLUDING:

- Fast format - up to 40 tracks (749 blocks).
- 16 function keys: list, run, load, directory, format, save, old, verify, etc.
- Flood will fastload files up to 250 blocks (other similar systems will only cope with 20k blocks).
- Number conversion. Reset.
- Unique built in file copier will copy files up to 250 blocks like lightning - multiple copy options - perfect for copying Action Replay files.
- Highly compatible with commercial software - can be switched out for non compatible programs.
- Perfect for use with Action Replay 3 - a typical AR3 backup will reload in about 3 seconds - yes 3 seconds!
- Speeds up other DOS functions including verify, scratch etc.
- Screen on or off during loading.
- Enhanced command set - over 30 new commands.
- Easily fitted - Disk Demon plugs inside the 1541 and the new operating system chip plugs inside the C64/128. Fitting takes only minutes and usually requires no soldering.
- User port throughbus supplied free - you could pay £15.00 for this alone.
- Supplied complete - no more to buy.

FAST HACK'EM™



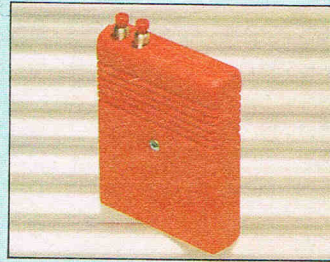
The Ultimate Disk Copier/Nibbler for C64/128

- MULTI-MODULE SYSTEM - ALL ON ONE DISK
- SINGLE 1541 MODULE
- AUTO NIBBLER: Copy an entire protected disk in 3 minutes. Automatically senses type of protection and treats it as normal data to produce working copy.
- NIBBLER: Copy an entire disk in 2 minutes. As above but parameters can be set manually.
- FAST COPY: Copy a disk in under 2 minutes.
- FILE COPY: Copy and file in 9 seconds.
- 1541 PARAMETERS MODULE
- FAT TRACKER: Fat tracks are amongst the latest forms of protection. This mode allows you to produce a fat track on the disk.
- SINGLE 1571 DRIVE (64 OR 128 MODE)
- FAST COPY: Entire 1571 disk in under 1 minute.
- SINGLE OR BOTH SIDES: Will copy C64 or true 128 software.
- C64 or 128 modes.

This is the module that gives Fast Hack'em its power. The parameters module contains dozens of "Parameter Keys" that are used to unlock those heavily protected programs. Each parameter is designed for a particular software brand or even a particular program. Other copy programs may make strong claims, but without special parameters they just can't cope. Datel will be offering updates to Fast Hack'em on a quarterly basis, featuring 20-50 new parameters plus other improvements as they're made. Prices to be 26 plus old disk.

- 1541 PARAMETERS MODULE
- AUTO NIBBLER: Copy an entire unprotected disk in under 1 minute. Features auto track/sector analyzer.
- FAST COPY: Copy entire disk in 36 seconds with verify.
- AUTOMATIC FASTCOPY: As above but with completely automatic operation. In fact once set up doesn't even need the computer. A must for duplicating disks on a large scale.

ONLY £19.99



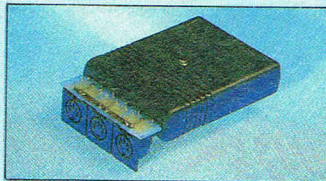
DISK MATE II

The Disk Utility Cartridge

- Disk fastload cartridge.
- Up to 5 times faster.
- Fast save. Fast format (10 secs).
- Improved DOS - single stroke commands - load/save/dir/old etc.
- Redefined function keys for fast operation of common commands.
- Powerful toolkit commands including: old/delete/merge/copy/append/autonum/linesave etc.
- Plus a full machine code monitor - too many features to list but it has them all!
- Special switching techniques make Diskmate invisible to the system. Therefore it is a more compatible fastloader than other types.
- Diskmate II is £14.99.

Special Offer!!

Diskmate II can be purchased on the same cartridge as Action Replay II for **ONLY £39.99**

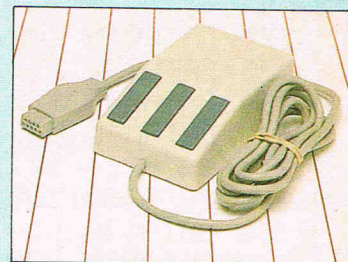


MIDI 64

A Full Midi Interface for the 64/128 at a realistic price

- MIDI in. MIDI thru. 2 x MIDI out.
- Compatible with most leading software packages including: Seil, JMS, Advanced Music System, Joreth, Steinburg etc.

ONLY £29.99



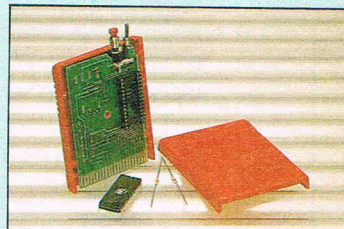
MOUSE

- CBM 64/128 mouse.
- Wide compatibility with software including: Blazing Paddles.
- Works by mimicking joystick so will work in any joystick application including graphic packages only designed for joystick.
- Functions on either joystick port.
- Optical system operation.

ONLY £24.99

CHIPS

- 27128 **£3.00 EACH**
- 27256 **£4.50 EACH**





CARTRIDGE DEVELOPMENT SYSTEM

- All the necessary parts to produce an 8K/16K auto-start cartridge.
- Top quality PCB. Injection moulded case.
- Reset switch. 16K EPROM.
- "Cartridge Handbook" gives full details and tips on building and configuring the cartridge for many uses.

ONLY £12.99
complete with handbook

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER

BY PHONE	BY POST	BY PRESTEL/FAX
  		
0782 273815 24 hr Credit Card Line	Send cheques/POs made payable to 'Datel Electronics'	Prestel Pages # 25880000A Fax Orders 0782 264610

DATTEL ELECTRONICS

UNITS 8/9, DEWSBURY ROAD, FENTON INDUSTRIAL ESTATE,
FENTON, STOKE-ON-TRENT

TEL: 0782 273815 TLX:

Hints and Tips

```
270 DATA015,208,245,224,000,208,067,234,234,234
280 DATA234,234,076,073,198,174,032,197,189,032
290 DATA093,172,034,197,153,012,004,200,192,015
300 DATA240,026,140,034,197,172,035,197,185,160
310 DATA204,141,057,198,185,161,204,141,058,198
320 DATA200,200,140,035,197,076,053,198,160,000
330 DATA140,034,197,140,035,197,076,240,197,000
340 DATA255,000,255,000,142,037,197,140,038,197
350 DATA162,002,160,240,200,192,255,208,251,202
360 DATA224,255,208,244,174,037,197,172,038,197
370 DATA076,002,198,255
400 DATA174,032,197,224,255,208,001,096,162,214
410 DATA142,032,197,234,234,234,174,032,197,202
420 DATA142,032,197,224,255,208,021,096,000,255
430 DATA000,255,000,255,000,255,000,255,000,255
440 DATA000,255,000,255,000,255,000,255,162,000
450 DATA189,162,203,141,031,199,189,163,203,141
460 DATA032,199,189,160,203,141,034,199,189,161
470 DATA203,141,035,199,232,232,160,000,185,204
480 DATA007,153,164,007,200,192,015,208,245,224
490 DATA048,208,067,174,032,197,172,034,197,185
500 DATA160,204,141,064,199,185,161,204,141,065
510 DATA199,189,032,093,172,035,197,153,204,007
520 DATA200,140,035,197,192,015,240,011,172,034
530 DATA197,200,200,140,034,197,076,048,199,160
540 DATA000,140,034,197,140,035,197,076,224,198
550 DATA255,000,255,000,255,000,255,000,255,000
560 DATA142,037,197,140,038,197,162,002,160,240
570 DATA200,192,255,208,251,202,224,255,208,244
580 DATA174,037,197,172,038,197,076,002,199,255
600 DATA012,004,052,004,092,004,132,004,172,004
610 DATA212,004,252,004,036,005,076,005,116,005
620 DATA156,005,196,005,236,005,020,006,060,006
630 DATA100,006,140,006,180,006,220,006,004,007
640 DATA044,007,084,007,124,007,164,007,204,007
650 DATA204,007,000,255,000,255
700 DATA000,080,240,080,224,081,208,082,192,083
710 DATA176,084,160,085,144,086,128,087,112,088
720 DATA096,089,080,090,064,091,048,092,032,093
730 DATA000,255
```

READY.

DRAWING UP

```
1 PRINT"[CLR]";
2 STOP
4 FORI=0TO24
5 FORJ=0TO14
6 A=PEEK(1024+I*40+J)
7 POKE20719+J*240-I-K*25,A
8 NEXTJ,I
9 K=K+1:GOTO1
```

READY.

CONVERTING SCREENS

```
10 REM CONVERTER
20 FORI=0TO14
30 FORJ=0TO239
40 A=PEEK(24576+J+I*240)
50 POKE (20480+J+I*240),A
60 NEXT J,I
```

READY.

SUPER-G

Supra Corporation

It can be very distressing watching the owner of a Commodore printer ripping his hair out and muttering the unprintable every time someone mentions that the letters he has just printed out using his £99.00 wordprocessor look odd! Why do they look so strange? The answer lies in the construction of the individual characters. They don't have true descenders. In other words the lower portions of the letters like q, y, p, g, j, that normally fall below the writing line... DON'T. The problems don't finish there. Commodore printers tend to be slow, have few of the features found on the more popular printers and their print quality often leaves a lot to be desired. So what's the answer? Don't buy a Commodore printer! With the price of printers coming down on an almost weekly basis it is possible to pick up an NLQ (Near Letter Quality) printer with every feature imaginable from as little as £150.00. There is, however, a snag. Most printers use the Centronics type interface with which to attach to computers and as we all know Com-

modore computer are somewhat lacking in the Centronics area. This is where SUPER-G fits in (I did wonder? Ed). It is a parallel printer interface that will enable a Centronics compatible printer to work with a lead coming out of each end. One lead plugs into the Serial port on the computer and one into the printer. There is also a single red wire with a small connector which fits into the cassette port. The cassette port can still be used as the connector incorporates a passthru facility. There is a small recess on one side continuing a bank of eight dip switches. These are used to setup the interface for whatever type of printer you are using.

Split personality

Once set up, the SUPER-G will convince your printer that it is a Commodore 1525. This means that it will work with any software that makes use of a printer including screen dumps etc. but the print quality will be that of the better printer. Another area where it helps

improve output is when it comes to printing listings. SUPER-G does this by substituting those curious graphic symbols you've all grown to hate with letters within braces, i.e. The SHIFT + CLEAR/HOME combination will be printed as (CLR) and not a reversed heart. The code for Light blue will no longer appear as a reversed diamond but as (LBLU). Simple eh? All the normal graphics remain unchanged. If the software package you are using is able to access your particular printer's special features then it is possible to turn off the 1525 emulation mode by means of one of the dip switches or via a simple software command. In fact all the dip switches can be over ridden from within software control.

Cure for baldness

So as you can see it's no longer a case of 'Commodore computer + Commodore printer = baldness + overflowing swear box' but 'Commodore computer + any printer + SUPER-G = heaven!'

I.B.



ICPUG is a highly influential organisation and brings many benefits to its members across the whole range of Commodore activity. CCI considered that a regular column from ICPUG would be of interest to many readers. The views expressed by ICPUG may not be those of CCI

Memory Manipulation by Logical Operators

— Joe Bowman

The logical operators "AND" and "OR", when used for Bit Masking and Manipulation, are probably the least understood aspects of programming but potentially the most useful. If you wish to inspect or change a particular memory location,

you can, of course, use PEEK or POKE. However, how would you test the setting of bit 0 or set bit 7 without changing the settings of any of the other bits? This problem arises because PEEK and POKE operate on the complete 8 bits of a byte and there are no BASIC commands to inspect or set single bits. This is where the logical operators can be used for Bit Masking or Manipulation. To do this it is first necessary to understand the result of ANDing or ORing two bits (Binary Digits):

$$\begin{array}{r} \text{AND} \quad \begin{array}{cccc} 1 & 1 & 0 & 0 \\ 1 & 0 & 1 & 0 \end{array} \\ = \quad \begin{array}{cccc} 1 & 0 & 0 & 0 \end{array} \end{array}$$

It can be seen from the above examples that by using AND to combine two binary numbers the only time a 1 is produced in the answer is where there was a 1 in the same position in both the original numbers.

Therefore:

$$\begin{array}{r} \text{AND} \quad \begin{array}{cccc} 1 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{array} \\ = \quad \begin{array}{cccc} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{array} \end{array}$$

It can be seen that if bit 7 was a 1, ANDing the number with binary 1000000 results in a number greater than 0 and if bit 7 was 0 then the result is 0. This can be used in BASIC to test for the value of bit 7 as follows:

```
10 A = PEEK(0)
20 B = A AND 128
30 IF B > 0 THEN PRINT "Bit 7 was set at 1"
40 IF B = 0 THEN PRINT "Bit 7 was set at 0"
```

To test for other bits, alter line 20 accordingly; eg for bit 1 change the 128 to a 1.

To set one bit without affecting the others you use the OR command:

$$\begin{array}{r} \text{OR} \quad \begin{array}{cccc} 1 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \end{array} \\ \hline 1 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \end{array}$$

The BASIC program to set bit 0 to a 1 is:

```
10 POKE(0), (PEEK(0) OR 1)
To set bit 7 to a 1:
10 POKE (0), (PEEK(0) OR 128)
```

If you want to clear bit 1 to a 0, you need to AND all the other bits with 1:

$$\begin{array}{r} \text{AND} \quad \begin{array}{cccc} 1 & 0 & 1 & 1 & 1 & 0 & 0 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 0 \end{array} \\ \hline 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 \end{array}$$

In BASIC:

```
10 POKE(0), (PEEK(0) AND 254)
```

You can, of course, use these routines to inspect or alter any bit of any location just by changing the locations and/or values used. You can therefore wield a fine scalpel instead of the bludgeoning of PEEK and POKE.

SPECTRUM AMSTRAD COMMODORE

NOBLES COMPUTER REPAIRS

* Repairs carried out by our own engineers on site.
* All repairs carry a 4 MONTH GUARANTEE

For estimates phone or send your computer to Derek at NOBLES.
Commodore 64..... From £18.95 plus parts P&P

TV repairs from £22.50 plus parts
Also repair specialists for Amstrad, Commodore 64/Vic 20, BBC and MSX computers

NO HIDDEN CHARGES

★ SPECIAL OFFER ★

2 FREE GAMES WORTH £12

with each Commodore repair Trade/School and Club discounts arranged.

* For free, no obligation estimates phone or send your computer to NOBLES for the fastest, cheapest repairs in ESSEX and Nationwide!

FULL RANGE OF SPECTRUM GAMES eg Z games £1.99
PLEASE PHONE FOR ORDER DETAILS

NOBLES Main repairs for Amstrad in the UK

14-17 Eastern Esplanade
Southend-on-Sea
Essex

0702 63377/8 633367/8/9

7 days a week, 24-hour Answering Service

SPECTRUM AMSTRAD COMMODORE

I.C.P.U.G

the Independent
Commodore Products Users Group
is the largest and most friendly
computer club in the country

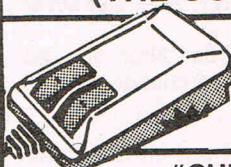
- Many local groups with regular meetings
- Superb FREE Newsletter - 80 plus pages of reviews, news & information every two months
- We support all Commodore Machines old and new: PET, VIC20, 64, 16,+4, PC, 128 & AMIGA
- Free Software Library of public domain programs for all machines. Members only send blank disk/tape and return p/p
- Over 100 disks of Amiga public domain software available free to members
- Help and Advice
- Discount scheme
- Subscription only £10 per year (UK) plus £1 joining fee

If you are seriously interested in using or programming any Commodore computer, then joining ICPUG is a must!
For full details, send a stamped, addressed envelope to:

ICPUG Membership Secretary, Jack B. Cohen,
30, Brancaster Road, Newbury Park,
Ilford, Essex, IG2 7EP
01 590 8849 Day 01 346 0050 Ev. & W'ends

NEOS MOUSE + SOFTWARE

★ (THE COMMODORE MOUSE) ★




NEOS MOUSE WITH "CHEESE" CASSETTE AND "CHEESE" ON DISC = £34.90

Soon available GEOS compatible Mouse. Watch press for details.

Wigmore disk version includes genuine save & load to disk.

"CHEESE" on disc - £8.50
(including save and load of pictures with fast and slow load.)



ARTIST 64 MOUSE or JOYSTICK

This is the most sophisticated, powerful and advanced art or graphics package available on a CBM 64 or 128.

"Artist 64 is an excellent graphics package and we were extremely impressed with its range of capabilities. It is in fact probably the most versatile graphics program that we have seen".

Your Commodore takes over where cheese leaves off. Although friendly and fun - can be used professionally with over 250,000 combinations of commands.

★GIVE YOUR 64/128 - AMIGA TYPE GRAPHICS★

Full colour working. Full screen working. Zoom and Pan. Create any brush fill, pattern or icon. Variable Text. Commodore and Epson printdumps. Add other print routines. Innovative colour commands."Over and Under" - (colours weave over and under each other) "Colour Cycling" "Duplicate objects without certain colours."

P.C.W. "Artist 64 is a compulsory purchase" Tape or Disc = £29.90

DESK TOP! Mouse or Joystick or K Board

Fascinating Range of utilities handy facilities. 100 year calendar. Diary. Clock. Calculator. Disc Utilities. Name/Addr. Directory.

ONLY £18.50 Cassette and Disc

WIGMORE HOUSE LIMITED
32 Saville Row London W1X 1AG 01-734 8826

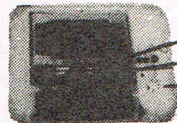
ACCESS CHEQUES P.O. CASH ORDERS P & P - UK £1.50 Overseas £3.00

Dealer, Export and Educational Enquiries Welcome

"LOAD-IT" "LOAD-IT"

ATTENTION DATA-RECORDER OWNERS

THE DISEASE - Tape Loading Problems
THE CURE - Our Exclusive Data-recorder Modification Package



- PERMANENT HEAD ALIGNMENT ADJUSTING KNOB
- CALIBRATED SCALE
- INTERNAL SPEAKER FITTED

CBM RECORDER

- ★ Programs fail to load if the head does not read the tape correctly.
- ★ By simply adjusting the head slightly all programs will load!
- ★ Loading problems are caused by variations in alignment of data on tape.

"LOAD-IT" GIVES YOU:

- ★ Audible loading through internally fitted speaker.
- ★ Head alignment easily adjusted to clearest data signal.
- ★ Calibrated scale for keeping a record of loading positions.
- ★ Achieves 100% success even on poorly recorded programs.
- ★ Guaranteed for life of data-recorder.
- ★ Approved by data-recorder manufacturers.
- ★ Recommended by leading software houses.
- ★ Does not affect any guarantees on computer.
- ★ 3-day service from receipt of order.

★ Due to popular demand a D.I.Y. kit is available.
★ All you need is a soldering iron (required for CBM only).
★ A small file and common sense.
★ Easy to follow instructions are supplied.
★ CBM data-recorder kit, only £9.95 inc. post and package.
★ SPECTRUM 48K/128+2 D.I.Y. kit, only £7.75 inc. post and package (no speaker required).

"LOAD-IT" is a registered trade name. Copyright ©1986. Patent Pending 8629660. Trade enquiries welcome. Franchise scheme available in selected areas. Britain and overseas.

SEND YOUR DATA-RECORDER SECURELY PACKED TO: Tel: 021-745 4970.
"LOAD-IT", 35 Stretton Road, Shirley, Solihull, West Midlands B90 2RX.

I enclose my CBM data-recorder and cheque for £19.95 inc.
 D.I.Y. kit, CBM £9.95. D.I.Y. kit for any data-recorder £7.75.
✓ Tick as appropriate.

Name
Address
Postal code

My Computer is: CBM 16/CBM +4/CBM 64/CBM 64C/CBM 128/SPECTRUM 48K/128+2.

THE PERFECT PROTECTION

Dear CCI,

This is the second time I have written to you on this subject but after the bawling-out you gave to that 'pompous little twit' (your words, not mine), perhaps I had better not say too much about your not including my letter. Although I was not really trying to be interesting, merely seeking information. I'll try again since the matter is important to me.

In your March edition you printed a program called "The Perfect Protection" by Dennis Zweytzer. It seemed such a useful proggy that I spent days typing it in and then sorting out the inevitable knot of typing errors which were bound to arise from such a long, l-o-n-g list of data statements. Eventually I got it up and running to the point where it prints

out the line "TO START: SYS 49494". However, when this memory location is typed in, the computer locks up.

Now, in his description, Mr Zweytzer mentions that his program "... asks for the name of the program you wish to protect then loans it." I suppose that all this print instruction is included in the data since it is not in evidence in any straight 'Print' instruction. Or could it be that the program, as printed in your mag. is not complete? Do please help. Others are probably as frustrated by this as I.

Finally, sir, since it inevitably takes so long to get a program query such as this answered, might I suggest that you set up a Program Query Hotline?

Yours faithfully,
J. C. McKillop, Glasgow.

Don't be nervous, J. C. McKillop. We only take it out on those who deserve. So we asked Ian (kind-hearted) Bennett to look into your query. Answer below. As for a Program Query Hotline, during the early days of CCI we used to have one which dealt with literally hundreds of enquiries. In fact it became so time consuming that it was creating difficulties for the magazine. So we discontinued it. If you have technical prolems we are glad to be able to help if it will interest other readers. For individual help though, the best place is experts like ICPUG or Commodore's own technical department.

```

0 DIM A(1665):FOR X = 1 TO 1665:READ A(X):NEXT
1 FOR L = 1 TO 15:T=
2 FOR X = L TO 1665 STEP 15
3 T=T+(A(X)) :NEXT:PRINT L,T:NEXT
4 :
5 :
10 L=49152
20 FOR X=0 TO 110:T=0:FOR Y=0 TO 14
30 READ A:IF A <0 OR A >255 THEN 60
40 POKE L,A:L=L+1:T=T+A:NEXT
50 READ A:T=T-(INT(T/256)*256)
60 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
70 PRINT1000+(X*10) "OK":NEXT
80 PRINT CHR$(147)" TO START : SYS 49494 "
1000 DATA 001,009,117,018,000,032,000,207,113,061,004,004,006,002,004, 066
1010 DATA 002,078,078,173,002,192,056,233,063,133,045,173,003,192,233, 120
1020 DATA 000,133,046,076,160,192,000,000,000,000,000,000,000,000, 095
1030 DATA 000,000,000,004,004,004,004,004,004,004,004,004,004,004, 048
      1      2      3      4      5      6      7      8      9      10     11     12     13     14     15

```

READY.

1	12792
2	14516
3	15032
4	15023
5	13775
6	14438
7	15223
8	13459
9	13829
10	14868
11	13505
12	15295
13	13138
14	14488
15	14182

Dear John,

I'm sorry to have to break it to you but the problem is in your program and not the listing. However, to help you find the wretched bug I have written a few lines of code for you to add to the beginning of the listing to help you find the error(s). The extra lines will read the date into an array and then add up the data but in columns and not rows. The reason why this may help is that the error checking routine incorporated in the program as it stands just adds up each row. It is possible that you may have entered TWO data statements incorrectly but that their total is still the same. i.e. 173, 103 instead of 103, 173 or 245, 009 instead of 254, 000. By adding them up in columns instead of rows will prevent the same problem from occur-

ring again. Once you have run the program with the new routine attached it will print out the totals of each column. I have run the same test on the master program and printed out my results. If my guess is correct you will find that 1 or more totals will not tally up with mine. All you need to do then is just check the column(s) in question. I hope that helps. I see from your letter that this is your second letter. Well all I can say is that we didn't get your first one. All program problems go into a special file which I am sent every Monday morning. Each letter is date stamped and given a unique reference number to ensure that it does not get lost in the system. So let's put this one down to Postman Pat eh?
Ian Bennett

COMPUNET - A snapshot

Compunet is a networked database for Commodore 64/128 owners. It was set up two and a half years ago and has become a rich source of information, software and contacts with similarly minded users. A short overview of some of the more popular areas will give some idea of the breadth of the activity on the service.

The 'Demo' area, in which programmers can upload demonstrations of their programming skills, is possibly the most successful of late. Other users can download these demo programs and vote on them. A typical demo might consist of a high resolution screen, with an extensive sound-track and a message and 'hellos' scrolling past in the screen border — the standard is very high and a number of programmers have been 'discovered' by the software houses in this area.

The 'Demo' area has recently spawned a new one, 'Show Biz' which is intended as a contact point between software houses and programmers. Many software houses sell their products through Compunet too. Games and serious software, such as sophisticated terminal emulators can be bought and downloaded at very reasonable prices com-

pared with those in the high street. There is also a large amount of free public domain software available on the database, much of which is of the highest standards.

The 'Jungle' is an area where anyone can upload anything they have produced and believe suitable for public consumption. Here views can be inflicted on other Compunetters, user's software can be bought and sold, or distributed free, and news can be passed on — really the area is only limited by the user's imaginations.

'Arena' is an area where various contentious subjects are discussed, anyone can upload their views and the result is often thought-provoking. A number of subjects such as 'Aids Education', 'South Africa' and 'Women in Computing' are currently under discussion while new conferences can easily be added.

For those who want to make real-time contact with other users there is 'Partyline', which might be described as a CB simulator. While electronic mail can be sent to other users using the 'Courier' service, which is infinitely more efficient than the GPO's 'Snail Mail', another form of contact between

users is through MUD, the Multi-User Dungeon. As MUD is well covered in other parts of CCI we won't dwell on it here.

Many special interest groups have areas on Compunet. The biggest is probably that of ICPUG, The biggest is probably that of ICPUG, the 'Independent Commodore Products User Group' which has most of its Public Domain software and many interesting articles available for free downloading. The Amiga User Group also has its own area, which provides up to date news about Commodore's latest machines.

'Wino', the sysop of the HomeView BBS, has deserted from Prestel and runs an excellent and very informative Communications News area. Essential reading for those interested in getting the most out of their Modems.

The above only scratches the surface of what's available. There are many other areas offering information, entertainment and software, many with esoteric names such as 'Dr. Fogg's Spot', the 'Mighty Bogg's Area' and the 'Vicar's Train Set'. Next month we will look at how to access and use Compunet, as well as some news about its imminent move to a new host computer.

J.M.L.

Eureka!

Accounting Software For Small Businesses

ACCOUNT ABILITY

is a powerful suite of programs which can provide a business with a helpful and informative method of financial control.

This superb system combines the accuracy, discipline and reliability of traditional accounting methods with a friendliness and flexibility that only an integrated system can provide.

HARDWARE

Currently available for your **Commodore** 128, 128D or 8000 series computer.

Imminent Release for Commodore 64 and P.C.

ACCOUNT ABILITY[®]

FULLY INTEGRATED SALES PURCHASE & NOMINAL LEDGER ACCOUNTING

MAJOR FEATURES

- COMPREHENSIVE HELP SCREENS
- QUICK CREATION OF ACCOUNTS
- ACCOUNT NUDGE FACILITY
- TEMPORARY ACCOUNT FACILITY
- MULTIPLE VAT RATE CAPABILITY
- MULTIPLE BANK ACCOUNTS
- FULL AUDIT TRAIL
- UP TO 64 LEVELS OF USER SECURITY
- CASH SALE FACILITY
- AUTOMATIC TRANSACTION AGEING
- AUTOMATIC DISCOUNTS
- TRANSACTION MESSAGES
- OPEN ITEM OR B/F ON ANY ACCOUNT
- DAYBOOK, STATEMENTS, REMITTANCE/CHEQUES
- 24 REPORTS
- SCREEN DUMP FACILITY
- UP TO 53 PERIODS PER YEAR
- SUPPORTS UP TO FOUR COMMODORE DISK UNITS
- SUPPORTS UP TO FOUR PRINTERS INCLUDING CENTRONICS.

For further information or details of your local stockist contact:

£99.99
INC VAT

MICROHEX COMPUTERS UNION STREET TROWBRIDGE
WILTSHIRE BA14 8RY TEL: (02214) 63828

COMMODORE

MAGENTA PAGES

THE INTERNATIONAL COMPUTER USERS DIRECTORY

In one Volume a Comprehensive suppliers of hardware, software, services and auxiliary in 36 Countries.

**WORLD SOURCE OF
COMPUTER DATA**

Ogils & Ododo Ass. Ltd.
55 Kellett Road,
London SW2 1EA



NOTICE

Watch this space

BIRMINGHAM COMPUTER REPAIRS

A.S.M. computer specialists are moving to Birmingham in July. We also specialise in repairs to LAN's, IBM-PC's, PC-Clones and a wide range of peripherals. We also specialise in software/hardware consultancy and bespoke software (CP/M or MS/PCDOS).

Our new workshop complex will enable us to offer a quick repair service and our product range will include most types of Commodore and BBC Micros.

Enquiries from educational establishments welcome

For further details call Sarah on

(0827) 896298

Mon-Fri 9am-6pm, Sat 9am-12.30pm

MICRO WORKSHOP

COMMODORE REPAIR SPECIALISTS

Also repair Sinclair, Amstrad
and BBC.

3 month warranty

**12 Station Approach,
Epsom, Surrey.**

Telephone: 03727 21533

JUST RELEASED for the C64. S-forth. Forth language on disk £24.90. S-lisp. Lisp language on cartridge £44.90. A. Shradhan, 45 Swift Close, Letchworth, Herts SG6 4LL. Tel: (0462) 675305.

HE RESET SWITCH

Hobbies Exchange



Only £4.99 Post Free

Reset The Computer & Poke...

Mail Order

Callers Welcome

Visa & B/Card

- Just Plug In
- Use Pokes
- Break into Your Games

36 Westgate, Elland,
West Yorkshire HX5 0BB.

Tel: (0422) 78485
MBX JRCS C/NET

FOOTBALL MANAGEMENT

Three Classic Football Management Strategy Games for all enthusiasts. Each of these QUALITY games is packed with GENUINE FEATURES to make them the most REALISTIC around.

PREMIER LEAGUE

A COMPREHENSIVE LEAGUE GAME - Play all teams home & away. Full squad details all teams. Injuries, Team styles, In-match substitutes, Named & recorded goal scorers, Comprehensive transfer market, 5 Skill levels, Financial problems, Team Training, Continuing Seasons, Save game, Opposition Select Strongest Team and MUCH MUCH MORE! 64/128k Commodore £8.50

WORLD CHAMPIONS

A COMPLETEWORLD CUP SIMULATION - From the first friendlies, qualifying stages, four matches and on to the FINALS - Select from squad of 25 players, 2 In-Match substitutes allowed, Discipline table, 7 Skill levels and MUCH MUCH MORE! Includes a full text match simulation with Injuries, Bookings, Sending off, Corners, Free kicks, Match timer, Injury time, Extra time, Goal times and MORE! 64/128k Commodore £7.95

EUROPEAN II

CAPTURES THE FULL ATMOSPHERE OF EUROPEAN COMPETITION - Home & away legs, Away goals count double (if drawn), Full penalty shoot out (with SUDDEN DEATH), 7 Skill levels, 2 subs allowed, Pre-match team news, Discipline table, Full team & substitute selection, Disallowed Goals and MUCH MUCH MORE! Plus FULL TEXT MATCH SIMULATION. 64/128k Commodore £7.95

FANTASTIC VALUE - Buy any 2 games deduct £2.00; buy all 3 games deduct £3.00
All games are available for IMMEDIATE DESPATCH by 1st CLASS POST and include FULL INSTRUCTIONS (add £1.00 outside UK)

From **E & J SOFTWARE**, Room C 1, 37 Westmoor Road, ENFIELD, Middlesex, EN3 7LE

CBM 64 PRINTER

(VIC1525) with manual and Word Processor
£70 o.n.o.

Franklin, 11 Fairway, Bramhall, Ches. SK7 1DB.

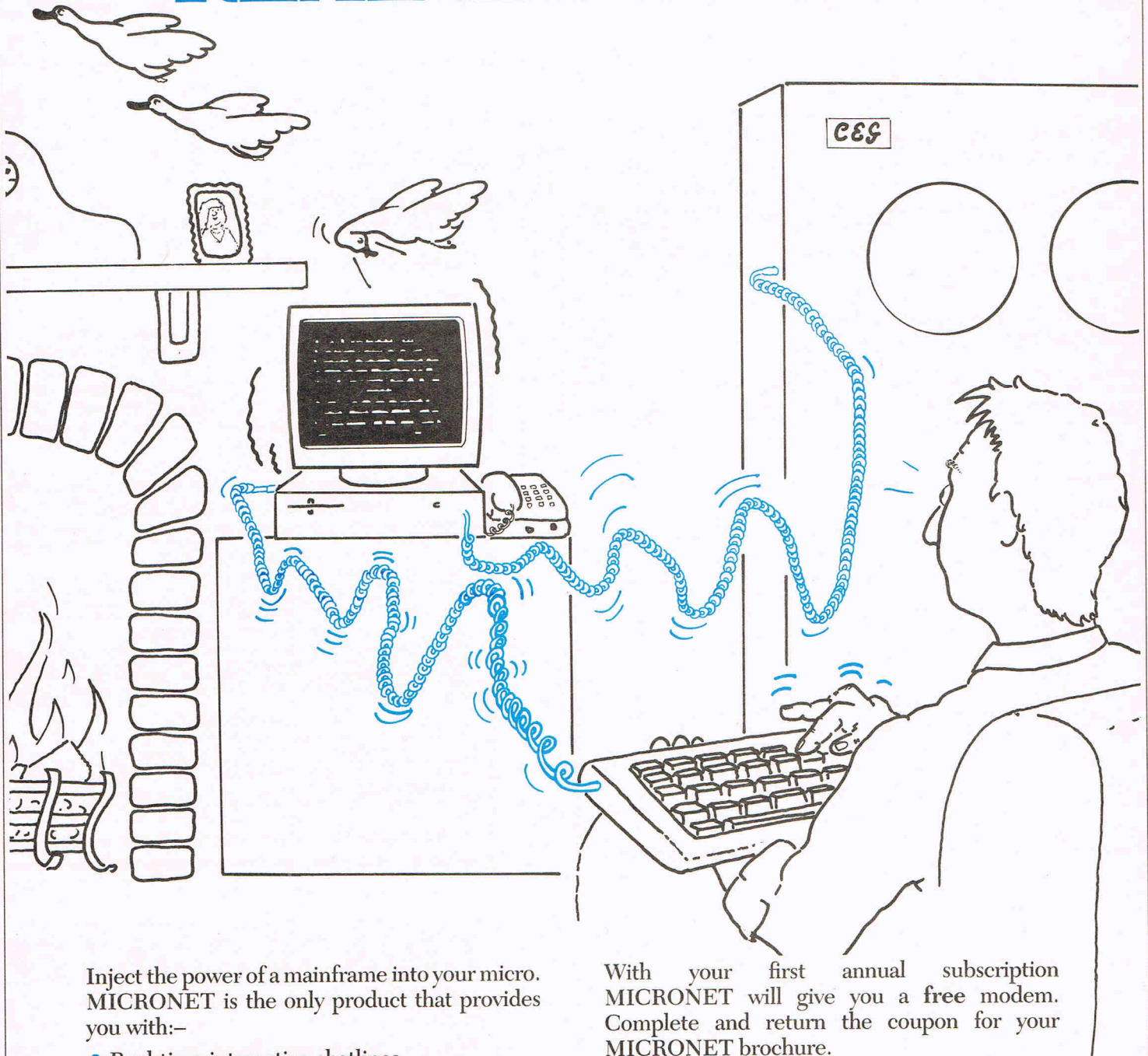
Tel: 061-439 3000

C128 and C64 programs on tape and disk.

S.A.E. for catalogue/gift.

**MEGABOS SOFTWARE (C11), 106
Ardgown Road, London**

COME HOME TO A REAL LIVE WIRE



Inject the power of a mainframe into your micro. MICRONET is the only product that provides you with:-

- Real-time interactive chatlines
- Free and discounted telesoftware
- M.U.G.'s inc the UK's most popular SHADES™
- Daily computer news and reviews
- Free PRESTEL™ electronic mail
- Teleshopping – holidays, hotels etc.
- 70,000 PRESTEL users 56,000 Telecom Gold users
- National and International Telex
- Technical Support and Help Desk

PLUS: Access to PRESTEL and Telecom Gold, and there's much more – all for one low cost subscription. Modem owners call us now for an on-line demonstration.

With your first annual subscription MICRONET will give you a free modem. Complete and return the coupon for your MICRONET brochure.

MICRONET

MICRONET, Durrant House, 8 Herbal Hill,
London, EC1R 5EJ. Telephone 01-278 3143
Please send me a free MICRONET brochure.

Name _____

Address _____

Tel _____ Age _____

Micro _____

OFFICIAL COMMODORE/AMIGA DEALER

COMPUTERS

AMIGA 2000 1Mb + 1081 Colour Mon	1604.25
AMIGA 1000 512K + 1081 Colour Mon	929.00
AMIGA 500 512K + 1081 Colour Mon	849.00
AMIGA 500 512K	529.00
Commodore 128 + 10 Tapes or Disks	229.00

PRINTERS

Citizen 120D Dot Matrix 120cps & NLO	195.00
Commodore MPS1200 Dot Matrix 120cps & NLO	249.00
Star NL10 with C64/128 Interface 120cps & NLO	249.00

MONITORS

Commodore 901 14in Colour Monitor for C64/128	299.00
Philips 8833 14in Med Res Colour Mon for C128 incl lead	289.00
Philips BM7502 Green Monitor for C64/128 incl lead	82.80

MISCELLANEOUS

Commodore 1541 Disk Drive	182.85
Commodore 1571 Disk Drive	239.00
Cent Interface for C64/128	29.95
RS232 Interface for C64/128 with disk software	57.44
User port printer driver on disk	7.99
User port printer cable	15.99
Commodore 64 Power Supply	26.45
Surge Protector 13 Amp Plug (Adapter £14.95)	11.95
The Final Cartridge II	35.00
Horasoft 80/40 Column Switch for C128	12.95
Amiga DOS Reference Manual	(p&p £2) 24.95
C64 Official Programmer's Ref Guide	(p&p £2) 7.95
C128 Official Programmer's Ref Guide	(p&p £2) 21.95

SOFTWARE

AMIGA Software 15% Discount	PHONE
GEOS for C64 — deskTop geoPaint geoWrite etc.	49.00
GEOS Fontpack 1 with 20 Fonts	21.99
GEOS Desktop	23.99
GEOS Writer's Workshop	34.99
GEOCALC Spreadsheet	34.99
GEOFILE Filing System	34.99
Mini Office II Word Proc/Database/Spread — Tape/Disk	16.95/19.95
Supabase 128 Programmable Database	55.95
Superscript 128 Word Processor	45.95
Tasword 64 40/80 Column Word Processor — Tape/Disk	17.95/19.95
VizaWrite Classic 128 Word Processor with Spell Check	79.35
VizaStar 128 Spreadsheet & Database	99.95

DISKS (Examples)

5.25in SS/DD Precision (10)	8.90
5.25in DS/DD Precision (10)	9.99
3.5in DS/DD Branded (10)	24.00

All prices include VAT
CARRIAGE £8, EXPRESS DELIVERY £12, Software & Small Items FREE.

Delta Pi Software Ltd

8 Ruswarp Lane, WHITBY, N. Yorks. YO2 1ND.
Tel: 0947 600065 (9am-7pm)

BETPRO II

The Punter Strikes Back!

BETPRO II is simply the best horse race rating program available.

- BETPRO II incorporates the following outstanding features:—
- ★ The tried and tested BETPRO race rating formula OR the option to develop your own unique formula which can be saved and loaded from Tape or Disk.
 - ★ Simple Horse data entry (usually one letter) and general user friendliness make BETPRO II ideal for regular or occasional punters alike.
 - ★ Lots of winners in the top 2 ratings for both flat and national hunt races.
- BETPRO II is available for the PLUS/4, COMMODORE 16, CBM 64 and 128. Tape and Instruction Manual £9.95p. Disk and Instruction Manual £11.95p.

TORNADO 64

(Tape to Tape Back-up)

TORNADO 64 is designed to produce Fast-Loading back-ups of your Basic and/or Machine Code programs. TORNADO 64 also incorporates the following features:—

- ★ Super Fast loading Independent Back-ups of your program(s).
 - ★ Stripecy Load Border whilst Background is displayed allowing Picture and/or Text to be displayed whilst loading the main program.
 - ★ Once Loaded the program will Run Automatically.
 - ★ Unlimited Copies of Source program. No extra hardware required.
- Take! Take! Take! — Top quality Ferric data cassettes (C10 individually boxed) 5 for £2.40, 10 for £4.70.

TORNADO 64 is available for the CBM 64 & 128 (64 Mode) at only £4.95p (Tape).

All Prices Include P&P in U.K. Overseas add £1 extra. Immediate Despatch

Send Cheque or P.O. or for Program Details send S.A.E. to:—

RAMSOFT, Dept C.C.I. 2, 24 Bankfield Lane, Norden, Rochdale, Lancs. OL11 5RJ.

**HOW DOES AN EXTRA £2000-£5000 (AND UP)
— EACH AND EVERY MONTH — SOUND TO YOU?**

ACROSS THE UK, MEN AND WOMEN JUST LIKE YOU, ARE EARNING UPWARDS OF £40,000 PER YEAR FROM UNIQUE, EXCITING SPARE-TIME BUSINESSES OPERATED FROM THE COMFORT, CONVENIENCE AND PRIVACY OF THEIR OWN HOME BY ... COMPUTER!

AND NOW FOR THE FIRST TIME, YOU TOO HAVE A CHANCE TO JOIN THIS GROUP OF WEALTH-BUILDERS!

ITC constantly scans the globe for unique, highly lucrative computer-operated business ventures. We seek out, research and develop fresh opportunities that can be implemented on strictly a part-time basis, with little or no investment, at home, by means of a computer.

Then, full in-depth studies are written in crisp, concise form. From how to begin and what you need, marketing techniques, who and where your prospective customers are, to running your thriving business. Everything you need to know is handed out to you, ready to start! So what are YOU waiting for? You can subscribe now and start profiting — or wait until a later date and WISH you'd subscribed today!



DIGITAL SHADES LIMITED

EAST LONDON'S NO.1 AMIGA SPECIALISTS

HARDWARE & SOFTWARE

WE SPECIALISE IN AMIGA 500'S AND 1000'S HARDWARE, SOFTWARE AND PERIPHERALS

Write for the latest Software/Hardware price list. A500 Modulator & 512K ram expansion also available.

A500's at £529.95!!

All Amiga's come with FREE software, Standard owners manuals, Mouse and the WORKBENCH system disk (Kickstart 1.2 in ROM).

All prices are POST FREE and INCLUDE VAT

We supply Hard disks, graphic tablets, monitors, copying & systems utilities, printers, disk drives, disk, games etc. If we haven't got it in stock we can get it. Save £££££'s when you Shop with "Digital Shades".

As a special launch promotion we are offering the first twelve amazing Commodore A500's at the crazy price of £499.00 INCLUDING VAT!!!

9 SELSDON ROAD, UPTON PARK, LONDON E13 9BY **MAIL ORDER ONLY**

24 Hour Message service: 01 471-7969

FULL "DIGITAL" AFTER SALES SUPPORT

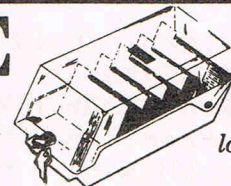
All Cheques made payable to DIGITAL SHADES LTD.

★★ Look out for our new shop opening ★★
Soon in East London.

Prices correct at copy date. Subject to availability. E&OE.

Sorry! — Limited to one only per customer

FREE



large
(100 disk capacity)
lockable disk storage
box worth £13.95 —

— When you buy **25** disks for only **£19.95**
including postage and VAT!



All disks supplied are superior Quadruple density 5 1/4" DS disks which are best for both 40 and 80 track drives.



Nebulae, Dept M.C. FREEPOST, Kilroot Park
Industrial Estates, Carrichfergus, Co Antrim,
BT38 7BR TEL (09603) 65020

7 Day Delivery,
One year guarantee,
& 14 day money back period.

We accept orders from all government bodies, schools, universities, PLC's etc.
We despatch on receipt of an official purchase order.

Yes, I like the idea of having unique, exciting computer business opportunities pouring into my home every month! So enter my one year subscription (12 full issues) to Computin' Wealth-Builders Monthly, THE MOST SIGNIFICANT NEWSLETTER FOR SERIOUS, COMPUTIN' MONEY-MAKERS THE WORLD OVER!
Enclosed is £45.00.

Name

Address

..... Country.....

() Cash

Credit card orders welcome:

Visa/Barclay, Mastercard/Access/Eurocard,
American Express & Diners Club

() Charge my credit card No.

Signature Expiration date.....

ITC Financial Publications

Franklinstraat 5 P.O. Box 414
1221 HA Hilversum 1200 AK Hilversum ISSN 0921-0407
Netherlands Netherlands

Bonus offer to CCI Readers: "Valuable start-up business facts" booklet free £10.00 of regular subscription price (£55).

HEX DUMP

by Mike Fulton

Commodore 64

This is a small utility to enable hex dumps to be printed in any width. It means that printers with width options other than the usual 80 columns wide can be better utilized.

```
10 AS=0:A$="0123456789ABCDEF":HX$="":OPEN4,4:GOSUB230
   :INPUT"CHARS/LINE";CHAR
20 GOSUB230:INPUT"START ADDRESS (HEX) ";IN$:L=LEN(IN$):M=16↑L
   :GOSUB170:SR=Y:Y=0
30 GOSUB230:INPUT"END ADDRESS (HEX) ";IN$:L=LEN(IN$):M=16↑L

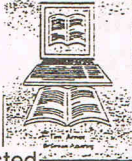
40 GOSUB230:INPUT"(H)EX (A)SCII OR (J)OINT";AS$:IFAS$="J"THENAS=1
50 IFAS$="A"THENAS=-1
60 IFSR>ENOREN>65535THENRUN
70 GOSUB230:PRINTTAB(13);CHR$(158);"OK - PRINTING"
80 CHAR=INT((CHAR-6)/(AS+3))-2:CNT=SR:FORA=1TO((EN-SR)/CHAR)+1
90 L=4:D=256↑(L/2):TCN=CNT:HX$="":GOSUB190:PRINT#4,HX$+" ";
   :FORNT=0TOCHAR-1
100 HX$="":IFNT+CNT>65535THENCLOSE4:END
110 TCN=PEEK(NT+CNT):IFAS<>-1THENL=2:D=256:GOSUB190:GOTO130
120 HX$=CHR$(TCN):IFTCN<32ORTCN>95THENHX$=CHR$(46)
130 PRINT#4,HX$+" ";HX$="":NEXTNT:IFAS=1THENGOSUB210
140 PRINT#4,CHR$(13);:CNT=CNT+CHAR:NEXTA:CLOSE4
150 GOSUB250:PRINTTAB(12);CHR$(155);:INPUT"ANOTHER OUTPUT";A$
   :IFA$="Y"THENRUN
160 END
170 FORN=1TOL:M=M/16:B=ASC(MID$(IN$,N,1)):IFB<58THENY=Y+((B-48)*M)
   :NEXT:RETURN
180 Y=Y+((B-55)*M):NEXT:RETURN
190 FORX=1TOL-1:D=D/16:H(X)=INT(TCN/D):TCN=TCN-(H(X)*D):NEXT:H(X)=TCN
200 FORX=1TOL:HX$=HX$+MID$(A$,H(X)+1,1):NEXT:RETURN
210 PRINT#4,CHR$(59);:FORJ=1TONT:CA=PEEK(CNT+J):IFCA<32ORCA>95THENCA=46
220 PRINT#4,CHR$(CA);:NEXT:RETURN
230 POKE53280,5:POKE53281,5:FORT=1TO6:READS:PRINTCHR$(S);:NEXT:RESTORE
240 PRINTCHR$(5);:PRINTTAB(8);"PLEASE REPLY TO PROMPTS":PRINTCHR$(31)
250 FORT=1TO5:PRINTCHR$(17);CHR$(29);:NEXT:RETURN
260 DATA147,5,17,17,17,17
```


Bitstream

COMMODORE 128 COMPANION

by Tim Arnot

COMMODORE 128 COMPANION



- More about Basic 7.0 than you knew existed
- Kernal, Editor and Basic Jump Tables revealed
- Complete memory maps for 128 and 64 modes
- Detailed hardware descriptions
- Lies flat when open!
- 340 pages
- Only £9.95 (add £1.00 p&p if overseas)

ISBN 870381 00 0

WHAT THEY SAID:

- "Brilliant! Buy it at any cost" — *B. Manager*
 "Couldn't put it down" — *Ivor Edit*
 "What's a 128?" — *A. Nerd*
 "Can I have a free one?" — *A. Reviewer*
 "Sorry, we only stock books that don't sell" — *Naff Books Ltd.*
 "He's dead Jim" — *L. McCoy*

BITSTREAM PUBLISHING

(Dept. C)

26-28 Osborne Road, Southsea, Hants. PO5 3LT

"ALWAYS EXCEPTIONAL QUARITY"

(TRADE DISTRIBUTION BY COMPUTER BOOKSHOPS, BIRMINGHAM)



Wales Largest Independent Retail Outlet

- * Part exchange welcome
- * All prices inc. VAT: excl. P. & P.
- * All computer repairs undertaken

* USED *	£	* NEW *	£
Spectrum 48k.....	39.99	Spectrum 128.....	79.99
Spectrum 48k Plus.....	49.99	Spectrum 128+2.....	119.00
Spectrum 128.....	59.99	Commodore 64.....	150.00
Spectrum 128+2.....	89.00	Commodore 64 Connoisseur.....	189.00
Commodore 64 inc. Rec.....	110.00	Commodore 128.....	199.00
MPS 803 Printer.....	119.00	Commodore 128D.....	359.00
Commodore 128 inc. Rec.....	150.00	1541C Disc Drive.....	150.00
Commodore 1541 Disc Drive.....	99.00	Amstrad 464 inc. Mod.....	179.00
MPS801 Printer.....	79.99	Amstrad 464 inc. Col. Mon.....	279.00
Amstrad 464 inc. Mod.....	99.99	Amstrad 6128 inc. Mod.....	279.00
Amstrad 464 inc. Col. Mon.....	189.00	Amstrad 6128 inc. Col. Mon.....	360.00
Amstrad 6128 inc. Mod.....	199.00	Amstrad PCW8256.....	430.00
Amstrad 6128 inc. Col. Mon.....	279.00	Amstrad PCW8512.....	530.00
Amstrad PCW8256.....	350.00	Amstrad PC1512SM.....	499.00
Amstrad PCW8512.....	450.00	Amstrad PC1512DC.....	799.00
DMP2000 Printer.....	110.00	Amstrad PC1512/HD20M.....	999.00
FD-1 Disc Drive.....	70.00	DSDD (per 10).....	£7.00
DD-1 Disc Drive.....	110.00	Cumana 40/80 Disc Drive.....	150.00
BBC Model B Series 7.....	199.00	3 1/2 Disks DSDD (per 10).....	£15.00
BBC Model B inc. DFS.....	249.00	1050 Disc Drive.....	120.00
Acorn Electron.....	45.00	3in Disks DSDD (per 10).....	£21.00
Atari 800XL.....	45.00	Atari 520STM.....	249.00
Atari 130XE.....	79.00	Atari 520STFM.....	359.00
Atari 520ST.....	189.00		
Atari 520STFM.....	310.00		

* NEW *

Cheetah 125+ joystick £5.99 - Spectrum joystick interface £7.99 - Spectrum light pen £12.95 - Spectrum power supplies £6.50 - Commodore power supplies £19.99 - Commodore data recorders £19.99 - Large range of used disc drives, printers, monitors, add-ons available.

ALL CHEQUES to made payable to: G.T. COMPUTERS LTD.
 21 Charles Street, Newport, Gwent. Tel: (0633) 216654
 133 City Road, Cardiff, Glam. Tel: (0222) 483038

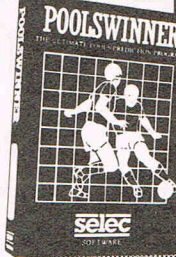
**WE DON'T SELL CHEAP COMPUTERS!
 WE SELL OUR COMPUTERS CHEAP!**

POOLSWINNER II

THE ULTIMATE POOLS PREDICTION PROGRAM

- **MASSIVE DATABASE** Poolswinner is a sophisticated Pools prediction aid. It comes complete with the largest database available - 22000 matches over 10 years.
- **PREDICTS** Not just SCOREDRAWS, but AWAYS, HOMES and NO SCORES.
- **SUCCESSFUL** SELEC guarantee that Poolswinner performs significantly better than chance.
- **ADAPTABLE** Probabilities are given on every fixture - choose as many selections as you need for your bet. The precise prediction formula can be set by the user - you can develop and test your own unique method.
- **SIMPLE DATA ENTRY** All team names are in the program. Simply type in the reference numbers from the screen. Or use FIXGEN to produce fixture list automatically (see below).
- **LEAGUE AND NON-LEAGUE** All English and Scottish League teams are supported, and also the non-league sides often used on pools coupons.
- **PRINTER SUPPORT** Full hard copy printout of data if you have a printer.

PRICE £15.00 (all inclusive)



Boxed, with detailed instruction booklet

FOOTBALL FOLLOWER

RESULTS DATABASE SYSTEM



- **THE PERFECT PROGRAM** for everyone interested in Football - Soccer Fans, Pools Punters, amateur league secretaries and team managers.
- **POWERFUL DATABASE** designed to store league results and all important statistics for all clubs.
- **SET UP** to handle English and Scottish league matches, but can be easily converted to non-league, amateur and Australian football.
- **FULL PRINTER SUPPORT:** Fixture lists, results, league tables, statistical records etc. can be printed out if you have a printer, or copied from the screen.
- **UPDATED:** The package is supplied with this season's football results already entered into the program.
- **INTEGRATED** with POOLSWINNER and FIXGEN: information can be exchanged between programs. (Can be used to update Poolswinner.)

PRICE £15.00 (all inclusive)

FIXGEN 87/8

AT LAST! No more struggling for hours to get the fixture list into the computer. FIXGEN has been programmed with all English and Scottish League fixtures for 1987/8. Simply type in the date, and the full fixture list is generated in seconds. Fully compatible with Poolswinner and Football Follower. Yearly updates available. (Published under licence from the Football League and Scottish Football League.)

POOLSWINNER with FIXGEN £16.50 (for both)

FOOTBALL FOLLOWER with FIXGEN £16.50 (for both)

SPECIAL COMBO PACK

FOR SOCCER FANS, the best combination is Football Follower with Fixgen.

FOR POOLS PUNTERS who want a ready made system, Poolswinner with Fixgen is the best combination.

FOR POOLS PUNTERS who want to do more detailed analysis and develop their own system, the complete suit of all three programs is available at a special price:

POOLSWINNER + FOOTBALL FOLLOWER + FIXGEN
 £26.50 (all inclusive) (ask for "COMBO PACK")

COURSEWINNER V3

THE PUNTERS COMPUTER PROGRAM

NOT JUST A TIPSTER PROGRAM, Coursewinner V3 can be used by experts and occasional punters alike. You can develop and test your own unique winning system by adjusting the analysis formula, or use the program in simple mode. Coursewinner V3 uses statistical analysis of major factors including past form, speed ratings, course statistics, prize money, weight, going, trainer and jockey form etc. etc. It outputs most likely winners, good long odds bets, forecasts, tricast etc. The database includes vital course statistics for all British courses. You can update the database - never goes out of date. FULL PRINTER SUPPORT.

PRICE £15.00 (all inclusive) includes Flat AND National Hunt versions.

AVAILABILITY...
 All programs available for:

AMSTRAD CPC's, PCW's, PC1512
 All BBC's
 All SPECTRUMS
 COMMODORE 64/128

All programs supplied on tape, but automatically transfer to disc or microdrive. AMSTRAD PCW and PC1512 supplied on disc (add £3.00).

Send Cheques/POs for return of post service to...



phone 24 hrs

selec

SOFTWARE



phone 24 hrs

37 COUNCILLOR LANE, CHEADLE, CHESHIRE SK8 2HX. ☎ 061-428 7425

(Send for full list of our software)

Interrupted Again — and Again

These are the listings that should have accompanied Peter Gerrard's article in the June Issue of C.C.I. Gremlins (no not the games house but the vicious kind) caused them to be omitted.

For the many readers interested — our humble apologies.

```
1 REM BASIC SPRITE MOVEMENT
2 REM LISTING NO 1          4/3/87   PG
3 :
4 POKE 53281,5:POKE 53280,0:S=54272:POKES+24,15
5 PRINT "[CLR,BLK]TAB(15)"THE WINKER!"
6 PRINT "[HOME,CD]";
7 POKE S+4,0:POKE S+5,9:POKE S+6,0
8 PRINTTAB(9)"[BLK,SP,20CBMP]"
9 FORJ=1TO20:PRINTTAB(9)"[BLK,CBMN,RVS,WHT,20SP,OFF,BLK,CBMH]":NEXTJ
10 PRINTTAB(9)"[BLK,SP,20CBMV]"
12 T=2:GOSUB 62000:A=248:POKE V+21,255:X=172:Y=136:POKE V,X:POKE V+1,Y
15 POKE 198,0:POKE 650,255
19 A$="M"
20 REM
22 IFA$="M"THEN100:REM MOVE DOWN
24 IFA$="I"THEN120:REM MOVE UP
26 IFA$="A"THEN140:REM MOVE LEFT
28 IFA$="D"THEN160:REM MOVE RIGHT
30 GOSUB200:GOTO19:REM ANY OTHER KEY PRESSED
100 IFY<210THENY=Y+3:POKEV+1,Y:GOSUB200
102 IFY>=210THENA$="I":GOSUB300:GOTO24
104 GETA$:IFA$=""THEN100
106 GOTO20
120 IFY>64THENY=Y-3:POKEV+1,Y:GOSUB200
122 IFY<=64THENA$="M":GOSUB300:GOTO22
124 GETA$:IFA$=""THEN120
126 GOTO20
140 IFX>105THENX=X-3:POKEV,X:GOSUB200
142 IFX<=105THENA$="D":GOSUB300:GOTO28
144 GETA$:IFA$=""THEN140
146 GOTO20
160 IFX<240THENX=X+3:POKEV,X:GOSUB200
162 IFX>=240THENA$="A":GOSUB300:GOTO26
164 GETA$:IFA$=""THEN160
166 GOTO20
200 REM ROTATE SPRITE
202 A=497-A:POKE 2040,A
204 RETURN
300 POKE S+4,0:POKE S+4,129:Z=INT((X+Y)/20):POKES,Z:POKES+1,Z:RETURN
62000 V=53248
62005 B(0)=248:B(1)=249:B(2)=250:B(3)=251:B(4)=252:B(5)=253:B(6)=254
      :B(7)=255
62010 NS=T:IFNS=0THENRETURN
```

CONTINUED ON PAGE 136

CASSETTES

at £1.95 each

Staff of Karnath, one on one, Twin Kingdom Valley, Jumpman, Basilidon Bond, Lunar Outpost, Doughboy, Juice, Chimera, Willow Pattern, Suicide Strike, Thunderbirds, Supergran, Dummy Run, The Real You by Collins, Spiderman/Hulk, Dark Tower, Star Trooper, Quake Minus 1, Drelbs, Moebius, Infotep, Outlaws.

at £2.95 each

Tubular Bells, Pilgrim, Split Personalities, Cauldron II, Nexus, Fantastic Four, Chess Renaissance Pack, Match Fishing, Touch Type, Arch Pandora, Grog's Revenge, Potty Pigeon, Skooldaze, Crazy Comets, Monty Mole, Zaxxon, Kong Strikes Back, Tapper, Bambo, Who Dares Wins II, Gyroscope, Fighting Warrior, Flak, Motocross, Jet Set Willy, Starion, Rock 'n' Wrestle, Mugsy's Revenge, David and Midnight Majic, Zorro, BC's Quest for Tires, Manic Miner, Journey, Eddie Kidd, Geoff Capes Strongman, Frak, Ghost Chaser, Blackwyth, Mermaid Madness, Adrian Mole (book + tape).

at £3.95 each

Pitman Typing Tutor, Battalion Commander, Dragonskulle, Fight Nite, Tigers in the Snow, Knights of the Desert, Law of the West, Congo Bongo, Wizardry, Moon Crest, Space Shuttle, Critical Mass, Amazon Woman, Ball Blazer, Red Arrows, Macadam Bumper, Thing on a Spring, Zoids, Boulder, William Wobbler, Redhawk, Paradruid, Combat Lynx, World Series Baseball, Hampstead, Time Tunnel, Pinball Wizard, Bounces, Adventureland/Secret Mission, Pirate Adventure/Voodoo Castle, Biggles, Surfchamp, Chuckie Egg II, Elektra Guide, Bull Dog, Highway Encounter, Johnny Reb II, Devs ex Machine, Little Computer People, Tai Boxing, Jet Set Willy II, Forest of Doom — Book and Tape, Sigma Seven, Yabadabado, Donkey Kong (cart), Football Manager.

COMMODORE TITLES

at £4.95 each

Lord of the Rings, Thai Mig Alley Ace, Adventure Quest, Kettle By Alligata, Evil Crown, System 1500 (Sec. Ed), Robotflow 2084 (cart), Sigma 7 (disc).

at £5.95 each

Winter Games, Superbowl, America Cup, Dragon's Lair, Q-Bert Cartridge, Xevious, Crystal Castles, Keylef, Boulderdash Construction, Battalion Commander, Tarzan, Uchi-mata.

at £6.95 each

Golf Construction Set, Touch Down Football.

at £8.95 each

Scrabble, Cluedo & Monopoly.

COMMODORE 64 DISCS

at £3.95 each

Zork I, Zork II, Zork III, Starcross, Deadline, Suspended, Railboss, Superman, Arcade Ext 5 Games, Monty on the Run, Galactic Controller, High Flyer, Number Build/Puzzler/Chaser.

at £4.95 each

Logo, Ultima III, Chimera/Willow Pattern, Redhawk, Fighting Warrior, Master of Lamps, Decathlon, Red Arrows, River Raid, Rescue on Fractalus, Park Patrol, Pitfall, Pitfall II, Thing on a Spring, Pastfinder, William Wobbler, Web Dimension, Beamrider, Tracer Sanction, Designer's Pencil, Ballblazer, Ghostbusters, Starion, Sold A Million, Critical Mass/Combat Lynx, Bomb-Jack, Nexus.

COMMODORE 64 COMPILATION DISC OF SIX PROGRAMMES INC. c. £7.95

Disc 1: Turbo 64, Derby Day, Pilot 64, Handy Cap Golf, World Cup, Test Match.

Disc 2: View to Kill, Friday 13th, Code Name, Mal II, The Pyramid, Test Match, Beaky & Egg Snatcher.

BARGAINS FROM 1st PUBLISHING

8 BOOKS FOR JUST £9.95 + £2.50 p&p Normal RRP over £50.00 BARGAINS FROM THE FOLLOWING £8.95 EACH.

Power Plan, First Word, First Base, Basic 64, Pascal Lang.

C64 UTILITY DISKS BY 1st SEPT SOFTWARE

G-Base The Data Base Management System	£7.99
One Step Utility Cartridge	£14.99
Home and Business Card File	£7.99
Personal Spreadsheet	£7.99
Master Word	£7.99
Family Tree	£7.99

UTILITIES & PERIPHERALS

Neos Mouse RRP £69.95
OUR PRICE CASSETTE £24.95
OUR PRICE DISC £29.95

Include £1.00 P&P Fassel m/c Lang assembler RRP £14.95 — OUR PRICE £2.95
1551 Disc Drive, compatible with Plus 4 and C64 RRP £200.00 Our Price £99.95

Easy File Disc	£4.95
Quick Data Drives (Phonemark 8500)	£14.95
Future Finance	£9.95
Programmers Utilities	£4.95
64 — Music Maker Keyboard	£5.00
64 — Prog. Reference Guides	£3.95
Macro Assembler Development	£4.95
Simon's Basic Exp. (disc/cassette)	£4.95
Commodore Music Expansion System	£79.95

+ £5 p&p

SPINNAKER EDUCATIONAL SOFTWARE

ALL AT £1.95 EACH.
Fraction Fever, Make A Face, Ranch, Story Machine, Alpha Build, Dance Fantasy, Alphabet Zoo, Logic Levels, Number Tumblers, Sea Speller, Song Maker, Alf, Aegean Voyage.

1 cassette P&P £0.85p
more than 3 cassettes £1.00
overseas £1.20 per tape

LOGIC MAIL ORDER LTD

17 Leofric Square,
Peterborough, Cambs. PE1 5TN
24 hour ordering on 0733 313870

TELETEXT

A world of information at your fingertips

A Microtext Adaptor turns your C64 or 128 in to a sophisticated Teletext receiver giving you access to the very latest information at the touch of a button. Amongst its features are:

- ★ 24 x 40 full colour text and graphics display.
- ★ Teletext pages may be saved to disc or cassette.
- ★ Print out a page to any printer on the serial bus.
- ★ Teletext may be accessed and used by your own programs.
- ★ Easy to use single key functions for 'Next page', 'Reveal' etc.

The Teletext services from Ceefax or Oracle are free, there's the latest world news and software reviews, sports or financial results, there's recipes, whats on TV and much much more, hundreds of pages, constantly updated — A world of information at your fingertips. Supplied with a manual and a lead, the Microtext Adaptor fits neatly on the user port. The lead connects to the 'VIDEO OUTPUT' socket of a video recorder. Just £69.95 inc. P&P (Overseas add £2.00).

"I wouldn't hesitate to recommend this to anyone"

— Your Commodore June 87

MICROTEXT TUNER NOW AVAILABLE

Our own Tuner has been specially designed to provide the signal that the Adaptor needs, thus eliminating the need for a video recorder. Just plug in an aerial it tunes itself in (!) and channels are selected from the keyboard. The whole system consists of a Microtext Adaptor, Tuner, Power supply, lead and manual and costs just £114.80 inc. P&P (128D owners add £8.50 for user port extension lead). Only from:

MICROTEXT

Dept Cl, 7 Birdlip Close, Horndean, Hants. PO8 9PW
Telephone: 0705 595694

WORLDWIDE software

C64/128	cass	disk		
Auf Widersehen Monty	7.25	11.20	Heart of Africa	11.20
Catch 23	6.55	10.45	Hitchhikers Guide to Galaxy	19.95
Conflict in Vietnam	11.20	14.95	Hollywood Hijinx	19.95
Eagles	6.55	10.45	Kampfgruppe	24.95
Enduro Racer	7.25	11.20	Leather Goddess (Adults only)	19.95
F15 Strike Eagle	7.25	11.20	Moonmist	19.95
Gunlet	7.25	11.20	Phantasia II	14.95
Gunship	11.20	14.95	Planetfall	19.95
Into the Eagles Nest	6.55	10.45	Portal	19.95
Jewels of Darkness	11.20	11.20	Shard of Spring	14.95
Leaderboard Exec	7.25	11.20	Spellbreaker	19.95
Livingstone	7.25	11.20	Suspect	19.95
Mini Office II	12.75	14.95	The Pawn	14.95
Nato Commander	7.25	11.20	Trinity (128/80 col)	28.95
Scrabble	9.75	11.20	Ultima III	14.95
Silent Service	7.25	11.20	Ultima IV	14.95
Silicon Dreams	11.20	14.95	Up Periscope	29.95
Spitfire Ace	7.25	11.20	USAAF	23.95
Star Games One	7.25	11.20	Wishbringer	19.95
Subbattie Simulator	7.25	11.20	Witness	19.95
Swift Spreadsheet	19.95	19.95	Barbarian	7.25
Wargame Const. Set	7.25	11.20	Army Moves	6.55
World Games	7.25	11.20	Champ Baseball	7.25
Zynaps	6.55	10.45	Conflict II	7.25
Wizball	6.55	9.75	Tia Pan	6.55
Road Runner	7.25	11.20	Slap Fight	6.55
Oink	6.55	11.20	Lode Runner (with 3 games)	7.25
Killed Until Dead	7.25	11.20	Broderbund (with 4 games)	7.25
Metrocross	7.25	11.20	10 Blank 5 1/4 in disks with labels:	7.99
Wargame Great	11.20	14.95		
Thing Bounces Back	7.25	11.20		
Conflict	9.75	13.45		
Advanced Art Studio	14.95	19.95		
Head Over Heels	6.55	9.95		
1541C Disk Drive	185.95			
Seikosha SP 180 VC printer	177.95			
C2N cassette unit	35.95			

C64/128 disk only

Alter Ego (M or F)	19.95
Bards Tale	11.20
Broadsides	19.95
Carriers at War	14.95
Colonial Conquest	19.95
Destroyer	11.20
Guild of Thieves	14.95
Sinbad	26.95
Starglider	18.95
World Games	18.95
Bureaucracy	26.95
Uninvited	22.95
Chess Master 2000	22.95
SDI	22.95
Winter Games	18.95

Prices include post & packing in U.K. Overseas orders please add £1.00 per cass/disk for AIR MAIL delivery. Cheques or postal orders payable to:



WORLDWIDE SOFTWARE

1 Bridge Street, Galashiels TD1 1SW
TEL: 0896 57004

STACK COMPUTER PRODUCTS

C64 128 +4 C16 VIC 20 128D

£59.95

- TYPEWRITER
- PRINTER
- PLOTTER

UNIVERSAL CENTRONICS INTERFACE

• Fully CBM compatible.

• Full Graphics on Dot Matrix Printers.

• Use 341 on Plus 4.

• Chainable with Disk

1540 1541 1550 1570 1571 128D

£10.50



5 1/4" FLOPPY DISKS INC. LABELS, SLEEVES, WRITE TABS

• A 10 Super Quality Doubled Sided in Library Case.

• B 10 Standard quality in polythene bag.

C64 128 +4 VIC 20 C128D

£33

PROFESSIONAL RS232 SERIAL INTERFACE

- TYPEWRITER
- PRINTER
- MODEM
- OTHER COMPUTER

• Connect any serial device to your computer.

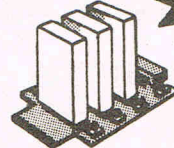
• Easyscript, Superscript, Scrip 128 etc. compatible.

• Send and receive

C64 C128 C128D

SWITCHABLE 4-SLOT MOTHERBOARD

£28



• USE COMPATIBLE CARTRIDGES TOGETHER

• SAVES UNPLUGGING & WEAR



£19.95

MAGIC DISK
Fix 1541/1570
SPEED &
ALIGNMENT
SIMPLY

ALIGN & CLEAN
ALL CBM TAPE
DECKS ON ALL
CBM'S SIMPLY

£4.95



HIGH QUALITY RIBBONS

- MPS801 3.54
 - MPS802 3.93
 - MPS803 3.92
 - 1525 3.35
 - 1526 3.93
 - DPS1101 3.52
 - MX/FX80 3.78
- ALL OTHERS AVAILABLE

C64 C128 128D



£30

- DISK & TAPE TURBO
- CENTRONICS I/F
- TOOL KIT
- GAMES KILLER
- RESET SWITCH
- FREEZER



BS3120 SAFETY DUSTCOVERS

FROSTED - BLACK TRIMMED ANTI-STATIC FIRE RETARDANT

64/20/16	2.75
Plus 4	2.75
128	3.50
128D	4.50
C2N/1530/1531	2.00
1541/1570	3.00
1571	3.00
MPS801	3.00
1701	6.00

• CBM COMPATIBLE

£22.50



- DATA RECORDER
- PIANO KEYS.
 - RECORD (SAVE) LIGHT.
 - COUNTER.
 - C16/+4 ADAPTOR £2 EXTRA



FREE 40 PAGE CATALOGUE ON REQUEST OR WITH ORDER

PRICES INCLUDE VAT
P&P £1.90
(FREE OVER £20)

MEEDMORE (Distribution) LIMITED
28 Farriers Way
Netherton, Merseyside.
L30 4XL

Tel: 051-521 2202



Culton

64 DRAWING BOARD

for the CBM64 and CBM128

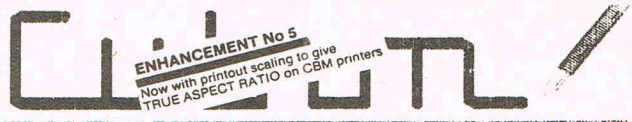
A precision graphics utility for

Designers
Architects
Hobbyists

- ★ Create, manipulate, combine, compare, fill, patterns and multiple sheet drawings
- ★ Fast and secure archival and retrieval of drawings
- ★ Mostly single keystroke commands

For use with disk-drive and dot-addressable printer
£29 plus VAT

Culton Sales and Services Limited
34 Mount Street
Dorking, Surrey RH4 3HX
Tel: (0306) 885138



ENHANCEMENT No 5
Now with printout scaling to give TRUE ASPECT RATIO on CBM printers

64 DRAWING BOARD

for the CBM64 and CBM128

IF YOU THINK THE 64 IS ONLY A GAMES MACHINE. THINK AGAIN!

Polynomial

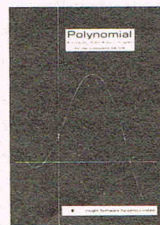
A NEW AND EXCITING METHOD OF STUDY FOR THE COMMODORE 64/128

Polynomial is the first program of its kind which offers a DYNAMIC way of learning and studying. However it is not one of those boring question and answer types of Educational Software. Polynomial allows you to put the questions and helps you find the answers. Students of all levels from all subjects could find Polynomial an INVALUABLE AID to their studies.

WHAT DOES POLYNOMIAL OFFER YOU?

Polynomial combines 3 powerful number crunching routines with an EXCITING GRAPHICS facility to form one of the most powerful educational software packages available for the Commodore 64/128.

- ROOTS - Solves linear and non-linear equations and can find both real and imaginary roots. Results can be verified using the powerful GRAPHICS module.
- CURVE FITTING - Calculates polynomials to fit a set of data points. Helps you interpret your data and solve the awkward experiments QUICKLY and EFFORTLESSLY. Plot both the data points and the resultant polynomial on the same screen.
- SIMULTANEOUS EQUATIONS - Can solve up to 34 simultaneous equations easily and efficiently. Equations clearly formatted on the screen. Solutions are calculated in seconds. Enormous potential as a problem solver.
- GRAPH PLOTTING - This extremely POWERFUL module has INCREDIBLE potential for learning. Plot results of all your experiments draw graphs of your polynomial equations and their DIFFERENTIALS, as many as you like all on the same screen. These are plotted on a high accuracy, high-res screen, choose double or single axis graphs.



THIS EXCELLENT PACKAGE IS IDEAL FOR CSE, 'O' LEVEL, 'A' LEVEL AND DEGREE STUDIES AND CAN BE YOURS FOR AS LITTLE AS £14.95 - UNBELIEVABLE VALUE!

Price INCLUDES detailed manual in an attractive protective case. Postage and Packaging FREE.

SEND FOR YOUR COPY NOW!

Write FREEPOST to: Insight Software Systems Limited

INSIGHT SOFTWARE. FREEPOST PO Box 27, Basingstoke, Hampshire RG22 4BR

Please send me copy(ies) of Polynomial
Tick as appropriate Cassette £14.95 Disc £19.95
 Cheque P.O.

Name _____ CCI

Address _____

Signature _____ Date _____

Please allow up to 28 days for delivery.

Program

```
5 REM BASIC LOADER .... LISTING NO 3
6 :
10 REM FROM 50000 TO 50210
20 REM OR IN OTHER WORDS $C350 TO $C422
25 A=0
30 FORI=0TO200
35 READB
40 A=A+B
45 POKEI+50000,B
50 NEXTI
55 IFAC>26768THENPRINT"ERROR IN DATA - CHECK CAREFULLY.":END
60 PRINT"ALL CORRECT, NOW LOAD BASIC DEMO PROG.":END
200 DATA165,197,201,010,240,026,201,018,240,054,201
210 DATA033,240,082,201,036,240,110,076,000,196
220 DATA141,002,197,032,237,195,076,049,234,234
230 DATA234,174,000,197,224,105,208,003,076,132
240 DATA195,202,142,000,197,142,000,208,076,101
250 DATA195,032,010,196,169,018,076,101,195,000
260 DATA255,000,255,174,000,197,224,240,208,003
270 DATA076,167,195,232,142,000,197,142,000,208
280 DATA076,101,195,076,049,234,032,010,196,169
290 DATA010,076,101,195,255,174,001,197,224,064
300 DATA208,003,076,199,195,202,142,001,197,142
310 DATA001,208,076,101,195,076,049,234,032,010
320 DATA196,169,036,076,101,195,255,174,001,197
330 DATA224,210,208,003,076,228,195,232,142,001
340 DATA197,142,001,208,076,101,195,032,010,196
350 DATA169,033,076,101,195,000,174,003,197,224
360 DATA248,208,006,232,142,248,007,142,003,197
370 DATA096,202,076,245,195,173,002,197,076,082
380 DATA195,076,082,195,000,174,000,197,172,001
390 DATA197,169,000,141,004,212,169,129,141,004
400 DATA212,142,000,212,140,001,212,096,000,255
```

READY.

```
1 REM FURTHER AMENDMENTS LISTING 4
2 REM 4/3/87
3 REM
4 POKE 53281,5:POKE 53280,0:S=54272:POKE S+24,15
5 PRINT"[CLR,BLK]"TAB(15)"THE WINKER!"
6 PRINT"[HOME,CD]";
7 POKE S+4,0:POKE S+5,9:POKE S+6,0
8 PRINTTAB(9)"[BLK,SP,20CBMF]"
9 FORJ=1TO20:PRINTTAB(9)"[BLK,CBMM,RVS,WHT,20SP,OFF,BLK,CBMH]":NEXTJ
10 PRINTTAB(9)"[BLK,SP,20CBMY]"
12 T=2:GOSUB 52000:A=248:POKE V+21,255:X=172:Y=136:POKE V,X:POKE V+1,Y
13 POKE V+2,X:POKE V+3,Y
15 POKE 198,0:POKE 650,255
18 POKE 51200,172:POKE 51201,136:POKE 51202,62:POKE 51203,249
19 POKE 50432,172:POKE 50433,136:POKE 50434,36:POKE 50435,248
20 POKE 788,80:POKE 789,195
22 PRINT"[HOME,14SP,HOME]BASIC STILL WORKS!"
24 A#=MID$(TI$,1,2):B#=MID$(TI$,3,2):C#=MID$(TI$,5,2)
26 FORI=1TO2000:NEXT
28 PRINT"[HOME,19SP,HOME]"A#":"B#":"C#"
30 FORI=1TO2000:NEXT
32 GOTO22
```

CONTINUED ON PAGE 139

TOOLBOX — EXTRA COMMANDS

by David McKain

Commodore 64

A collection of routines all brought together to form a mini-toolkit David McKain is going to make an impact one day. This shows great promise from a 12 year old — a real whizz-kid!

```
0 REM *****
1 REM *
2 REM *   TOOLBOX - EXTRA COMMANDS   *
3 REM *
4 REM *       BY DAVID MCKAIN       *
5 REM *
6 REM *****
10 L= 49152: PRINTCHR$(147)
20 FOR X=0 TO 27 :T=0:FOR Y=0 TO 14
30 READ A:IF A <0 OR A >255 THEN 60
40 POKE L,A:L=L+1:T=T+A:NEXT
50 READ A:T=T-(INT(T/256)*256)
60 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
70 PRINT 1000+(X*10)"OK":NEXT:PRINT CHR$(147)
80 PRINT"LIST OF COMMANDS":PRINT
90 PRINT"SYS 49152,SA,EA,NAME,DEVICE:M.C. SAVE"
100 PRINT"SYS 49229,FIRST,SECOND:COPY MEMORY"
110 PRINT"SYS 49276:CURSOR ON"
120 PRINT"SYS 49300:CURSOR OFF"
130 PRINT"SYS 49313:FIX LOAD ERROR"
140 PRINT"SYS 49324,EA:SETS TOP OF BASIC"
150 PRINT"SYS 49345:SET NORMAL BASIC START ADDRESS";
160 PRINT"SYS 49354:WAIT FOR A KEYPRESS"
170 PRINT"SYS 49365,Y,X:MOVE CURSOR TO Y,X"
180 PRINT"SYS 49400:MIX THE COLOURS"
190 PRINT"SYS 49432,B1,B2,B3,B4:BACKGROUNDS"
200 PRINT"SYS 49497,SA,N,DATA:MULTI-POKES":PRINT
210 PRINT"NOTE THESE DOWN FOR REFERENCE":PRINT"THEN PRESS A KEY"
220 SYS 49354: PRINT CHR$(147)
230 PRINT " SAVE MACHINE CODE TO (D)ISK / (T)APE "
240 PRINT:PRINT" PRESS ANY OTHER KEY TO QUIT"
250 GET A$:IF A$="D" THEN DV=8:GOTO290
260 IF A$="T" THEN DV=1:GOTO 290
270 IF A$="Q"THEN END
```


Program

```
280 GOTU 250
290 SYS 49152,49152,49565,"TOOL-BOX",DV
300 FOR N=0 TO 200:SYS 49400:NEXT N:NEW
1000 DATA 165,043,072,165,044,072,165,045,072,165,046,072,032,121,000,255
1010 DATA 032,253,174,032,138,173,032,247,183,165,020,133,251,165,021,227
1020 DATA 133,252,032,253,174,032,138,173,032,247,183,165,020,133,253,172
1030 DATA 165,021,133,254,032,253,174,032,212,225,169,251,166,253,164,200
1040 DATA 254,032,216,255,104,133,046,104,133,045,104,133,044,104,133,048
1050 DATA 043,096,032,121,000,032,253,174,032,138,173,032,247,183,165,185
1060 DATA 021,133,252,165,020,133,251,032,253,174,032,138,173,032,247,008
1070 DATA 183,165,021,133,254,165,020,133,253,160,000,177,251,145,253,009
1080 DATA 200,208,249,096,120,169,140,141,020,003,169,192,141,021,003,080
1090 DATA 088,096,255,255,255,169,000,133,204,076,049,234,255,120,169,054
1100 DATA 049,141,020,003,169,234,141,021,003,088,096,173,063,003,133,057
1110 DATA 045,173,064,003,133,046,096,032,121,000,032,253,174,032,138,062
1120 DATA 173,032,247,183,165,020,133,055,165,021,133,056,096,169,001,113
1130 DATA 133,043,169,008,133,044,096,169,000,133,198,165,198,201,001,155
1140 DATA 208,250,096,032,121,000,032,253,174,032,138,173,032,247,183,179
1150 DATA 165,020,133,251,032,253,174,032,138,173,032,247,183,165,020,226
1160 DATA 168,166,251,024,032,240,255,096,169,000,133,251,168,169,216,034
1170 DATA 133,252,177,251,132,253,024,101,253,145,251,200,192,000,208,012
1180 DATA 242,230,252,165,252,201,220,208,234,096,032,121,000,032,253,234
1190 DATA 174,032,138,173,032,247,183,165,020,141,033,208,032,253,174,213
1200 DATA 032,138,173,032,247,183,165,020,141,034,208,032,253,174,032,072
1210 DATA 138,173,032,247,183,165,020,141,035,208,032,253,174,032,138,179
1220 DATA 173,032,247,183,165,020,141,036,208,169,091,141,017,208,096,135
1230 DATA 032,121,000,032,253,174,032,138,173,032,247,183,165,020,133,199
1240 DATA 251,165,021,133,252,032,253,174,032,138,173,032,247,183,165,203
1250 DATA 020,056,233,001,133,253,160,000,132,254,032,253,174,032,138,079
1260 DATA 173,032,247,183,165,020,164,254,145,251,196,253,240,006,200,225
1270 DATA 230,254,076,129,193,096,000,000,000,000,000,000,000,000,000,210
```

EXAMPLE 1

TO COPY THE CHARACTER SET TO MEMORY STARTING AT 12288

```
5 SYS49324,12288
10 POKE56334,128:POKE1,51:FORN=0T04095STEP256
20 SYS49229,53248+N,12288+N:NEXTN:POKE53272,28
30 POKE1,55:POKE56334,129:END
```

EXAMPLE 2

WAIT FOR KEYPRESS THEN PRINT WHICH KEY WAS PRESSED

```
10 SYS49354:PRINTCHR$(PEEK(631))
```


TRUE DESCENDERS

by F. Randall

Commodore 64 + MPS801 or MPS803

We have had several programs that offer the option of true descenders on Commodore printers . . . This is the best one to-date. It is small and compact and is faster in operation than any other non-hardware method we have encountered.

```

10 POKE52,100:POKE56,100:POKE53281,7:CLR
20 CL$=CHR$(147):CD$=CHR$(17)
30 PRINT CL$;CD$;CD$      PLEASE WAIT"
40 L= 49152
50 FOR X=0 TO 19 :T=0:FOR Y=0 TO 14
60 READ A:IF A <0 OR A >255 THEN 90
70 POKE L,A:L=L+1:T=T+A:NEXT
80 READ A:T=T-(INT(T/256)*256)
90 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
100 PRINT 1000+(X*10)"OK":NEXT
110 :
120 L=25600
130 FOR X=0 TO 22 :T=0:FOR Y=0 TO 14
140 READ A:IF A <0 OR A >255 THEN 170
150 POKE L,A:L=L+1:T=T+A:NEXT
160 READ A:T=T-(INT(T/256)*256)
170 IF T<>A THEN PRINT"DATA ERROR IN LINE"2000+(X*10)"CHECKSUM <>"A:STOP
180 PRINT 2000+(X*10)"OK":NEXT
190 :
200 PRINT CL$;CHR$(18)"          EASYSRIPT FILE PRINT          "
210 PRINT CD$;CD$"WHAT IS THE FILE NAME":INPUT F$
220 PRINT CD$;CD$"INSERT DISC, SWITCH ON PRINTER AND PRESSSPACE BAR
230 GET A$:IF A$<>" " THEN 230
240 OPEN 15,8,15:OPEN 2,8,2,"0:"+F$+",S,R":INPUT#15,E,E$:IF E<>0 THEN 320
250 OPEN 4,4: POKE 806,0: POKE 807,192
260 SYS 25648: SYS 25681
270 CLOSE 2:CLOSE 15:PRINT#4:CLOSE 4
280 PRINT:PRINT"ANOTHER FILE?"
290 GET A$:IF A$<>"Y" AND A$<>"N" THEN 310
300 IF A$="N" THEN END
310 IF A$="Y" THEN 200
320 PRINT CD$;CD$;E,E$:CLOSE 2:CLOSE 4:CLOSE 15:GOTO 280
1000 DATA 072,165,154,201,003,240,005,144,003,076,016,192,104,076,202,117
1010 DATA 241,104,141,198,192,072,138,072,152,072,173,198,192,162,004,063
1020 DATA 221,200,192,240,062,202,016,248,201,013,208,003,076,158,192,184
1030 DATA 201,032,144,023,201,145,240,019,201,146,240,015,201,128,240,128
1040 DATA 011,174,197,192,169,032,157,033,193,238,197,192,104,168,104,113
1050 DATA 170,104,076,221,237,174,199,192,240,009,024,105,008,144,001,112
1060 DATA 200,202,208,247,170,152,096,142,199,192,169,209,160,192,032,010
1070 DATA 080,192,134,034,133,035,169,249,160,192,032,080,192,134,036,060
1080 DATA 133,037,160,007,177,034,032,221,237,177,036,174,197,192,157,179
1090 DATA 033,193,238,197,192,136,016,237,076,191,192,162,003,189,205,212
1100 DATA 192,032,221,237,202,016,247,096,032,146,192,173,197,192,240,111

```


1110 DATA 017,206,197,192,162,255,232,189,033,193,032,221,237,236,197,039
1120 DATA 192,208,244,032,146,192,169,000,141,197,192,104,168,104,170,211
1130 DATA 104,096,000,013,000,080,081,071,074,089,032,015,013,008,015,179
1140 DATA 128,184,196,196,196,252,008,015,128,252,196,196,196,184,008,031
1150 DATA 015,128,248,196,196,196,184,008,015,128,128,250,128,128,128,028
1160 DATA 008,015,128,128,252,192,192,188,008,015,128,128,128,128,128,230
1170 DATA 143,008,015,132,143,128,128,128,128,008,015,128,131,132,136,223
1180 DATA 136,136,008,015,128,128,135,136,136,136,008,015,128,128,131,224
1190 DATA 132,136,136,008,032,032,000,000,000,000,000,000,000,000,220
2000 DATA 142,167,002,169,000,141,168,002,200,177,251,056,233,048,048,012
2010 DATA 027,201,010,016,023,141,169,002,162,010,169,000,024,109,168,207
2020 DATA 002,202,208,250,109,169,002,141,168,002,024,144,221,174,167,191
2030 DATA 002,096,000,162,002,032,198,255,169,102,160,000,133,252,132,159
2040 DATA 251,032,207,255,145,251,230,251,208,002,230,252,032,183,255,224
2050 DATA 041,064,240,238,096,000,162,004,032,201,255,160,000,169,255,125
2060 DATA 145,251,169,102,133,252,132,251,162,005,142,170,002,169,070,107
2070 DATA 141,171,002,169,042,141,172,002,177,251,133,254,201,255,208,015
2080 DATA 005,136,016,035,048,088,201,128,208,003,076,013,101,201,013,248
2090 DATA 240,022,232,236,171,002,240,009,201,032,208,002,132,253,200,132
2100 DATA 208,217,165,253,141,173,002,208,003,140,173,002,160,000,204,001
2110 DATA 173,002,240,016,169,017,032,210,255,169,032,174,170,002,032,157
2120 DATA 210,255,202,208,250,177,251,032,210,255,204,173,002,240,003,112
2130 DATA 200,208,243,201,013,240,005,169,013,032,210,255,200,177,251,113
2140 DATA 201,255,208,006,162,003,032,201,255,096,201,032,208,001,200,013
2150 DATA 152,024,101,251,144,002,230,252,133,251,160,000,174,170,002,254
2160 DATA 206,172,002,240,003,076,113,100,162,008,169,013,032,210,255,225
2170 DATA 202,208,250,169,042,141,172,002,174,170,002,076,113,100,200,229
2180 DATA 177,251,201,042,240,025,201,058,240,021,201,163,208,007,169,156
2190 DATA 032,145,251,076,147,100,201,013,208,230,238,172,002,076,198,041
2200 DATA 100,200,162,000,177,251,201,076,240,005,232,201,082,208,210,041
2210 DATA 200,177,251,201,077,208,203,032,000,100,173,168,002,157,170,071
2220 DATA 002,024,144,192,000,000,000,000,000,000,000,000,000,000,106

ATTENTION ALL PROGRAMMERS!!

You may be an experienced programmer – you may be a beginner. Either way, you may have come across some useful tips which could make life easier for other CCI readers.

Or maybe you have written a program, either in Basic or assembly language, that you feel is worthy of publication.

CCI always welcomes contributions from readers. We will publish any suitable listings or programming advice...and we'll pay you for it!

If you wish to contribute something for publication, we require programs on cassette or disk, together with any additional explanatory information and a CLEAR printout of any listings. (The better the original printout, the better the reproduction in the magazine.)

Please enclose a SAE if you wish to have your program returned to you. Please package disks or cassettes carefully!

The address to send contributions to is:

The Editor,
Commodore Computing International,
Finsbury Business Centre,
40 Bowling Green Lane,
London EC1R ONE

Don't forget...CCI welcomes programs for all Commodore computers – 64, Plus/4, C16, 128 plus the VIC and PET.

ADVERTISERS DIRECTORY

Access Associates	95	Meedmore	131
Advance	65	Melbourne House	81
Advanced Memory Systems	17	Meta Comco	102
Applied Systems Modules	129	Microhex Computers	128
Bitstream Publishing	133	Micro Illusions	90
Brook Computers	133	Micro Media	119
Calco	47	Micronet 800	130
Cavendish Commodore Centre	112	Micro Systems	115
Computer User's Directory	129	Micro Text	133
Culton Sales & Services	137	Micro Workshop	129
Database Mini Office	25	Midcomm International Ltd	63
Datel Electronics	107,121,122,123	Mirrorsoft	92
Delta Pi	131	MPC Software	71
Digital Shades	131	Nebulae Computers	131
Dimension	9	New Tek	105
Direct Disk Supplies	68	Nobles	126
Dosoft	31	Overbase	31
Dr. Soft	146	Pan European Services	110
E & J Software	129	Precision	4
Evesham Micros	22,23	Ram Soft	131
Felsina	110	Robtek	68
Finally Software	97	Selec	135
G & B Computers	7	Shradhan	129
G. T. Computers	133	Shifnal Satellite	146
George Thompson	113	Sixty Four Software Centre	39, 41
Granthams	111	Software Express	102
Gremlin	IFC	Software Projects	73
Hi-Voltage	101	Sogwap	111
Hobbies Exchange	146	Start Systems	63
H & P Computers	49	Supersoft	OBC
H.S.V. Computer Services	47	Triangle	13
ICPUG	126	Tri Computer	116
Insight Software	137	Trilogic	15
Inter Trading Company	131	Turtlesoft	124
Konix	33	U.S. Gold	12, 1BC
Lan Computers	108	Verran Maintenance Ltd	109
Load It	126	Wigmore House	126
Logic Mail Order	135	Worldwide Software	133
Manor Court Supplies	146	York Electronic	63

Join the cream
of the Commodore world
and make your advertising
really work!

SUMMER SALE

PLEASE READ THIS

WHOLESALE PRICES TO YOU THE USER

★ BUY 5.25" DISKS

Plain label by leading manufacturers i.e. R.P.S. Wabash etc.

	25	50	100	200	500
SS/SD 48tpi	£10.00	£19.00	£35.00	£68.00	£164.00
SS/DD 48tpi	£10.50	£20.00	£38.00	£74.00	£174.00
DS/DD 48tpi	£11.00	£21.00	£40.00	£78.00	£190.00
DS/DD 96tpi	£11.50	£22.00	£42.00	£82.00	£200.00

All above inc. envelopes, label sets and hub rings
UK MAKE Library cases brought with above only £0.95 EACH

SPECIAL OFFER

Buy 100 SS/DD 48tpi Disks without envelopes for ONLY £33.00

3.5" DS/DD DISKS

Plain label Made in Japan	10	20	50	100	200
	£17.00	£32.00	£72.00	£138.00	£270.00

LOCKABLE DISK BOXES AND LIBRARY CASES

5.25" 10 Capacity Ref. VIS 10 Library case	£1.30	
5.25" 50 Capacity Ref. YA50L	£7.50	Discount for qty
5.25" 100 Capacity Ref. YA100L	£10.00	10% for 3+
3.5" 10 Capacity Ref. MCS 10	£1.30	20% for 6+
3.5" 40 Capacity Ref. YA40L	£8.50	25% for 12+

SPECIAL OFFERS

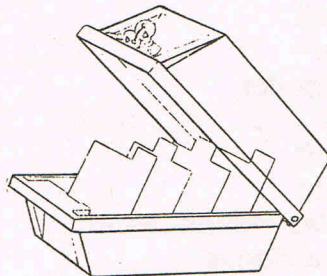
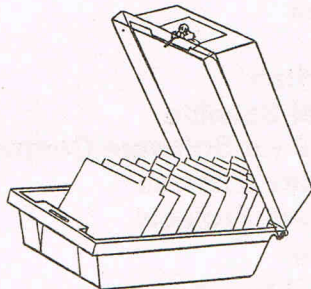
★ EXCEPTIONAL VALUE ★

25 5.25 DS-DD DISKS PLUS
100 CAPACITY LOCKABLE DISK BOX
FOR ONLY £18.75

25 5.25 DS-DD DISKS PLUS
100 CAPACITY LOCKABLE DISK BOX
FOR ONLY £30.75

20 3½" DS-DD DISKS PLUS
40 CAPACITY LOCKABLE BOX
FOR ONLY £36.00

OR
50 3½" DS-DD DISKS PLUS
90 CAPACITY LOCKABLE BOX
FOR ONLY £78.00



REMEMBER THE PRICE YOU SEE IS ALL YOU PAY.
THEY INCLUDE VAT AND CARRIAGE

Cheque or Postal Order to:



Manor Court Supplies Ltd

Dept CCI, Glen Celyn House, Penybont,
Llandrindod Wells, Powys LD1 5SY
Telephone: 0597 87784 or 0597 87792

Orders accepted from educational & government depts.
Dealer enquiries invited.

Scandinavian countries please contact our agent for prices
Magnum Data, PO Box 627, N-5001 Bergen, Norway.

LOOK FOR THE PLAIN PACK...

THAT PACKS TWO PLANES!

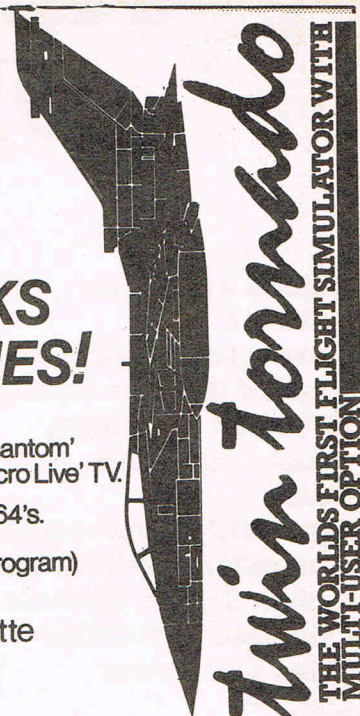
Developed from 'Double Phantom' on the BBC, as seen on 'Micro Live' TV.

Runs on single or linked C64's.

(Link cable voucher with program)

£9.95 Turbo Cassette

£11.95 Disc



THE WORLD'S FIRST FLIGHT SIMULATOR WITH MULTI-USER OPTION

Locally, or direct, first class post free.

PHONE 24 HOUR **0903 776000** ACCESS/VISA

OR CHEQUE/P.O. TO P.O. BOX 66
EAST PRESTON WEST SUSSEX BN16 2TX

DOCTOR SOFT SIMULATIONS

SHIFNAL SATELLITE COMMUNICATIONS

COMMODORE 64 Power Pack Problems Need a new Power Pack?

Need a new Power Pack?
or do you!

The **SRM** Module from Shifnal Satellite Communications gets those faulty power packs working again. Don't spend £30 to £35 on a new power pack when all you need is an **SRM**.

Works with **FAULTY POWER PACKS**, if your power light won't come on or comes on, then goes out, then the **SRM** is for you.

PLUGS IN LINE WITH YOUR POWER PACK

Prolongs the life of a good power pack

AS REVIEWED IN ZAPP 64 JUNE 1986

PATENT PENDING

1 year parts and labour guarantee

The **SRM** is only available from:
SHIFNAL SATELLITE COMMUNICATIONS
45 DANESFORD, HOLLINSWOOD,
TELFORD, SHROPSHIRE TF3 2DZ.

PRICE £17.95 + POSTAGE. WE SEND WORLD WIDE
POSTAGE: UK & BFPO £1.50 (Recorded Delivery)
OUTSIDE UK £5.00

PAYMENT BY CHEQUE, P.O., INTERNATIONAL MONEY ORDER,
ACCESS, VISA
PLEASE ALLOW 28 DAYS FOR DELIVERY
AS DEMAND WILL BE HIGH



The Ultimate Golf Challenge

World Class

LEADERBOARD™

BOARDS

- Full scoreboard printout.
- Course Editor allows you to arrange any of the holes from all four courses to form your own personal 18 hole golf course. (Disk)
- More trees (upto 192 per hole), traps and rough.
- Practice putting green and driving range.
- Improved graphics and playability increase difficulty and add realism.

● Aerial view gives you a bird's eye view of the course and your position.

● One to four players can compete in MEDAL, MATCHPLAY and BETTER BALL competitions.

● Realistic choice of club, distance, type of shot (hook, slice or putting).

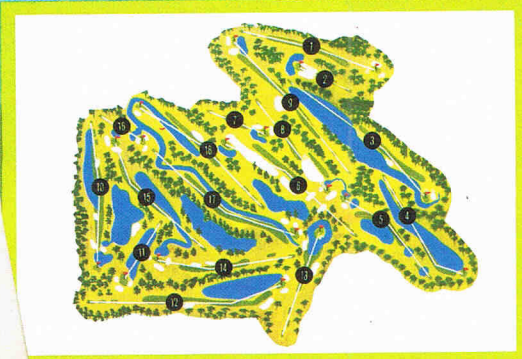
● Unlimited backups of World Class Leaderboard can be made for your archives. (Disk)

U.S. Gold proudly present the final challenge in the Leaderboard series – World Class Leaderboard – the Ultimate test of your skill and judgement, the unparalleled successor to Leaderboard and Leaderboard Executive. Now you have the opportunity to play the same courses that have challenged golf's greatest legends, three famous and classic 18 hole golf courses in which each hole is authentically reproduced for distance, traps, trees and water hazards.

- St Andrews ● Dorset Country Club ● Cypress Creek

And the fourth, the "Gauntlet Country Club" has been specifically designed for the "World Class Leaderboard" challenge – only those who can master the testing conditions of the best golf courses in the world will come near to mastering "The Gauntlet".

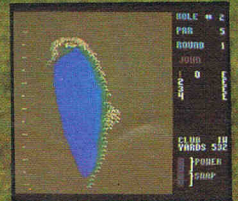
Whether at novice, amateur or professional levels, "World Class Leaderboard" will challenge you with the same demanding strategy, skill and decision making options set by its real life counterpart.



The Gauntlet – designed to create the greatest test of a golfer's true skills and abilities. Few courses combine such a searching trial of accuracy and courage, harrowing and perilous in the extreme.

EUROPEAN COMPUTER GOLF CHAMPION 1987

In honour of the outstanding excellence of this, the ultimate golf game, U.S. Gold have organised a competition to find the European Computer Golf Champion of 1987. In every World Class Leaderboard game there is a scoreboard. Practice your skills, test your courage and then play your best possible round on the Ultimate course – The Gauntlet – Record your best score, have it verified by an independent witness and send it to U.S. Gold. Novice, Amateur and Professional – there's a prize for each – Professional: a full set of Ping golf clubs – "the ultimate club in the world." Amateur: a full set of Gallagher golf clubs – a superb asset in improving your game. Novice: 10 free golf lessons with the "teaching professional" of your local golf club. When all entries have been received – closing date 31st September 1987 – the top four players at each level will be called to a central venue to play-off for the title European Computer Golf Champion 1987 and receive their trophies and prizes.



screen shots from CBM 64/128 version

CBM 64/128 £9.99 TAPE £14.99 DISK
 AMSTRAD £9.99 TAPE £14.99 DISK
 SPECTRUM 48/128K £8.99 TAPE
 SPECTRUM +3 £12.99 DISK

ACCESS



U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 356 3388.

"U.S. Top Seller is British"

**CBM 64
and CBM 128
40 + 80
Column
Versions**

The Essential Package

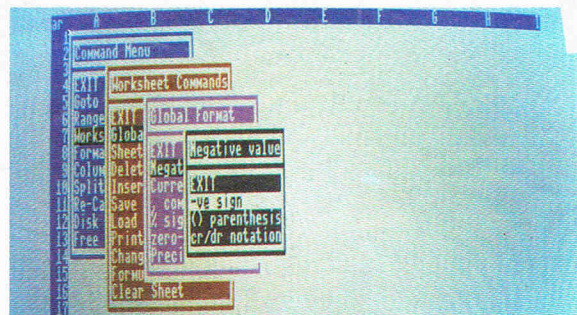
Over there they call it Swift-Calc; over here we just call it Swift, but whatever you call it, it's the most affordable and easy-to-use professional quality Spreadsheet around!

The Americans have voted with their wallets and made Swift one of the top ten Home Management programs, according to the highly respected Billboard chart. But it's British, written by Dave Middleton of Metamorphosis Developments, and published in the UK by Audiogenic Software.

Swift Spreadsheet is the essential financial modelling package. Use it in business, at home, or in your club or society to help you in budgeting, costing, quotations, household financial planning, or any task where the manipulation of figures is involved.

Swift will prove indispensable in forecasting and decision-making due to its 'What If' capabilities – it can show you instantly how results are affected when you change one or more of the contributory factors.

Even if you haven't used a Spreadsheet before, you will soon be able to harness the power of Swift to your own special requirements.



WHAT THE REVIEWERS SAY

"Companies are spending thousands of pounds on micros running Lotus 1-2-3... home users have access to similar powerful programs like Audiogenic's Swift Spreadsheet" *The Guardian*

"This product is so outstanding in so many ways" *Commodore Horizons*

"Audiogenic's Swift Spreadsheet is far and away the best of the low-cost spreadsheets for home micros" *Sunderland Echo*

VERSIONS AVAILABLE

Commodore 128 and 64 – both versions on one disk
Commodore 128 and 64 – both versions on one cassette
Atari 800XL and 130XE – both versions on one disk
Atari 800XL and 130XE – both versions on one cassette
BBC-B (40 Column screen display) – EPROM



Swift is the Trade Mark of Metamorphosis Developments Ltd. Now available from...
WH Smith, Boots, Laskys and all good software dealers.



Best Value Package

Ever at £24.95 (BBC version £29.95)

ONLY SWIFT CAN GIVE YOU ALL THESE FEATURES...

- Easy to use – With pop-up menu control.
- Easy to learn – Comes with an instruction manual that is comprehensive and comprehensible.
- Enormous Spreadsheet area – Cell matrices are A1 to BL254 (Commodore 128 and Atari 130XE); A1 to Z254 (Commodore 64 and Atari 800XL); or A1 to Z126 (BBC-B).
- Professional 80 column screen display – On Commodore 128 version only (RGB monitor required).
- Highly flexible cell formatting – Column widths individually variable, user definable decimal precision, and text formatting to left, right or centre.
- Lots of numerical display options – Minus signs, debit brackets or cr/dr notation for negative values, currency symbols, percent sign, etc.
- Simultaneous display of two sheet areas – Horizontal or vertical split-screen facility.
- Graphical display option – Converts cell values into bar graphs.
- Can be used by unskilled operators – Automatic execution of pre-programmed operational sequences.
- BBC version supports both Tape and Disk filing systems – Comes as an EPROM chip.
- Commodore version gives easy interface to parallel printers – Built-in Centronics Interface.

Order now by phone... (0734) 303663

...or via Prestel to our Telex: 847826 AUDGEN G

Audiogenic Software Ltd.

PO Box 88 Reading Berkshire RG7 4AA