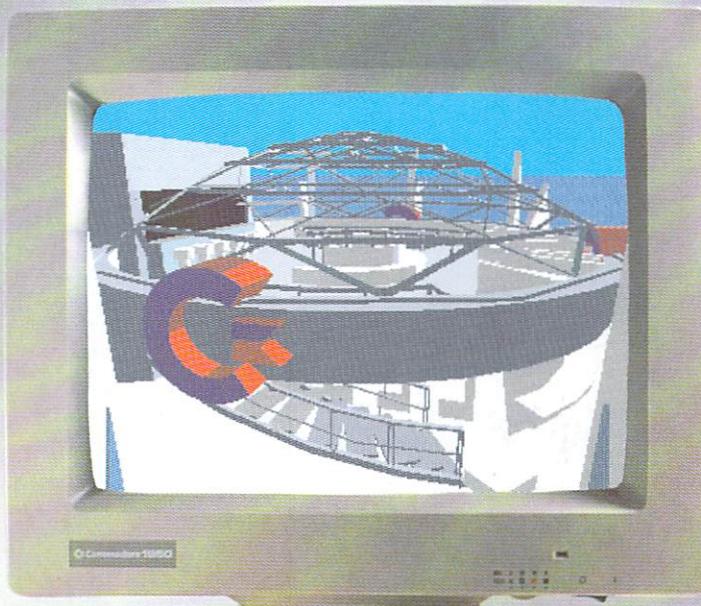


Volume 3
Number 2
July 1990
£2.95

An Interactive Publication

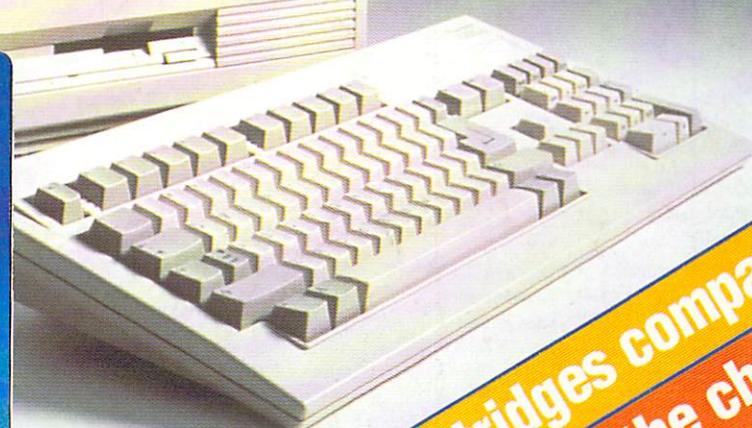
AMIGA

COMPUTING



The new Amiga

ON TEST



July 1990

AMIGA

COMPUTING

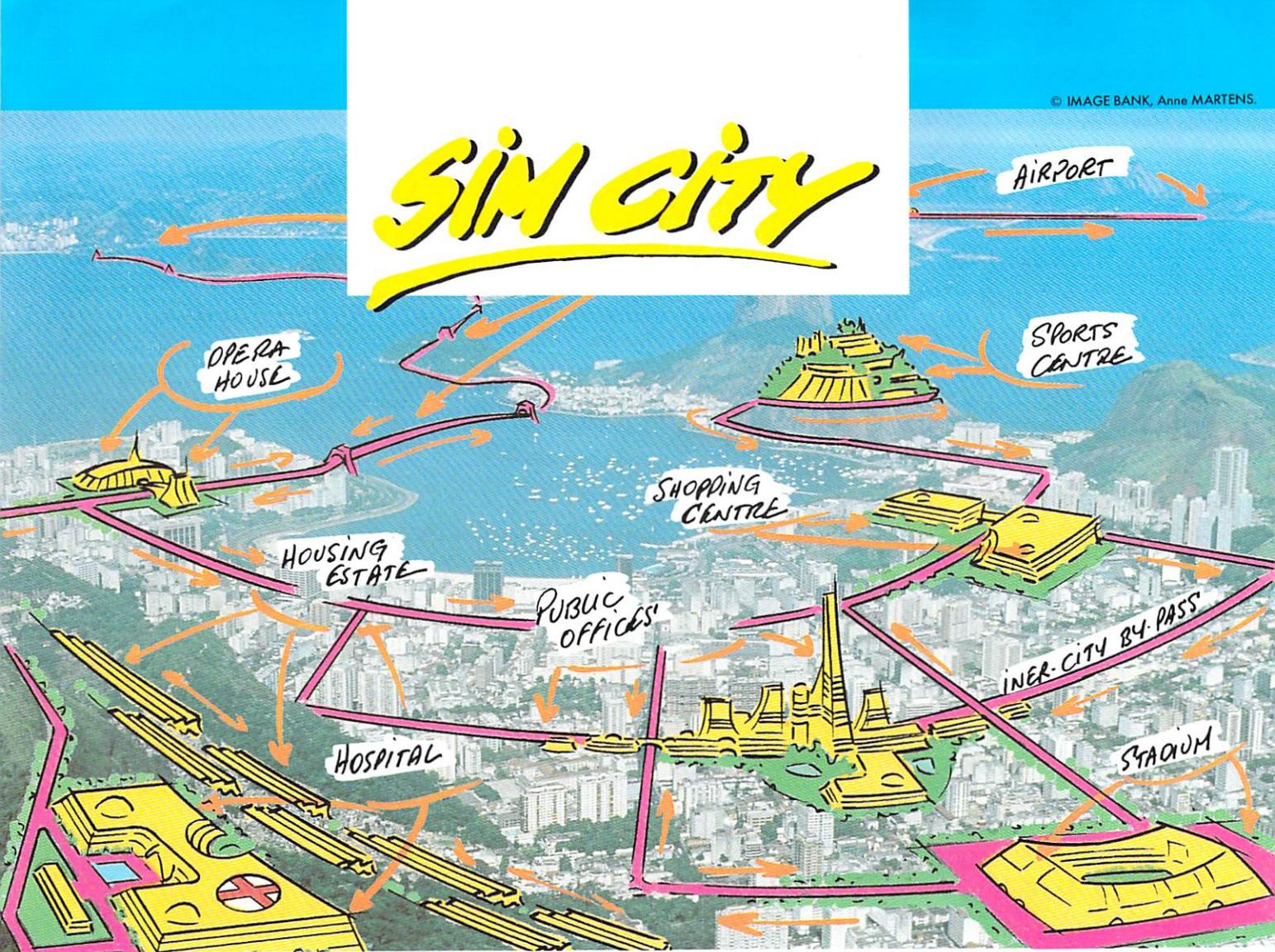
A MEGABYTE OF SUPERB SOFTWARE

- NComm: Full version 1.9 of this Norwegian comms package. Features Zmodem transfers and a Host mode.
- PShow: Now you can view IFF files crunched with PowerPacker.
- Musicbox: Another mysterious tune.
- Klide: Stunning examples of just what you can do with a decent line-drawing routine.
- The Code Clinic: Write your own boot-block with this month's source-code.
- ProtectOMagic: Set your protect flags from the comfort of this user-friendly front end.
- Miniblast: Another Anders Bjørn classic. This time a Workbench-friendly Scramble clone - with editable levels!
- HotSummerNights: Music from Howie Davies.

Full instructions are in the July 1990 issue of Amiga Computing



Freezer cartridges compared
Ray tracing on the cheap
Teach yourself DTP
WIN an
A1500!



On seeing the crumbling estates, out-dated roads and rusty bridges of your city, how many times have you said "Put me in charge for a day and I'll make this wretched thing work!"

Now, with Sim City, take the destiny of the world's greatest cities in hand. Or take charge of a new evolving and growing city. Become both mayor and city planner of a dynamic real-time simulation.



Build houses, streets, factories, airports, a stadium, or even nuclear power plants. Organise urban transport, hire police, firemen, bulldoze entire neighbourhoods.

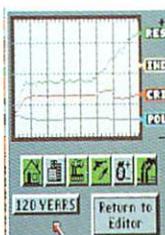
Raise and collect taxes, balance your budget, manipulate property values. Sim City is alive. It's loaded with animation and detailed sound effects. Build roads, cars appear. Lay tracks, trains go. Build an airport, planes fly. Neighbourhoods go upper-class. Areas deteriorate into slums. Small industries grow into huge factories. Everything is managed and animated in real



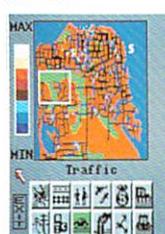
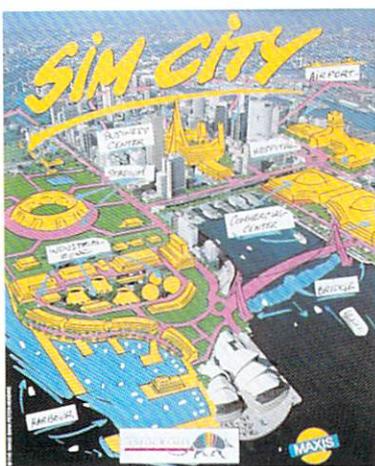
SIM CITY

What you should know about the game of the year.

NOW AVAILABLE ON ST



time. Every decision instantly influences the life of your town. In a special mode, you can even cause tornadoes, floods, fires and other disasters at your whim. Save San Francisco from the great earthquake of 1906. Or save Tokyo of pollution and from his famous B-movie monster. Sim City is an all-absorbing unique game which contains 8 pre-defined scenarios: e.g San Francisco, Tokyo, Rio de Janeiro... With it's exceptional depth of play, it's still simple to play with icons and graphics, without text commands.



Design and build the city of your dreams. Sim City gives you the keys. The rest is up to you.

INFOWORLD Volume II Issue 20: "People playing Sim City are completely plugged into the world they create, disappearing for hours."

NEW YORK TIMES: "The model is very sophisticated, yet understandable. And just as important, it's fun, too."



INFOGRAMMES



OVERSEAS MEDIA DISTRIBUTORS LTD



OVERSEAS MEDIA DISTRIBUTORS LTD

OM HOUSE, 139-141 DOMINION ROAD, GLENFIELD, LEICESTER LE3 8JB

MINIMUM ORDER VALUE

£12.50

TELEPHONE: [0533] 877733

FACSIMILE: [0533] 873999

OMD DISKS

- TOP QUALITY
- CERTIFIED
- GUARANTEED
- 100% ERROR FREE
- LABELS SUPPLIED

	25	50	100	200
D6010 3½" DSDD 135 TPI	£19.50	£33.50	£59.50	£115.00
D6020 5¼" DSDD 48 TPI	-	£21.90	£39.50	£72.50

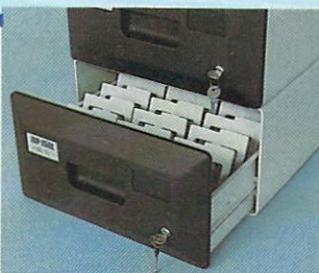
GET £2.50 OFF ANY OTHER PRODUCT WHEN YOU ORDER OMD DISKS

3½" DISK STORAGE SYSTEMS

3½" x 50 A0023	£7.90
3½" x 100 A0053	£9.90
3½" x 120 A0063	£10.90

- LOCKABLE
- STACKABLE
- IMPACT RESISTANT

Holds 150 disks
£24.50
Ref. A0084



MANUAL DATA SWITCHES



All metal case with rotary switches.

Ref.	36pin.	Ref.	25pin.
2 way X0001	£17.50	X0011	£16.50
4 way X0003	£22.50	X0013	£21.50
X way X0004	£24.50	X0014	£23.50

CABLES

A0801 25pin Male/36pin Male	2m	£7.50
A0804 25pin Male/25pin Male	2m	£8.50
A0805 25pin Male/25pin Female	2m	£8.50
A0806 36pin Male/36pin Male	2m	£8.50

COMPATIBLE PRINTER RIBBONS

AMSTRAD 8256	R7410	£3.90
AMSTRAD DMP2000/3160	R4820	£2.75
AMSTRAD DMP4000	R4260	£4.50
CANON PW1080	R2230	£4.25
CITIZEN 120D	R4880	£4.25
EPSON LQ800	R4370	£3.90
EPSON LX 80/56	R4540	£2.90
EPSON MX/FX/RX80/FX/ LX800	R2730	£2.90
NEC P2200	R8440	£4.50
PANASONIC KXP1081	R2280	£4.50
PANASONIC KXP1124	R9040	£4.90
SHINWA CP80	R6981	£4.50
STAR NL10	R7610	£3.90
STAR LC10	R8610	£3.90
STAR LC10 (Colour)	R8696	£7.90
STAR LC24-10	R8680	£4.50

BUY 10 GET 1 FREE

MANY OTHERS AVAILABLE - PLEASE CALL

MICE

X2005 Atari High Resolution Replacement Mouse	£24.50
X2006 Amiga High Resolution Replacement Mouse	£24.50
X2010 Naksha Mouse Suitable for Amiga & Atari	£39.00

ALL PRICES ARE
INCLUSIVE OF VAT AND
DELIVERY (UK MAINLAND ONLY)

- TOP QUALITY
- CERTIFIED
- GUARANTEED
- 100% ERROR FREE
- LABELS SUPPLIED

TELEPHONE: [0533] 877733

FACSIMILE: [0533] 873999

CHOOSE FROM
SONY OR
Verbatim



1 BOX	3 BOXES
£13.90	£12.90
5 BOXES	10 BOXES
£11.90	£10.90

Price per box of 10 disks

3½" DISK STORAGE SYSTEMS

3½" x 50 A0023	£7.90
3½" x 100 A0053	£9.90
3½" x 120 A0063	£10.90

- LOCKABLE
- ANTI-STATIC
- SMOKED LID

PRINTERS

CITIZEN



H0100 120D	£139.00
H0101 SWIFT 24	£320.00
X0900 SWIFT 24 COLOUR KIT	£38.00
H0102 PRODOT 9	£375.00
H0110 OVERTURE 106 LASER	£1295.00

Panasonic



H0200 KXP 1081	£155.00
H0201 KXP 1180	£170.00
H0202 KXP 1124	£250.00
H0203 KXP 1592	£320.00
H0210 KXP 4450i LASER	£1599.00

NEC



H0300 P2+	£299.00
H0301 P6+	£469.00
H0302 P7+	£585.00

Star



H0000 LC 10	£165.00
H0009 LC 10 II	£195.00
H0001 LC 10 COLOUR	£205.00
H0002 LC 24-10	£245.00
H0003 FR10	£370.00
H0020 LP-8 LASER	£1650.00

SPECIAL OFFER

PARALLEL CABLE IS INCLUDED WITH
EVERY PRINTER

WHEN YOU ORDER A PRINTER BUY A
BOX OF PAPER 11" x 9.5" 60gsm AT
£11.50 (INC VAT)

COMPUTER PAPER

11x9½" 60GSM	Ref. P0101	Box of 2000	£15.90
PERFECT A4 85GSM	Ref. P0301	Box of 1000	£13.90

COMPUTER LABELS

• SELF ADHESIVE	• TRACTOR FED
Packed 2000 3½" x 17/16"	£11.90
1, 2 or 3 across 4" x 17/16"	£12.90

AMIGA COMPUTERS

H1000 "BATMAN" PACK

£399.00

H1001 "CLASS OF THE '90'S" PACK

£549.00

NEW 'FLIGHT OF FANTASY'

PACK - H1002 **£399.00**

COMES COMPLETE WITH:

HARDWARE

• Amiga 500 Computer

• Mouse

• TV Modulator

SOFTWARE

• F29 Retaliator (Flight simulator)

• Deluxe Paint II

• Escape from the Planet Of The Robot Monsters

• Rainbow Island

COPY HOLDERS

Desk Top Ref. A0301	£7.90
With adjustable arm	
80 Column Ref. A0302	£13.50
132 Column Ref. A0303	£19.50

MONITOR STAND



HOLDS 14" MONITOR £14.50

Ref. A0701 All monitor stands revolve 360° and tilt up to 25°

DUST COVERS

Amiga A500	1PC	C0102	£5.50
Atari 1040 STFM	1PC	C0108	£5.50
Printers 80 Col*	1PC		£4.50
Printers 132 Col*	1PC		£5.50

*Please specify printer

HOW TO ORDER

*Cheque: Please make cheques payable to OMD Ltd. and send them to the address shown above.

*Credit Card: We accept Access & Visa. Please telephone on (0533) 877733 (24 hours).

All orders received by 12 noon are despatched on the same day.

Overnight delivery available £7.50 extra.

Managing Editor
Derek Meakin

Reviews Editor
Nic Veitch

Technical Editor
John Kennedy

Production Editor
Peter Glover

Art Editor
Tym Lecky

Advertisement Manager
John Snowden

Advertising Sales
Wendy Colburn

Published by:
Interactive Publishing Ltd,
Europa House, Adlington Park,
Adlington, Macclesfield SK10 4NP.

Editorial: 0625 878888
Advertising: 0625 878888
Subscriptions: 051-357 2961
Fax: 0625 879966
MicroLink: MAG001

interactive publishing

Chairman
Derek Meakin

Managing Director
Hugh Gollner

Commercial Director
David Hirst

Amiga Computing welcomes articles for publication. Material should be typed or computer-printed, and preferably double-spaced. Program listings should be accompanied by disc. Please enclose a stamped, self-addressed envelope, otherwise the return of material cannot be guaranteed. Contributions can only be accepted for publication by Interactive Publishing Ltd on an all-rights basis.

© 1990 Interactive Publishing Ltd. No material may be reproduced in whole or in part without written permission. While every care is taken, the publishers cannot be held legally responsible for any errors in articles, listings or advertisements.

Amiga Computing is an independent publication and Commodore Business Machines (U.K.) Ltd is not responsible for any of the articles in this issue or for any of the opinions expressed.

News trade distribution: Comag Magazine Marketing, Tavistock Road, West Drayton, Middlesex UB7 7QE. Tel: West Drayton (0895) 444055.

AMIGA SCENE

7 NEWS ROUND-UP

Amiga voted computer of the year, APL updated, a new 24-bit framestore, Amiga game sales top arch-rival's...and much more.

LETTERS

21 EZRA SURF'S POSTBOX

If you've got a gripe with mice, Or your printing device, There's no time to waste, He's the ace on the case.

PROGRAMMING

27 THE CODE CLINIC

Revealed at last: The secrets of the bootblock explained by coding genius Jolyon. Plus a look at the official programming manuals.

SHORTIES

33 BOOK REVIEWS

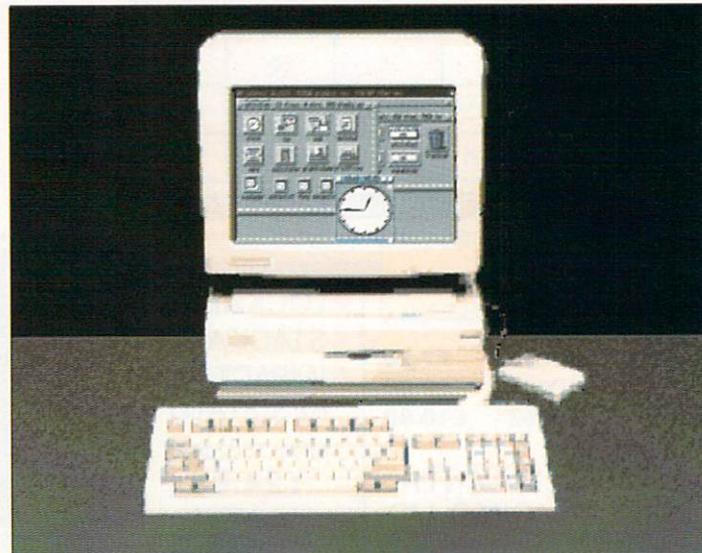
A three letter abbreviation special with books on DTV and DTP. Two more contenders for the Amiga version of the Booker Prize.

GAMES

36 AMIGA ARCADE

The headlines: Anco get promoted to the first division with Player Manager but Mastertronic's Protector faces relegation.

Ray tracing needn't be expensive, as Stewart C Russell discovers



The shape of things to come? It's taken its time, but the new Amiga is here, now. We have a hands-on review of the machine everyone is talking about

COVER STORY

68 A DREAM COME TRUE

It's here! The new A3000 has finally been unveiled. The team were at the launch and managed to get their hands on one for a detailed review.

PORTFOLIO

78 ARTISTS' SHOWCASE

Weird. Very weird. These and other comments will spring to mind as you visit the gallery of Pierre Jolivet's imagination.

COMPETITION

74 WIN AN A1500

Probably the most exciting expansion system in the world. Assuming you win, you can upgrade your A500 for the price of a stamp.

REVIEW

80 GAME FREEZERS

Suddenly Amiga "freezer" cartridges are all the rage. We passed our collection on to the cool Jolyon Ralph for an expert opinion.



REVIEW

88 ARENA ACCOUNTS

It's a man's life in accountancy. Expert rabbit tamer Alex Aird takes a break to give this Amiga package a thorough workout.

PUBLIC DOMAIN

93 BUDGET RAY TRACING

If you thought you only got what you paid for, then Stewart C. Russell has a surprise in store. Cheap three-dimensional modelling is here.

DTP

99 NEW SERIES

In the first of a three part guide to desktop publishing, Nic Veitch covers layout and design concepts. Phew! What a scorcher.

SHORTIES

103 A500 PSU LIGHTGUN

Reviewed – a replacement power supply with added Oomph, and the heavy artillery moves in with an Amiga compatible lightgun.

CLOSE GADGET

114 LAST BLIT

A typical day in the life of a busy Amiga Computing reviews editor. Bet you thought a career in journalism was a cushy number.

COVER DISC

59 THE DISK

NCOMM

The latest version of the excellent comms package from Norway which threatens to overtake old favourites like JRComm and Access!

KLIDE

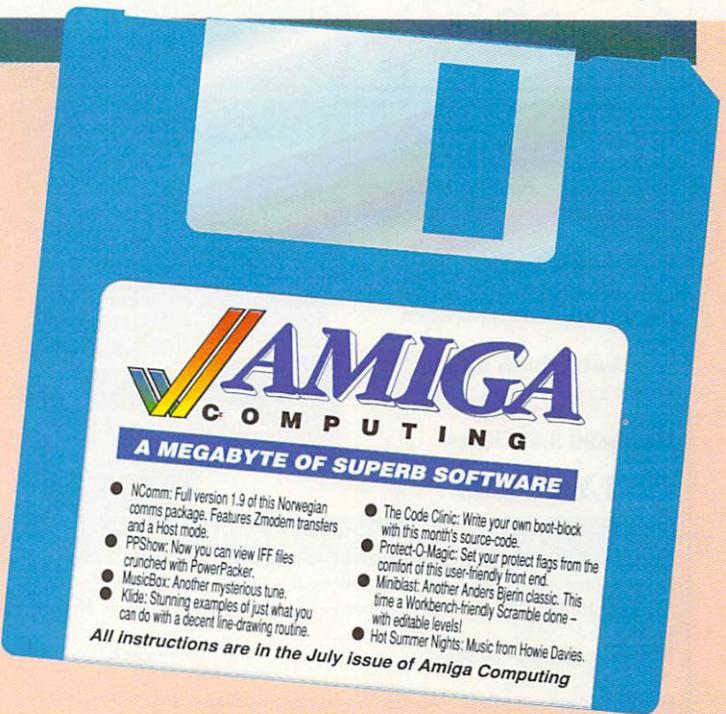
Amazingly fast line-drawn graphic experience. You'll find it excellent accompaniment to your favourite Floyd tracks.

PPSHOW

If you save disk space by PowerPacking your IFF files, you can now view and print them without de-crunching first.

MINIBLAST

Excellent multi-tasking scramble-type game which plays in a workbench window. Anders Bjerin delivers the goods again.



PROTECT-O-MAGIC

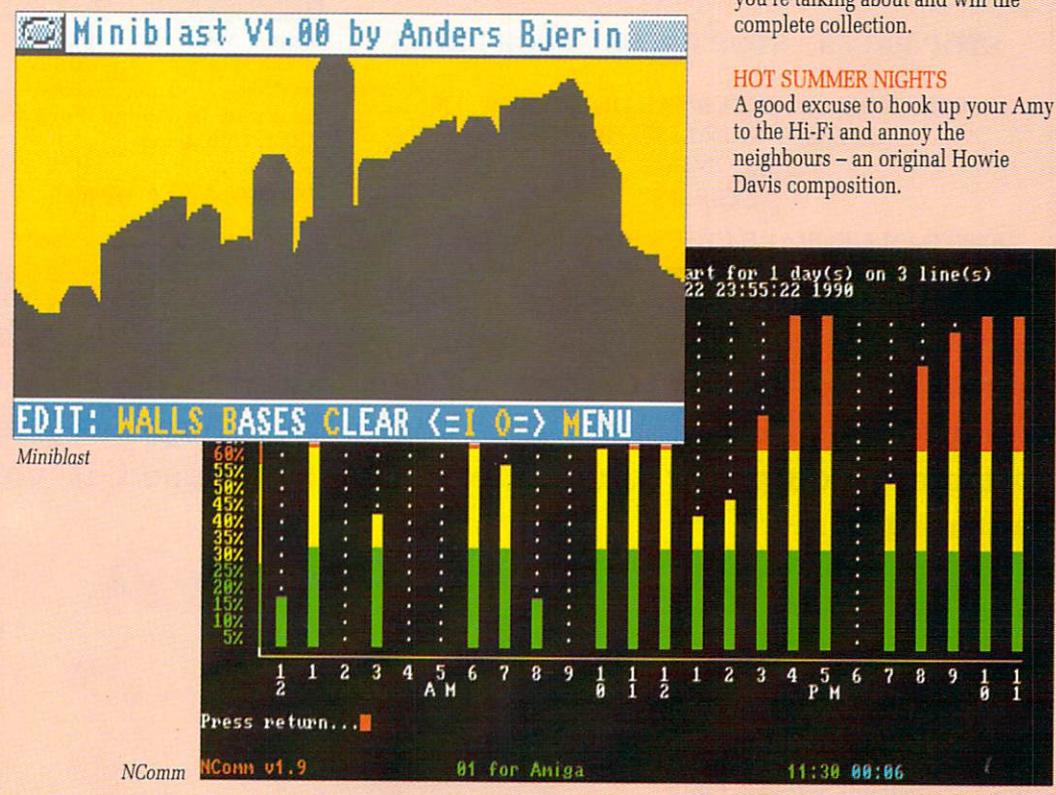
At last you can alter all those file flags easily from the comfort of a user-friendly front end.

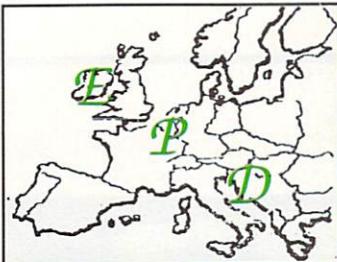
MUSICBOX

Another "Name That Tune" competition in this month's music slot. Convince us you know what you're talking about and win the complete collection.

HOT SUMMER NIGHTS

A good excuse to hook up your Amy to the Hi-Fi and annoy the neighbours – an original Howie Davis composition.





ALL PRICES INCLUDE V.A.T.
Add £3.95 For Post & Packaging
Next Day Courier £9.95

Please make cheques payable to E.P.D.

CORPORATE EDUCATION & TRADE
ENQUIRIES WELCOME

EUROPEAN PERIPHERAL DISTRIBUTION

Peripheral House
DEPT AF, Unit 36 Cranford Gardens
Compton Acres
West Bridgford
Nottingham
NG2 7SE

Telephone (0602) 841640

BANX DISK BOX

The most economical 3.5" disk storage system, with all these features on the market

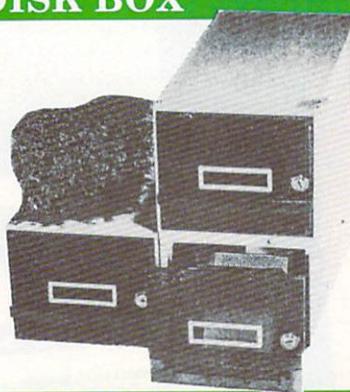
Pull out drawer.

Lockable with two keys.

Stackable both up & sideways.

Holds 90 3.5" Disks

ONLY £11.95



3.5" DISKS FROM 39p

Double sided 3.5" Discs, Individually Wrapped, 880K 135tpi, ideal for Amiga, ST, Etc. Made in Japan. 100% Error Free. 2 for 1 Warranty or Money back.

Minimum Quantity 50 Disks £0.39 each.

Genuine 'Sony' 3.5" discs. Double sided. Made in Japan, sold in Sony outers, probably the best disks in the world!

Minimum Quantity 50 Disks £0.42 each.

3.5" Diskette box holds either 100 or 50 3.5" disks
box to hold 100 3.5" Disks £4.95.
box to hold 50 3.5" Disks £3.95.

Prices for disk boxes are if disks bought at same time.

STOP PRESS STOP PRESS STOP PRESS

CHINNON 3.5" EXTERNAL DRIVE NEW IN,
LATEST SLIMLINE DESIGN

ONLY
£62.95

A590 RAM UPGRADE CHIPS RING FOR DETAILS

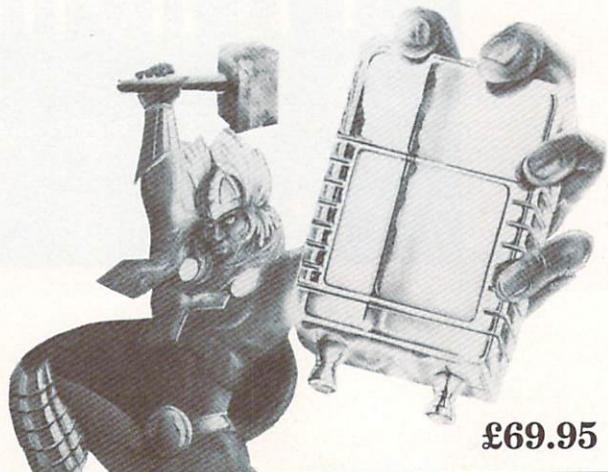
NORDIC POWER CARTRIDGE

Get the most from your computer. Get inside where the action is. Freeze it to ice for tomorrow's use. Easy to fit, easy to use. It is a must for expert programmers and beginners. Impress your friends with the ultimate computer tool. Once you have used it you will never work without it!

* SUPER PROGRAMME FREEZE (SAVES LEVEL TO REPLAY AT ANY TIME) * BACKUP FOR 2 DRIVES * FULL MACHINE LANGUAGE MONITOR (DISASSEMBLER ANY FILE AND SEE HOW IT WORKS, ASSEMBLE YOUR OWN CODE, HEX DUMPS, ETC.) * GRAPHIC UTILITY (GETS ANY SCREEN OUT OF A GAME, NUMEROUS ADJUSTMENTS FOR GRAPHICS, SAVE AS IFF FILES, ETC.)

PICTURE REPRODUCED BY KIND PERMISSION
FROM DATA & ELECTRONICS

NORDIC POWER & ACTION CARTRIDGE
ARE REGISTERED TRADEMARKS



£69.95

SOUND SCANNER (FIND SAMPLES WITHIN A GAME, SAVE SOUNDS AS IFF FILES, SOUND EDITOR TO ALTER SOUNDS FOR YOUR OWN USE) * TRAINING MODE (SLOW DOWN A GAME TO GET PASSED THAT DIFFICULT LEVEL) * INTEGRATED SLIDE SHOW (COMPILE A DISK OF YOUR FAVOURITE GRAPHICS AND VIEW THEM FROM THE SLIDE SHOW) * MANY MORE FEATURES TOO NUMEROUS TO MENTION * RING FOR DETAILS.

Teachers expand the keyboard concept

A GROUP of Birmingham teachers have designed a product which gives even more scope to the already versatile Concept Keyboard, now in full production for the Amiga.

Under the name of Think Ltd, they have produced the Overlay Designer and Manager which works on the Concept Keyboard Company's serial version designed for the Amiga.

The package can be used to create overlays for almost all Amiga software, so allowing many more people to enjoy using an Amiga - particularly young children and disabled people. It includes software designed by Think, but teachers can also design their own software.

Using the overlay package, keys on the Concept Keboard can be tailored to represent words or phrases. A new development will incorporate synthesised speech, so pupils will hear the word they have put in and even more software is on the drawing board,

which will represent a whole page at the press of one key.

Commodore dealer Mr.Disk (021-616 1168) is to package and sell Overlay Designer and Manager which costs £19.99, including a comprehensive manual.

"There is going to be a tremendous amount of interest when it gets up and running", said Alan Caddy of Mr.Disk. "Programmers at Think are coming up with lots of ideas. Being teachers themselves, they know just what teachers need and are designing their software in

REVIEWS in *Amiga Computing* are on the ball. Nic Veitch introduced readers to the wonders of the APL mathematical language in May, pointing out some of its drawbacks. Quite independently, developer MicroAPL (071-922 8866) has produced an upgrade which covers many of these points. Full marks Nic.

Version 7.30 of APL68000 improves its Amiga interface and includes new Events handling software which permits much more effective control of the Amiga environment from within the APL68000 workspace.

Other new features include an improved requester interface, an improved editor for functions and text matrices,

Modest smiles dept

quicker mixed functions such as reshape and catenate, support for a unified keyboard, a multi-workface which allows tasks to share variables, new bitmap graphics and multi-font support plus many new functions in the support workspaces.

MicroAPL issues free runtime versions of APL68000 to developers who complete a simple licence form. This policy has had considerable success in encouraging the release of packages written in APL68000, particularly in the USA.

Full price, £99.95. Upgrade price for owners of versions 6 and 7, £30.

Pool the other one

TAM MARKETING is following up its well known Tipster horse racing program with Punter for those who fancy a quick eight from ten every now and again.

The system is heavily based on the algorithms from Tipster but obviously the database will be altered to accept pools information from any national newspaper.

Provision is made for all combination plans and so the program should work with any football pool coupons.

The Punter is available now from TAM (0392 215485) price £29.95 inclusive of VAT and P&P.



Win a pack with Batman

COMMODORE and Warner Home Video have teamed up for a competition which gives people who rent the new Batman video a chance to win one of 10 Amiga 500 Batman Packs. It is claimed to be the first interactive competition in the UK to involve a major movie title.

After watching the video, viewers must answer two riddles posed at the beginning and must then complete a tie-breaker question. The 10 correct entries judged to have the most interesting tie-breaker will each win a pack, which includes an Amiga

500 and Batman game plus a selection of software titles including The New Zealand Story, Deluxe Paint II graphics package and F-18 flight simulator. The packs are worth £400.

"This competition is the first of its kind and we are excited to be presenting such a fabulous offer with Warner Home Video", said Commodore's managing director Steve Franklin.

"Batman and the Commodore Amiga 500 Batman Packs are two great success stories and by combining the two I'm sure that we will score a huge hit with viewers".

Disc transfer package

COMMODORE has shown interest in promoting a new package from Track Computer Systems (0332 41817) which allows users of the Commodore BBC Emulator to copy disks over from BBC format to Amiga.

Called Transfer, it will copy programs, machine code and data files from the BBC to the Amiga and allows users to use their Emulator to the full.

Chris Harvey of Track said: "Anyone who owns the Commodore BBC Emulator will have found out by now that it will not allow them to copy disks over from BBC format to Amiga.

"Since we announced Transfer, Commodore have become very interested in it.

"We sent them a copy and received a telephone call to say they may be willing to promote it".

Transfer costs £19.95 including BBC to Amiga cable. It comes packaged with four small utilities - a database, a teletext and screen editor, a disassembler and memory mover, Mem Move.

>

line with that.

"There is a lot of interest now in Concept Keyboards for serial machines like the Amiga particularly in the UK and education fields in America, Australia and New Zealand".

Underlining the importance of their Amiga product for people with sight problems, Think Ltd was recently invited to the International Conference on Education for the Visually Handicapped at Warwick University.

The company demonstrated the software using Talker, the talking word processor, Pro-Write v2.5 colour word processor, Excellence and Kindwords. The teachers showed how one overlay card for Notepad could be used with each of these and many other word processors available for the Amiga.

The showing by the Think team, Mr. Disk and Andrew Harland from Commodore's demonstration team, created great interest among the international delegates at the conference.

Formerly known as Star Microterminals, the Concept Keyboard Company (0962 843322) is now in full production with its serial product for the Amiga.

Peter Beech of Concept reports that they are now making 4,000 serial and parallel keyboards a month. While versions for Acorn machines are sold by A & B Marketing, the new Amiga versions are being dealt with directly by sales staff at Concept.

They are available for both the Amiga 500 and 2000. Since the 2000 has a detachable keyboard, the product can be used through the keyboard socket or with a separate supply unit.

Available at present are the A4, 128 key version at £177, the A3, 128 key version at £199 and the A3, 256 key version at £227. Specialised boards can be produced to customers specifications and Concept has produced a number of Braille boards.



Winner Ken Holland and his children

High flying winner

WE know that readers of *Amiga Computing* are high flyers and now one of them has proved it. Ken Holland of Dorset sent in the winning entry in our January competition run in conjunction with Digital Integration.

He correctly answered the questions on Digital's F16 flight simulator and won a flight of his own as the prize.

With his children, Cheryl,

9, and six-year-old Carl, he took to the sky from Hurn Airport in a Cessna aircraft owned by Bournemouth Flying Club. The flight took them over much of the Dorset countryside including their home in Wareham.

"We were lucky because we could not have chosen better weather", said Ken. "There was not a cloud in the sky and you could see for miles. Cheryl and Carl loved it".

Taking on another class

FOLLOWING the success of Commodore's Class of the '90s Amiga-based educational bundle, the company is likely to launch a similar product aimed at children of primary school age.

National sales manager for education, Peter Talbot told *Amiga Computing* that the follow-up to Class of the '90s will be announced later this year. It will offer an Amiga bundled with educational software and will probably target the under elevens.

"The Class of the '90s bundle which we launched last October has been a great success", he said. "We have now sold 10,000 units and have had requests for something in the region of 2,000 education resource files. We are just about to mail out an update to the resource files and we are in the process of launching a newsletter on education.

"Because of this success, I would not be surprised if we repeated something like it later this year but for a different sector of the market. We are always keen to support younger users and the Amiga lends itself to such markets. A lot of respected software developers are now writing home education software for the Amiga and it is a marketplace we are presently looking at".

The decision is said to result from parents' requests. It is expected that the new bundle will cost around £499 - the price of the present bundle.

Pro Midi music

the internal sounds and instrumental arrangements with ease from full screen graphical displays. The software can also multitask with a sequencer program so the results can be heard immediately. Extensive librarian facilities are included to allow whole banks of sounds to be created and manipulated.

Programs are available for the Roland D5, D10, D20, D110, MT32, CM32L, CM32P and CM64 and the Gajits software is endorsed by Roland UK for use with its computer music modules.

Professional Sound Development Programs cost £99.99 including 64 professionally created sounds.

GAJITS Music Software (061-434 2768) has released a new range of programs designed to help Amiga owners get the most from Midi instruments.

Following its success with music software packages on the Atari ST, Gajits has now launched its Professional Sound Development Programs for the Amiga.

They allow users to edit

Video upgrades

UPGRADES to two popular video packages have been announced by the Phoenix-based Zuma Group.

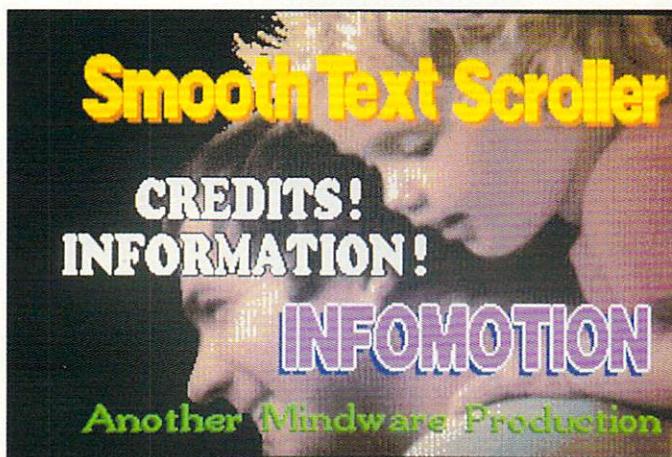
TV Text Professional is a video titling program which can also be used for desktop presentations.

Features include title effects such as metallic look, colour animated glows, glints, sheens and the creation of styles with a built-in editor. Price £129.95.

TV Show II can be used to create animated graphics presentations and allows the inclusion of sound effects and computer generated speech.

More than 40 variable speed transition effects are featured and the program also includes a script editor. Price £69.95.

Both packages are available from HB Marketing (0753 686000).



Smart little scroller

EASY and automatic creation of smooth scrolling text screens is the boast of Credit Text Scroller, the latest Amiga offering from Mindware International (0279 412441).

It allows users to select fonts, sizes and scroll rates via a simple point and click interface. Information to be displayed is generated from a text editor or word proces-

sor then automatically put into the desired credit screen or information display.

The final result is in the common Anim format and can be genlocked over a video source or overlaid on another Anim. Colours and drop shadows can be added to standard Workbench fonts and there is a subtitling option. Price, £29.95.

Editor lends a helping hand

THE Spastics Society will benefit from an Amiga "charityware" drive launched by Designer Mouseware (0642 482831). It is selling its public domain snooze pointer editor, Sleepy, for £2.50 and all proceeds will go to the society.

Version 3 of Sleepy allows Amiga users to redesign Workbench's Snooze bubble. The new pointer is almost three times the height of the original, has its own set of colours and can be animated with up to 20 images. It is compatible with Amiga Workbench, Devpac 2, Scribble 2, Analyse 2, Organiser 2 and Deluxe Paint.

Mark Smiddy, the computer journalist who designed Sleepy, said: "Some time ago I interviewed a young cerebral palsied man who was producing a magazine for a local computer club with all proceeds going to the local Spastics Society.

"I was so moved by his courage that I found myself wanting to help. During the development of Sleepy, a colleague suggested selling it as shareware and the idea grew from there. Hopefully, other programmers will follow our lead".

Fundraising manager for The Spastics Society Hilary Finch said: "We are delight-

ed to receive donations from this initiative. Many people with cerebral palsy use computers, so it is very appropriate for us to have this association".

Sleepy is available from good public domain sources. The official supplier is Ray Burt-Frost of Amiganuts United (0703 785680).

Waiting for the CD rom

AMIGA owners will have to wait a little longer for the cheap CD rom alternative under development by Codemasters (0926 814132). Manpower problems have forced the games developer to put the project on hold.

As an alternative to expensive CD roms, Codemasters has produced an analogue to digital converter which connects the headphone socket of a CD player with the computer's joystick port. An accompanying loader program sets up the machine to receive data through the joystick port.

Backed up by games compilations on compact disc, the system is so far only available for the Spectrum and Commodore C64 but an Amiga version is still on the cards.

"We have had so much on with the American side of our business that we have not been able to do any further work on the Amiga version", said a spokesman.

"While this system would not be in the same league as CD roms costing hundreds of pounds, it will provide games players with some of the benefits of CD but at a fraction of the cost.

"We would see the price at around £30. A system for the Amiga certainly has not been discounted. It's a matter of finding the time to work on it".

Heavily into mouse business

TAKING on the mouse scene with a vengeance is Contriver (Europe) Ltd (0280 822803) which has announced two new mouse ranges, claiming they will give the company more mouse products than any other firm in the UK.

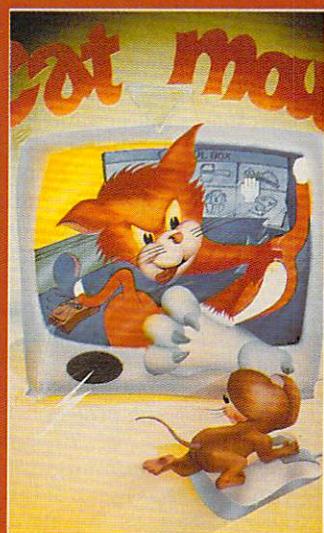
Known as the 820 and 830, the new mice are technically almost identical but quite different in appearance. They are supplied with mouse mat and pocket for a standalone price of £29.99.

The Buckingham-based

company which was formed in the middle of last year is also offering the mice bundled with Fantavision, the art package which allows users to animate graphics. Price, £54.99.

The mice feature a resolution of 200dpi with a tracking speed of 500mm.

"Our new mice are competitively priced and cater for a wide diversity of needs", said managing director Adolfo Giannini. "Selecting icons has never been easier".



CD-Amiga is due at big Chicago show

RUMOURS of a midsummer UK launch for Commodore's new CD-Amiga have been accompanied by speculation that it will be pitched higher than just as a games machine.

Trade sources say it will target the growing market in low cost solutions which combine audio, video and computers. Tipped for launch as a complete home entertainment system, it is claimed that the CD-Amiga will cost between £750 and £800.

The machine was due for its first American appearance on June 2 at the giant Consumer Electronics Show in Chicago.

A UK launch is rumoured for soon after CES and top software houses are said to be already working on packages to support it.

At Mirrorsoft, John Norridge told *Amiga Computing*: "It is well known that we are working on CD-rom projects. We are very involved in CD-rom games and multimedia as part of our core business.

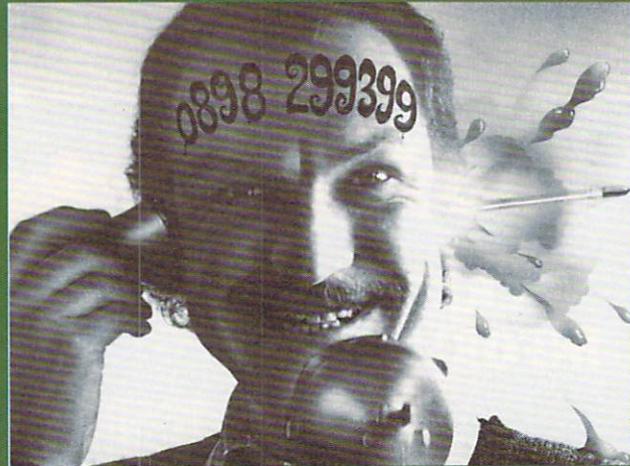
"Because of non-disclosure, I cannot go on record regarding any involvement with Commodore".

Another software house said to be preparing supporting software for the CD-Amiga is Mindscape, where software manager Phil Harrison was also unwilling to comment.

"We have signed a non-disclosure agreement with Commodore and it would be improper of me to comment at the present time", he said. The same story came from a spokesperson at Activision.

Following its usual policy which prevailed right up to the recent launch of the A3000, Commodore would not discuss the project.

Also a case of "no comment" from Commodore is the new Amiga portable rumoured to be under development in America.



Smiles on line

NOTHING and no one are safe from the attentions of the latest venture by computer industry characters Bruce Everiss and Mel Croucher

They have set up The Mel Croucher Computer Fun Line which features "an exciting and entertaining new Fun Line event" every week. With

the accent on humour, the line takes software, hardware, the industry and the people in it with a Private Eye approach.

"No one will be speaking to us after this", commented Bruce. The Fun Line number is 0898 299399 which is charged at 25p a minute cheap rate and 38p a minute full rate.

LATER this year Martin Lowe of Amiga Centre Scotland (031-557 4242) hopes to launch the ACS Framebuffer I, a display device which gives users the option of more colours and greater resolution than are inherent in the Amiga. A prototype of the device

Multi-million colour show

is in existence but an exact release date or price have yet to be decided.

Framebuffer I features full 16 million colour display, PAL and NTSC, RGB analogue output, full overscan, 24 bits per pixel palette,

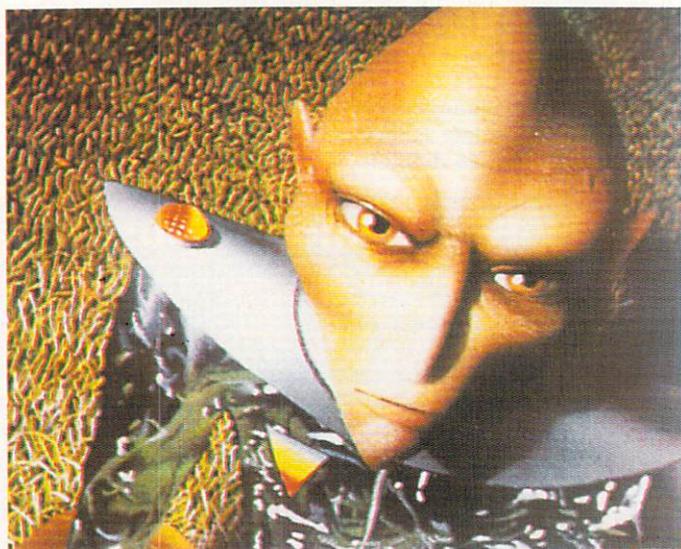
Amiga winning in High Street

AMIGA software is winning the High Street battle with its principal rival the Atari ST, according to W.H.Smith.

For the first time, sales of Amiga packages equalled those for the ST in March and are expected to overhaul them in coming months. Reflecting this success, W.H.Smith is to increase the number of its stores stocking Amiga software.

"Historically, we have always done better on Atari ST software because we used to stock the machines before our policy on hardware changed", said the group's computer buyer Sean Willis. "We also stocked Atari products

►



More problems for Mac owners as the Amiga looks set to become the cheapest 24bit-colour micro ever



before we went into the Amiga but over the last two years the Amiga has shown the largest growth.

"Finally, in March, it caught up with ST sales as far as value is concerned. As part of our new stocking policy for 1990, I have decided to increase the number of stores selling Amiga software by more than 80."

"This means that 202 of our 260 stores throughout the country will have Amiga product on the shelves. As far as W.H.Smith is concerned, Amiga Software is very good news".

Looking to the future, Sean is likely to take W.H.Smith into the field of CD-rom as the industry awaits further news of Commodore's CD Amiga.

"This is a very exciting area and I will certainly be looking at supporting it", he added.

New Amiga guides

ADAMSOFT (0706 524304) has added to its stocks of Amiga books with three new titles.

Mapping the Amiga from Compute Publications is an in-depth reference work including complete listings of library functions with syntax given in C, machine language and Modula-2.

Written by Randy Thompson and Rhett Anderson, it is claimed to be the only source which includes full descriptions of every Amiga hardware register and an element-by-element breakdown of each Amiga system structure. Price, £19.95.

Compute's AmigaDOS Reference Guide has been completely revised and updated to cover all current versions including 1.3. Written by noted Amiga authority Sheldon Leeman and magazine columnist Arlan Levitan, this edition costs £18.95.

TWO former competitors in the Amiga field have joined forces to make the North/South divide work in their favour and give their customers cheaper products.

Kelvin Searle of Weybridge-based Speed Computers (09323 52277) and Steve Cobham from D S & K of Liverpool have teamed up to buy cheaper components in bulk for their Amiga expansion boards allowing them to bring down average prices from £79 to around £49.50.

They also offer a more localised service which promotes confidence in their products.

"We started out as competitors in the Amiga expansion board market", said Kelvin. "We were trying to beat each other on price. When there were shortages of bits and pieces such as Dram connectors, we tried to rip each other off to get them.

"On the telephone, Steve and I became very friendly and built up a good relationship over a period of

months. We realised that we could join forces to take out joint advertisements and so keep the costs down. We also source our components from America and the Far East and can now buy in bulk.

"I deal with the southern region and Steve deals with the North. Customers like dealing with someone who is closer to them".

Amiga owners interested in expansion boards can expect further developments on this partnership in the near future.

Mark Lewis of Electronic Arts receives his award from Pierre Dell'Orco of Bit magazine, Milan

Pictured below with the Amiga's award for Computer of the Year is Commodore's marketing manager David Pleasance



Amiga voted top computer

MEMBERS of the UK and foreign computer press voted the Amiga "Computer of the Year" in the Home Productivity section of the recent European Computer Leisure Awards. Best product for the Amiga was Deluxe Paint III from Electronic Arts.

Presented in conjunction

with The European Computer Trade Show, the awards were voted on by journalists from the UK, Italy, France, Germany, Spain and Sweden with special awards from America and Japan. Game of the Year was Populous, and Software Publisher of the Year was Electronic Arts.

Our prices are...

A500
1/2 Meg
RAM UPGRADE
£49
WITH FREE 1Mb DEMO.

FLOPPY DRIVE
NEC, TEAC
£68
(3.5" WITH SWITCH
AND THROUGH PORT
SILENT MECHANISM)

A2000 bits
8-UP/SUPRARAM (2 Meg) £309
8-UP/SUPRARAM (4 Meg) £459
HARDFRAME (49Mb/28Ms) £489
"SUPRA WORDSYNCH (SCSI CONTROLLER) £175
FLICKER-FIXER £319
ACCELERATOR CARDS
68020, 68030 cards,
available now. Contact us.

ALL PRICES INCLUDE
VAT AND P & P

A500 RAM UPGRADES
1/2 Meg INTERNAL £49
2 Meg INTERNAL (Minimax⁺, fits in A501
'trapdoor' slot) £289
2 Meg EXTERNAL (Minimegs) £309
8 Meg INTERNAL (EXP 8000 2 Meg Fitted
co-processor socket) £349
ALL PRICES INCLUDE VAT
AND P & P

HARD DISKS

VORTEX 42Mb
FOR A500/1000
CONTROLLERS BY:-
GVP, Microbotics
Xetec, SUPRA
Whatever your requirement
we have the drive to suit
your system.

OTHER PRODUCTS
1.3 KICKSTART ROM £30
8372A FATTER AGNUS £60
5 1/4" FLOPPY DRIVE £125
(720K/360K SWITCHABLE)
A590 CHIPS
HALF MEG 1 MEG 2 MEG
£40 £80 £150

...out of this world!

TRADE ENQUIRIES WELCOME



Send cheques to: Dept AC
Memory Expansion Systems Ltd.
Britannia Buildings, 46 Fenwick Street,
Liverpool L2 7NB

(051) 236 0480

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE



(051) 236 0480 • 24 Hour Sales

(051) 227 2482 • 24 Hour Fax

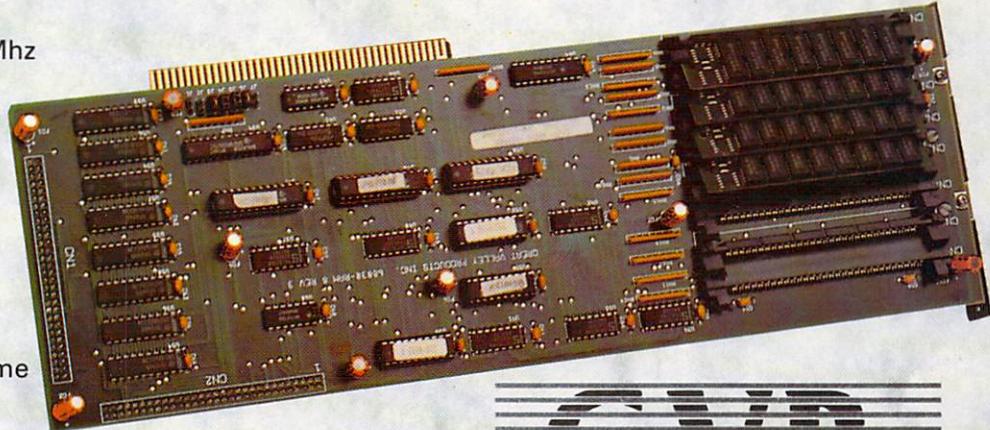
POWER COMPUTING

THE AMIGA 2000 SPECIALISTS

UK SOLE DISTRIBUTOR FOR GVP

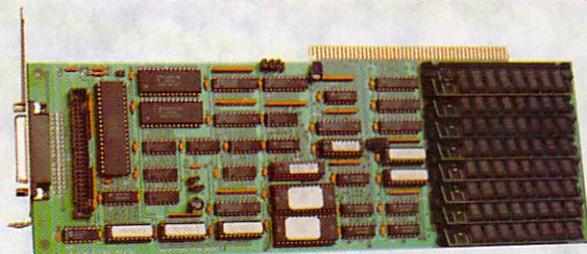
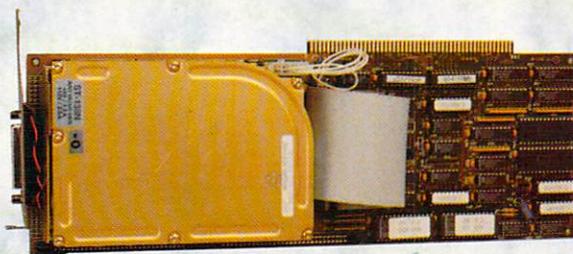
68030 ACCELERATOR BOARD

- 16 Mhz, 28 Mhz, 33 Mhz
- Expandable to 8 MB
- Easy to install
- 12 month warranty
- Selectable 68000 fall back mode for full floppy based game compatibility
- 68030 design allows high clock rates and Genlock compatibility



Up to 33 Mhz

HARD DISK CARD



- Available in a range of sizes
- 2 MB of fast ram expansion using easy to install, state-of-the-art SIMMS
- External SCSI connector for attaching additional external SCSI devices
- Easy to install
- 12 month warranty

Other GVP products include

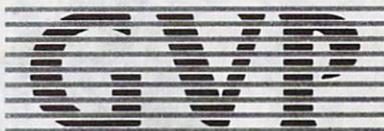
SCSI CARD
HARD CARD

TAPESTORE - 150 MB Tape Streamer
SYQUEST 44 MB - Removable Hard Disk

- Up to 8 MB ram using 1 MB x 8 SIMMS modules
- Supports 6 MB fast ram expansion for PC Bridgeboard users
- Includes flat 50-pin ribbon cable for connecting internal SCSI Hard Drive
- Easy to install
- 12 month warranty



PHONE
0234 273000
FOR YOUR BEST DEALS!
Dealer Enquiries 0234 273248



All trade marks acknowledged

Power Computing Ltd • 44A Stanley Street • Bedford • MK41 7RW

Tel 0234 273000 Fax 0234 270133
Technical Support 0234 273248 Mon-Fri 3 - 5 pm

Showroom & Telephone Sales open Mon-Sat 9:30 am - 6:00 pm and to 8 pm Thursdays & Fridays

PC

POWER CO

ALL PRICES
ON THESE PAGES
INCLUDE
VAT AND DELIVERY

A selection of special deals only ava

A500

512K

EXPANSION

ONLY
£59

INC. VAT

INCLUDING
BATTERY BACKED CLOCK

A500

1.5MB

EXPANSION

ONLY
£159.95

INC. VAT

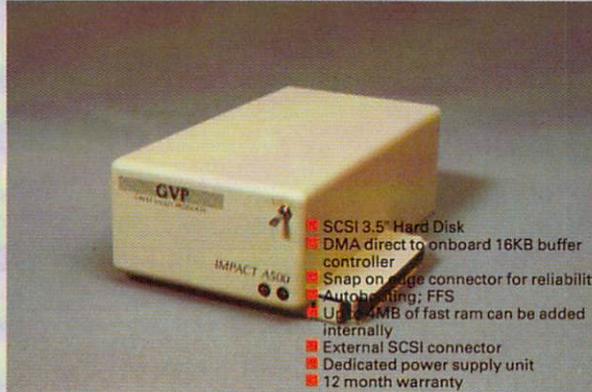
INCLUDING
BATTERY BACKED CLOCK

A500 Expansion ram PC501/PC502

- A500 Expansion Ram using low power 1 Mb chips
- Two Models available 512K/1.5MB
- Complete with clock and lithium battery
- Fits in A500 expansion underneath computer
- Comes complete with extra ram switch off software
- 1.5MB model only requires simple cable to be fitted inside Amiga
- 12 month warranty

GVP IMPACT
A500 Hard drive

Now using SIMMS for a massive 4MB extra ram!



- SCSI 3.5" Hard Disk
- DMA direct to onboard 16KB buffer controller
- Snap on edge connector for reliability
- Autoformatting; FFS
- Up to 4MB of fast ram can be added internally
- External SCSI connector
- Dedicated power supply unit
- 12 month warranty

	OK	2MB	4MB
45MB	£599.00	£749.00	£899.00
80MB	£849.00	£999.00	£1149.00
100MB	£999.00	£1149.00	£1299.00

NOW ANTI CLICK!

A500 Internal Drive Kit

£59.00



ONLY

£69.95

INC. VAT

Power Drive PC880

- Now with anti-click that stops that annoying drive click when no disk are present!
- Fully compatible with A500, 880K formatted
- Isolating on-off switch
- Through port for daisy chaining
- Colour matched and styled to Amiga
- Free utility diskette
- 12 month warranty

40 Disks* and lockable

storage box

£29.95

INC. VAT



15 Disks* and

Storage Box

£9.95

INC. VAT

Verbatim media - fully certified and guaranteed for life!

BUY YOUR A500 SYSTEM FROM POWER
AND GET A GREAT DEAL MORE!



BASIC PACK	as above	£399
SUPER PACK	with PC880 drive	£459
ULTRA PACK	with PC880 + 512K	£499
MEGA PACK	with PC880 + 1.5MB	£599
HYPER PACK	as Mega with A590 Hard Dr.	£949

Class of the 90's and other packs available
Commodore A590 20MB Hard Disk £379

INPUTTING

Available from Power House DIRECT!

GO COLOUR AMIGO!

Includes

- LC10 Colour UK Model
- Parallel Cable
- 200 sheets microperf paper
- 200 address labels
- LC10 colour WB driver
- Delivery and vat

Star LC10 Colour £219
 Star XB10-24 Colour £499
 HP Paintjet Colour £799
 HP Paintjet XL A3 Colour £2500

LC10 Colour Fabric printing kit

 £24.95

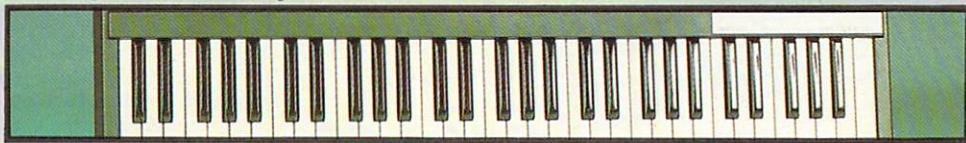
Star LC10 Colour
 Complete Kit
£219.00

INC. VAT



Amiga Music System (MM5000 + Pro Sound Gold)

£99



Video Magic + P.A.S.E.
 Animation Program

£49

VIDTECH SCANLOCK **£899**

- Multi media presentation system
- Supports all IFF picture files
- Supports P.A.S.E. Animations
- Auto scripting
- Sound effects by using Prosound Designer
- Controllable from joystick Port 2
- Many more features

Full details available



All trade marks acknowledged

The One Stop Software Shop! Callers Welcome!

Fantavision

WORD PROCESSING,

BAD £35

Interchange

DTP & BUSINESS

BBC Emulator £39

Interfont

Excellence £159.95

CLimate £20

Intro Cad

Home Accounts £24.95

Dos 2 Dos £29

Kara Screen Fonts 1

Kind Words £39

Cross Dos £29

Kara Screen Fonts 2

Maxiplan + £99

Fine Print £39

Movie Setter

Maxiplan 500 £79

Quarterback £34

Photom Paint 2

Pagestream £120

Transformer £29

Pixmate

Pro Draw £100

WB 1.3 £15



LANGUAGES ETC

Devpac Amiga £45

Hisoft Basic £55

Lattice C v5 £160

Lattice C ++ £299

Manx C Dev £163

Manx Debugger £49

Power Windows 2.5 £48

UTILITIES

Arexx £39

Need Help? £39

Music X £199

Pro Sound Gold £39

Amiga Music System £99

Sonix £45



Power Computing are the productivity software specialists. Scores of new titles every week! The following is a selection from our large range. We also stock most of the published Amiga books and magazines.

RED HOT PRICES

ART & GRAPHICS

Typically 30-40% off rrp

Animagic	£69
Amiga Clipart	£29
Comic Setter	£37.95
Deluxe Paint 3	£59
Deluxe Photolab	£48
Deluxe Video 3	£79
Digipaint 3	£49
Digiview Gold 4	£109.95

Elan Performer

WORD PROCESSING,

Midi Interface £25

Express Paint 3

DTP & BUSINESS

C64 Music Keyboard

Elan Performer

Excellence £159.95

Interface £49

Express Paint 3

Home Accounts £24.95

MM5000 Keyboard

Elan Performer

Kind Words £39

Dr T's Drums

Express Paint 3

Maxiplan + £99

Dr T's Midi Studio

Elan Performer

Maxiplan 500 £79

KCS level 2 £229

Express Paint 3

Page Templates £39

Music X £199

Elan Performer

Pro Text £74.99

Pro Sound Gold

Express Paint 3

Pen Pal £99

Amiga Music System

Elan Performer

Superbase 2 £62

Sonix £45

Express Paint 3

Superbase Pro £160

Elan Performer

Superplan £62

Express Paint 3

The Works Platinum £149

Elan Performer

Word Perfect £164

Express Paint 3

LANGUAGE ETC

Elan Performer

Devpac Amiga £45

Express Paint 3

Hisoft Basic £55

Elan Performer

Lattice C v5 £160

Express Paint 3

Lattice C ++ £299

Elan Performer

Manx C Dev £163

Express Paint 3

Manx Debugger £49

Elan Performer

Power Windows 2.5 £48

Express Paint 3

UTILITIES

Elan Performer

Arexx £39

Express Paint 3

Need Help? £39

Elan Performer

MUSIC

Express Paint 3

Devpac Amiga £45

Elan Performer

Hisoft Basic £55

Express Paint 3

Lattice C v5 £160

Elan Performer

Lattice C ++ £299

Express Paint 3

Manx C Dev £163

Elan Performer

Manx Debugger £49

Express Paint 3

Power Windows 2.5 £48

Elan Performer

UTILITIES

Express Paint 3

Arexx £39

Express Paint 3

Need Help? £39

Elan Performer

MUSIC

Express Paint 3

Midi Interface £25

Elan Performer

C64 Music Keyboard

Express Paint 3

Interface £49

Elan Performer

MM5000 Keyboard

Express Paint 3

Dr T's Drums

Elan Performer

Dr T's Midi Studio

Express Paint 3

KCS level 2 £229

Elan Performer

Music X £199

Express Paint 3

Pro Sound Gold

Elan Performer

Amiga Music System

Express Paint 3

Sonix £45

Elan Performer

NEED HELP?

Elan Performer

£

Elan Performer

THE
WORLD'S
LARGEST
CHAIN
OF
AMIGA
CENTRES

MR

DIAMOND'S DIRTY DOZEN (AN EXTRA 12 SIZZLING GAMES)

Why settle for anything less!

DIAMOND PACK 1

ALL OUR AMIGA A500 PACKS CONTAIN MACHINES WITH THE FOLLOWING STANDARD FEATURES

- 512K RAM
- 1 Meg Disk Drive
- 4096 Colours
- Multi Tasking
- Mouse
- Built-in Speech Synthesis
- Two Operation Manuals
- Operating System Disks
- All Appropriate Connecting Cables

AMIGA 500, Batman the Movie, New Zealand Story, F18 Interceptor, Netherworld, Star Wars, Boambuzal, Saint and Greavie, Table Tennis, Clownomania, Paperboy, Mike Reid's Pub Quiz, BAAL, Menace, Bloodmoney, Deluxe Paint II, Microswitch Joystick, 10 Blank 3.5" Disks, Disk Library Case, Mouse Mat, Amiga Dust Cover, Tutorial Disk, TV Modulator and 23 PD Programs

£399.00

INC VAT

EXTRA
512K RAM



DIAMOND PACK 2

ALL OUR AMIGA A500 PACKS CONTAIN MACHINES WITH THE FOLLOWING STANDARD FEATURES

- 512K RAM
- 1 Meg Disk Drive
- 4096 Colours
- Multi Tasking
- Mouse
- Built-in Speech Synthesis
- Two Operation Manuals
- Operating System Disks
- All Appropriate Connecting Cables

AMIGA 500, F-29 Retailer, Rainbow Islands, Escape from the Planet of Robot Monsters, Netherworld, Star Wars, Boambuzal, Saint and Greavie, Table Tennis, Clownomania, Paperboy, Mike Reid's Pub Quiz, BAAL, Menace, Bloodmoney, Deluxe Paint II, Microswitch Joystick, 10 Blank 3.5" Disks, Disk Library Case, Mouse Mat, Amiga Dust Cover, Tutorial Disk, TV Modulator and 23 PD Programs

£399.00

INC VAT

TREAT YOURSELF TO AN EXTRA 5 GAMES FOR £25.00 OR 10 GAMES FOR £35.00

DIAMOND D501:

- ★ TWO YEAR WARRANTY
- ★ BATTERY BACKED CLOCK/CALENDAR
- ★ FREE UTILITIES DISK WORTH £49.95
- ★ ON-OFF SWITCH

£49.95

INC VAT

+ FREE DELIVERY
ANYWHERE IN EUROPE

£59.95 inc VAT with
IT CAME FROM THE DESERT

DIAMOND PACK 3

If you thought our Diamond Pack 1 was good value just look at our Diamond Pack 3.

SAME AS PACKS 1 OR 2, BUT WITH
PHILIPS COLOUR VISION MONITOR (U.K.)

ONLY £589.00 INC VAT

DIAMOND PACK 4

Same as Pack 2 with Philips Vision monitor but includes Philips NMS 1432 Printer

ONLY £599.00 INC VAT

Kindwords ver 2.0 Word Processor

RIBBONS

	Quantity	2	6	12
OKI 20 COL	£7.00	£6.50	£6.20	
OKI 20 BLACK	£6.60	£6.20	£6.00	
PANASONIC KXP 1124	£7.50	£7.00	£6.50	
KXP 1080/1/2/3	£3.95	£3.80	£3.60	
JUKI 6100	£1.75	£1.60	£1.50	
M. TALLY MT80	£3.50	£2.70	£2.50	
STAR LC10	£3.90	£3.70	£3.50	
STAR LC10 COL	£6.50	£6.00	£5.50	
STAR LC24-10	£6.50	£5.90	£5.50	
CITIZEN 120D	£3.25	£3.10	£2.90	
LX800 EPSON	£2.50	£2.10	£1.90	
AMSTRAD PMP 4000	£3.85	£3.70	£3.40	

JOYSTICKS

ARCADE	£12.95
COBRA	£8.95
ULTIMATE REMOTE CONTROL	£29.95
EUROMAX PROFESSIONAL	£15.95
QUICKSHOT 1	£4.95
QUICKSHOT 2 TURBO	£8.95
KONIX SPEED KING	£12.95

DIAMOND – THE NAME YOU CAN TRUST

EXPORT HOTLINE (0272) 693 545
EXPORT FAX NO (0272) 693 223

Diamond Computer Systems Ltd
114 Lodge Road, Southampton.
Diamond Computer Systems Ltd,
227, Filton Avenue, Bristol.
LAN Computer Systems Ltd,
1045 High Road, Chadwell Heath,
Romford.
LHC Microsales, 121 Regents St.,
Leamington Spa, Warwickshire.
Diamond Computer Systems Ltd,
Ballina, County Clare, S. Ireland

CHIP SHOP PRICES

WE ONLY SELL NEW CHIPS

A590 CHIPS	0.5Mb £29.95 inc VAT	1.0Mb £58.95 inc VAT
	2.0Mb £115.00 inc VAT	
	A590 £319 + VAT	
	A590 2Mb Populated £399 + VAT	
8 UP BOARD CHIPS	2Mb £99	6Mb £279
	4Mb £195	6Mb £369
	8 UP Board/Supra only £139	
	8 UP Board 2Mb Pop £229	

★ SPECIAL ★
DIAMOND DRIVE, THRU
PORT ON/OFF SWITCH

ONLY £49.95
INC VAT
WITH 10 BLANK DISKS
£53.95 INC VAT

Your AMIGA 500 IS worth over £800!!

When you part exchange it for a B2000 with an autoboot hard disk!

Phone or call in to a Diamond store for details

RENDALE 8802
GENLOCK
£179 INC VAT

FLICKER FIXER
£275

£399 PRICE BREAKTHROUGH
A590 2MB POPULATED
INCLUDES THE EXTRA 2MB

VIDI AMIGA
£99 INC VAT

HI RES MONO CAMERA
£199 INC VAT

VIDI + CAMERA
£279 INC VAT

CITIZEN SWIFT
24 PIN PRINTER
£249

DIAMOND MULTISYNCH
MONITOR
£295

DIAMOND
MULTISYNCH 3D
£379



47Mb Autoboot, Fast file System Hard Disk for B2000 - only £395
Autoboot A2092 (20Mb Hard Disk) - £199

HIGH QUALITY 3.5" BULK DISKS		RETAIL PROMO ONLY
Inc VAT		INC vat
10		£7.00
25		£13.00
50		£25.00
100		£48.00
200		£94.00

Add £4.95 for 80 capacity lockable box

NEW COMMODORE AMIGA 3000

DIAMOND 16/40 A3000 £2499

DIAMOND 25/40 A3000 £2999

DIAMOND 25/100 A3000 £3299

CALL FOR VOLUME DISCOUNTS
WITH CBM OS/2

MUSIC X SPECIAL OFFER

£109 INC VAT

INCLUDES YAMAHA KEYBOARD
MIDI INTERFACE

PRINTERS

All printers in our range are dot matrix and include the following features:

Standard centronics parallel port for direct connection to Amiga, PC's, ST, Archimedes etc. Tractor and friction paper feeds.

PHILIPS MNS 1432 £99
HIGH QUALITY 9-PIN PRINTER

CITIZEN SWIFT-24 £249
WITH COLOUR

PANASONIC KXP-1124 £199
24-PIN D.MATRIX PRINTER

OKIMATE 20 £159
24-PIN COLOUR THERMAL
DOT MATRIX PRINTER

STAR LC-10 MONO £125
Multiple font options from front panel, excellent paper handling C64/128 version available

STAR LC-10 COLOUR £165
Colour version of the popular LC-10, allowing the effect of full colour on screen dumps (requires colour printer driving software). C64/128 version available

STAR LC-24-10 £199
24 Pin version of the popular LC series with exceptional letter print quality.

STAR XB 24-10 £439
24 PIN COLOUR PRINTER
(INCLUDES COLOUR OPTIONS)

Diamond Configured Packs:

AT System

Amiga B2000

AT Bridgeboard

2090A 20Mb Autoboot HD
1084 Colour Monitor

XT System

Amiga B2000

XT Bridgeboard

2090A 20Mb Autoboot HD
1084 Colour Monitor

Basic System

Amiga B2000

2090A 20Mb Autoboot HD
1084 Colour Monitor

Audio System

Amiga B2000 + 2090A

1084 Colour Monitor

Music X & Midi Interface

Visual System

Amiga B2300 Genlock

TV Text + TV Show

Phone for our incredibly low prices on the above systems!

COLOUR PIC

Real Time

Frame Grabber

£349

MONITORS

PHILIPS COLOUR
VISION MONITOR

£199.00

PHILIPS 8833 (U.K.)
COLOUR MONITOR WITH
STEREO SOUND

ONLY £199.00

DIAMOND MULTISYNCH
MONITOR

ONLY £295.00

COMMODORE 1084/S
MONITOR

ONLY £199.00

ALL PRICES EXCLUDE VAT. COURIER £5, NEXT DAY SERVICE £10

E & OE. All prices correct at time of going to press and are subject to change without notice.

AMOS - The Creator is like nothing you've ever seen before on the Amiga. Developed by the author of the best-selling STOS, the number one game creation tool for the Atari ST, AMOS stretches the Amiga to its limits. Now for the very first time you can access the awesome power of your computer with bewildering ease.

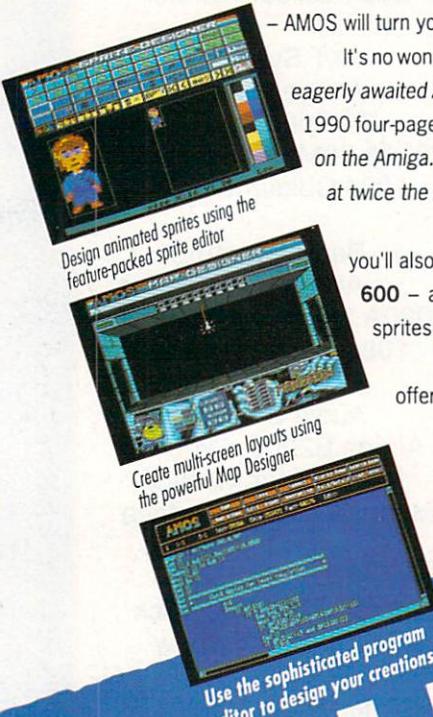
AMOS Basic is a sophisticated development language with more than 500 different commands to produce the results you want with the minimum of effort.

Whether you want to create arcade games, adventure games, demos, educational programs - or even serious applications like graphical databases or video titling sequences - AMOS will turn your dreams into reality.

It's no wonder that Amiga Format has described AMOS as 'the most eagerly awaited Amiga utility ever', and Amiga Computing said in its May 1990 four-page preview: "Whoosh! By far the fastest Basic interpreter on the Amiga. Runs like the wind... Nobody will ever top it... Cheap at twice the price... Overall 94%."

Don't delay, send for your copy of AMOS today - and you'll also receive, absolutely free of charge, **AMOS Sprites 600** - a fabulous collection of more than 600 animated sprites for use in your games (not available separately).

We're so convinced about AMOS that we're even offering a money-back guarantee if you're not satisfied.



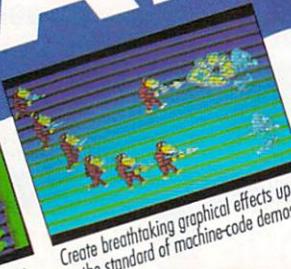
UNLEASH YOUR IMAGINATION



Play the addictive Magic Forest and see just what AMOS can do!



Explore the hidden depths of Castle AMOS in search of the secret prize



Create breathtaking graphical effects up to the standard of machine-code demos

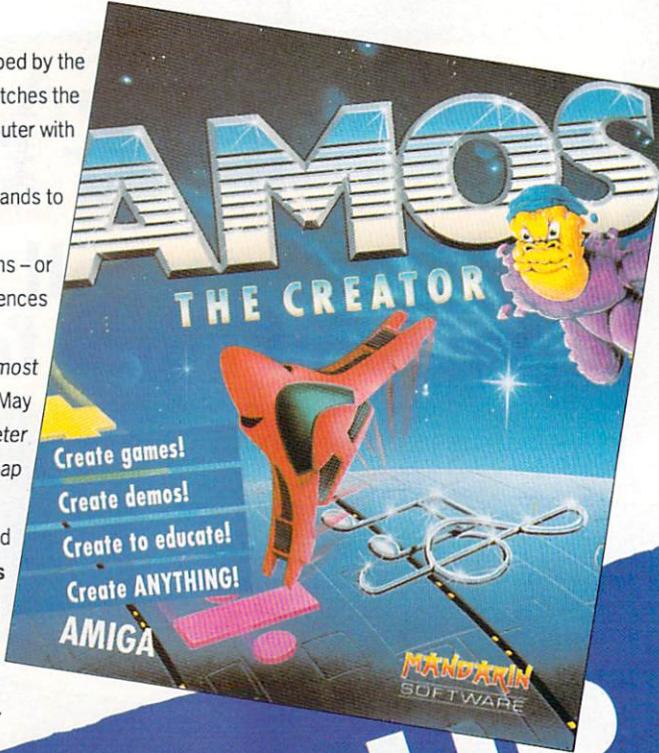
WHAT YOU CAN DO:

- Define and animate hardware and software sprites with lightning speed
- Display up to eight screens on your TV at once - each with its own colour palette and resolution (including HAM, half-brite and dual playfield modes)
- Scroll a screen with ease. Create multi-level parallax scrolling by overlapping different screens - perfect for scrolling shoot-'em-ups
- Use the unique AMOS Animation Language to create complex animation sequences for sprites, bobs or screens which work on interrupt
- Play Soundtracker, Sonix or GMC (Games Music Creator) tunes or IFF samples on interrupt to bring your programs vividly to life
- Use commands like RAINBOW and COPPER MOVE to create fabulous colour bars like the very best demos
- Transfer STOS programs to your Amiga and quickly get them working like the original
- Use AMOS on any Amiga from an A500 with a single drive to the very latest model with hard disc

WHAT YOU GET:

AMOS Basic, sprite editor, Magic Forest and Amosoids arcade games, Castle Amos graphical adventure, Number Leap educational game, 300-page manual with more than 80 example programs on disc, sample tunes, sprite files, AMOS Club Newsletter and registration card.

MANDARIN
SOFTWARE



ONLY £49.99!

Please send me **AMOS - The Creator** and my free copy of **AMOS Sprites 600**

I enclose a cheque payable to Mandarin Software for £49.99

Add £2 per program for Europe & Eire (£5 Overseas)

Please debit my Access/Visa/Connect card number:

0000 0000 0000 0000

Expiry date: /

Name

Address

Postcode

Send to: Database Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB.
Credit card orders: Tel: 051-357 1275

A.
Contriver

Q.
**Why Go
Elsewhere**

?

**Complete Peripheral
Solutions Worldwide**



Dotty on DTP

I DEVoured your report on PageSetter II as only a starving man would. Information about the so called serious software for the Amiga is so difficult to come by. Although your report was welcome, it left me still hungry.

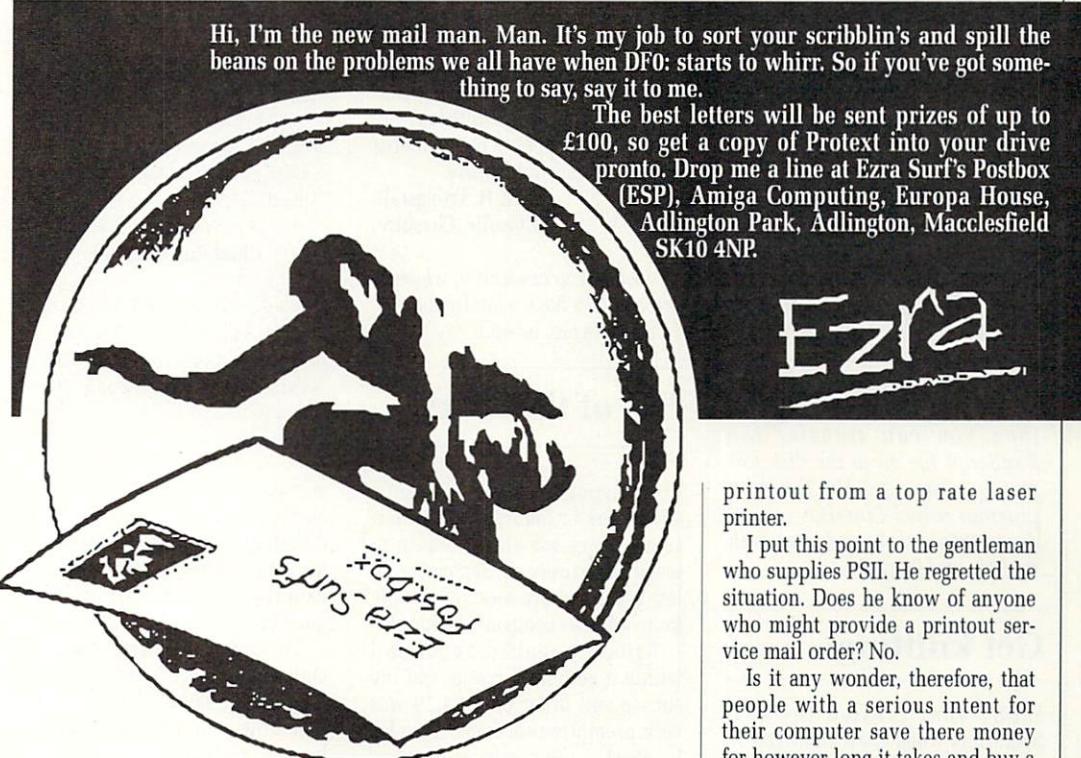
All the magazines that I have ever read have said what a serious computer the Amiga could be, that what is needed is for those not quite so besotted by it to give it a chance in a business environment where it would proceed to knock the socks off those Macs and IBMs.

But if your magazine and others like it won't take it seriously enough, what chance is there of this happening?

I want to buy a DTP program. Like most people, I have very limited funds, so I want to be sure before I buy. I have seen the output of a friend's PageSetter and although I was impressed at first, I now realise that the output from a 9 pin printer is not good enough.

If this software is in part aimed at a semi-professional market, that same market would want to see the quality of the output, in comparison with the competition, and on a variety of printers - 9 and 24 pin, inkjet and laser.

Magnified photos of the outputs and a selection of available fonts is minimum information for software of this nature. So down to the local



Hi, I'm the new mail man. Man. It's my job to sort your scribbles and spill the beans on the problems we all have when DFO: starts to whirr. So if you've got something to say, say it to me.

The best letters will be sent prizes of up to £100, so get a copy of *Protext* into your drive pronto. Drop me a line at Ezra Surf's Postbox (ESP), Amiga Computing, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.

Ezra

printout from a top rate laser printer.

I put this point to the gentleman who supplies PSII. He regretted the situation. Does he know of anyone who might provide a printout service mail order? No.

Is it any wonder, therefore, that people with a serious intent for their computer save their money for however long it takes and buy a Mac?

Now I know all this is not your fault and you are only coming in for this flak because you *did* print something of use, but couldn't you raise the debate at least and help to change the situation?

Ron Cavedaschi,
Brighton.

What a load of codswallop. Listen, Ron, DTP output from any 9 pin printer is going to be awful. You've discovered that. The output from 24 pins is going to be less awful, but you'll still get the jaggies because resolution is limited to the size of the pins themselves.

Deskjets and Laserjets are the only viable answer for semi-professional output. Both print at 300 dots per inch. Some expensive ones go higher than this.

The example output (three pages of it!) in the PageSetter II article was printed out by a Star LaserPrinter 8II at 300 dots per inch. There was an actual size example of output on the front cover!

DTP output at 300 dpi isn't going to differ that much from package to package. The limitation is the resolution of the fonts. The CompuGraphic fonts that come with PSII and Pro Page are limited

Stingy British?

I HAVE spent nearly £900 on my system and I feel that what I've got is a professional computer which I can use for a multitude of different things. And I do. But what I fail to understand is why people will spend £400 on a machine just to play games.

Why not buy a dedicated games console that can produce as good, if not better, audio and visual effects than the Amiga for half the price?

I think that the answer to this is that people are not willing to

spend £25-£40 on a games cartridge when they can get the latest Amiga blockbuster from "the guy round the corner" for the price of only a blank disk.

This probably sums up the whole British market - why pay for something when you can get it for free? Which is why, in my opinion, games cartridge-based machines will continue to flop in this country.

P Mattocks,
Huntington, Yorkshire.
People see the Amiga 500 as a

games machine because it's being marketed as such by Commodore UK. It is a different story in Germany and North America where everyone owns at least 2 meg of ram and hard drive.

I think you've hit the nail right on the head. The British don't like spending their money. Then again, the cost of living in this country is very high.

If you haven't got it, you can't spend it, he says, putting on his ill-fitting homespun philosopher hat.

►

only by your printer's resolution.

Output them to a Linotronic typesetting machine and they'll come out as good as the text you see in this magazine.

PageSetter II (not to be confused with the original PageSetter, which it seems your friend has) is produced by Gold Disk, the same company that produces Professional Page.

Professional Page can write pages out as PostScript files (PSII can't). Any printing shop providing laser or typesetting services will be able to print such a file.

If the shop doesn't have an Amiga to hook up to its printer, then you can transfer the PostScript file on to the disk format the shop uses. You'll need a program called CrossDos to produce MSDOS disks, a format both the Mac and PC can read.

Get knitting!

FIRST they created the 48k Spectrum. Then they improved it to the 128k Spectrum. I bought both of these machines over a period of time to use as a home computer and to facilitate one of my interests shared with my loving wife nearly 40 years. Then I bought an Amiga.

I have studied over the years many, many lists of games with widely varying interest group applications, and even more widely varying age group applications, but so far as I am able to determine the Amiga fails to fulfil my basic need, which the humble Spectrum filled to perfection.

It was not just one program which filled this need, but several; and all with colour display, good

graphics and printer facilities.

Please will someone out there produce an Amiga program for machine knitting. The market exists, the demand exists, the research has all been done, and at least six major knitting machine companies would probably welcome the increased interest the chance to design ones own patterns and garments would create.

S K H Artingstall,
Cheadle, Cheshire.

And while you're about it, whoever you are, let's have a landscape gardening program as well.

Six of the worst

THE response of some of your advertisers to inquiries from overseas is very variable. I wrote to seven advertisers on September 10 last year and have received a reply from only one company, Byteback.

Byteback replied by airmail within a couple of weeks and my subsequent order of £115.29 was very promptly processed. Thanks, Byteback – the company deserves recognition.

Mark von Dadelszen,
East Hastings,
New Zealand.

Roll On bug fixes

HOW glad I am to see the cover disk back. It's nice to see that you listen to your readers. However, I have a couple of points about the May disk.

Documentation and source files: I suppose that with no doc files you can fit more on the disk, but trying to find the right issue for the

Getting organised

I HAVE just splashed out on a Psion Organiser and want to link up to my A500. Please could you tell me if there is any way of doing this without buying a comms link, and if so what kind of software will I need?

Andrew C Wilson,
Cheshunt, Hertfordshire.

What you need is K-Comm 2 from Kuma (0734-844335). The lead that comes with the Psion plugs straight into the Amiga.

necessary instructions is a bit of a nuisance. If the doc files are on the disk, they are instantly to hand. As for source files, there were really useful and I hope you will put more of them on the disk in future.

The support programs for Roll On seem to have some problems. Not being a fan of Basic I am not sure how complete these are, but here are my bug fixes.

Firstly, both LoadILBM-SaveACBM and Cut-A-Puzzle cannot find their bmap files. The solution is to put the following line at the start of each program:

CHDIR "cd007:reader-contributions/rollon"

Secondly, Cut-A-Puzzle does not seem to save the puzzle file out correctly. To put it right, find the following code:

```
OPEN vv FOR OUTPUT AS #1
FOR d=0 TO e
  WRITE #1,brush(d)
NEXT d
```

As a guide, if the List window is

Printer Tip 1

REGARDING the letter from Edward Christian in your June edition of *Amiga Computing* and his problems with his Olivetti DM 100-S printer.

I own the same printer and at first had similar problems. I must admit that these problems were brought about by me not reading the user manual adequately.

This printer emulates the Epson FX-80 and therefore is put onto Workbench by choosing "Install Printer" when the Extras Disk is requested using Epson X(CBM-MPS-1250). This worked for myself and as I am no computer buff it must be easy!

I did, however, set up the printer wrongly, again by rushing rather than reading the instructions one by one.

I assume that Mr. Christian has the user manual, so if he refers to Section 5, "Programming the Printer" and follows the instructions he should have no problems (provided he can understand the technical details, much of which I couldn't).

Mike Wilson,
Bournville, Birmingham.

Printer tip 2

IN the June issue of *Amiga Computing*, S Mallan of Devon wrote to you about printer

full PAL size, then the code is at the very bottom of the second screenfull. Now replace FOR d=0 TO e with:

FOR d=0 TO 5123

It seems to work. Well, for me anyway.

Lastly, there is a neat little program called TBar hidden in the C: directory of the cover disk. Is there any chance of you putting it on the disk as a featured program with instructions?

David Illegible,
Garswood,
Lancashire.

Thanks for the debugging. The .bmap files were originally in the Libs: directory (where they should be) but at the last minute Jeff decided to move them into the Roll On drawer. He must've forgotten to re-check the programs.

Funny though, we think the Cut-A-Puzzle program works OK as it is, although your bug fix works too.

I've passed your comments about the disk on to Jeff. He nodded sagely about the source files but did a passing imitation of a pair of scales when he read the bit about the doc files. He pointed to the Amiga Computing binder lying open on my desk. I think he was hinting that I send you my binder. Or something like that.

Guarantee please

I AGREE with what most of the letters in the June issue say about the high price of games, but I do not agree that this is a good enough excuse for breaking the law.

On the other hand will the games producers be willing to give

codes not working when using Basic, and you said to use OPEN "PRT:" instead. I had the same problem when using printer codes, but they still didn't work with "PRT".

After some messing around I found that the printer device was changing the codes I sent into other codes. To get around the printer device I sent the codes to the parallel port by using the statement:

OPEN "PAR:" FOR OUTPUT AS 5

The printer now receives the codes you send without being altered.

Robert Boardman,
Bolton,
Lancashire

► a lifetime guarantee with their games? The ordinary bloke on the street can no longer make a backup copy because of the said law.

R S McCrea,
Greenisland,
Co. Antrim.

Quite a few software houses will replace a disk if it fails to function. Others will sell you another copy cheap, just in case.

Personally, I think it's safest not to touch the disk at all and stick to reading the instruction manuals instead.

Bald bard

I HAVE an ambition and, well, to be frank, I need your help to achieve it. What I want to do is sit in my front room and create music. Music to rival great songs like Primal Scream's Loaded and 808 State's Cobra Bora.

To do this I will need a sampler of some description along with a piece of software which will hold my short 10 second bass guitar riffs and repeat them over and over while I proceed to mix in guitar, vocals and a few drums.

I think you get the picture; a sequencer that will take lots of very short bursts of music and help me create a thing of beauty.

So what do you recommend? My only wish is to sit at my Amiga, shave all my hair off and pretend I'm Norman Cook.

Andrew Cowper,
Amersham,
Buckinghamshire.

On the commercial side of things, I can't recommend Music-X highly enough. But it might be worth getting hold of the latest version (v2.01) of a shareware sequencer called MED first.

Although it's basically a SoundTracker clone, it multi-tasks, it supports Midi and it's very easy to use. Comes with a bunch of instruments too.

Write to the author: Teijo Kinnunen, Oksantie 19, SF-86300 Oulainen, Finland.

Cheap video

I HAVE just bought the Vidi frame grabber and Vidi Chrome, which is brilliant for the price. I have been using it with my video player, but now I would like to use it with a camera.

Could you tell which is the

C-ing red

As a very new Amigan I was scanning the magazine shelves for some in-depth background. Most titles look too highly coloured and games orientated for my taste, but *Amiga Computing* has the clearest contents page.

What really decided me to choose your April issue, however, was the article on Chaos. A team with the nerve to present their readers with a recent mathematical theory, and in a three part series no less, just has to be encouraged.

Yet you could show still more initiative. Pete Aikin writes asking for a series on C programming and you fob him off with some unlikely story about the high costs of the hardware expansion, heavyweight American compiler and documentation.

I stand aghast, coming as I do

from the austere world of the 64k BBC Micro where we had two passable C compilers and a very good Pascal at reasonable prices. To me an Amiga 500 is already lavishly equipped.

You should be encouraging modular, structured programming. Basic is fine for small programs, but for larger projects C offers a better modular structure and the power to create complex data objects that better represent their real world counterparts.

The result is – and this should appeal to your editorial instincts – that well written C programs look better on the printed page and communicate ideas more clearly to your readers.

So why not apply your immense power and influence in the Amiga world to encourage someone to develop a good, com-

pact, starter C compiler at a starter price?

It would offer a limited function library but assure repeat sales with further specialist libraries for graphics, engineering, finance and so on.

As for documentation, you need look no further than Mark Burgess whose book *AmigaDos* is already one of your Reader Offers.

His *C – A Dabhand Guide* is the same price and has all that a beginner needs. His section on the Amiga begins: "C is the natural language to use for programming the Commodore Amiga".

Some entrepreneur's C compiler and Mark Burgess' book on C – what a natural for a possible future Reader Offer!

Brian Eggleston,
Avonside,
Warwickshire

... and C-ing the light

I'VE acquired a book on C. I have read most of it, and it looks manageable. I've seen some results of fab programming in C and I reckon (so does my book) that C is what I want to learn.

But I need a compiler and Lattice C is just a wee bit above my budget. Can you suggest a cheap or PD compiler?

Ralph Bolton,
Guildford,
Surrey.

There is no doubt that C stands for "cool". It's the best language to use with the Amiga. But there is a drawback – a package such as the superb Lattice C is a professionally heavy product and so

costs money. Lots of money.

It can be used on a bare A500, but it only starts to become fun with extra ram and extra floppies. With a hard drive it is verging on the positively enjoyable! Unfortunately, this means that before you can even dip your toes, you have open the wallet several times.

But the times they are a-changin'. At the moment both Mr PD himself Stewart C. Russell, and Tech Ed Aj are currently making "Ummm" and "Ahhh" noises over a certain public domain package called NorthC.

It is a polished version of Sozobon C, and comes complete with linker and assembler. In other

words it is an essential disk if you are interested in C. For details write to the dude who wrote it: Steve Hawtin, 54 Gloucester Drive, Basingstoke, Hampshire, RG22 4PH. Stewart will be covering NorthC in detail in next month's PD column.

Just recently we have been starting to get some really exceptional disk submissions written in C. It seems that after a slow start the language we were meant to use is finally taking off.

On the programming side, The Code Clinic will be continuing to make regular visits to the twilight zone of K&R. The more requests we get for C, the more we'll do about it.

cheapest camera I can use and where I can get it from.

Robert Boardman,
Bolton,
Lancashire

Thanks for the printer tip, by the way. Now to cameras, and the surprisingly common problem of choosing one.

How much you want to spend on a video camera really depends on you. If you want a camera which will also film the family on the beach, then any camcorder with a standard video out signal

will suffice. (This means don't get the cheap Amstrad/Fidelity one, which has no video output.)

Prices are high, and digitising quality is relatively low, especially with colour. The dumb beast will try to compensate for the colour filters placed in front of it. Sigh.

The cheapest solution is to shop around for a second-hand black and white security camera. Make sure it comes with a lens! Ask your local security equipment supplier what they do with the old cameras they replace.

Results from these cameras are,

umm, OK-ish. It depends a lot on how the camera has been looked after.

Try it before you pay for it and look out for "burnt" spots which will show as black dots in the image. Don't pay more than 100 notes.

The best solution is to buy a specially designed black and white camera.

These give stunning results with digitisers, and cost about 175 earth pounds each. Rombo (0506 414631) try to keep an Hitachi model in stock.

ALL OUR PRICES INCLUDE CARRIAGE & VAT
HSV COMPUTER SERVICES LIMITED (AMC)
 23, Hampstead House, Town Centre, Basingstoke, RG21 1LG.

3 1/2" DS/DD Disks Bulk - Fully Guaranteed

25	50	100	250	500
*69p	*63p	*61p	*59p	*57p

*per disk

SONY 3.5" DS/DD
branded discs
£13.95 per
box of 10

Lockable Disk Boxes

50 x 3 1/2"	£5.95
100 x 3 1/2"	£7.95

**Special Box and
Disk Offer**

100 capacity disk box only £4.95
when purchasing 50 or more disks

Stationery... Stationery... Stationery...

Micro-perf all edges	500	1,000	2,000
9.5" x 11" 60gsm		£9.50	£15.95
True A4 70gsm	£8.50	£12.95	£23.95
True A4 80gsm	£8.95	£13.95	£25.95
True A4 90gsm	£9.75	£14.95	£27.95

Labels	1,000	2,000	4,000
3.5" x 1.5" (1 across)	£5.25	£9.50	£17.95
3.5" x 1.5" (2 across)	£5.75	£10.50	£19.95
4.0" x 1.5" (1 across)	£5.75	£10.50	£19.95
4.0" x 1.5" (2 across)	£5.75	£11.95	£22.95
2.75" x 1.5" (3 across)	£4.75	£8.50	£15.95

Accessories

3 1/2" Cleaning Kit	£4.95
Amiga 500 Dust Cover	£4.95
Amiga 1000 Dust Cover	£9.50
Mouse Mat (Foam)	£5.95

Ribbons

Canon PW1080	£2.95	Panasonic KXP 1080	£3.95
Citizen 120D	£3.95	Panasonic KXP 1124	£4.95
Epson FX/MX/RX80	£2.95	Star LC10 (Mono)	£3.95
Epson LX80/86	£2.50	Star LC10 (Colour)	£7.95
NEC P2200	£4.95	Star LC24-10	£4.95

TWO AMIGA SPECIALS

**Amiga 500
upgrade board
.5 to 1 Meg . . .
In seconds!**

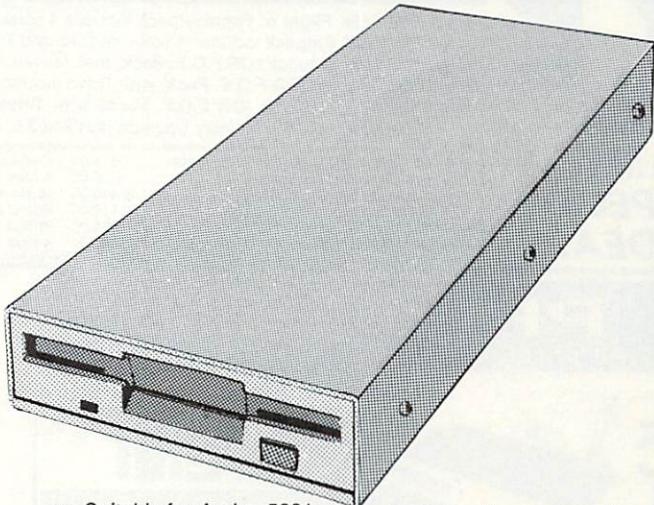
- ★ No technical expertise required
- ★ Realtime Clock
- ★ Low power consumption
- ★ On/off switch

ONLY £69.95

inc VAT + Delivery

STOP PRESS – BUY BOTH ITEMS £134.95

3.5" External Drive



- ★ Suitable for Amiga 500/1000/2000
- ★ NEC drive mechanism
- ★ Can be daisy chained
- ★ Integral power supply
- ★ Ultra slim metal case
- ★ Enable/disable switch
- ★ 12 months warranty

ONLY £69.95

inc VAT + Delivery



Order Hotline (0256) 463507

Orders under £8 in value carry a small order charge of £2



Evesham Micros

RETAIL SHOWROOMS

63 Bridge Street
Evesham
Worcs WR11 4SF
0386-765180
fax: 0386-49761
Open Mon-Sat, 9.00-5.30

5 Glisson Road
Cambridge CB1 2HA
0223-323898
fax: 0223-322883
Open Mon-Sat, 9.00-6.00
Specialist Education Centre

1762 Pershore Road
Cotteridge
Birmingham B30 3BH
021-458 4564
fax: 021-433 3825
Open Mon-Sat, 9.00-5.30

ALL PRICES INCLUDE VAT AND DELIVERY

Same day despatch whenever possible. Express Courier delivery £5.00 extra.

MAIL ORDER DEPARTMENT

Unit 9 St Richards Rd, Evesham, Worcs WR11 6XJ

Call us now on 0386-765500

Access 8 lines, Open Mon-Sat, 9.00-5.30. Fax: 0386-765354

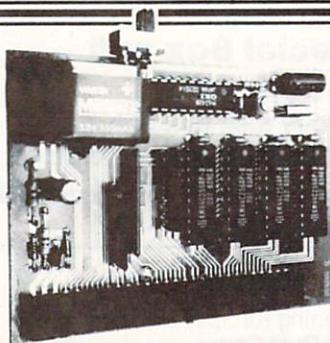
VISA

Technical support (open Mon-Fri, 9.30-5.30): 0386-40303

Send an Order with Cheque, Postal Order or ACCESS/VISA card details

Government, Education & PLC orders welcome
All products covered by 12 Months Warranty
All goods subject to availability, E. & O.E.

Buy with confidence from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.



AMIGA A500 512K MEMORY UPGRADE

ONLY £49.00 inc. VAT & delivery

512K RAM/CLOCK EXPANSION FEATURES :

- ★ Direct replacement for the A501 expansion
- ★ Convenient On / Off Memory Switch
- ★ Auto-recharging battery backed Real-time Clock
- ★ Compact unit size : Ultra-neat design
- ★ Uses only 4 D-RAMs for High Reliability
- ★ Low power consumption

RAM expansion without clock, only ... £43.00

3.5" EXTERNAL DRIVES

using Teac / Citizen drive mechanisms



- Suits Amiga 500 or Amiga 1000
- Teac / Citizen drive mechanism
- On / Off switch on rear of drive
- Throughport connector
- 880K Formatted capacity
- Slimline design
- Very quiet
- Long cable for location either side of computer
- Full 12 months guarantee

Superb low price!

£64.95

Including VAT and delivery



All A500 Packages also include the following :

Karate Kid II
Leatherneck
Battle Squadron

Jaws
Defcon 5
High Steel

Wordwright (w processor)
Nigel Mansell's Grand Prix
Better Dead than Alien

Super Huey
Goldrunner
Night Walk

Amiga 500 512K Flight of Fantasy pack includes 4 software titles and TV modulator	£379.00
Amiga 500 512K Batpack includes 4 software titles and TV modulator	£379.00
Amiga 500 1Mb Batpack (OR F.O.F. Pack) features our 1Mb RAM Upgrade fitted	£419.00
Amiga 500 Batpack (OR F.O.F. Pack) with Drive includes our 3.5" External Drive	£439.00
Amiga 500 1Mb Batpack (OR F.O.F. Pack) with Drive features our 1Mb Memory Upgrade plus 2nd 3.5" External Drive	£479.00
External 5.25" 40/80 track switchable drive	£114.95
Omega Projects MIDI interface	£29.95
Vortex System 2000 40Mb Hard Disk	£499.00
Vidi-Amiga including Vidi-Chrome	£110.00
MiniGEN Genlock Adapter	£95.00
Contriver Hi-Res replacement Mouse package	£22.95
A-Max Mac Emulator without Mac ROMS	£129.00
A-Max Mac Emulator with 2x128K ROMS	£249.00
Music-X Incredibly powerful music package	£129.00
Home Accounts (Digita)	£18.95
Philips CM8833 colour monitor inc. cable	£259.00
Amiga 500 dust cover	£4.95

CBM A590 HARD DRIVE

Good quality Commodore 20Mb Hard Disk, including its own PSU and built-in cooling fan. Features sockets for up to 2Mb of RAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec transfer rate. Autoboots when used with Kickstart 1.3.

only £379.00

A590 512K RAM Upgrade kit £36.00
A590 1Mb RAM Upgrade kit £70.00
A590 2Mb RAM Upgrade kit £135.00
RAM upgrades fitted free when bought with A590.

NEW! Genuine replacement
Commodore Amiga P.S.U. £39.95

PRINTERS

All prices include VAT/delivery & cable



star

We use and recommend Star printers because they offer an unbeatable combination of features, print quality, reliability and value. When buying, please note we are now offering 12-month on-site maintenance contracts for £7.95 extra.

Only £159.00
Colour version also available,

Only £209.00

Prices include 2 extra black ribbons free of charge.

Star LC24-10 multifont 24pin printer, super low price	£239.00
Star LC24-15 wide carriage version of LC24-10, 200/67 cps	£409.00
Star LC15 wide carriage version of LC10, 180/45 cps	£329.00
Star LC-10 MKII faster version of LC10, 180/45 cps	£199.00
Olivetti DM100S 9-pin 10" printer 200/30 cps inc. 1 year on-site warranty!	£129.95
Panasonic KXP1081 reliable + sturdy 9pin 10" printer 120/24 cps	£159.00
Panasonic KXP1180 super new feature-packed multifont 9pin 11"	£179.00
Panasonic KXP1124 new good specification multifont 24 pin 11"	£259.00
Panasonic KXP1624 wide carriage version of KXP1124	£399.00
Epson LX400 (was LX800) 10" 180/25 cps	£179.00
Epson LQ550 good 24pin 150/50 cps	£349.00
Epson LQ400 new 24 pin 180/60 cps with 8k buffer	£229.00

A-MAX MACINTOSH EMULATOR

Enables Apple Mac and Mac Plus emulation on the Amiga. Cartridge includes socket for connection of Mac Floppy Drive so that Mac disks can be read in directly. Compatible with all current versions of System. Versions available with or without Macintosh 128K ROMS (required).

Without 2 x Mac 128K ROMS £129.00
With 2 x Mac 128K ROMS £249.00

5.25" External Drive

Our high quality 5.25" drive is capable of a number of configurations including 40 or 80 tracks (360/720K format). Colour matched to the Amiga, quiet in operation, and includes a throughport connector.

£114.95 including VAT & delivery

PYE 15" FST TV/Monitor (MODEL 2325)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price!

£249.00

Includes VAT, delivery and computer connection lead



Considering a Monitor?

Consider this!

The CODE CLINIC

EVERYONE who uses the Amiga knows that there are disks that boot and disks that don't. Take the Workbench disk, for example. When this is thrown in the drive it autoboots Workbench. However, when you put the Extras disk in on power-up, it does nothing except ask you to put in another disk.

More experienced users will know that a non-booting disk can be turned into a booting one simply by issuing the INSTALL command from CLI.

What is not so readily known is how this works.

When a disk is inserted in DFO: after a power-up or reset, the Amiga loads in the first two sectors of the disk and examines them. If everything is correct it will carry on booting the disk. If, however, the bootblock is empty or contains an invalid

bootblock, it will ask for another disk.

The bootblock contains a machine code routine to check if the DOS library is available and, if it is, returns control to booting the disk. There is enough space on the bootblock to tag on your own routines after this check and before the return to the booting process.

The listing shows a standard INSTALL type bootblock after disassembly. The first thing to notice is that before the code starts there are three longwords of data. These are very important. If they are not correct the disk will not boot.

The longwords begin with the

string, "DOS",0, which signifies an AmigaDOS disk and tells the Amiga which file system is used. The zero value indicates the StandardFileSystem, a 1 would indicate the FastFileSystem, which is not yet properly supported on floppies.

The second word is a checksum to make sure the bootblock has not been corrupted or tampered with. It is calculated by adding together all the bytes in the bootblock – except the checksum itself of course – and inverting the total.

The third word is a pointer to the root block of the disk and should be

left equal to 880 (\$370). A disk is divided into 80 cylinders, each of which is two tracks, upper and lower. Each track is further divided into 11 sectors of 512 bytes each. Hence the total storage of an Amiga disk is: $512 \times 11 \times 2 \times 80 = 901,120$ bytes or 880k (1k = 1,024 bytes).

The rootblock – not to be confused with bootblock – is at the beginning of cylinder 40, hence it is $11 \times 40 \times 2 = 880$ sectors into the disk. However, this longword does not seem to be used and can be changed to anything without harming the bootblock. I would strongly advise against changing it unless you really need the extra two bytes – it may be needed in future versions of the Amiga's operating system.

After these 12 data bytes, there are 1,012 bytes left to store the machine code program to be run on boot-up. The official boot code, which *must* be included in the program if you want the disk to boot, takes only 37 bytes, leaving 975 bytes free for your own code.

What sort of things can you do on a bootblock? Well, firstly there is the dark side of things. Viruses like the SCA and Byte Bandit viruses are code programs stored on the bootblock that execute at the boot stage, writing out new bootblocks to other disks inserted

```
dc.b "DOS",0      ; Signifies a DOS disk
dc.l xxxx        ; Bootblock checksum.
dc.l $370        ; Pointer to root block

boot:           ; The start of the machine code
lea DOSname(PC),a1 ; point to 'DOS Library' string
jsr FindResident(a6) ; Execute EXEC Library routine
tst.l d0          ; Check if library is open
beq.s error       ; If not, error
move.l d0,a0
move.l 22(a0),a0  ; Get library revision number

moveq #0,d0      ; Clear d0
return:          ; Carry on with boot process
rts

error:           ; Put -1 in d0 (error return code)
moveq #-1,d0
bra.s return

DOSname:
dc.b "dos.library",0
```

into the machine.

There is no shortage of PD bootblocks to fool your Amiga into thinking it only has the one disk drive or only has 512k of memory so you can run some badly-written German demo or game that freaks out on an expanded system.

On this month's cover disk I have included two bootblocks for you to mess around with. The first will allow you to switch the low-pass sound filter on or off. Note that this can be done on most A500 or A2000s but *not* on the A1000 or very early A500s.

The second is a bootblock to switch between 50Hz and 60Hz modes. This

```
AmigaShell:
dc.w $9989,$ffff,$182,$fe0,$180,-49
dc.w $9a89,$ffff,$182,$ffff,$180,0
dc.v $ffff,$ffff ; End copper
dc.v $ffff,$ffff ; twice to make sure
grafix1 inbin "sources:lopass.bmap" ; graphics for options
grafix2 inbin "sources:lopass2.bmap" ; graphics for title
even

dosname dc.b 'dos.library',0
gfname dc.b 'graphics.library',0
1> bootwriter filter.boot
Bootwriter V1.0. Written by Jolyon Ralph of Neural Network.
© Amiga Computing 1990.

Operation successful. Bootblock installed on D0: Remove disk and reboot.

1>
```

Writing your bootblock is made simple with just one command from the CLI line

```
1> checkagnus
Checking your machine...
You have the standard PAL Agnus chip fitted.
You have the standard DENISE chip.

1>
```

Sigh. Perhaps our **next** new Amiga will have the new chips

needs the new Fatter Agnus chip so will only work on a very new Amiga. You can test which Agnus chip you have with my CheckAgnus program, also provided on the cover disk in the Code Clinic drawer.

There's also a program in there called Bootwriter, which will transfer a program you have written on to the bootblock of a disk.

Once you have tried out the two example bootblocks, look at the source code for either, as they are almost identical. You will find that the beginning is the same as the standard AmigaDos bootblock described earlier, but with the addition of the following:

```
movem.l d0-d7/a0-a6,-(sp)
bsr.s start
movem.l (sp)+,d0-d7/a0-a6
```

This bit of code allows the bootblock to call your own program – the instructions following the *start:* label – before returning to the boot process. All the registers are saved before calling, and they are restored on return. This is very important.

There are a number of other points you must consider when writing code for a bootblock. To start with, all code is loaded into chip memory. Do *not* use a SEGMENT command, because it would be meaningless in a bootblock.

In the Devpac 2 assembler, set program type to executable, debug info to none and output to a disk file. This will create an executable file which will have 32 bytes of AmigaDos information at the beginning of the file. The Bootwriter program ignores this data, which is not needed for the

On the Cover Disk

IN THE Code Clinic drawer you will find the Bootwriter program. To install one of the bootblocks included on the cover disk, put the disk you want to install the boot on into D0: and type from the CLI:

```
bootwriter xxxx.boot
```

where xxxx.boot is either the *60hz.boot* or the *filter.boot* code. You will have to copy these two files, plus Bootwriter, to RAM: if you only have one drive.

The program will give an error if the file is not a bootblock or if it cannot find the file. Expect an error if the disk is write protected or corrupt.

Bootwriter will calculate the bootblock checksum and write it out to the disk. Reboot your Amiga and your bootblock should be working.

Also in this drawer is a program called CheckAgnus. Run this from CLI and it will tell you which versions of the Agnus and Denise chips you have in your machine. If you have the new ECS (Enhanced Chip Set) Agnus, you can use the 60Hz bootblock.

However, just because you have the ECS Agnus doesn't automatically mean you have 1 meg of chip memory. Amiga 500s need an alteration to the motherboard first to allow this.

bootblock. Assuming the bootblock is correct and the options have been set as stated, you should have no problems installing a custom bootblock.

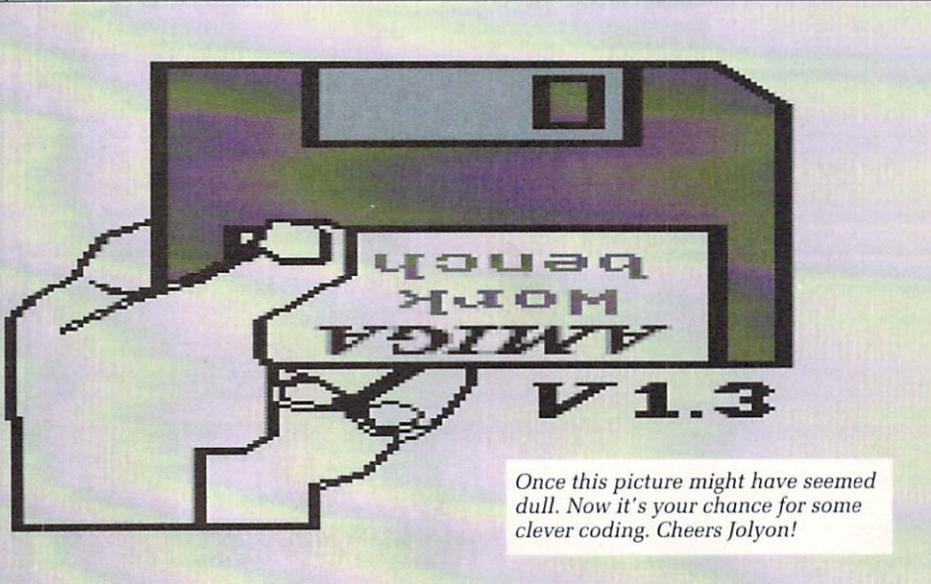
Another point to remember is that the bootblock will not load into the same address each time, so you must use PC-relative code, for example: *lea dosname,a1* must be replaced with *lea dosname(pc),a1*.

Any non-PC relative code will cause the bootblock to crash or produce unpredicted results.

Your code must be shorter than 1,024 bytes or it will not fit on to the bootblock. You don't have to worry about calculating the bootblock checksum, leave it set to zero because Bootwriter calculates it for you. Bootwriter will not recognise a file as a bootblock unless the first longword is set to "DOS",0.

You can use any library commands in the bootblock except those from the DOS library.

A lot can be done in 1k – many



MAIL
ORDER

SOFTSELLERS

6 BOND STREET, IPSWICH, SUFFOLK IP4 1JE

MAIL
ORDER

5A DOG'S HEAD STREET, IPSWICH, SUFFOLK (RETAIL)



36A OSBORNE STREET, COLCHESTER, ESSEX (RETAIL)

MAIL ORDER PURCHASE LINE (0473) 257158/210605 FAX NO. 0473 213457

JOYSTICKS

Cheetah 125	£7.99
Cheetah Starprobe	£11.99
Pro 5000 Extra Glo Green	£13.99
Pro 5000 Extra Glo Red	£13.99
Pro 5000 Black	£11.99
QS Turbo III	£9.99
Euromax Racemaker	£24.99
Konix Navigator	£11.99

PERIPHERALS

Replacement mouse + mouse holder + mouse mat	£29.95
Four Player Adaptor	£5.95
Mouse Mat	£4.95
Joystick Extender	£5.95
Dust Cover	£4.95

DISCS

	Qty 10	Qty 20	Qty 50	Qty 100
3.5" dsdd	£7.99	£14.99	£34.99	£59.99
Unbranded				
3.5" dsdd	£11.99	£22.99	£54.99	£99.99

DISC BOXES

3.5" 40 Holder Lockable	£5.99
3.5" 80 Holder Lockable	£7.99
5.25" 50 Holder Lockable	£4.99
5.25" 120 Holder Lockable	£6.99

CHEQUES AND POSTAL ORDERS PAYABLE TO SOFTSELLERS. POST AND PACKING FREE IN UK. OVERSEAS £1.50 per item. Subject to availability and price change without notice. Not all titles released at time of going to press. Shop prices may vary, but personal callers can claim advertised discounts on production of cut-off slip.



0530 411485

ASHCOM



0530 411485

**YOU NEED 512K NOW
HOW MUCH WILL YOU NEED
TOMORROW?**

THE NEW ASHCOM RAM EXPANSION IS EXPANDABLE TO 1.8Mb

FEATURES:

- ★ Real Time clock/calendar with high capacity Nicad battery backup
- ★ Memory disable switch
- ★ Low power consumption
- ★ Buffered Data Bus (Essential for high capacity Ram boards)
- ★ Plugs in as A501 NO SOLDERING!!
- ★ 12 Months warranty

All prices include VAT and delivery.

Trade enquiries welcome. British made.

Please make cheques payable to Ashcom

**ONLY £89.95 for 512K version. Rams only
Expander Board £19.95. £40 per 512K**

Fully expanded to 1.8Mb only £225

**ASHCOM 512K RAM EXPANSION
WITH REAL TIME CLOCK/CALENDAR
AND DISABLE SWITCH**

ONLY £59.95

**AND DISABLE SWITCH WITHOUT CLOCK
£53.95**

VIRUS BLOCKER

**PREVENTS THE
WRITING OF ALL BOOT
BLOCK VIRUSES TO
DISK. SIMPLY PLUGS INTO EXTERNAL
DISK SKT**



**ONLY
£19.95**

**Only from ASHCOM, 10 The Green, Ashby-De-La-Zouch, Leicestershire, LE6 5JU
Telephone: (0530) 411485**

moons ago it was the standard memory provided with computers like the ZX-80 and ZX-81. I have even seen a game on a bootblock. The examples I have shown are fairly simple, but the principle behind all bootblocks is the same.

Finally, a warning: Before installing any bootblock make sure you are not installing it on an original piece of software. Always use a backup. Games with custom bootblocks, most of them at least, will be destroyed by installing a new bootblock.

Do not install a new bootblock on a

disk which already has a custom bootblock. Check the disk with VirusX first. If it reports that the disk in DFx: has a non-standard bootblock, then do not use Bootwriter on it.

A blank formatted disk is a safe one on which to test out Bootblock routines.

Proper programmers need the proper books

WE GET one type of programming query more than any other here at the *Amiga Computing* offices, and it is always along the lines of:

"I want to start programming the Amiga. Do I need all those books?"

This is a very valid question because "those books" are the official Amiga reference books. A complete set of three could cost you more than £80 and several inches of valuable shelf space. Do you really need them all? What are they actually about?

Well, yes, you do need them if you

want to program the Amiga. There are various other publications around, most notable being the excellent Abacus books, but for the last word I would go for the official guides.

However it is not very likely that you will need all three books, not all at once, anyway. What follows is a brief description of the information to be found in each book.

By the way, before signing any cheques make sure you are buying the latest version of these tomes of knowledge. The ones you want are a palish blue colour.

I AM always on the lookout for clever solutions or techniques. Your Basic program to calculate pi to 30 decimal places might be just what someone is looking for. Or have you found a neat way in assembler or C to create software sprites with the blitter? Want to be famous? Send it in.

The Code Clinic
Amiga Computing
Europa House
Adlington Park
Macclesfield
SK10 4NP

MicroLink: Mag048
CIX: amigacomputing

Hardware Reference Manual

THIS is the book all hackers swear by and all serious programmers swear at. If you are at all interested in programming the Amiga as though it were nothing more than a C64 with extra bells and whistles, then this book is *all* you need.

It deals with the various aspects of the Amiga by examining everything at the very lowest level. The custom chips, the interface hardware... you name it, it's here.

The various chapters concentrate on the copper, the playfield hardware, the sprites, the audio department and the blitter. The sprite section alone is a wonderful example of a well-written book.

The Hardware Reference Manual will teach you about the chips that actually make multi-tasking and Intuition possible. If you would rather stick to programming in C or Basic, then you will not find anything here that will make your life easier.

Rom Kernal Manual – Libraries and Devices

THIS is the book that will send Wimp fanatics everywhere into shivers of ecstasy. Well, perhaps that's a slight exaggeration, but you get the general idea.

If you want to know anything about Intuition, you're in luck, for there is a complete tutorial on using the Amiga's wonderful operating system.

But there is so much more, with introductions to animation and graphics, disk operations and speech.

Be warned though, this is no book for Basic programmers. You may find some of the examples useful, but to try everything out properly you'll need to be programming in C. There are hundreds of example listings, demonstrating everything you need to know.

For programmers new to the Amiga, here is the definitive guide to writing software. It should probably be the first Amiga book you buy.

Rom Kernal Manual – Includes and Autodocs

AFTER all the excitement of the first two books, this one may come as a slight disappointment. The majority is made up of a list of all the functions available from within the libraries. If you want to know the exact format of the command to plot a pixel, then it's here somewhere.

The function lists are called autodocs because they have been automatically extracted from the original source code. Can't say fairer than that.

The other important section of the book details the IFF format in excruciating detail. Starting with graphics examples, then moving on to sound and text, this is where you look if you want an explanation on how to make your programs IFF compatible.

Unless you want the IFF info, this volume is best thought of as a companion to the Libraries and Devices.

HAMPSHIRE MICRO COMPUTERS LTD

Unit 11, Kingdom Park, Brunel Way,
Segensworth East, Titchfield, Hants PO15 5TJ
Tel: 0489 885911 or Fax: 0489 885651

Visitors welcome at our showroom. Mon-Fri 9-5.30
12 months guarantee. Many more items in stock.
Phone for full price list/catalogue.
Securicor delivery £7.00 + VAT, Post £1.00 + VAT,
Large items £3.00 + VAT

Printer prices include Paper & Cable	All prices are exclusive of VAT	Other Accessories
Citizen 120D £104	Hewlett Packard Deskjet Plus £585	Philips 8833 Colour Monitor £204
Citizen Swift 24 £265		Amiga A500 'Flights of Fantasy' £312
Panasonic 1124 £229	Integrex Colour Jet Printer £540	Cumana Disc Drive £72
Panasonic 1180 £139	LC10 & LC2410 Cut Sheet Feeder £51.30	Amiga 501 Upgrade £103.48
Star LC10 Colour £169		Amiga Batpack £312
Star LC10 Mono £129	Universal Printer Stand YU S25A £22.61	Amiga Class of 90's £460
Star LC10 Mono £129		x 10 3.5" discs D/S D/D £7.39 3.5" 100 Disc Box £6.91 3.5" 50 Disc Box £5.17 Copy Stand £8.65
Star LC2410 £195	Amstrad LQ3500 £191	FULL RANGE OF AMIGA SOFTWARE ON REQUEST
Epson LX400 £139	RIBBONS	
Epson LQ400 £215	1200D Original £4.00 LC10 Colour £6.00 LC10 Mono £4.00 LC2410 £5.00 Panasonic 1124 £8.65 Deskjet Cartridge £14.05	
Epson LQ550 £283		

Access & Visa welcome.
Prices subject to change

NEW-WIZARD'S GUIDE TO BASIC-NEW

Months of research and programming have gone into developing this highly effective and enjoyable way to learn BASIC. The whole concept is designed to help you learn more quickly and achieve impressive results in no time. Your confidence and skills will rise rapidly as you make your way through this course. The Wizard's BASIC Guide comes on two disks with a sophisticated electronic book - You can get help in the form of text, moving demonstrations, graphics, sound for speech with just the touch of a button. This is far better than any paper book and you can access it while you are working on any of the programs. The course starts at beginner level, and carefully rises to expert level. You will learn to master graphics, colour, sound, movement, speech, windows, menus, dataprocessing etc. Hundreds of example programs are included. We have also included a good number of exciting and useful demo programs - e.g. speaking mastermind with animated head, an electronic address book, a fast moving racing car game, a synthesiser and many more. This is a value packed package which will leave you with a wealth of knowledge and expertise.

Excellent value - £12.95

BEGINNERS GUIDE TO AMIGADOS

This is a new and effective way to take you from a beginner to an expert on AmigaDOS. This highly popular package has now been updated to cover BOTH 1.2 and 1.3 versions. The package consists of a guidebook, a tutorial DISK, a crib card and FREE additional software which could cost you over £20 to buy elsewhere. This is clear and well thought out guide to AmigaDOS commands. The emphasis is on learning through experience and doing - not just reading like most other books. It shows you how to set up your own boot disk with your own customised messages that will boot in seconds (unlike workbench!). It will show you how to make your Amiga independent of the workbench disk - no more "Please insert workbench disk". We include the new and incredibly fast Lazer-Load picture loader so you can include your own pictures (e.g. from DPaint) on your boot up sequence. The disc also includes a gallery of high quality pictures. We supply a password system which will prevent unwanted users from using your Amiga. Also, included are several other high quality programs. Guide Book, disk, cribcard etc. Only £12.95.

MASTERPIECE

"THE BEST PICTURES I HAVE EVER SEEN ON THE AMIGA" reported a recent reviewer. This package takes you on a spectacular trip through the world of art. We have selected many masterpieces from the world's art treasures and take you on a historical guided tour. Every picture is of true quality and is displayed using thousands of colours. To help you enjoy the world's heritage of art to the full we have included comprehensive notes on each artist and painting. All the famous names are there - Leonardo Da Vinci, Monet, Renoir, Constable, Picasso and many, many more. Whether you are an art expert or know nothing at all about art, this is a wonderful way to appreciate the great paintings of the world (and appreciate the graphic capabilities of your Amiga as well). The package comes with two disks packed full of pictures and information.

Excellent value - £12.95

SALE PRICE - This month only - MASTERPIECE ONLY £7.95

UK P&P - FREE and by FIRST CLASS post

Overseas orders welcome - Europeans please add 50p

Outside Europe please add £1.50 for Airmail

All payments in pounds sterling please.

Cheques/P.O.'s to:

Wizard Software (Dept A.C.1) 20, Hadrian Drive,
Redhills, Exeter, Devon, EX4 1SR

commodore

AMIGA

FROM £349!

Prices include VAT, delivery & warranty.
Please add £15 for overnight delivery.
All systems are tested before despatch.
On-site maintenance options available.

- Amiga A500 package £379
- Amiga B2000 with 40MB auto-boot hard disk, special trade-in offer £1099
- Amiga B2000 latest UK model, with 1.3 ROMs and 1MB chip-RAM £949
- Amiga B2000 As above, plus A2286 PC-AT bridge board & 512k disk £1495
- Amiga B2000 With A2286, plus A2090A/2092 20MB autoboot hard disk £1795

■■■ B2000 + AT Bridge Board + 40MB autoboot hard disk £1995!

PERIPHERALS
AMIGA

- A2620 68020 Card + 2MB 32-bit £1095
- A2630 25MHz + 2MB 32-bit £1295
- A2630 25MHz + 4MB 32-bit £1495
- A2286 PC-AT board & 51" drive £595
- A2090A/2094 40MB autoboot h/d £595
- A2090A/2092 20MB autoboot h/d £345
- C2058 8MB Board, 2MB installed £315
- RAM for above, per 2MB ... £175
- Flicker Fixer Multiscan Adaptor £349
- 14" Multisync high-res monitor £445
- 3½" DS/DD diskettes, per 10 £10
- C1010 NEC 3½" slimline drive £79
- A501 plug-in RAM/clock 512k £99
- A1084S Hres colour stereo monitor £249
- A590 20MB autoboot hard disk £375
- RAM for A590, per MB £99
- Amdrive 50MB autoboot hd disk £495
- Star LC10 Multifont Printer £179
- Star LC10C colour, 120 cps, NLQ £229
- HP DeskJet+ 300 dpi inkjet, B/W £695
- HP PaintJet colour inkjet 180 dpi £889
- Supra Modem 300-2400 baud £179
- Trackball Marconi RB2 £59
- ColourPic Digitiser/Frame Grabber £475
- Superpic Genlock/Digitiser £595

■■■ We send a FREE copy of SUPERPLAN with every B2000!

Why not enjoy the free Teletext databases with the MicroText Teletext adaptor... Fully programmable, with Fastext facility, instant access to last 16 pages, double page view, telesoftware loader, auto-start/background operation... Pages can spoken, printed as ASCII or graphics, saved as ASCII or IFF files... And it turns your 1081/1084/8833 monitor into a digital TV! Available now for only £139!

■■■ SUPERPLAN half-price special offer, while stocks last... £49.95!

PRODUCTIVITY
AMIGA

- SuperBase Personal 2 £169.04
- SuperBase Professional v3 34.95
- SuperPlan 24.95
- Maxiplan 500 39.95
- Ruby Comm 49.95
- Arena Accounts 49.95
- Personal Tax Planner 14.95
- CanDo 14.95
- Top Form 14.95
- Excellence! 14.95
- Professional Page v1.3 14.95
- CG Outline Fonts 14.95
- Pagesetter 2 14.95
- Publisher's Choice 14.95
- ProText v4 14.95
- Pen Pal 14.95
- VizaWrite Desktop v2 14.95
- Lattice C v5.04 169.04
- Dos-2-Dos 34.95
- PC Emulator v1.2 24.95
- C64 Emulator v2 39.95
- SuperBack 2 49.95
- Workbench v1.3 Enhancer 49.95
- Relational database power, without programming! 59.95
- "The Rolls-Royce of Amiga databases" (NCE) 154.05
- Pro Spreadsheet with business graphics, time planner 49.95
- Fast Amiga spreadsheet with text/graphics/speech 59.95
- Comme software, includes Ruby-View and Ruby-Term 69.95
- Sales, Purchase and Nominal Ledgers plus invoicing 159.95
- UK Income Tax computation program, from Digita 39.95
- Can You Do It without CanDo? 139.95
- Forms generator with over 100 ready-made forms 69.95
- WP with graphics, thesaurus, dictionary etc. 129.95
- Includes WP, Desktop, colour separations, CAD 189.95
- 35 fonts for ProPage, ProDraw, PageSetter 2 139.95
- £79.95 ■ A/C Basic v1.3 149.95
- 79.95 ■ Hisoft Basic V1.05 79.95
- 79.95 ■ Amiga C for Beginners 18.45
- 99.95 ■ Amiga C Advanced Programmers 24.95
- 69.95 ■ System Programmer's Guide 32.95

■■■ ColourPic real-time PAL colour digitiser/framegrabber £475!

CREATIVITY
AMIGA

- X-Cad Designer 89.95
- Graphics Starter Kit 69.95
- Sculpt-Animate 4D 89.95
- Sculpt-Animate 4C Jr. 69.95
- Sculpt 3D XL 69.95
- Aegla Sonix v2.0 69.95
- Pro-Video PAL Plus 69.95
- Pro Video font sets 69.95
- TV-Text Professional 69.95
- SummaSketch Plus 69.95
- PAL Rendale Pro 645.00
- Rendale 8802 Genlock 199.95
- MiniGen 109.95
- De Luxe Paint 3 62.95
- Design 3D 69.95
- De Luxe Video 3 89.95
- PageFlipper + F/X 69.95
- Animagic 69.95
- Fantavision 29.95
- Entry-level professional CAD system (needs 1MB) 89.95
- Aegis Images/Aegis Animator/Aegis Draw/Aegis Artpack 69.95
- 3D graphics and animation for the professional user 369.95
- As Sculpt 4D above, without HAM ray-tracing 109.95
- Much faster than Sculpt 3D, with 24-bit plane option 129.95
- Score, edit, synthesise, improvise. Midi compatible 49.95
- Professional video tiler with fonts, extra fonts available 189.95
- Choice of 5 sets of 4 anti-aliased fonts, each... 89.95
- Latest full-feature video tiler, includes Zuma fonts 139.95
- 12x12 Graphics Tablet with fast driver software 425.00
- £645.00 ■ Digiview Gold V4.0 139.95
- 199.95 ■ Digipaint 3 59.95
- 109.95 ■ Professional Draw 114.95

■■■ IF YOU WANT IT TOMORROW... CALL US TODAY! ON 081-546-7256 ■■■

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. Please allow 5 days for delivery
of hardware orders. Prices are quoted
subject to availability.
Ref. A71



Calico
Software

LAKESIDE HOUSE, KINGSTON HILL, SURREY, KT2 7QT. TEL 081-546-7256

CONSOLE CRAZY!

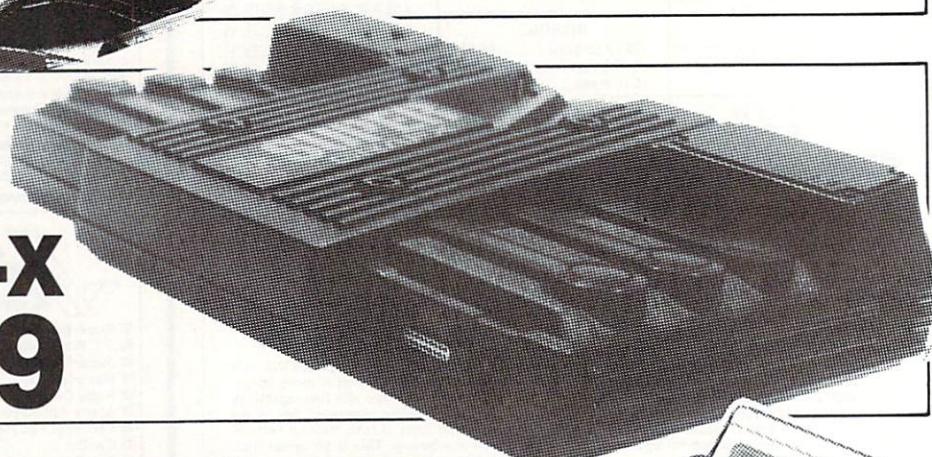


SEGA®

16 BIT
MEGA DRIVE
SCART
OR PAL **£185**



SUPERGRAF-X
SCART
OR PAL **£289**



ORIGINAL PC ENGINE £185

HAND HELDS



**ATARI
LYNX**
£175

inc. California Games

**NINTENDO
GAME
BOY**
£99

SOFTWARE
AVAILABLE
FOR ALL
CONSOLES.
SEND SAE
FOR LISTS
(STATE MODEL).



CONSOLE CRAZY! c/o PERRYMERE LTD.,
BRITANNIA BUILDINGS,
46 FENWICK STREET, LIVERPOOL L2 7NB.
ALL PRICES INCLUDE VAT & P & P.

(051) 227 2482

PHONE/FAX



PLEASE MAKE CHEQUES PAYABLE TO PERRYMERE LTD.

HI SOFT is entering the vicious world of publishing with a new range of books, hoping to retain and expand its reputation as a value-for-money and user-friendly sort of organisation.

DTP at a Glance is one of the first of many volumes off the production line and is aimed, cunningly enough, at those of us who are just starting out in DTP.

The book does not attempt, in only 90 pages, to tell you all you ever wanted to know, but does tackle the terrible problem of jargon. DTP is where the two jargon-ridden industries of computers and publishing mix.

The results are understandably horrendous. Unless you're on a degree course in semantics, it's not much fun.

As well as explaining terms used, attempts are made to discuss the concepts behind the various processes under consideration. Topics cover such matters as balance and layout design as well as the more mechanical aspects of binding, folding and other production concerns.

Fonts are covered in exacting detail. After reading this book you will be able to describe a font in such overboggling detail that absolutely nobody will have a clue what you're going on about except another DTP freak. Or a typesetter.

The text is accompanied by frequent and relevant diagrams which are explanatory and useful, a bit of a rarity in this sort of publication. The examples are consistently well chosen, unambiguous and well presented.

Although only a relatively short book, many different topics are covered – and quite well at that. Some subjects conspicuous

by their absence are the use of colour, drop shadows, bleeds and captions.

DTP is one of those newish fields that attract lots of authors and publishers who reckon they can write any old waffle, bung a nice price tag on it and flood the shelves of Foyles and Waterstones with so many copies that unsuspecting newcomers open their wallets first and ask questions later. This is not one of those books. Although I do find it highly ironic that the book was actually *typeset* by a company in Luton.

It is by no means meant to

Publish and be damned

BOOK REVIEW

Title: *DTP at a glance...*
Author: Rob Pickering
Publisher: Bookmark Publishing
ISBN: 1-85550-002-7
Price: £9.95 (90 pp, paperback)

Nic Veitch

Roll DTV!

YET another light blue Abacus book plops on to the desk, this one promising to reveal the deepest secrets of desktop video.

DTV is the latest hobbyist buzzword, and in its simplest form is the combination of computer generated output with live or pre-recorded video signals. The archetypal example is putting credits such as Best Boy and Key Grip over your summer holidays, but this is only a tiny part of what is possible.

There are two main problems facing those trying to get started in desktop video: The high cost of the equipment and a general lack of information. This book does a good job of redressing the second point.

Early chapters do the right thing and get all the

tedious mucking around with video signals and the various bits and bobs of jargon out of the way. Everything you ever wanted to know about different video standards is explained in a way which actually makes a bit of sense.

By far the largest portion of the book deals with all the delicious technical equipment and software you'll need. This section is well written and explains the pros and cons of as many different types of genlocks, sound and video digitisers as the author could get his hands on. Essential reading to ensure you don't waste your money on inferior products, or on something which is not exactly what you had in mind.

Finally, some general hints on production and scripting, all rounded off with ideas for making use of your new-found skills and a few example shopping lists.

I have several slight reservations about this book. To start with there are no photographs. None at all. With a media as completely

visual as video, it seems crazy to use only one or two simple mono drawings to illustrate points. Instead of describing the process of calibrating cameras with colour bars and so forth, Abacus could have printed some useful charts. A missed opportunity to be really clever.

The other faults are only consequences of the book's stateside origin. As a result, not all of the products detailed in the text are available in this country. Even if they were, the nature of the PAL and NTSC colour standards casts a shadow over their compatibility.

If this book had been written in Europe it would be the best reference book to date. As it stands, it's about the nearest you'll get.

John Kennedy

BOOK REVIEW

Title: *Amiga Desktop Video Guide*
Author: Guy Wright
Publisher: Abacus
ISBN: 1-55755-057-3
Price: £18.45 (257 pp, paperback)

AMIGA

4 Mb
68020
CARD
£349*

NOW
ONLY

* Price includes 68020 + 1Mb of ram.

- Enjoy the performance of 5.5 Amigas under the lid of your computer
- Run graphics packages at lightning speed (upto 40 times faster with 68882)
- Loads Kickstart into 32-bit SUPER-FAST RAM (software selectable!)
- Our RAM price is more cost effective than any A501 compatible (runs faster too!)
- THE 20-CARD is compatible with the A500 and the A2000
- Runs programs 5-6 times faster than a standard Amiga
- THE 20-CARD comes with 1 Mb installed (remaining 3 Mb socketed)
- THE 20-CARD operates at a FULL 16 MHz (asynchronous design)
- THE 20-CARD has a socket for the 68881/ 68882 maths coprocessor (16 MHz)
- THE 20-CARD uses low price 256x4-100ns DRAMS (has no wait states)
- THE 20-CARD has a superior DRAM design enabling it to out perform some 20 MHz cards
- THE 20-CARD is the ONLY card to auto-synchronise with the Amiga perfectly
- THE 20-CARD fits internally into the 68000 socket and is compact in design (7.75 x 5.3 inches overall dimensions)
- AFTER A WEEKS USE YOU'LL WONDER HOW ON EARTH YOU MANAGED WITHOUT IT!

ORDER FORM

I enclose a cheque/Postal Order for £349 (inc. VAT)
payable to:-

SOLID STATE LEISURE LIMITED

Signature: _____ Name: _____

Address: _____

Post Code: _____

Send to: Solid State Leisure Limited, 80 Finedon Road,
Irthlingborough, Northants NN9 5TZ.
Tel: (0933) 650677 - Monday to Saturday 9.30-5.30pm

Please allow up to 28 days for delivery

OUR GUARANTEE

SOFTWISE

COMPUTER SOFTWARE PHONE/MAILORDER

Will not charge credit card customers for goods until day of dispatch. We do not charge extra for phone orders, we will quote prices over the telephone, and send price list with every order if required - price list on request - large S.A.E. required.

7 Gates of Jambala	£16.99	Ghouls & Ghosts	£16.99	Weird Dreams	£16.99
Afterburner	£16.99	Indiana Jones (Adv)	£16.99	Xenon 2	£16.99
Altered Beast	£13.99	Infestation	£16.99	Space WQuest 2	£16.99
Austerlitz	£16.99	Interceptor	£16.99	Star Wars Trilogy	£16.99
B of Power	£16.99	Ivanhoe	£16.99	Stunt Car Racer	£16.99
Batman the Movie	£16.99	Jack Nicklaus Golf	£16.99	Time of Lore	£16.99
Battletochess	£16.99	Jumping Jackson	£13.99	Turbo Outrun	£16.99
Battle of Britain	£16.99	Kick Off	£16.99	Waterloo	£16.99
Beach Volley	£16.99	Kid Gloves	£16.99	Wings of Fury	£13.99
Black Tiger	£16.99	Last Ninja II	£16.99	Wipe Out	£13.99
Blade Warrior	£16.99	Leisure Suit Larry	£23.99		
Bloodwych	£16.99	Leisure Suit Larry 3	£23.99		
Bomber	£19.99	Lost Patrol	£16.99		
Cabal	£16.99	Manhunter	£19.99		
Chase HQ	£16.99	Matrix Marauders	£16.99		
Chess Champion 2175	£16.99	Microprose Soccer	£16.99		
Cloud Kingdoms	£16.99	New Zealand Story	£16.99		
Colorado	£16.99	North & South	£16.99		
Continental Circus	£13.99	Operation Thunderbolt	£13.99		
Cyberball	£13.99	P47	£16.99		
Damocles	£19.99	Police Quest	£16.99		
Day of the Viper	£16.99	Populus	£16.99		
Delux Strip Poker	£13.99	Powerdrome	£16.99		
Double Dragon	£13.99	Quartz	£16.99		
Dragons Breath	£19.99	Robocop	£13.99		
Dungeon Master (1 Meg)	£19.99	Running Man	£13.99		
Elvira	£19.99	Shadow Warrior	£16.99		
Elfie	£16.99	Shinobi	£13.99		
Escape Robot Monsters	£13.99	Grid Iron	£16.99		
European Superleague	£13.99	Hard Driving	£13.99		
F16 Combat	£16.99	Honda R.V.F.	£16.99		
F29 Retaliator	£16.99	Home Park Mystery	£16.99	Branded Disks	3.5" DS/DD Sony £9.99
Final Battle	£16.99	Toytell's	£13.99	5.25" DS/DD TDK	£6.99
Future Wars	£16.99	Triad 2	£16.99	Kindwords 2	£42.99
Ghost 'n' Goblins	£13.99	Typhoon Thompson	£16.99		
Ghostbusters 2	£16.99	Untouchables	£16.99	Unbranded Disks	3.5" DS/DD £7.49
					5.25" DS/DD £6.99

BUSINESS SOFTWARE

Home Accounts	£25.99
Personal Accounts Plus	£28.99
Small Business Account	£69.99
Small Bus. Account Extra	£
K Comm 2	£25.99
K Data	£42.99
Superbase Personal 2	£85.99
Fun School 6-8/over 8/under 6	£16.99
Digitalic	£34.99
K Spread 2	£51.99
Protex V4	£85.99
Degas Elite	£
First Word Plus	£
VIDI	£144.95
Delux Paint 3	£68.99
Kindwords 2	£42.99
Branded Disks	3.5" DS/DD Sony £9.99
	5.25" DS/DD TDK
	(48TP)
	£8.99
	Unbranded Disks 3.5" DS/DD £7.49
	5.25" DS/DD £6.99

All prices correct at time of going to press

MANY MORE SOFTWARE ITEMS AVAILABLE. SEE OUR GUARANTEE

All prices phone/mail order only, goods subject to availability or release date, above prices include VAT and P&P UK only. For European prices divide by 1.15 + £2.00 P&P per item, games only. Mail order, please make cheque/PO payable to Softwise, 41 The High Street, North Tawton, Devon EX20 2HG. Please allow for cheques to clear (5 working days) before goods despatched.



0837 82846

FOR PHONE ORDERS ON CALL 24 HOURS A DAY



CONTROL THE UNIVERSE!

"I'm totally awed by what you have done!...it's beautiful, especially when the lights are off...congratulations..."

Arthur C. Clarke

author of *2001: A Space Odyssey*

Distant Suns (Commodore Amiga™ only), the award-winning planetarium blockbuster, is now available in the UK in PAL!

Endless entertainment and education for all. Ask for it!



Virtual Reality Laboratories, Inc.

2341 Ganador Court
San Luis Obispo, CA 93401 USA

ATARI ST and AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists!

CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier



520STE Power Pack

£369.00

inc. VAT and Next Day Delivery

NOW INC
HYPERPACK

PowerPack includes:

- ★ 520 STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
- ★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
- ★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE.
- ★ First BASIC and First Music Utility Software.
- ★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95.
- ★ All leads, manuals PLUS MOUSE and free mains plug!
- ★ Hyper Pack S/W inc Hyper Draw, Hyper Paint and Borodino Battlescape War Game.



Amiga A500 BAT Games Pack

featuring BAT PACK or the new

FLIGHT OF FANTASY PACK

£399.00

520STE DISCOVERY PACK

£279.00

NEW!!

NEW! fantastic value for money pack includes:

- ★ 520 STE 512K memory keyboard with built in 1 megabyte double sided disk drive and TV modulator
- ★ Game Pack including OUTRUN, SPACE HARRIER, CARRIER COMMAND and BOMB JACK
- ★ UTILITY PROGRAMMES inc STOS GAME CREATOR, NEOCHROME painting package and FIRST BASIC programming language
- ★ ST tutorial programme and 'DISCOVER YOUR ST' beginners guide to the ST computer
- ★ PLUS MOUSE, MOUSE MAT, MANUALS, ALL LEADS, METACOMCO

1040STE Business Pack

£479.00

- ★ Includes the new 1 megabyte 1040STE keyboard plus over £200 worth of business software including WORD UP wordprocessing software, featuring glossary and mail merge, K-Spread 3.0 spread sheet and SUPERBASE PERSONAL Database software. Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.

MEGA 1 Business Pack

£529.00

Features:

- ★ Separate Keyboard and System Unit
- ★ Inc. all software supplied with 1040 STE Business Pack.
- ★ Blitter chip installed for faster graphics

Inc SM124 Mono Monitor.....£628.00

ACCESSORIES

Quickshot II Turbo Joystick.....	£9.95
Competition Pro 5000 Joystick.....	£13.95
Competition Pro with Autofire.....	£14.95
Konix SpeedKing Joystick.....	£11.95
Red Mouse Mat with Amiga logo.....	£5.95
Plain blue Mouse Mat.....	£4.95
Contriver Amiga and ST Mouse with FREE holder and Mouse Pad	£20.95

PRINTERS

Star LC24-10 24 pin incl. lead ST/Amiga.....	£249.00
Star LC10 including interface lead for ST/Amiga.....	£169.00
Star LC10 colour including interface lead for ST/Amiga.....	£219.00
Citizen 120D including interface lead for ST/Amiga.....	£139.00
SEIKOSHA 80 COLUMN PRINTERS – AMAZING PRICES	
Seikosha 9 pin NLQ including interface lead for ST/Amiga.....	£139.00
Seikosha 24 pin LQ including interface lead for ST/Amiga.....	£239.00

CREDIT CARD ORDERLINE 0908 378008 (Mon – Sat 10am-6pm)

To order: either call the orderline above with your credit card details OR make a cheque/PO payable to: Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below

DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES MK2 2AZ

All prices include VAT and next day delivery by courier.
Licensed Credit Brokers * Written quotations available on request APR 34.5% Variable



BAT Games Pack includes:

- ★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive
- ★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV
- ★ DELUXE PAINT II GRAPHIC PACKAGES
- ★ PHOTON PAINT II graphics with animation worth £70
- ★ FREE, only-just-released BATMAN-THE MOVIE games software.
- ★ NEW ZEALAND STORY arcade games software.
- ★ F16-INTERCEPTOR – amazing 3D flight simulator software.
- ★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
- ★ FREE MOUSE MAT JOYSTICKS and 10 BLANK DISKS.
- ★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial
- ★ All leads, manuals PLUS MOUSE and mains plug!

FLIGHT OF FANTASY Pack Includes:

- ★ F29 RETALIATOR – fantastic NEW flight simulator – replaces Batman
- ★ RAINBOW ISLANDS – smashing new arcade game – replaces New Zealand Story
- ★ ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS – replaces F18
- ★ Everything else listed for BAT Games Pack.

AMIGA A500

CLASS OF THE 1990's BUSINESS + EDUCATION PACK

£549.00

Features:

- ★ Amiga A500 + TV Modulator
- ★ Midi Interface + Software
- ★ Kind Words II word processor
- ★ Page Setter DTP
- ★ Super Base Personal Database
- ★ Maxiplan 500 spreadsheet
- ★ Amiga Logo, BBC Emulator Deluxe Paint II
- ★ Mouse Mat, 10 Blank disks, and disk wallet



AMIGA 1 MEG

BAT GAME PACK

£499.00

1 Meg Bat Games Pack includes:

- ★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
- ★ Everything listed for the A500 Bat Game Pack
- ★ DRAGON'S LAIR 1 MEG MEGAGAME!

EXTERNAL DISK DRIVES

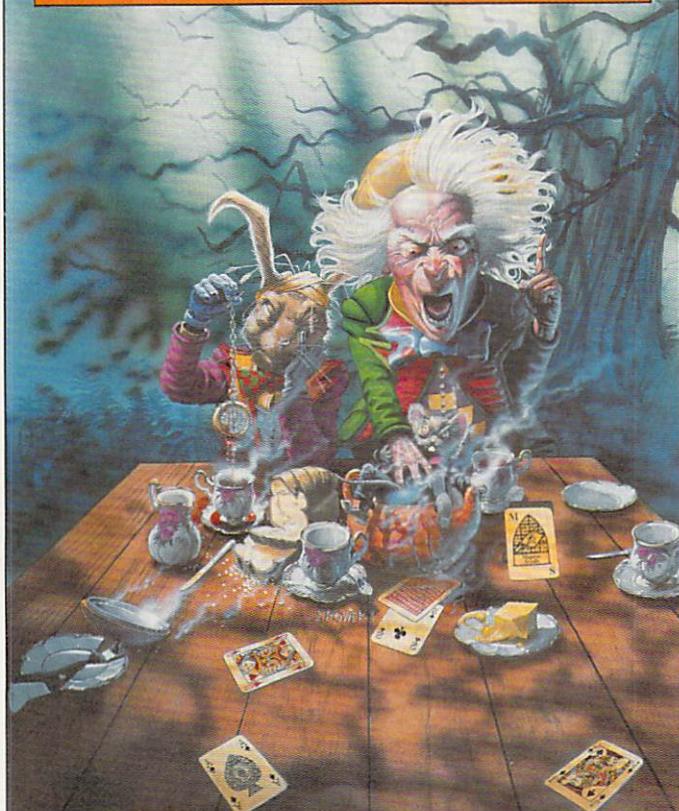
Atari SF314 1 Megabyte.....	£139.00
Amiga A1010 1 Megabyte.....	£109.00
Cumana 1 Megabyte Atari or Amiga	£89.95
NEC 1 Megabyte Atari or Amiga	£79.95
Atari Megafile 30 Hard Disk.....	£439.00
New! Commodore A590 20 meg hard disk.....	£369.00
A590 Hard Disk & Memory Upgrade installed.....	Phone
Seikosha 24 pin LQ including interface lead for ST/Amiga.....	£239.00

MONITORS

Commodore Amiga A1084 Stereo colour Monitor inc. lead	£269.00
Atari SC1224 Colour Monitor inc. lead.....	£259.00
Atari SM124 Mono Monitor including lead.....	£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga.....	£259.00

Amiga Arcade

Curiouser and curioser



Take care of the sense and the sounds will take care of themselves

AFTER a swift spot of contract signing Magnetic Scrolls is licensed to Virgin Mastertronic.

Magnetic Scrolls was formed in 1984 by Ken Gordon and the near legendary Anita Sinclair.

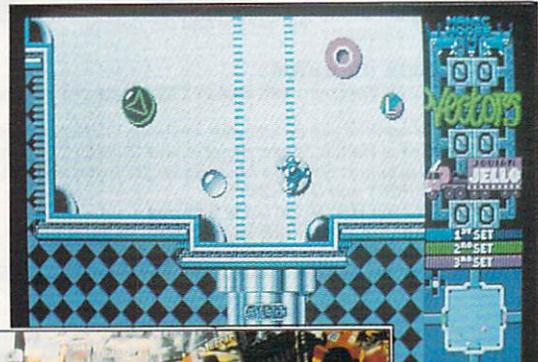
Their first release was The Pawn, a multi-award-winning blockbuster which set the standard for excellence in computer adventures.

The first title to come under the wing of Mastertronic is Wonderland, an extravaganza

based on the works of the bizarre genius Lewis Carroll. This will include a re-think on the gaming environment with new features such as interactive illustrations, auto-mapping and other goodies.

More than 100 locations – including the sherbet fountain – and some of the weirdest puzzles you are ever likely to come across make up the game that everybody will soon be talking about. Make a date with Wonderland on the shelves in early June.

All fired up



Who was that bald guy?

TO CELEBRATE the imminent release of Projectyle, the new mega-groovy hyper-brilliant game from Electronic Arts, a press play-off was organised.

Unfortunately what with the handsomest, most brilliant mem-

bers of staff being all tied up writing a magazine and that sort of thing we could only spare Jeff.

Well, I'm sure he was never odds-on but he didn't do too badly and came a close-runner up to Clare somebody from some other less worthy mag, Bah!

The game itself is a sort of three teams of four players and a puck affair. There are five(?) quarters to the pitch, each with a goal – one for each team and a "frantic" zone where anyone can score.

With up to three human players at once the game can become fairly fast and furious – even downright violent, but in-game options can bias play towards the strategic and statistical.

The completed game should be out by the time you read this, at a big and bouncy price – £24.99.

IF YOU haven't had enough of football games already Empire is releasing a World Cup 90 compilation.

The pack will include Kick Off, Tracksuit manager and the widely acclaimed International Soccer. The *World Cup Year 90 Compilation* will retail for the almost on the ball price of £24.99.

Magic Roundabout

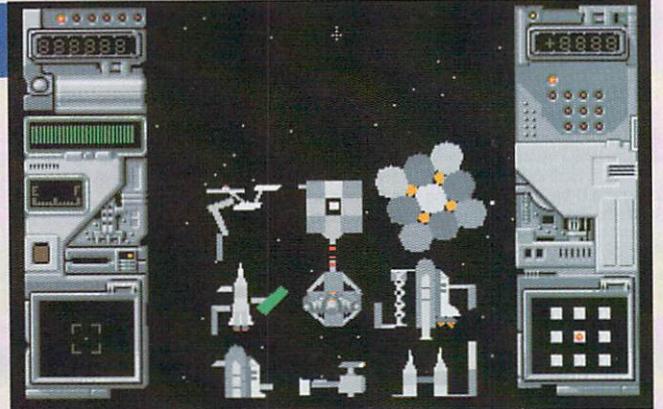
U.S. GOLD is in a spin about soon to be released Rotox which features a new (it says here) technique called Rotoscape. This will apparently rotate the whole world through 360 degrees.

Rotox - the man, the cyborg, the game - was an elite marine injured during combat and transformed into a metal mishap by 22nd Century science. Now the powers

that be have constructed a proving ground to test their latest investment.

Shoot nasty things, dodge tricky things and make your way through 10 levels of rotating real estate before you get out. Bah, would've been better off with a wooden leg.

The wonderful Rotox should be around your local store circa June.



All the latest news on the games software scene

It's not quite a Jaguar



IF YOU'RE the sort of person who drools at the thought of getting behind a turbocharged, intercooled, four cylinder in-line, 16 valve dual overhead cam engine then Thalmus has a surprise for you.

The company's new title, *Q8 Team Ford Rally*, will put your mitts on the steering wheel of a Sierra Cosworth 4x4. Three stages of rally action will test your razor-sharp reflexes.

If you get bored with the route you can take off on your own across country or on the public highway. Watch out for the boys in blue though - remember, they drive RS Cosworths too!

REVIEWED

THIS MONTH

- 90% Player Manager
- 86% Tennis Cup
- 84% Their Finest Hour
- 83% Treasure trap
- 81% Wipe Out
- 79% The Third Courier
- 78% Cloud Kingdoms
- 77% Tower of Babel
- 70% Spidertronic
- 64% Ultimate Golf
- 60% Sim City Editor
- 58% Gravity
- 37% Imposamole
- 34% Protector

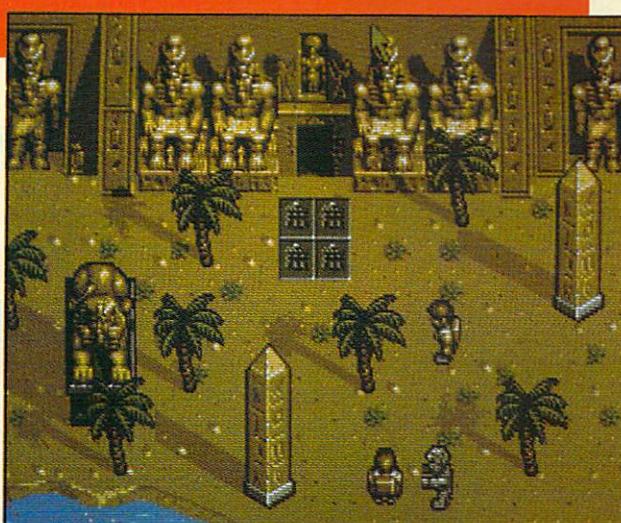
On the scrounge

A MORTAL being propelled through time, wandering the paths of infinity in search of his homeland. Sounds like an average Friday night on the way home from the pub, but actually it is the plot to *Scavenger*, a soon-to-be-released game from Hewson.

Brilliant horizontally scrolling graphics at 25 frames a second and eight channel sound are promised.

Scavenger is due for release in late July.

Early graphics from Scavenger by John Phillips



CORE DESIGN, the name behind such titles as *Rick Dangerous*, *Action Fighter*, *Dynamite Dux* and the um, interesting *Imposamole* (reviewed in this issue) is now going it alone.

First solo effort will be *Corporation*, a game of industrial espionage in the near future. A nasty Megacorp is planning and building the ultimate killing machine. Your aim in this 3D rôle-playing adventure is to nip inside the well defended research labs and nip out again with some incriminating evidence.

Corporation will be sneaking into all well-defended computer stores in July.

THE SALES CURVE team are the latest entrants in the "let's change our name" competition. Their forthcoming titles Rodland (a cutesy thing), Big Run (a rally thing) and Saint Dragon (a blasty thing), not forgetting SWIV (the new name for the Silkworm sequel) will now be published under the name The Cu... sorry, what was that Dan? You've changed it again? Sigh... will now be published under the name "Storm".

Is that OK now Dan? Or is your name still Dan?

Freakout weirdo stuff

ALPHA WAVES is not just a new game but a new concept. At least that's what the press release from Infogrames says.

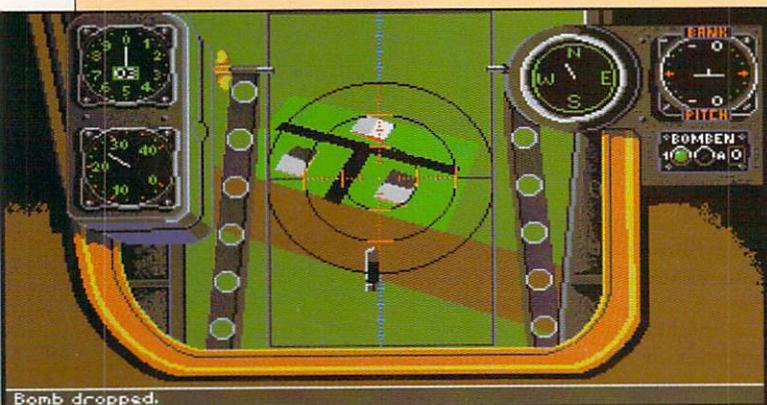
Apparently the game will also "stimulate the brain and bring it to a deep relaxation which can provoke a state of dreaming" - probably French for "it sends you to sleep".

Actually that's probably a bit cruel. It looks very interesting and there are a few mellow dudes around this office who wouldn't mind getting hold of a copy.



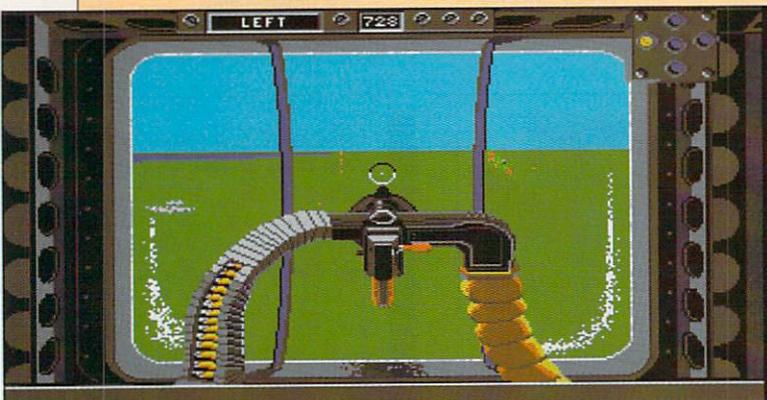
THEIR FINEST HOUR

Bandits at tea-time!



Bomb dropped.

Gravesend is in for a battering



The belly gunner of a Heinkel is always on the job

Well I mean, the Hun should've known better shouldn't they? For a start they hopelessly outnumbered the brave Few, a situation which has not failed to give a result for the Brits in a good few centuries.

Secondly, the venue chosen was the corner of some foreign field, which was very convenient for the RAF lads. They could be very British having a spot of high tea or a game of bowls, pop off for an afternoon's war and then back home for bridge and cocktails in the evening.

Lastly, and most unfortunate of all for the Bosche, was the time pencilled in for the big bash to take place - their finest hour. I mean anyone else would've seen it was a complete non-starter, but there you go.

The first thing to do when you get hold of a copy of TFH is install the bally thing on your hard drive. Saves all the nasty messing about changing disks, don't you know.

Clamber into the cockpit of your Spitfire or Hurricane and give the foe a jolly good battering. Or, alternatively, you can go and work for Jerry, flying Stukas, Heinkels, Dorniers and the like. God knows

they need you, no backbone don't you see - can't even play cricket would you believe.

You'll find the cockpit layouts are fairly accurate, everything in its familiar place. Controls are all on the keyboard but you can use the stick or this new fangled mouse thingy for flight control. No foot pedals for rudder controls. Probably had old Dougie Bader on the design team.

Keep a record of a few of the few on the roster. Sorry, no chalk option. Names and planes is all, but it keeps a running total of missions flown and confirmed kills.

Fly a few training flight to get the hang of things, then move on to proper combat or a full war scenario. Your overall battle strategy will have to be pretty damn cunning what with the Luftwaffe outnumbering you and everything. Plan your campaign on the big map, deciding where and how to scramble.

Eyesight's not what it was old boy, can't quite make out the call sign on a passing Hurricane but I can still distinguish them from a Me109 at about two miles. Something to do with filled polygons and stuff so the technical



Remake a few David Niven films with the in-flight camera



johnnies tell me.

The wonderful noises of lead ripping through enemy canopy seem different. Rather unimpressive. They tell me you need to have at least one Meg to hear them as well, whatever that means. Pish!

Activating the in-flight camera will give you a permanent record of your best kills. When you come to replay the film due to some devilishly fiendish technical whatnot you can position the camera anywhere you like. Chasing behind your plane, following bombs, from the ground and all that sort of rot, don't you know.

If you decide to go and work for the foe you'll be on double time. They must be short of decent crew, because in the bombers you have to fly the whole thing yourself –

cockpit, gunnery, bomb bay – it's a bit of a tall order.

If you go down over the green and pleasant land the old Dads Army will soon have a pitchfork in your back. No more saurkraut for you.

The past is a foreign country and all that, so I think we should leave petty jingoism aside. However morally bankrupt the idea is, there is nothing like a good dogfight, and the golden age of dogfighting was 1940.

Mr Churchill also once said: "Jaw-jaw is better than war-war". He obviously never played this game.

Green

Their Finest Hour

£29.99

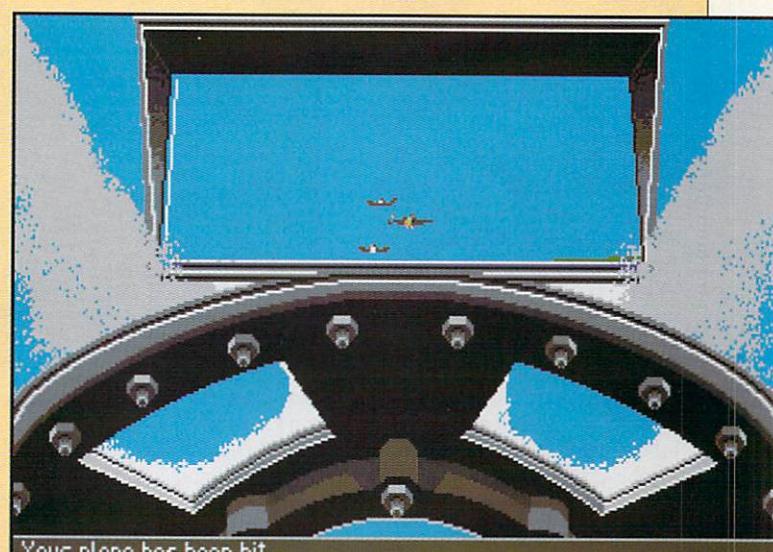
US Gold

Realism	
Strategy	
Gameplay	
Value	
Overall - 84%	



Tune your radio. Press M for the Inflight Map/Radio.

Tally ho! The old spitfire Mk1 doesn't like inverted flight



Your plane has been hit.

Always look in your rear-view mirror before pulling away

FLIGHT BRIEFING MAP



BRIEFING | **ROSTER** | **CANCEL** | **GOFLIGHT**

A map can help but it all looks different at 20,000 feet

Combat Flight: 4
He 111 H-3

Crew:

- ± YOUR AIRCRAFT
- ± RAF
- ± CONVOY
- ± LUFTWAFFE
- ± TARGETS

Ground Site:

Status:

AMMO	STANDARD
DAMAGE	STANDARD
FUEL	STANDARD
ENEMY	TOP ACE
RESET	

PLAYER MANAGER

Come on ye greens

RECENTLY I sent a messenger pigeon to good old Green, the pipe-smoking wheelchair bound Reviews Editor, with the following message: "Listen spongehead, I've got hold a copy of Anco's Player Manager, it's wonderful, do you want a review?"

Back came his carrier sparrow (anything to save money) with the reply, "Um, ahh, well, that be the question laddie. Now then, don't be getting all hasty like, I'll have to consult me Old Fogeys Almanac first".

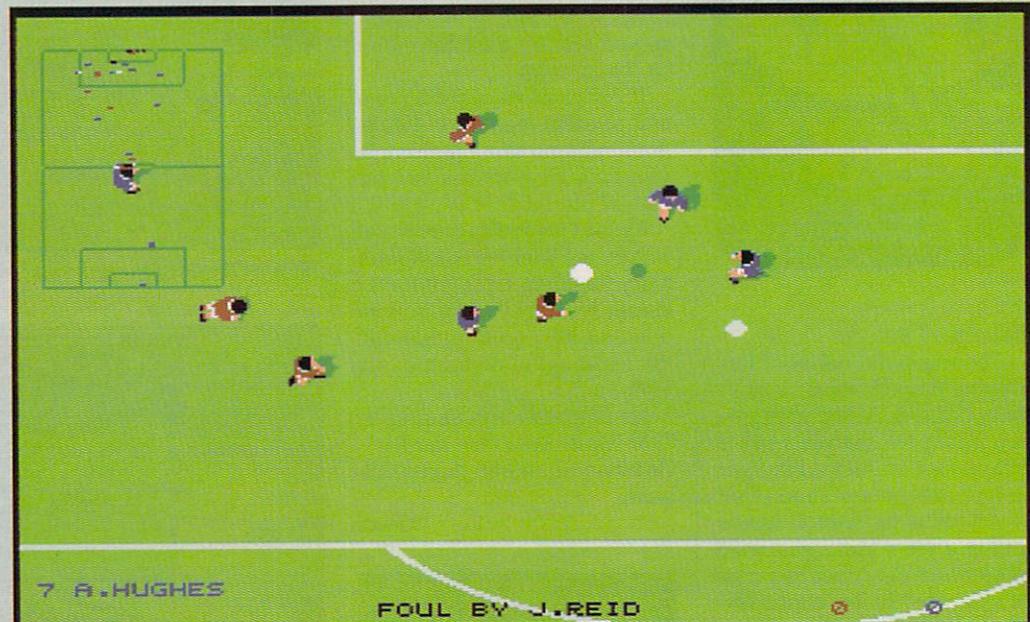
Many days later I visited his feather and dropping-festooned office and shook him awake. "Well you dozy old retard, what's it to be. A brilliant and witty review of the best management-with-action-bits game ever or a poke in the eye with a blunt stick?"

"Eh, what did you say your name was sonny?" he muttered while brushing away the cobwebs covering his pipe.

Lacking the requisite patience for dealing with the old and infirm I grabbed him by the tweed lapels and screamed, "Do you want a review or not you dozy half-wit?"

"Eeh, ar suppose so then lad. We'll have 400 words by tomorrow's pigeon post then".

With a growing sense of horror I suddenly realised that I'd written over 200 words already, and that there was scant room left to wax lyrical about this most magnificent



No way ref, he took a dive. Bah, Palace without a chance anyway

of management games. Enough scene setting then, on with a particularly terse review.

You are the player manager of a Third Division club, with a decent size squad, money enough to raid a very large transfer market (there are more than 1,000 individually detailed players in the league), a cup competition, coaching tactics, and the chance to play in the Kick Off style games (which only last six minutes in total).

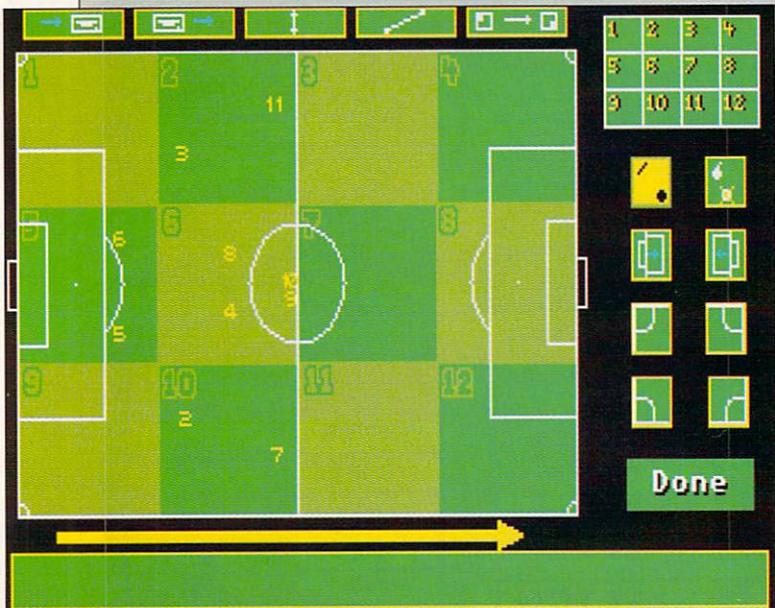
A board of directors monitors

managerial performance, giving you the boot if you cock it all up, vetoing transfer deals if they involve running up a large overdraft and actually suggesting you spend some money when you have a huge cash mountain.

Players are rated on physique and skills out of 200. These include pace, stamina, endurance and violent tendencies. Be aware that players with poor stamina virtually give up moving towards the end of a game.

Passing, shooting, tackling and goalkeeping are the skills, and are relevant according to position played. Some skilled players may be better off being retrained to be a striker instead of say a midfield player.

The transfer market is excellently done, involving limited time per week and price haggling. Selling players requires them to be placed on the transfer list, and you having to wait for offers from interested parties. It is invariably



Back to square one with the tactics editor



Say 60k and I'll throw in my back issues of Amiga Computing



Excellence

impossible to shift a player for what the board seems to think he is worth.

Tactics are everything. There are the standard 4-2-4, 4-3-3, 4-4-2 and 5-3-2 formations, but any of these can be replaced with your own custom formations and tactics. The pitch is split into 12 sections, and the players can be re-arranged regarding what positions to try and take when the ball enters each one. Corners and kickoffs are set piece plays that can also be designed.

When playing the actual games you can sit on the sidelines (eventually you have no choice because of retirement) or play in the games in Kick Off fashion. There are substitutions and injuries, disciplinary points for yellow and red cards, the ability to change tactics at certain points, and the ability to just control the player-manager and stay in position.

The gameplay is much harder than normal Kick Off, and it features pitches and goalkicks from Extra Time. Watching the game is tense and nervy stuff (you can always skip this part and have the computer generate the result only), and knocks the so called match highlights of other games into touch.

Needless to say it's totally fab, and makes Football Manager I and II look like total plop. Why delay, buy today, football heaven... and other slogans Anco will use in its adverts with us, etc, etc.

Duncan Evans

Player Manager

£19.99

Anco



Overall - 90%

PROTECTOR

Cheap and cheerless

VALUE for money. Dontcha just love it? The concept of budget software is a good one. Sell games cheaper than everyone else. Sell lots of them. Get rich. Everyone is happy. Aren't they?

The only drawback is that because the game is to be sold at what is seen as a cheap price, no one worries too much if it's not totally state of the art.

The software companies reason: "Ah, but you knew it was cheap. You only get what you pay for after all".

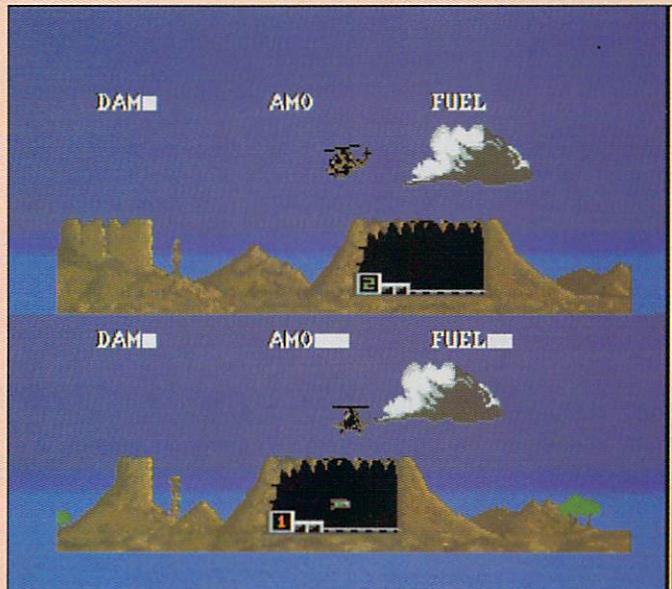
This time I get annoyed. Selling a game for a fiver is *not* a licence to release rubbish.

Protector looked as though it might be quite good: Simultaneous two player action, a couple of helicopters, nice copper-list sky. Then you start to play it.

Here is the plot. You collect all the parts to a bomb. Your opponent (who is a friend and/or the Amiga) does likewise. Once you have all the parts you drop the bomb on your opponent's base. Game over.

The alleged "gameplay" comes about because both players are trying to collect the same parts. It's like two people trying to fill buckets by stealing water from the other with a yoghurt cartoon. But less fun.

My total time spent playing



Re-arrange the following words into a well known phrase - game, rubbish, is, this

before chucking in bin - half an hour.

Now if someone were to release a *good* game at this budget price I would be a lot happier. And you never know, they might sell even more too.

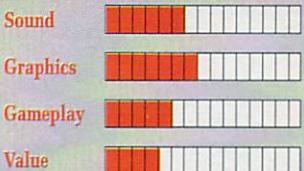
But if I'm expected to enjoy something so primitive that the authors were too embarrassed to put their real names on it, then 16 Blitz has another think coming.

John Kennedy

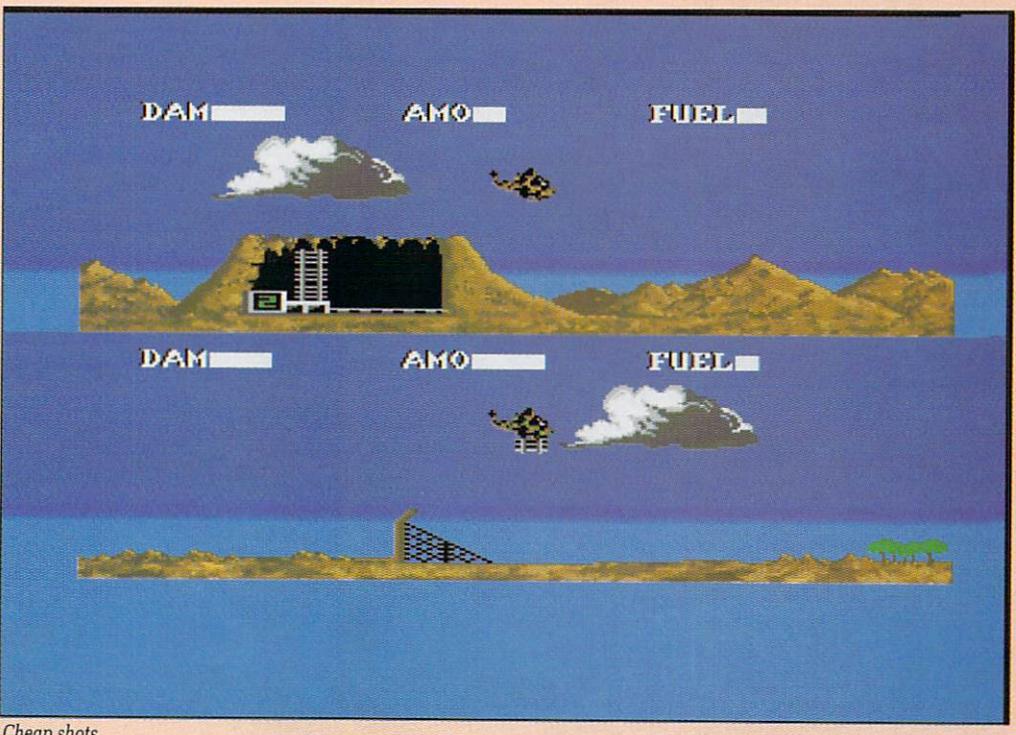
Protector

£4.99

16 Blitz



Overall - 34%



Cheap shots

TENNIS CUP

Court in the act



TENNIS CUP



LORICIEL



TENNIS CUP



LORICIEL

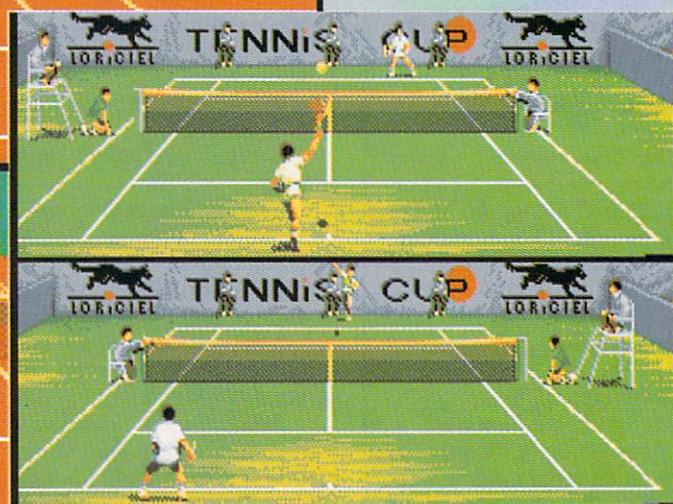
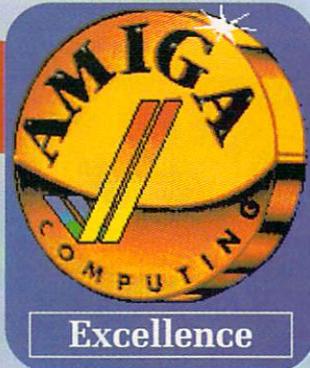


TENNIS CUP



LORICIEL

Get some pre-match practice against the machine to smarten up your game



WIMBLEDON is almost upon us, so what could be more likely among this month's crop of software than a tennis game.

Admittedly most software houses this year don't seem to be interested in sports sims unless the constituents include two teams of 11 men, a leather ball, several thousand trouble-dogged fans and a spot of politics. So I suppose it is a bit of a blessing.

Although the instructions for Tennis Cup are a little on the spartan side, there is quite a lot to do before you start strutting it on the court, so to speak.

There are six modes of gladiatorial racket combat to choose from: Exhibition matches, tournaments, doubles, Davis Cup...virtually every avenue of permutation is ruthlessly explored.

You must also design your player. This takes the form of adjusting up and down his statistics for forehand, backhand, smashes, lobs and service.

Points can be subtracted from one statistic and added to another until you like the look of them. The programmers must have picked up a few tips from the Minister for

Employment here. Among other things you can decide is their nationality, which determines which terribly rendered national anthem is played before the match.

I was very upset to find there was no Irish option. There wasn't an English option either but that's understandable since England doesn't have any tennis players.

(And I suppose Ireland does? Ed)

Different venues can be selected from clay courts, indoors, grass and hard courts. Personally I didn't notice any behavioural difference in the ball, but maybe I'm just not in tune with these things.

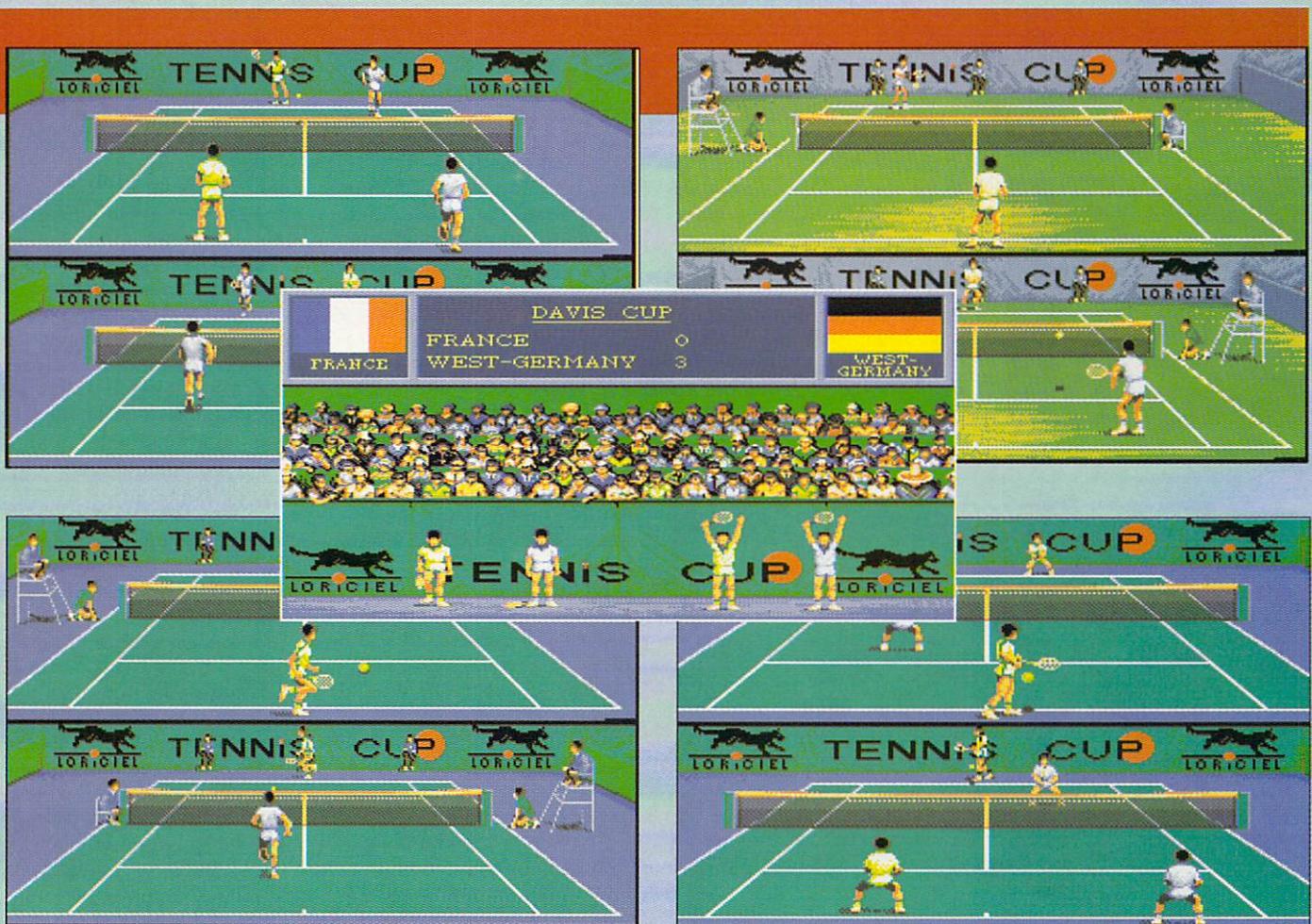
The graphics are, as you would expect from a French game, excellent. Animation is well done, as is

the scrolling in the split views. The automatic service machine is a nice touch.

The most impressive thing about the Tennis Cup though is the sound. Excellent ball effects, the temptation is to think that they may have been sampled at some exclusive world final or something.

Likewise the grunts that accom-





pany some of the more adventurous plays could almost certainly come from Connors on one of his good days. Even the score is read out in traditionally officious speech-synthesis.

Depending on your position on the court and the style of shot your opponent plays, you have a limited vocabulary of returns. Spins, lobs,

smashes, volleys and the like are all catered for.

The game will automatically assume you wish to play backhand if the ball is behind you - very clever of it because half the time I accidentally ran too far.

It can be a little difficult to get into, but there is a training option and you can slow down the ball

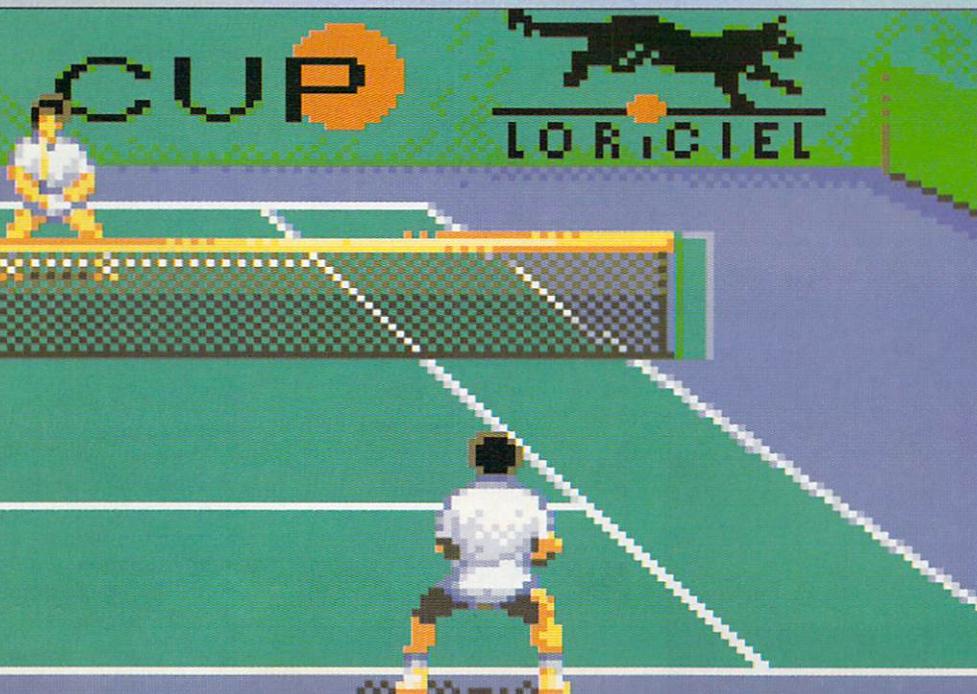
speed. Training forms an important part of the game in tournament mode. Training before the match can improve your statistics in the areas selected, as does experience throughout the match.

A whole series of vicious opponents will give lasting challenge, especially in the championship and Davis Cup scenarios. If you

think you're so much better, you can always get a friend to play. That should make things a bit harder, particularly if you play a doubles match with both of you on the same side. Players won't actually collide, but the confusion is as profound as in the real thing.

One of the only decent tennis sims around, so there's not much competition, especially as everyone and his uncle is concentrating on Linekar simulators at the moment. Full of nice touches, like the line judges heads following the play and the ball boys running out. The only thing missing is the rain.

Green



Tennis Cup
£24.99
US Gold

Sound	
Graphics	
Gameplay	
Value	
Overall - 86%	

TREASURE TRAP

Do you believe in Cod?

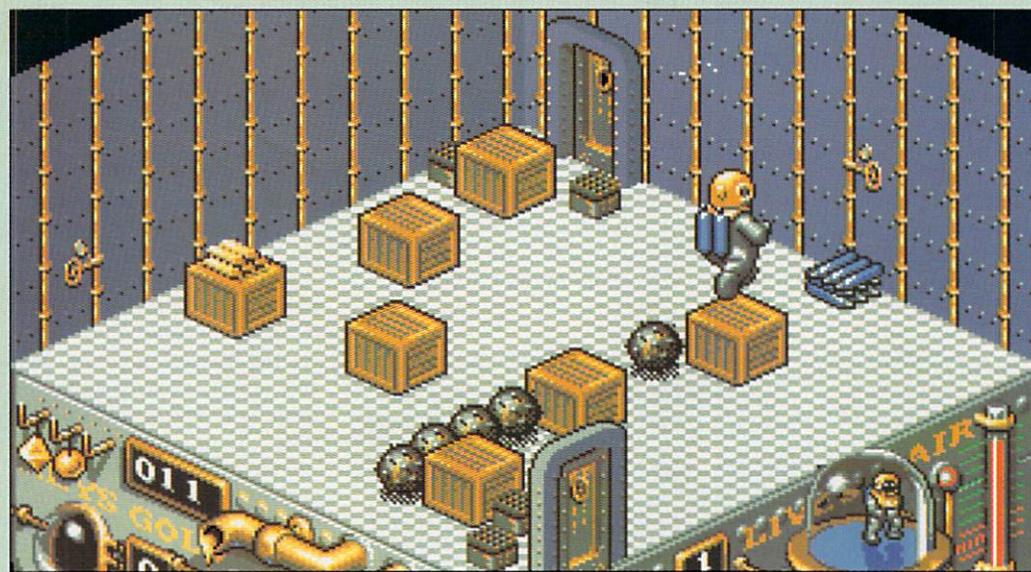


WE aren't saaiilllinngg, we aren't saaiillinngg, under the waattteerr, under the seeaaaaaaa. No, that's not quite right, is it..? Ahem. Like a bridge under troubllleed waattterr... Nope, definitely off course there.

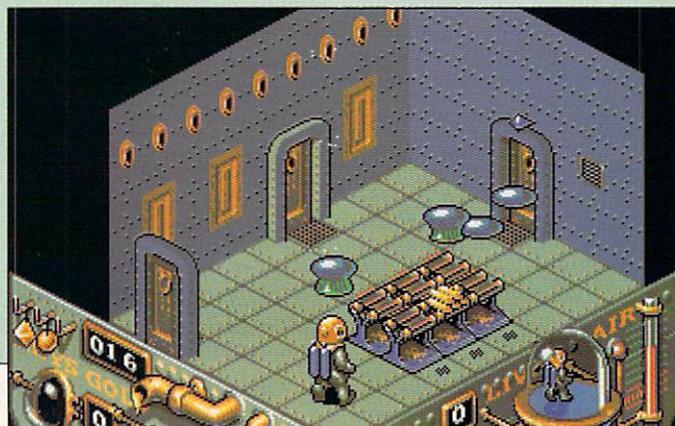
Aha, I have it – the definitive musical accompaniment to Treasure Trap. Altogether now:



One of the hazards of being overinflated



A return to traditional, wholesome isometric graphics. Where did I put my ZX?



Once in a lifetime, water flowing underground. Into the blue again, into the silent water, under the rocks and stones there is water underground. Letting the days go by, into the silent water. Once in a lifetime, water flowing underground. Same as it ever was, same as it ever was....

There's more to it, but I sense a witt from EMI if I continue.

Treasure Trap is all about money and being under water. It's about searching the 100+ rooms for every single bar of Esmeralda's gold. Swipe all the gold and win the game? Easy, huh?

Hardly. Treasure Trap marks a return of the isometric 3D arcade adventure made famous by Ultima so many years ago and given a brief reprise last year by Microdeal with Airball. Considering how good these games were, it's a surprise it's taken so long for another stab at the genre.

Anyway, being underwater, Treasure Trap deals with all things aquatic and, naturally, an ever

decreasing air supply. Mapping is essential, as is noting where the canisters of oxygen are.

While a good gulp of the invisible stuff is to be recommended, don't waste it by grabbing a canister while you still have a nearly full tank. The result is that your diver's suit bulges at the seams and the little man takes on the aspect of a very fat person indeed.

After a rip gurgling tune on the intro and title page (listen and watch it all the way through) the rest of the sound effects in the game live up to the high standard set, perfectly complimenting the underwater thievery.

If there's any gold in a room an indicator flashes. This is just as well because half the time you can't see it. Moving boxes and crates, patrolling jellyfish, starfish and killer crabs are all there to help or to remove one of your five lives.

This being an arcade adventure, there are locked doors requiring various types of key, which thankfully do not disappear once used. The catch is that you can only carry four of them.

The gold disappears into some sort of aquatic Barclays Bank automatically, so you don't have to carry it around.

There are puzzles aplenty, some of them bordering on the Fu Man Chu for fiendishness.

You can't get behind these crates where the gold is? What do you do? You use a loose crate to make a patrolling fish detour round the back and involuntarily push the gold out.

When the fish-like menace grows to great, or you find yourself trapped by a clutch of crabs, let loose the killer piranha! This is the fishy equivalent of a smart bomb – it goes into a berserk feeding frenzy, consuming every living thing in the room, except yourself, thankfully.

The 100+ rooms are going to keep you busy for quite a while, but none requires Mensa eligibility to solve or table tennis player reactions to execute.

With balanced gameplay, good graphics, snappy sonics and a sense of humour which nothing else has these days, Treasure Trap represents a return to traditional gaming values. A decent challenge, and a damn fine game.

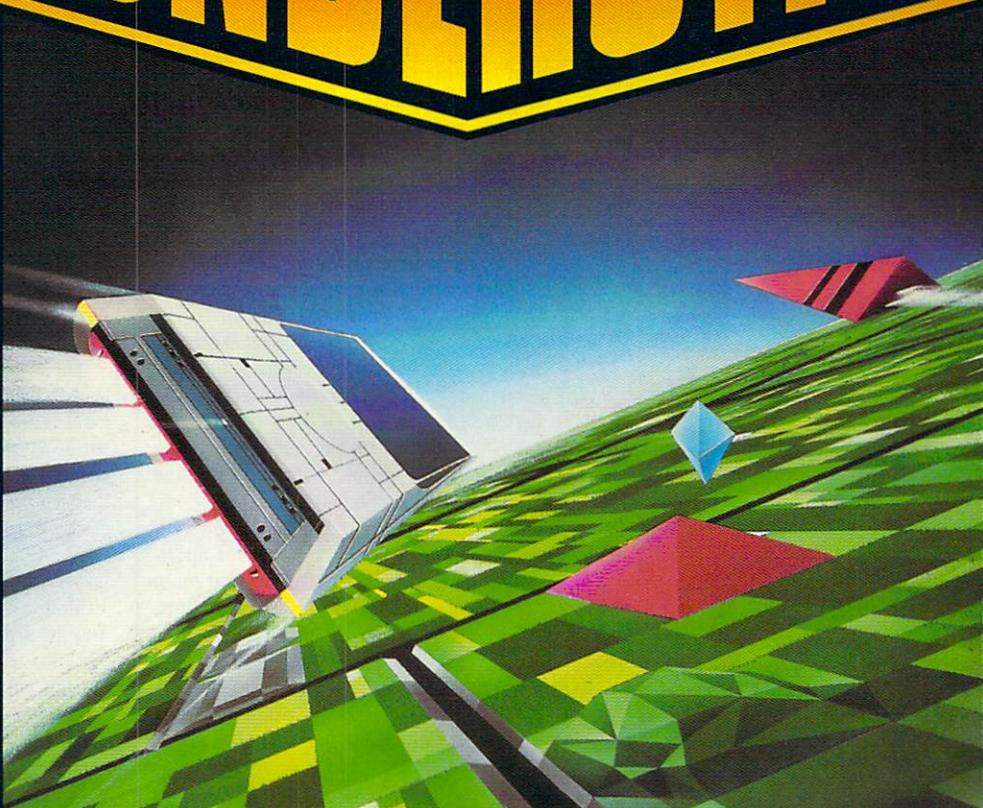
Duncan Evans

Treasure Trap
£24.95
Electronic Zoo

Sound	██████████
Graphics	██████████
Gameplay	██████████
Value	██████████

Overall – 84%

THUNDERSTRIKE



IBM PC VGA SCREEN SHOTS



IN JUST 200 years the Earth is controlled by the TV networks and defence industries. The ultimate TV phenomenon is coverage of the military olympics... and the ultimate event is '*Ground Defence*'. Gladiators man deadly craft, their mission to protect the communication tracks and ground installations. Their goal - and yours - is to be knighted '*Defender of the Ground*'.

ThunderStrike is 3D arcade action, using solid polyhedrons and solid relief techniques to create a breathtaking contoured landscape. With super-smooth 3D scrolling the gladiator's craft hunts and attacks the enemy vessels in deadly low-flying combat. The action is tracked by a camera following close on the tail of the player's craft, whether flying along a trench or hugging the undulating contours of the ground.

- Spectacular graphics - fully light-source shaded solid 3D vectors (in 256 colours on VGA)
- Choose to pilot a variety of sleek Defender class fighters
- Heads-up display featuring radar displays and weapon indicators
- Various weapon pick-ups, shield drones and turbo-thrusters
- Watch the TV ratings go up as the action gets hotter!
- Available from the end of June 1990 for the Atari ST, Commodore Amiga (£24.99) and the IBM PC (EGA/VGA) (£29.99)

Millennium, Chancery House
107 St Pauls Road, London N1 2NA

Light years
ahead



MILLENNIUM

THE THIRD COURIER

Two down, one to go...

A border guard is directly in your path armed with an AK47.



So much for glasnost, the border guards are distinctly unfriendly

LAST November history was made when the East Germans destroyed part of the Berlin Wall which had separated the city since 1961. I only mention this because the wall (as in Berlin, not Pink Floyd) plays quite a part in this new game from Accolade. In their version it's still there.

The briefing is this: Three couriers were on route to a secret meeting in Brussels. Each had a vital component relating to NATO's non-nuclear defence plans. Two have been assassinated, one remains. He was last seen in West Berlin.

As a CIA agent you make selections as to your cover and past history. These directly effect the playing characteristics of your agent as he moves through the rather violent backstreets of the erstwhile German capital.

You are not completely on your own. A computer in your apartment building will keep you up to date on the latest developments. An answering machine will play silly messages to anyone who rings while you were out and a fax machine is always handy for relaying photos of suspects back to HQ for an identity check.

There is also a mission support

centre in the middle of the city to provide you with weapons, money and useful items of equipment such as bomb-sniffers, bugs and lockpicks.

The streets tend to get a bit monotonous what with all the trudging up and down and what have you. Not every shop front has a shop behind it, though there are plenty of locations. Most of them are one of four things, an office block - which are very hard to get into - a hotel - ditto, a bar - difficult to get out of - or a shop which never seems to have anything you might want to buy.

The game is very realistic in that there is an awful lot of boring, humdrum legwork to be done before you uncover anything. The streets are slightly more dangerous than you might believe, with well armed muggers and drunks everywhere. Good job there's a doctor at mission support.

Money isn't much of a problem. You get a daily allowance of 1000 DM plus whatever you can get out of your cashpoint account. Some things are expensive, like a false set of East German papers, but the commodity you are most short of is time. You have only a few days

IMPOSSAMOLE

Molementary lapse of reason

DEAR oh dear oh dear ... those Gremlin people must be going for the nostalgia market with Impossamole. Either that, or they've got themselves badly caught in a time warp, because Impossamole is one Old Time game.

Labouring under the misapprehension that people ever liked Monty Mole to start with, Gremlin dug the little creature up again. Happily basking on a sun-drenched shore, The Mole with the Least is suddenly beamed aboard a passing spaceship, to be confronted by two alien beings.

Instead of using the correct greeting for the situation (viz. "Eat Plutonium Death, you disgusting Alien Weirdos !") he is coerced into helping the beings recover

some lost scrolls (sacred) from the Five Guardians. He is given special powers, and sent back to the Five Lands where the Five Grauniads live.

Incidentally, none of this actually happens. You never see the spaceship, or the beings; all you see is a cartoon (static) of a flying mole in tights and sneakers. The one concession to progress (after all, any machine could do the picture) is a technically competent House track. And yes, it does have the irritating piano break that all House tracks have.

To give the game even more nostalgia (or better, *déjà vu*, or better still, unoriginality) Monty must defeat each Guardian at the end of each level to gain a scroll, but the last Guardian can only be beaten

1

Christopher Reeves did it better

Nice day.

Seedy Bar
Unarmed

Action Inventory Places

Arm
Bribe
Buy
Drop
Hail Cab
Listen
Search
Sell
Sneak
Stake Out
Take
Use
Save
Restore
Quit

NCE

EXPERIENCE 1000

Day 1

Run Fight

Chat Threaten

ith away from you

5.

Action Inventory Places

INTELLIGENCE
STRENGTH
KNOWLEDGE
INTUITION
HEALTH

LEVEL 1 EXP 6110

07:16 Day 2

Run Fight

Chat Threaten

Hohenzollernstr.

Unarmed

The reassuring sight of a heavily armed NATO officer - at least you won't get mugged

The Third Courier
£24.99
Accolade



Overall - 74%

once all the other scrolls have been recovered. And the thing is, *Impossamole*, like all the *Monty Mole* games before it, is a two little platform game.

A well written platform game can be a thing of beauty and a joy forever. It should have pixel-perfect positioning, keyboard controls (for the ultimate accuracy), high contrast between the player and the background, three (or five) lives, and the bits that are nasty to stand on should be immediately recognisable as such.

That's the trouble with these new machines. The sprites have so many frames that you can't tell the difference between a super mega hyper Big Leggy jump, and an adequate mega hyper Big Leggy jump (something to do with *Hayzee*



Fantayzee?).

There are so many colours that graphics people put nice smooth edges around sprites so you can't tell when there's a collision. Bah - bring back monochrome sprites and dot-crawl, I say.

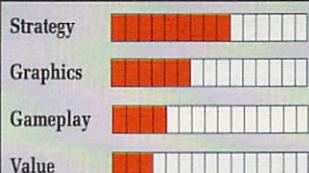
Each of the worlds has a theme; one is a mine, another is the Orient (keep those Origami ducks off of me!), yet another is the jungle (would you credit it, a 'nana-lobbing Gorilla?') and the last one is Arctic-ish.

There is a fifth, but it is reserved for people who have completed the other four. As you only have energy, rather than good old fashioned 'lives', you have to be some mean ubermensch to manage it. Either that, or very desperate.

Remember the cute little "Please Wait..." that you used to get with all games? Well, Gremlin have given you the wait while levels load in, but haven't given you the message.

What they have done is given

Impossamole
£19.99
Gremlin



Overall - 37%

you a loader which punishes the drive into eldritch glitchings, and does funny things with the serial port, and gives you nothing but blackness to look at in between levels. C'mon, people, what ever happened to the art of the loading screen?

What I find particularly amusing in this game is that one of *Monty Mole*'s "power-ups" is a can of worms. Sums up the game quite nicely, I think.

Stewart C. Russell

WIPE OUT

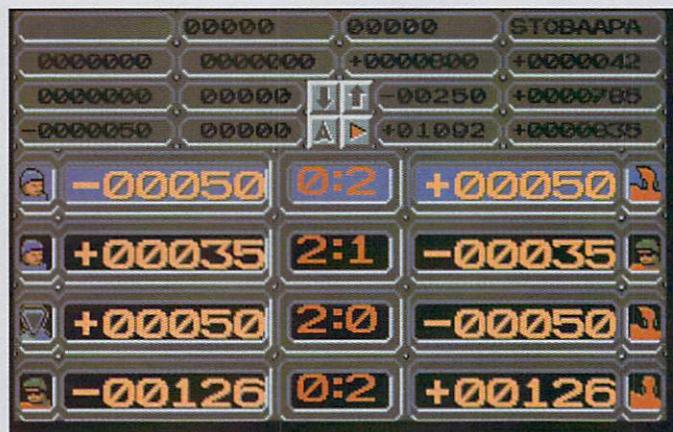
Cleans right through to the shine

OLD computer games never die. They just fade away into obscurity for a few years and then come back bigger, better and faster when you least expect them. If there are only six plots for "Whodunit?" novels, then there are even less for computer games.

Take this offering from the man with the big nose, Mr Gonzo. The object is to fly your hoverboard around a track, leaving a trail for your opponent to crash into. Sounds familiar? You remember Tron don't you?

Of course you do - it was that Walt Disney film about a bloke trapped inside a computer who spent his time playing with baddies on light cycles. It has been calculated that the film generated more computer games based on the "surround your enemy" principle than the number of people who saw it at the cinema.

A smash hit written in Basic for



The user-friendly front end. Apparently

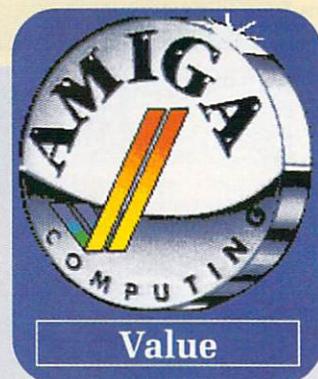
every micro ever made, it's been a while, but now it's back. And this time it's in code with simultaneous split-screen, two player, three dimensional graphics.

Racing your hoverboard requires all the old tactical skills - designing

bottlenecks, forcing loops and packing as much wall into as small a space as possible. If your timing is good you can attempt to jump a wall, but don't get too cocky, for it's not easy. One tiny error of judgement and you're history.

There is plenty to do in the background while waiting for the next competition. You can upgrade your hoverboard by adding brakes (you big pansy) and better engines with turbo boosters and go-faster stripes. Or you can bet on and watch the outcome of other races, thereby earning yourself more cash.

Then when you're really getting the hang of things, you can move to a new planet and challenge the racers there. If you do well, you can skip to a new solar system. And if you do *really* well, you may be called upon to take part in the All Time Greats Inter-galactic tournament. Your prize? I dunno, I didn't get that far. But if the entire uni-



verse of individual aliens is taking part, I suspect it's something pretty special. At least as good as a Blankety-Blank chequebook and pen.

When it comes down to the technicalities of the game, the graphics might be a bit naive. The sounds might even be a bit simplistic. Does this worry me? Naw, not a lot. And the reason for is that the game is fun. F.U.N. fun. The two player version is terrific. Look upon the single player version as a way of practising until your mate agrees to play again.

Of course, no gameplay is perfect. Wipe Out has several flaws, the most major of which is a completely incomprehensible frontend. Lots of little meaningless icons lead to numerous incomprehensible screens. You end up frantically clicking here and there on the little metallic grey shapes until the game gets around to starting.

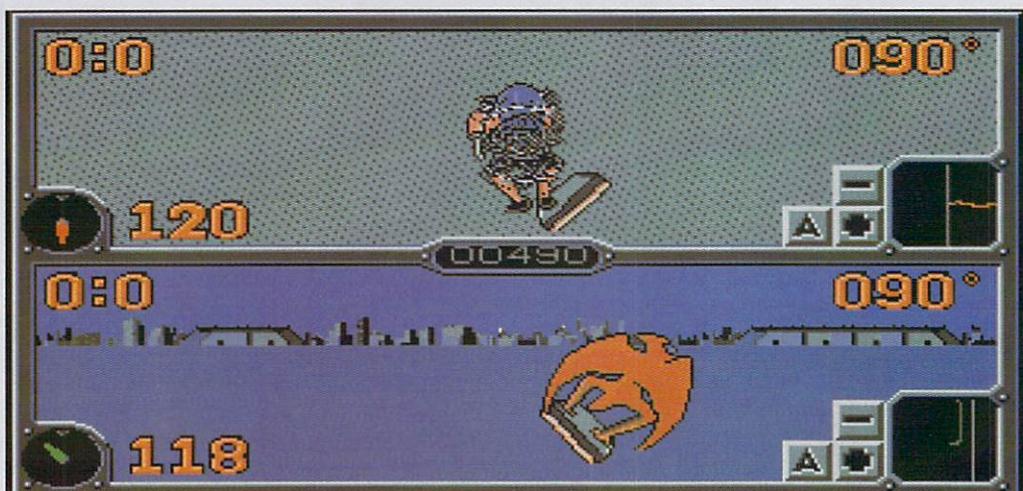
By making the program a touch more user friendly, the considerable manual could have been halved in size.

But when I'm heading at break-neck speed towards an energy wall with an alien on a Scorched Earth special board intent on sliming me, the only thought in my head is whether or not I can pull off a high speed banked turn and still survive...

John Kennedy



The aftermath of a game - Aj hits a wall at 60 clicks a second



A typical race - player one (me) gets creamed by player two (the birdman of Epsilon minor)

Wipe Out	
£19.99	
Gonzo Games	
Sound	██████████
Graphics	██████████
Gameplay	██████████
Value	██████████
Overall - 81%	

Special Reserve

CAN YOU AFFORD

NOT
TO
JOIN?



- Bi-monthly **Buyer's Guides**, each with reviews of 40 games and more.
- Release Schedules**, bi-monthly, with advance release information.
- 7-day **hotline**, to 8pm weekdays, 10-5.30 Saturdays, 11-5 Sundays.
- Fast despatch** of stock items. Most lines from our stock of 40,000 games.
- Catalogue, Membership Card & Folder** for the Buyer's Guides.
- Games sent **individually wrapped** by *first class post*.
- Written confirmations** (and receipts) sent when we receive each order.
- Refunds, or change of order** on request, if there is a delay just phone.
- No commitment, no obligation to buy anything (unlike others).**
- The best games**, available at the **best prices**. That's why over 20,000 members have already joined **Special Reserve**.

Amiga Software

688 ATTACK SUB	16.99	ENCHANTER (INFOCOM)	18.49	KINGS QUEST 4 (SIERRA)	21.49
ADIDAS CHAMP FOOTBALL	15.99	ESCAPE FROM SINGE'S CASTLE	28.49	KLAX	12.99
AMOS (GAMES CREATOR)	27.49	ESCAPE FROM THE PLANET	15.99	KNIGHTS OF CRYSTALLION	19.99
AMOS SPRITES 1000	9.99	OF THE ROBOT MONSTERS	12.99	LEADERBOARD BIRDIE	16.49
AMOS VIDI DIGITISER	51.49	F16 COMBAT PILOT	15.99	LEISURE SUIT LARRY 1	18.99
ANARCHY	15.99	F16 FALCON	18.49	LEISURE SUIT LARRY 2	21.49
ARKANOID	12.99	F29 RETALIATOR	15.99	LEISURE SUIT LARRY 3	21.99
BATTAGAMMON PROF	12.99	FERRARI FORMULA 1	16.49	LIFE AND DEATH	15.49
BALANCE OF POWER 1990	15.49	FINAL BATTLE	15.99	LIGHT FORCE (R-TYPE)	15.99
BARDS TALE 1	7.99	FLIGHT SIMULATOR 2	25.49	VOYAGER, BIO-CHALLENGE, IK+	15.99
BARDS TALE 2	16.49	FS 2: WEST MONSTERS	13.99	LIVERPOOL	11.99
BATMAN THE MOVIE	15.99	FOOTBALL DIRECTOR 2	12.99	LURKING HORROR (INFOCOM)	24.99
BATTLE OF BRITAIN	19.99	FULL METAL PLANETE	15.49	MAGNUM 4 (COMPILATION)	18.99
BATTLECHESS	16.49	GRAND PRIX CIRCUIT	12.49	MANCHESTER UNITED	15.99
BATTLESHESS 1942	16.49	GRIDIRON (U.S. FOOTBALL)	15.49	MANIAC MANSION	16.99
BEACH VOLLEY	16.49	GRUNSHIP	15.49	MARIN BEACON TEACH TYPING	17.99
BECOMING ZORK (INFOCOM)	24.99	HAMMERFIST	15.99	MIDWINTER	18.49
BLADE WARRIOR	15.99	HARLEY DAVIDSON	15.49	MIND FOREVER VOYAGING	19.99
BLOODWYCH DATA DISK	9.99	HILLSFAR (SUSI)	15.99	MOONMINT (INFOCOM)	19.99
BOMBER	18.49	HITCHHIKERS GUIDE	39.99	MUSIC X	124.99
BOMBER MISSION DISK	13.49	HOLLYWOOD HUINX	24.99	NINJA SPIRIT	16.49
BRIDGE PLAYER 250	18.49	HOME OFFICE KIT	16.49	NINJA WARRIORS	16.49
BUDOKAN	16.49	KIND WORDS 2, MAXI PLAN	16.49	OMNI-PLAY BASKETBALL	15.49
C-LIGHT (3-D ANIMATION	31.49	INFO FILE, PAGESETTER,	16.49	OMNI-PLAY HORSE RACING	12.49
CABAL	15.49	ARTISTS CHOICE, FONTS)	86.49	OPERATION THUNDERBOLT	15.99
CARTOON CAPERS	12.49	RADAR	15.99	PAPERBOY	15.99
CASTLE MASTER	15.99	HARLEY DAVIDSON	15.49	PERSONAL NIGHTMARE	18.99
CHAMBERS OF SHAOLIN	14.99	HILLSFAR (SUSI)	17.49	PHOTON PAINT 2.0 (1 MEG)	54.99
CHASE H.Q.	15.99	HITCHHIKERS GUIDE	39.99	POWERDROME	16.49
CHESS CHAMPION 2175	18.49	HOLLYWOOD HUINX	24.99	PRO TENNIS TOUR	16.49
CHRONOQUEST 2	18.49	HOME OFFICE KIT	16.49	PROTEXT WORD PROCESSOR	64.99
CLOUD KINGDOMS	15.99	KIND WORDS 2, MAXI PLAN	16.49	PUBLISHERS CHOICE DTP	124.99
COLLOSSUS CHESS X	15.49	INFO FILE, PAGESETTER,	16.49	KIND WORDS 2, PAGESETTER 1.2	124.99
COLONY (1 MEG)	17.49	ARTISTS CHOICE, FONTS)	86.49	PLAYER MANAGER	12.49
COLORADO	15.99	RADAR	15.99	POLICE QUEST 1 (SIERRA)	15.99
CONQUEROR	15.99	HOUND OF SHADOW	16.99	POPULOUS	16.49
CONTINENTAL CIRCUS	11.99	HOYLES BOOK OF GAMES	22.49	POPULOUS PROMISED LANDS	7.99
CRACK DOWN	16.99	IMPERIUM	16.49	POWERDROME	16.49
CUTTHROATS (INFOCOM)	16.49	INDIANA JONES ACTION	11.99	PRO TENNIS TOUR	16.49
CYBERBALL	12.99	INDIANA JONES ADVENTURE	16.99	PROTEXT WORD PROCESSOR	64.99
CYCLES	15.99	INFESTATION	15.49	PUBLISHERS CHOICE DTP	124.99
DAMOCLES	15.49	INFIDEL (INFOCOM)	17.49	KIND WORDS 2, PAGESETTER 1.2	124.99
DATA STORM	12.49	IRON LORIS	16.49	PLAYER MANAGER	12.49
DEJA VU	15.49	IT CAME FROM THE	15.49	POLICE QUEST 1 (SIERRA)	15.99
DEJAVU 2	15.49	DESERT (1 MEG)	18.49	POPPULOUS	16.49
DELUXE MUSIC CONST SET	46.47	DESFET.D. DATA DISK (1 MEG)	10.49	POWERDROME	16.49
DELUXE PAINT III	51.49	ITALIA '90	16.49	PRO TENNIS TOUR	16.49
DEMONS TOMB	15.49	IVANHOE	15.99	PROTEXT WORD PROCESSOR	64.99
DOUBLE DRAGON 2	15.49	JACK NICKLAUS GOLF	15.99	PUBLISHERS CHOICE DTP	124.99
DRAGON NINJA	15.99	JACK NICKLAUS GOLF DATA1	8.99	KIND WORDS 2, PAGESETTER 1.2	124.99
DRAGONS LAIR (1 MEG)	28.49	JUMPING JACKSON	12.49	PLAYER MANAGER	12.49
DRAGONS BREATH	18.99	KICK THE THIEF	12.49	POLICE QUEST 1 (SIERRA)	15.99
DUNGEON MASTER (1 MEG)	15.49	KICK OFF	12.49	POPPULOUS	16.49
DUNGEON MASTER EDITOR	7.49	KICK OFF 2	12.49	POWERDROME	16.49
DYNAMIC DEBUGGER	16.49	KICK OFF EXPANSION DISK	7.49	PRO TENNIS TOUR	16.49
DYTER-07	12.99	KID GLOVES	16.49	PROTEXT WORD PROCESSOR	64.99
E-MOTION	16.99	KIND WORDS 2.0 (W/P)	29.99	PUBLISHERS CHOICE DTP	124.99
ELVIRA MISTRESS OF THE DARK	19.49	KINGS QUEST 1, 2 & 3	21.49	KIND WORDS 2, PAGESETTER 1.2	124.99

SONY 3.5" DS/DD DISKS 69p each

INEVITABLY, SOME OF THE ABOVE GAMES MAY NOT YET BE RELEASED. ALL GAMES ARE DESPATCHED AS SOON AS POSSIBLE.
Special Reserve and Official Secrets are trading names of Inter-Mediatess Ltd. Registered in England Number 2054713.

Reg. Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG. VAT reg. no. 424 8532 51

Amiga Mega-Savers

ADVENTURE CONSTRUCTION KIT	11.99	LASER SQUAD	7.49
ALTERED BEAST	6.99	LEATHER GODDESSES (INFOCOM)	12.99
ARCHIPELAGOS	6.99	LEATHERNECKS	5.99
AUSTERLITZ (BATTLE OF)	11.99	LOMBARD RAC RALLY	10.99
BAAL	6.99	LORDS OF THE RISING SUN	9.99
BALLISTIX	6.49	MANECA	6.99
BALLYHOO (INFOCOM)	9.99	MICROPROSE SOCCER	8.49
BATTLE SQUADRON	12.99	MILLENNIUM 2.2	6.99
BLACK CAULDRON	7.99	NEVER MIND	6.49
BLACK LAMP	7.49	NEW ZEALAND STORY	9.99
BLOOD MONEY	7.49	NIGEL MANSELL'S GRAND PRIX	5.99
BLOODWYCH	8.99	NORTH AND SOUTH	10.49
BUGGY BOY	9.99	PAACLAND	6.49
CAPTAIN BLOOD	5.99	PACMANIA	6.99
CARRIER COMMAND	7.99	PASSING SHOT (TENNIS)	8.99
CHAMP (USA) FOOTBALL	4.99	PAWN (M'SCROLLS)	9.99
CHESSMASTER 2000	8.49	PHOTON PAINT	6.49
CHRONIC QUEST	9.49	POWER DRIFT	4.99
CONFLICT EUROPE	6.49	PURPLE SATURN DAY	7.49
CONFLIKT (M'SCROLLS)	9.99	ROCKET RANGER	8.99
DRAKKHEN	13.99	SHADOW OF THE BEAST + T-SHIRT	12.99
DYNAMITE DUX	7.49	SHOGUN (INFOCOM)	15.49
EDDIE EDWARDS SUPER SKI	4.99	SIM CITY	13.99
ELIMINATOR (12 AMIGAS ONLY)	4.49	SKYCHASE	7.49
ELITE	9.99	SKYFOX	5.99
EYE OF HORUS	6.99	SPEEDBALL	6.49
F16 FALCON MISSION DISK	7.99	STARGLIDER	6.49
FAST BREAK (VOLLEYBALL)	6.49	STARGLIDER 2	9.99
FISH! (M'SCROLLS)	9.99	SUPER WONDERBOY	7.49
FOOTBALL MANAGER 2 + EXP	10.99	SWORD OF SODAN	7.99
GNOOME RANGER (LEVEL 9)	6.99	TEENAGE QUEEN (STRIP POKER)	6.49
GUILD OF THIEVES (M'SCROLLS)	9.99	THE PRESIDENT IS MISSING	5.99
HARD DRIVIN'	9.99	THREE STOOGES (CINEMAWARE)	6.99
HIT DISKS VOLUME 2	10.49	THUNDERBIRDS	5.99
(LEATHERNECKS, MAJOR MOTION, TIME BANDIT, TANGLEWOOD)	8.49	TIME & MAGIC (LEVEL 9)	6.49
HOSTAGES	7.49	TRIAD VOL2 (MANECA, BAAL, TETRIS)	7.99
HYBRIS	7.49	TRIVIAL PURSUIT	6.49
INGRID'S BACK (LEVEL 9)	7.99	TURBO CUP	6.49
INTERNATIONAL KARATE +	7.99	TV SPORTS FOOTBALL (USA)	11.99
JINXTER (M'SCROLLS)	9.99	UMS - UNIVERSAL MILITARY SIM	7.49
KING OF CHICAGO	9.99	VIRUS	6.99
KRISTAL	8.99	VOYAGER	9.49
KULT	7.99	WATERLOO	10.49
LANCELOT (LEVEL 9)	9.49	WHO FRAMED ROGER RABBIT	8.99

BEAST + SHIRT 12.99

POWERDRIFT 4.99

XENON II 6.99

OR JOIN EUROPES BIGGEST ADVENTURE CLUB

OFFICIAL SECRETS

FOR ADVENTURES AND ROLE PLAYING AND MORE

All the benefits of Special Reserve plus:

• **Confidential.** Our 32 page bi-monthly magazine is essential reading for those interested in adventures or role playing games. Written by experts, Confidential has covered everything from How to Host a Murder to Which F16 Flight Simulator? Our agents, led by the Master Spy known as "The Boss Upstarts", seek out the secrets of RPGs, FRPs, MUGs, PBM's, Leisure Suit Larry, The Russians, Elvira... & more.

Note: You can subscribe to Confidential without joining the clubs for £15.00 (UK) by entering "CONFIDENTIAL SUBSCRIPTION" on the order form.

• **Myth.** Written by Magnetic Scrolls, authors of The Pawn, exclusively for members of Official Secrets. Myth is a small adventure set in Ancient Greece. In it you'll meet The Ferryman, cheat Death and face the nine-headed Hydra. Myth includes the famous Magnetic Scrolls parser and graphics and is included in the price of membership.

Amiga Format said: "An excellent adventure... witty, cunning and just plain good fun! If you liked Fish! you'll probably like this, because they're very similar in style: you may even prefer Myth, it's that good!"

Myth Ratings: Crash 91%, CU 90%, Amiga Format 87%, TGM 85%

• **Sim City or Drakken (rp 29.99).**

Of Drakken, **ST Action said:** "Drakken really impressed me. For me, the game was a subtle cross between my all-time favourite, Dungeon Master, and the SSI fantasy role-playing games. The graphics are superb.... Overall, Drakken is an excellent RPG, one that will take quite some time to beat" and **Zero said:** "Absolutely brilliant". Of Sim City, **ACE said:** "Sim City is a politician's - or a gamesplayer's - dream... comparisons spring immediately to mind with Populous... but Sim City seems to have much more depth..." and **C&VG said:** "Sim City is utterly fab".

• **Help-Line.** Manned weekdays until 8pm and Sundays - with solutions to most adventures.

Annual UK Official Secrets Membership including 6 issues of Confidential, Myth, Drakken or Sim City, Help-Line and Special Reserve membership. **27.99**

SALES LINE 0279 600204.

PLEASE NOTE THAT THERE IS A SURCHARGE OF 50P PER GAME FOR ORDERS PLACED BY TELEPHONE.

Name & Address _____

Post Code _____ Tel. _____

Computer _____

*5.25"/3.5"

Computer _____

*3.0"/TAPE

Special Reserve or Official Secrets

P.O. Box 847, Harlow, CM21 9PH

Existing members please enter your Membership No. _____

Special Reserve £5 UK, £6 EEC, £7 World or

Official Secrets £27.99 UK, £32 EEC, £36 World

with Drakken or with Sim City and Myth AMIGA

PLEASE ENTER MEMBERSHIP FEE

£ _____

Item _____

Item _____

Item _____

Software Prices include UK or EEC Postage. World software orders please add £1.00 per item.

For non-software items such as joystick or blank disks please add 10% EEC or 25% World for carriage.

Overseas orders must be paid by credit card.

Credit card expiry date _____

*CHEQUE/POSTAL ORDER/ACCESS/VISA

CARRIER COMMAND 7.99

SWORD OF SODAN 7.99

16/32 PD LIBRARY
2 BIT SYSTEM
A & S DISTRIBUTION
A TO Z COMPUTER -
SERVICES
ABACAS
ACCO DATA
ADAMSOFT
ADVENTURERS CLUB
ADVENTURE SOFTWARE
APPLEBY COMPUTER-
SYSTEMS
ARGUS SPECIALIST PUB
ARNOR
AUDIO VISUAL RESEARCH

SHOW OPEN
10 - 6 EVERYDAY
CLOSES 4PM
SUNDAY JULY 1st

THE ONLY SHOW
IN THE UK
DEDICATED TO THE
SERIOUS AND
ENTERTAINMENT
SIDES OF THE
ST & AMIGA

BARGAIN SOFTWARE
BATH COMPUTER SHACK
BITS & BYTES
BYTES & PIECES (EURO)
CARE ELECTRONICS
CAVENDISH DISTRIBUTION
CASPELL COMPUTERS
CHECKMATE SYSTEMS
CLUB 68000
COMPUTER VISIONS
COMPUTER MANUALS
CONDOR COMPUTERS
DIAMOND COMPUTER-
SYSTEMS
DIGICOM
DIGIPRO
DOWLING COMPUTERS
D STK DESIGNS
ELMTECH RESEARCH
EVESHAM MICRO
EXPOSURE PRODUCTIONS
F M COMPUTER SUPPLIES



FIRST MICRO
FRONTIER SOFTWARE
FUTURE PUBLISHING
GASTEINER TECHNOLOGIES
GRUNDIG
H B MARKETING
HAMPSHIRE MICRO-
COMPUTERS
HARPERS COMPUTERS
HELIT
HI-SOFT
HI-TECH MODEMS
HSV COMPUTER SERVICES
ICPUG
IMAGE SOFTWARE
JEM COMPUTERS
JENGROVE
JOHN CRAIG ASSOCIATES
KEMPSTON DATA
L C L EDUCATIONAL-
SOFTWARE
MCD SOFTWARE
MEMORY EXPANSION-
SYSTEMS
MICHTRON
MICROBOTICS



AVOID THE
QUEUE !
OVER 115
COMPANIES
EXHIBITING.
BOOK YOUR TICKET
IN ADVANCE

the 16 Bit Computer Fair

SUMMER EVENT

JUNE 29th/30th & JULY 1st

JUNE 28th TRADE/PRESS BY INVITATION ONLY
ROYAL HORTICULTURAL HALLS
VICTORIA, LONDON
NEAREST TUBE/MAINLINE VICTORIA

SAVE 50%

Save 50% if you pre purchase before 17th June
REGULAR TICKET PRICE £4 PRE PURCHASE FAST LANE TICKET £2
CHILDREN UNDER 10 ADMITTED FREE

Post to: THE 16 BIT COMPUTER FAIR, PO BOX 68, ST. AUSTELL, PL25 4YB
Please send me **FAST LANE TICKETS** at £2 each

Cheque/PO enclosed for £ **NAME:**.....

ADDRESS:.....

.....**POSTCODE:**.....

or phone 0726 68020 with your credit card number
Please make cheques payable to THE 16 BIT FAIR



MICRODEAL
MICRO MART
MICROTEXT
MIDLAND MICROSOFT
MUTANT SOFTWARE
MODEM MARKETING
NADI SYSTEMS
OASIS
OVERSEAS MEDIA DIST
PANDAAL MARKETING

PARADISE COMPUTERS
PROTON SOFTWARE
PSYGNOSIS
RAD TECHNOLOGY
R & AJ PRESTON
R & R DISTRIBUTION
RADIO SERVICES
RIVERDENE PDL
ROMBO
SDC SOFTWARE
S D L
SENLAC SOFTWARE
SIREN SOFTWARE
SOFT STUFF SOFTWARE
SOFTSTORE
SOFTVILLE
SOFTWARE BUSINESS
SOFTWARE EXPRESS
SOFTWARE SOFTSTORE-
LIBRARY
SPACE TECH
ST UK
STAMPEDE
SWIFT
TAKE CONTROL
THE DEEPER DOMAIN
THE ED SOFTWARE CLUB
THE PUBLIC DOMINATOR
THE SW LIBRARY
TOPOLOGIK
TURBOSOFT
TYNESOFT
UK HOME COMPUTERS
VIDEK
WCA BUSINESS SYSTEMS
WE SERVE
THE £3.99 GAME CO



FOR FURTHER
INFORMATION CONTACT
WESTMINSTER
EXHIBITION LTD,
SURREY HOUSE,
34 EDEN STREET,
KINGSTON,
SURREY, KT1 1ER
PHONE: 081-549-3444
FAX: 081-547-1311

TOWER OF BABEL

The land of confusion

ONCE upon an eon the descendants of Noah decided to build a tower. This was to be a tower to reach so high that they could communicate with their creator.

Well they didn't quite manage that but they did attract the attention of some passing aliens who took pity on the poor humans and gave them three robots to help finish the job.

Now the time has come for the robots to phone home, but they can only do this from the top of the tower. The jealous humans have laid traps to prevent the robotic "spiders" reaching their objective.

The spiders each have different abilities. The first is the Zapper which can, naturally enough, zap things. This is useful for clearing the way of weapons systems and the occasional zapable obstruction.

Next in the team is the Pusher. His powers of repulsion (sounds like Jeff) can push most obstacles out of the way, including the other robots.

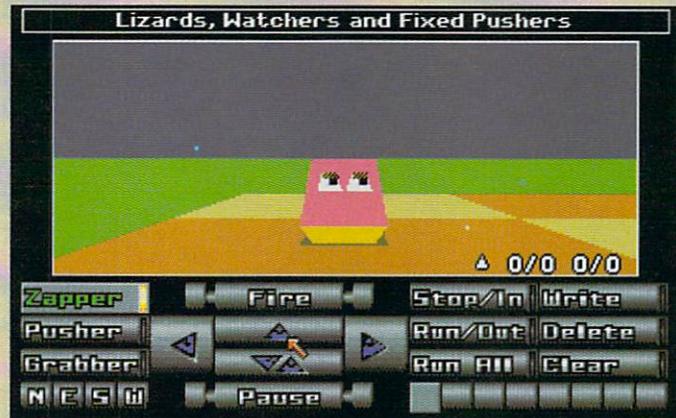
Lastly comes the grabber, whose sole aim is to pick up things, mostly Klondikes - the energy pods that the robots need to survive.

The three spiders must work as a team to overcome all the problems and puzzles the treacherous humans have set before them. Other robots in the service of the humans inhabit and inhibit the tower.

Laser cannons and repulsion



Programming the front end to avoid the Zapper



I wonder if he'll be friends with me

rays, proximity mines, reflectors, wipers and exchangers are just some of the hostile hardware to be overcome on the quest for the summit.

Control of the spiders is

straightforward. Click on the relevant icon to move forwards, left or right. The fire icon will activate the current spider's weapon. Gadgets down the right hand side allow

Tower of Babel

£24.95

Rainbird

Sound	
Graphics	
Gameplay	
Value	

Overall - 77%

switching between spiders.

Up to eight orders can be programmed in advance and then executed, even if a different spider is in use at the time. In fact all three spiders can run programs simultaneously, eliminating all that hassle of switching between them.

The graphics are nothing stunning, being just you're average 3D surreal cubist landscape stuff, although some of the lighting effects were very nice. It's not a fast action arcade style thing so there isn't much scope for wonderful effects.

Puzzewise it is quite exceptional. Perhaps akin to the kind of constructional nightmare presented by building a ship-in-a-bottle in space by remote control.

A complete tower construction set is included so when you get bored torturing your hamsters or whatever you can turn your talents to creating a replica of Dante's Inferno for your mates to battle their way through.

Definitely one for those who consider themselves cunning.

Green

The Magic Roundabout



Believe it or not, he's on your side

CLOUD KINGDOMS

On a trip to Cirrus Minor

IT ISN'T easy being green. We're not talking about buying "No Phosphate" washing powders which have never actually contained phosphates anyway. No, we're talking physically green - you know, sort of easy to lose on a football pitch kind of a colour.

It wasn't the problem of galloping verdancy that was uppermost in Terry the Green's mind. The evil

Baron von Bonsai (Boo Hiss ad nauseum) had stolen Terry's magic crystals and was using them to corrupt the Happy Cloud Fairies. Quite how the Baron was planning to use them was anybody's guess, but it probably involved hanging around street corners with a radio-pager and an Uzi.

"Drat! Those Magic Crystals were for my own personal use!"

thought Terry to himself. Without further ado (whatever that may be) he shot off to the Cloud Kingdoms.

On arrival, a sorry sight met his eyes. The Happy Cloud Fairies had mutated into Bad Insect Monsters and Giant Rolling Blackballs. "Those crystals must have been a bad batch. Just as well I didn't use them," thought Terry.

At this point it may be a good

idea to explain that, although Terry is a small green bouncy ball, he does a nice line in looking unshaven and disreputable. For a good example of looking unshaven and disreputable, see the *Amiga Computing* editorial team. I won't spoil it by telling you which is which, though.

There are four maze-like kingdoms which Terry can clean up for starters. Two of them seem to be somewhat difficult. The Unseen Kingdom has an invisible maze, so you don't know where you are going, or even where you *should* be going. The Arrow Kingdom is covered with arrow tiles, which accelerate you off the edge of the Kingdom.

The best one to start on is the Cloud Kingdom. You have a time limit to collect all your Magic Crystals, and there are a whole load of patrolling enemies to get past. You will have to paint in some of the floor using the Magic Paint Pots to get all the crystals.

You'll also make some interesting discoveries about the floor - some bits disappear as soon as you roll over it. Do I need to tell you that you instantly plummet through the holes that you make? I think not.

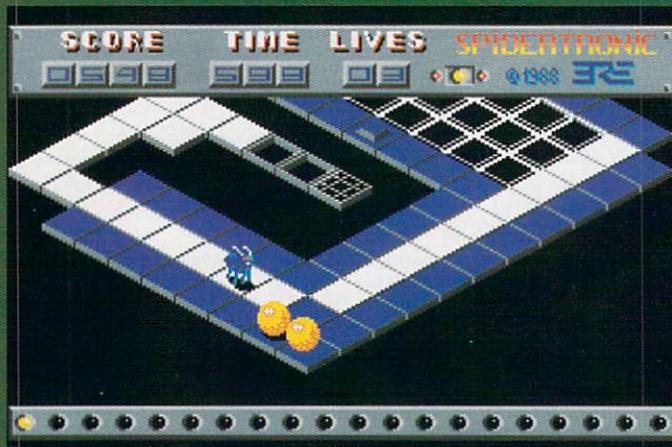
The Quartet Kingdom is much more difficult. Not merely do you



Some sort of bridge seems to be in order

SPIDERTRONIC

Affordable arachnid antics



A spider is approached by two large orange balls...

RECENTLY I discovered a huge, and here I mean really big in a large sort of way, spider living in my garage. Behind the cardboard box if you're interested. Ordinarily this wouldn't particularly bother me but the very next day I received a copy of Spidertronic from Interceptor. Coincidence? You get a bit paranoid in this business.

Anyway, the game more or less follows the plot of *Clown O'Mania* which we reviewed a while back. Run around an Englebert style landscape picking up coloured squares and laying a path to the



Value

transporter. The transporter will take you to the next level, of which there are ten.

When you complete the tenth level you have one of two choices - either give up and go and do some-



Terry the Green gets blackballed from the Cloud Kingdom steering committee

have contend with disappearing floors and patrolling enemies, but you also have a floor littered with magnets. These stick you down and prevent you from jumping over the nasties. A similar effect can be had in real life by eating an entire suet pud.

Cloud Kingdoms reminds me of both Skweek and Incredible Shrinking Sphere, but isn't exactly like either. The graphics are pretty terrible - not so much YASTP,

more YAC64P - which is exactly what it is. On first seeing this game, I really loathed it, but after playing around with it for a while I've discovered it's fun.

It's still inexcusable that two out of the four starter Kingdoms are virtually impossible. Likewise instant death by falling through the floor. Well, not death - you don't lose any time, but you get put back to the start of the Kingdom.

Cloud Kingdoms is a real C64

game; solid and difficult gameplay, average graphics and passable sound. But what I do find strange is that in attempt to stop hacking, the game hangs on reset. Only a powerdown will restore the machine - why not just disable the reset?

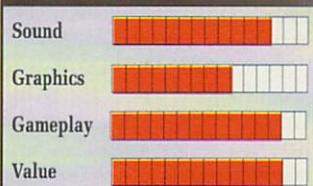
Cloud Kingdoms is quite neat, actually. Uncomplicated frustration and lots of levels will keep you occupied.

Stewart C. Russell

Cloud Kingdoms

£24.99

Millennium



Overall - 78%

thing else or make up your own levels with the editor.

Graphics are nothing too special. The spider is only just discernible as such, but the giant balls that hamper progress are quite nicely done. Sound is adequate.

Spidertronic is out on the Smash 16 budget label which means it retails at £4.99. Up until now I have not been a great supporter of budget games because they seemed to be an excuse for software houses to peddle off dross for a profit without fear of complaint.

Spidertronic hardly shines, but

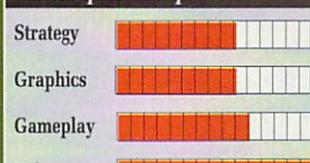
it could certainly take on some of the full-priced games that have been through these offices.

Green

Spidertronic

£4.99

Interceptor Group



Overall - 70%



GRAVITY

He ain't heavy...

GRAVITY has a lot to answer for you know. Every time I get on the bathroom scales they scream for mercy, but if there was, say, half Earth gravity my weight would be quite acceptable.

You can't go too far and wish for no gravity though. For one thing the Earth's atmosphere would take a hike, and for another your cereals wouldn't stay in the bowl at breakfast time.

So gravity, in some form or another, is a good thing. Now then, what do you know about Newton's Law of Gravitation and Einstein's General Theory of Relativity?

If you're the smarmy pseudo intellectual type who bought Stephen Hawking's book because you thought you were doing your bit for the disabled and anyway it was all rather cosmic, you probably know nothing at all.

However, if you did read the book – and it was heavy going in places – then you undoubtedly know what I'm talking about. If so, skip the next few paragraphs.

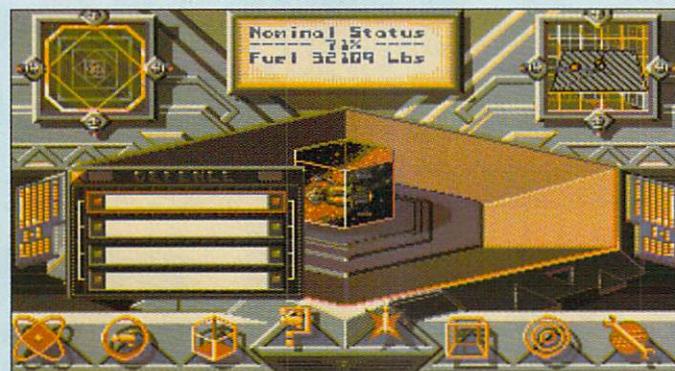
So what the hell are you on about Duncan? I hear you asking. Well obviously I don't actually hear you asking, unless you happen to be reading this review aloud one day in WH Smiths and I'm stood next to you. However, it serves as a lead into a short lecture on the subject in hand.

The Space Time Continuum is what it's all about. This is a four dimensional (your usual three, plus time) model of, well, the universe and everything. Planets and suns are like heavy balls on the rubber sheet of spacetime. Naturally, they sink into the rubber a bit, causing gravity wells.

Anything reaching the edge of the well is bound to be attracted because of gravity. And it's downhill as well. Heavy suns, your white dwarfs and red giants have large gravity wells, but heaviest of all are black holes.

These are collapsed suns, infinitely heavy in the centre. They naturally have great big gravity wells. In fact, they are so heavy that scientists postulate that your metaphorical ball on the rubber sheet distorts space so that it actually reaches somewhere else in the spacetime continuum.

This hole leading elsewhere is known as a singularity, and per-



Looks like a fish, moves like a fish...

haps, just perhaps, one day we might have the technology to ride down the singularity and come out at the other end. Alive and not terminally squashed.

Which leads me to the game Gravity, which uses a very attractive display of the spacetime continuum, complete with suns and planets and black holes and gravity wells.

If you want to jump from one end of space to another, down the gravity well of the black hole you go. This is the future. A future where man is colonising the stars and terraforming the planets.

This is also where the Outies come in. Horrible alien life forms that they are, they have decided to eradicate us before our own team of xenophobes eliminates them.

We do this to each other by blasting apart our ships with a variety of weapons, and by turning the opposing team's sun into a black hole or a black hole into a sun.

The Outies get their Ready Brek from heavy radiation from black holes, so if they turn the sun where your home base is into a black hole, you're scuppered. Equally, if you manage to turn their black hole



back into a sun they are kebabbed.

To aid in this quest of galactic genocide, you have a fleet of 15 ships, which can be ordered around to investigate, explore, fight aliens and colonise worlds.

If the ship you are on is blasted to bits, you automatically transfer to another one.

Thus this is a very tactical game rather than a romp around the galaxy killing things.

Think first, then go and nuke 'em.

To aid in the process you have drone ships, which can be programmed by an icon-driven language. It isn't too hard to get the hang of but when you start off it can be confusing.

This applies to the game in gen-

Gravity	£24.99
Mirrorsoft	
Sound	
Graphics	
Gameplay	
Value	
Overall – 61%	



eral, thanks to a manual which describes all the systems – defence, weapons, orders, the dreadful 3D map in the Holotank, tools for terraforming and colonising planets – but nothing about how you actually do these things.

And when something doesn't appear on a menu when the manual says it is on that menu, you start to wonder what the hell is going on.

Hours of frustration mark the beginning of the game. A quick tip if you're looking for a singularity to go down is to follow the dark blue line on the long range scanner; the brown ones lead to suns and planets.

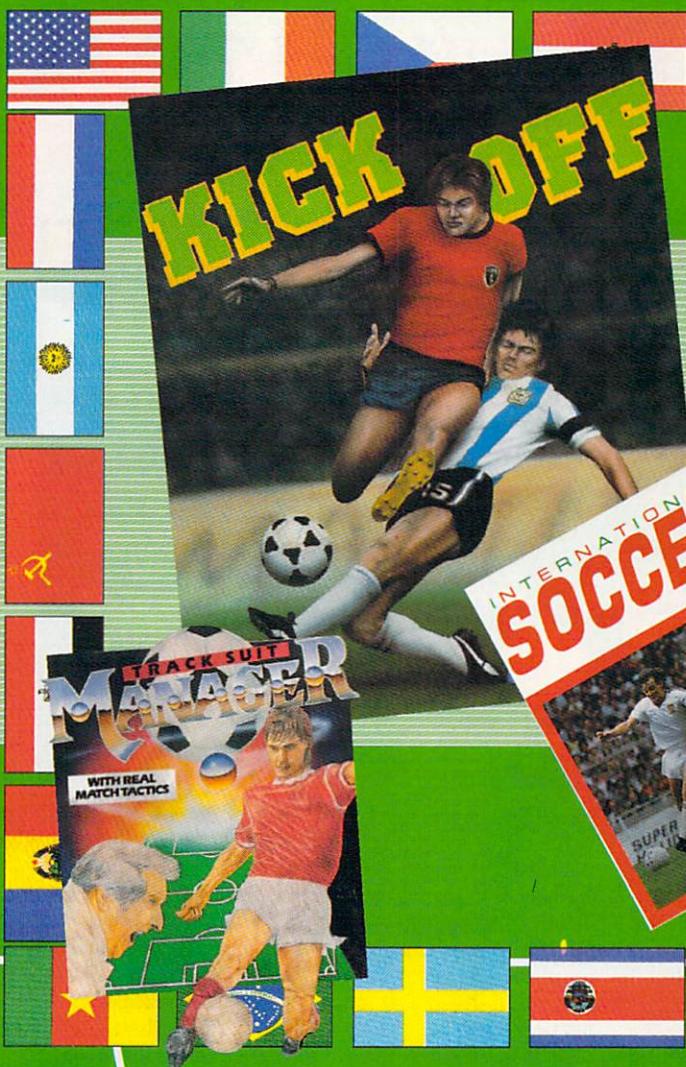
Once you get into the game, though, you'll admire the rolling spacetime graphics, tense every time an alien starts blasting away, and stare in horror when you lose the game and look upon a picture of someone's head melting.

But you'll also be irritated by the fiddly control, unimpressed by the way the control panels jerkily scroll on to the screen, and eventually, eventually, play the game long enough to realise that Gravity is a tactical wargame with flash graphics and all action combat scenes.

But to be honest, it is not that interesting. Gravity ain't heavy at all.

Duncan Evans

In association with
Shoot!
 Free superb full colour Wallchart follows
 all the Fixtures through to the Final



WORLD CUP YEAR 90

Compilation

Pack includes:
 • 3 Superb Award Winning Games
 • Unique Full Colour Wall Chart
 With the History of the World Cup
 including Amazing Facts & Figures
 • Comprehensive User Guide
 • Strategy, Management and Red Hot
 Action makes this the Ultimate Soccer
 Experience

KICK OFF

The award winning, chart topping and international best selling soccer simulation of all time!

- Best Arcade game 16 bit '89
- Europe's best soccer simulation '90
- Elspa game of the year
- 16 bit game of the year!
- Emap golden joystick awards

Featuring:- Pixel Perfect passing
 Blistering Pace
 Superb tackle play

"Has to be the best football simulation yet!"
 ST USER

"Most playable soccer simulation in binary history" C & VG 88%

"Boots the other football simulations over the cross-bar" Zzap 96%

"Simply the best football sim" New Computer Express



INTERNATIONAL SOCCER

- Superb Hi-Res graphics, plus team colours, wind, weather and night play options.
- Highly competitive play
- One or two players
- Up to 4 players can play using a 4 player adaptor
- Animated supporters, electronic scoreboard and on-screen refereeing keep gameplay fast and furious.

Without doubt the best of the soccer action games" Amiga User International 88%

Gary Lineker's Hot Shot replaces International Soccer on Commodore 64, Spectrum and Amstrad



TRACKSUIT MANAGER

A management game the way it should be played. Live the match thrills, as you compete to qualify for the Nations and World Cups.

You decide the play and enjoy the victories and suffer the defeats...

Play defense, attacking or man to man marking
 Offside trap, sweeper system or possession football
 - Genuine goal-kicks, corners and throw-ins
 - Crunching tackles, fouls, penalties, bookings and sendings off
 - 54 computer managed squads from around the world all with individual tactics
 "The best ever football managerial game ever, in the history of the World" C & VG 9/10

The ultimate management game" Ace Rated 929

"Easily the best of its type" Zzap 64 89%

"The best ever managerial game" Sinclair User Classic 93%



**TILT D'OR
AWARDS
1989**



**THE
One**
FOR 16-BIT GAMES



YC



**YOUR
SINCLAIR**



**TILT D'OR
AWARDS
1989**



**THE
One**
FOR 16-BIT GAMES



YC



**YOUR
SINCLAIR**



AVAILABLE FOR

ATARI ST AMIGA C64 (CASSETTE + DISK)

AMSTRAD CPC (CASSETTE + DISK)

SPECTRUM (CASSETTE + DISK)



4 The Stannetts, Laandon North Trade Centre,
 Basildon, Essex, SS15 6DJ Tel. No. (0268) 541126

GREG NORMAN'S ULTIMATE

A good walk spoiled

WHEN I first saw this program, I thought thank god for that, it's not another of those dreary Jack Nicklaus games. Then again, after Jack anything would be a relief. Harold Mickelthwaites Guide to Getting on the Green Before Twilight even begins to sound interesting.

When you actually get Greg Norman's Ultimate Golf (my doesn't that sound much more exciting) you even find the energy to take the disc out of the box. And speaking of the box, Gremlin has even pasted the words, Shark Attack on the side. For a minute I thought that this was another version of Jaws. Very confusing I must say.

Anyway, on with the game and the first problem, the copy protection. Identify the hole from those shown in the manual it says. Easy, except the pictures in the manual have been taken in black and white and the shades of green are indistinguishable. Whichever idiot at Gremlin thought this one up should be shot.

To the clubhouse then, and a decision to make over the number of partners. I could make a smutty remark here, but they'd only cut it out so I won't bother *Right on, Good Taste Dept.*

One to four players, human or



Decide how to address the ball - 1st class or airmail

computer controlled. Before you progress further remember to switch the caddy function off. The caddy can take up to three minutes to pick a club that you'll be offered if you disable the feature anyway.

And you don't get a caddy looking like Nick Faldo's anyway, so you're not missing anything.

Out to the first hole and the scenery undulates into the distance. This is better than the flat plains of Leaderboard, but then the graphics are quite crude and look like they were developed with the

PC and Spectrum in mind.

You are automatically lined up to hit at a hole, which is a shame if the hole is a dog leg with trees. Altering position involves going to a drop down menu and calling up a map display. That works, but is not how I'd like to alter my stance and position.

On the map screen you can also zoom into the course, though as it will do you no good whatsoever, you'd simply be experiencing another of Ultimate Golf's useless features.

So you whack the ball using power and hook/slice on a very Leaderboard style meter - which is why it is the feature of the game which works most satisfactorily - and the ball sails into the distance, not growing perceptible smaller until it vanishes.

If you hear a sound effect you can guess that it's in a bunker, hit a tree or in the water. If not you have no way of telling where the ball has gone until you get up there.

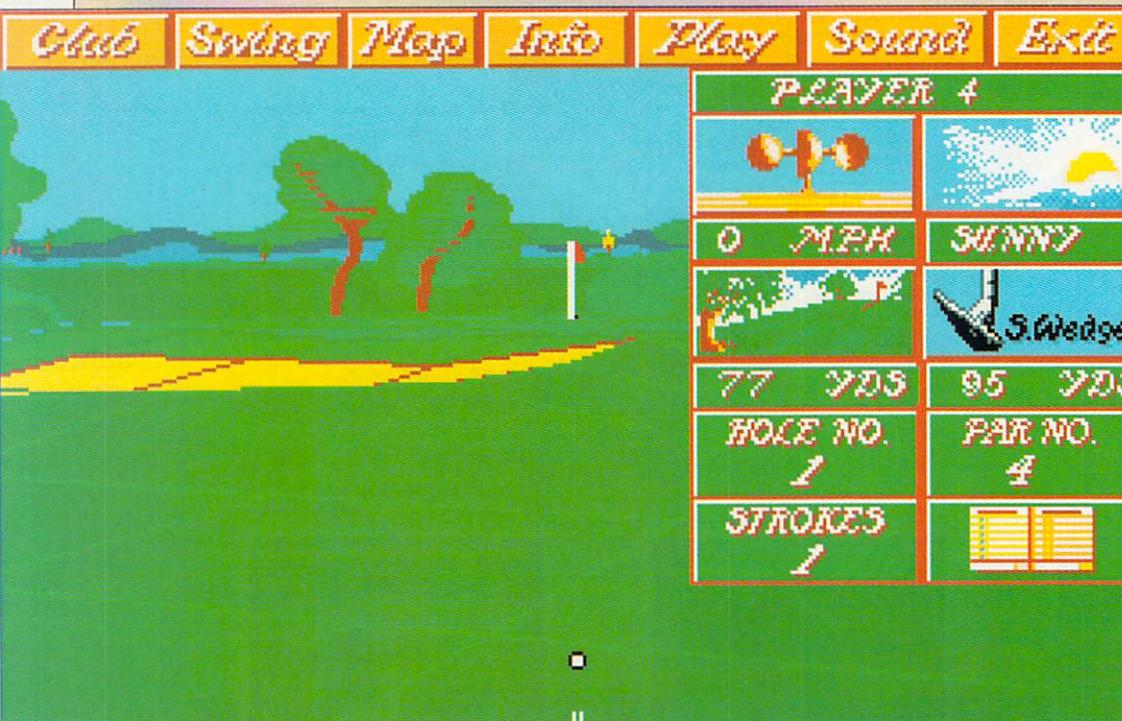
Wind is a feature to monitor constantly, but rather irritatingly the anemometer is on yet another screen, as is the type of lie the ball has. When approaching nasty looking holes (behind a tree and over water), the poor computer players don't half dither. I mean I am one of the worst golfers in the country, but at least I know where I'd like the ball to go.

Which reminds me, the score cards have the provision for solitary players to try and reduce their handicap. When the computer asked for my handicap I typed in "My arms".

Where was I? Oh yes, assuming you get to the green, which is by no means certain given the vagaries of computer arbitration, and the dismal putting section comes up.

The green is virtually always flat, except for the one occasion when you need to sink a put to win. Then you find yourself on the side of a hill.

The only thing you have to worry about is strength of shot, and what the weather conditions are. Even so, it is possible to com-



What a lovely day - pity you're stuck in the golfers version of Gridrunner

GOLF

Ultimate Golf

£24.99

Gremlin

Graphics	
Sonics	
Playability	
Value	

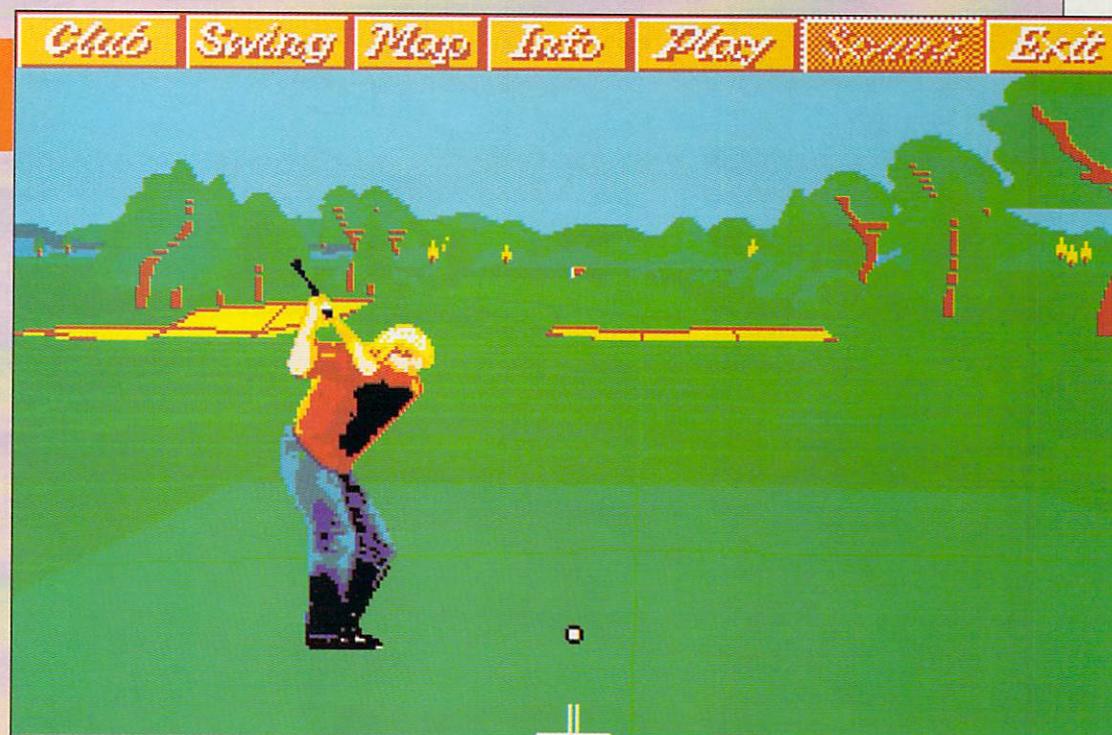
Overall - 64%

pletely misjudge a shot because the computer is feeling mean.

When you give a three foot putt 10 per cent power (a 55 feet putter \times 10 per cent = 5.5 feet supposedly) don't be surprised when you don't even make contact with the ball. The putting is a total joke, and someone at Gremlin has completely screwed it up.

Before you know it, if you're playing with three computer players, you'll have finished a round and be ready for the 19th hole, only to find that it's now 3 a.m.

Ultimate Golf isn't bad, but it



Greg ironing out problems with his swing

has serious flaws and certainly isn't worth buying if you're going to play on your own. Get a few friends round though, get them

sufficiently inebriated, and you'll find it a reasonable change from Leaderboard.

Oh, and Ed (whoever it is this

week), if anyone writes in to explain shark attack please send them a copy of the Beano from me.

Duncan Evans

SIM CITY TERRAIN EDITOR

Their life on your land

ONE of the most notable games these last few months was the excellent Sim City, acclaimed as the concentrating jolly hard man's Populous, where mere mortals got to be mayor of a megacity.

However, the game had one slight complaint levelled against it. It was impossible to create the actual starting terrain, all the land-

scape was terraformed randomly.

Now even this little niggle has been rectified with this wonderful editing package. Fill and draw options allow you to place land, sea, trees and even plot the route of passing ships. A smoothing function will get rid of all those nasty rough edges.

Even if you do want just a random landscape various sliders can

be set to bias towards leafy, wet or barren lands - even down to the curviness of the rivers. A few sample cities are included to help guide you on your way.

An excellent companion to an excellent game, but not really worth it for the money.

Green

Sim City Terrain Editor

£14.99

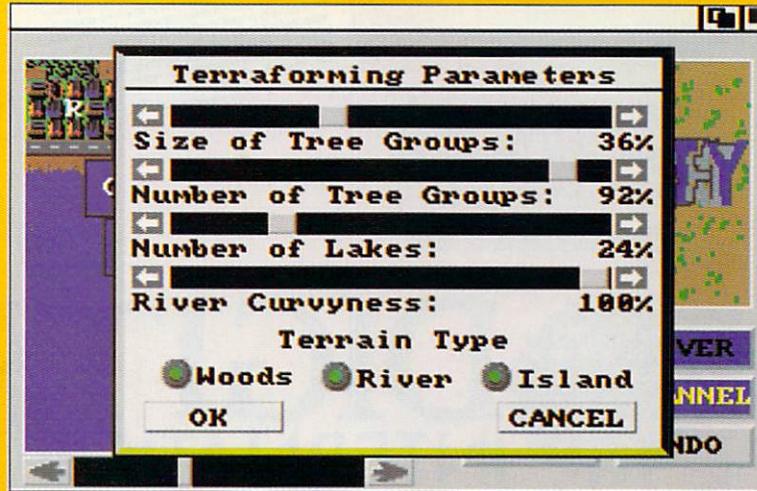
Infogrames

Features	
Ease of use	
Usefulness	
Value	

Overall - 60%



Design impressive looking island chains with the powerful editor



Nature tamed by the terraforming control panel

Distinctly Digital

Cleverly written and always favourably reviewed in the press, Digitala produces a range of powerful, low cost software for the home and business user.

DGCALC

The fastest and most powerful spreadsheet available in this price bracket, with 512 rows by 52 columns, giving you up to 26624 cells. As with all Digitala products, the operation of the program is clearly thought out. Being either menu, mouse or command driven you'll be able to start using it within minutes – even if you've never used a spreadsheet before. Some of the features which make it such good value are the exporting of ASCII files for integration with other programs, adjustable column width and text overflow, programmable function keys (macros), and a unique windowing facility, so that you can look at different parts of a sheet at the same time.

£39.95

E-TYPE

Do you ever have to print names and addresses at awkward places on envelopes, or do you ever need to fill in tricky forms or invoices where the text has to be in exactly the right place? Usually you have to do it by hand, or get your trusty old typewriter out of the cupboard and dust it off. Well not anymore. The Emulated TYPEwriter transforms your computer and printer into a fully fledged typewriter, supporting bold, underline, italic and other type-styles. Because it can display and print text INSTANTLY you can line up your form, press Return and Space a few times to move to the correct place, and then start typing. Alternatively you can switch to line-by-line mode, which offers word-wrap, justification and proportional spacing, so that you can edit each line before it's printed.

£39.95

PERSONAL TAX PLANNER

Are you absolutely sure your taxman is doing his job correctly? Plan your own tax with ease, this menu-driven program will calculate your income tax liability (4 tax years included) and provide pertinent facts about your tax position. You can perform 'what-if?' calculations to discover ways to minimise your tax liability. In fact, the program will advise you on things such as, if you are a married man, whether it would be advantageous to have your wife's income taxed separately or not. At this price who knows, you will probably find that PTP will pay for itself in tax savings the first time you use it!

** STOP PRESS **

July 89 – PTP user receives tax refund of over £2,000!!

£39.95

DAY-BY-DAY

An excellent way to get organised. With it you'll be reminded of birthdays and other anniversaries, meetings and appointments, phone calls to make and so on. As with all Digitala products, inputting information is simplicity itself and, once entered, you can search for keywords or for particular events such as birthdays to see when one is coming up. Includes month/week/day planner, automatic reminders for overdue appointments, month and week summary at a glance. For less than £30 this is the ideal way to make sure you never miss that important occasion again!

£29.95

MAILSHOT

If you ever need to send out mailings or print labels, you know how fiddly and time-consuming it can be making sure all the labels are printed correctly. Well now all that's the thing of the past. Because Mailshot actually shows you the labels on screen, you can type names and addresses in exactly the correct place. But more than that, the labels are animated on screen as a continuous sheet, allowing you to scroll backwards and forwards, to search for particular keywords or to edit entries with the minimum of fuss. Facilities include searching, detection of duplicate labels, sorting (even surname!) 9 labels across, 999 copies of any label. This has to be the simplest and most effective method of creating a mailshot available.

£24.95

MAILSHOT PLUS

Advanced version of Mailshot for the business user with the following extra facilities:

- Integration with other software (using ASCII files)
- Column/Tabulated summary (ideal for telephone lists, etc)
- 4 extra memo lines per label (with defaults)
- System for coding, dating and adding messages to each label
- Different layouts available for horizontal and vertical justification.

£49.95

CASHBOOK COMBO

Money saving combination pack featuring both Cashbook Controller and Final Accounts – Save £10.00.

£69.96

FINAL ACCOUNTS

The program will take information prepared by Cashbook Controller and produce a complete set of accounts including:

- Trial Balance
- Trading and Profit and Loss Account
- Balance Sheet
- Notes to the Accounts
- Full Accounting ratios.

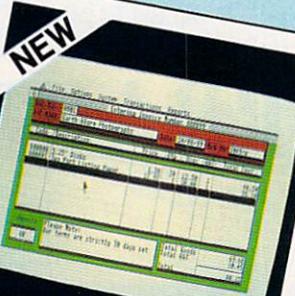
All reports may be produced at any time, with comparative/budget figures if required. The facility to produce these documents quickly, accurately, and regularly is of enormous help in running any business, large or small, since one shows the true profitability achieved, and the other the exact strength of the business in terms of assets and liabilities.

£29.95

CLASSIC INVADERS

Escape from executive stress with the classic space invader game.

£14.95

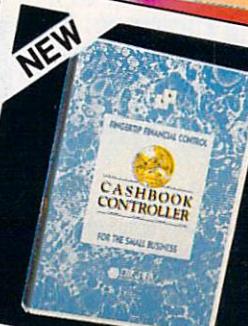


SYSTEM 3

Take the first essential step in computerising your business with this simple integrated suite of programs:

1. CASHFLOW CONTROLLER: Keep track of the most important aspect of business – cash flow. Essentially a debit/credit ledger, it's flexibility lies in its ability to produce account balances instantly for debtors (from invoices), creditors, VAT, Bank, Petty Cash, together with a record of all transactions, dates and descriptions. A management aid designed to go alongside your existing accounting system.
2. INVOICE & STATEMENTS: This program will greatly reduce time and cost of preparing invoices and statements. Professionally printed invoices and a full record of debtors. Integrates with Stock Control.
3. STOCK CONTROL: Effectively control your stock, purchasing and suppliers and produce re-order reports, stock valuation, price lists, etc.

£49.95



CASHBOOK

Use your computer as a powerful business tool and take the drudgery out of book keeping! In its simplest form, the program will replace your Cash and Petty Cash books BUT information includes:

- Summary of VAT information to enable completion of VAT Return.
- Monthly summaries and departmental analysis of sales and purchases.
- Total debtors and creditors, sales, and overheads.
- Income and expenditure analysis.
- Journal routine for entering transfers between accounts.
- 199 nominal account titles, most of which are user definable.
- Observes accounting procedures and meets legal requirements.
- Full audit trail and integrates with Final Accounts.

£49.95



HOME ACCOUNTS

Ideal for both home users and small business. Simple to use, this package will keep track of all your finances and cater for 10 types of income (e.g. Bank, credit card) and 60 types of expenditure (e.g. rates, mortgage, gas, food), with optional budgeting and forecasting. The program will handle Standing Orders and Direct Debits, and automatically warn if for example, Bank charges are likely, or if you have exceeded your credit limit. With the comprehensive reporting and graphics facilities you can even produce your own monthly Accounts, you'll wonder how you ever managed without it.

£29.95

Available to the trade from:
Digitala, GEM, Greyhound,
HB Marketing, Lazer,
Leisuresoft, R & R, SDL.

**DIGITA
INTERNATIONAL**
"Serious software at a sensible price"

All software written in the UK. Prices include VAT & P & P (add £2.00 for export)

• HOW TO ORDER • CREDIT CARD HOTLINE

0395 270273

Post: Digitala International Ltd
Black Horse House
Exmouth Devon
EX8 1JL England
Fax: 0395 268893

Jeff Walker presents...

THE

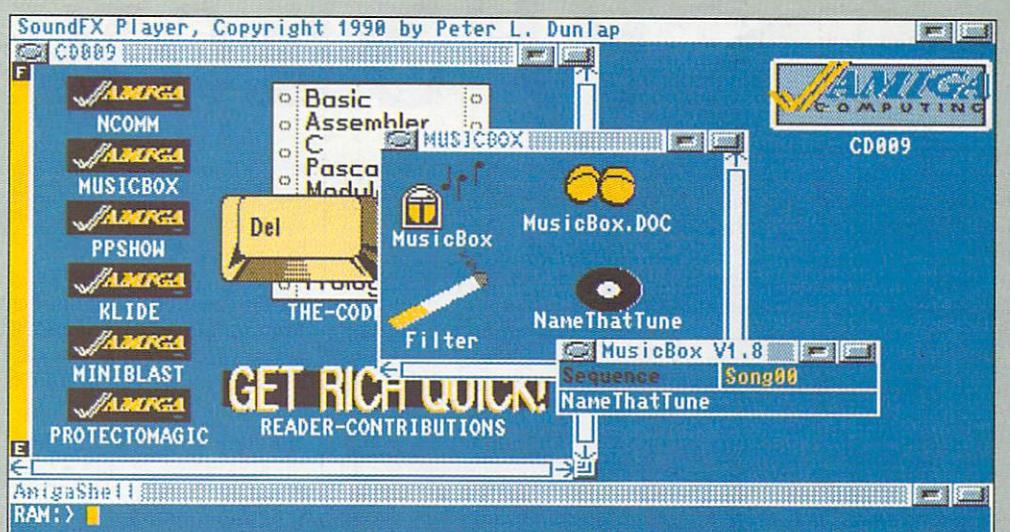
DISK

MUSIC while you work. Love it. If my memory serves me correctly, this is the fifth tune I've passed to you. So we're half way to an album.

Time for another quick competition, methinks. Name that tune. Same rules as last time. Drop me a line and if you can convince me you know what you're talking about I'll send you my full MusicBox collection, which is currently standing at three disks.

Send your letters, grovels and bribes to: *I'll Name That Tune, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.*

MUSICBOX is freeware but remains copyright ©1989-90 Peter L. Dunlap. This program is distributed courtesy of CMOS BBS (0101-303-322-4078).



The tune has been crunched with PowerPacker so be prepared for a few seconds of inactivity before it starts playing

MusicBox



Protect-O-Magic gadget descriptions

PROTECT-O-MAGIC is a utility program for setting the protection bits of files from Workbench. The best way to learn to use Protect-O-Magic is to examine the image file ShowMe. However, this

is not necessary. You could just run Protect-O-Magic and see nearly the same picture. To see the ShowMe file, double click its icon.

Looking at the picture, you will see on the left side of the window

five lines of HSPARWED. These gadgets represent the protection flags – Hidden, Script, Pure, Archived, Readable, Writable, Executable, Deletable. If they are orange, the flag is set. Click on the

letter to change the flag.

To the right of the flags are the filenames. Directories will appear orange here. Click on the name to enter the subdirectory.

On the right of that are what the

PPSHOW was written to complement one of Nico Francois' other utilities, PowerPacker, a command and data cruncher (October 1989 cover disk). It is used to show normal IFF ILBM files or ILBM files crunched with PowerPacker. The decompression is done automatically so you don't have to know if a file is crunched or not.

PPShow can be used in three different ways. First of all via the CLI: If you enter PPShow without arguments you will get a usage template. You use PPShow like this:

PPShow []

The program will then load the ILBM file and display it. If the file was crunched using PowerPacker 2.0 or higher, PPShow will first decompress it for you. If the file was encrypted you will be prompted for the password.

There is only one option in this version of PPShow, -h, which is used to force HAM mode when no CAMG chunk is found. If you

PPShow

don't specify this option, PPShow will assume a 6 bitplane screen is Extra HalfBrite.

Note that it is wrong for an Amiga IFF ILBM file not to have a CAMG chunk, especially when there can be doubt about what display mode to choose.

There are three different ways of using PPShow via the Workbench: You can set the default tool of the crunched or non-crunched ILBM file to PPShow; you can single click the PPShow icon, hold down Shift and then double click the pic-

ture icon; or you can double click the PPShow icon and enter the filename in the string gadget you will be presented with.

You set the default tool by single clicking the icon of the picture and selecting Info from the Workbench menu (this will only work if info.library is present in the Libs: directory).

You will get a window with several gadgets in it. Click in the string gadget where it says Default Tool and enter :ppshow. The program should be in the root directory of

your disk for this to work. If it's in the System directory, for example, you should enter :system/ppshow.

Last of all select the Save gadget.

Note that PPShow will add the extension .pp to the filename when the file is not found. This is very useful in the Workbench environment. You can make an icon for house.pic, for instance, but name the file house.pic.pp so you know that it has been crunched by PowerPacker.

Now the Workbench will show an icon with house.pic as name, but if you double click it, house.pic.pp will be displayed, so long as there is no house.pic file in the directory.

Abort PPShow by pressing any key (except the Tab or P keys) or the right mouse button. The screen

Get more
crunch

MANY IFF ILBM files are already crunched with the standard ByteRun1 compression. PowerPacker will crunch these files even further most of the time but will not crunch them as

well as uncrunched ILBM files. So save IFF files uncrunched (with Pixmate, for example) before crunching them. This will lead to the best crunching results.

Clock this!

HEY guys, I'm getting snowed under with clocks. Why do you keep sending me clocks? I know the one on the Extras disk lacks a few features, but who uses it anyway?

Look, I'll tell you what - if you can write me a clock which

is as pretty as the Extras one, but with a better alarm system, command line parameters to set the features, plus a user-interface whereby you can change the time displayed on the analog clock face by dragging the hands with the mouse pointer, then I'll take a bit more interest. OK?

Protect-O-Magic

author, Nick Fiorello, calls the do-it buttons. When these are hit the protection flags of the file to the left of it are changed, if necessary, to match those on the HSPARWED display.

On the right of the do-it buttons are gadgets for scrolling through the list of file names.

Along the bottom are the gadgets which change the current path that Protect-O-Magic is examining. Most are self-explanatory. An exception is the * gadget, which

will re-read the current path.

Protect-O-Magic remembers any changes made to the protection flags, even of those files scrolled off the screen. The / gadget will go to the parent directory, if one exists.

To the right of the path gadgets are the last two gadgets. Write All changes the protection flags on all files in the directory, if necessary, to match those of the buffer. Iconify will iconify the program to the upper left corner of the

Workbench screen.

Protect-O-Magic will remember where the icon is if you move it, and it will remember where the Protect-O-Magic window was when you iconified it, and put the window back there when you re-open it.

Iconifying Protect-O-Magic frees memory allocated to the directory listings and generally reduces memory use by about 10k. To get back into the program, double click the icon.

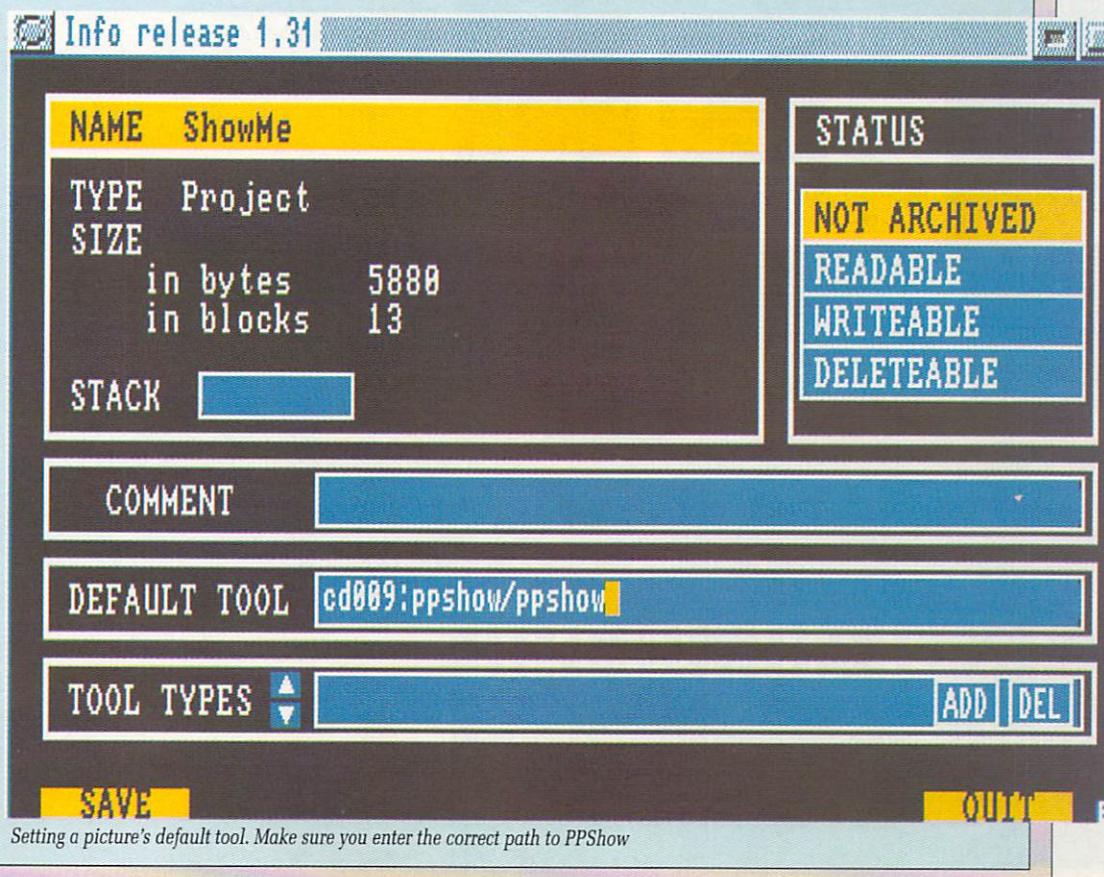
PROTECT-O-MAGIC is freeware. If you find any bugs in the program the author, Nick Fiorello, would like to know. Contact him at: 2142 Trieste Drive, Mims, FL 32754, USA. Telephone 010-1-407-268-1666.

can be dragged by an invisible drag bar at the top. The pesky little mouse pointer will be removed while displaying.

PPShow offers full overscan support, PAL or NTSC. All Amiga display modes, such as HAM and EHB, are also supported, along with Deluxe Paint cycling. Press the Tab key to start it and to stop it. Up to eight cycles are supported, DPaint III currently only supports six.

PPShow has the ability to print the screen it is displaying. Press P and wait. The mouse pointer will be visible while printing. Please remember that printer.device and a correct system-configuration for your printer must be in the Devs: directory for PPShow to be able to print.

PPSHOW v1.0 is Copyright ©1989 Nico Francois/PowerPeak. If you have suggestions or remarks, or if you find any bugs, please let Nico know. Write to the following address: Nico Francois, Corbielaan 13, 3060 Bertem, Belgium.



JUDGING by the number of new Amiga bulletin boards springing up, and the activity on them, telecommunications is the fastest growing Amiga fad in the UK. As the speed of modems increases and their prices drop, more and more UK Amiga owners are waking up to the benefits the world of comms can bring them.

Public domain software on-tap 24 hours a day and technical help from other comms users who know what they are talking about are just two of the advantages of plugging a modem between your phone and your Amiga.

And it doesn't cost a fortune. Stick to a local bulletin board, call after 6pm or at weekends and you'll be spending just 50p an hour. Most times you can logon, do what it is you want to do and logoff in under 10 minutes. It's peak time, long distance and international calls that run up the phone bill.

Many UK and European Amiga boards are now networked together so that any message you put on the board gets "echoed" around all the

The screenshot shows the MComm v1.9 software interface. At the top, the title bar reads "MComm v1.9 Copyright © 1988, 1989, 1998 Daniel Bloch & co." Below the title bar is a menu bar with "File", "Edit", "Comm", "Help", and "About". The main window is titled "MComm Status:". It contains the following text:
Printer: OFF CHIP: 277 K
Capture: OFF FAST: 2832 K
No capture file
64K Scrollback Buffer
0 ms Send Delay The "Done" button is highlighted with a red box.

Pressing Help brings up a status window. The scrollback buffer captures everything that scrolls past up to the memory limit you set.

D **I**

other boards in the network. This means you can correspond over long distances, even internationally, all for the price of a local call.

In the past, comms has been held back by the complexity of the subject. Jargon words like upload, download, baud rate, duplex and handshake are difficult to explain without bringing in yet more jargon.

The real limiting factor, however, has always been the software. Traditionally, comms terminals – the general term for a communications program – are bare bones

pieces of software that leave the new user high and dry.

I remember one popular CP/M public domain comms terminal called Mex which involved having to learn a whole new command set. You ran the program and it presented you with a MEX> prompt. What now? Sigh. Out with the manual...

The Wimp environment of the Amiga means we can do away with all this nonsense. To get online (jargon for logging on to a bulletin board) all you need to know is the speed of your modem (its baud

rate), the speed the bulletin board runs at and the phone number of the bulletin board.

In practice, after an initial very short and simple setting-up session, all you have to do is instruct the terminal to dial your chosen bulletin board. One mouse click and away you go.

Over the past year or so there have been only two contenders for the Best Shareware Comms Terminal title, Access! and JR-Comm.

Both are excellent, but while Access!, whose chief feature is its ease of use, appears to have ceased development at v1.42, JR-Comm is still very much being worked on. The last shareware release was v0.94a.

The author, Jack Radigan, is now putting the finishing touches to the first full release, v1.0, and it looks like being a most versatile and bug-free program. This full version, however, will only be released to registered JR-Comm users. In other words, it'll cost you \$40.

But now there's another challenger, NComm, which will cost you, at the most, a box of biscuits — giftware, the Norwegian authors call it.

NComm has leapfrogged from nowhere to pole position. It's as easy to use as Access!, but if you want advanced features it's got those too. Top of the advanced features list is the script language.

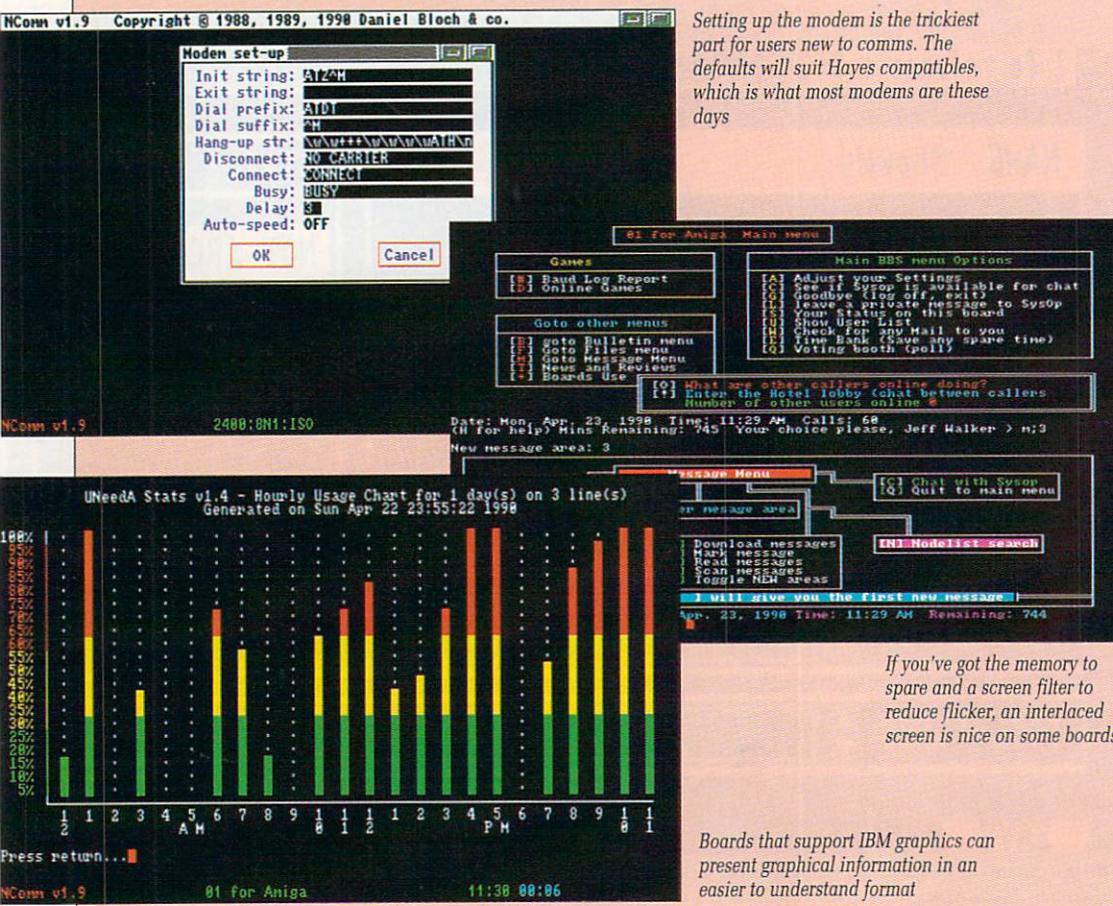
A script is a program written in a Basic-like language that the terminal understands and interprets line by line. Scripts can be written to do anything and everything.

My favourite one logs on to MicroLink in the early hours of each morning, captures all my unread mail, saves it to my hard drive and logs off again. Me? I'm in bed upstairs fast asleep.

When I get up I go through my mail, type my replies into QED (a shareware text editor), save them each as a separate file, write a script program, which usually involves only some quick changes to the one I used the day before, and run it. Then I take the dog for a walk.

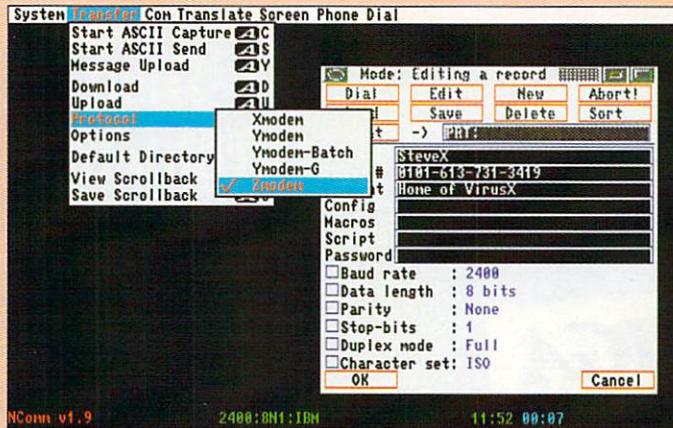
It takes a little practice to get

NComm

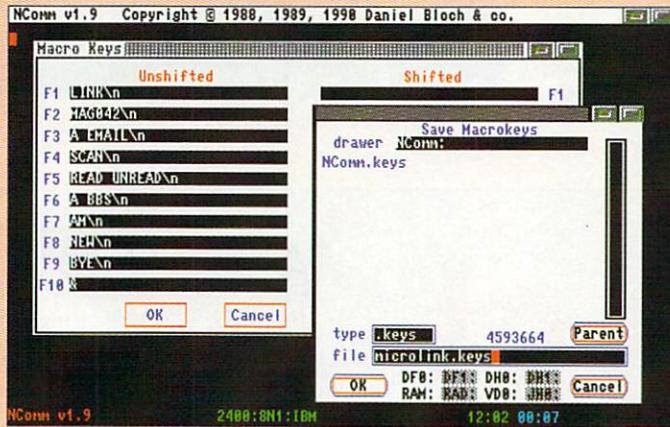


SK

NCOMM v1.9 was written by Daniel Bloch and is based on Comm v1.34 by Dj James. The program is freely distributable and is intended for personal use only. Sale of this program, except for reasonable media costs, is prohibited. Comments and bug reports to: Daniel Bloch, Fyrstikkbakk 9, N-0667 Oslo 6, Norway.



Make sure your favourite transfer protocol is set correctly before dialling the BBS



Macro keys are an alternative to scripts and help you to get around bulletin boards quickly

this confident with comms. The fancy technology usually frightens the hell out of new users, who worry unnecessarily about viruses being transmitted to them and their systems being got at by hackers while they sleep. These scare stories are absolute claptrap spread by people who don't know their RTS from their macro.

The quickest and best way to learn about comms is to log on to a local bulletin board - BBS in commspeak - and ask some questions. You'll be surprised how helpful and friendly everyone is.

Get to know your local sysop - jargon for system operator - the person who runs the board, usually at his own expense. He'll help you around the system and show you where all the help files are.

NComm v1.9 comes with very

good manuals which print out to about 50 A4 pages. But it won't teach you about comms; only experience and an inquisitive mind can do that.

• The authors of NComm have made every effort possible to ensure that the program will function as described, but no warranty of any kind, expressed or implied, is made by them or Interactive Publications Ltd.

The authors of NComm and Interactive Publishing Ltd will not be liable for any direct or indirect damages to either machinal equipment or mental health arising from a failure of the program to operate in the manner desired by the user. In no event will the authors of NComm or Interactive Publishing Ltd be liable for any loss of profits or savings.

Buying a modem

AFTER a ram expansion and second floppy drive, the next peripheral on an average UK Amiga owner's wish list is a printer, usually a colour one.

But stop and think. A printer is only useful if you need to prepare and print a lot of text files. Writing letters to your friends can still be done by hand while you save up for the printer.

A modem, on the other hand, is about the same price or cheaper and can actually save you time and money. Letters take a day to arrive by snail mail, if you're lucky, whereas electronic mail - email - is delivered in seconds. You can logon to a board, post your mail and log off again in well under five minutes. That'll set you back 10p local cheap rate, half the price of a first class stamp.

Public domain software at a couple of quid a disk can get very expensive, particularly if the disk contains many programs and you're only after one of them. Downloading it from a bulletin board is cheaper.

At 2400/2400 you can download

a 300k file in less than half-an-hour - that's 25p at local cheap rate. And bulletin boards get the files first. It can take up to six months for the same program to appear on a PD disk.

If you're thinking of buying a modem I strongly urge you to consider nothing less than 2400/2400 (v22bis in comms jargon). You can pick them up new for between £200 and £300 now.

Also, go for one that has MNP error correction, a protocol that will filter out all the spurious line noise characters when you get a bad connection.

A second-hand modem may look a good bargain at less than £50, but it'll almost certainly be an old, slow model - 300/300 (v21) probably. If you're unsure whether comms is for you or not, this may seem like the best way to start. However, remember that comms at high speed (2400 baud and over) is a different kettle of fish disks than comms at 300 baud. If you must buy second-hand, try to get a 1200/1200 (v22) speed modem.

Where's my local BBS?

HERE'S a short list of some free UK bulletin boards for you to try. They all run at 300/300, 1200/1200 and 2400/2400. There are literally thousands more, far too many to publish, but most boards will keep

their own list of recommended boards to ring.

Have fun, and remember - if you want to keep the phone bill to a minimum, keep it cheap rate and keep it local.

01 for Amiga: 071-377 1358	Liquorice Allsorts: 0633 244345
AIX 386: 0905 52536	London Guest House: 081-748 0974
Alien BBS: 0472 250690	Mabbs: 021-444 8972
Alma: 0787 277745	Mancunian: 061-227 9095
AmLink: 021-778 5868	Murky Caverns: 081-426 9386
Arkham: 081-952 5128	Nite Life: 071-976-6807
Bedrocks UK: 0423 324540	Oddball: 081-679 2583
Bitmap Bros: 0245 413728	Open Access: 081-427 3974
Blitter: 0292 671638	P SQ: 0293 511554
Breakthrough: 051-734 5817	Parallel Dimensions: 0992 465366
Cheam Amiga Board: 081-644 8714	Plus & Minus: 0559 322766
Darkstar: 081-656 3944	Public House: 0222 221168
End Zone: 0524 752245	Runway A500: 0293 884117
Equaliser: 0923 662127	Scorpions Nest: 0022 826478
Hal: 0489 691069	Sheer Logic: 0285 713688
Jersie Amiga: 010 45 531 4537	Skyfall: 0792 772745
KnightOwl: 0375 375190	Welsh Wizards: 0443 815642

NOT a lot to be said about Klide. It's a kind of silent demo, best viewed in a darkened room with some freaky music on the hi-fi. The author, Jerry Kallaus, calls it a line art collage, the fastest draw in the west, no less.

Klide

Double click its icon and see what you think. Some of the 3D effects are very nice indeed.

Hot Summer Nights

MORE original music from the keyboard of the jobless Scot, Howie Davies. This one's great in stereo through the headphones.

Since last month, when we featured his music for the first time, Howie has teamed up with some programmers and graphics artists

from the AcidForce group. But he's still looking for a proper job. In music. Anywhere.

Incidentally, Hot Summer Nights will work with MusicBox v1.8. Simply copy it into your MusicBox directory or disk and add a Tool Types entry to the MusicBox icon. Something like

Song01=HotSummerNights should do the trick.

● Are you a budding musician looking for fame and fortune? If so, perhaps the Amiga Computing cover disk can give you a little push up the ladder. Original stuff only, please, preferably in self-contained modules.

T D I

The CODE CLINIC

THIS drawer contains the programs and listings discussed in this month's programming feature on boot-blocks. Double click the icons to view the listings. Note that there are a number of files in this drawer without icons.

See The Code Clinic article on Page 27 for further instructions.



Disc problems?

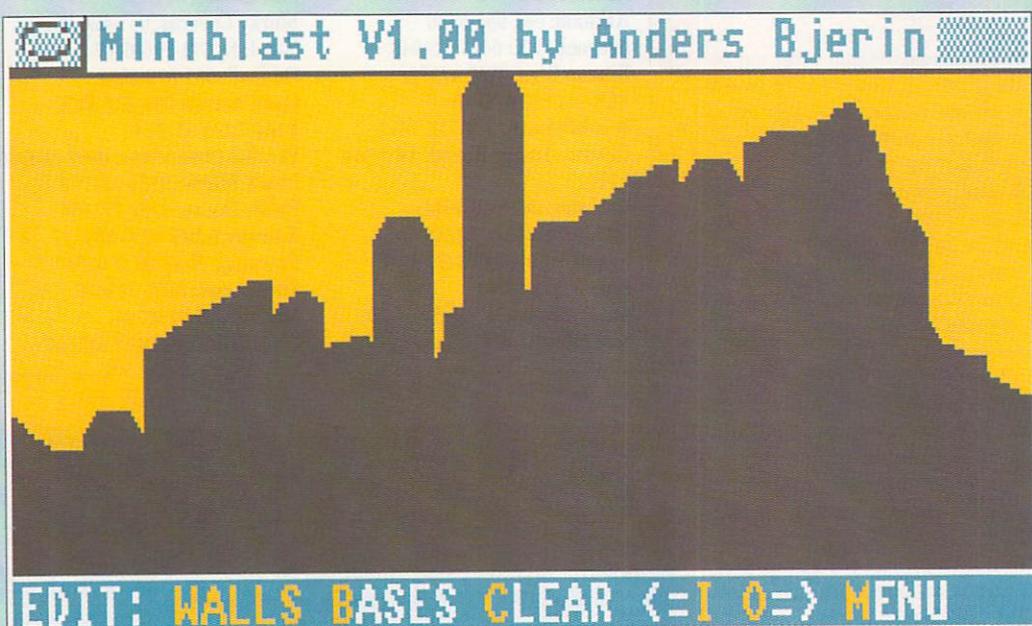
SUBSCRIBERS

If you subscribe to *Amiga Computing* and your disc has got damaged in the post, please return it to:

Amiga Cover Disc, Database Direct, FREEPOST, Ellesmere Port, South Wirral, L65 3EB.

You will be sent a replacement with our compliments. Please allow 28 days for delivery.

Miniblast



ANDERS BJERIN, author of such cover disk favourites as Track Record (aka Car) and Sys, has created in Miniblast the ultimate workbench toy - a colourful, five level, sideways scrolling shoot-'em-up with sound.

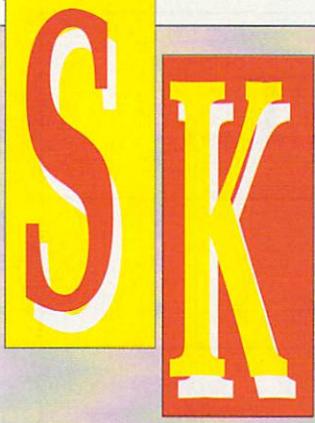
It sits neatly on the workbench in its own 5in x 3in window and will happily multi-task with anything else you care to run.

Designed in the good old Scramble tradition, you control a helicopter on a journey across a barren rocky landscape. Barren, that is, except for the missile silos which fire nasty sharp-ended things at you. Shoot the silos and the projectiles to notch up points - 2 for a silo, 1 for a missile. Oh yes, and you get one point for every missile you dodge.

To begin with you can choose to start on either level one or level two. After you've reached the later levels you'll be able to start on any of those if you wish.

To give you something to aim at, my highest score is 257 on level two.

But the bestest thing about Miniblast is that you can create



NON-SUBSCRIBERS

If you bought your magazine in a shop and when you got home you found your disc was damaged, please return it, within two months of the on-sale date of the magazine, to:

Amiga Cover Disc, Stanley Precision, Unit F, Cavendish Courtyard, Sallow Road, Wellton North Industrial Estate, Corby, Northants, NN17 1JX.

You will be sent a new disc with our compliments. Please allow 28 days for delivery.

your own levels. Simply click on the Edit gadget and away you go. Click on the Walls gadget to create the landscape; hold the left mouse button down in the playing area and move the mouse about a bit. You'll soon get the idea. To place a silo click on Bases and then in the playing area where you want to put it. The arrow gadgets scroll the playing area left and right.

Only level one can be edited to be in with. As you complete later levels you'll be able to edit those, too.

MINIBLAST is Copyright ©1989 Anders Bjerin. If you find any bugs or you have suggestions, please write to Anders at: Tulevdagen 22, 181 41 Lidingo, Sweden.

You may copy this program freely, but may not exchange it for money without written permission from the author. Nor may any part of this program be altered or used within another program.



Earn up to £1,000!

WE are always looking for original contributions for the *Amiga Computing* cover disc. If you think something you have written is good enough to share with everybody else who reads the magazine, send it along and we'll have a look.

If we like what we see, it could earn you up to £1,000.

Please let us know which files, if any, your submission needs from the Workbench disc. If it is clickable, feel free to design an original icon. But don't make it too large. And please use the standard Workbench colours.

Bear in mind that a program which does not run on a 512k machine would have to be exceptionally good to make it on to the disc.

Amiga Computing will buy your work

on an all rights basis. We are not prepared to pay for programs which are already in the public domain or have been spread by other means. However we are quite prepared to launch your program into the public domain as either freeware or shareware if that is what you wish.

Please enclose this coupon, or a photocopy of it, with your submission. Include a file on the disc with full documentation, your name, address, phone number and a few details about you and your kit. A photograph of yourself would be nice, but isn't essential.

Don't forget to duplicate on the disc label the program name, your name, address and phone number. If you want your disc back, enclose a self-addressed, stamped envelope.

Name Age years
Address

.....
Daytime phone After am
Evening phone After pm
Submission name

Submission size bytes in total

We will accept submissions up to 500k in total length, including documentation. But the shorter your submission, the better chance it stands of getting on to the disc. If it is a compiled or assembled program include all the source code, but do not count this in the size of the submission. Write a brief description of your submission below. If it consists of more than one file, describe what each file is for. Attach an extra sheet of paper to this form if necessary.

.....
.....
.....
.....

Sign this declaration:

The stuff on this disc is mine. I didn't nick it off someone else. It hasn't been published before and I haven't submitted it elsewhere because I want *Amiga Computing* to publish it.

Signed Date

Post your submission to: Amiga Computing, Cover Disc Submissions, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP

The word is PROTEXT...

Britain's favourite home-grown word processor
has now been joined by Prodata, the Arnor database

"Protext - the real joy comes only from using it. I can say without any fear of contradiction it is the best word processor available at the price, in my view, at any price in fact." AUI 3/89

"Protext really is the best text processor on the Amiga"

ST/AMIGA FORMAT 2/89

"Wins hands down as the all round package"

ST USER 8/88

"I couldn't be more impressed" ...

"So a big thanks to Arnor for writing a brilliant piece of software"

COMPUTER SHOPPER

PROTEXT is now Britain's fastest selling Word Processor on Atari ST and Amiga computers, and is used by many of the leading computer publications and journalists, as well as thousands of businesses.

Protext's powerful features include:-

- fast spell checker with 70000 word English dictionary.
- background printing. You can print and type at the same time.
- box manipulation. Columns can be moved around on the screen.
- macro recording. Any key sequence can be assigned to a single key.
- use of foreign languages • headers, footers and footnotes
- flexible configuration program • comprehensive set of printer drivers
- wysiwyg ('what you see is what you get') display shows bold, underlining and italics on the screen.
- two file editing. You can edit two documents at the same time.
- find and replace. Powerful search facility.
- mail merging. The most comprehensive mail merging facilities available in any program.
- 300 page manual with full index.
- Swedish version also available. French and German coming soon.

Protext was awarded the "Best Buy" accolade in *PC Buyers Guide*, and was given a bottom line verdict of 5 stars in *What Personal Computer?*

"Protext is probably the most powerful word processor on the Atari ST" ST USER 4/88

"the best value for money in word processing on the Amiga" AUI 9/89

"Protext deserves to be the system by which all other word processors are judged ... Arnor has given the market a superb product"

YOUR COMPUTER

"Arnors Protext 4 is just about unbeatable ... this really is an excellent program" PC AMSTRAD

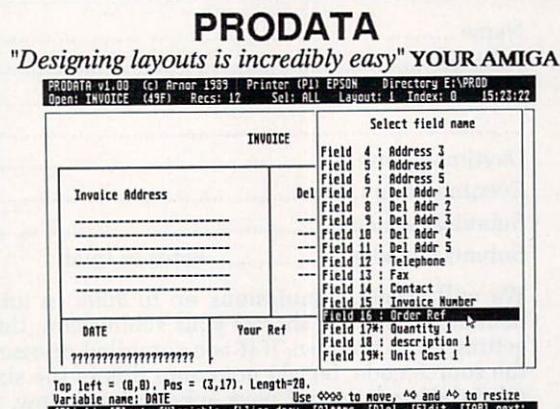
Protext ... truly the professional's choice

Just some of the features of Prodata:-

- Multiple indexes for accessing data
- Full editing facilities for data
- Comprehensive printing options
- Importing and exporting
- Undo changes facility
- Powerful filtering feature
- Easy to use layout design
- Password protection (5 levels)

And of course, Prodata is fully compatible with Protext.

Amiga owners please note that you need 1MB to run Prodata - see below for special price for Prodata plus A501 (512K memory + clock expansion)



"Totally menu driven, Prodata must rank among the top database systems..." ST USER 12/89

"Prodata is a very sophisticated database package, and at £79.95, it is most certainly worth the money" YOUR AMIGA 12/89

"Arnors have a quality product at a very reasonable price"

POP COMP WEEKLY 19/10/89

ORDER FORM - Send to: Arnor (STU), 611 Lincoln Road, Peterborough PE1 3HA

Please send me (indicate where applicable):

PROTEXT v4.2 @ £99.95
PRODATA @ £79.95
PRODATA + A501 (Amiga) @ £179.95

Further information Protext demo disc

Computer: PC 5 1/4" / PC 3 1/2" / Atari ST / Amiga

I enclose Cheque / Postal order for £ _____, or debit my
Access/Visa card no. _____ Exp. _____

Name _____

Address _____

Postcode _____

Releasing your micro's potential...



Arnors (STU), 611 Lincoln Road, Peterborough PE1 3HA. Tel: 0733 68909 (24 hr) Fax: 0733 67299

All prices include VAT, postage and packing. Credit card orders will be despatched by return of post. If paying by cheque please allow 10-14 days for delivery.

PUBLIC APOLOGY

M.D. Office Supplies would like to take this opportunity to apologise to all its competitors. As always we will supply the highest standard Discs, Storage Boxes, etc. at the lowest possible prices. IN FACT WE GUARANTEE IT.

AMAZING PRICES **SUPERB QUALITY** **UNBEATABLE VALUE**

3 1/2

3.5" DISCS & BOXES

3 1/2

25 3.5" DS-DD 135 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£21.95
35 3.5" DS-DD 135 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£29.95
45 3.5" DS-DD 135 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£34.95
55 3.5" DS-DD 135 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£39.95
65 3.5" DS-DD 135 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£44.95
75 3.5" DS-DD 135 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£49.95
150 3.5" DS-DD 135 TPI WITH 2, 100 CAPACITY LOCKABLE STORAGE BOXES	£84.95
200 3.5" DS-DD 135 TPI WITH 2, 100 CAPACITY LOCKABLE STORAGE BOXES	£94.95

OUR 3.5" DISCS ARE VERY CAREFULLY SELECTED TO GIVE YOU 100% ERROR FREE PERFORMANCE AND UNQUESTIONABLE RELIABILITY. EACH DISKETTE IS SUPPLIED WITH OUR 100% NO QUIBBLE GUARANTEE AND IS SUPPLIED WITH LABELS.

5 1/4

5.25" DISCS & BOXES

5 1/4

25 5.25" DS-DD 96 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£13.50
50 5.25" DS-DD 96 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£18.50
75 5.25" DS-DD 96 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£24.50
100 5.25" DS-DD 96 TPI WITH 100 CAPACITY LOCKABLE STORAGE BOX	£29.95

OUR 5.25" DISCS ARE VERY CAREFULLY SELECTED TO GIVE YOU 100% ERROR FREE PERFORMANCE. EACH DISC IS OFFERED WITH OUR 100% MONEY BACK GUARANTEE AND IS SUPPLIED WITH LABELS, ENVELOPES AND W.P. TABS

HIGH DENSITY 3.5" DISCS

10 DS HD 3.5" DISCS	£14.99
30 DS HD 3.5" DISCS WITH 50 CAPACITY BOX	£49.99
50 DS HD 3.5" DISCS WITH 100 CAPACITY BOX	£64.99
100 DS HD 3.5" DISCS WITH 100 CAPACITY BOX	£110.00
150 DS HD 3.5" DISCS WITH 100 CAPACITY BOX	£149.99

PRICE & QUALITY GUARANTEE

We pride ourselves on offering you the very Highest Quality products at the best possible prices. If you should ever see a comparable product offered cheaper in this magazine **DO NOT HESITATE** give us a call because we won't match it.

WE WILL BEAT IT - GUARANTEED

LOW LOW PRICES FOR BULK BUYERS

For all you large users we have some **unbeatable** bulk rates on our superb DS-DD 3.5 discs

300 DS-DD 135 TPI	£139.95
400 DS-DD 135 TPI	£179.95
500 DS-DD 135 TPI	£220.00

As always **Lifetime Guaranteed, unquestionable reliability**, each disc is supplied with label

NEW EXCITING PRODUCTS

NEW, NEW, NEW product to enhance your computers productivity and performance

External Disc Drives, slimline, very quiet, very reliable	only £79.95
Replacement Mice, smooth operation, precise movement	only £24.95
2 Piece Universal Printer stands (cuts down on space)	£6.95

Stackable disc boxes 80 capacity and lockable
1 off - £9.95 3 off - £8.95 5 off - £7.95

Can be stacked horizontally or vertically as you please
Tilt 'n' Turn 14" Monitor stand, a superb investment only £14.95
Data Switches 2 way manual switch (state serial or parallel)

only £12.95

M.D. OFFICE SUPPLIES

18 CRESCENT WAY, FARNBOROUGH, KENT BR6 9LS

TELESALES HOTLINES: 0689-61400

All prices include VAT and Delivery UK only. E/OE

Trade Accounts Welcome

Education Orders Welcome



A3000

- a dream come true

Now is the time to lay rumours to rest. The Amiga 3000 has been revealed. Simon Rockman got his hands on one and discovered it has been well worth the wait

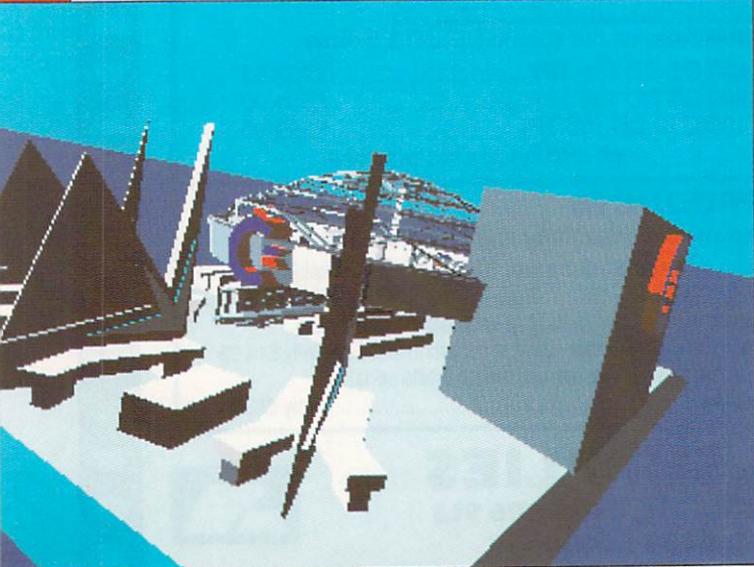
COMMODORE bills the A3000 as an evolution rather than a revolution, and a good thing too. The problem with revolutions is that people get hurt and the last thing a new computer needs is for existing software to curl up and die. This evolution will spread across the species. A lot of the features which debut on the A3000 will migrate to lesser Amigas.

The styling is crisp yet reserved. Commodore want to sell Amiga 3000s to the workstation market, to the kind of people who need high power computing and who have the high power accountants to pay for it all.

Significantly narrower than an A2000 it hides some real Tyson punch in a small frame. The power switch has been moved to the front and the keyboard re-styled. The latter

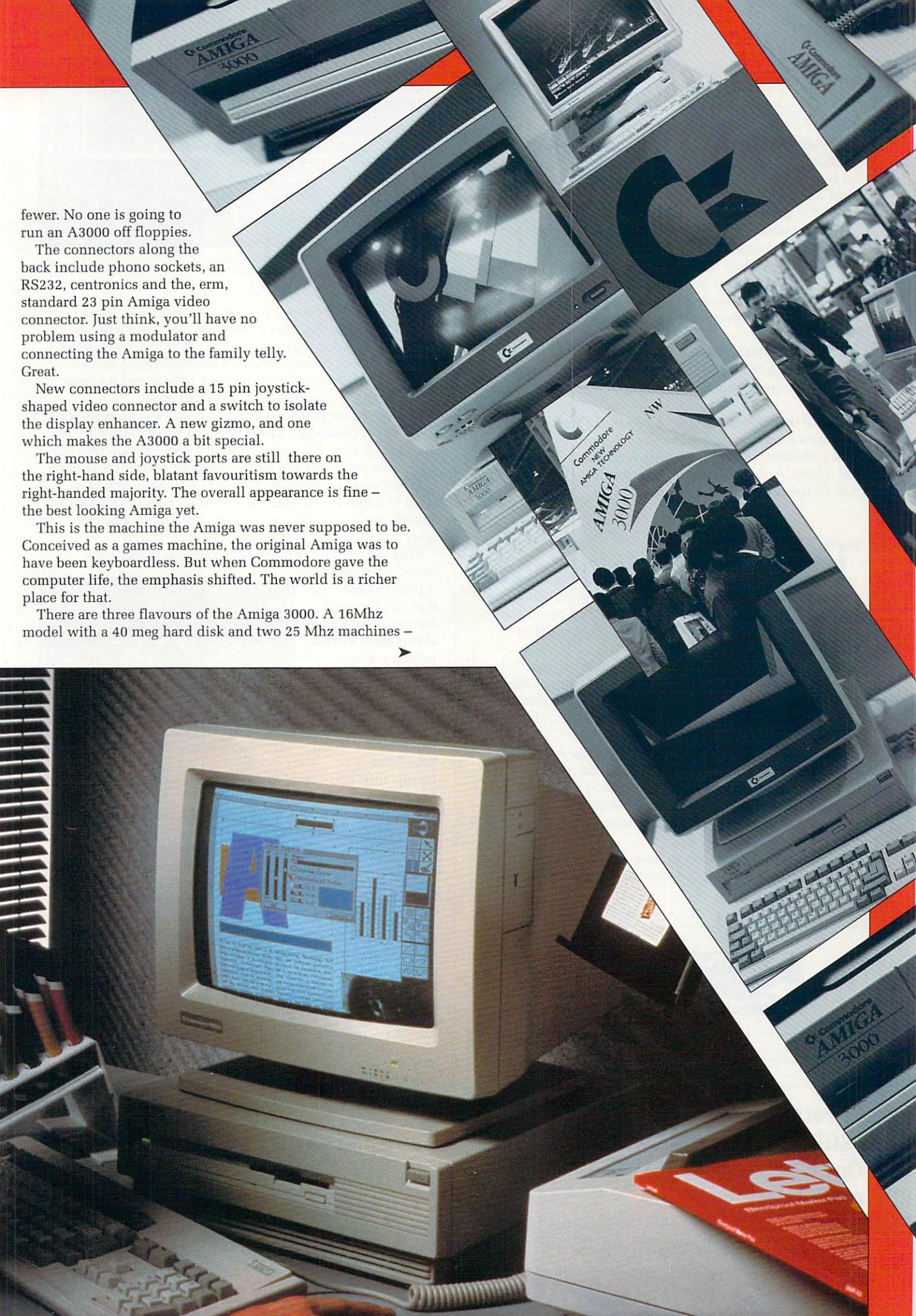
change is an unnecessary embellishment in my opinion, I am something of a fan of the old 2000 keyboard. Still, at least it feels the same. The crude old mouse has been retained.

Around the back things are very different and provide a better clue as to what is going on inside. The blanking plates for the Amiga and PC expansion cards lie sideways. There are only four of them, but since the hard disk controller has been moved to the main PCB you need one



A frame from the huge ray-traced animation played at the recent A3000 launch





fewer. No one is going to run an A3000 off floppies.

The connectors along the back include phono sockets, an RS232, centronics and the, erm, standard 23 pin Amiga video connector. Just think, you'll have no problem using a modulator and connecting the Amiga to the family telly. Great.

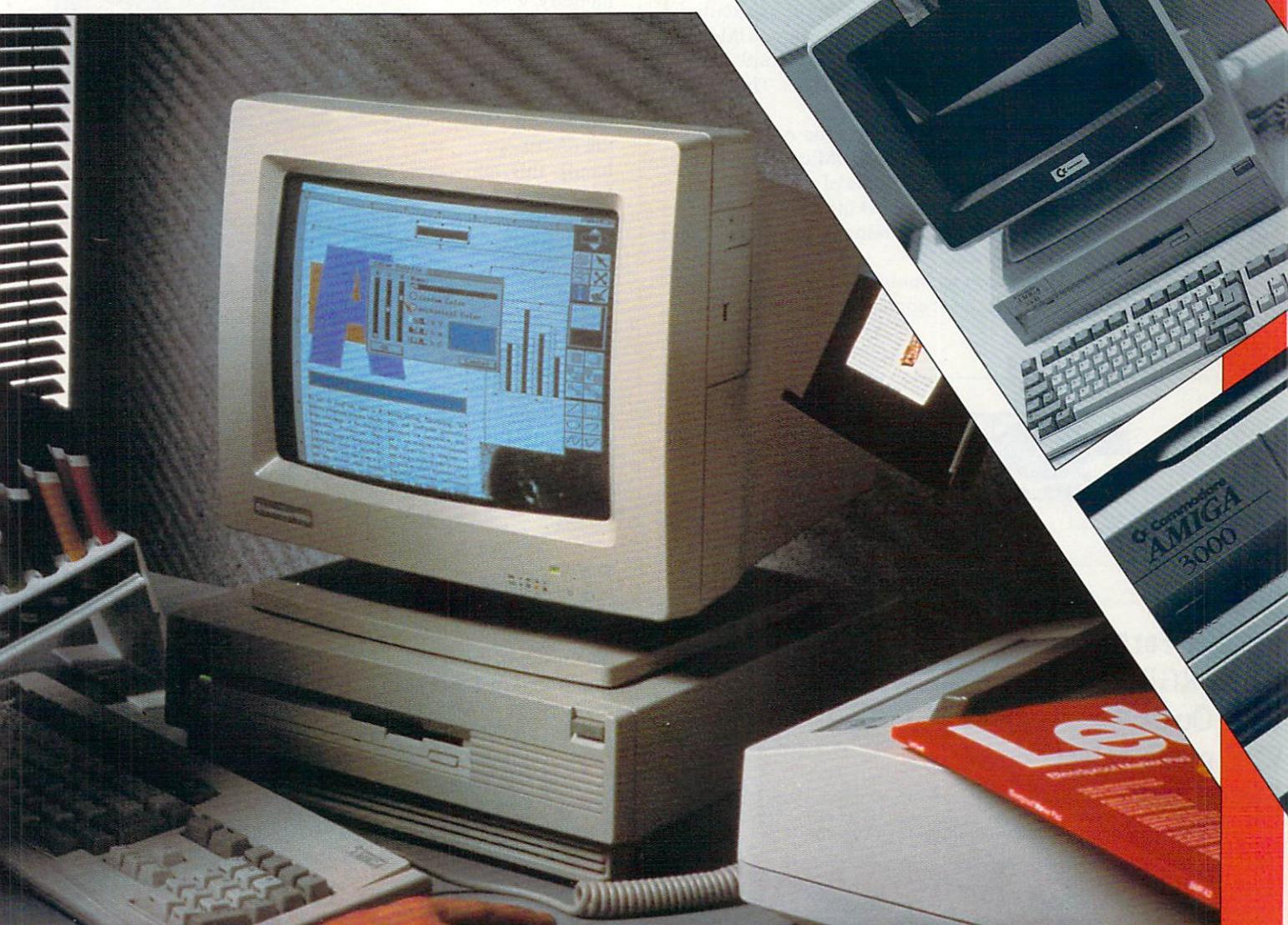
New connectors include a 15 pin joystick-shaped video connector and a switch to isolate the display enhancer. A new gizmo, and one which makes the A3000 a bit special.

The mouse and joystick ports are still there on the right-hand side, blatant favouritism towards the right-handed majority. The overall appearance is fine – the best looking Amiga yet.

This is the machine the Amiga was never supposed to be. Conceived as a games machine, the original Amiga was to have been keyboardless. But when Commodore gave the computer life, the emphasis shifted. The world is a richer place for that.

There are three flavours of the Amiga 3000. A 16Mhz model with a 40 meg hard disk and two 25 Mhz machines –

►



➤

one with a 40 meg drive, the other with a 100 meg drive. All hard disks are fast SCSI units. Thankfully the 3000 has no support for the slow drives with which the A590 and 2091 are supplied. The sound of the drive can be heard above the quiet fan.

The machine boots up into the new 2.0 Workbench by default. It is possible to regress to 1.3 by holding down both mouse buttons while booting. A similar trick is used by the A2620 and A2630 add-in processor cards for the Amiga 2000. With those a menu offered the choice of using the standard 68000 instead of the go-faster 68020 or 68030 processors.

The Amiga 3000 only has a 68030, so an option to turn it off would be a trifle pointless. As a result any program which is foolish enough to break the hardware rules will fail.

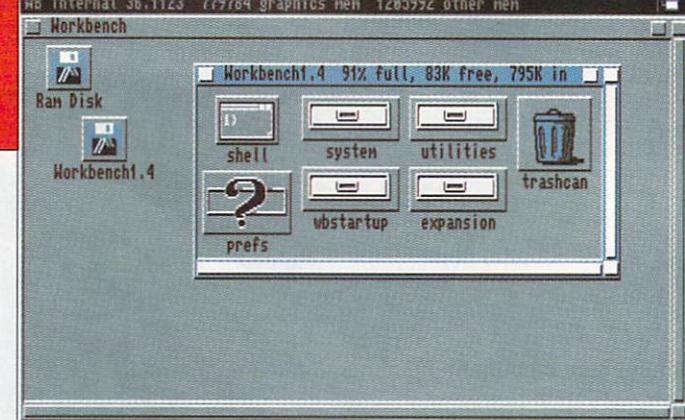
One of these rules is a ban on self-modifying code – programs which change themselves. Unfortunately a lot of disk protection systems rely on this, and so won't work on the A3000. A shame because the programs would probably run. Still, only games are affected.

THE new processor has a lot of advantages. It is faster, the overall performance is around 10 times that of a standard Amiga. Maths is very much faster, particularly on the 25Mhz machines which sport a 68882 co-processor, the newer faster version of the 68881 chip on the 16Mhz machine.

All memory is 32 bit. This helps throughput, particularly disk access. The Amiga 2000 add-in cards cannot DMA into 32 bit ram, while the GVP card reviewed last month has a slower disk interface. There are no bottlenecks. This is a fast beast.

The only thing which doesn't match is the Amiga chip set. Designed in 1984, it still runs at 7.16Mhz. There have been improvements in the design, some of which are seen for the first time on the 3000, but the kind of re-working that will allow them to be clocked faster requires a back-to-the-drawing board approach.

Advances in Amiga chip technology have been filtering through since the first A1000s appeared. The first to affect



This is what Workbench 2.0 will look like, rendered in tasteful grey and blue

A500 and A2000 owners was last year when the 1 meg Agnus was released. This gives those machines a full meg of chip ram, the memory the blitter can access, and so the limiting factor on the quantity of graphics which can be manipulated. When you are running DPaint and it closes Workbench for you, it is freeing up chip ram.

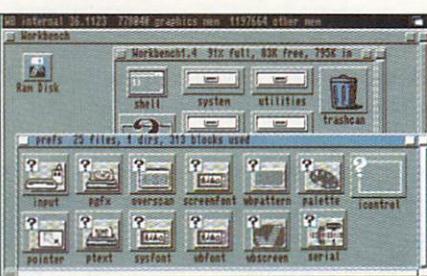
One megabyte is the most A500 and 2000s can cope with due to the PCB design. The A3000 can have 2 meg chip and 16 meg fast ram. It is supplied with 1 meg of each, the idea being that you move the small 1 megabit chips over to chip ram and install 4 megabit chips into fast ram when you want to upgrade. Six meg will not be an unusual size for an A3000, the rich and power hungry will opt for a full 18 meg.

This is a lot but the buzz among serious workstation users – at whom the A3000 is aimed – is that any top limit is restrictive and what is needed is virtual memory, where space on the hard disk can be used as though it was ram. All Motorola 68000 family chips above the 68010 can handle this, and virtual memory was planned for 1.5. Maybe it will appear one day.

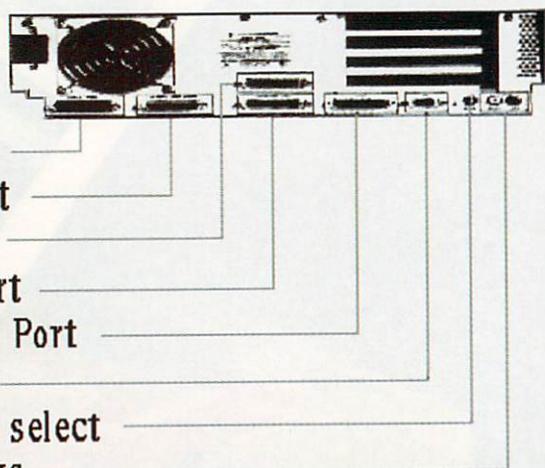
The other chips which are new to the A3000 are versions of Denise, Gary and Buster.

Denise is the most exciting, handling the graphics and introducing new modes. These are additional to the existing modes, so all old software will still work as before unless the program is doing something incredibly naughty.

Software has to be specially written to utilise the new modes. Since Workbench has undergone suitable treatment, all programs which run on the standard Workbench should automatically cope. Anything which assumes Workbench cannot be bigger than 640 x 256 pixels is in for a shock. Programmers, you were warned.



The new expanded preferences section



Rear view of the A3000. Note the new video outputs

THE new modes are a 1280 x 256 in four colours from a palette of 256, and a 640 x 480 in four colours from only 64. But, and this is the clever bit, it is non-interlaced. The result is the same as IBM's mode 3 on the 8514/A monitor, if that means anything to you. To do this you need a VGA-type 31Khz monitor. Because the old video modes require a 15Khz monitor, you'll either need a multi-sync – oops, NEC trademark, I mean multi-scan – or two monitors.

A suitable screen – and you might well want one since the chips are retrofittable to A500s – will set you back £350ish, if you shop wisely. There is the added advantage

A collage of Amiga 3000 computer components and a magazine cover. The collage includes a monitor displaying a large 'C', a keyboard, a system unit, and a magazine cover for 'Commodore AMIGA 3000'.

that the chip can be switched between NTSC and PAL modes. This means naff YASTPs can be made slightly less naff by being expanded to fill the screen.

Video buffs will enjoy the new genlock facilities. The old genlock would only work with one colour – 2.0 and the Enhanced Chip Set (ECS) conspire to allow any colour or combination of colours to be genlocked. The border can be switched to opaque regardless of its logical colour.

If you are a programmer and are getting really excited about all these sexy new features, the sort of person who jumps up and down when they hear that the hardware collision detect for sprites now works, brace yourself: There is a downside. Anyone who has broken rules about tagging on to copper lists – the rule is: don't – will get a mess on the screen.

Since the A3000 can have twice as much chip ram as the machines us mortals use, the chip numbers vary. If you want to be flash and upgrade your machine you'll need to order an Agnus 8372-R3 and a Denise 8373-R2a. But don't expect your dealer to get them for a very long while.

Buster is a chip you will find in a few existing Amigas. His job is to look after the data bus, managing signals. This is much more important on the A3000 where datum is whizzing around very much faster.

The new and fatter Agnus is freely available, albeit at a price – around £50. This gives A500 and A2000s more chip ram. New Gary is very little different, fixing a minor bug which caused some fast memory to be treated as slow, but not chip, ram.

WORKBENCH has changed a lot. The original blue, white, orange and black defaults were adopted as a result of a NASA study. Astronauts clearly have different eyes to programmers and so a more sedate black, white, grey and "it's not going to rain today" sky blue has emerged.

These look good, but present two problems. First, most of your existing icons will look dreadful. Second, the grey on blue, and vice versa, are unreadable on each other. If you use a mono monitor, forget it. As ever, the colours can be changed and the number of colours is selectable in binary powers from two to 16.

Instead of the device icons appearing on a workbench screen they now live in a window. I can't really grasp why, and this is the only change I don't like. All windows can have a texture applied to them, the Workbench one can be independent of the proper windows so that windows show up very clearly. This has to be a repeating pattern and stops short of a whole picture like the PD utility Dropcloth.

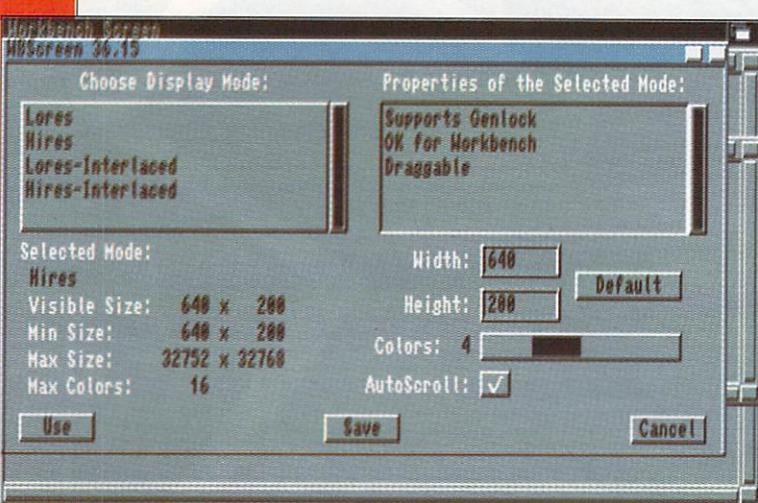
A constant problem for new users has been understanding the CLI. You either had a nice simple graphical interface or were dropped into the deep end with #? syntax. Workbench 2.0 offers a half-way house, the ability to type in one line of CLI-type stuff directly.

Workbench errors are easier to understand. Instead of having to look up mystic numbers to find that 103 means there is not enough ram or 205 means there is no program for the icon, there is now some text telling you what you have done wrong.

Even with a meg of chip ram – 2 meg if you have upgraded the A3000 – you might end up with the dreaded 103. Assuming you have a CLI open, you can shut Workbench and free up some ram. After all, LoadWB is just a program and there is no reason why you shouldn't quit it, unless of course a program you are running needs Workbench.

Many of the new features relieve frustration in using the Amiga. One of these is the handling of new drawers. In the past you had to keep a drawer empty, duplicate and rename it to create a new one. Instant drawers are now possible with the new drawer option. It is very much faster and neater.

Another enhancement is the ability to open a parent drawer from the bottom up. You don't have to shuffle windows, find the device and open the main drawer. But



Choosing the screen size from Preferences



the feature I most like is Select All.

You know how it is. You have just finished a major session with DPaint and have loads of hiddledy-piggledy icons. You select clean-up and start shift-clicking on them so that you can do a snapshot and keep the system neat. But in a fit of over-clicking you end up running DPaint and have to start again.

No worries. Select All will save the trouble of shift clicking. A neat workbench is now no hassle. A touch of Mac magic – I didn't say that, honest Mr Scully – gives the option to draw a box around icons and select all those inside.

Atari lovers will appreciate the View By Text option. This replaces your lovely, hand crafted icons with a list of files. OK they are in nice Amiga fonts, but what is the point? Needless to say, I hate it. If you want to view files without icons there is a special mode which attaches magic icons to all the files and directories. You can then move them around and switch off.

INCREASED font control means that you are quite likely to have a different font below the icons. This may look good, and Workbench clean-up now takes the text into account, but the font won't change until you re-open the window. For this reason there is a ResetWB option which

closes and re-opens all windows. This is needed if you change modes.

One of the magic spells all Amiga owners curse at is the S:startup- sequence. You know how it is never quite right but you can't be bothered to load Ed and fix it? Well, worry no more because there is a special drawer which replaces startup-sequence. Called the Startup drawer, all the programs inside are run on booting. These can either be set to run one after another or simultaneously. Easier and less hassle, I'm sure you will agree.

ONE of the contributing factors to the new look is a reworking of Preferences. This program has always suffered from growing bit by bit. Having to select two printer sub-menus for each new printer always struck me as being a bit cack-handed.

Preferences has been expanded into a number of programs to control command key definitions, the keyboard option, no more fiddling with CLI to get a £ sign.

One program controls the palette, but this segmentation means that any application can update the preferences file, so if a PD palette requester you prefer pops up on a cover disk, you can replace just that bit of Preferences.

The same holds for all the selections. Parallel and serial port configuration programs will need updating if you buy a board to add extra ports.

As before you can edit the pointer. Mine has a drop shadow. And as I hinted before you can change the font. There are three types – text which appears in CLI, icon names and window names. For some applications there are limits on size, and they have to be proportional. Others can be totally wild. How about a hi-res Gothic?

Such flexibility is bound to cause problems. Lots of programs assume size 9 fonts, and some even rely on Topaz. With more users customising the screen, developers are going to have to be even more cautious.

Not everyone will like the new look. It takes a bit of getting used to but with a good monitor – no, put the family telly back in the front room, it would look silly on an A3000 – Workbench 2.0 is much more restful. And it is easier to use, with stacks of keyboard equivalents.

Whenever two or three overweight, sandal-shod, developers gather, the talk turns to ARexx. There is a theory that programmers promote the image of Unix as being difficult just to elevate their status. Such

Looking Forward

COMMODORE will have Unix, the operating system which will dominate 1991 as the corporate world discovers it really does need networking and multi-tasking. Amiga will be ready with Unix System V version 4.

The software isn't finished yet because AT&T, which supplies Unix, hasn't finished its bits. It will be expensive but offer a lot of power and, hopefully, open up great new markets to the Amiga.

Further off is the next generation of Amigas. They may

not even be called Amigas, and they certainly won't appear for two or three years.

I'd speculate that they will be based on the Motorola 88000, the RISC successor to the 68000, and the machines will have better versions of the Amiga chip set, perhaps offering a level of compatibility. Most of the Amiga system is written in C, but I wouldn't like to have to port it to another processor.

Still, the men from America have worked wonders this far. The Amiga 3000 is enough to be getting on with.

programmers, when confronted with something like an Amiga, seek refuge in ARexx.

We reviewed it yonks ago. Basically ARexx is a programming language for CLI, but it goes beyond a standard batch file by interacting with the programs.

An ARexx program can be written to take whatever your word processor spits out, convert it to Ascii, archive it, log on to Cix, upload the file, send a message to someone, download any unread mail and log off, while you keep using the word processor.

Of course, the comms program needs to know about ARexx to give it control, and it helps if the word processor does too, but these things will come. ARexx forms the foundation for interconnectivity. In five years' time the rest of the world will catch on – they still think digital watches and multi-tasking are a pretty

neat idea. ARexx used to cost £50, now it is free.

If you haven't bought a hard disk perhaps the single greatest improvement in Workbench 2.0 is Fast File System (FFS) for floppies. With the application of

caution and cunning, this has been possible under 1.3, but with suspect reliability.

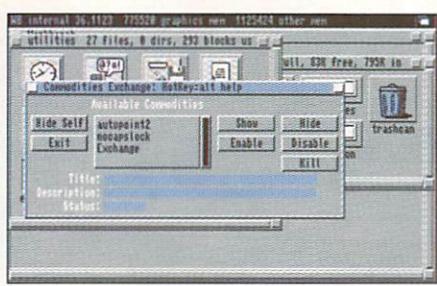
Workbench 2.0 does it properly. This is no great shakes for Amiga 3000 owners, but some other improvements help. While retaining disk compatibility the wizards at Commodore have sped up FFS. They have also added some bits that won't get used unless you have a network, locking records so that they cannot be corrupted when several people are using a file.

Inside, the A3000 is as neat as it is on the screen. The expansion slots have been turned sideways. Beware of cards which run hot, there is a lot less cooling from a horizontal card. All slots are Zorro III. Like previous Zorros, this is 100 pin, but is compatible with Zorro II. Most cards which have been tested worked straight off.

Of the four, one is on its own, the other two line up with non-Zorro slots, so a card can be designed which plugs into both. Predictably two of these allow you to join Amiga and PC slots.

The fourth is more interesting. It is a video slot, like that found the wrong side of the PSU in an A2000. This opens up plenty of scope for special effects video boards which take instructions from the computer and manipulate the image.

The CPU slot won't take A2620 or 2630s. There is no point – it is a new format with 200 pins. Commodore talks of adding a 68040 or RISC processor. My guess is that an 88000 card is being developed as a stepping stone to the next generation of



Some of the many new features provided by Workbench 2.0



Amigas.

One thing which won't get added to the A3000 is a Flicker Fixer. The Microway product has been beaten to the job by the Commodore Display Enhancer. Functionally the same as a Flicker Fixer, this de-interlaces the interlace modes and so, erm, fixes flicker. For those who like itchy eyeballs or who want to use X-Specs type glasses, there is an off switch on the back. Did you play with Meccano when you were a small boy? Good. You'll love the drive bay chassis. This slides in and out making it a breeze to fit a more interesting drive.

All these features will no doubt have your credit card running for cover. Well, it is justified. Put your bank manager on danger money, this is a workstation not a geegaw. The cheap (hah) 16Mhz machine with a 68881 maths co-processor and 40 meg drive – the one that no one will buy – is £2,499. Plus Vat, plus monitor. The middle one, 25Mhz, 68882 and 40 meg costs £2,999 and the only one really worth having – a similar spec as the second but with a 100 meg drive – will see no change from £3,299, plus, plus.

Still, one can but dream.

Win

a Checkmate

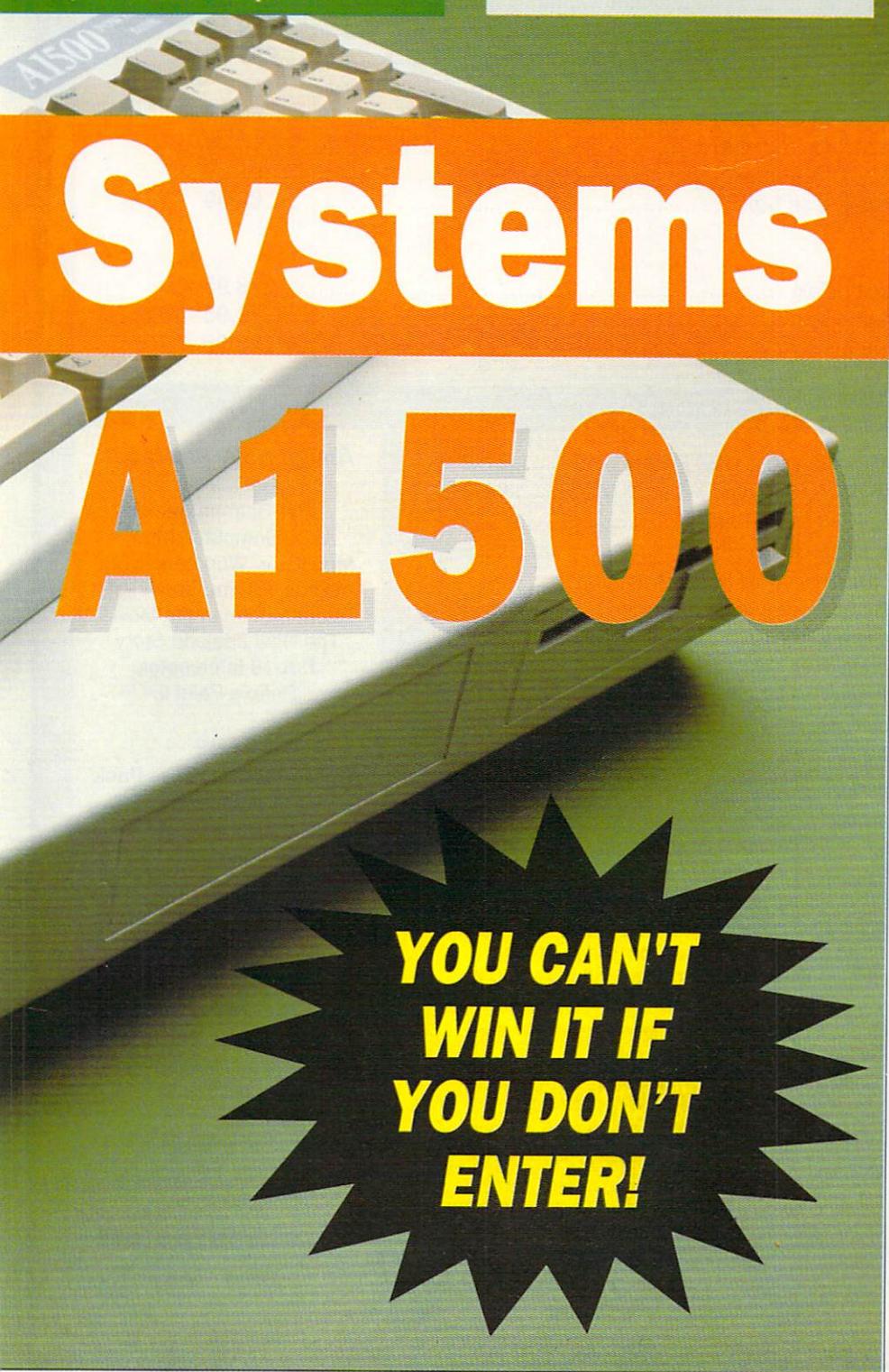
PREVIEWED in our May issue, Checkmate's A1500 expansion system looks like one of the most exciting add-ons ever produced for the A500.

Almost a complete Do-It-Yourself A2000 kit, it re-houses the A500 in two separate metal boxes to hold both the keyboard and main circuit board. The floppy drive is repositioned to face the front, a hard drive can be fitted internally and the whole system can be mounted in a 19in rack.



The added flexibility of the A1500 will allow the A500 owner to upgrade his system piece by piece, eventually taking it beyond an A2000.

Checkmate Systems has agreed to give an A1500 system to a lucky Amiga Computing reader. Of course, by lucky we mean those readers clever enough to enter our special competition, get the answers right and then have their entry picked from the magic binbag by Tym the terrific art person.



Systems

A1500

**YOU CAN'T
WIN IT IF
YOU DON'T
ENTER!**

Rules

1. The first correct entry drawn from the magic binliner on July 18 will win the prize.
2. Photocopied entry forms will be permitted, but multiple entries will be treated with the respect they deserve.
3. Employees of Interactive Publishing and people who don't like Pink Floyd stand a good chance of being disqualified.
4. The editor's decision, however strange, is final.

A golden chance for you to turn your A500 setup into a brand new computer

HOW TO ENTER

BELOW is a list of some of the features boasted by an A1500 system. All you have to do is sort them into what you think is their order of importance and write the relevant letters in the relevant boxes.

For example, if you thought A was the most important feature, you would write A in box number one.

The correct entry will exactly match the order previously selected by the crack *Amiga Computing* team. No tedious little tie-break sentence is required because me know how tricky they are. Of course, if you want to complete the sentence "I am sending AJ lots of money because..." please feel free to do so.

ENTRY FORM

A1500 features

- A - Houses keyboard in a separate box.
- B - Supports a full A2000 video slot.
- C - Repositions the floppy drive.
- D - Designed in the UK.
- E - Can be rack mounted.
- F - Full upgrade path.

I think the A1500 features should be placed in the following order:

1 2 3 4 5 6

<input type="checkbox"/>					
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Name.....

Address.....

.....

Postcode.....

Phone number.....

I have read and understood the rules and agree to abide by them.

Signed.....

Date.....

Send your completed form to:
Checkmate A1500 Competition, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP. The closing date for entries is July 18.

COME AND
SEE US

POST
FREE

THE COMPUTER STORE

DISKS LOW LOW PRICES and HIGH HIGH QUALITY 3.5" DSDD ONLY 59p EACH DSDD 3.5"

Our Disks are Packed in Boxes of 10 and come Complete with Labels. They are of the highest Quality and come with a no quibble lifetime warranty. Order any quantity you want (we don't mind opening a box) for only 59p each.

1 3.5" DSDD with label	59p
10 3.5" DSDD with labels	£5.90
15 3.5" DSDD with labels	£8.85
20 3.5" DSDD with labels	£11.80
50 3.5" DSDD with labels	£29.50
100 3.5" DSDD with labels	£59.00
40 capacity lockable disk box (3.5" disks)	£5.99
80 capacity lockable disk box (3.5" disks)	£6.99
100 capacity lockable disk box (3.5" disks)	£7.99
NEW 20 capacity non lockable disk box	£2.99

SPECIAL OFFER

25 3.5" DSDD + 40 Capacity Box	£18.95
25 3.5" DSDD + 80 Capacity Box	£19.95
25 3.5" DSDD + 100 Capacity Box	£20.95

Amiga A500 Packages

Containing
The Flight of Fantasy Pack, A500 Computer, Mouse Modulator, Workbench 1.3, Extras 1.3 The Very First Tutorial, F29 Retaliator, Rainbow Islands, Escape from the Planet of the Robot Monsters, Deluxe Paint II.

PLUS

The Computer Store Pack

Comprising
Quality 8mm Mouse Pad, Ten Black 3.5" Disks, Mouse Bracket, Disk box to hold 40 Disks

PLUS

The Addons Pack

Consisting of Exolon, Zynaps, Slayer, Battle Tank, Xybernoid II, Megablaster Joystick

FREE COURIER DELIVERY

This package is available ONLY from

THE COMPUTER STORE

ONLY £399

Commodore MPS1230 Printer

£149

Star LC24-10 Printer

£249

Star LC10 Mono Printer

£169

Star LC10 Colour Printer

£229

All printers come with a free lead

Cumana 1 Meg 2nd 3.5" Drive

£84.95

Commodore A1010 3.5" 2nd Drive

£84.95

Ashcom Half Meg + Clock

£69.95

Ashcom Half Meg no Clock

£59.95

Quality Mouse Pad (10" x 8" x .25")

£3.99

Commodore A590 20 Meg Hard Drive

£379.00

A590 + 1 Meg extras Ram fitted

£499.00

A590 + 2 Meg Ram fitted

£599.00

Call in and visit The Computer Store,
produce this advert and we will give you a
3.5" disk. Absolutely FREE!

THE COMPUTER STORE
Unit 82 In shops,
2-8 Greenwood Way,
Chelmsley Wood,
Birmingham, B37 5TL
Tel: 021 770 0468

Please make Cheques/PO's Payable to :
THE COMPUTER STORE

Amiga A500 Packages

Containing
The Batman Pack, A500 Computer, Mouse Modulator, Workbench 1.3, Extras 1.3 The Very First Tutorial, Batman the Movie, The New Zealand Story, F/A-18 Interceptor, Deluxe Paint II.

PLUS

The Computer Store Pack

Comprising
Quality 8mm Mouse Pad, Ten Black 3.5" with labels, Mouse Bracket, Disk box to hold 40 Disks

PLUS

The Addons Pack

Consisting of Exolon, Zynaps, Slayer, Battle Tank, Xybernoid II, Megablaster Joystick

FREE COURIER DELIVERY

This package is available ONLY from

THE COMPUTER STORE

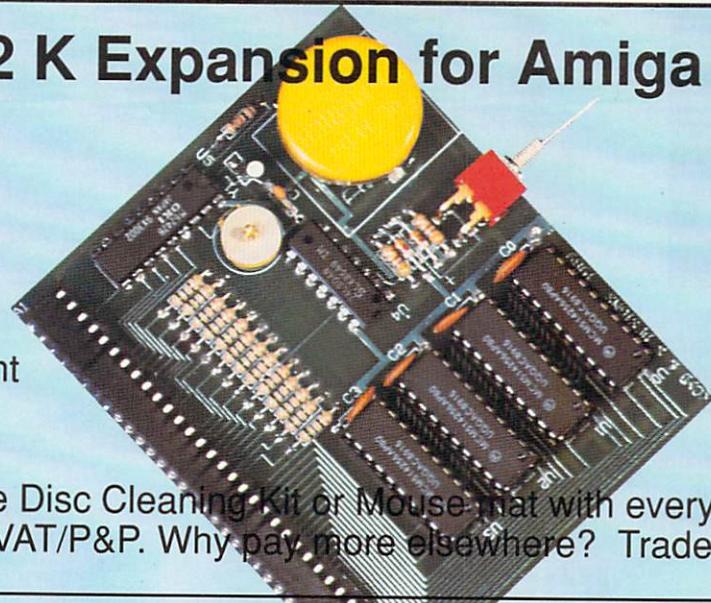
ONLY £399

SEE US AT THE
16 BIT SHOW
STAND No 96

512 K Expansion for Amiga A500

£49.50

- * Real Time Clock
- * A501 Replacement
- * 1 Mbit DRAMS



£46.95

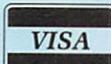
- * Memory Only
- * Disable Switch
- * Made in U.K.

* Free Disc Cleaning Kit or Mouse mat with every board

All Prices include VAT/P&P. Why pay more elsewhere? Trade enquiries welcome

A500 3.5" Disc Drive (NEC) £68 * A500 2 Meg Expansion £280 * A500 Dustcover £3.95 * Amiga SCART Lead £7
A590 Upgrades per 0.5 meg £34.95 * Mouse Mat £3.95 * Kickstart Rom v1.3 £29
Please send a cheque or phone your nearest distributor: 24 Hour order service available. * Same day despatch

DS & K DESIGNS LTD,
Dept AC, Gardner's Row Business Centre,
Gardner's Row, Liverpool L3 6TJ
Tel: 051 298 2098 Fax: 051 298 2074



SPEED COMPUTERS LTD
Dept AC, 41 Weymede, Byfleet,
Weybridge, Surrey, KT14 7DQ
Tel: 09323 52277 Fax: 09323 52772

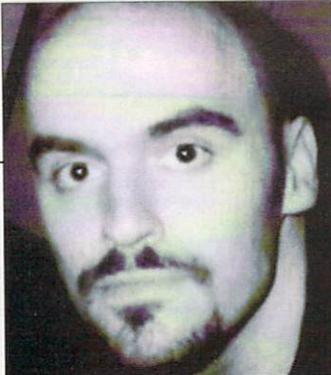


TRADEMASTERS
LIMITED

COMPUTERISED REPROGRAPHICS

GRAPHIC HOUSE, 33 NUTBROOK STREET, LONDON SE15 4JU TEL: 071-639 4394 FAX: 071-639 3831

Trademasters Ltd. are market leaders in computerised reproduction techniques for the print industry and offer an extensive range of services to our clients who include record and video companies. We have vacancies for enthusiastic young people to train in all aspects of our work. If you are interested in a career in high resolution computer reprographics please contact Mr. Matthew Dillon at the above address.



PIERRE JOLIVET is an enigma, a man of many talents. Some might call him weird, others insane. We prefer deep.

As you've guessed from his name, Pierre is French, although at the moment he is living in Dublin where



Espace

Portfolio

he's working as an adviser in computer graphics alongside computer technology companies. Before that he created the music for a French cartoon, *L'Intouchable*, which was presented at the Cannes festival this year.

Pierre's second love is music. The music for the cartoon was composed using his Amiga 1000, which he's had since 1987, and Music-X. Indeed Pierre and his Amiga have played a number of live concerts around the world and have made four albums, including one called *A Porky Prime Cut* released in this country on BNIA Records in 1988. You might have heard of him. He works under the name of Pacific 231?

Now that we've got your attention and shown you what a talented guy this is, we're sure the images on these pages have taken on another dimension. This is modern art. It's not everyone's cup of turpentine, an acquired taste you might say, but it's certainly highly original.

Pierre, who owns and experiments with all the top Amiga graphics packages, has now progressed to DeLuxe Video III, putting digitised images created with Vidi-Amiga and Pixmate to music in short animations.

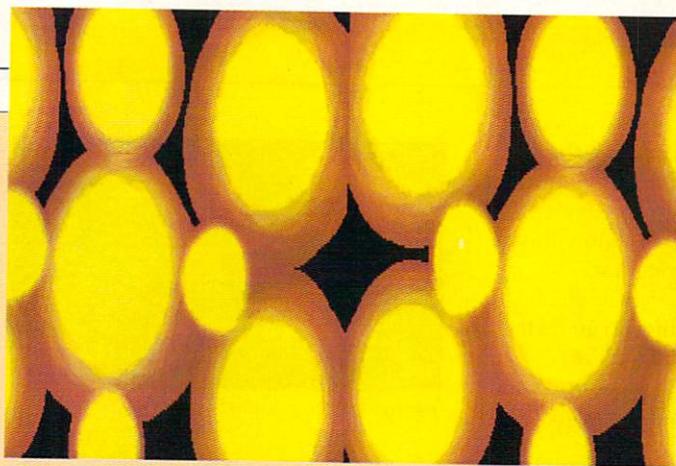
More power to your palette, Pierre. Keep the discs coming.

COMPANIES or individuals wishing to commission any of our Portfolio artists should in the first instance contact the Amiga Computing editorial offices. Tel 0625 878888, Fax 0625 879966.

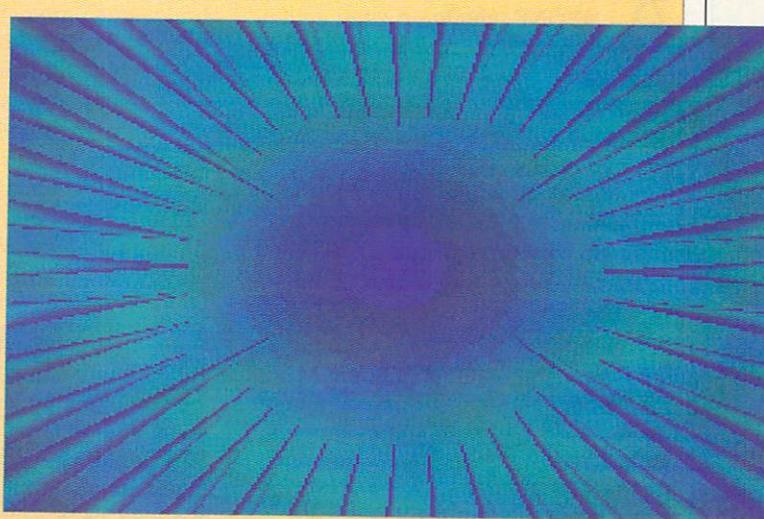
Contributions, on disc please, to: Portfolio, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.



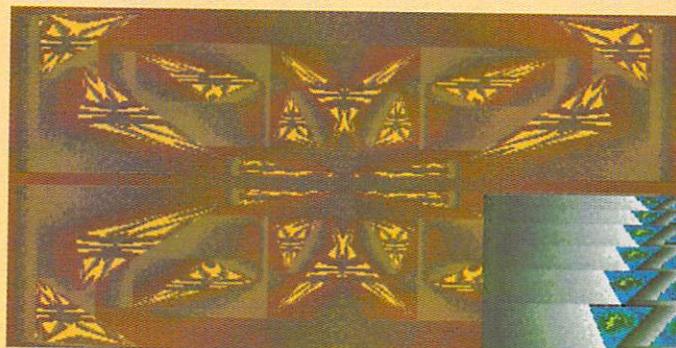
Scarlet Women



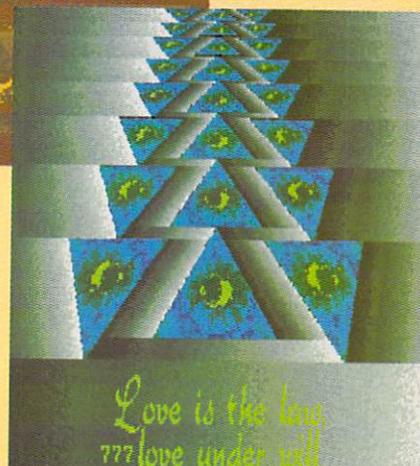
Molecule



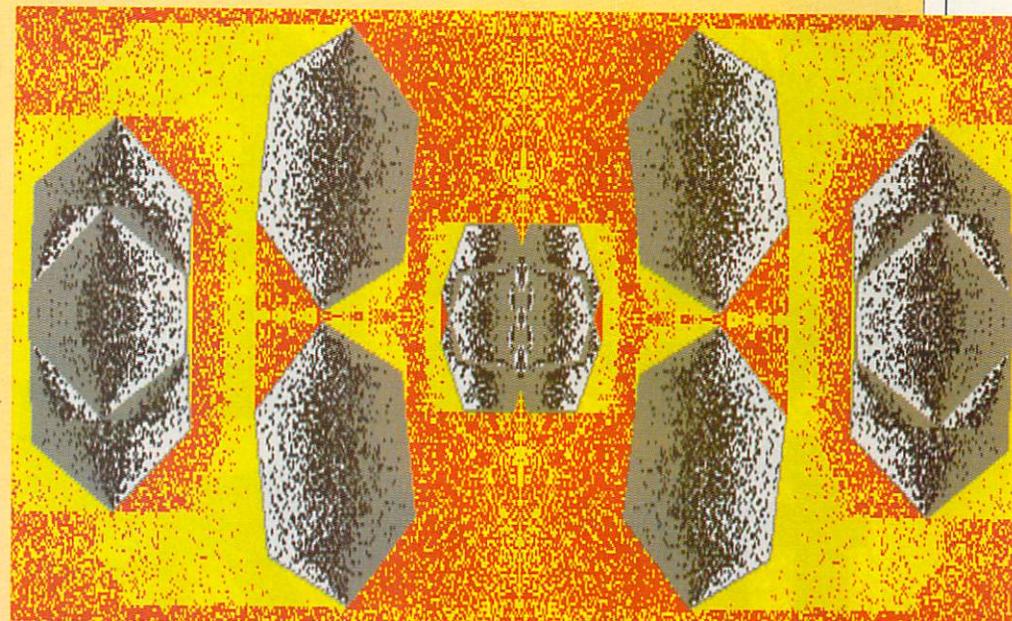
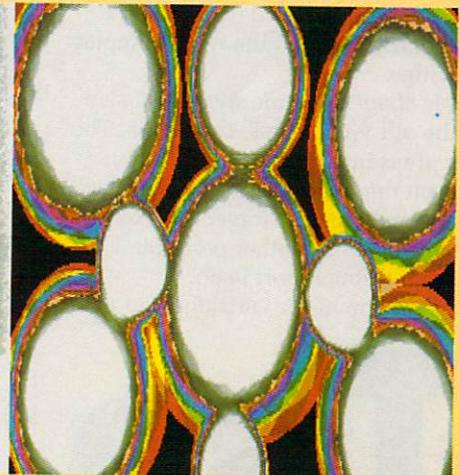
Fiat



Scarification



Oudjat



Stonehenge

ANYONE who has owned an 8 bit machine can't have failed to have noticed the varied selection of freezer cartridges for them, ones like the Freeze Frame, Multiface and Expert Cartridge.

As well as allowing you to transfer 8 bit tape games to disk, the better ones also contain a host of useful utilities for programmers and those interested in having a look inside programs and ripping out the graphics.

Now the first two of these cartridges are available for the Amiga – the Amiga Action Replay from Datel Electronics and the Nordic Power from Data & Electronics Venlo B.V. (Holland).

After signing and returning a form to state you will not use the Action Replay for illegal activity, you receive a box containing a small manual, a disk of utilities and the Action Replay cartridge.

It is about the same shape and size as the old Vic 20 game cartridges. The box plugs into the A500 expansion port on the left of the machine. It has no through port, so forget it if you've got an A590 or another peripheral with no through port itself.

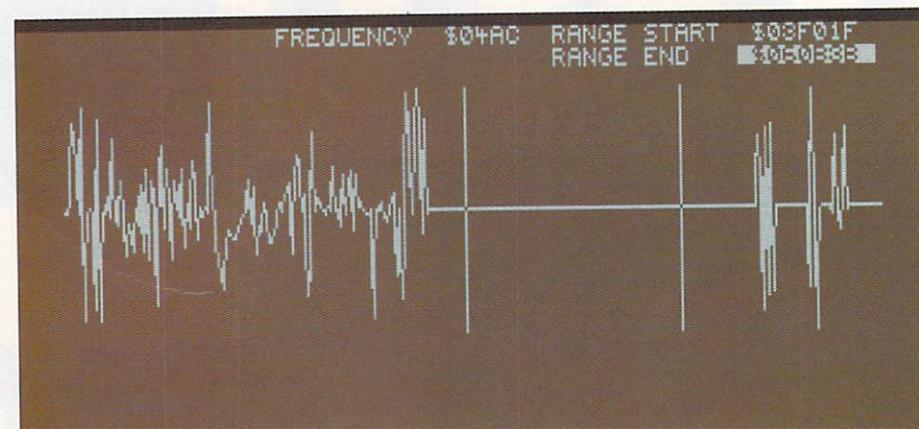
On the top of the cartridge you will

find a small green power LED, the magical freeze button that starts the cartridge going and a slo-mo device – a little knob you can use to slow down the Amiga, a sort of processor decelerator.

I generally prefer things to go faster rather than slower, but if you're having problems with a game you can slow it down with this knob to just the

```
ACTION REPLAY - AMIGA SYSTEM  
(C) 1989 BY OLAF BOEHM & ULRICH LANGER  
----  
JH  
RBBBC94 2222222200000000  
RBBBC95 2211113200000000  
RBBBC96 2211112200000000  
RBBBC97 2211112200000000  
RBBBC98 2211231320000000  
RBBBC99 2211231320000000  
RBBBCA0 000000002111200000  
RBBBCA1 000000002111320000  
RBBBCA2 000000002111320000  
RBBBCA3 000000002111320000  
RBBBCA4 000000002111320000  
RBBBCA5 000000002111320000  
RBBBCA6 000000002111320000  
RBBBCA7 000000002111320000  
RBBBCA8 000000002111320000  
RBBBCA9 000000002111320000  
RBBBCA0 000000002111320000  
RBBBCA1 000000002111320000
```

Recognise the pointer?



It might not look like it, but this is Green snoring

speed you require.

Once the cartridge is plugged in and you turn on your Amiga, you are greeted with an Amiga Action Replay screen which flashes up before the Workbench disk hand pops up.

So you boot up your Amiga with a game and press the button. You are immediately confronted with a blue

screen with the Datel copyright message at the top. The screen is lo-res 40 column, probably due to memory restrictions rather than a desire to deeply annoy Amiga owners with monitors.

At this point you can start fiddling. While doing so you will soon find out that pressing Z gives a Y, and pressing Y gives a Z. This is because the cartridge uses a German keymap. You can switch it to a USA keymap by pressing F9.

There is no UK keymap, so if you have a UK keyboard you will find some of the symbols above the number keys messed up.

Not that they work properly with a US keyboard either. Pressing Shift-2 gives a funny squiggle character. If you use said funny squiggle character in a filename and then try and look at the file later with the utility disk, you find that it is a y with an umlaut (two dots) above it.

The strange thing is that no language in the world uses a y with an

The big freeze

Jolyon Ralph casts an expert's eye on two magic boxes that Amiga hackers have been crying out for

umlaut. Legend has it that this character was invented by IBM and every computer manufacturer since then has blindly copied it, never thinking to check up if the character is actually used or not.

You can format a disk to the special FDOS format, which is basically no format at all. It takes about two or three seconds. Once you have done this you can make an entire memory dump of your Amiga to a disk file.

This not only saves an entire image of memory to disk, but also the current state of all the Amiga's hardware, including the hardware registers and the 68000 registers. It even remembers the position of the disk head in the drive and moves it back to the correct place when loading in memory dumps.

Such dumps are compressed before saving, which can take a couple of minutes, but results in three or four memory dumps fitting to a disk on average.

The disks the Action Replay creates can be made into bootable Amiga ones with a program on the utility disk.

Booting such a disk gives you a menu to choose which memory dump to load and run.

THIS little cartridge does a lot more besides saving out memory. Hardware-hitting programmers will love it for it contains a monitor and disassembler for looking at the programs in memory. You can view normally write-only hardware registers, you can set breakpoints and execute code until the processor reaches the point you set.

You can block move memory around your machine; it even has a copperlist assembler and disassembler to examine and fiddle with the workings of the current copperlist.

You can rip graphics out of almost any game or demo at any time - you can even rip out the screen the Amiga puts up asking for a Workbench disk to be loaded.

However, a lot of game screens are built up of various layers stacked vertically, and each has to be saved individually because each can be a

different resolution or use different colours. Once saved to disk using the cartridge, these files can be converted into standard Amiga IFF files with the supplied conversion utility.

Action Replay has a trainer mode to find pokes automatically for infinite lives on your favourite games. It works by looking for the initial number of lives in the game, then you play, lose a life, press the button, and the Action Replay looks for any memory location that has decreased to the right value from the last check.

It often takes several passes to track down the life counter, and some games cannot be trained this way.

Once you find the life counter for your game, you can either alter it and give yourself 255 lives or use the built-in option to find the SUB or SUBQ instruction that decrements the counter and replace it with a harmless TST instruction. This will prevent the counter from ever reaching zero.

Pressing Help gives a list of the commands. This revealed some not in the manual, so I looked at the disk for



If you should go skating on the thin ice of piracy...

Danger!

Heavy technical info

NEITHER of these cartridges wins any points for OS friendliness. They are designed to do things the Amiga hardware tries not to allow. Problems arise with certain hard drives. The A2000 version of the Nordic Power cartridge plugs in the MMU slot, where faster processor boards usually go, and will not work if a Bridgeboard is in the system.

If you have extra memory, both cartridges assume it will be at \$000000, although Nordic Power also detects memory at \$80000 in new 1 meg chip ram machines.

This is fine if you have a Commodore A501 or a compatible 512k board, but anyone with other memory boards installed in their A500 will find that the cartridge will not detect the extra memory.

Nordic Power refuses to let you even look at memory in other areas, such as the Spirit 1.5 meg memory board in my A500.

Despite the German documentation, I managed to work out that Action Replay has 16k of ram mapped to \$9fc000 and 64k of rom mapped to \$f00000. If Commodore decides to put something more interesting in these areas of memory later on the cartridge will have to go.

Action Replay takes over the 68000's level 7 interrupt and the unauthorised interrupt. What appears to be either a programming bug or a deliberate attempt to confuse those investigating the workings of this cartridge means these vectors are set to Sc5f0000x instead of \$00f0000x. On a 68000 the top byte of a long-word address is ignored, but it is not ignored on a 68020 or above, which will cause a 68020 to jump to the wrong part of memory.

Programmers have been warned many times never to use a non-zero value in this top byte. Because it is hard-coded into the rom of this cartridge it will presumably not work with a 68020/030 board installed, although I have not been able to test it with one.

The Nordic Power cartridge contains 64k of rom and 16k of ram. It has defied all attempts by me to track down where it is or how it works, because it does not seem to use any of the 68000 interrupt lines. This may make it more difficult for games companies to protect against.

➤ further information. I found a file called Read.me, so I did. Unfortunately it was all in German and wasn't much help. And it didn't contain any y's with umlauts either.

On reset the Action Replay checks for anything resembling a virus and, if found, wipes the memory totally clean. This approach is a bit heavy handed, but certainly effective. It can be disabled if you use a recoverable ram disk. The cartridge can also optionally disable fast memory for badly written games or demos.

The hardware assumes you have a standard A500 with or without extra drive and, if you have a ram expansion, it assumes it's an A501. Anything else you may have inside your Amiga could cause problems with the cartridge. It might be worth checking with Datel whether the Action Replay will work with your specific configuration before parting with cash.

Other than that, the hardware is good. A few minor points like the 40 column screen and there being no lower case characters, but it allows you to do things impossible on an Amiga without it. Machine code programmers will love it, being a very powerful debugging tool. But if you only want it to save games, it's an expensive way to improve your high scores.

THE Nordic Power cartridge is slightly smaller than the Action Replay one. The buttons are placed at the rear, making it slightly less easy to use, and the case falls apart quite easily to allow upgrade roms to be fitted at a later date.

This cartridge has a through port

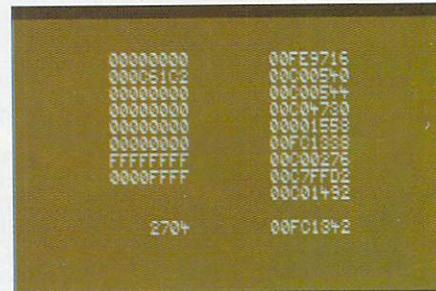
allowing further peripherals to be added. Whether they work or not is another matter. My A590 works with the cartridge plugged in, but refuses to autoboot.

Once the cartridge is fitted and the Amiga is powered up, you have to press the freeze button once. This initialises the cartridge and re-boots your Amiga.

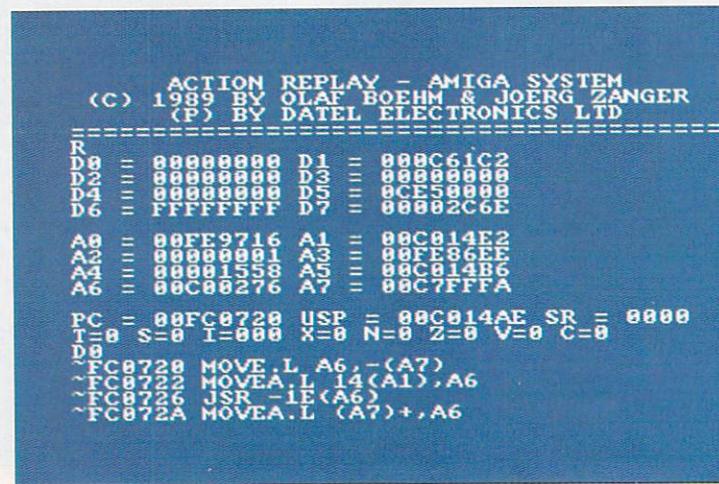
Now you can use your Amiga happily until you reach the point that you wish to employ the cartridge's services. Now you press the button again, which gives you a menu. At the bottom of the menu are the names of the programmers, M. Rom and Z. Nine. Demo fans may recognize these names as Major Rom and Zeronine from Quadlite.

The display is lo-res and uses less than half of the screen, but at least it uses a small 6 point font allowing about 50 characters per line. It looks nicer than the Action Replay screen, but the restricted width makes it no easier to work with. Nordic Power has no lower case character set, either.

Most of the menu functions can be chosen with the function keys, making the cartridge very easy to use. My one complaint about the menus is putting the Exit Back To Program option on F7



CPU registers according to the Nordic unit...



...and according to the Datel box of tricks

3½"

DSDD DISKS 100% CERTIFIED ERROR FREE

PRICE INCLUDES
VAT & LABELS

ALL OUR DISKS
ARE FULLY
GUARANTEED

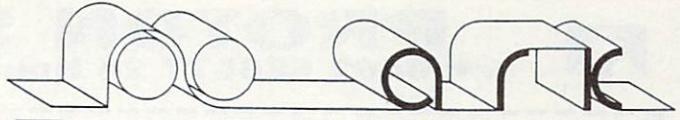
40P

80 Capacity Disk Box £5.50: With Disks £4.50
12 Capacity Boxes 95p each £7.50 for 10
Quality mouse mats £3.95

AMIGA 512K UPGRADE WITH CLOCK £55.00

PLEASE ADD £3.20 P+P PER ORDER
Cheques/PO's to:-

MEDIA DIRECT - DEPT AMC
11 SAGE CLOSE, HANLEY,
STOKE ON TRENT, ST1 3SF
TELESALES HOTLINE:
0782-712819



TEL: 0983 79496

VISA



Access

STOCK CLEARANCE (few only)	
3.5" NEC Drive (s/hand)	49.90
AmigaDisk Toolbox (NEW)	29.90
BBS PC Bulletin Board	79.81
C Light Ray Tracing (s/hand)	29.90
Deluxe Paint 2 (of Bundle)	19.78
Deluxe Paint 3 (split box)	49.91
Fantavision (from bundle)	24.84
Lights Camera Action (NEW)	39.79
Modula 2 Compiler (NEW)	99.82
News Letter fonts (NEW)	19.78
Panmead Accounts (NEW)	29.90
Project D (s/hand)	29.90
Starter Kit (NEW)	49.91
Studio Magic (NEW)	39.79
The Works Platinum (NEW)	99.82
World Atlas (NEW)	34.96
Your Family Tree (s/hand)	29.60
GRAPHICS	
Animagic Editor 1MB	54.97
Comic Setter 1MB	39.79
Deluxe Paint 3 1MB	57.96
Deluxe Video 3 1MB	69.92
Digi Paint 3	49.91
Elan Performer	44.85
Impact Presentations	49.91
Lights, Camera, Action 1MB	47.84
Movie Setter	51.98
Piximate	38.87
Sculpt 3D 1MB	99.82
Sculpt 4D Prof. 1MB	329.82
Sculpt Animate 4D Junior	84.87
Turbo Silver	99.82
Zoetrope 1MB	79.81
HARDWARE	
A 13.5000 Kickstart ROM	29.90
1.8MB MiniMax A500 RAM	199.87
3.5" NEC Drive Switch/Thru	68.77
64MB 400MHz RAM Clock	69.92
A Max Mac Emulator No Roms	109.94
A 4 Flat Bed Scanner	45.97
A590 20MB Hard Disk Drive	379.96
Personal Tax Planner	34.96
A.M.A.S. Sound Sampler	77.74
Small Business Xtra 1MB	89.93
System 3 Integrated	44.85
ACCOUNTS	
Arena Int. Accounts 1MB	119.83
Cashbook Combination	59.80
Desk Top Budget	34.96
Home Accounts	23.92
Personal Accounts Plus	29.90
Personal Tax Planner	34.96
Small Business Xtra 1MB	89.93
System 3 Integrated	44.85
BOOKS	
Please call	
COMMUNICATIONS	
A Talk 3	62.92
K Comm 2	24.84
COMPUTER AIDED DESIGN	
Design 3D 1MB	57.96
Professional Draw 1MB	99.82
X Cad Designer 1MB	79.81
DATABASE MANAGERS	
Mailshot Plus	37.95
Microfile Filer	49.91
Prodota	57.96
Superbase Personal	39.79
Superbase Personal 2 1MB	62.79
Who What Where	29.90
DESKTOP PUBLISHERS	
PageSetter 2 1MB	74.98
Pagestream 1MB	129.95
Professional Page 1.5MB	179.86
EDUCATION	
GCSE Tutors	24.84
My Paint	34.96
EDITORS	
CygnusEd Professional	69.92
PACKAGES	
Apetizer	29.90
Graphics Starter Kit	54.97
Home Office Kit	99.82
Publishers Choice	68.77
Starter Kit	59.80
PROGRAMMING	
Apex C Professional	109.94
Modula 2	119.83
Devpac 2	42.78
GFA Basic Compiler	28.98
GFA Basic Interpreter	39.79
WORD PROCESSORS	
WordPerfect	176.95
Databases	
Acquisition 1.3	169.95
K-Data	35.50
Prodota	56.95
Superbase Personal	42.50
Superbase Personal 2	69.95
Superbase Professional	169.95
SPREADSHEETS	
Advantage	79.95
DGC Calc	28.50
K-Spread 2	42.50
Maxiplan A500	79.95
Maxiplan Plus	112.50
LANGUAGE/COMPILERS/ETC	
AMOS	RING
A-Rexx	36.30
Argasm	49.50
Aztec C Developer	RING
Aztec C Professional	RING
Benchmark Modula 2	137.50
Benchmark Libraries	72.50
Devpac 2	43.50
GFA Basic V3 Compiler	22.95
GFA Basic V3 Interpreter	39.95
Hisoft Basic	56.95
K-Seka Assembler	35.50
Lattice C V5	174.95
PERIPHERALS	
0.5Mb Ram Exp/Clock	£69.99
1Mb Ram Exp/Clock	£194.99
Cumana 1Mb 3.5" Drive	£71.99
Vortex 40MB Hard Drive	£499.99
Hitachi Camera & Lens	£219.99
Digiview 4	£124.99
Vidi Amiga	£97.99
Colourpic	£435.99
Rendale 8802 Genlock	£191.99
Omega Midi Interface	£29.99
Cherry A3 Tablet	£464.99
Linnet Modem	£144.99
STAR PRINTERS	
Star LC10	£169.00
Star LC10 Colour	£215.00
Star LC24-10	£249.00
Please ring for prices/availability on any hardware/software/peripherals not listed. (Full price list on request)	
Please make cheques/postal orders payable to SOFTMACHINE. All items subject to availability. All prices include V.A.T. & Delivery. All prices subject to change without notice. E.O.E.	
SOFTMACHINE	
Dept. AMC 7, 36 Guernsey Road, Sunderland SR4 9RR. Telephone: 091 385 7426	
VISA	

Richard Howe & Angela Hammett

Applied Research Kernel

Corve Farmhouse, Chale Green, Ventnor, PO38 2LA, U.K.

Postage: UK Free, Europe £4, World £10

CHEQUES: London Sterling Payable to A.R.K. please

EXPORT & BFPO: Remove U.K. V.A.T. (=Price/1.15)

VAT: All prices include U.K. V.A.T. at 15%

PHONE: Monday to Saturday 9.30-6-30pm

DESPATCH: Usually within 48 hours

PRICES: Are subject to change

CALLERS: By appointment please

SOFTMACHINE

AMIGA HARDWARE

AMIGA 500	
FLIGHT OF FANTASY	
F29 Retailiator	
Rainbow Islands	
Escape from the Planet of the Robot Monsters	
Deluxe Paint II	
£374.99	
AMIGA 500	
BATMAN PACK	
Batman - The Movie	
New Zealand Story	
Interceptor	
Deluxe Paint II	
£374.99	
AMIGA 500	
CLASS OF THE 90's	
Superbase Personal	
Maxiplan 500	
Publishers Choice	
Dr T's Midi Recording Studio	
Amiga Logo	
BBC Emulator	
Deluxe Paint II	
Midi Interface	
10 Blank Disks	
Disk Wallet	
Mouse Mat	
£374.99	
SOFTMACHINE	
STARTER PACK	
Mouse Mat	
Mouse Bracket	
10TDK MF2DD Disks	
80 Capacity Disk Storage Box	
3.5" Head Cleaner	
A500 Dust Cover	
ONLY £25*	

SOFTWARE

WORD PROCESSING	
Excellence	£136.95
Kind Words 2	£35.50
Pen Pal	£104.95
Protex	£69.95
Pro Write 2.5	£70.50
Scribble Platinum	£41.50
Transcript	£32.50
Word Perfect	£176.95
UTILITIES	
A-Max	£134.95
A-Max with Roms	£249.95
Ami-Alignment System	£33.95
Amikit	£28.65
Ashas Caligrafont	£47.75
Award Maker Plus	£32.50
B.A.D.	£32.50
B.B.C. Emulator	£39.95
Butcher 2	£28.65
CLIMate	£32.50
Cross Dos	£24.95
Disk 2 Disk	£39.95
Dos 2 Dos	£39.95
Diskmaster	£39.95
Enhancer (WB 1.3)	£14.95
Facc II	£24.85
Family Tree	£32.50
Fancy 3D Fonts	£39.95
Gomi V4.0	£28.65
Grabbit	£24.85
HiSoft Extend	£15.75
Interchange	£39.95
Interchange Objects 1	£17.25
I/Change Mod V3D/Finf	£17.25
I/Change Mod V3D/Turbo	£17.25
Kara Fonts	£55.35
K-Gadget	£21.95
K-Rocket	£35.50
Lions Fonts	£47.75
Mac 2 Dos	£69.95
Mailshot Plus	£35.50
Masterpiece Fonts	£137.50
Newsletter Fonts	£24.85
Power Windows V2.5	£55.35
Project D	£32.50
Benchmark Modula 2	£137.50
Benchmark Libraries	£72.50
Devpac 2	£43.50
GFA Basic V3 Compiler	£22.95
GFA Basic V3 Interpreter	£39.95
Hisoft Basic	£56.95
K-Seka Assembler	£35.50
Lattice C V5	£174.95
DESKTOP PUBLISHING	
Home Office Kit	£116.65
PageSetter V2	£78.95
Pagestream (USA)	£127.95
Professional Page	£193.50
PP Compugraphics fonts	£112.50
PP Structured Clip Art	£36.40
PP Templates	£36.40
Publishers Choice	£78.75
DESKTOP PUBLISHING	
PIXmate	£39.95
Professional Draw	£108.75
Pro Video Plus	£193.50
Sculpt 3D XL	£119.95
Sculpt 4D	£367.45
Sculpt 4D Junior	£103.80
Start-up	£20.95
The Director	£47.75
The Director's Toolkit	£28.65
Turbo Silver	£108.75
TV Show V2	£57.50
TV Text Prof.	£104.95
Video Generic Master	£55.35
Video Wipe Master	£55.35
Videoscape 3D	£123.95
X-CAD Designer	£89.75
X-CAD Professional	£352.80
Zeotrope	£86.85
*state Sculpt or Videoscape	
MUSIC	
A Drum	£32.50
Audiomaster 2	£62.95
Bars and Pipes	£184.95
Deluxe Music	£53.15
Dr T's KCS	£154.50
Instant Music	£20.25
Music X	£184.15
Quartet	£37.50
Sonix	£51.55
Synthia	£74.70
Synthia Professional	£229.95
Track 24	£74.95
COMMUNICATIONS	
A Talk III	£70.60
BBS PC	£93.50
K-Comm 2	£35.50
Ruby Comm	£54.65
ACCOUNTS	
Arena Accounts	£140.95
Cashbook Combo	£49.50
Cashbook Controller	£44.95
Desktop Budget	£32.50
Final Accounts	£21.95
Home Accounts	£21.95
Personal Accounts Plus	£24.95
Small Business Accounts	£RING
System 3	£34.95

SOFTMACHINE

Please ring for prices/availability on any hardware/software/peripherals not listed. (Full price list on request)

Please make cheques/postal orders payable to SOFTMACHINE. All items subject to availability.
All prices include V.A.T. & Delivery. All prices subject to change without notice. E.O.E.

SOFTMACHINE

Dept. AMC 7, 36 Guernsey Road, Sunderland SR4 9RR. Telephone: 091 385 7426

VISA

*When purchased with any Amiga computer...Offer limited to 1 starter pack per Amiga purchased
ONLY £25*

AMIGA COMPUTING July 1990 83



PROTON SOFTWARE

Tel: 0462 686977 24 Hour. Fax: 0462 673227



FREE PRICE LIST AVAILABLE	FREE GAMES WITH SELECTED TITLES	£1.00 OFF NEXT PURCHASE SELECTED TITLES	PERSONAL SERVICE MON-SAT 9-6pm	PRODUCTS IN STOCK SENT SAME DAY	CALL FOR SPECIAL OFFERS	CALL NOW 0462 686977
---------------------------	---------------------------------	---	--------------------------------	---------------------------------	-------------------------	----------------------

AMIGA	AMIGA	AMIGA	AMIGA	AMIGA	AMIGA	AMIGA
Space Harrier II.....£16.99	688 Attack Sub.....£16.99	Player Manager.....£16.99	Dragons Flight.....£24.99	Superbase 2.....£24.99	Crackdown.....£16.99	
Space Ace.....£28.99	Flight Sim II.....£28.99	Xenon II.....£16.99	Operation Stealth.....£18.99	Impassable.....£16.99	E-Motion.....£16.99	
Chase HQ.....£17.99	Ultimate Golf.....£17.99	Batman - Movie.....£9.99	World Cup Soccer.....£14.99	Gravity.....£16.99	Baal.....£8.99	
Turbo Outrun.....£16.99	Leisure Suit Larry II.....£26.99	Powerdrift.....£13.99	LHX Attack Chopper.....£34.99	Blue Angels.....£16.99	Menace.....£8.99	
Manchester Utd.....£16.99	Super Cars.....£14.99	Ghostbusters II.....£16.99	Klax.....£14.99	Protector.....£4.99	Tetris.....£8.99	
Falcon.....£16.99	P47.....£16.99	Last Ninja II.....£16.99	Planet of Robot Monsters.....£14.99	Triad 3.....£22.99	Manic Miner.....£9.99	
Battle Squadron.....£16.99	It Came from Desert.....£22.99	New Zealand Story.....£13.99	Passing Shot.....£14.99	Triad 2.....£9.99	Renaissance.....£13.99	
R.A.C. Rally.....£16.99	(1 meg).....£22.99	Pro Tennis Tour.....£16.99	Table Tennis.....£14.99	Sonic Boom.....£16.99	Nuclear War.....£16.99	
Cyberball.....£14.99	Black Tiger.....£17.99	F18 Interceptor.....£13.99	Comba Racer.....£16.99	3rd Courier.....£16.99	Baal.....£8.99	
Carrier Command.....£16.99	Dungeon Master (1 meg).....£22.99	Blood Money.....£16.99	Midi Interface.....£22.99	Magnum 4.....£22.99	Ultimate Golf.....£16.99	
Damocles.....£16.99	Battle Chess.....£16.99	Space Quest III.....£29.99	Italia 90.....£4.99	Persian Golf.....£13.99	Theme Park Mystery.....£22.99	
Dragons Breath.....£23.99	Conqueror.....£17.99	F16 Combat Pilot.....£16.99	Hunter Killer.....£4.99	Shadow of the Beast.....£16.99	Dyler 7.....£13.99	
Infestation.....£16.99	Warhead.....£17.99	Supreme Challenge.....£23.99	Battle Ships.....£9.99	Cyber World.....£13.99	Bad Blood.....£22.99	
Midwinter.....£22.99	Hound of Shadow.....£17.99	Extra Time.....£7.99	Treasure Island Dizzy.....£4.99	Premier Collection III.....£22.99	Day of the Viper.....£16.99	
TV Sports Basketball.....£22.99	North & South.....£16.99	Pirates.....£16.99	Kindwords 2.....£42.99	All-Time Favourites.....£22.99	Nevermind.....£13.99	
Kick Off.....£13.99	Bloodwych.....£17.99	Chaos Strikes Back.....£16.99	Music X.....£149.99	Dragons Lair (1 meg).....£28.99	Edition 1.....£16.99	
TV Sports Football.....£22.99	Space Rogue.....£17.99	Giants.....£23.99	Photon Paint II.....£22.99	Sonix Amazon.....£59.99	Rings of Medusa.....£22.99	
F29.....£16.99	Test Drive II.....£17.99	Xenomorph.....£16.99	Deluxe Paint II.....£59.99	Bomber Amiga.....£22.99	Soccer Manager Plus.....£16.99	
Pacland & Pacmania.....£19.99	Full Metal Planet.....£16.99	Winners.....£23.99	Triad III.....£19.99	World Cup Soccer.....£16.99	The Golden Fleece.....£16.99	
Conflict Europe.....£8.99	Stryx.....£17.99	Ninja Spirits.....£16.99	F19 Stealth Fighter.....£24.99	Dungeone Quest.....£16.99	Dungeone Quest.....£16.99	
Time & Magik.....£8.99	Knights of the Christalion.....£22.99	Hammerfest.....£16.99	Cheetah 125 + Joystick.....£8.99	Time Soldier.....£16.99	Time Soldier.....£16.99	
Football Manager II.....£13.99	Gunship.....£16.99	Chronoquest II.....£22.99	Navigator + Auto.....£8.99	Football Manager World.....£16.99	Power Boat.....£16.99	
Double Dragon II.....£16.99	Untouchables.....£17.99	Gravity.....£16.99	Fast Fax.....£59.00	Cup Edition.....£13.99	Emlyn Hughes Soccer.....£15.99	
Populus.....£16.99	Pinball Magic.....£16.99	Sherman Tank M4.....£16.99	Action Service.....£4.99	International Championship.....£15.99	Gaza's Super Soccer.....£15.99	
Lost Patrol.....£16.99	Budokan.....£16.99	Ivanhoe.....£17.99	Audio Master 2.....£49.99	Wrestling.....£16.99	Microprose Soccer.....£16.99	
Rainbow Islands.....£16.99	Grand National.....£13.99	Risk.....£17.99	Warhead.....£16.99	Debut.....£16.99	Football Manager II.....£15.99	
Wayne Gretzky.....£17.99	Hot Rod.....£16.99	Carthage.....£16.99				
Pipemania.....£16.99	Iron Lord.....£16.99	Cloud Kingdoms.....£16.99				
Sim City.....£19.99	Tower of Babel.....£23.99	Barbarian II.....£17.99				
Fiendish Freddy.....£16.99	Footballer of the Year.....£13.99	Elite.....£16.99				
Escape from Singes Castle.....£28.99	Lost Dutchmans Mine.....£16.99	Zombie.....£17.99				
Bomber.....£22.99	Castle Master.....£16.99	Populus Promised Land.....£8.99				
X Out.....£16.99	Beyond Dark Castle.....£23.99	Bad Blood.....£24.99				
Operation Thunderbolt.....£16.99	Bloodwynch Data Disc.....£11.99	Treasure Trap.....£17.99				
Magnum 4.....£24.99	Precious Metal.....£16.99	Escape From Hell.....£17.99				
Ghouls & Ghosts.....£16.99	Premier Collection.....£12.99	Liverpool.....£17.99				
Capa.....£16.99	Premier Collection II.....£16.99	Gunboat.....£17.99				
Ninja Warriors.....£16.99	Baal.....£8.99	Ultima V.....£26.99				
Future Wars.....£16.99	Menace.....£8.99	Astro Marine Corps.....£17.99				
Deluxe Video III.....£78.99	Ballistix.....£8.99	Colorado.....£17.99				
	Speedball.....£9.99	Ghosts n Goblins.....£16.99				

If the product you're looking for is not here give us a call. 1000's more titles in stock. Orders under £10.00, please add 50p per item p&p. Products in stock usually sent same day.

PRODUCT COST FORMAT

PO/cheques payable to:
PROTON SOFTWARE. New releases sent on day of release.

NAME

ADDRESS

TOTAL

Send to: PROTON SOFTWARE (AMF), ENTERPRISE HOUSE, BLACKHORSE ROAD, LETCHWORTH, HERTS SG6 1HD. Tel: (0462) 686977. Fax: (0462) 673227

AUTHORISED DEALER FOR * AMIGA * STAR *	
AMIGA (UK MODELS ONLY)	
B2000/U with 40Mb Fast Drive A500	
trade-in offer (ends 6/90).....1099.00	
B2000 with 1Mb Chip RAM.....949.00	
B2000 + Stereo Colour Monitor.....1195.00	
B2000 XTHD 20Mb inc XT Bridgeboard & Stereo Mon.....1449.00	
B2000 + 30/48Mb Autoboot + Stereo Mon.....1635/1665	
Amiga 500 FLIGHT OF FANTASY PACK (NEW).....359.00	
Amiga 500 CLASS OF THE 90's Education Pack.....529.00	
PRINTERS	
Citizen 120D (NEW) Parallel.....129.95	
Star LC-10 Parallel.....159.00	
Star LC-10 Colour Parallel.....199.95	
Star LC24-10 24 pin Multi-font 170/57 cps.....239.00	
All Oki 20 consumables normally in stock.....PHONE	
MONITORS	
Philips 8833 Stereo Colour Monitor.....249.00	
Commodore 1084S Stereo Col Mon for C64/128/Amiga/PC.....239.00	
DISK DRIVES	
A2000 Autoboot 30Mb Drive.....439.00	
A2000 Autoboot 48Mb Drive.....469.00	
A2000 Autoboot 80Mb Drive.....619.00	
Amiga A590 Autoboot 20Mb Drive (RAM expandable).....369.00	
20Mb 3.5" Disk Drive for PC/A2000 Inc Controller.....150.00	
Internal 3.5" Disk Drive for A2000.....79.95	
External 3.5" Drive for Amiga - Disable Sw & Thro' Port.....69.95	
ALL PRICES INCLUDE 15% VAT	
CARRIAGE £5 (EXPRESS £10) SOFTWARE £2	
Price subject to change without notice. E. & O. E.	

Delta Pi Software Ltd

8 Ruswarp Lane, WHITBY, N. Yorks YO21 1ND
TEL/FAX: 0947 600065 (9am-7pm)



TELETEXT A world of information at your fingertips



Now you can keep it informed with the latest weather, financial news, sports results, current affairs and much more from Ceefax or Oracle. But unlike a Teletext TV all this valuable information isn't trapped behind glass. Now you can...

Save to disc. Pages may be saved in Compact (over 800 pages per disc) or IFF format.

Print. You can print as just text (for a fast result) or as a screen dump.

Review. Instant access to the last 16 pages which have been received.

Speak. Thanks to the Amiga's speech capability, it will even read the news to you.

Multiple display. It can display and update two pages on screen simultaneously.

FastText. True FastText gets pages in advance and reduces the waiting time.

Tuning. Just connect an aerial - it tunes itself in! Although the prime function is to receive Teletext, it also will convert a 1081 or 1084 monitor to a colour TV.

Programmable. The system can be programmed to get a series of pages and then save or print them. Your own programs can access the data on Teletext.

Only a Microtext adaptor can provide all these facilities, it's easy to use and connects to the parallel port, a printer can be reconnected to the adaptor. Everything is supplied, all you need is your Amiga and a normal TV aerial.

At just £124.80 + VAT inc p/p for an advanced Teletext TV its excellent value for money. Make sure you're always up to date, and get yours now from:-

MICROTEXT

Dept AG, 7 Birdlip Close, Horndean, Hants PO8 9PW
Tel: (0705) 595694 Fax: (0705) 593988

	Action Replay	Nordic Power
Works on A500	★	★
Works on A1000	★	★
Works on B2000		soon
Through port		★
Slow motion device	★	★
Upgradable roms		★
Cartridge needed to re-load files		★
AmigaDos format disks		★
Full size screen	★	
Disk copy		★
Memory virus killer	★	
Cheat finder	★	★
Graphics ripper	★	★
Print screens		<small>9 pin epson b&w only</small>
Sound sample ripper		★
Assembler	★	★
Breakpoints	★	
Copper assembler and disassembler	★	
Disassembler	★	★
Jump to address	★	
Block copy memory	★	
Load block to address	★	★
Save memory block	★	★
Sprite editor	★	
Edit memory	★	★
Show memory as Ascii	★	★
Block fill	★	
Show/Edit CPU registers	★	★
Hardware register edit		★
CIA (8520) edit	★	★
Calculation evaluator	★	

The Pros and Cons of hacking

Bad news for pirates

ALTHOUGH it would seem that these cartridges provide a very easy way to pirate games, it doesn't quite work like that. Firstly, most games load levels from disk and you will still need the original disk to play the game from a cartridge-saved copy.

Secondly, although the files that the Action Replay creates do not need the cartridge plugged in to run – because it saves all of memory out and restores all of memory in, including areas used by the system – loading it on a



rather than a more logical key, like Escape or F10.

Saving memory is simple. You have the option of crunching the file or saving the whole of ram as one 512k long disk file, or two 512k files on two disks for 1 meg machines. The problem with saving crunched memory is that it will save *all* of memory, so if you only want to save 512k, you have to physically remove your extra ram.

The manual suggests cutting a track on your A501 and soldering a switch across it to disable the expansion, but this is hardly an acceptable solution for the average Amiga owner.

The Nordic Power graphics ripper is much more complex than the Action Replay one, and therefore is a lot more confusing for beginners.

It allows you to fiddle with such things as the individual bitplane pointers, the bitplane modulus and the ddfstart and dffstop values. It will usually guess the values you need, but I found it didn't work as well as Action Replay. One advantage the Nordic Power has is that it uses standard AmigaDos disks, so you don't have to mess around with a conversion utility.

Where Nordic Power really shines is in its sound ripper facility. It shows a graphical representation of memory, which you can output to the speaker as a sample. You can change the start and end positions and zoom in on the display until you get exactly the right length for the sample you wish to rip. Pressing S will save the sample to disk.

Like Action Replay, Nordic Power has a machine code monitor. I was disappointed with it though. Perhaps it's because I used the Action Replay

different machine, with a different Kickstart, different memory configuration or different number of drives, and so on, will promptly cause the Amiga to crash 99 per cent of the time.

Both cartridges are ideal for people playing a game who want to save their game position when there is no save-game option. Programmers will be delighted with the debugging facilities they offer. Would-be pirates will be disappointed.

cartridge first, but the Nordic Power monitor seems a very basic affair, offering a bare minimum of features and lacking some which I regard as essential, such as a block move.

None of this is helped by the manual, which is the victim of some nasty translation. For example: "We call the actual screen that on the moment of pressing the freeze button the graphic" and "The Amiga music exists from samples (samples means monsters)".

Some of the mistakes cannot be excused by translation and must be put down to brain failure: "On Amiga text screens are called dual playfields." What!?

Nordic Power has a game trainer option, but unlike Action Replay it is totally automatic. It assumes you are losing one life at a time, and therefore cannot be used for other counters that may go up, like damage for instance.

When it finds the correct value it replaces it with 127, so you don't have infinite lives, just 127.

This is not a good way to train a game because some games crash if the life value is too high for the display – for example, if the game tries to draw 127 little spaceships at the top of the screen and runs out of space.

Overall, Nordic Power is a very useful unit. The use of AmigaDos format with the ability to format disks, catalogue and delete files, makes it easy to use. But it doesn't seem very reliable – if you hold the freeze button down too long it crashes.

Amiga Action Replay, £59.99, Datel Electronics, 0782 744707.

Nordic Power, £59.99, Data & Electronics, 0795 472727

DISKS DISKS DISKS DISKS DISKS DISKS

LOCKABLE STORAGE BOXES

3.5"	40 capacity£4.50 each
3.5"	80 capacity£5.50 each
3.5"	100 capacity£6.25 each
5.25"	70 capacity£5.50 each

LIBRARY CASES HOLDS 10 DISKS

3.5"/5.25"
£1.05 each

**NEW BANX BOXES 3.5" DISK STORAGE UNITS
CAN BE LOCKED TOGETHER FOR HORIZONTAL
OR VERTICAL STACKING . . .**
£9.50 each

Mouse
Mats
£2.00

Mouse
Pocket
£2.40

3 1/2" SPECIAL COLOURED DISK OFFER
10 Coloured disks + box £6.50

Quantity	10	25	50	100
3 1/2" DS/HD 2MB	£1.18	£1.15	£1.14	£1.12
DDS/HD PRE-FORMATTED	£1.28	£1.25	£1.24	£1.22
135TPI 1MB	45p	44p	43p	42p

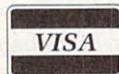
Quantity	10	25	50	100
5 1/4" DS/HD 1.6MB	45p	44p	43p	42p
DS/DD	26p	25p	22p	21p

PRICES ARE PER DISK. ALL DISKS
COME WITH LABELS. ALL 5.25 DISKS
SUPPLIED WITH WRITE PROTECT TABS
AND ENVELOPES

WE OFFER A NO QUIBBLE REPLACEMENT
OR MONEY BACK GUARANTEE
ALL OUR PRICES INCLUDE VAT
ORDER NOW WHILE STOCKS LAST

**CREDIT CARD HOTLINE
(24 HOURS)**

0784 451011



To
DEPT AC 0790
Northumberland House
Drake Ave, Staines,
Middlesex TW18 2AP

(0784)
466744
fax (0784)
450845
Telex 925707 Action G

I enclose a cheque/PO for

My computer is
PLEASE PRINT CLEARLY

Quantity	Description	Price

Packaging
Total

Name
Address

Post Code

Tel
Postage and Packaging £2.50. Next day delivery £10.00
E&OE

RETURN THE COUPON FOR FREE BROCHURES!

NEW! - AMIGA PACK



Commodore A500
Flight Of Fantasy

£399

INC
VAT

A500 BATMAN PACK



The Commodore A500 Batman Pack must surely rank as one of the most popular computer packs ever! The pack features the Commodore Amiga 500 computer with mouse controller and TV modulator, plus four top software titles. The software includes: 'Batman The Movie' - Rid Gotham City of the cunning joker, in Ocean's top selling title based on the blockbuster Batman film; 'New Zealand Story' - high quality conversion of the leading arcade game; 'Interceptor' - Dogfight with two F-16's in this leading flight simulator; 'Deluxe Paint II' - top quality Amiga graphics package which set the standard for others to follow. Return the coupon for further details.

PACK INCLUDES:

A500 Computer & Mouse £399.99

A520 TV Modulator £24.99

Batman The Movie £24.95

New Zealand Story £24.95

Interceptor £24.95

Deluxe Paint II £49.95

TOTAL RRP: £549.78

Less Pack Saving: £150.78

PACK PRICE: £399.00

£399 INC VAT

AMIGA 2000



For the more serious or professional applications user, Commodore have a selection of systems based around the expandable Amiga 2000, at prices from £1295+VAT. The A2000 features a full 1Mb RAM (expandable to 9Mb), 9 system expansion slots, plus IBM compatibility with the use of PC-XT or PC-AT bridgeboards. Complete and return the coupon, putting a tick in the A2000 box, for details of A2000 computer systems.

£1295
+VAT= £1489.25

FLIGHT OF FANTASY

Flight of Fantasy is the very latest Amiga 500 pack from Commodore, featuring BRAND NEW software releases, to make this the most spectacular A500 pack ever! The pack features the Amiga 500 computer with mouse controller and TV modulator, as well as four top software titles. These include the following:

DELUXE PAINT II:

The high quality graphics program that set the standard for other Amiga art packages. Deluxe Paint II includes powerful, easy to use tools that bring out the artist in you. Create masterpieces, presentations, 3D perspectives or just doodle.

ESCAPE / ROBOT MONSTERS:

Here's something completely different - a science fiction story with comic book style graphics. Our heroes Jake and Duke are on a Planet X rescuing Humans who have been captured by the Robot Monsters and forced to help the evil Robot Army to DESTROY EARTH! Jake and Duke fight their way through hordes of evil Robots to help the Humans escape.

RAINBOW ISLANDS:

Sip on your magic shoes, practise throwing a rainbow and you're ready to go! In this quest to rescue the Queen of Doh to Monster Island, you will encounter Doh himself, stinging insects, lethal combat machines, mechanical assailants, the formidable beings of legend and folklore. Finally enter the world of darkness and its inhabitants.

F29 RETALIATOR:

The ultimate in flight simulation with a choice of two aircraft and four battle environments with dozens of different tactical missions. Aerial combat, strategic bombings, interacting with ground forces, searching cameras... the list of features is endless. And the cockpit displays, including 'true radar', enhance the realistic feel of this stunning simulation.

PACK INCLUDES:

A500 Computer & Mouse £399.99

A520 TV Modulator £24.99

Deluxe Paint II £49.95

Escape/Robot Monsters £19.99

Rainbow Islands £24.95

F29 Retaliator £24.95

TOTAL RRP: £544.82

Less Pack Saving: £145.82

PACK PRICE: £399.00

£399 INC VAT

FOR FURTHER DETAILS OF THE AMIGA RANGE, COMPLETE THE COUPON AND RETURN IT TO SILICA SHOP THE UK's No1 AMIGA SPECIALISTS

SILICA SHOP OFFER YOU

FREE OVERNIGHT COURIER DELIVERY: On all hardware orders shipped in the UK.

TECHNICAL SUPPORT HELPLINE: Team of Amiga technical experts at your service.

PRICE MATCH: We normally match competitors on a "Same product - Same price" basis.

ESTABLISHED 12 YEARS: Proven track record in professional computer sales.

£13M TURNOVER (with 60 staff): Solid and reliable with maintained growth.

BUSINESS/EDUCATION/GOVERNMENT: Volume discounts available for large orders.

SHOWROOMS: Demonstration and training facilities at our London & Sidcup branches.

THE FULL STOCK RANGE: All of your Amiga requirements from one supplier.

FREE CATALOGUES: Will be mailed to you with offers and software/peripheral details.

PAYMENT: By cash, cheque and all major credit cards.

CREDIT PAYMENT TERMS: Silica are licensed credit brokers - return coupon for details.

Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Shop, we ensure that you will have nothing to worry about. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest free literature and begin to experience the "Silica Shop Service".

**RETURN THE COUPON NOW FOR
FREE BROCHURES**

**SILICA
SHOP** S

MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

BUSINESS/EDUCATION: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888
Order Lines Open: Mon-Fri 9.00am-6.00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Shop, Dept AMCOM-0790-32, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND INFORMATION ON THE AMIGA

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode:

Tel:

Which computer(s), if any, do you own?

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

A2000

That figures!

HAVE you ever wondered why some people get to review certain products in *Amiga Computing*? Well, I run a little computer shop and while I was chatting with the Features Editor one day I happened to mention that I was doing my yearly accounts. Jeff asked what software I was using. I told him I didn't know of anything good and was doing them by hand.

Surprised by my reply, he sent me a newish accounting package, which shall remain nameless, and asked me to try it out. I played with it for about 15 minutes and sent it straight back.

A couple of days later Jeff sent

Many small companies go broke each year because there is nobody to look after the time-consuming job of keeping proper accounts. Alex Aird looks at a package from Arena Technologies which aims to keep the small businessman on top of his job

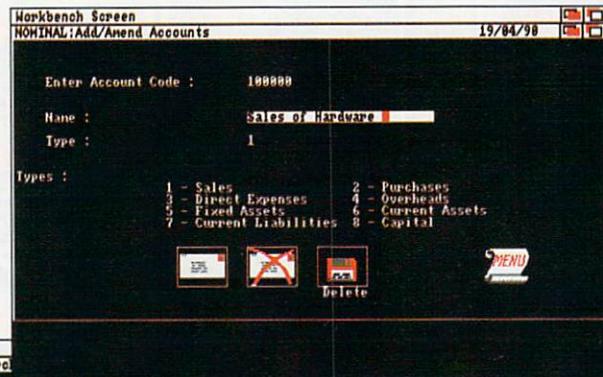
another, Arena Accounts. "That's better," I said. "This is something I might be able to use."

Arena Accounts is a full accounting package aimed at small to medium-sized businesses. It requires at least 1 meg of memory and, as usual with

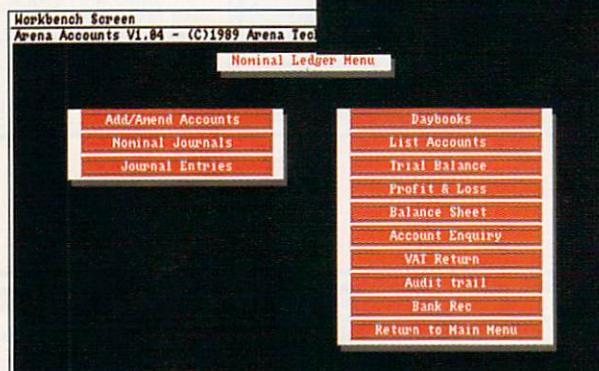
serious packages, two floppies or a hard drive makes life very much easier.

The software is not copy protected and even comes with a little program to copy itself to your hard disk – a big plus point for me as I use an A590. I hate programs which will not run from my hard drive.

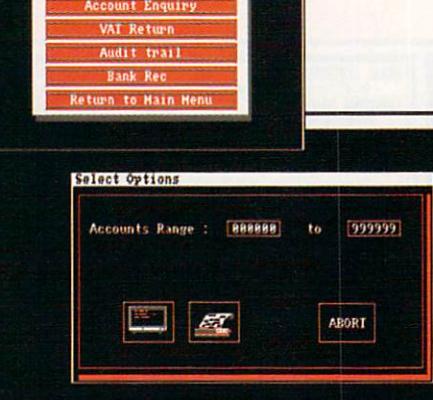
The Add/Amend module is where you set up the details for each of your accounts



The Nominal Ledger is where you'll probably spend most of your time.



With facilities for up to a million accounts, even the biggest of businesses should have room to spare



Code	Name	Date
456000	Overseas Travelling	19/04/90
460000	Training Costs	
462400	Carriage	
471000	Electricity	
477000	Public Relations	
481000	Bank Charges	
495000	Charities	
498000	Depreciation	
499000	Grants	
500010	F/M Depreciation	
510010	O/F Depreciation	
520010	M/V Depreciation	
610000	Bank Control	
630000	Stock	
650000	Pre-Payments	
670000	Deposit Account	
710000	Val Control	

Accounts for all seasons, 80 obvious ones are provided to save your pinkies from wearing out

place to start. Here you have to add your own unique accounts to those already entered for you. With a computer shop we have classifications such as Sales of Software and, of course, Purchases of Software.

Altogether more than 80 separate accounts are entered into the system – things like stock, rent, rates, petrol and so on. There is provision for around a million separate accounts, which is more than enough for any business.

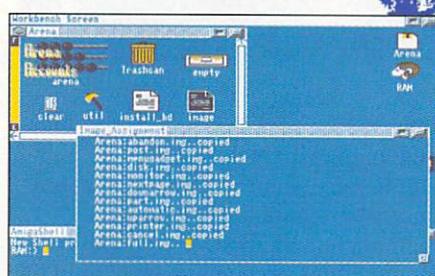
To enter the account classification you click on the Add/Amend Accounts box, enter the account code, account name and account type, then post the entry by clicking on a postcard icon.

All the icons are large and

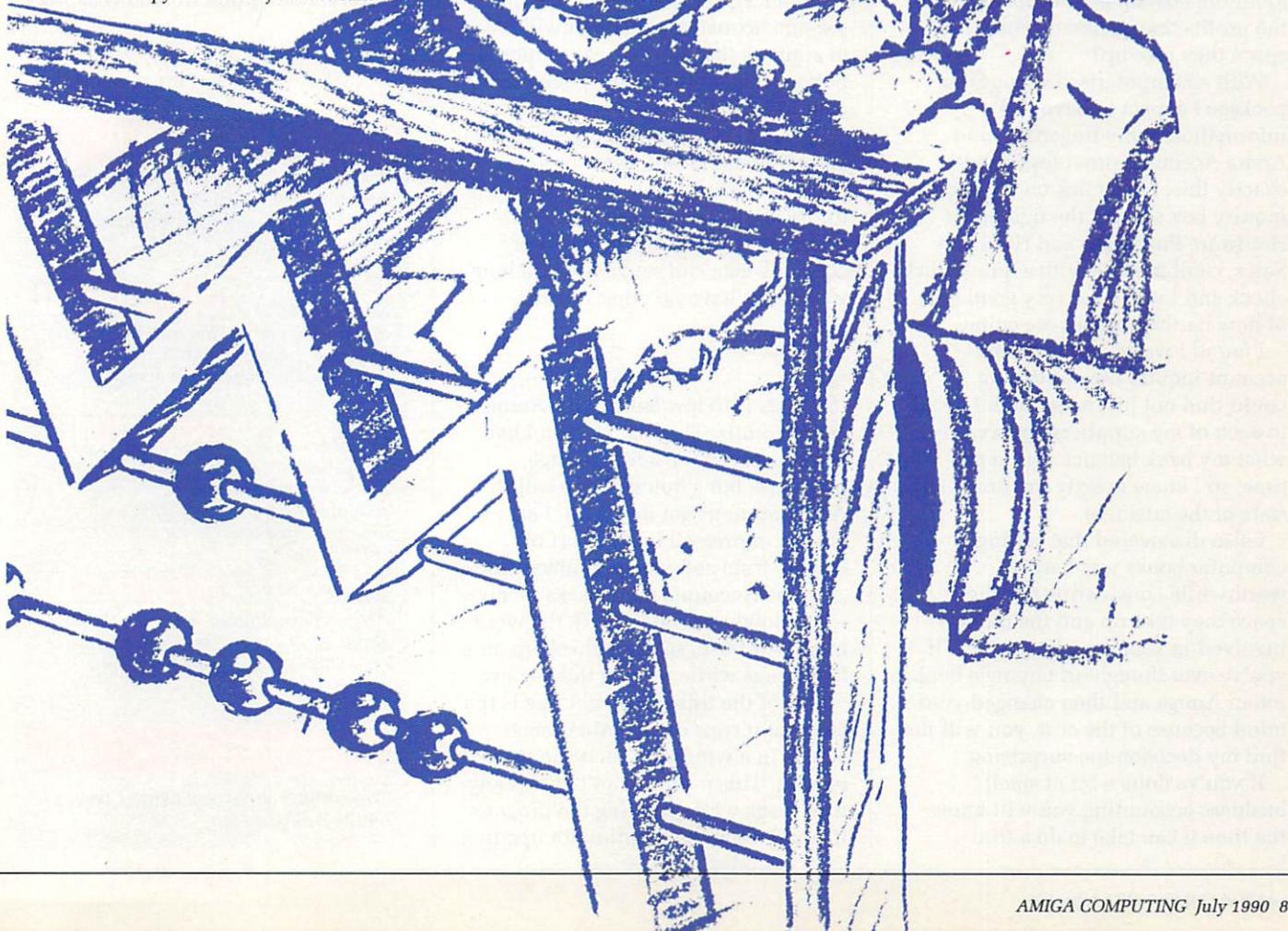
well chosen. If you want something sent to the screen you click on a picture of a monitor, to print something you click on a picture

of a printer.

Next you need to set up the sales and purchase accounts. For example, if you have several regular customers who buy from you on credit, you will need to have a separate account for each. This is not relevant to a retail operation such as a computer shop; the main account for us is daily cash sales. Every account has to have a six-figure account code. I called Daily Cash Sales CASH01, non-VAT sales became CASH02. Purchase accounts also had to be set up.



Before running the program, a script file must be executed to copy 20k or so of data to ram



► Software Sellers became SOFT01; other accounts were set up in a similar fashion.

This setting up procedure may seem long-winded, but it is quite simple and just the same as having separate books or columns when doing accounts by hand.

When everything has been set up you can start entering your data. Every day the money in the till is counted and the day's takings are entered into the sales ledger. Invoices that arrive in the post are entered into the purchase ledger.

This is the rather mundane part of any business, finding different books and entering figures in the correct column always seems a long job. Doing it on a computer seems to make it less tedious.

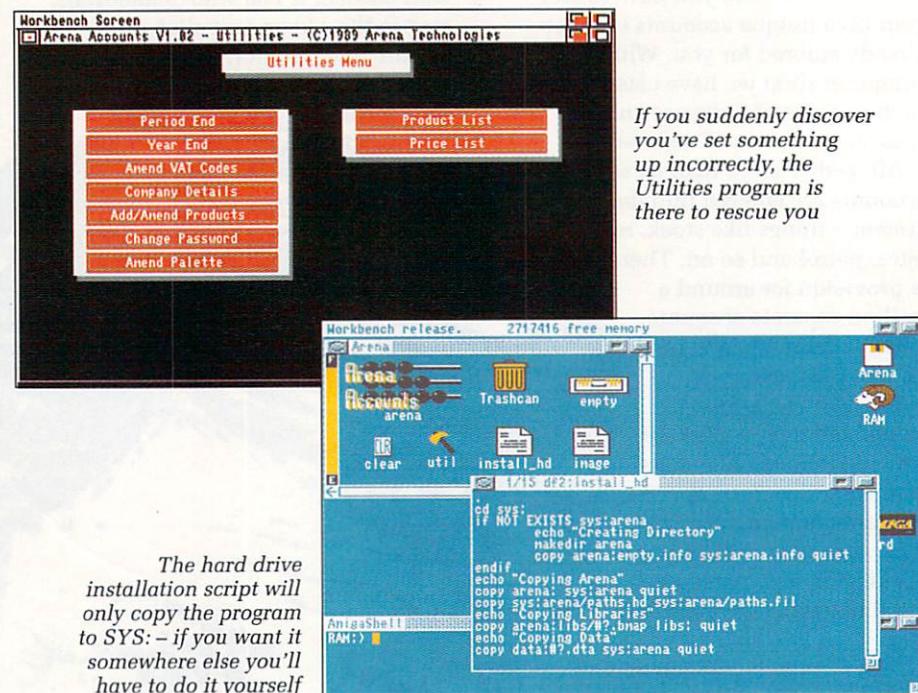
THE major advantage though of any computerised accounting system is the information which the package can give to the user. Most accounts packages will print out a VAT return for you, but the more information the better. Computers and monitors take up a lot of space, so are the profits they generate worth the space they take up?

With a computerised accounting package I expect to have this information at my fingertips, and Arena Accounts provides me with exactly this. I can click on the account inquiry box and get the figures for Hardware Purchases and Hardware Sales, combine this with a quick stock check and I will get a very good idea of how hardware sales are going.

I found I was clicking on the account inquiry box quite a lot. I could find out just how much I owed to each of my suppliers and exactly what my bank balance was at any time, so I knew exactly the financial state of the business.

I also discovered that selling computer books was hardly worthwhile considering the shelf space they take up and the money involved in keeping a large stock. If you've ever thought of buying a book for an Amiga and then changed your mind because of the cost, you will not find my decision too surprising.

If you've done a bit of small business accounting you will know the time it can take to do a trial



The hard drive installation script will only copy the program to SYS: - if you want it somewhere else you'll have to do it yourself

balance, produce a profit and loss account or a set of final accounts. With Arena Accounts you simply click on a box and the information is there before you.

Although I find Arena Accounts very useful, it cannot replace the accounts I do by hand. Firstly, you see, the taxman and vatman will have to approve the package - an important point to remember before changing over to computerised accounts.

Also, backing up data becomes more and more important, three or four copies of a disk is not overdoing things at all, it is merely being prudent. The loss of a disk full of accounts data can set you back a long way if you have no other records.

ICAN find few faults with Arena Accounts. The first version I had (v1.02) caused me a few strange problems, but a quick phone call to Arena Systems got me v1.04. I am always impressed by this sort of backup from software manufacturers.

Arena Accounts multi-tasks nicely - but slowly - with Protext, the word processor I use, so I can check up on a few things while writing this review.

One of the things I do not like is the fact that it runs on the Workbench screen in a window which cannot be resized. This means I can't access any disk icons while running the program. It could do with an option for opening

If you suddenly discover you've set something up incorrectly, the Utilities program is there to rescue you

on its own screen for those users who have the available memory.

This gripe apart, Arena Accounts is a useful program for any small business to own. By the time you read this review, a tweaked v1.05 should be available, which will include a delivery note option in the invoicing module.

REPORT CARD

Arena Accounts (v1.04)
Arena Technologies Ltd 0724 280222
£149.95 + vat

EASE OF USE
Marks dropped for the utilities section being a separate program, and for hijacking the workbench screen.

SPEED
Ok unless you want to multi-task, when the screen refresh rate begins to resemble that of an Amiga Basic program. Fast enough for the job.

VALUE
An good accountant will cost you about £250 a year. Use this program once instead, and you've got your money back.

OVERALL 82%
The best accounting package I've used on the Amiga so far.

THE AMIGA 500 PC/XT IS HERE



Run Professional
MS DOS Software
on your Amiga 500 at
a price you can afford

KCS POWER PC BOARD

Why did you buy an Amiga 500?

Of course, because of its superb graphics, music and animation capabilities. However if you want to get serious, you soon realise that it is distinctly lacking in memory and professional software.

Well – they said it could never happen – but it's here at last!

You! In your own home can transform your Amiga 500 into a real IBM compatible PLUS up to **ONE AND A HALF MEGABYTE** Amiga memory expansion.

It's simple – no screwdriver, no soldering iron and no technical knowledge required. Just turn your Amiga over, open the cover, slide the Power PC Board into the connector, close the cover and your Amiga PC/XT is ready. (In other words, no loss of guarantee)

You are now ready to use a wealth of professional MS DOS software at speeds faster than a PC/XT (ind. review), **and in colour**, with compatibility thanks to Phoenix-Bios.

You can also rely on the correct date and time at any moment in Amiga and MS DOS mode (with the aid of a battery pack).

- ★ Video support: monochrome, Hercules and Colour Graphics Adaptor (CGA) (4 and 8 colours)
- ★ Disk support: internal 3.5" external 3.5" external 5.25" drive. (Software-upgrade to H/D A590 in pipeline)
- ★ Including MS DOS 4.01, MS DOS shell and GW Basic (market value approx £130.00)
- ★ Including English Microsoft books + KCS manual + FREE software
- ★ Further exciting software upgrades in the pipeline

★ Available memory: 704KB + 64KB EMS in MS DOS mode, 1 megabyte + 512KB RAM (disk) buffer in Amiga mode

★ No extra power supply necessary thanks to the most modern CMOS and ASIC technology

★ OK with TV. No special monitor required

★ Price: £320.00 including VAT. Postage in UK £4.00 Total £324.00.

Access and Visa accepted.

★ For export price please contact us

★ Trade enquiries welcome (UK – Scandinavia – Australia/NZ and all English language.)

First deliveries expected in May. Place your order now and get into the queue. Don't send any money yet. We will contact you when we are ready to ship.

Compatibility is excellent but no-one can guarantee every single program available, therefore if your purchase depends on a particular program, please ask us first or send in a copy of the program. (With suitable S.A.E. if to be returned). Price subject to change without notice.

BDL **BITCON DEVICES LTD.**
88 BEWICK ROAD, GATESHEAD,
TYNE & WEAR, NE8 1RS ENGLAND.
Tel: (091) 4901919/4901975.
Fax: (091) 4901918



SK MARKETING

COMPUTER SUPPLIES

LONDON'S LEADING



AMIGA HARDWARE

AMIGA 500 + FREE SOFTWARE!

- ★ Amiga 500 + TV Modulator
- ★ Batman the Movie
- ★ New Zealand Story
- ★ Interceptor
- ★ Deluxe Paint II
- ★ Dust Cover
- ★ and Mouse Mat

ONLY £375 Inc. VAT!

A500 20MB Hard Drive	£374.99
Vortex 40MB Hard drive	£499
Philips 8833 Monitor	£289.95
Commodore 1084S Col. Monitor	£259.95
A501 Ram Expansion/Clock	£129.95
Video Digitizer	£99.95
Cumana 3.5" Drive	£94.95
MES Half Meg Ram Expansion	£75

FLIGHT OF FANTASY

- ★ Amiga 500 + TV Modulator
- ★ Deluxe Paint II
- ★ Escape from Robot Monsters
- ★ F-29 Retaliator
- ★ Rainbow Islands
- ★ Dust Cover & Mouse Mat

ONLY £385 inc VAT

Amiga B2000 P.O.A.

AMIGA 500

Including:-
Mouse, Workbench, Utilities, Manuals,
Tutorial, Modulator
SKM price £355

DOT MATRIX PRINTERS

Star LC10	£185
Star LC10 Colour	£213
Panasonic KX-P1124	£305
Panasonic KX-P1180	£190

CLASS OF THE 90's

- ★ Amiga 500 + TV Modulator
- ★ Midi Master Interface
- ★ Deluxe Paint II
- ★ Publishers Choice
- ★ Maxi Plan 500
- ★ Superbase Personal
- ★ DR-T'S Midi Rec. Studio
- ★ Amiga Logo
- ★ BBC Emulator + Mouse Mat
- ★ 10 Blank Discs + Disc Wallet

ONLY £539 Inc. VAT!

CONTROL CENTRE

Instantly transform your Amiga 500 into an A1000/2000 'look a like' without any modification to the computer. Simply slip the 'control centre' over the Amiga 500 and by reason of its colour match and contour hugging design it becomes an integral part of the computer itself.

- Hides untidy connections at rear of A500
- Holds disk drives, genlocks etc...
- Easy access to joystick parts
- Monitor sits about A500 £54.95

LEISURE SOFTWARE

3D Pool	£15.90	Dragon Ninja	£16.50	King Arthur	£17.45	Silkworm	£14.90	688 Attack Sub	£17.45	*Jumping Jackson	£14.90
5th Gear	£14.90	Dragons Lair	£32.95	King Quest 3 Pack	£24.95	Shadow of the Beast	£17.50	American Dreams	£17.45	*Kid Gloves	£15.90
Advanced Ski Simulator	£14.90	Dragons of Flame	£17.45	Kult	£17.45	Shadow Warriors	£17.50	Black Tiger	£17.45	*Klax	£14.90
Altered Beast	£17.45	Drakken	£21.95	Last Ninja II	£17.50	Shinobi	£14.90	Blade Warrior	£15.90	*Knights of the Crystalline	£17.45
Aquanaul	£17.45	Dr. Dooms Revenge	£15.90	Leisure Suit Larry	£14.90	Shogun	£19.95	Bomber	£21.90	Last Dutchman's Mine	£17.45
All Dogs Go to Heaven	£22.50	Dungeon Master	£15.95	Leisure Suit Larry 2	£19.95	Shoot em up Construction Set	£21.95	Buckaroo	£17.45	*Last Ninja II	£17.45
Armada	£15.90	Dungeon Master Editor	£8.45	Leisure Suit Larry III	£29.90	Silent Service	£15.90	Castle Master	£17.45	*Leisure Suit Larry III	£24.90
AMC	£17.50	Dynamite Dux	£17.45	Licence to Kill	£15.90	Star Wars Trilogy	£21.95	Chrono Quest II	£19.90	*Loot Patrol	£17.45
American Dreams	£16.95	Elite	£15.90	Lombard RAC Rally	£15.90	Storm Lord	£14.90	Colorado	£15.90	Magnum 4	£21.90
Archipelagos	£16.95	E-Motion	£17.45	Lord of the Rising Sun	£20.90	Story So Far Vol. 1	£15.90	Cyberball	£14.90	Manchester Utd	£17.45
Asterix	£15.90	Escape from Planet Robot	£15.90	Manhunter	£20.90	Street Fighter	£17.45	*Democles	£16.90	*Matrix Marauders	£15.90
Axel's Magic Hammers	£15.90	Mothers	£16.90	Maniac Mansion	£16.90	Strider	£15.90	*Dan Dare III	£13.90	Midwinter	£21.90
Baai	£13.90	Eskimo Games	£14.45	Microprose Soccer	£16.95	Stunt Car Racer	£14.90	Datastorm	£14.90	Ninja Spirit	£17.45
Balance of Power 1990	£15.90	F16 Combat Pilot	£17.45	Millennium 2.2	£17.45	Super Hang On	£17.45	Distant Suns	£36.99	Paris-Dakar '90	£17.45
Ballistix	£13.90	F20 Retaliator	£17.45	Minimender	£14.90	Super Scramble Simulator	£16.90	E-Motion	£17.45	Rotor	£14.90
Bangkok Knights	£17.95	Falcon	£19.95	MicroProse Soccer	£16.95	Super Quintet	£16.90	*F20 Retaliator	£17.45	*Sim City Terrain Editor	£11.45
Barbarian II	£14.90	Falcon Mission Disks	£14.90	Milan 90	£15.90	Supreme Challenge	£24.90	Full Metal Planet	£17.45	*Sonic Boom	£17.45
Battle Squadron	£16.90	Fast Lane	£14.90	Moonwalker	£17.45	Sword of Sodan	£19.90	Gold of the Realm	£14.90	Space Rogue	£21.90
Batman the Movie	£16.50	Ferrari Formula 1	£17.45	Mystery of the Mummy	£14.90	Swords of Twilight	£17.95	*Hammerfest	£17.45	*The Killing Game Show	£15.90
Battle Tech	£17.45	Fleindish Freddie	£15.90	Nevermind	£13.95	TaleSpin	£20.90	*Hot Rod	£17.45	*Theme Park Mystery	£16.90
Battle Chess	£17.45	Fighter Bomber	£21.95	Nightdown	£19.90	Tank Attack	£15.90	Hypemania	£17.45	*Triad III	£20.90
Beach Volley	£17.45	Flight Simulator 2	£36.80	North & South	£16.90	Targhan	£15.90	Hyperaction	£17.45	Untouchables	£17.45
Beam	£15.90	Football Manager 2 Expansion	£10.35	Offshore Warrior	£16.50	Police Quest	£17.45	Infestation	£17.45	*Wipe Out	£13.90
Beverly Hills Cop	£15.90	Football School II under 6	£14.95	Police Quest II	£17.45	Police Quest II	£17.45	Ivanhoe	£17.45	X-Out	£14.90
Bionic Commando	£18.95	Fun School II 6-8	£14.95	Powerdrive	£17.45	Prison Fury	£17.45				
Blood Money	£15.90	Fun School II 8 and above	£14.95	Powerdrive	£17.45	Psycho	£17.45				
Bloodwyrm	£17.45	Future Wars	£15.90	Prisoner Collection	£23.90	Psycho	£17.45				
Blue Angels	£17.50	Galaxy Force	£17.45	Quartz	£17.45	Psycho	£17.45				
Bridge Player 2150	£17.45	Galdragons Domain	£14.90	Robocop	£15.95	Psycho	£17.45				
Cabal	£17.45	Gazza's Super Soccer	£15.90	Passing Shot	£15.90	Robot	£17.45				
Capone	£19.95	Gemini Wing	£13.90	Personal Nightmare	£19.90	Robot	£17.45				
Capital Blood	£15.90	Ghostbusters II	£16.90	Player Manager	£13.90	Robot	£17.45				
Castle Master	£16.50	Ghouls n Ghosts	£16.90	Police Quest	£17.45	Robot	£17.45				
Castlevania	£17.45	Gladiators	£21.90	Police Quest II	£17.45	Robot	£17.45				
Championship Football	£17.45	Grand Monster Slam	£13.90	Populus	£17.45	Robot	£17.45				
Championship Golf	£15.90	Grand Prix Circuit	£14.95	Populus Data Disk	£11.90	Robot	£17.45				
Charlots of Wrath	£16.90	Gravity	£17.45	Powerdrive	£17.45	Robot	£17.45				
Chase HQ	£16.90	Gunship	£16.50	Powdermilk	£17.45	Robot	£17.45				
Chess Player 2150	£17.45	Hard Drivin	£16.90	Precious Metal	£17.45	Robot	£17.45				
Circus Games	£13.90	Hawkeye	£13.90	Prisoner Collection	£23.90	Robot	£17.45				
Cloud Kingdoms	£17.50	Honda RVF	£16.90	Quartz	£17.45	Robot	£17.45				
Conflict Europe	£17.45	Hound of Shadow	£16.90	Robocop	£15.95	Robot	£17.45				
Continental Circus	£16.90	Hunt For Red October	£15.95	Rocket Ranger	£20.90	Robot	£17.45				
Conquerer	£17.50	Impossamole	£15.90	Run the Gauntlet	£17.45	Robot	£17.45				
Crazy Cars 2	£15.90	Indiana Jones Adventure	£17.95	Sargon III Chess	£19.90	Robot	£17.45				
Dan Dare III	£17.50	Indiana Jones Crusade	£14.90	Scare Ghost	£13.90	Robot	£17.45				
Darius	£17.45	Interphase	£16.90	Zak McCracken	£17.45	Robot	£17.45				
Dark Castle	£19.55	Italy 1990	£17.50	Rick Dangerous	£15.90	Robot	£17.45				
Day of the Viper	£16.90	It Came From The Desert	£24.95	Risk	£17.45	Robot	£17.45				
Defenders of the Earth	£15.90	Iron Tracker	£13.90	Robocop	£15.95	Robot	£17.45				
Demons Tomb	£17.45	Ironman	£17.50	Rocket Ranger	£20.90	Robot	£17.45				
Denaris	£14.90	Ivanhoe	£17.50	Run the Gauntlet	£17.45	Robot	£17.45				
Dominator	£16.90	Joan of Arc	£19.99	Sargon III Chess	£19.90	Robot	£17.45				
Double Dragon II	£17.95	Keel the Thief	£16.90	Scare Ghost	£13.90	Robot	£17.45				
Dragons Breath	£21.95	Kick Off	£13.90	Zak McCracken	£17.45	Robot	£17.45				
Dragons Lair II	£32.95	Kick Off Extra Time	£19.99			Robot	£17.45				

24 hour hotline for
credit card orders



All prices subject to change
without notice

SALES HOTLINE

0923 89 69 69

To order: Please send cheque/PO/Access or Visa details to SK Marketing Ltd,
13 Moneyhill Parade, Uxbridge Road, Rickmansworth, Herts WD3 2BE,

All prices include VAT and carriage is free (UK mainland)

LONDON'S LEADING



PROFESSIONAL AMIGA SOFTWARE

9 out of 10	£29.95
Animator/Images	£89.95
Animator	£39.95
Animator 3D	£99.95
Arena Accounts	£149.95
C-Light	£39.95
Comic Setter	£44.95
Deluxe Paint II	£49.95
Deluxe Paint III	£64.95
Deluxe Print 2	£39.95
Deluxe Music Construction	£54.95
Deluxe Productions	£99.95
Deluxe Photolab	£54.95
Deluxe Video	£65.95
Digipaint III	£54.95
GFA Basic Compiler	£39.95
GFA Basic Interpreter III	£39.95
HiSoft Devpac V2	£42.95
HiSoft Lattice C	£175.95
Home Accounts	£22.95
Home Office Kit	£120.00
Instant Music	£21.95
K-Data	£34.95
K-Gadget	£19.95
K-Seka	£29.95
K-Spread III	£75.00
K-Text	£14.95
Kind Words V2	£33.95
Mailshot Plus	£40.95
Music X	£169.00
Photon Paint 2	£54.95
Prodata	£59.95
Protext	£64.95
Publishers Choice	£74.95
Starter Kit	£54.00
Superbase Personal	£54.95
Superbase Personal II	£65.95
Superplan	£69.95
TV Show	£59.95
Word Perfect	£185.00
Workbench 1.3	£15.00
Zoetrope (5 in 1 package)	£79.95

BOOKS

Advanced Amiga BASIC	£18.95
Amiga 3D Graphics Prog BASIC	£18.45
Amiga Applications	£16.95
Amiga Assembly Lang Prog	£10.80
Amiga BASIC Inside & Out	£18.95
Amiga C for Beginners	£18.45
Amiga DOS Inside & Out	£18.45
Amiga DOS Manual	£22.95
Amiga DOS Quick Reference	£13.95
Amiga DOS Ref Guide	£14.95
Amiga Disk Drives Inside & Out	£27.95
Amiga Gd Graphics Sound Teleco	£17.45
Amiga Handbook	£15.95
Amiga Intuition Ref Manual	£22.95
Amiga Machine Lang Guide	£19.95
Amiga Machine Language	£14.95
Amiga Microsoft Basic Prog Guide	£18.45
Amiga Prog Handbook Vol. 1	£23.95
Amiga Prog Handbook Vol. 2	£23.95
Amiga Programmers Guide	£16.95
Amiga ROM Kernel Ref Man Exec	£22.95
Amiga ROM Kernel Ref Man Lib	£32.95
Amiga System Programmers Guide	£32.95
Amiga Tricks and Tips	£14.95
Amiga for Beginners	£12.95
Becoming an Amiga Artist	£18.45
Beginners Guide to the Amiga	£16.95
Compute's 1st Book of Amiga	£16.95
Compute's 2nd Book of Amiga	£16.95
Elementary Amiga BASIC	£14.95
Inside Amiga Graphics	£16.95
Inside the Amiga with C 2nd Ed	£20.95
Kickstart Guide to the Amiga	£13.95
Kids & the Amiga	£15.95
More Tips & Tricks for Amiga	£18.45
Programmers Guide to the Amiga	£23.95

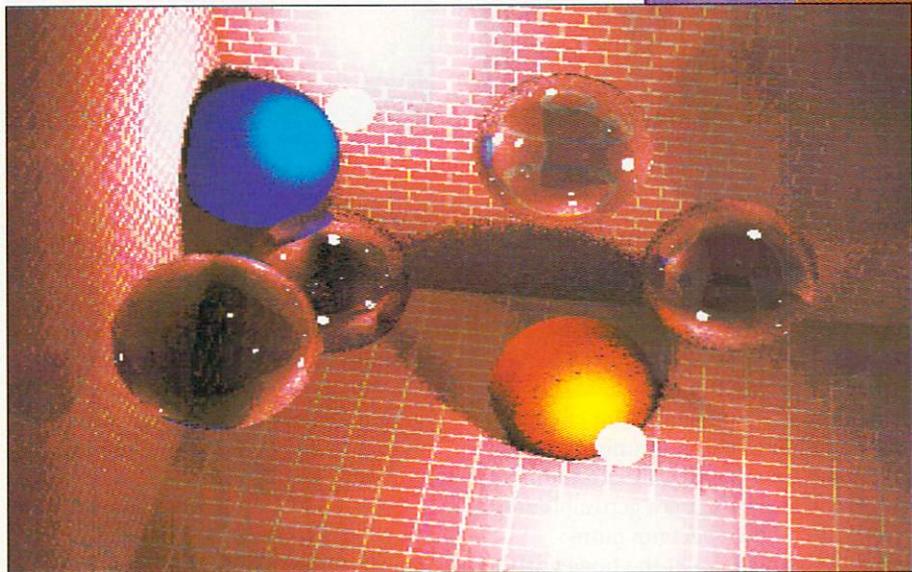
LATEST RELEASES

688 Attack Sub	£17.45	*Jumping Jackson	£14.90

<tbl_r cells="4" ix="1" maxcspan="1" maxrspan="1" usedcols="

Ray trace yourself a new home with A-Render

Textures such as glass may be incorporated into the images



WRITING a program as complex as a ray tracer is difficult enough; writing one which runs at any kind of speed takes a large investment of time and money.

The upshot is that there are no freeware ray tracers. But there are a couple of shareware ones, and they are remarkably inexpensive for what they offer.

Both systems are capable of good results, but without the polished user interfaces of Sculpt or Silver. Both require use of the CLI, and one of them needs a large amount of mental calculation beforehand.

A-Render, which lives on Fish Disk #99, is the easier system to use. It fills the disc with a slideshow of very reasonable ray traced pictures. The documentation is extremely comprehensive, reading more like a technical paper, complete with introduction, appendices and bibliography.

But it doesn't quite work on a Kickstart 1.3 machine, which the majority of Amigas are by now. (If the switch-on Hand Screen says 1.3, you've got Kickstart 1.3.) This is unfortunate, because the actual rendering routine works fine on all machines, as do most of the object definition tools. However, one very necessary program gurus out straight away. So don't say I didn't warn you.

Installing A-Render would be very

difficult but for the script files provided for every possible Amiga setup. Once A-Render is installed, which can take anything up to half-an-hour on a single drive system, you're ready to follow the tutorial.

This as well thought out as the rest of the package. The aim is to create a HAM picture of a heart with an arrow through it. I know it sounds tacky, but it just happens to use all the programs in the A-Render suite in its creation.

Not merely does the author include all files created by the tutorial session,

Ray tracing has always been the Amiga's strong point. The combination of a large colour palette, good processor power and low hardware cost has brought the science out of the university and into the home. Stewart C. Russell puts two public domain packages to the test



►

he also provides the final rendered picture, so if you can't quite get the program to work, at least you'll be able to see what the results should be like. It also means that Kickstart 1.3 owners can have *some* fun with the program.

A-Render, like all ray tracing programs, defines a set of physical objects in a three-dimensional space and works out how they are affected by the lighting conditions.

Objects can be built up from polygons using a digitiser program, each point (or digitise) being a vertex of the polygon.

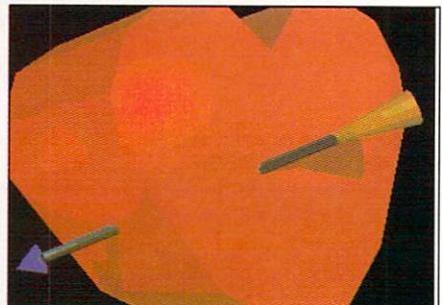
Alternatively, if you plan to use solids of revolution, which doesn't mean sticks and half-bricks, you can build objects on a lathe. This lathe is a program, as opposed to a real engine lathe. Would you want to clean swarf out from under the keyboard?

You can vary the speed of the render by changing the resolution. Normal (maximum) resolution is 320 x 200 HAM, which can take a couple of days to render if you're close to the maximum eight objects.

Halving the resolution quarters the generation time, but the picture begins to look very blocky. Any further reduction in resolution is only useful for quick test renders to see if your



More textures – brick this time



Ahh...Stewart and Wendy

objects are visible. Many's the time I've started a ray trace only to realise that most of the objects are off the screen. But we won't dwell on that.

A-Render produces good, if simple, results. They're not on a par with Sculpt or Silver, but this package is far less sophisticated – and a lot cheaper – than either of those. Rumours about A-Render now having mutated into a commercial product are getting louder every day. It may become more expensive, but at least the bugs will have been ironed flat.

HERE A-Render tries to be helpful, DBW_Render on Faug Disk #42, doesn't. User interface-wise it has the interactivity of a

cornered bear. On the user-hostility front it's like ordering a Chateaubriand at a Vegan takeaway.

In order to get yourself a rendered scene you have to plan out where all the objects are, define them in three dimensions relative to a fixed origin, work out what textures you want the objects to have, and then work out the lighting.

Once you've done that, you load up your favourite text line editor (just to maintain the mainframe-ish atmosphere) and key in all the lovely data using a cryptic command set. You then decide how long you want the program to spend on the calculation, set everything going, and wait while a lot of full stops fill up your CLI window.

Several hours and many gallons of

Now you can C better

IT is rare to find a book in a public domain collection, but that's exactly what Fish Disk #337 is. Aha, says you, the man's finally cracked under the strain of leafing through innumerable PD catalogues and has started to imagine hardbacks among the double-sides.

Not so, says I. Anders Bjerin's C Manual is about 200 pages long, and just happens to have executables of all the example listings. Using the magic of file compression, three discs full of data have been packed down on to that single disc.

Anders is a deeply generous type. Not merely has he written some very fine PD games, some of which have been featured on our cover discs, but he's got a mission to get the whole world programming in C. All his games are written in C, and they all multi-task in the way that good programs should.

In order to get more people

programming in C he's started the Amiga C Club (ACC) from his home in Sweden. Not only will he help with any C-related angst that ACC members may have, but there's also a digitising service and a special deal on further C Manual volumes.

As there isn't a full C compiler release in any PD library, Anders has based the manual on the industry standard Lattice C version 5.0x, a very expensive but generally fun-to-be-with compiler, if such a thing exists.



Everyone's favourite bitmapped image

The C Manual isn't designed to be a tutorial for absolute beginners, but the very large introductory chapter gives a whistle stop tour around the more difficult points of C data types and has a good section on getting Lattice C to spit out exactly what you want it to, or at least a fair approximation.

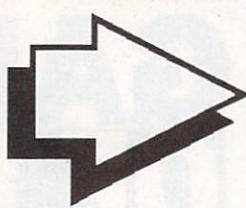
As the Lattice documentation is so huge, this is a welcome condensation for those who still think that braces are things that look rather fetching in a Paisley pattern.

Version 1.00 of the manual covers Screens, Windows, Graphics (Border, Text and Image structures), Gadgets, Requesters, Alerts, Menus, IDCMP and Sprites. In order to be able to use all these system functions, you have to know about memory allocation, linked list manipulation, and various other bits of vital information – the manual introduces these topics very neatly at exactly the right time you need to know about them.

Pdom PD Amiga Software



Graphics



AMP3 Graphics Pack 1 – Amiga MCAD excellent CAD package, VDraw brilliant painting program, Ray Tracer Generator, An object-orientated drawing package, IFF to pieces jigsaw program, ROT 3D drawing program. Loads of utilities. A 3 disk pack for only £7.50!

AMPI: Home Business Pack, RIM the relational database and HyperBase database, UEdit the word processor which includes built-in help and tutorials, spell checkers, and VisiCalc the excellent spreadsheet. All auto loading.

A 3 disk pack for only £7.50!

APDC 15 – Icon utilities: full of icon files and creators.

Pdom ClipIt! Vol1 5 disks full of clip art all in .IFF format.

3MB of clip art. 5 disks for only £15.00!

AMICUS 22 – Printer Driver Generator V2.3.



Utility

FFISH 253 – Elements a display of the periodic table.

FFISH 258 – BACKUP allows you to backup any hard disk path.



Most of the disks in this advert actually contain more than is listed, for full details of all the disks, send for our disk catalogue, which costs only 70p fully inclusive! and allows fast and easy searching for items!



Application

APDC 18 – Floppy Disk Utils: Quick Copy, Disk Mapper, Disk Salvage, Virus Check, System Utils:

Blitz text editor, TimeSet, ACalc a calculator, Amiga Monitor, MeM Grab fast memory grabber, DirectoryMaster. A must get disk for your Amiga P.D. collection! Excellent.

FFISH 244 – Boot Intro you specify The headline text of upto 44 characters and the scrolling text of upto 300.

PDOM 62 – The Public Dominator Anti Virus Disk: Virus X V4.0, VCheck V1.2 (for memory), VCheck V1.9 (for disk drives), Zero Virus V1.3 the fully integrated virus detector and killer. Also Boot Block Champion the utility.

PDOM 65 and 66 – Red Sector Mega Demo. THE best demo on the Amiga! A 2 disk demo with the best sounds and graphics! A must!

FAUG 41 – Amiga Arc V0.2 compatible with ARC V5.0.

PDOM93 – ARP V1.3 Amiga DOS Replacement Project.

FFISH 58 – ASDG a RAM disk that survives reset, Big View displays any size IFF picture, EGraph creates graphs from X,Y pair text files. NewZap disk sector editor.

FFISH 188 – Boot Intro V1.0 displays a

scrolling and a still message of your choice at boot up.

PDOM 86 – The Memory Expansions demo No1.

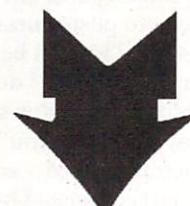
PDOM 87 – The Memory Expansions demo 2. Both Require 1MB RAM.

PDOM 73, 74 and 76: The Star Trek Dry Dock Demo, Starship Enterprise demo and the Star Trek Shuttle demo. Amazing graphics.

AMP21 Graphics Pack 2 – Mandelbrot Explorer, DBW Render a Ray Tracing utility, ST2IFF picture converter, HAM2IFF picture converter. Excellent value! A 3 disk pack for only £7.50.



Games



AMP8 – Games Pack 1 – Cluedo, Klondike, Canfield, Cribbage, Backgammon, Yahzee, Missile Command, 3D Breakout, Empire, Gravity Wars, Hanoi, Hockey, Jackland, Othello Master, Pacman, plus loads of other brilliant games. Amazing value!

A 3 disk pack £7.50!

AMP22 – Games Pack 2 Escape from Jovi V3, Monopoly, Amoeba Space Invaders, Cosmo Roids, StoneAge, Back Gammon, Mastermind, Reversi, Black Jack, YachtC, Daleks plus loads of other brilliant games. Amazing Value!

3 disks for £7.50!

PDOM90 – Tennis excellent tennis action game, fully working.

PDOM79, 80 + 81 the StarTrek game! A brilliant three disk graphics game! Requires 1MB RAM.

PDOM 83 – Space ACE Demo an excellent demo of the game with fabulous animation and incredible sampled sounds!

All prices are fully inclusive. To order please send a cheque or postal order payable to Pdom PD Amiga or Access & Visa credit card details to: Pdom PD Amiga, P O Box 801 Bishop's Stortford, Hertfordshire, CM23 3TZ. Telephone 0279 757692.

PD Disk Prices: 1 to 5 disks are £3.00 each, 6 to 10 disks are £2.75 each and 11 or more disks are £2.50 each!
Blank disks : 10–£7.00, 50–£33.00.
Disk cleaning kits – £2.50.

IT'S satisfying to hear from a shareware author thanking you for your hard-earned cash. It's deeply satisfying getting the newest version arriving on your doormat. But in the awesomely wonderful satisfaction league, there is little to compare with the delivery of software available *only* to those who have registered.

The system works like this. You get a program, downloaded from a BBS or from a library disc. You see in the documentation "... Version X is only available to registered users ..." followed by some blatant sales pitch about how much more ozone-friendly the new version is.

After using the software for a while, you get to like it, but feel there are a few limitations – bugs, missing features or physical limitations compiled into the program to encourage registration.

You send off your money and before you know it, assuming you have a reaction time of around eight weeks, the new version arrives containing a dire warning that you must not distribute this software on pain of being prodded in the navel several times, or worse.

As an example of how mind-alteringly fantastic it can be, I'll take two examples of registered-user software.

QED is a compact text editor. Nothing wonderful about that, you say. It is fast; global search/replace in a 2,000 line file is completed in under three seconds. That's 10 times the

Registering gives more than just a warm glow

speed of the unslothful Protext.

The blitter renders the text directly to give super-speedy scrolling. QED can have as many editing buffers as you want and can cut-and-paste text between them. It has rudimentary formatting and printing capabilities, so it could be used as a budget word processor.

As found on Fish Disk C019, QED can only save files up to 10,000 characters long. Once you register, the author – Darren Greenwald of Santa Ana, California – sends the latest version, which has no file limitations, full documentation on its command language and AReXX capabilities (three syllables, pronounced A Rex X).

With the addition of AReXX, a macro language capable of inter-task communication and control, QED becomes capable of driving a whole host of applications such as comms programs, compilers and databases. Neat, or what?

Considering the pukka QED costs around £13 (\$20) to register, you'd be crazy not to. And I'm not on a percentage to say that.

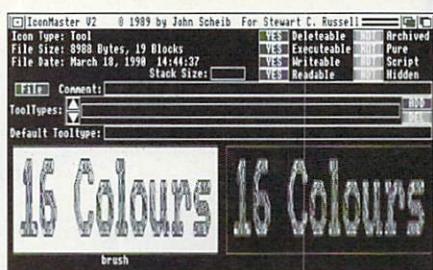
My second example of shareware worth registering is IconMaster, which was on the October 1989 cover disc.

When it comes to icons, there's IconMaster and nothing else. It does

everything you could want. And that's just version one. Version two, which costs \$25 from John Scheib in Las Vegas, gives loads of extra colours.

You want a 16 colour workbench? No problem, IconMaster 2 can edit in up to 16 colours and a tiny utility on the disc can add the necessary bitplanes to workbench.

A 16 colour workbench is very pretty,



but it eats memory and system performance. You want speed, then? How about a two colour workbench? Guaranteed to go flat out and use very little ram, but look only slightly more interesting than a PZzzzz... Sorry, meant PC.

If your workbench is looking a little dull, IconMaster 2 will banish the blues. Not to mention the oranges, blacks and whites.

So there you go. Don't be suspicious all your life. Come out of the cupboard and have some fun with registered-user software.

MessyDos – faster than CrossDos, and free

THE Amiga, you'll be surprised to learn, isn't the only machine to use 3.5in discs. A certain machine called a PC from a hicksville outfit called IBM can use them too. Unfortunately IBM didn't have the foresight to use the advanced data format that the Amiga uses, and the systems are incompatible.

For some strange reason a lot of people wish to transfer data from this PC thing to the Amiga. There are plenty of commercial programs to do this. But apart from a few demos of commercial products, the shareware scene is devoid of anything along these lines.

Predictably enough, MessyDos fills this gap. It's a whole new file system

and device driver to read and write double-sided PC 720k 3.5in floppies in any standard Amiga drive.

Despite its powerful features, it is not that difficult to install. Anyone who knows which end of a CLI to hold should be OK.

MessyDos allows most of the things that the commercial product CrossDos can, but cannot read or write Atari ST discs or the very rare single-sided 360k 3.5in floppy. It's very fast, roughly twice the speed of CrossDos, and seems to be reliable.

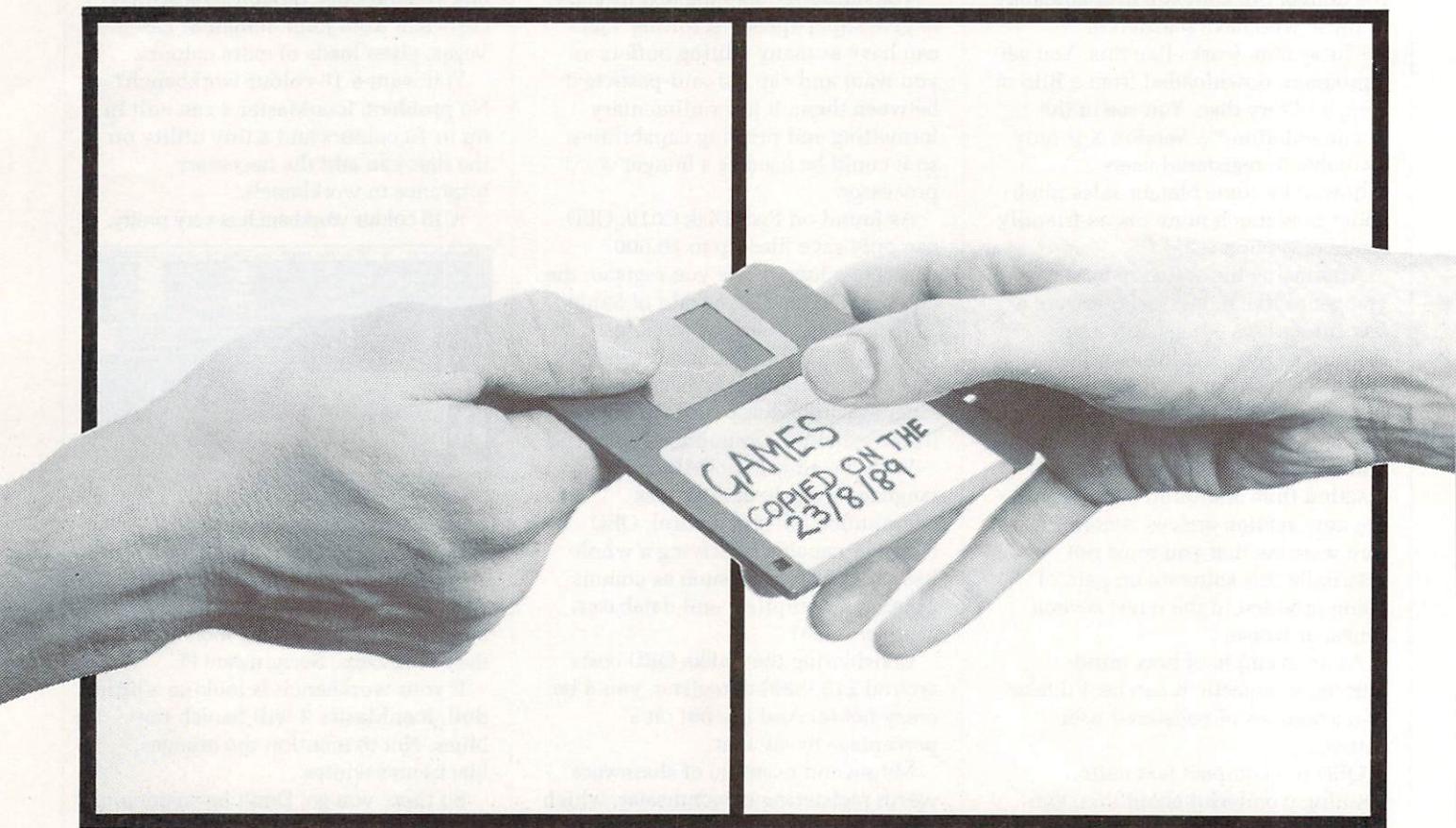
There are a few "features" which are a bit annoying, but none endanger the data on your discs. For instance it throws up an error when you put an Amiga disc in the drive where MessyDos is expecting a PC

one. Cancel the requester and the drive becomes a standard AmigaDos one again. I've been using it a lot for the last few weeks and it hasn't failed me yet.

A lot of machines support the 720k PC format; they can be used as normal on an Atari ST and the newer Apple Macs, capable of using 1.44 megabyte discs, can access them as well. So if you have an Amiga, MessyDos and another (lesser) machine, you can probably exchange data easily.

MessyDos (aka MSH) lives on Fish Disk #327. It's shareware, but Olaf Seibert (he who did the deed) didn't bother to specify how much he wants. That doesn't mean that you don't bother to pay him, OK?

WARNING



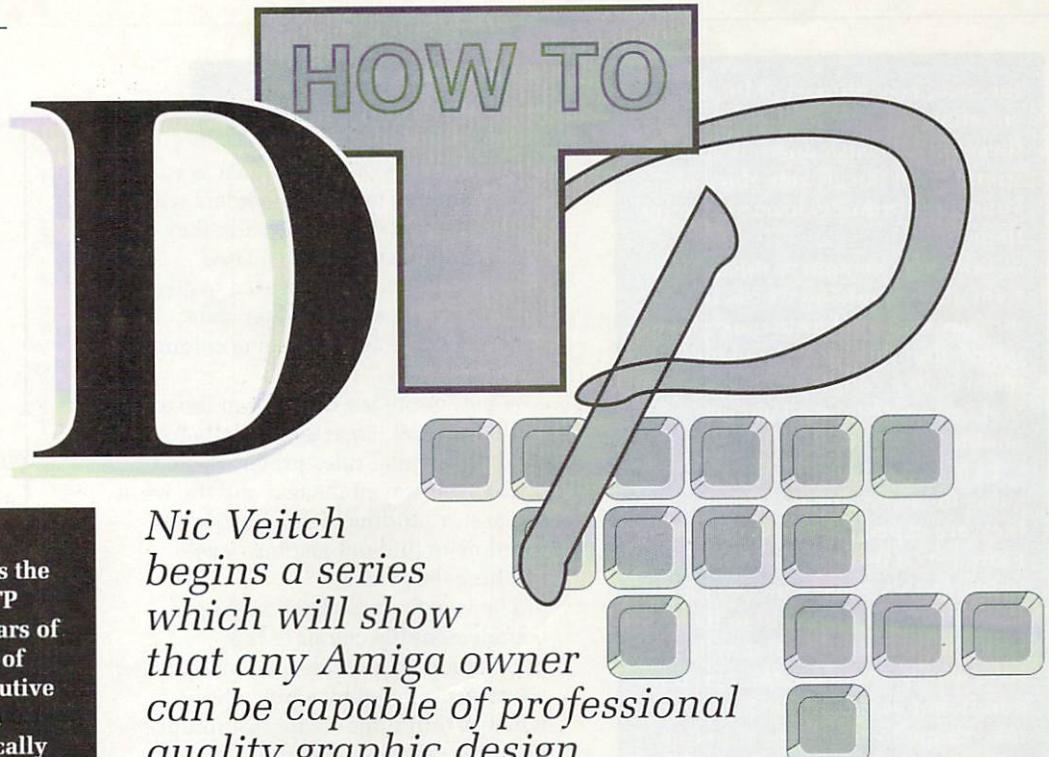
**THE ONE ON THE RIGHT
IS HANDLING
STOLEN GOODS.**

If you are involved in software piracy then you are breaking the law.

THIS CAMPAIGN IS ORGANISED BY
ELSPA
EUROPEAN LEISURE SOFTWARE
PUBLISHERS ASSOCIATION

*Any information on piracy
should be passed to
The Federation Against Software Theft.
Telephone 01-240 6756*





Nic Veitch
*begins a series
 which will show
 that any Amiga owner
 can be capable of professional
 quality graphic design*

Templates

 A DTP package without templates isn't an application, it's a waste of money. Page templates are exceptionally handy when designing things which are likely to be more than a one-off or has multiple pages which are similar in design.

If your package doesn't come with

templates, you can make your own. It's simple really. Just keep a saved page which has been laid out but has no text in it. You still have to do all the pixel-perfect calculations once, but at least if you get them wrong they will be consistently wrong. And consistency is very important.

Borders

 BORDERS help decide what the jargonists call the colour and emotional tone of the publication. It doesn't matter if you draw them in or not, borders are still perceived by the eye between the body text, around the edges of the paper, and between columns of text.

Tangible borders can be drawn using the DTP package's line or box function. If you want a very thick border, try using four filled boxes around the edges. Remember, borders don't need to go all the way around the text. Often borders appear just top and bottom or on one side only to provide a margin for comments.

Be careful though. Natural borders can be created by illustrations on the edge of the body text. In most cases this makes an assumed border, one which the reader perceives but does

not exist physically, so no further mucking around is necessary.

Aha, that reminds me of the second golden rule, I mean *guideline*, here at Amiga Computing Towers: If something is unnecessary, why put it in? Less is more.

WHY bother? What is the big idea behind DTP anyway? Well, after long years of being fettered by the whims of others, the desk-bound executive is now free to make his own mistakes. In these electronically enlightened times one man can become a publishing company. Creativity unleashed, without having to know the secret handshakes of the print room boys.

Therein lies the problem. People who belong entirely to the group not in possession of a clue are traipsing their ideas through forestfuls of virgin paper, with results resembling the off-cuts from other less noble forms of DIY.

Before I start a long diatribe of invective over the wheres, whys and et ceteras of DTP, I would like you to open your mind to one concept: There are no rules, only guidelines.

The process of DTP, from writing the words through layout design to printing is just that – a process. It is not an event. It is never "done", it evolves. And it does so because there are no hard and fast rules set in stone. Nor in hot metal, for that matter.

If it were as easy as merely obeying commands, we could all do it, or mechanise it, and I wouldn't be sat here writing about it.

So you have a load of text and you're ready to start some serious desktop publishing, right? Sorry, not. Mistake numero uno. I have one word to say to you: Planning. That is what it's all about, make no mistake. Writing

or the article begins to take shape I will still be thinking of what I have written and trying to make it better. I will be doing all this as well as

in effect what I am writing.

These changes should be

going through your head long before you boot up Pro Page.

Before I go to the under

lining of the under

MAKE YOUR | AMIGA | EARN!

Yes making money with your Amiga becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort. **NOW** by starting your own **HOME BASED BUSINESS**.

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country, including YOU, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied, Full or part time. For FREE details send S.A.E. to:



HOME BASED BUSINESS

31 PILTON PLACE (AM6)
KING AND QUEEN STREET
WALWORTH, LONDON SE17 1DR

EXTERNAL 3.5" AMIGA DISC DRIVE

£64.95



12 Months Guarantee
On/off switch
Through port
Slimline

Add £2.50
Post & Packing

Tel: 0767 314252

J.H.L.
8/9 Market Square Biggleswade Beds. SG18 8AP

COMPUTER REPAIRS

ATARI ST/AMIGA

Simply send your machine along with a £15 diagnostic fee and you will be sent a written quotation for the cost of repairing your machine.

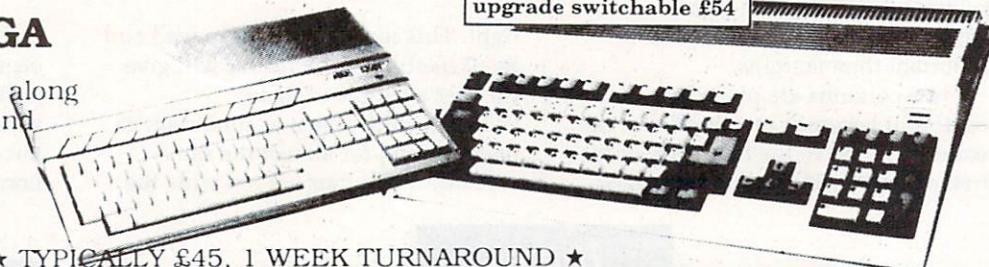
★ TYPICALLY £45, 1 WEEK TURNAROUND ★

W.T.S. ELECTRONICS LTD, CHAUL END LANE, LUTON, BEDS LU4 8EZ

Tel: 0582 491949 (4 LINES). Fax: 0582 505900

FIRST AID FOR TECHNOLOGY

STOP PRESS:
A500 512K RAM
upgrade switchable £54



MISTRAL COMPUTER SUPPLIES

0705 453814

AMIGA SOFTWARE

Mail Order	Mail Order
AMIGA SOFTWARE	
F29 Retaliator	16.99
Third Courier	16.99
First Contact	16.99
American Dreams	16.99
Supreme Challenge	19.99
Space Rogue	19.99
Fire Brigade	19.99
Pipe Mania	16.99
Player Manager	13.99
Dragons Breath	19.99
World Boxing Manager	13.99
Chess Player 2150	16.99
Hyper Action	16.99
Escape from Singes Castle	29.99
T.V. Sports Basketball	19.99
Tower of Babel	16.99
After the War	13.99
Full Metal Jacket	16.99
Rainbow Island	13.99
Manchester United	16.99
Infestation	16.99
Cyberball	13.99
P47 Thunderball	16.99
Typhoon Thompson	16.99
Renaissance	13.99
War Head	16.99
Xenomorph	16.99
Crossbow	13.99
Supercars	13.99
Scramble Spirits	13.99
Risk	13.99
Hunter Killer	3.99
Hoi Rod	16.99
Budokan	16.99
Datastorm	13.99
Interceptor	16.99
Batman	16.99
New Zealand Story	16.99
Robocop	16.99
Pinball Magic	16.99
Predator	16.99
F16 Falcon	19.99
Falcon Mission Disk	13.99
Gazza's Soccer	16.99
Double Dragon II	13.99
Xenon II	16.99
Super Wonderboy	16.99
Beach Volley	16.99
Space Ace	19.99
Ninja Warrior	13.99

★★★★★ AMIGA HARDWARE ★★★★★

Amiga 500 Bat Pack *SPECIAL OFFER*phone
Amiga Bat Pack or Flight of Fantasy with Tenstar Pack	£379.99
Amiga 500 Flight of Fantasy Pack	£359.99
A590 Hard Drive 20 MB *SPECIAL OFFER*	£352.99
Cumana External disk drive	£79.99
1084S Colour Monitor	£249.99
A501 Ram Expansion	£89.99
Trapper Ram Expansion with clock	£65.99
3.5" Disks Sony unbranded, boxed and fully guaranteed	
10	65p each
50+	60p each

Send Cheque/PO to: **Mistral Computer Supplies, 42 Park Way, Havant, Hants PO9 1HH**

Add £5 per item to cover 1st class postage on all Hardware.
Send for full Software and Hardware list. Software available for all formats

Greater London Computers

AMIGA 3000

Available Soon
Advanced Orders and information
from our Sales Lines: 081-527-0405

418 Hale End Road,
Highams Park,
Chingford,
London,
E4 9PT

Tel: 081 527-0405

Fax: 081 531-2688

Delivery

All orders of £50 or over include delivery. Orders over £400 include guaranteed next day delivery by DATAPORT.

Plugs

All computers are supplied with a correctly fused plug fitted.

Mail Order:

Orders can be made by Telephone, Fax or Post, Credit card orders are despatched checked and despatched at once. Cheques are rapid cleared and goods despatched upon clearance.

Other Items

Greater London Computers also stock the Amstrad PC range, Atari ST and several other systems plus printers by Epson, Star, Brother etc. We also keep a wide range of Printer ribbons and blank disks in stock at very competitive rates. Please Call for details.

HARDWARE

AMIGA 500 BATMAN pack

£389.95

AMIGA 500 Flights of Fantasy Pack

£389.95

AMIGA 500 Class of the 90's pack

£559.95

MONITOR

A1084S Stereo Colour Monitor

£249.95

Philips CM8833 Colour Monitor

£299.95

Philips BM7502 (AMBER)

£92.95

DISK DRIVES

A1011 External 3.5" Disk Drive

£99.95

A590 20Mb Hard Disk

£379.95

RAM Chips for A590 per

half Megabyte

£34.95

PRINTERS

MPS1230 Printer

£199.95

MPS 1550 Colour Printer

£239.95

Star LC-10

£199.95

Star LC-10 Colour

£249.95

Star LC-24/10

£249.95

OTHERS

A501 Memory upgrade

£89.95

A520 TV Modulator

£24.95

A1352 Mouse

£34.95

Mini Gen Genlock

£129.95

SOFTWARE

Deluxe Paint III, Deluxe Video III, Publishers

Choice, PageSetter II in stock.

Plus Lots of Games, ring for details



We come in peace, shoot to kill

SURPRISING as it may seem, the Amiga has never really attracted its fair share of light guns. It's doubly surprising because (a) the Amiga hardware directly supports such a device, and (b) it has a good – perhaps too good – reputation for games.

Have manufacturers have thought Amiga owners too pacifist? Too mellow? Not any more, for US Action (081-568-8297) has decided that Amiga owners have been unarmed for too long and have given us a complete light gun and software package.

The gun itself is a real handful of black pistol. It appears to have been adapted from a toy battery-operated unit, and still contains an (unused) miniature loudspeaker. DIY

fiends will have great fun wiring this up for their own devices. The important part is half way up the short barrel. It's a lens which focuses light on to a photosensitive diode.

Thanks to the miracle of Amiga technology, the pen connects directly to the joystick port via a short cable to sort the order of the wires. No interfaces, no set-up procedures. Results depended a lot on the monitor used and angle at which the gun was pointed at the screen. With a bit of experimentation, the gun was accurate to within a few centimetres. Just plug in and blast. Ahem.

Now you know me, I'm not one for gratuitous violence. That's why I was particularly pleased to see that the games provided with the gun were not just simple gratuitous shoot-'em-ups.

Instead, the gun is being used as a legitimate input device. Now the cosmic laser pistol can rate along with keyboards, trackballs and mice as simply ways of getting information into the computer. So it's shaped like a dangerous weapon. Would it be better if it was shaped like a rubber duck? Tricky philosophical questions such as these are better explored in other forums.

The first game is called Gateway to Ypsilon and is a nicely put together three dimensional scroller. Not only do you have to zap any objects that get in your craft's way, but you have to steer it as well.

In the second game the gun is in its more traditional form. Master of the Town urges you to play the part of an urchin who has a strong dislike of street lamps. So strong in fact,

that he must shoot as many as possible before the police arrive. It's a circus sideshow type of game with a bit of "Rebel without a cause".

In terms of value for money, £49.95 will get you the gun and the two games. The games are quite simple,

and would probably come into the budget-priced side of things. This means you are paying about 40 quid for the gun. Short intake of breath.

Hopefully with the Amiga's standard hardware and the better than average results, software writers will start to take advantage of light guns. Otherwise they're just a shot in the dark.

John Kennedy

The struggle for power

COMMODORE claims that the standard A500 PSU can comfortably supply enough power to handle one external floppy drive. This is probably as many as most users will want.

However once the more expansion minded add yet more drives and perhaps a meg or two more ram, the strain on the PSU may start to show.

Most modern 3.5in drives are pretty frugal with electricity, but older versions and unpredictable 5.25in systems might be a different story. Plus, with the emergence of A2000 lookalike expansion boxes, even more people will be looking out for something with slightly more oomph to drive their peripherals.

So if you have expanded your setup and are experiencing strange Gurus, you might be facing an internal power struggle.

The solution, according to WTS, is its new, upgraded PSU. It is a direct replacement for the standard unit and is housed in an almost identical case. In fact, if the leads were a bit longer you would be hard pressed to tell them apart.

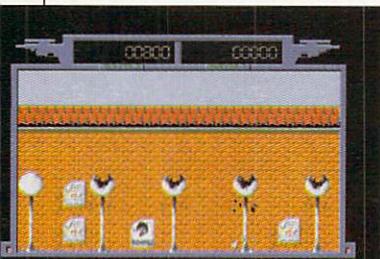
The most important difference is something which you can't see directly – the power output, which

has been increased by a claimed 30 per cent. This has been achieved by upping the current on the plus 12V rail to 2A. As this is where the external drives get their power, it should enable the full quotient of three external drives to be used with ease.

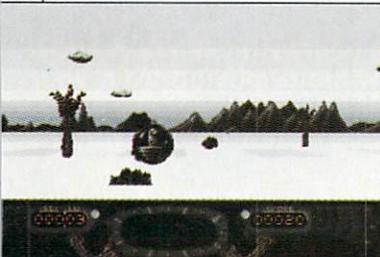
It is important to remember that for seriously expanded systems where large amounts of ram are to be powered internally, you might need an even more powerful supply. In the meantime, for us mere mortals who don't have an 8 meg memory, this will do nicely.

The A500 PSU is available for £49.95 from WTS on 0582 491949.

John Kennedy



Space Harrier in the shrubbery



How to be an urban terrorist

Low-cost... High-speed... Error-free...



This is what the EuroLink package offers . . .

- ★ Fully automatic operation – you don't need any prior knowledge
- ★ A multi-speed modem – 2400, 1200, 300 and 1200/75 baud, offering MNP error correction
- ★ Easy-to-use free comms software
- ★ FREE registration to MicroLink

... all for
£254.95 VAT
incl.

THE MODEM

The EuroLink modem is a robust and sophisticated device which turns data from your Amiga into signals which can be sent along a telephone line. It can handle speeds up to 2400 baud – about 40 words a second. Although it has many powerful features, it is simplicity itself to use when combined with its accompanying software. Built into the Hayes-compatible modem is MNP error correction – your guarantee of a corruption-free connection. Its wide range of other features include – auto dial and auto answer, auto redial, baud rate scanning, auto terminal baud rate sensing, 32-entry number store, internal loudspeaker, call progress monitor, bell tinkle suppression, external plug mounted power supply unit and built-in 'watchdog' circuitry.

THE SOFTWARE

Accompanying the modem is one of the Amiga's most popular and easiest to use telecommunications packages, Access!, which simplifies the connection to MicroLink. Two mouse selections and the rest is automatic. After that you can move freely around MicroLink, capture text on disc and send pre-prepared documents – all with a minimum of keystrokes. It can also be used to dial other services in addition to MicroLink.

WHAT YOU CAN DO WITH MICROLINK

With MicroLink any Amiga can be turned into a complete communications centre. Without any additional expenditure it becomes a telex machine, a fax machine, an electronic mail terminal.

- ★ You can use it to send a letter for next-day delivery to any address in Britain, send a telegram to anywhere in the world, or even send flowers without moving from your Amiga.
- ★ It's also a retrieval tool that lets you search out and store data from the world's leading electronic libraries.
- ★ It gives instant access to the credit status of many thousands of companies all over the UK... and it lets you embark on exciting adventures – in real time! – with like-minded enthusiasts in faraway places.
- ★ It keeps you up to date with the latest news, sport and weather.



YES – the long-awaited breakthrough in data communications has finally arrived!

Now you can use your Amiga (plus phone) to talk to MicroLink and other computers anywhere in the UK – or all round the world* – using the very latest in modem technology.

Today there are hundreds of MicroLink telephone points throughout the British Isles. This means that the majority of subscribers access the service for the price of a local call.

APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them

*The EuroLink modem and its accompanying software can also be used to access other information services such as Telecom Gold and CompuServe, as well as innumerable other databases and bulletin boards in the UK and overseas.

It's all you need to become part of a very friendly and helpful online community

ORDER FORM

Please send me a EuroLink modem with MNP error correction plus Amiga lead, power supply and free Comms software – all for the special offer price of £254.95 (incl. VAT)

I am already a member of MicroLink

I am not a member of MicroLink. Please send details

I wish to pay by:

Cheque/Eurocheque enclosed made payable to EuroLink
 Access/Mastercard/Eurocard/Barclaycard/Visa/Connect

Expiry _____
Date _____

No.

Name _____ Signed _____

Address _____

Post Code _____

Daytime telephone number in case of queries _____

Send to: EuroLink, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP
PHONE ORDERS: 0625 878888. FAX ORDERS: 0625 879966. AMC 7

SAVE
£15

A VIDI SPECIAL OFFER



READER OFFERS

Thanks to a breakthrough by Rombo Productions in frame-grabbing technology, you can now produce good colour images quickly and cheaply with Vidi-Amiga and the VidiChrome colour software.

- Take snapshots in 16 shades live from video
- Multiple frame store
- Dynamic cut and paste
- Full palette control
- Hardware and software control of brightness and contrast
- Compatible with all video standards

"Vidi must be one of the most exciting peripherals you can buy for your Amiga" - Amiga Computing, March 1990

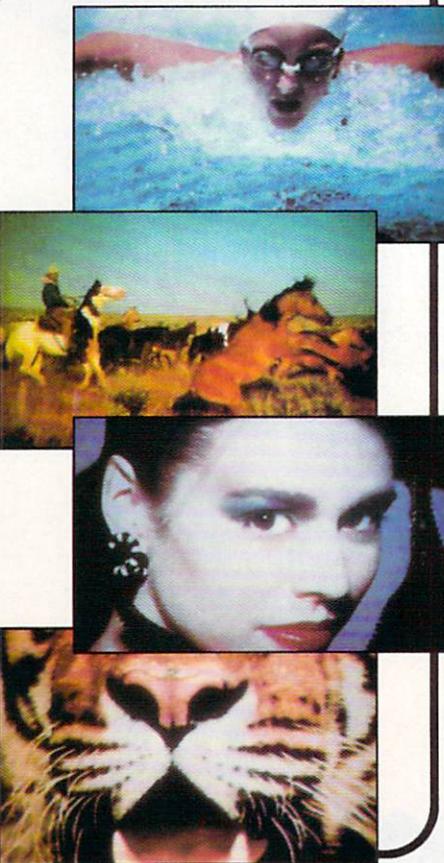
FULL PAL SCREENS

RRP £134.95*
OUR PRICE
£119.95

* Includes colour upgrade worth £19.95



While stocks last, use the form on page 111



READER OFFERS

Boost your micro's sound output with an Amiga Soundblaster

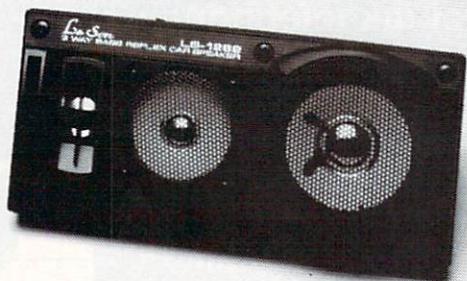
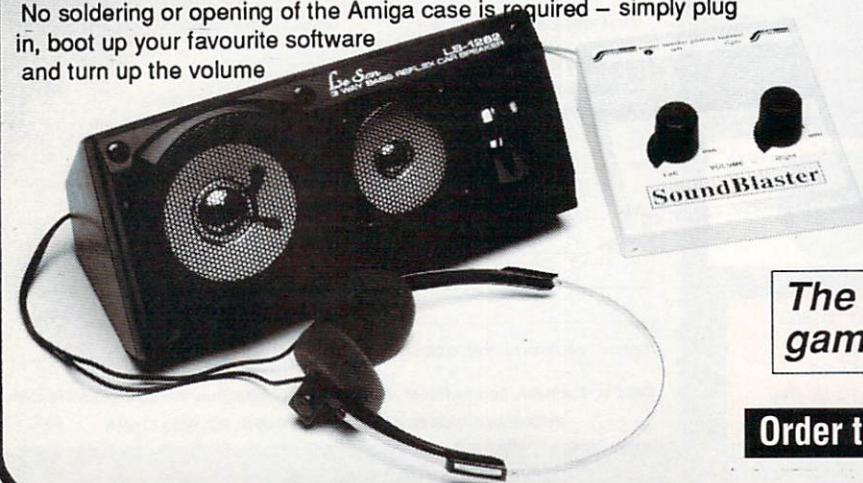
Take advantage of the Amiga superb sound capabilities by routing the output through the Soundblaster's high quality amplifier and speakers.

The amplifier has been designed specifically for the Amiga and implements the latest microchip technology to produce an ear-shattering five watts output. Twin volume controls enable you to adjust the output and balance to suit.

The quality 50 watt speakers consist of a 3in woofer for thumping bass output, a 2in mid-range unit for crisp music and effects and a tiny 1in tweeter which pumps out the highest frequencies the ear can hear.

The package comes complete with mains adaptor and full instructions. No soldering or opening of the Amiga case is required - simply plug in, boot up your favourite software and turn up the volume.

ONLY
£34.99



The essential peripheral for all games players and musicians

Order today, using the form on Page 111

Reader offers

TANK ATTACK

The unique computerised board game

Tank Attack is a computerised board game for two, three or four players, where each one takes the role of a General commanding a country's Tank Corps of one or more armoured divisions. Your objective is to capture the enemy headquarters, which will require the planned strategic deployment of your forces and regular fire duels between your own and enemy units. Weather, morale, skill, judgement, planning foresight, careful management of rebuild and repair facilities and luck all play a part in deciding the result of each game.

- Control a full division of tanks and armoured cars
- See all the fighting 'live' on your computer
- Superb board and fully detailed playing pieces
- Real time graphics
- Play as allies or enemies
- Suitable for all ages

RRP £22.95

OUR PRICE

£19.95



AMIGADOS: A Dabhand Guide

Is a comprehensive guide to the Commodore Amiga's disc Operating System (Versions 1.2 and 1.3). It provides a unique perspective on this powerful system in a way which will be welcomed by the beginner and the experienced user alike.

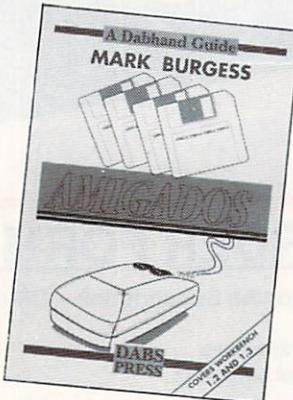
Rather than simply reiterating the Amiga manual, this book takes a genuinely different approach to understanding and using the Amiga and contains a wealth of practical hands-on advice and hints and tips.

The many features of this book include:

- Full coverage of Amiga DOS 1.3 functions
- Filing with and without the Workbench
- The Amiga's hierarchical filing system
- Pathnames and Device names
- The Amiga's multitasking capabilities
- The AmigaDOS screen editor
- AmigaDOS commands
- Batch processing
- Amiga Error code descriptions
- How to create new systems discs
- Use of the RAM discs
- Using AmigaDOS with C

Amiga Computing approved reading

£14.95



TO ORDER
PLEASE USE
THE FORM
ON PAGE 113

Only £19.95
genuine leather
personal organiser

Worth over £30, the personal organiser is crammed full of pages of information including year planners, first aid tips, international holidays, mileage charts, dialling codes, weight and measure conversions and locations of motorway service areas.

There's also a daily diary section for 1989, 1990 and 1991, maps of the UK and the London underground, an appointments schedule, several pages for notes, a personal finance organiser, expense sheets, a telephone index, and much, much more!

Each section is marked using plastic tabs - making it easy to find the page you need. There are special pockets for your credit and business cards, and you get a handy plastic ruler which you can also use to keep your place. *So get yourself organised on us. Order today and we'll mail your personal organiser by return!*



Just some of the personal organisers
information-packed pages

LET THERE BE COLOUR

Once upon a time there were two drawbacks to video digitising on the Amiga. Either it was slow or it was expensive. Thanks to a price breakthrough from Rombo, you can now produce good colour images quickly and cheaply. Thanks to Amiga Computing and Rombo you can get the high specification PAL VIDI digitiser and Vidi Chrome colour software for only £119.95.

The award winning Vidi digitiser connects to a black and white or colour video camera to grab mono pictures instantly and uses a series of filters combined with a camera to produce startlingly realistic HAM colour images.

SAVE £15

HISOFT BASIC
SAVE
£30

Buy the combined package of the HiSoft Basic Compiler and HiSoft's award-winning Extend library for less than the price of the compiler alone

HiSoft Basic is THE language to get you started with programming the Amiga.

- Runs up to 30 times faster than Amiga Basic
- Produces stand alone programs
- Compatible with PC Quick Basic & Amiga Basic

HiSoft Basic is easy to use

- Supplied with a high quality manual
- No upper limit to program or data size
- Multi-tasking editor and compiler

HiSoft extend is the natural enhancement for HiSoft Basic users

- 50 functions and subprograms
- Load and Save IFF pictures
- Use all the commands in your own programs

Together both programs would usually set you back almost £100, as a special offer to Amiga Computing readers both programs are available for just £69.95.

SEE ORDER FORM ON PAGE 111

EXCLUSIVE!

RRP £99.95
OUR PRICE
£79.95

SAVE £20

Just how good is Protex?

...merely the best wordprocessor for the Amiga

Reviewed in
Amiga Computing,
January 1989

Protex is acknowledged by many as THE word processor for most home micros, and the Amiga version is no exception.

What you get with Amiga

Protex is a powerful workhorse with a proven track record. Plus a saving of £20 off the retail price of the new version 4!

Press comments

"For power and value for money, I don't think that Protex can be beaten. It can be used as simply as you choose, or can handle the most complex mailmerge routines... in short, it can be what you want it to be". - Micronet

"Anyone with a professional interest in words is likely to find it pays dividends". - PC Business World

"It is a refreshing change to review an inexpensive WP package which lives up to every expectation". - Which PC

"Protex deserves to be the system by which all other word processors are judged". - Your Computer

"The great strength of the package is its ease of use". - CPC Computing

"Deserves very serious consideration". - Amstrad Professional Computing

Keyboard dust cover (A500)

£4.95

Protect your Amiga with this top-quality

cover made from clear, water-resistant vinyl. It's bound with strong cotton and features the Amiga Computing logo.



Binder
£5.95

Twelve rods hold your issues in place and keep them in pristine condition in this smart PVC binder.

Disc storage box
£4.95

This luxury padded box is the ideal storage medium, holding up to FIFTY 3.5" discs

Mouse mat
£6.95

The perfect desktop environment for your mouse with its specially-designed, perfect-grip surface. It ensures much smoother movement, gives super-positive control and protects your table top from scratches.



Home Accounts

Day by Day

Home Accounts has been designed to make full use of the Amiga's features, giving you the widest range of home accounting facilities available at this price.

The program lets you set budgets and control up to 13 separate accounts, with optional printouts of any data. Within seconds of loading you data disc you can check your budget or any account, and even display or print the data in bar or pie charts.

Day by Day replaces your manual system for diary, business organiser, notepad, planner, reminder and so on.

It's suitable for both business and home applications, including numerous useful functions which serve every requirement.

It's suitable for both business and home applications, including numerous useful functions which serve every requirement.

Among its many features are:

- ★ Calender/diary/planner
- ★ Categories such as bills, birthdays and letters
- ★ Appointment sorting
- ★ 'Urgent' notice board
- ★ 'Overdue' notice board
- ★ Advance notice of forthcoming events

- ★ Updating of regular appointments
- ★ Comprehensive search facility
- ★ Automatic reminders
- ★ At-a-glance week and month summaries
- ★ Print option
- ★ Grouping of related messages

Both of these powerful programs are excellent value on their own, but if you buy this exclusive combination package we'll knock £20 off the combined retail price.

RRP £54.90
OUR PRICE
£34.90

SAVE £20

Automatic reformatting of text
Page breaks shown during editing
Can spell check as you type
Over 70,000 word English dictionary
Macro record mode
Footnotes
Menu driven configuration program
Auto indent for program editing
Line drawing
Fast and flexible find and replace
Powerful mailmerge facility
Box mode for creating columns
Edit two files at a time
Keyboard or mouse operation

Reader offers

Publishers' Choice

SAVE £20

Whether you are designing a simple flyer, creating a newsletter, banners, posters, or even producing a magazine, Publisher's Choice offers a comprehensive solution to your Desktop Publishing and presentation requirements.

With the program you can easily combine text in a variety of styles, in multiple columns and with customised graphics. It comes with over 200 professionally designed images, and high quality "Headline" fonts.

In fact, Publishers' Choice combines the Kindwords 2.0 wordprocessor, PageSetter 1.2 page composition package, Artists' Choice art program, and the Headline fontpack.

Because the Amiga is multi-tasking you can have all the programs working on the screen at the same time, or just use them individually as powerful stand-alone programs.

RRP £99.99
OUR PRICE
£79.99

Steve Davis World SNOOKER

SAVE £5

Play Steve Davis at his own game in the most popular snooker simulation the home computer has ever seen

Go on, give it some stick!

RRP £19.95
OUR PRICE
£14.95



- Snooker, 10 ball or 15 ball
- Billiards, English or French
- Pool, American or English
- Smooth, fast movement
- Six skill levels
- Trick shots
- Table editor
- Magnify option
- Digitised pictures and sound

It's the perfect game for billiards and snooker fans of all ages, a game you'll come back to again and again, year after year

"A classic game..." - Amiga Computing, July 1989

ArgAsm
Probably the fastest assembler ever for the Amiga!

Exclusive price for readers of

ASSEMBLER

- ✓ Fast one-pass design
- ✓ Code limited only by memory
- ✓ Unlimited number of labels
- ✓ Long label names
- ✓ Unlimited macro nesting
- ✓ Unlimited include nesting
- ✓ Include binary data
- ✓ Extra-helpful error messages
- ✓ Instruction cycle timings
- ✓ Processor flag display

EDITOR

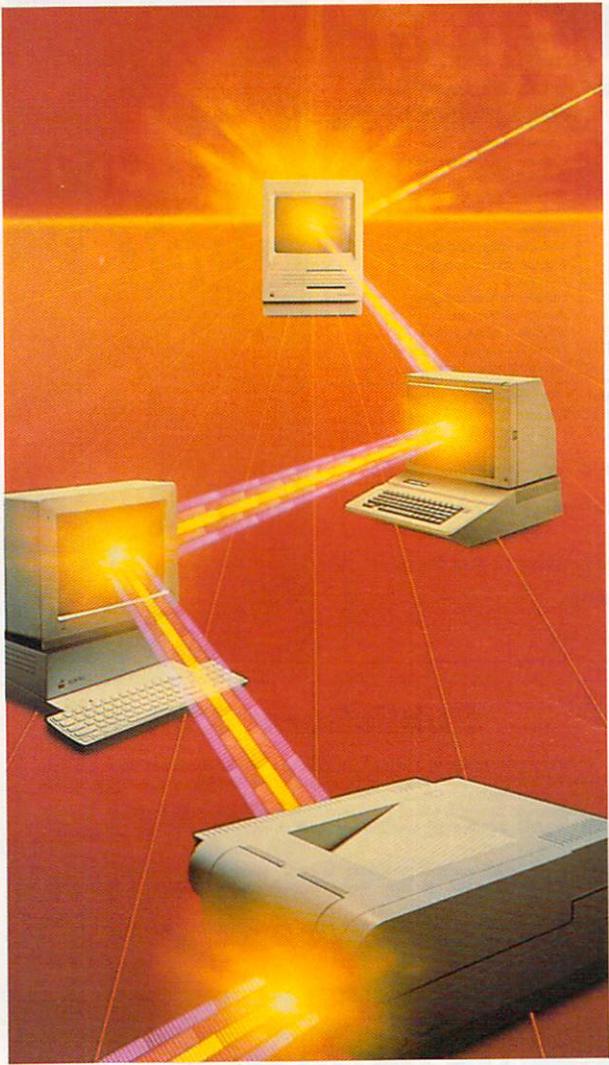
- ✓ Multi-tasking
- ✓ Full multi-file capability
- ✓ Unlimited split views of files
- ✓ Cut/paste between windows
- ✓ Insert/delete blocks etc.
- ✓ Full configuration facilities
- ✓ Save/restore environment
- ✓ Extremely fast text scrolling
- ✓ Fast page update rates
- ✓ Assemble from any window
- ✓ Works on Workbench screen

AMIGA
COMPUTING

£54.95

RRP £59.95

SAVE £5!



'TODAY'S WAY' TO GET in touch

MicroLink is your vital link with other users the world over. Exchange news and views via a Bulletin Board or pit your wits against fellow players of MicroLink's challenging multi-user games, including BLOODSTONE and FEDERATION II.



WHAT'S GOING ON OUT THERE?

VIEWTEL lets you see at a glance what's happening – as it happens – in the world of finance, current affairs, sport and leisure.



STEAL MICHAEL FISH'S THUNDER!

WEATHERLINK lets you display satellite weather maps of the U.K. and Europe on your own monitor.



'SAY IT' WITH FLORALINK

Make someone's day extra special with flowers and your message delivered direct via MicroLink's FLORALINK facility.



HOW'S BUSINESS FOR 280,000 TOP U.K. COMPANIES?

INFOCHECK gives you the current status and credit recommendations on over 280,000 leading companies in Britain.

MicroLink

WE'VE TAKEN INTO ACCOUNT ALL BRITAIN'S BIGGEST BUSINESSES

The facts about 2.1m U.K. companies and full audited accounts for companies with £1m+ turnover via JORDAN INFORMATION

HOT NEWS FROM MICROLINK

Instant access to early edition newspapers plus many U.K. and U.S. magazines, journals and research reports through PROFILE INFORMATION.



WHAT'S THE QUICKEST WAY TO JFK?

Key into the OFFICIAL AIRLINE GUIDES (OAG) for full flight, fare and seat availability details of 100's of airlines.

YOU'VE GOT 'FRIENDS IN THE TRADE' ALL OVER THE WORLD

BUSINESSLINK is MicroLink's bulletin board where you can pose problems, queries and requests to like-minded professionals throughout the world.

And these are just a few of over 1200 varied business databases available through MICROLINK covering Market Information and Research Reports to Technical, Medical and Scientific Data.

THE BUSINESS BRAIN THAT'S YOUNG AT HEART

BE ABLE TO ACCESS ALL THIS FROM JUST £7.00 A MONTH

MICROLINK TURNS ANY PERSONAL COMPUTER INTO A COMPLETE COMMUNICATIONS CENTRE

Make the most of your computer with MicroLink's total communications package which includes Electronic Mail, Fax, Telex, Telemessages, Telegrams and RadioPaging.



I would like to know more about MicroLink. Please send me the complete MicroLink Information Pack.

LAM FC 7

Name

Address

Postcode

Tel No

MICROLINK, 4 MOONS PARK, BURNT MEADOW ROAD, REDDITCH, WORCESTERSHIRE B98 9PA.
TEL: 0527 69459 (Sales & Marketing)
FAX: 0527 63084

MicroLink
The Vital Link

TO SERVE IS A PLEASURE

BYTES™ & PIECES

Stand 80
Sixteen
Bit Show
28-29-30th
June, 1st July.

2000 'SLOT MACHINE'™

For the 2000 with auto-booting and driver software. Ready formatted. Can be a hard card or with drive mounted in a drive bay or in an external case. Your choice. (We can provide just the interface if you provide the ST506 drive). Uses the OMTI cache memory card that is RAPID! Read speeds near to 500K a second are possible. We can sell you a 40 meg system for £450 but for the serious user we recommend the very latest drive, a 66 meg 3.5 inch 24 mill/secs drive that you can hardly hear running and at £550 it is a steal. Don't forget, with our systems you double the capacity by the purchase of a second drive only! Highly recommended by AMIGA USER INTERNATIONAL and 17 BIT SOFTWARE WILL work in the new B3000 AMIGA

HARD DRIVE KITS

You provide the ST506 type drive, we provide the interface, cables, fast caching controller and case with fan cooled power supply. The full kit (less drive) costs £299 for an RLL system. MFM £289. Or buy the complete system ready formatted capacities start at 42 megs.

FULL B2000 SYSTEMS

We can supply the B2000 & Fatter Agnus at £799

8meg card with 2 meg £275
40 meg auto-boot hard card £425
66 meg auto-boot hard card £550
87 meg auto-boot hard card £720
larger drives available

A500 owners find out how your A500 can be worth £300 when you buy a B2000 rev 6.2. This is not Commodore's deal but our own so we don't force you to have a hard drive of 40 megs. YOU choose the peripherals you want.

NEW!

68030 card for A500 and B2000

The first ever to give you B3000 power on the A500. 25 mhz and 33 mhz can take kickstart in 32 bit memory and works with your existing 16 bit memory as well as 32 bit. Same board for A500 and B2000 very fast so send or request full spec and low low prices

ONLY FROM US

512K RAM BOARD

Without clock £44.95 With clock £49.95 We do not believe in switches that break and cause problems. ALL our Ram Boards go with a utilities disk for switching Fast Ram on and off; a clock reset program when the clock has been hit by a virus or a protection routine and the latest virus checkers.

2MEG BOARD

A500 memory board uses low power CMOS chips as 512k, 1 meg or 2 meg. Transparent auto-configure. No leads or jumpers, multi-layered board, buffered at £299 for 2 megs

1.5MEG BOARD

A1000 memory board with clock, can autoconfigure 512k 1 meg & 1.5 meg software ram test disk 1.5 megs £250

OCTABYTE™ 8MEG - 2000

For the 2000 and the new AX-S expansion system. (2000 Only) With a ram controller chip for contiguous ram not fragmented! Software support disk tests ram. The latest technology, not a board a few years old. 2 megs £275 8 meg £699 will work in the new B3000!!

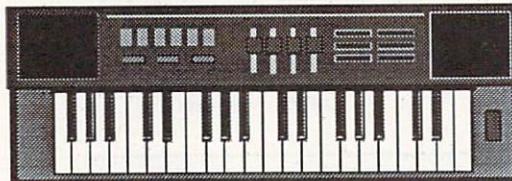
X-RAM™ 8MEG - A500-A1000

The same as 'OCTABYTE' but in a slimline case with optional power supply.. £325 for 2 megs X-RAM can be used in a 2000 when you upgrade or in the new B3000.

A500 fan cooled beefy power supply no more power problems and only £69

MUSIC X full version £99

With Midi interface £109



AUDIOMASTER II plus SOUND TRAP 3 £59.95

BEST SOFTWARE AND HARDWARE
MIDI INTERFACE AND SONIX £35

MAXIPLAN 500 plus KIND WORDS 2 plus SUPERBASE 2 together retail at over £250. From Us a silly £70 or £30 each Get one of the three at £20 with every Ram board purchased. Save lots of money but hurry while stocks last

F29 RETALIATOR £17.50

IT CAME FROM THE DESERT £17.50

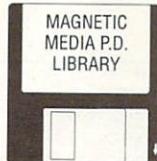


BYTES & PIECES, 37 CECIL STREET, LYTHAM, LANCS, FY8 5NN, UK



Tel 0253-734218 Fax 0253-736035 ON-LINE Support number available

Callers by appointment please. Open 11am to 6pm Monday to Friday Prices include VAT unless stated
We are the Official Spirit Technology distributors and manufacturers. Dealer enquiries welcome



AMIGA PUBLIC DOMAIN

LOOK!!

HUNDREDS OF TITLES *STARTER PACKS*

FAST, RELIABLE SERVICE

LOOK!!

£1.80 each of £16.50/10

Pack A	Delirious 1, 2, 3, 4.....	(4 Disks).....	£6.50
Pack F	Titanix, Crusaders, Trash & TTB Music.....	(3 Disks).....	£5.00
Pack I	Vortex, Antirax, & Northstar Megademos.....	(3 Disks).....	£5.00
Pack K	DOC, Wild Copper, & RIP Demos.....	(3 Disks).....	£5.00
Pack L	Every inch a Lady, Sam Fox, Sabrina Demos.....	(3 Disks).....	£5.00
Pack M	Tiffany, Kylie, & Debbie Gibson Demos.....	(3 Disks).....	£5.00

MANY MORE OFFERS & STARTER PACKS SEND S.A.E. FOR FULL LIST
PLEASE MAKE CHEQUES/POSTAL ORDERS PAYABLE TO:

MAGNETIC MEDIA

VICTORIA ARCADE, ALDERGATE
TAMWORTH, STAFFS B79 7DL
TEL: 0827 59566

PRICE INCLUDES VAT,
1st CLASS POST IN UK
(Airmail Postage: Europe/Scandinavia £3.50/10
Other countries £6.50/10



COMPUTERWISE BRIGHTON

AMIGA SPECIALISTS

WE HAVE 100s OF SOFTWARE TITLES (MANY ARE NOW
DISCOUNTED), BOOKS
AND PERIPHERALS IN STOCK AT ALL TIMES.
CALL IN TODAY FOR YOURS

£1000 INSTANT CREDIT AVAILABLE
TO PERSONAL CALLERS

0273 674626



OPEN 10 AM TO 5.30 PM MONDAY TO SATURDAY
44 GEORGE STREET, KEMPTOWN, BRIGHTON
OPPOSITE THE AMERICAN EXPRESS BUILDING



AmigaTEX

AmigaTEX provides a powerful alternative in document preparation. It enables you to typeset complex or long documents, especially those of a technical nature such as user manuals or journal papers. It gives you true typeset quality with kerning, ligatures, full floating accents, mathematical and technical symbols and the ability to produce tables and special formats. AmigaTEX will accept input from any text editor or word processor and with its built-in screen previewer, a document formatter of mainframe power becomes available. Also included with AmigaTEX are LaTEX – a document formatter with dozens of preformed styles, SliTEX – a slide generating macro, and BibTEX – a bibliography database program. AmigaTEX is fully file compatible with other versions of TEX.

Printer drivers are available for most printer types and the complete set of Computer Modern Fonts is included. A companion program METAFONT is available for those who wish to create new fonts or modify existing ones.

AmigaTEX is £125 and printer driver sets (laser series, Epson FX series, NEC P6 and Epson LQ series, HP DeskJet) are priced at £75 each. METAFONT is £50. All prices include VAT and carriage.

Access and Visa accepted.

For further details and free demo disk write or call:

THE TEXT FORMATTING COMPANY
SUFFIELD WORKS, 1 SUFFIELD ROAD, LONDON N15 5JX
TEL: 081-802 4470

E_P_D . E_P_D

ELECTRA PUBLIC DOMAIN

A Fast and Efficient Service

1 Disk £1.60

10 or more Disks £14.00

(Postage, Packing & VAT inclusive)

In the event of a query please contact Paul King on



071 433 3428

Cheques or postal orders payable to P.J. King,
Electra Public Domain, 35 Marlborough Mansions,
Cannon Hill, London NW6 1JS

Reach the top with ... LCL Self-Tuition Services



World leaders - Hons graduate - Teachers Authors - At all major

shows - £5 off total for 2, £10 off for 3

Each course includes 24 programs on up to 105 topics and come with 2 books and usually

a voice tape and costs only £24.

NEW NATIONAL CURRICULUM VERSION

PRIMARY MATHS COURSE - Full screen colour graphics. Ages 3-12 years.

MICRO FRENCH (8-GCSE) - With real speech + graphics adventure game.

MICRO MATHS (11-GCSE) - Best seller, highly acclaimed.

MICRO ENGLISH (8-GCSE) - Eng. Language or EFL with real speech.

MEGA MATHS NEW - A-level course with all calculus by graphics.

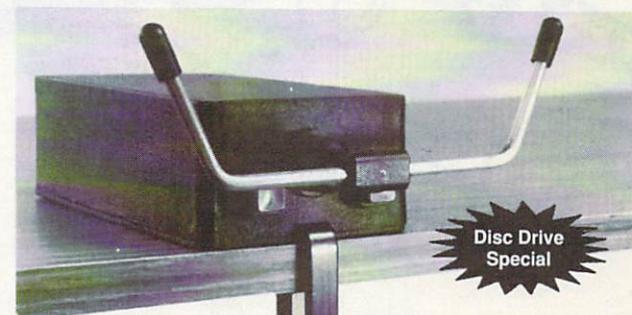
HOME COLLEGE - Opening learning course of video, software and books.

Choice of MATHS, ENGLISH or FRENCH. Only £49.99 each.

SEND OR PHONE ORDERS OR OFFICIAL ORDERS FOR FREE COLOUR CATALOGUE AND POSTER TO:

LCL (DEPT AC) Thames House, 73 Blandy Road, Henley, Oxon RG9 1QB

OR RING (0491) 579345 (10AM - 10PM)



DELTABASE A

Analogue Yoke joystick for Flight Sim II. Similar to a light aircraft control it rocks from side to side for aileron movement and slides in and out for elevator controls. £29.95

Disc Drive
Special

DELT 3A - A light action analogue joystick with fire buttons. Introduced so that software companies can produce the software to use it. Meantime this also will only run Flight Sim II. £14.95

DELT 3S - Standard switched joystick but very light and easily hand held. £14.95

AMI-CAT - Mouse eliminator. Joystick control of mouse functions. £29.95.

SIMULATOR - Sublogic Flight Sim II. £27.95.

SOFTWARE - Scenery Discs. £15.95.

EXTERNAL DISC DRIVES - 1 Meg Chinon drives as used in Amiga. Cased, with leads, through port and disable switch, limited number - first come first served. £69.95.

VOLTMACE

Unit 9, Bondor Business Centre, London Road, Baldock, SG7 6HP

Telephone 0642 894410



Prices include VAT & 1st class post
Dealer & Distributor terms available



IT may be easy to believe that the life of a computer magazine journalist is a fun-filled and relaxing experience.

You might even think that here in the editorial offices of *Amiga Computing* we do nothing more than sit around and play games all day. Occasionally the telephone might ring and one of the bevy of PR persons might invite us out for lunch under the guise of showing us their latest game.

Then back to the office for a quick chat with the advertising

Harder than you think

department, a cup of delicious vending machine coffee and off home in the company Rover.

Alas, if only this were the case, for real life rarely lives up to expectations.

Take the recent Green incident, for example. There he was, all set to visit Dublin to

see the premier performance of the Don Bluth film *All Dogs Go To Heaven* because of a computer game tie-in. Everything seemed wonderful. Little did Green know of the horrors in store.

All was going well as he made his way courtesy of British Rail to London Town and next day's early morning flight. Then the first disaster struck - his accommodation refused to accommodate him. This necessitated a hasty visit to a friend, who agreed to put him up for the night.

And so next morning, bright eyed and bushy tailed, he set off for the airport. He never made it.

Instead, halfway across a zebra crossing he was struck in the midriff by a Vauxhall Cavalier.

Several dramatic loop-the-loops later he re-established contact with the ground, using his head to cushion his fall.

The first we knew of all this was a telephone call to the

office which went along these lines:

"Erm... I'm not in Dublin, I've been run over. Where am I? What am I supposed to be doing? Right... I'll call again some time..."

After about six hours without contact, Green was officially classed missing, presumed out to lunch. Even the software house which had invited him on the journey had not seen him. Was Green wandering around Euston Station in a dazed state? Who would write *Amiga Arcade* this month? The office party was well into the planning stages.

Eventually our beloved Reviews Editor did reappear, complete with large facial bruise and forehead mounted sticking plaster. Having missed the flight by being in the casualty ward of a local hospital, he clambered into the InterCity and came home again.

Comments such as "I see you've suffered some sort of head crash" were not appreciated.

It's a hard life.

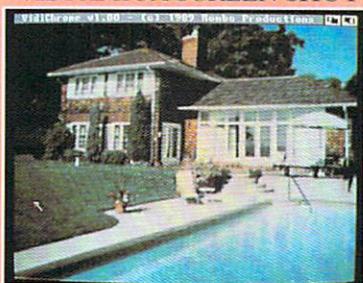


ADVERTISERS INDEX

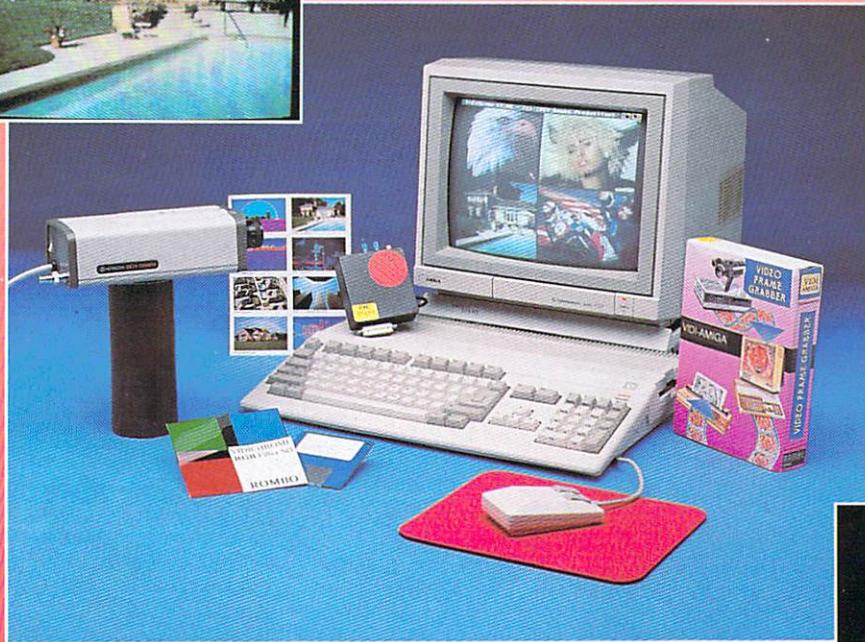
Amigatex	113	Digita International	58	Media Direct	83	SK Marketing	92
Applied Research Kernel	83	DS & K Designs	77	Media Value	86	Softmachine	83
Arnor	66	Electra PD	113	Memory Expansion Systems	12, 32	Softsellers	19, 29
Ashcom	29	Eurolink	104, 105	Microdeal	50	Softwise	34
Bitcon Devices	91	European Peripheral Distribution	6	MicroLink	87	Solid State Leisure	34
Bytes & Pieces	112	Evesham Micros	26	Microtext	84	Special Reserve	49
Calco	31	Greater London Computers	102	Millenium	45	Trademasters	77
Castle Software	98	Hampshire Micro Computers	31	Mirrorsoft	116	US Action	23
Computer Store	76	Home Based Business	102	Mistral Computer Supplies	102	Virtual Reality	34
Computerwise	113	HSV Computer Services	25	Overseas Media	3	Voltmace	1134
Contriver Europe	20	Infogrames	2	Power Computing	13, 14, 15	WTS Electronics	102
Database Software	110	Janor Hirst Holdings	102	Proton Software	84	Wizard Software	31
Delta Pi Software	84	LCL	113	P Dom PD Amiga	96		
Diamond Computers	16, 17	Magnetic Media	113	Rombo	115		
Digicom	35	MD Office Supplies	67	Silica Shop	18		



VIDI-AMIGA SCREEN SHOT



AVAILABLE
FROM ALL GOOD
COMPUTER SHOPS



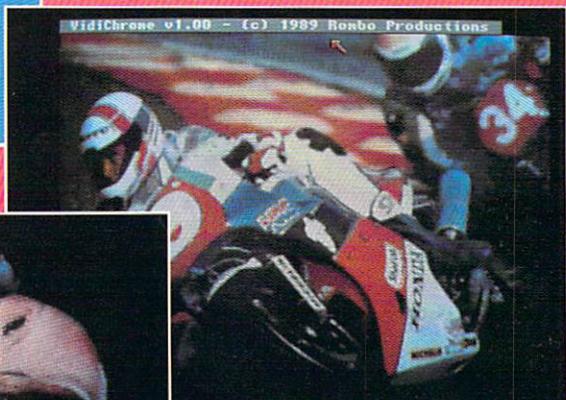
VIDI ENABLES YOU TO...

- Have perfect freeze frame from any video.
- Incorporate real life objects into your favourite design.
- Grab real time 3-D images from TV.
- Enhance your graphics creativity.
- Capture and store action sequences.
- Desk top video.
- D.T.P. (Desk Top Publishing).



VIDI-AMIGA SCREEN SHOT

COLOUR UPGRADE
£19.95 inc VAT



VIDI-AMIGA SCREEN SHOT

VIDI-
AMIGA

TEL: 0506-414631

FAX: 0506-414634

Rombo Ltd., 6 Fairbairn Road, Kirkton North,
Livingston, Scotland EH54 6TS.

COMING SOON...



© 1990 MIRRORSOFT LTD
© 1989 UCS & Amblin

Image Works, Irwin House, 118 Southwark Street, London SE1 0SW. Tel: 071-928 1454

