

AMIGA

COMPUTING

GOOD VIBRATIONS

Valued
at over **£100!**

**FREE COMPLETE MUSIC
PROGRAM**

BARS&PIPES

PROFESSIONAL 2 jr
THE MOST POWERFUL MUSIC
GIVEAWAY EVER TO GRACE A
COVERDISK

Special version of
the Amiga's number
one music package,
complete and just rarin' to rock!



AMIGA
The
Best Reason
SoundWorcs
Ltd

PLUS PrintManager
Amiga Diary

**Make
Amiga
music
like a
genius!**

**New
beginners'
series starts
inside**

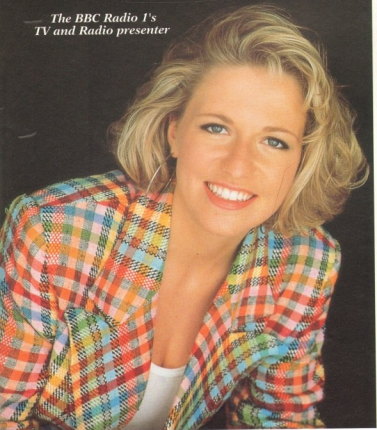
europress
ENTERPRISE

**REVIEWED: PIPView • TOSMS
Emplant • Blitz Basic 2 • Real 3D v2
HD Floppy • PLUS modem round-up**





The BBC Radio 1's
TV and Radio presenter

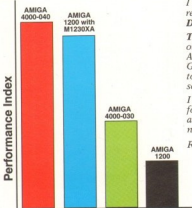


STOP PRESS

Latest news on the Amiga 4000-030 shows demand outstripping supply world wide. If you are having problems getting stock or perhaps feel disappointed that you opted for the A1200 before you knew about the new machine all is not lost. Check out the table on the right showing the A1200 fitted with the new M1230XA Microbotics accelerator available from Indi from

ONLY £299.99

Performance Comparison



INDI DIRECT MAIL Proudly Presents THE JAKKI BRAMBLES COLUMN

Hi,

It certainly doesn't seem a month ago that I last wrote for Indi and what a month it has been.

With immaculate timing Commodore announced their superb Amiga CD, are Sega and Nintendo worried?

Interesting question, 32 bit technology, 16.8 million colours and the amazing AA chip set: what do you think?

But, more to the point, what does it mean to you if you currently own or were thinking of buying an Amiga 600 or 1200. First of all let's be clear, you cannot use the Amiga CD as a computer until there is a keyboard and drive option (promised for 1994). So if you want to do any more than run CD software remember you will not have access to the vast range of floppy based software on Amiga nor the processing power that makes the Amiga so rewarding if you want to do more than games play.

So what does this mean to the current Amigas? To make it simple, the **Amiga 600** is a cheap entry level system perfect for the first time user or those working to a budget. The **Amiga 1200** is the elite system for the dedicated user who wants to access the speed and performance of this mid range system; you can upgrade later via an external CD solution promised to be hot on the heels of the Amiga CD.

The Amiga CD should be available to dedicated games players in August. Phone INDI to check for pricing and availability; and don't be confused, both the Amiga 600 and 1200 are around for some time. In fact Indi have already finalised their plans for Christmas!

Mail order purchasing can be worrying, sending your hard earned cash to a company that may be hundreds of miles away, will your dream machine arrive as promised and what do you do if it doesn't?

Indi is part of a very large company with their own in-house experts and systems and yet it still sometimes goes wrong. At Indi they have a Customer Care department who do nothing else but problem solve. So if Securicor couldn't find your house but will re-deliver tomorrow, or you cannot load a disk, they are there to help.

But what if the problem needs a fresh pair of eyes, perhaps you feel that you have been unsympathetically or unfairly treated?

I was delighted to learn that Indi take their responsibilities so seriously that they have joined the **DMA**.

The **Direct Marketing Association** is a very serious organisation (recognised by the Advertising Standards Association and other such official bodies). Getting accepted is difficult, staying in required Indi to set and achieve real customer satisfaction and solve problems quickly if they occur.

I sincerely hope that all Mail Order Companies will follow Indi and display the DMA symbol on their advertising. If they don't you should ask them why not.

Regards,

Jakki Brambles

**DEFERRED CREDIT ON ALL ORDERS OVER £200.
*PAY 10% NOW AND NOTHING MORE FOR 3 MONTHS.**

CUSTOMER CHARTER

INDI Direct Mail is original and very exciting. Before you buy mail order you must first be confident that you will receive the product you've ordered and that the supplier will still be there in the future, should you need them.

A mail order purchase from INDI is a safe and secure decision, and here's why.

INDI is a wholly owned subsidiary of a public company now in its tenth year of trading and specialising in the supply of computer products.

With a turnover approaching £30 million per annum, we have the resources and the purchasing power to offer you the best deals, deliver them next day nationwide and always be around when you need us.

SALES AND SUPPORT

The INDI sales team have been trained to take your order with the utmost care and efficiency. All stock offered for sale is held in stock, centrally at our group warehouse complex and is available for next day delivery, direct to your home or business. If at any time we are out of stock your money will not be banked until the product is available (a point worth checking should you feel tempted to purchase elsewhere).

General information regarding product is available from our sales team, however technical support is always at hand should you need assistance.

All prices quoted are inclusive of VAT.

INDI TELESales

Tel 0543 419999 Fax 0543 418079

CREDIT FACILITIES

INDI are now able to offer competitive credit facilities on all orders over £200.00. All credit facilities are subject to status and applicants must be over the age of 18. If you would like a quote simply call our sales line where acceptance can normally be notified within the hour. We are also able to offer Credit Insurance to cover repayments in the event of sickness or unemployment.

	12 MONTHS	24 MONTHS	36 MONTHS
AMOUNT OF CREDIT	AMOUNT OF CREDIT	AMOUNT OF CREDIT	AMOUNT OF CREDIT
£50	£20.00	£10.00	£5.00
£100	£40.00	£20.00	£10.00
£150	£60.00	£30.00	£15.00
£200	£80.00	£40.00	£20.00
£250	£100.00	£50.00	£25.00
£300	£120.00	£60.00	£30.00
£350	£140.00	£70.00	£35.00
£400	£160.00	£80.00	£40.00
£450	£180.00	£90.00	£45.00
£500	£200.00	£100.00	£50.00

APR 29 1993 WRITTEN QUOTATIONS AVAILABLE ON REQUEST

*After deposit paid

AMIGA A1200

ALL NEW 32-BIT AMIGA



INDI ADDED VALUE FREE

OFFICIAL A1200 HD SYSTEMS

The Amiga 1200 supplied by INDI Direct Mail now includes the official (legal) Commodore installation disk and hard drive utility manual. IndI are proud to be an official supplier of Amiga 1200 Hard Drive systems, that include the official software, documentation and on-site warranty

COMIC RELIEF PACK

The event may be over but the fund raising still goes on if your looking for the latest in Amiga technology then this is the starter pack for you. Based around the outstanding A1200, this pack also gives you sleepwalker, a most addictive platform game from ocean software. You'll be pleased to know that every one of these packs purchased raises another £10 for Comic Relief. **12 MONTH STANDARD FEATURES:**
• 68020 Processor • 1A Chipset • 2MB ChipRAM • 3.5" Internal drive • 12 Months at home maintenance

INDI PRICE

£379.99 or from **£14.47*** per month

(*Credit price based on 36 monthly payments APR 29.8%. Total repayment £520.92 and 90 day deferred payments.)

A1200 60 MEG HD INDI PRICE £379.99
A1200 80 MEG HD INDI PRICE £599.99
A1200120 MEG HD INDI PRICE £679.99

INDI A1200 ACCESSORY PACK

PACK Contains:

- 3 SuperB Games: • International Games Challenge • The Cool Croc • Paratroop 99 • Zapacac and Zappo T-shirt

INDI PRICE £19.99

60/80 Hard Drive upgrades available on any A1200. Upgrade includes full 3 year warranty on A1200 and Hard disks. Phone for a quote.

AMIGA A4000

NEW MONITOR RANGE

THE NEW DUAL SYNC 1940/1942 Monitors have been specially designed for the New Amiga 1200 and 4000 computers. Both monitors feature built-in stereo speakers.



Parnet Adaptor for CDTV

Connect a CDTV Player to any Amiga, and access the world of CD-ROM software. The Parnet interface and software will allow the Amiga CDTV to be used as a CD-ROM drive with any Amiga and will give any Amiga owner access to the vast range of CDTV software currently available. The CDTV player offers excellent value for money when compared with a standard CD-ROM drive and interface. Most CD-ROM drives will set you back over £400 while CDTV will cost you less than £300 and will play audio CD's in addition to CD-ROM. CDTV's Parnet adaptor includes the software driver for your Amiga, interface cable and PD disk with driver software for your CDTV player

INDI PRICE

1940 Monitor £279.99

14 inch screen size - 0.39 mm dot matrix.

INDI PRICE

1942 Monitor £379.99

14 inch screen size - 0.28 mm dot matrix.

INDI PRICE £39.99

A4000/326 PLUS CDTV + 1960 MONITOR.
INDI PRICE £1599.99
CDTV + PARNET.
INDI PRICE £329.99

It's here - The new Amiga 4000/030

The New Amiga 4000/030 features a 68030 processor running at an incredible 25MHz, and upgradeable at a later date to a faster processor. The 4000/030 has a powerful 4MB of 32-bit RAM (2Mb chip & 2Mb fast) expandable to 18 Mb using industry standard 32-bit Simms modules. It runs with the Amiga 4000/030 (4000/030) the 4000/030 features the new AGA graphics chipset, giving you a massive palette of 16.8 million colours. A range of hard drive options are available from 80 - 240Mb and includes a SCSI option.

4000/030 60 Mb HD INDI PRICE £939.99

Other Drive Options

4000/030 120 Mb HD INDI PRICE £1039.99

4000/030 240 Mb HD (exclusive to INDI)

Phone for price

4000/030 120 Mb SCSI HD (exclusive to INDI)

Phone for price

A full range of approved upgrades are available for the 4000/030, including additional memory modules, hard drives, PC bridge boards, FPU's (68881 & 68882) and the 24-bit Opal vision graphics and video system.



THE WILD, THE WEIRD AND THE WICKED A600 is an ideal starter pack containing a considered mix of software, making the most of the Amigas amazing capabilities.

PACK CONTAINS:

- A600 Single Drive
- Built in TV Modulator
- 1 Mb Memory
- Pushover: Grandprix
- Silly Putty: Deluxe Paint III
- Mouse and Manuals

NEW LOW PRICES

£289.99

INDI PRICE £215.99

AMIGA A600 PRICE CRASH

A600-SD A single drive Amiga for those of you requiring a basic A600 at a very competitive price.

PACK INCLUDES: A600 single drive, built in TV modulator, 1Mb memory. 12 Months at home service.

INDI VALUE ADDED FREE

- Kick Off 2 • Pipemania • Space Ace • Populous • Microswitched joystick

INDI PRICE £239.99

£189.99

A600 EPIC PACK (40 Mb HD) PACK INCLUDES:

A600 Hard Disks (20Mb) • 1Mb Memory • Epic • Rome • Myth • Trivial Pursuit • Amiga Text • Deluxe Paint III • 12 Months at home service. **PLUS INDI ACCESSORIES PACK AS LISTED. COMES WITH AN EXTRA 512K RAM EXPANSION FREE.**

INDI PRICE £395.99

£339.99

INDI A600 ACCESSORY PACK (Featured with WWW)

- Micro Switched Joystick • Lockable Disk Box • Disk Wallet
- 10 Blank Disks • Kick Off 2 • Pipemania • Space Ace
- Populous • Zapacac Carry Case • Zappo T-Shirt

INDI PRICE £26.99

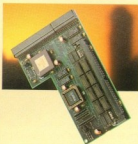
WANT THE BEST IN PROFESSIONAL AMIGA. WHY NOT TAKE ADVANTAGE OF THE AMIGA DEALS AVAILABLE (SUBJECT TO STATUS). CREDIT AVAILABLE ON 6, 12, 18, 24, 36 MONTHS. WHY NOT RING NOW FOR A QUOTE. SAME DAY RESPONSE.

AMIGA RECOMMENDED PERIPHERALS & ACCESSORIES

New from Microbotics for the A1200!!! M1230XA Accelerator launch!!

Microbotics beats the competition on price, performance, features and configurations. INDI is very pleased to announce the availability of the new 68030 accelerator product for the A1200: the microbotics M1230 XA (call it the "XA" for short) 50 MHz speed is standard! Memory management is standard! Huge 128 MB memory design is standard (the biggest memory space on any A1200 peripheral) Just look at these specifications and prices!

M1230 XA W/40 MHZ EC 030 0MB **INDI PRICE £299.99**
M1230 XA W/40 MHZ EC 030 4MB **INDI PRICE £399.99**
M1230 XA W/50 MHZ MMU 030 0MB **INDI PRICE £399.99**
M1230 XA W/50 MHZ MMU 030 4MB **INDI PRICE £499.99**



MBX1200.

The original and the best floating point unit and memory upgrade for the Amiga A1200. Available with 0,4 0R 8 MB OF 32 BIT FAST RAM and a choice of floating point units. Now complete with real time clock (RTC)

MBX1200Z 68881 14 MHZ 0MB **INDI PRICE £129.99**
MBX1200Z 68881 14MHZ 4MB **INDI PRICE £249.99**
MBX1200Z 68881 14 MHZ 8MB **INDI PRICE £349.99**
MBX1200Z 68882 25 MHZ 0MB **INDI PRICE £189.99**
MBX1200Z 68882 25 MHZ 4MB **INDI PRICE £339.99**
MBX1200Z 68882 25 MHZ 8MB **INDI PRICE £409.99**
MBX1200Z 68882 50 MHZ 0 MB **INDI PRICE £339.99**
MBX1200Z 68882 50 MHZ 4MB **INDI PRICE £419.99**
MBX1200Z 68882 50 MHZ 8MB **INDI PRICE £539.99**

MEMORY UPGRADES AND ACCESSORIES

M501 The original 0.5MB battery backed upgrade for the A500.
INDI PRICE £29.99

M502 The original 1 MB battery backed upgrade for the A500.
INDI PRICE £49.99

8 Up memory board. Again designed for the A1500/A200. Memory upgradable to 2/4 or 8MB
INDI PRICE £69.99

Hard frame suitable for A1500/A2000. Allows for the interface of a SCSI hard drive.
INDI PRICE £110.99

AMIGA PERIPHERALS.



2MB SMARTCARD. The original and still the only fully PDMCIA compatible memory card for A600/A1200. Comes with lifetime guarantee. Beware of cheap imitations.
INDI PRICE £129.99
4MB SMARTCARD Same as above but maximum 4 MB **INDI PRICE £199.99**

ZAPPO 601. Trapdoor upgrade for the A600. 1MB with RTC
INDI PRICE £49.99

ZAPPO 601NC. As above only 512K no clock **INDI PRICE £29.99**

MULTISTART ROMSHARER with kickstart V3 **INDI PRICE £44.99**
MULTISTART ROMSHARER with kickstart V2.04 **INDI PRICE £49.99**



COMMODORE MPS 1270A INK JET PRINTER. Whisper quiet yet prints at an amazing 160 CPS. Possibly the best value printer on the market.
INDI PRICE £94.99
1270A - REPLACEMENT INK JET CARTRIDGE.
INDI PRICE £12.99

AUDIO VISUAL

MEGAMIX. Low cost, hi spec digital effects cartridge plugs into printer port of Amiga. Allows stereo sampling from almost any musical source.
INDI PRICE £29.99



VIDI AMIGA 12. The ultimate low cost colour digitiser for the Amiga. "The best value full colour digitiser on the market" AMIGA FORMAT.
INDI PRICE £75.99



TAKE 2. Animation package is a must for computer artists and enthusiasts of all ages. As used in Rolf Harris Cartoon Club.
INDI PRICE £37.99



ROTECT ROGEN. Entry level Genclock for all Amigas. Record stunning Amiga Graphics onto Standard video or overlay text and graphics onto a video signal.
INDI PRICE £69.99

ROTECT ROGEN PLUS. As above but with extra features such as tinting and signal inversion. Allows for real time editing of graphics. Compatible with all Amigas.
INDI PRICE £133.99

ROTECT ROCKEY. The ultimate accessory for Amiga / video fans. Separate RGB controls to chroma key on any colour
INDI PRICE £249.99
PYRAMID SCANNER. A total hand held scanning package for all Amigas complete with interface and software (mono)
INDI PRICE £99.99.

DISK DRIVES.



ZAPPO EXTERNAL FLOPPY.

You've seen all the reviews on this popular and affordable second Amiga drive. Compatible with all Amigas.
INDI PRICE £39.99

"Quality: 9 out of 10." Exceptional value for money.
AMIGA COMPUTING JAN 93

MONITORS.



1084ST MONITOR.

Commodore original and best selling colour stereo monitor. Now includes swivel and tilt stand for total ease of use. **INDI PRICE £189.99**
(£179.99 if purchased with A600/A1200/A1500)

PRINTERS

COMMODORE MPS 1230 A high quality 9-pin Dot Matrix Printer with paper and tractor feed and is fully compatible with Epson FX80 and IBM Industry standards. High speed 120 CPS draft mode and an NLQ mode of 25 CPS.

INDI VALUE ADDED FREE D-PRINT - Design greetings cards, letters and posters.

AMIGA LOGO - Educational and programming language.

AMIGA VISION - Multimedia Authoring system for video, animation, sound, speech, graphics and text.

INDI PRICE £134.99

THE NEW CD AMIGA

Just prior to finalising this advertisement Commodore have confirmed that the new CD Amiga has been delayed until August.

If there is any change then the INDI Sales Desk will be able to take your order.

However, Commodore are confident that circumstances will not change.

**TERMS AVAILABLE OVER 6, 12, 18, 24 & 36 MONTHS SUBJECT TO STATUS.
WHY NOT RING FOR A QUOTE. SAMEDAY RESPONSE. (SEE EXAMPLE)**

Panasonic Quiet Colour Printing

We researched the colour printer market at great depth to find a colour printer good enough to cope with Amiga's powerful graphic output, yet at an affordable price.

We found the perfect printer in the KX-P2180 - KX-P2123 quiet printers.

We then considered that if you were going to buy a Panasonic printer you would probably need a quality word processing package to use with it. We found that, too, with 'Wordworth', yet at a retail price of £129.99 we thought that might be a little too expensive on top of your printer purchase! So together with Panasonic we decided to give a copy of 'Wordworth' free with every Panasonic printer. How's that for added value?

Panasonic

KX-P2180



"WORDWORTH COMPLETELY FREE! WITH PANASONIC QUIET PRINTERS The writers choice. The ultimate word processor for Amiga computers. Wordworth is undoubtedly the ultimate word document processor for the full range of AMIGA computers. The graphical nature of WORDWORTH makes producing documents faster and easier, with the enhanced printing fonts including full Panasonic KX-P2180 - KX-P2123 colour printing support. Colours spell checker and thesaurus, no other word processor comes close. "Without doubt this is one of the best document processors for the AMIGA. Today (Amiga Format)
NORMAL RRP £129.99 inc VAT

Panasonic

KX-P2123



INDI PRICE

£189.99

The new Panasonic KX - P2180 9 pin quiet colour printer. Produces crisp clear text in mono or in 7 glorious colours with new quiet technology. The new KX - P2180 is typically 150BA quiet in operation, than the competition.

- Fast Printing Speeds 160CPS Draft and 38 CPS HQ
- Colour Printing 7 colour palette (blue, red, green, yellow, violet, magenta and black)
- Quiet Printing Super quiet 45 - 48dBA sound level (most matrix printers are typically in excess of 60dBA)
- 6 Resident Fonts Over 6,100 type styles using Courier Prestige, Bold PS, Roman, Script and Sans Serif Fonts
- 3 Paper Paths Paper handling from bottom, top and rear for total flexibility
- 1 Year warranty for total peace of mind.

INDI PRICE

£239.99

The new high performance Panasonic KX - P2123 24 pin. Quiet colour printer offers leading edge quiet printing technology at an affordable price.

- Fast Printing Speeds 160 CPS draft, 64 CPS HQ and 38 HQ
- Colour Printing 7 colour palette (blue, red, green, yellow, violet, magenta and black)
- Quiet Printing Super quiet 43.5 - 46dBA sound level (most matrix printers are in excess of 60dBA)
- 7 Resident Fonts Over 15,000 type styles using Super HQ, Courier Prestige, Bold PS, Roman, Script, and Sans Serif Fonts
- 24 PIN Diamond Printhead High performance and high quality output
- 1 Year Warranty for total peace of mind.

Panasonic LASER PRINTER

KXP - 4410 LASER PRINTER



WORDWORTH COMPLETELY FREE! WITH PANASONIC LASER PRINTERS The writers choice. The ultimate word processor for AMIGA computers.
NORMAL RRP £129.99 inc VAT

KXP - 4430 LASER PRINTER



Once again INDi have joined together with Panasonic to offer all Amiga owners the most outstanding Laser Printer offer ever. We are now able to offer high quality, professional laser printing at affordable prices. We are also giving away a free copy of Wordworth with every Panasonic Laser Printer purchased (RRP £129.99). Whether you are looking for a laser printer to handle word processing, DTP, presentation or complex graphic applications - the Panasonic range offers you the power to meet your requirements.

KXP - 4410

- 5 pages per minute
- 28 resident fonts
- Optional 2nd input bin (total printer capacity 2 x 200 sheets)
- Low running costs
- Parallel interface
- Optional memory expansion to 4.5 Mb (0.5 Mb as standard)
- HP LaserJet II Emulation

INDI PRICE

£499.99

inc. VAT

WORDWORTH COMPLETELY FREE WITH LASER PRINTERS



KXP - 4430

- Satprint (optimum resolution technology)
- 5 pages per minute
- HP LaserJet III Emulation, PCL 5
- 8 Scalable fonts & 28 bitmap functions
- Optional 2nd input bin (total printer capacity 2 x 200 sheets)
- Optional memory expansion to 5.0 Mb (1 Mb as standard)

INDI PRICE

£699.99

inc. VAT

WORDWORTH COMPLETELY FREE WITH LASER PRINTERS

Panasonic PRINTER ACCESSORIES



- PANASONIC AUTOMATIC SHEET FEEDER**
Automatic Sheet Feeder for KXP 2180/ KXP 2123 holds 80 A4 sheets. **INDI PRICE £89.99**
- PRINTER DUST COVER**
Specially tailored quality dust cover for Panasonic KXP 2180/ KXP 2123 printer. **INDI PRICE £9.99**
- PRINTER STAND**
1 piece printer stand. **INDI PRICE £9.99**
- PAPER PACK**
500 sheets quality A4 paper. **INDI PRICE £9.99**
- CONTINUOUS PAPER**
2000 sheets 1 part feeding paper. **INDI PRICE £19.99**
- PARALLEL PRINTING CABLE**
To be used when connecting Amiga to Panasonic Printers. **INDI PRICE £8.99** (£5.99 if purchased with a printer)
- PANASONIC COLOUR RIBBON**
Colour ribbon for KXP 2180/ KXP 2123. **INDI PRICE £18.99**
- PANASONIC BLACK RIBBON**
Black ribbon for KXP 2180/ KXP 2123. **INDI PRICE £9.99**

SAVE ££££'s ON THE FOLLOWING ACCESSORY PACKS

PACK 1

PANASONIC COLOUR RIBBON PACK
Contains 2 colour ribbons for the KXP 2180/ KXP 2123 RRP £119.99. **INDI PRICE £98.99 SAVE £20.00!!**

PACK 2

PANASONIC RIBBON PACK
Contains 2 black and 4 colour ribbons for KXP 2180/ KXP 2123. RRP £99.99. **INDI PRICE £98.99 SAVE £10.00!!**

PACK 3

PANASONIC DELUXE ACCESSORY PACK
Contains Automatic Sheet Feeder, 2 black ribbons, 2 colour ribbons, 1 dust cover, 2 piece printer stand. RRP £169.99. **INDI PRICE £139.99 SAVE £30.00!!**

Add £2.50 carriage to all printer accessories or combinations thereof

SOFTWARE DEMON

(0736) 331039 – PHONE OR FAX

38-40 QUEEN STREET, PENZANCE, CORNWALL TR18 4HB

**HARD DRIVES FOR 500/600/1200, WITH
COMMODORE GAUARANTEE OR WITH OUR**

A1200 £355

85 MEG – £199 – 170 MEG – £249 – 250 MEG – £329

330 MEG – £429 – 426 MEG – £449

A500 HD

40 MEG – £249 – 85 MEG – £299 – 170 MEG – £349 –

212 MEG – £399 – 256 MEG – £449

A4000/030 170 MEG – £969

A4000/030 212 MEG – £999

A4000/030 254 MEG – £1150

A4000/030 340 MEG – £1300

ORDER HOTLINE (0736) 331039 Phone or Fax

All prices subject to change without notice. E&OE

THANKS TO DIXIE FOR
Blue'93

CONTENTS



Nine pages for enquiring minds

The most authoritative monthly columns in the business, covering all areas of specialised Amiga activity

ARexx 132

Improve the quality of your text output within ARexx scripts. Alex Gane shows how to present words in a more attractive manner

Video 135

Paul Austin takes to the air with Flightpaths and persuades Agli's impressive selection of video-specific Workbench 2 fonts

Programming 137

Assembler programmers get the inside story on using text and graphics in intuition windows. Margaret Stanger cracks the code

Music 139

The definitive low-down on a major revision to Blue Ribbon's SuperJam gets the Paul Austin treatment... and lives

Comms 141

Phil South looks at a system which ensures nothing you send through your modem can be seen by anyone but your authorised recipient...

Amos 143

Love 'em or hate 'em, fractals have become synonymous with today's power graphics computers. Phil South creates some using Amos

Publishing 145

Ben Pointer explores how to design, produce and print good-looking inlay cards to revolutionise your music cassette collection

FEATURES

Beat that! 31

Evelyn Glennie, the world's only professional percussionist, and her Amiga 4000...

Basic guide 65

Continue to become a programming expert with the latest instalment of our guide

Updates 85

Imagine 3.0 due soon, and some credible song files for the Miracle keyboard

REVIEWS

PIPView 36

The possibilities are endless with this ingenious bit of video kit

Real3D v2 46

The most involved graphics and animation package ever?

Emplant 72

The definitive Mac emulator has arrived on the Amiga



TOSMS 79

The first sound module designed to integrate totally with your Amiga

Blitz Basic 2 89

Does this powerful upgrade have what it takes to outdo Amos?

GAMER

Rest your weary mind and relax with a joystick and a screenful of things to kill. Now what'll it be?

Gamer Globe 108

News from around the games world

A1200 software 126

Will your fave game work or not?

Cheat Mode 128

Finish Dizzy without getting in a spin!

GAME REVIEWS

Woody's World 110

International Rugby Challenge 113

Flashback 114

Sink or Swim 116

Championship Manager 93 118

Graham Gooch Cricket 120

Nippon Sales Inc 122

World of Legend 124

Amiga Market

The monthly round-up of the latest hardware and software on the market, advice on spending those hard-earned pennies, Software Spotlight and much more...

Shop Window 148

- GVP's A1 230 Accelerator
- Power XL high density drive
- A1200 hard drive
- AmigaVGA adaptor
- Mickey Mouse/Playroom educational software

Classifieds 152

Spotlight 155

Hard Times 157

Locator 161

**NEXT
MONTH ON
SALE JUNE
3rd**

COVER STORY

COVER DISK



Bars and Pipes Pro Jnr

Easily the most valuable and powerful Amiga music sequencer giveaway ever, the complete Bars and Pipes Pro Jnr is exclusive to AC this month

Print Manager

A unique and incredibly useful print spooler program for Workbench 2 users

Amiga diary

Keep track of your life with the best time-managing program ever to grace our Disk

Quoter

Food for thought – every time you switch on your Amiga, Quoter chirps up with one of hundreds of quotations

Turn to page 24

REGULARS

News

13

CD-based Amiga confirmed as video ratings are planned for CD games

US News

18

Top secret developments – our reporter has all the latest gossip

Comment

20

Will Commodores' hesitant reticence harm the A1200 market?

Beginners' Disk

27

CoverDisk beginners start here... we explain the basics

ESP

55

Get it off your chest with the best Amiga letters pages in the business

AmigaDOS

61

A brand new series of tutorials designed to explore and explain AmigaDOS

ACAS

95

The most authoritative technical letters page in the business

Subscriptions

98

Have your mag delivered by a uniformed representative of Her Majesty's Government

Public Sector

102

If it's free and good, it's here! Save money with the cheapest software known to man

GREAT OFFERS

Connect up to comms with our great free introductory membership to Compuserve. Should you have missed the great offers upgrading recent CoverDisk packages, you can get Vidi Amiga 12 at a third discount, and a great deal on HiSoft Basic.

Turn to page 42 now!



BEAT THAT!

**Evelyn Glennie,
top percussionist
and Amiga
aficionado, talks
about her music
Page 31**

£3,000 holiday competition!

Win yourself a holiday of a lifetime and ensure your copy of the best Amiga magazine ion the business to boot. For details, turn to page 130!

The Best Word Publisher (Amiga Format)

Wildlife **Report**

The Tiger

Large striped cat of Asian jungle and mountain regions. One of the largest of the big cats, the tiger is 3-4 m. (10-13 ft) long, including a tail 1 m. (3 ft) long, and weighs 227-272 kg. (500-600 lb.). Both sexes are immensely strong, enabling them to bring down and overcome animals the size of buffaloes. Their main prey is deer, antelope, wild pigs and bushbucks.

Lacking the stamina for a prolonged chase, tigers rely on their striped markings to conceal their movements as they silently creep up to their victims before making a sudden rush from behind. They kill by first knocking the animal down with a blow of the forepaw, or pulling it down with the claws, then suffocating it with a powerful blow at the neck or throat. Tigers swallow meat in large chunks, using their teeth to cut rather than to chew, and eating up to 22.5 kg. (50 lb.) of meat in a single meal.

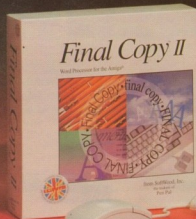
Tigers spend the day sleeping or resting and emerge at dusk to hunt. solitary animals except during breeding season. Each male marks off a territory of from 65-650 sq. km. (25 sq. miles), which contains several females and which he defends against other males, marking the boundaries by spraying a mixture of both his urine and scent.

Tigers once ranged all the way from China to Turkey, but today their range are largely confined to India and South-east Asia, with smaller populations in China, Siberia and Turkmenistan.



Region of Habitat

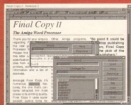
We'd simply call it the best Amiga Word Processor. But if after using it, the experts insist on calling Final Copy II the best Word Publisher as well, we're not complaining!



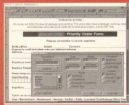
Final Copy coined the phrase "Perfect Printing on any Printer".
We mean it - this document proves it!

Created in Final Copy II and printed on a standard 24-pin Citizen Swift, it shows a small number of Final Copy II's features: Smooth Scalable Outline Fonts, Multiple Columns, Drawing Tools for Boxes, Borders, Shadows, Lines and Arrows, White-Out Text, Text Printed over Graphic Images, Text Obliquing, Auto-Flow Text around Graphics and of course, Import of Colour and Mono Graphics Pictures.

Word Publishers go beyond simply producing normal letters and documents (at which Final Copy II naturally excels) and progress into a world where *how* the whole document looks is just as important as *what* it says. Admittedly, this can be achieved with Desk Top Publishers, but they can't easily be used as Word Processors, especially when a good looking letter needs creating quickly - they're far too cumbersome. This is where Final Copy II offers the perfect balance between the two requirements. Ease and speed of use, combined with complete control and perfect final printed presentation.



Document creation is so simple with 28 On Screen Buttons for routine formatting and page layout commands, like Auto-Hyphenation. With true WYSIWYG display, you can even add white pages are magnified up to 400% (or more!). Long documents are supported with TableMaster Pages, Style Sheets, Left/Right Page Binding Offset and Auto Numbering. Because your text needs to be perfect, the British-English Collins Proximity Speller combined with the Thesaurus (for that added inspiration) help you to produce the precise, printed page.



Compographic, Adobe Type 1 PostScript or Nimbus Q PostScript? If you want lots of fonts, you can have lots of fonts! Final Copy II can use thousands of superior Adobe Type 1 or Nimbus Q fonts (the same as those used on professional publishing systems). Both these types are PostScript fonts, but unlike all other Word Processors you don't need an expensive PostScript laser to use them! Final Copy II will print them on PostScript lasers, or any graphics capable printer. This includes the dot-matrix or ink-jet you probably already own. Even if you have your own Compographic® font library you'd still like to use. Final Copy II is fully compatible, outputting to any graphic printer. Final Copy II is unrivalled in its range of fonts supported, and as you can see here, you have complete control over text formatting. When using the outline typefaces included, or any additional fonts, they'll output perfectly - no matter what size they're scaled to - with absolutely no jaggies! Opening multiple documents also allows editing whilst printing in background mode (free memory dependent).

Compatible with all Amigas from A501 to the latest A1200/A4000 ranges with either a second floppy or a hard drive. A minimum of 1Mb of available free RAM is required (A500 hard drive - 1.5Mb) however, as with all advanced graphical programs, extra memory (up to 1.52Mb - the more the better) will be required to exploit all features fully.

Available from all good Amiga Software Dealers,
or from SoftWood Europe - please phone for a list of nationwide stockists.

Best Publishing Program of its Type (The words not ours)

ord
rts
ord



Final Copy II

Release 2 available now!

fonts,
has Q
fonts,
Final
docu-
mentary
ible, I
is
can
ing
any
that
es!
ists
(a).

Complete control over how your documents look, now you have it! Final Copy II incorporates: On-Screen Drawing Tools for generating boxes, borders, and lines or arrows at any angle. Multiple Newspaper Style stacking columns, combined with the unique ability to print the same PostScript quality outline fonts - on absolutely any printer in portrait or landscape. These all mean that no matter what you may have thought, no other Amiga Word Processor has all the capabilities that Final Copy II users now simply take for granted!



The almost endless list of features includes On-Screen Object Drawing Tools (no more importing of borders from drawing packages to frame graphics or reverse-highlight text) with selectable rulers to aid precise positioning. Text Auto-Flows around graphic objects and imported pictures, which can be placed anywhere, scaled and cropped, with no loss of printing quality. Text can also be printed actually over graphics (refer to 'The Tiger' heading on our documents). No other Word Processor for the Amiga offers all this. (*Compagraphics joins require Kickstart 2 and Workbench 2.1 or later, with Final Copy II. They will not output on PostScript printers from any Word Processor - and would always be our second choice. All printers used in Final Copy II can print to the highest resolution that the printer will output).

Amiga Format think we have the Best Word Publisher. We'll show you why with a list of features that users tell us are important (below). If you'd like to know who's also chosen Final Copy, Commodore specify it as an option with some of the most powerful Amigas available in the United States. What better recommendation could you have?

Feature	Wordworth 2	Final Copy II
Compatible with Standard Amiga Workbench 2 Compagraphics Fonts	YES	YES, But would Suggest use of Better PostScript Fonts
Compatible with Standard Adobe Type 1 and Nimbus Q Scalable PostScript Fonts	NO/NO	YES/YES
PostScript Font Outlines on all Printers	NO	YES
Maximum Number of PostScript Printer Downloads (Sideways) Printing on all Printers	Limited to a total of 35	Infinite
Reclaim-Printing Resolution (Quality of Scaled Reduced and Enlarged) Graphic Images	NO, Can't download extra fonts	YES, Automatic
Print any Text or Graphic in Colour	NO	YES, Automatic
No. of Colours Printed in Imported Pictures	NO	YES, Same High Quality when Reduced and Enlarged
Graphics Printing (HAM & IF LBM)	NO	YES
Text Width (Compress and Expand)	NO	YES
Variable Text Obliquing (Slanted Text)	NO	YES
Both Positive and Negative Attributes	NO	YES
Box, Rounded Box, Circle, Oval, Line, Variable Border & Arrow Drawing Tools	NO	YES
Crop (Hatch) to Size Imported Graphics	NO	YES
Supports A1000/4000 AGA Chipset	YES, 256 On-Screen Colours	YES, 256 On-Screen Colours
Create Border around Graphics and Pictures	NO	YES
British-English Spelling Checker	YES, Collins Proximity with Legal & Medical Supplements	YES, Collins Proximity with Legal & Medical Supplements
British-English Thesaurus	YES, Collins 62000 Synonyms	YES, Collins 62000 Synonyms
Page View Magnifications and Reductions	One Fixed Print Preview	7 Variable steps - 25% to 400%
Edit Document while Magnified or Reduced	NO	YES
Search & Replace (150 words in 9000, 7 Pages)	61 Seconds (On Amiga A1000)	7 Seconds (On Amiga A1000)
Index and Table of Contents	YES, Automatic	NO, Requires Manual Entry
Multiple Newspaper Style Stacking Columns	YES, 2 to 32	YES, 2 to 6
Style Sheets, Master Pages, Title Pages	NO	YES
Uses Standard Amiga Clipboard for Cutting & Pasting to and from Different Applications	NO	YES
Smart Caps Typographical Control	NO	YES
Conforms to Commodore's Amiga Standard Look & Feel Guidelines	NO, Non-Standard User Interface	YES
On-Screen Maths Columns (Addition)	NO	YES
Import ASCII Text from any Word Processor	YES	YES
UK Registration, Upgrade and Support	YES	YES
Free Memory Required	1.8Mb, Minimum More Recommended	380k, Minimum More Recommended
Free On-going Technical Phone Support	NO, £30 per year after 40 days	YES, Free of Charge
Recommended Retail Price	£129.95	£99.95

SoftWood - Quality software for your Amiga

With Final Copy II you're not just getting a one off product! SoftWood are acknowledged as the World's leading software company who develop for the Amiga, and no other system. Once you're a registered SoftWood product owner, you'll be gaining access to unlimited free UK technical support (others charge you), and preferential upgrades to new versions of this and other existing products being developed right now!

Please send me personal copy of the new Final Copy II information pack, including samples from popular printers, and a list of stockists etc. (clip the coupon or call 0773 836781, please)

Name & Address:

Please include your p...

SoftWood Products Europe

PO Box 19 Alfreton Derbyshire DE55 7RW England Tel: 0773 836781 Fax: 0773 831040

SoftWood & their trademarks (The British Endell Ltd) are a trademark of Miles Inc. Adobe & PostScript are trademarks of Adobe Inc. All other trademarks and...

AMIGA A600

AMIGA A600 LEMMING'S PACK
1 MEG RAM EXPANDABLE TO 2 MEG
1 YEAR IN-HOME SERVICE WARRANTY
WORKBENCH 2.0
MOUSE AND
LEMMINGS GAME **249.99**

AMIGA A1200

AMIGA A1200 HOME COMPUTER
WITH FAST 68020 PROCESSOR
2 MEG RAM EXPANDABLE TO 4 MEG
1 YEAR IN-HOME SERVICE WARRANTY
WORKBENCH 3.0
MOUSE
SAVE £34 **365.99**

WORKS WITH A TELEVISION OR SUITABLE
MONITOR VIA RF OR SCART CONNECTION

AMIGA A4000/030

AMIGA A4000/030 HOME COMPUTER
WITH 80 MEG INTERNAL HARD DRIVE
POWERFUL 68030 PROCESSOR (25MHz)
4 MEG RAM (2 MEG CHIP + 2 MEG FAST)
1 YEAR IN-HOME SERVICE WARRANTY
WORKBENCH 3.0
AND MOUSE
929.99

GOLDSTAR 14" TV/MONITOR

GOLDSTAR 14" TELEVISION/MONITOR
WITH REMOTE CONTROL
& SCART INPUT
FREE SCART LEAD **154.99**
GIVES PIXEL PERFECT PICTURE

SONY 14" TV/MONITOR

SONY 14" TELEVISION/MONITOR
MODEL KVM1410U
REMOTE CONTROL
FREE SCART LEAD **199.99**

DEBATE MHS, SDHS, AMHS, RS-85
AND £20 OFF A GAME OFFER
DEBOUT CUP OFF OUR PRICE OF ANY GAME (OR THE TOTAL OF
SEVERAL GAMES) PURCHASED AT THE SAME TIME AS THIS SONY TV
SONY TUNING/ENCODERS MONITOR QUALITY PICTURE FROM
AMIGA, SUPER NES, OR ON MEGADRIVE VIA SCART
CONNECTION. ALSO SUFFERS ALL CONSOLE/VIA NORMAL RF
INPUT. INCLUDES REAR SCART/VIDEO OR FRONT ANY INPUT
FROM SUPER NES, STEERING LEAD OR VIDEO CAMERA, TV
ANY CHANNEL, 68 CHANNEL TUNING, BLACK TINT/WHITE
CONTROL, INCLUDES REMOTE, AED, SUPERB QUALITY
ALSO AVAILABLE IN WHITE AT £199.99
ALSO AVAILABLE WITH TELETEXT AT 249.99

PHILIPS 15" TV/ MONITOR

PHILIPS 15" TELEVISION/
MONITOR +
TELETEXT **WITH**
MODEL 15PT161A
REMOTE CONTROL
FREE SCART LEAD
(SCART LEAD INCL IN PRICE)
SAVE £15 **234.99**

AUTO PROGRAMMING, 1 YEAR WARRANTY, ENABLER
MONITOR QUALITY PICTURE FROM AMIGA, SUPER NES,
MEGADRIVE OR MASTER SYSTEM 1 VIA
CONNECTION. ALSO SUFFERS AT ST AND ALL CONSOLES
VIA NORMAL RF INPUT. INCLUDES SCART/VIDEO
CHANNEL, VERY SMART

**MORE PRINTERS & MONITORS AVAILABLE -
PLEASE PHONE FOR DETAILS**

We only supply official UK products. Official suppliers of all leading
brands. We sell games and peripherals at an amazing price to
Member. Member: Super NES, Super NES, Game Boy, Super NES, Game Boy,
Lynx, Amiga, Atari ST, PC CD ROM and Apple Mac. And we sell T-
Special Reserve Club Shop The Mailings, Sedgeborough,
Herts. Open on Thurs Weekends and to 3pm Saturdays.

CITIZEN PRINTERS

CITIZEN 120D+ 9-PIN MONO PRINTER

80 COLUMN, 144 DPM/80, 180/21 DRAFT FONT
3 YEAR WARRANTY
FREE PRINTER LEAD
HIGH QUALITY BUDGET PRICED PRINTER
122.99

CITIZEN SWIFT 90C 9-PIN COLOUR PRINTER

80/100 COLUMN, 144 DPM/80, 180/21 DRAFT FONT
3 YEAR WARRANTY
FREE PRINTER LEAD
A 9 PIN PRINTER WITH COLOUR FACILITY AND
FULL PAPER HANDLING FUNCTION
167.99

CITIZEN 200C 24-PIN COLOUR PRINTER

WITH COLOUR KIT, 24 PIN, 80 COLUMN
240/240/240 LCI DRAFT FONT, AUTOFEED FACILITY
INPUT DATA BUFFER, AUTO PAPER LOAD
ENCLOSURE PRINTING, 3 YEAR WARRANTY
FREE PRINTER LEAD
209.99

CITIZEN 240C 24-PIN COLOUR PRINTER

WITH COLOUR KIT, 24 PIN, 80 COLUMN, 240/240/240 LCI
DRAFT FONT, AUTOFEED FACILITY, INPUT DATA BUFFER,
AUTO PAPER LOAD, ENCLOSURE PRINTING, 3 YEAR WARRANTY
FREE PRINTER LEAD
ADVANCED VERSION OF 240C WITH AUTOFEED
FEATURE AND LCI CONTROL PANEL
259.99

CANON BJ10-EX PRINTER

CANON BJ10-EX BUBBLE JET PRINTER

84 NOZZLE, 80 COLUMN, 180 CPS 3.0/21 DRAFT FONT
1 YEAR WARRANTY
FREE PRINTER LEAD
A BUBBLE PORTABLE PRINTER, VERY QUIET IN
OPERATION, VERY GOOD OUTSTANDING PRINT QUALITY.
205.99

DISK BOXES

Bank 3.5" Disk Box 3.5" (1020) STACKABLE **13.99**

Bank Disk Box 3.5" (80) STACKABLE **12.49**

Bank Disk Box 3.5" (1020) LOCKABLE, DIVIDERS **13.99**

FLURBO Disk Box 3.5" (30 CAPACITY) **7.99**

DISK BOX 3.5" (1020) CAPACITY 1.99

DISK BOX 3.5" (1020) LOCKABLE, DIVIDERS 1.99

SEGA MEGADRIVE

SEGA MEGADRIVE +
THREE GAME PACK
WITH SONIC THE HEDGEHOG
EA ICE HOCKEY
JOHN MADDEN'S '93
TWO SEGA JOYPADS
129.99

JOYSTICKS

BOLLETTICH HAND
HELD JOYSTICK FOR
AMIGA OR ST WITH
AUTOFEED FUNCTION
9.99

CHETAN BUG JOYSTICK **13.99**

COMPETITION PRO EXTRA
JOYSTICK (CLEAR BASE)
10.99

COMPETITION PRO STAR
JOYSTICK **14.99**

FREEWHEEL
STEERING WHEEL
(DIGITAL) FOR AMIGA
AUTO START DRIVING
GAMES **25.99**

GRAVITY JOYSTICK FOR AMIGA
WITH FOAM PADDED GRIP
ADJUSTABLE HANDLE TENSION
AND PROGRAMMABLE
BUTTONS **22.99**

LOGIC 32-BIT-RAY
JOYSTICK **11.99**

MINI
COMPETITION PRO
JOYSTICK **10.99**

MINI COMPETITION PRO STAR
JOYSTICK WITH AUTOFEED
13.99

QUICKJOY FOOT
TRANSFER ANY
JOYSTICK
FUNCTIONS TO
FOOT PEDALS, IDEAL FOR FLIGHT AND CAR GAMES,
COMPATIBLE WITH MOST AMIGA GAMES **10.99**

QUICKJOY JET FIGHTER
JOYSTICK **11.99**

QUICKJOY GUN
JOYSTICK
(BROOKSWITCHES) **7.99**

QUICKJOY TOP
STAR JOYSTICK **13.99**

QUICKSHOT 111A
TURBO
JOYSTICK **3.99**

QUICKSHOT 128F
BARONICK 1 JOYSTICK **13.99**

QUICKSHOT 137F
PYTHON
JOYSTICK **1.99**

QUICKSHOT 149
INTRODUCER 1
JOYSTICK **22.99**

QUICKSHOT
155 AVIATOR 1 JOYSTICK **23.99**

SPEEDING ANALOGUE
JOYSTICK FOR AMIGA/PRO
PORTION/CALCULATOR, ON
SUITABLE SOFTWARE) **12.99**

SUPER PRO 23P
JOYSTICK FOR AMIGA
WITH AUTOFEED FUNCTION
12.99

ZYDEC TRACKBALL **14.99**

NARSHA MOUSE FOR
AMIGA OR ATARI ST WITH
OPERATOR STYLUS **25.99**

MOUSE MAT LIGHT GREEN WITH SPECIAL
RESERVE LOGO PRINTED IN RED **4.99**

POINT EXTENSION ADAPTOR FOR AMIGA
CHANGE JOYSTICK WITHOUT NEEDING TO
REACH BENDERS CONNECTION **3.99**

ROBOSHIFT INTERFACE FOR AMIGA PLUS
LOGIC JOYSTICK AND LOGIC **12.99**

SUPER NES

SUPER NES + STARWING
WITH STARWING GAME
ONE JOYPAD
SAVE £20.00
109.99

FOR A FREE 12 PAGE COLOUR CATALOGUE CALL
0279 600204

Special Reserve

The Games Club

Special Reserve members can have all this... can you?

READ "NRG" Regular Club Magazine
CHOOSE from our Huge Selection
BUY at Best Possible Prices
SAVE with our Special Deals
SAVE more with our XS Coupons
WIN £60,000 worth of prizes FREE
JOIN now from just £4.99

We only supply members but you can order as you join

There's no obligation to buy and you can be any age.
Just send in the form below or phone Sales on 0279 600204

As a member of Special Reserve you'll receive regular issues of
NRG magazine. NRG is our 48 page colour club magazine sent bi-
monthly only to Special Reserve members. NRG contains:

1. The best selection of games, peripherals and hardware for all popular formats. We are official Sega, Nintendo and Sony stockists.
2. Reviews in colour and table information on new products.
3. Charts and Release Schedule, to help you choose and plan.
4. The best prices, since one purchase will save you your joining fee.
5. Hundreds of Special Offers. Top games at prices you will believe.
6. XS Super Savers. Money-off coupons worth over £180 a year.
7. £60,000 worth of prizes per year in our FREE-to-enter BIG TARGET COMPETITIONS. That's £10,000 worth in every issue of NRG, exclusive to members.

That's why over 160,000 people have joined Special Reserve, the biggest games club in the World!

0279 600204

Send to: Special Reserve, Sales to: Special Reserve, 10am to 5pm Sunday
to 3pm Bank Holidays. Orders/Confirmations/Orders sent for every order
there is a SURCHARGE of 50p PER GAME ON TELEPHONE ORDERS.

You can also Fax your order to us on: 0279 726842

Invitation some games sent may not yet be available. Please phone sales on
0279 600204 to check availability before ordering. In customer service we save
hundreds on regular at any time to help you. We reserve the right to change
prices without prior notification. L & C.

Registered Office & Club Shop: 100 Medley Rd, 100 Medley Rd, The Mailings,
Sedgeborough, Wiltshire, SN21 3PJ

All prices include VAT and postage to UK mainland. See base of order form for
overseas surcharge. We supply hardware only to UK mainland addresses.

MEMBERSHIP FEES

	6 MONTHS	12 MONTHS	24 MONTHS
TRIAL			
MEMBERSHIP	4.99	7.99	14.99

OVERSEAS IC MEMBERS

	6 MONTHS	12 MONTHS	24 MONTHS
MEMBERSHIP	6.00	10.00	20.00
MEMBERSHIP	7.00	11.00	21.00

WE ONLY SUPPLY MEMBERS BUT YOU CAN ORDER AS YOU JOIN
THERE IS A SURCHARGE OF 50p PER GAME ON TELEPHONE ORDERS.
(PLEASE PRINT IN BLOCK CAPITALS)

Name _____
Address _____
Postcode _____
Phone _____ Machine _____

Enter membership number (if applicable) or
New membership fee (ANNUAL UK £9.99)

10m _____
10m _____
10m _____
10m _____

ALL PRICES INCLUDE UK POSTAGE & VAT

Cheque/P.O. Access/Mastercard/Switch/Visa (Selfish Issue No.)

Card _____
Expiry date _____ Signature _____

Cheques payable to: **SPECIAL RESERVE**
P.O. BOX 847, HARLOW, CM21 9PH

Overseas Orders Surcharge (E.C. or World): Software orders
please add £2.00 per item. Non-software items please add
25%. Hardware items supplied to UK mainland only.

Overseas orders must be paid by credit card.

By John Butters

Video ratings plan for CD games

COMPUTER games developers are close to agreement on self-regulation which could lead to some Amiga games being given video-type age ratings.

The move is intended to help clean up the software industry's image after several months of tabloid newspaper claims about the effects games playing has on Britain's kids.

In some of the latest stories, the media have highlighted the reality of horrific graphics contained in a recently-released console game.

ELSPA (European Leisure Software Publishers' Association), the trade body representing 98 per cent of games developers, have drafted a Code of Practice for their members to follow.

Under the Code, CD-based software which has been produced from film will be submitted to bodies such as the British Board of Film Censors for classification.

Ratings given to the software will be displayed on packaging and allow parents to easily identify games which contain material that might be unsuitable for their children.

Some of the first affected could be those for Commodore's new CD Amiga system, which the firm has now confirmed is due for a summer launch. Industry bosses fear

that unless they agree on self-regulation, politicians could force computer and video games to be included in the Video Recordings Act 1984.

That would mean all programs including those with lower graphical standards on floppy disk would be tested, costing the games industry millions of pounds each

year. "The video industry had legislation imposed on it," said ELSPA's Roger Bennett. "We want to avoid that situation."

"Our aim is to make games legal, responsible and for publishers to pursue activities that are socially acceptable. Most of our members are in favour of the action planned."

CD games: Video type ratings plan

Call for Amiga PD

A ROMANIAN engineer has just set up an enthusiasts club with the aim of helping the few Amiga users in his country to get the most from their hobby.

The man behind Amiga-Club, Bitca Bogdan, says Romania's low salaries – he earns just £40 a month – make computing expensive, with many products keeping their Western prices.

But Bitca says his Bucharest-based club, running A500 and A1000s, has found Amiga Computing's editorial pages a helpful source of information and its CoverDisks invaluable.

And now he is looking to the West for help, especially in building a collection of public domain software which can be distributed freely among his small club.

"Unfortunately in our country there isn't a shop with magazines, software and hardware for the Amiga," he said.

"Amiga-Club Romania is a non-profit organisation whose purpose is to popularise Amiga computers in Romania."

"Our need is disks – either public domain or those from the covers of magazines. They will help us be successful in our activity."

If you would like to join Amiga-Club, the address to write to is: Bitca Bogdan, Street Cornelia, No 8, Apt. 1, Sect. 4, Bucharest, Romania.

CBM bring Amiga price inside £200

ENTRY-level Amiga prices have been slashed, bringing the computer's recommended retail price inside £200 for the first time.

All machines and bundles in the A600 range see the cuts, which are aimed at increasing the price gap between the entry machines and the superior A1200.

The standalone computer has been given a £50 cut, picking up a new price tag of £199.99. The Wild, Weird and Wicked and Epic packs now cost £229.99 and £349.99 respectively.

Dealers are expected to add their own discounts. Indi Direct Mail were one of the first to announce details, with their standalone A600 costing £189.99.

"We had expected to get down to this price by Christmas but this is a real bonus," said Indi boss Craig Saddington.

"There is now a real price difference between the A600 and A1200 – it must be the best value computer on the market."

The ST pack includes a small selection of leisure software but the computer is difficult to upgrade and is not supported by many games developers.



A600: Price tumbles to under £200

News Briefs

Kiddies CD book

ALISTAIR in Outer Space is an interactive story book which has been developed for CD Amigas by Bedford-based Altered Images (0234 340722).

It features 26 animated pages, an illustrated index and a selection of games. The package costs £24.99 and is aimed at children aged between five and nine years old.

Amiga plant sale denied

RUMOURS that Commodore have put their Amiga development plant at West Chester, Pennsylvania up for sale have been denied by the firm's UK boss David Pleasance.

The firm own two buildings in the same area, one of which has been used for C64 manufacturing. It would now make sense to put both operations under one roof, he said.

Scanning costs are down

LADBROKE Computing (0772 203166) have cut the price of the Golden Image Hand Scanner with programs Touch Up and Deluxe Paint 3 to £89.99.

Piracy arrest

A 19-year-old Amiga user was arrested in Hertfordshire recently after police seized games that have not even been released in Britain.

It is alleged that the man pirated the software and then sold it to other gamers through bulletin boards. The Federation Against Software Theft joined the police in the operation.

One meg for £30

UPGRADE manufacturer Amitek have announced the immediate availability of a 1Mb memory upgrade for the A500P costing £30.

"The new RAM board is aimed at the first time user," said spokesman Andy Leaning. "It's low cost, easy to fit, doesn't void the computer's warranty and comes in a colourful case."

It is available through several Amiga dealers including Silica Systems, who can be telephoned on 081-309 1111.

Inside Imagine

THE book *Understanding Imagine 2* has been reprinted by Alternative Image (0533 440041) following demand from users of the rendering software. It costs £25.



TWO graphic designers have used their new Amiga to help in the production of a recent episode of London Weekend Television's *South Bank Show*.

Twenty-year-olds Simon Hough and Anthony Murray, both from Birmingham, were asked by LWT to illustrate a documentary about fantasy writer Terry Pratchett and his works.

Part of the programme needed to show a young child play-

LWT tune into Amiga graphics

ing a computer game, for which Chrystal Haze Graphics designed a suitable animation. "Our prime objective was to emulate a game, so there was no call for advanced 3D modelling techniques because this would stray from a child's perception of a computer game," said Simon.

"The key to the success of the design was that it had to be convincing to the viewer and yet still appeal to children.

The designers were already familiar with the Amiga. For over a year they have been trying to provide a low-cost computer graphics service.

"We chose the Amiga computer because it was a stable basis for producing a high standard of graphic images while maintaining a relatively low level of financial support," said Simon.

"When Commodore released the AGA chip set we decided to incorporate the new system into our design criteria.

"It provides an ideal stop gap for testing animations and still before going into the process of final design or into the process of printing."

Consecutive grabs from new V-Lab

THE recent update of V-Lab enables Amiga users to import video sequences from recording decks without the timecode feature found only on expensive machines.

V-Lab Y-C is the third version of the package and is now compatible with composite and Y-C video recorders. Interleave frame grabbing software is also supplied. Its most impressive feature enables the hardware to grab consecutive video frames directly to hard disk by making multiple passes over the film.

The operation is repeated until a 25 frames per second sequence has been generated. A maximum of 200 frames – about ten seconds worth of video – is accepted.

Martin Lowe from distributor Amiga Centre Scotland (0896 87583) claimed the system is ideal for home users, video users and CD-ROM developers who need to store video images.

Priced at £381.88, users who want to leave the system unattended can buy an infra red video deck controller as an optional extra. The controller's price remains to be fixed.



V-Lab Y-C: Compatible with more VCRs

Multimedia updates for video board

GREAT Valley Products (010 1 215 337 8770) have upgraded multimedia video board IV24 to give the pack's software a range of new features and improvements.

MacroPaint 2 is a real-time, 16 million colour paint package featuring a toolbox-style interface that can be moved to a more convenient part of the screen. It can load and save JPEG compressed files and painting can be done on a 24-bit image while work is viewed at between 12 and 21 bits for extra speed and lower memory needs.

A newly-designed custom version of Caligari24 gives renderers a line-up of extras, including an unlimited number of light sources and better animation functions.

MyLab enables video productions to be enhanced with creative transitions while Desktop Darkroom offers image capture, retouching and a range of special effects for image manipulation.

GV's Phil Prescott: "With the addition of this software upgrade, IV24 represents an opportunity for professionals to optimise their creative potential and productivity."

British distributor Silica Systems (081-309 1111) are selling upgrade packs for £99.

Deluxe extras for disk utility

DISK utility software Quarterback Tools has been improved by its Texas-based makers Central Coast Software to include new features and improved performance.

Quarterback Tools Deluxe is claimed to be much faster than earlier versions, have improved hard disk organisation functions and a better undelete facility.

Other features include disk recovery, a sector editor, ability to improve efficiency and compatibility with the latest Amigas. It is controlled through a new "3D look" interface.

Several additional programs are supplied in the package: Locator, Replicator, File Erase, Disk Eraser, Encryptor, Keystroke Finder, System Mover and Brain Cloud.

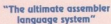
Locator finds files no matter where they are on the disk, Brain Cloud protects sensitive materials from use by others, while Encryptor can encrypt and password-protect documents.

Information can be permanently deleted using File Eraser and Disk Eraser.

"Users can sometimes forget the huge investment in time that their work represents," said CCS's marketing director Rick Unland. "Like any cutting edge technology, problems can occur."

"Quarterback Tools Deluxe is not just for emergencies any more. Central Coast Software have paid close attention to their users, found out what they needed and given it to them."

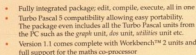
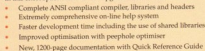
It will be sold through several UK dealers and has a US price of \$125. Upgrades are available to existing Quarterback users for \$50. CCS can be telephoned on 010 1 512 328 6650.

Special
Order
FormAmiga Format
Gold 4/92

- Full Windows™ v1.3 and 2.x compatibility
- Multi-window editor with macros, bookmarks and total integration making the package a joy to use for both the beginner and the professional programmer
- Super-fast 68000-68040 assembler and debugger with support for the maths co-processor
- Pre-assembly option makes using the Amiga includes simple and very, very quick
- Assemble to memory, many assembler-control options and optimisations, repeat loops, output of code to executable, linkable or S-record format, full listing control and much more makes Devpac 3 unbeatable



- Covers fundamental assembly language concepts
- How to use the system header files and official Amiga docs
- Low-level intuition and graphics programming
- CLI/Shell and Workbench programming
- and much more besides in this invaluable book



Use this order form to obtain the latest Hirsch products, normally within 2 working days, you can pay by Mastercard / Access / Visa, Switch / Connect etc. or simply send us a cheque / T/C. All orders are subject to availability and prices include P&P (except books, add £2 per order). Hirsch BASF, 1.05, add £20 and VAT within the UK. Send the completed form to Hirsch, The OAS School, Greenfield, Bedfordshire, MK43 7JX.

S&BC Inc Silver Support	\$239
Support 3 Analysis & Free Book	\$39.95
Support Analysis 2 Complete	\$29.95
MyOpen Parcel 1.10	\$39.95
WISN S&BC 1.85 Complete	\$19.95
Shooting Range Assessment	\$24.95
TrailLight Towards Night cam	\$19.95

John Korte, Manager, Job Center

Includes 8 AudioBooks	\$24.95
Libraries	\$24.95
Devices	\$24.95
Hardware	\$25.95
8-Grand 2 & K-Dura Pack	\$49.95
The AudioBooks Book	\$19.95

Name:	
Address:	

☐ **Check/Postal Order**
☐ **Credit card**
☐ **Debit card (Visa)**

Card No. _____
 Signature _____
 Expiry Date _____

Please rush me the software/books that I have selected.	
Name / Book Order #	Credit card Date

HiSoft
High Quality Software

for more information on any of our products, please call HiSon on 0525 718181, or fax us on 0525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DE UK.

DIARY DATES

16 to 20 September 1993
Live '93

Organiser: News International
(071-782 6000)

Venue: Olympia, London
A public consumer electronics show. Commodore plan to attend.

5 to 7 September 1993

European Computer Trade Show
Organiser: Blenheim
(081-742 2626)

Venue: Business Design Centre, London
A trade-only event where new games will be unveiled.

11 to 14 November 1993

Future Entertainment Show
(0225 442244)

Venue: Olympia, London
A multi-format computer and console show.

19 to 21 November 1993

International Computer Show
Organiser: Westminster Exhibitions
(081-549 3444)

Venue: Wembley, London
Discounted software and hardware plus product releases.

OVERSEAS

3 to 6 June 1993

Summer CES
(010 1 202 457 8728)

Venue: Chicago, USA
A massive consumer electronics show with Commodore presence.

● If your company is organising a show relevant to the Amiga and it's not listed, let us know so we can include the information in the diary.

Psygnosis win export award

PSYGNOSIS, the Liverpool-based makers of top Amiga leisure software including Lemmings, have become the first computer games software company to receive the Queen's Award for Export.

The firm's exports to North America, Europe, Japan and Australia have more than quadrupled over the last three years.

Revenue from exports and royalties earned from Japan and America accounted for more than 40 per cent of turnover between 1991 and 1992.

"As a British-based company in the entertainment software field, we are the most successful in Japan," claimed Psygnosis development manager Ian Hetherington.

"Our work with major Japanese companies has been in development for some time now and we are beginning to see the fruits of these joint projects."



Another Star is born

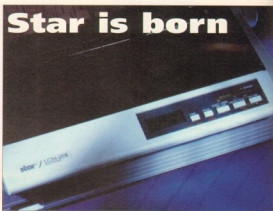
AMIGA owners using their computers for home productivity or small business work are among those targeted for Star Micronics latest printer, the LC24-20 II.

It is the successor to the firm's 24-pin LC24-20 and features an increased buffer size of 39K – expandable to 71K – to increase the speed of graphics printing.

There are ten resident fonts and eight more can be bought as optional cartridges, including Super Letter Quality Fonts with 48-pin emulation.

Print speeds are 200 characters per second in draft mode and 67cps in letter quality. Up to 210cps can be achieved in high speed draft mode.

Amiga-specific drivers have been developed by Star. Price, £351.32.



LC24-20II: Big memory for Star printer

SCSI brings mass storage to A1200

THE latest Amiga upgrade from American specialist CSA is an A1200 accelerator card featuring a SCSI interface to enable mass storage peripherals to be used with the computer.

CSA Twelve Gauge uses a 68030 processor running at 50MHz and has a socket to allow a maths co-processor to be fitted as an optional upgrade.

The speed of the computer is improved further by employing Burst Mode processing, a faster and more efficient way of managing data from 32-bit memory.

Up to 32Mb of this fast RAM can be added to the board, which fits to the Amiga's trap door and is available in several different configurations.

Prices were not fixed at the time of going to press but a 40MHz 68EC030 version with 18Mb of memory will cost about £399 while the 50MHz board will sell for about £499.

The British supplier is Omega Projects who can be telephoned on 0942 682203.

Improved graphics for rendering system

SINGLE frame rendering system Simpatica has been improved to give video professionals AGA graphics support for IFF pictures and animations.

Also new is a 24-bit rotoscoping system which enables sequences of video frames to be digitised from tape, editing and re-rendered with full single frame accuracy.

And the program's developers, Leicestershire-based Optonica (0455 558282), have also announced details of a new package for creating timelapse video and stop motion sequences.

Video Timelapse, or VDL for short, has a range of features including a point-and-click user interface, on line help and on-screen video deck control.

It has start sequence control by Future; Time and Manual modes and stop sequence control through Unlimited, Rendertime, Time, Duration, Timecode, Frames Recorded.

Upgrades from earlier versions of Simpatica cost £49.95 while the full price for newcomers is £350.

VDL costs £350, or £199 will buy the software if the buyer already owns hardware included with Simpatica.

Power tool to help program makers

PROGRAMMERS are targeted for an interactive disassembler and software inspection utility which is claimed to be the most powerful available on any personal computer.

ReSource comes from US firm The Puzzle Factory and is used to disassemble machine code into labelled and formatted source code which can then be reassembled.

It can cope with more than 200,000 lines of code per minute and Amiga enthusiasts can also use the software to examine all the software functions of the Amiga.

A printed manual includes tutorials and within the program there is a Hypertext system which is word-indexed to provide in-depth information about the software.

British distributor is through Helios Software (0623 554828). They charge £130 for the package.

What do you know?

Although Amiga Computing has scores of contacts in the Amiga world we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966.

All sources will be treated in the strictest of confidence.

GASTEINER



ICD POWER



Unit 2
Millmead Business Centre
Millmead Road
London N17 9QU
Tel: 081 365 1151
Fax: 081 885 1953

AMIGA COMPUTERS

A500+.....	£189.00
A600.....	£229.00
A600 40Mb Hard Drive.....	£399.00
A1200.....	£379.00
A1200 20Mb Hard Drive.....	£529.00
A1200 40Mb Hard Drive.....	£599.00
A1200 65Mb Hard Drive.....	£639.00
A1200 80Mb Hard Drive.....	£679.00
A1200 120Mb Hard Drive.....	£769.00
A4000 120Mb Hard Drive.....	£2089.00
A4000 030.....	£979.00

MONITORS

Philips CM8833 Mk2.....	£229.00
Commodore 1084/5 SDI.....	£209.00
Commodore 1960 Multisync.....	£439.00
Gasteiner Multisync Monitor.....	£349.00

PRINTERS

Citizen Swift 9 Colour.....	£179.00
Citizen Swift 240 Colour.....	£279.00
Citizen Swift 200 Colour.....	£219.00
HP 500.....	£309.00
HP 500 Colour.....	£439.00
HP 550 Colour.....	£550.00

RAM

A500 1/2Mb.....	£14.95
A500 1/2Mb with Clock.....	£19.95
A500+ 1Mb.....	£29.95
A600 1Mb.....	£19.95
A600 1Mb with Clock.....	£39.95
A1200 2Mb (PCMCIA).....	£119.00
A1200 4Mb (PCMCIA).....	£189.00
1Mb Simms (Gvp).....	£27.00
4Mb Simms (Gvp).....	£89.00
A2000 2Mb-8Mb.....	£129.00

SCANNERS

Power Mono.....	£95.00
Power Colour.....	£235.00
AlfaData Mono.....	£99.00
AlfaData Plus.....	£119.95
AlfaData OCR.....	£165.00
Gasteiner Mono.....	£89.00
Gasteiner Scan Read.....	£129.00
DataScan Pro V3.....	£89.00
Epson GT 8000.....	£1199.00

HARD DRIVES

ALPHA POWER	
* External IDE HDD for Amiga	
A500/A500+.....	
Internal IDE HD for A1500/A2000	
* Memory conveniently expandable to 2/4/6/8Mb by using IM X 4 Zips	
* 100% Compatible	
* Easy Installation, just plug in and go	
* Auto boot, Auto config and zero wait states	
Controller for A500/A500+/A1500/A2000.....	£99.00
Controller + 40Mb Hard Drive.....	£199.00
Controller + 65Mb Hard Drive.....	£279.00
Controller + 85Mb Hard Drive.....	£299.00
Controller + 120Mb Hard Drive.....	£329.00
GASTEINER POWER For A600/A1200	
20Mb + IDE Cable.....	£99.00
40Mb + IDE Cable.....	£149.00
65Mb + IDE Cable.....	£199.00
85Mb + IDE Cable.....	£279.00
120Mb + IDE Cable.....	£299.00
Fitting for A600 or A1200.....	£29.95

BARE HARD DRIVES

IDE (3 1/2")	SCSI
40Mb.....	£99.00
65Mb.....	£199.00
85Mb.....	£219.00
120Mb.....	£249.00
50Mb.....	£199.00
85Mb.....	£279.00
120Mb.....	£299.00
210Mb.....	£319.00

ACCESSORIES

Power Supply A500/A500+/A600/A1200 (High Voltage).....		£34.95
Power Supply A1500/A2000.....		£69.95
Internal Drive for A500.....		£40.00
Internal Drive for A2000.....		£45.00
A500 Rom Switcher.....		£12.95
A600/A1200 Rom Switcher.....		£12.95
Auto sensing Joystick/Mouse switch box.....		£12.95
Printer Cable.....		£6.00
Modem Cable.....		£6.00
SCSI Cable.....		£6.00
IDE cable for A600/A1200.....		£15.00
External Drive for A2000.....		£49.00
Blitz Amiga.....		£20.00
ICD Flicker Free Video 2.....		£199.00
Commodore 64 Power Supply.....		£19.00
10 Blank Disc.....		£7.00
3.5" External Drive.....		£50.00

MICE + TRACKBALL

AlfaData	
Infra Red Mouse.....	£45.00
Mega Mouse.....	£10.95
Mega Mouse (Mat+Holder).....	£14.95
300 DPI Optical Mouse.....	£27.95
The Trackball.....	£29.95
Crystal Trackball.....	£34.95
Optical Pen Mouse.....	£35.95
Golden Image	
GI 600.....	£13.95
Optical Mouse.....	£23.95
Brush Mouse.....	£19.95
New Golden Image	
400 DPI Mark 2 Mouse.....	£14.95

IT'S HERE!!! GIGAMem

VIRTUAL MEMORY FOR AMIGA

Application:
Most recent powerful application for the Amiga (e.g. for graphics, music, animation, raytracing, DTP) require more main memory than is available or possible to integrate. GIGAMem is a program which simulates up to 1 GigaByte memory, which swaps onto any mass storage system (i.e. hard disk). Intelligent management allocates simultaneous use of several programs in a multitasking mode.

Features:

- Support up to 1 GigaByte Virtual Memory
- Swapping to either a file or a partition
- Intelligent memory swapping in accord with memory access frequency
- Use of the new Amiga/HiOS 2.x interface guidelines
- Comfortable preferences utility with 2.0 style
- Fully multitasking, no system slowdown during disk access
- Easy and comfortable installation program
- Kernel 100% assembler for maximum speed and minimum size
- Intelligent paging strategy a la UNIX™
- Display of available virtual memory on the Workbench site
- Write cache for increased speed
- Ready-to-use program database of common applications for optimum utilization

System requirements:

- GIGAMem works with all AMIGA®-® computers with MMU (Memory Management Unit), i.e. Amiga/HiOS 2500, 2500/30, 3000 or Amiga 500+ (1000/1000/2000/4000 with 68020 or 68020 accelerator and MMU)
- No restriction on type of HD controller and hard disk
- GIGAMem is compatible to Kickstart 1.2/1.3 and 2.x

PHONE FOR REPAIRS ON AMIGA!

DELIVERY CHARGES:
Small consumables & software items.
Other items, except lasers, Offshore and Highlands.
In addition we offer the following express services:
Saturday deliveries
AM next day
UK MAINLAND (post Highlands)
Despatched by post please charge changes when ordering.
Next day courier service, £10 per box.
Please contact.
Normal rate plus £15 + VAT per box.
Normal rate plus £8 + VAT per box.

Products advertised represent a small sample of our in-stock range. A complete price list is available on request.

E. & O. E. Price subject to change without notice.
Goods subject to availability.
Specifications subject to change without notice.
All Trademarks acknowledged.

Top secret work exposed!



COMMODORE are working on a project so secret that they've only told a few select developers about it.

At the World of Commodore Show in New York, Commodore's Lew Eggebrecht said that some projects, such as networking,



Sonic not to appear on CD Amiga?

were currently on hold due to another urgent project. This reporter has done some snooping and discovered exactly what.

Code-named AmigaCD 32, this hot new hardware unit combines the basic circuitry of an Amiga 1200 (the AGA chipset and the EC020 processor) with a top-loading CD-ROM drive, similar to that found on the Sega MegaCD.

How can Commodore hope to take on CD-ROM giants like Sega and the coming Nintendo and 3DO CD-ROM units? By using an old sales tactic they dug out of their early 1980s archives – selling hot equipment at a low price.

An anonymous games house reports that Commodore told them that AmigaCD 32 is slated to sell at only \$299 (£199) com-

Denny Atkin with the latest news from the other side of The Pond

plete. This puts it about \$100 (£67) less than a Sega Genesis (the US version of the Mega Drive) with the CD-ROM attachment, and at less than half the price of 3DO.

So is this just CDTV with A1200 guts? Nope. My informants tell me that AmigaCD 32 doesn't have all the com-

puter-like expansion ports found on CDTV, and it looks more like a games console than a VCR.

This doesn't mean it can't be turned into an Amiga – Commodore are also developing an expansion unit that will allow standard computer peripherals to be attached.

Will this be the machine that puts Commodore back on the top? Even the developers I talked to who are actually doing titles for it aren't brimming with optimism.

Although the hardware is quite capable and the price is low, it's software that sells the consoles, and most companies seem to be targeting sure bets like Sega for their CD titles.

Powering up the A1200

THE ANNUAL World of Commodore Amiga show, held April 2-4 at the New York Passenger Ship Terminal in Manhattan, was a treat for A1200 owners looking to add a bit more power to their hot new machines. Those who went seeking software, though, left largely disappointed.

Although there were 33 exhibitors at the show, many of those were dealers, magazines, and purveyors of public domain software. Among the more well-known developers who did attend were Centaur Development, DKB Software, Gold Disk, GVP, ICD, Microdeal, Migraph, Moonlighter, NewTek (in the guide of Video Toaster Magazine), SCALA, Soft-Logik, and Utilities Unlimited.

Commodore's booth was consistently crowded, especially around the Amiga 4000T, which was shown to the North American public for the first time at the show.

The A4000T ("T" is said to stand for "floor standing unit," rather than "Tower," due to NCR's ownership of the latter word) sports five Zorro III 32-bit expansion slots, four IBM AT slots, six drive bays, both IDE and SCSI-2 on the motherboard, and – of particular interest to video nuts – dual video slots.

FUTURISTIC-LOOKING

The case is the slickest ever to come from the big C, with a futuristic-looking smoked-plastic curved door covering the drive bays. The A4000T is still a couple of months away from shipping, and promises to be a premium-priced product, not one for the Zool crowd.

Lew Eggebrecht, an information-seeking journalist's dream, once again spilled the beans about Commodore's development plans.

You've read about the high and low-end 24-bit chipsets in previous columns (see the April issue of AC); the only news there was that the low-end chip set will have support for adding a 16-bit stereo DAC for improved sound,

and that the target date for the high-end chipset, which ships first, has slipped to mid-1994.

Commodore's upcoming DSP chip has found a new home on a Zorro III card. The original plan had been to place the chip on the 68040 CPU card, but Commodore realised they could double the performance of the AT&T DSP 32010 chip if they placed it on an expansion card with its own RAM.

This also allows them to run the card at 66MHz, instead of "only" 50MHz. The board will ship with its own multitasking operating system based on the AT&T VIOS software. Initial software will enable use of the board for real-time sound processing, and libraries to use it as a V32bis modem, JPEG image decoder and encoder, and MPEG audio decoder and encoder are in the works as well.

This board won't be cheap, but comparing its capabilities to those of the basic Motorola DSP in the Atari Falcon is like comparing a 33MHz 68040 to the 1MHz 6502 found in the C64.

Eggebrecht also said that CD-ROM drives for the rest of the Amiga line were a top priority right now. The drives will be double-speed mechanisms and will support multi-session discs (useful for Kodak's Photo-CD), and will include custom microcode to speed access dramatically.

Eggebrecht said drives will be available for all Amigas, with the probable exception of the A600, since the A600 doesn't have the needed DMA access.

Perhaps the most intriguing hint of the Amiga's future, though, came from Commodore US president Jim Dionne.



Towering above the opposition, the A4000T

When asked during a question-and-answer session why Commodore hasn't been able to repeat the success of the C64 in the US market, Dionne hinted that Commodore would be making a major push for the consumer market this fall with a new machine that could be the next Commodore 64. He emphatically stated that this would not be the A600 – it's more likely to be the AmigaCD 32 mentioned above.

Will it be the next C64? Commodore has already lost the support of virtually all the US games developers. And a company that would sell such as "Commodore's Cold, Raw, Dead Fish" is trying to go up against Nintendo and Sega in a marketing war? I don't think so. Is this the 64GS all over again?

Hardly a good sign



As mail order and high street dealers alike begin at last to ship the A1200HD in quantity, bitter feelings and cries of anger linger on over the way in which the machine's parent company finally staggered into the hard drive market.

The seeds of the future were sown last year when, to the stupefaction of those present, Commodore launched the A1200 in only one flavour - without a hard drive.

Most observers scratched their heads and wondered whether an external hard drive connecting through the PCMCIA slot was to be announced shortly, but this did not happen and the internal expansion route became the only option for the storage hungry user.

Given the easy availability of 2.5in IDE drives, it seemed that the damage could be limited. What rapidly became clear, however, was that although the hardware was easy to come by, Commodore themselves were making the ambitious owner's life a misery by supplying A1200s with five Workbench 3.0 disks as opposed to six.

The missing disk? Why, the installation disk, of course, containing the hard drive tool kit and other essential hard drive utilities. Without this disk, A1200 owners might buy their own drives, but fit them they could not.

Magazines, assuming that the A1200 would be supplied with the same Workbench set as included with the A4000, wrongly reassured their readers that they would be able to buy a drive and cable then fit it at home, thus raising more doomed expectations.

Files in a cesspit

Bewildered (and rather annoyed) customers tried everything from the A600HD install disk to a variety of shareware utilities, and confusion multiplied like flies in a cesspit. Commodore, fiddling merrily as the blaze developed around them, played dumb, and restricted themselves to a few statements about the naughtiness of copying disks distributed with other Amigas.

Why the decision was taken to omit that vital sixth disk from the A1200 Workbench 3.0 set will probably remain a mystery. Commodore were never very good at discussing their motives, and the MD at the time of the A1200 launch, Kelly Summer, has since left the company.

What is clear, however, is that the decision left a gaping hole in the market ripe for both exploitation and the confusion we rapidly saw developing.

Smaller dealers, especially those in the mail order industry, took the opportunity to buy in cheap IDE drives and fit them themselves, but again they ran into the brick wall of Commodore's reluctance to give permission for dealers to supply

Commodore seem set to release a CD-based AGA machine, but given their record on hard drives, should we hold our breath for the compact disc?

A4000 or A600 hard drive software. There were soon as many hard drive solutions as there were dealers, and the poor punter, to judge from letters we received during the worst period, simply didn't know what was going on.

Commodore's answer was to close down their technical support division, admit in secret that they hadn't the facilities to put together their own A1200HD, and throw the hot potato to trade distributor ZCL.

The deal struck between ZCL and Wang at last made the A1200HD a reality, but by this time a huge number of floppy-only machines had been sold and their owners were no better off.

As no moves have been made to provide an official upgrade path for existing owners wishing to fit hard drives, and as Commodore continue to ignore the calls from mail order dealers to at least release the official formatting software, users who buy an A1200 with the aim of upgrading it at a later date will find themselves as frustrated as those early owners.

Older PCMCIA

What about PCMCIA? Many have pointed to the slot as a potential interface for everything from fax modems to electric toothbrushes, but most have neglected to mention that the slot fitted to the A1200 is an older revision of the standard than that currently being worked on by the PCMCIA market as a whole.

In other words, the vast majority of manufacturers developing on the standard are in all probability developing devices which will not work on the older A1200 PCMCIA slots.

If Commodore, in their wisdom, are unwilling to make a shout about this discrepancy between marketing claim and fact, Amiga Computing is not.

The complete lack of PCMCIA expansion options, the late arrival of the official A1200HD, the missing sixth disk, and the company's refusal to allow third parties to use Commodore software when selling their own hard drive kits adds up to a monumental mess in which only the end user has lost out.

With the demise of CDTV, the Amiga 600's death by AGA, and the rumours concerning CD-based Amigas, AAA chipsets, and so on, the last thing we need at the moment is for a lack of development to stifle the A1200 market.

The machine makes for easily the best value-for-money micro ever released, a fact which alone will keep sales healthy all this year, but if users begin to suspect that Commodore are unable to support their product or are intent on replacing it within the year, confidence in the 32-bit revolution may begin to slip.

The AC team

EDITOR **Storie Kennedy**
ASSOCIATE EDITOR **Paul Austin**
ART EDITORS **Tym Lecky**
Terry Thiele
NEWS EDITOR **John Butters**
PRODUCTION EDITOR **Phil Morris**
STAFF WRITERS **Jonathan Maddock**
Ben Styles

ADVERTISING MANAGER **Sue Horsfield**
AD SALES **Andy Simpson**
AD PRODUCTION **Barbara Newell**

MARKETING ASSISTANT **Lucy Oliver**
PRODUCTION MANAGER **Sandra Childs**

SYSTEMS MANAGER **David Stewart**

EDITORIAL MANAGER **David Wren**
SUBSCRIPTION **COMAG (0895) 444655**
SUBSCRIPTION **051-357 2941**

Member of the Audit Bureau of Circulations

ABC 64,418

Jan-June 1992

Published by Europress Enterprises Ltd.
 Europa House, Adlington Park,
 Macclesfield SK10 4NP
 Tel: 0625 879888
 Fax: 0625 850632

CHAIRMAN **Derek Maslin**
MANAGING DIRECTOR **Ian Bonfield**

Cover/Desk Hotline
0625 89766
Thursday, 2-5pm only

We regret Amiga Computing cannot accept technical help or a personal best letter by telephone or in writing. All reader enquiries should be submitted to the address in this panel for possible publication.

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

©1992 Europress Enterprises 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.

EUROPRESS
 ENTERPRISE

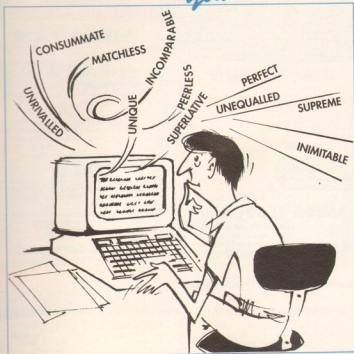
For five years Amiga Computing has been the leading magazine for Amiga enthusiasts. As a key member of the Europress magazine group, Amiga Computing promises to inform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available.

Amiga Computing • Amiga ST User • Amiga ST Review • PC Today
 Acorn Computing • GB Action • Amiga Action • ST Action
 Commodore Force • Super Force • PC Force • Amiga Force
 • Best Software • Super Action • PC News

Printed in the United Kingdom
 by BPCC Ltd, Carlisle

PROTEXT 5.5

"You won't be lost for words" . . .



"it's bloody brilliant"

"one hell of a performer"

"if you need a professional word processor Protext is perfect"

"nothing else available comes close"

ST FORMAT

COMPUTER SHOPPER

AMIGA COMPUTING

ST APPLICATIONS

PRODATA 1.2

New version of Prodata now with pull-down menus, mouse or keyboard operation, automatic record numbering, merge database, instantaneous filtering, prologue form, edit fields in any order, 2-across label printing. Full details available from Arnor.

Price: £40

PRICES (including VAT and delivery)

For Commodore Amiga, Atari ST or TT.

Protext 5.5	new £80
Upgrade from 5.0 to 5.5	£30
Upgrade from 4.2/4.3 to 5.5	£40

Please return your original discs when upgrading

French or German spelling dictionary £35.25

When upgrading please return any extra spell checking dictionaries for a free update to the revised version.

... with Protext 5.5 because the pop-up thesaurus will provide you with inspiration whenever you need it. With words provided by Collins the thesaurus has 43,000 main entries and 827,000 responses!

Protext 5.5 introduces enhanced text formatting options. Automatic hyphenation lets you produce a well-spaced page layout without the bother of manually putting in soft hyphens. Protext determines the correct hyphenation points by algorithms and look-up tables. Elimination of widows and orphans is also provided. You will no longer need to worry about those infuriating single lines at the top or bottom of pages. Protext formats the text to avoid these as you edit the text. Extra blank lines at the top of a page can be suppressed.

New document analysis features provide a wealth of information about your text. You can examine a list of all the words used - alphabetically or by the number of occurrences. Other statistics shown include average word length, average sentence length and a table of the number of lines on each page.

Plus many more improvements . . .

- ✧ Enhanced file selector with different sorting methods, bulk copy and erase.
- ✧ Prodata users - mail merge directly from Prodata files, no need to export.
- ✧ Mail merge: nested repeat loops.
- ✧ New window-based help facilities.
- ✧ Improved line drawing.
- ✧ Spelling checker finds repeated word and missing capital letters.
- ✧ Conversion to and from WordStar 5.5 and Microsoft RTF
- ✧ Full printed documentation of new features.

Of course Protext still includes . . .

Choice of pull-down menu or keyboard operation, extensive printer font support and proportional formatting while editing, up to 36 files open, split screen editing, characters for 30 languages, index and contents, footnotes, newspaper column printing, file sorting, macros, indent tabs, mail merge programming language, exec files and the fastest search and replace around. Altogether the most comprehensive word processing software for your Amiga or ST.

✧ Both Protext 5.5 and Prodata require 1Mb of memory



ARNOR

Arnor Ltd (AC), 611 Lincoln Road, Peterborough PE1 3HA. Tel: (0733) 68909. Fax (0733) 67299



Before the first of AC's three-part B&P Jr. tutorials, it's worth spending a little time exploring the interface and installation of the software. Hard disk users will be happy to know that installing the program is simply a matter of dragging the B&P Jr. drawer onto the hard disk partition.

Assuming hard disk users have done what they must, the inevitable double click on the B&P Jr. icon will reveal the three basic elements of the interface, namely the track window, transport control and window selection icons. On certain systems loading may take a while but be patient - it's well worth the wait!

Icon start

Exploring the icons is probably the best place to start - so simply move through the various icons clicking and closing them in turn. After a couple clicks you'll notice that some of the advanced options have been removed.

Obviously it wouldn't be good business on the part of Blue Ribbon to hand over the entire package, and it's here where AC's amazing upgrade offer begins to show its worth.

Although a fair selection of windows are inactive, B&P Jr. still offers incredible power and a real taste of the potential within B&PPro2. We'll cover the various options as and when required but for now

*Amiga Computing
brings you
Bars&Pipes Jr, the
most powerful
musical giveaway
in magazine
history - an
eight-track
sequencer with
powerful editing,
Midi and internal
sound support,
and full save*

we'll turn our attentions to transport control.

As you may have already noticed the transport controls - like the larger track window - can be closed down and returned to their icons just like all the program's windows.

However, assuming transport control is still active you'll see a selection of tape deck controls, the present tempo setting, a song position counter plus an

the DISK

The best sequencer bar none

assortment of flag icons and special features.

In subsequent support columns we'll look at all the advanced features but for now we'll stick to the basics. Although the sequencer is empty we can still experiment with the controls. Click on the play button and you should see the song position marker begin to move within the track window.

To stop playback, simply click on the

blue square or alternatively click on the square and triangle combination button to jump the sequencer back to the beginning without terminating playback.

If you choose the stop option you can still move back and forth through the sequencer with the fast-forward and rewind arrows. To adjust the tempo simply click above or below each figure using multiple clicks or a sustained hold and the tempo should

Focus on the edit



Magnifying glass - click on notes to obtain specific note information



Pencil - add new notes to the sequence according to the note length and volume settings



Magic wand - adjust the length and volume of existing notes



Move - adjust the pitch and position of the note according to the selected note length



Copy - click on any existing note to make a duplicate which can be stamped down according to the defined note settings



Erase - delete any note or group of notes



Toolbox - apply tools - such as quantize - to single or group selections



Drag box - make multiple selections, used in combination with the move, copy and erase options



Stop-time - add new notes according to pre-set note length and volume settings. If used with internal sounds the Spare keys requester must be active. Use the space bar to add rests, and backspace to delete unwanted events

We'll look at editing in detail over the coming issues but for now here's a brief taste of the power on offer. Assuming some changes are required to the performance, double-click on the sequence window to reveal the track in close-up. Now click on the various icons listed below depending on your requirements:

Recording a classic

When you feel comfortable with the necessary set-up procedure for either MIDI or internal sounds, it is time to attempt some recording. Move to the song pull-down and select New. Now follow the set-up procedure depending on your preference for internal or MIDI sounds.

In the case of the internal sounds this will require the AmigaPhone tool at the end of each track and a Spare keys icon at the beginning, but unlike the demo you'll have to specify the samples yourself by double clicking on the AmigaPhone icon and defining the sample by selecting New.

This will present a requester which you can use to load a sample from the selection available within the instrument drawer on the CoverDisk.

Assuming set-up is complete, the next move is to make sure the metronome is on-line and has at least a one-bar lead-in prior to recording. Next click on the grey box just before the sequence window until it displays a red R.

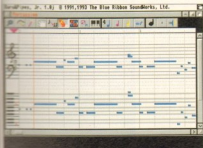
Finally make sure the track is selected – a small red arrow

should appear just after the track name. Now move to the transport control and click on the record button. The sequencer is now set to record and if you click on the play button recording will begin.

All that remains is to hit the button, play your masterpiece, and press stop. When recording is complete the sequencer automatically de-selects the record button in the transport control or a safeguard – this must be active in addition to the record or merge options on the target track before you can record anything.

If you want to re-record the sequence, simply rewind the sequencer, re-select the record option in the transport and press play – this will automatically overwrite the original.

If however you wish to combine the old with the new, toggle the record, merge, and play button on the target track until it shows a red M, activate the record button within the transport and press play. Any new notes will then be combined with the old.



Clear and simple editing makes recording a dream

reflect any tempo changes you make.

A particularly useful addition just below the tempo control allows instant half and three-quarter speed playback and recording. Rather than having to adjust the tempo to play a tricky section correctly, clicking on either option to temporarily slow the sequencer when necessary.

Moving on to the track window we finally arrive at the heart of the sequencer offering eight tracks complete with the pipes that give the sequencer its name.

Although rather unassuming, the plumbing either side of the sequence window sandwich is absolutely essential to the program allowing the addition of various tools which can perform everything from simple I/O operations to special effects.

In order to get any sound from the sequencer the first task is to place suitable

tools at both the beginning of the input pipe and the end of the output. By default B&P Jr loads up with MIDI-in and out tools already in place – very handy.

For those with a suitable MIDI interface and a MIDI compatible sound source all that remains is to click on the small grey box just after the track name – a red arrow will appear inside the box and the sequence window will become active.

Sound checks

Now move to the output on the output pipe and select one of the 16 available MIDI channels by clicking on the channel icon – a pop-up requester will appear allowing you to make the appropriate channel selection.

If you select a voice for the appropriate channel on your synth or module you should be able to play some notes and hear the results – assuming you have some form of amplification of course.

If after the aforementioned procedure there's still no sound, check the leads between the Amiga and your instrument –

remember you need both MIDI-in and out connections. Although B&P Jr is primarily a MIDI sequencer, it still allows access to the internal talents of the Amiga with notes input via mouse or keyboard.

Before the guided tour to internal sound set-up, it's essential that readers running a 1Mb system should read the instructions detailed in the box labelled Attention 1Mb owners.

By far the easiest way to learn is to load the demo song supplied on the CoverDisk. To access the aforementioned demo, move to the song pull-down and select load – a prompt will ask whether to save before closing – click on the NO.

A new requester will then pop-up showing the available volumes. Select the CoverDisk and list the contents of the Bars & Pipes Jr drawer – at which point select and load the Demo file.

Once safely installed you'll see the basic set-up required for playback and recording. However before a close inspection, hit the play button and give it a listen. When you've become thoroughly bored, click on the stop button and we'll look at what makes the pro-

Attention 1Mb owners

Prior to loading the B&P Jr demo song on a 1Mb system the following procedure must be carried out:

1. Type ENDCLI into the CLI window and hit Return
2. Load B&P Jr and select the memory savers option from the preferences pull-down menu. Select each option with the exception of Use Gray Scale – a small check mark should appear alongside each item.
3. Once the Close Workbench option is applied certain systems may require a re-boot in order to return to the normal CoverDisk environment.

change as desired. Obviously with no song in memory tempo changes are pretty meaningless.

However if you make a quick trip to the windows pull-down menu and select the Metronome option, a small requester will appear. For the moment simply click on the internal button, set the lead-in to one, and then close the requester. If you now hit the Play button and continue editing the tempo a short clicking sound will

Note velocity – use to define volume of notes added via the pencil and step time options



Playback – listen to the music shown in the edit window



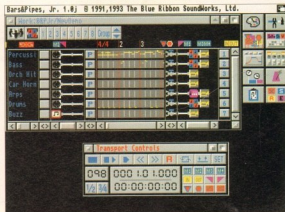
Zoom – not surprisingly, used to zoom-in and out of the track – particularly handy for cut and paste operations



When editing is complete simply click on the close-at in the top left-hand corner and the program will automatically store any changes and return to the track window ready to record the next track in your potential masterpiece.



Note length – used to define note length and relative bar position for both the pencil and step time options



BarS&Pipes Jr in full flight as the AC demo takes the stage



Amiga Diary

Author: Andrew K Pearson

Amiga Diary is one of those desktop utilities so often found in the public domain and so often left out of the average owner's PD collection because most of us don't realise just how useful they can be.

Rather than offer an alarm function for events which occur during a single day, Amiga Diary is designed to keep track of events and appointments over the course of a few weeks, months, or even years.

It features a page flicking system to simulate a real paper diary and has a quick "look-up" function for jumping to any day required.

Each day can have as many pages as required for its diary entries, which means that the user need never type an entry in short form as is so often the case with diary programs. If this isn't enough for all information, the scribble function will enable the jotting down of notes.

Most programs of this type allow just a single line of text for each entry with little or (usually) no explanatory information to remind the user about the appointment or event.

Amiga Diary will succeed where others fail simply because it offers much the same ease of use as a normal diary without forcing the user to stick to cryptic little notes.

on the button directly after the track name, a small red arrow will appear. Now double click on the Spare-keys tool and a miniature keyboard will pop up. If you click on the keys the sample assigned to that particular track will sound.

Although useful on occasion, it's the Amiga keyboard option offered by the Spare-key tool that really makes internal sounds a viable option. Assuming the Spare-key requester is still active, try tapping in a few notes on the bottom two

rows on the Amiga keyboard. You should hear the sample play and see the notes light up on Spare-key requester - to move through the available octaves simply click and drag the octave bar beneath the miniature keyboard.

To try a different track simply click on the original Spare keys icon and drag it to the track of your choice. Click on the input button - the red arrow will move to new track. Now double click on the Spare keys tool to open the requester. You should now be able to play notes as before.

Expload file on disk

Last month's disk was meant to include the file Expload in its C directory, but due to an attack of intense moronic dullardness on the part of the person responsible for this simple task, it did not appear. Sorry!

Users of Maxipain wishing to follow last month's ACAS column file can now proceed by substituting AC62 where AC61 was in the original.

Faulty disk?

If you subscribe to Amiga Computing and your disk has been damaged in the post, please return it to:

Amiga CoverDisk, Europress Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB

If you bought your magazine from a shop and found that the CoverDisk was damaged, please return it within two months to:

Stanley Precision Data Systems Ltd
Unit F, Cavendish Courtyard, Salford
Road, Weldon North Industrial Estate,
Corby, Northants NN17 1JX

gram's internal sounds tick. As you can see, all that's required to turn Midi notation into internal sound is an AmigaPhone tool placed at the end of the appropriate track.

Like most tools the AmigaPhone icon can be opened with a double click revealing the set-up for that particular tool. For the moment leave the various parameters as they are and close the requester.

Obviously the AmigaPhone tool only supplies the sample and its parameters - the question is how to get the note information into the sequencer. The answer is the Spare-keys tool which can be found in the tool box or more easily as the input tool on track 8 in the demo. If you select that track by clicking

Quoter

Author: Ben Merrifield

Quoter is an amusing program of the fortune cookie type which, every time it is run, provides a quote for the day. This can be either a general truism, such as Sod's Law, or a quote taken from a famous personality, such as Winston Churchill or Groucho Marx.

Most titillating of all are those which have been added down the years by wits in offices and workplaces around the world, my own favourite being: "When the plane you are on is late, the plane you are transferring to is on time." (anon).

The CoverDisk contains not only the Quoter program, but also a sizeable file of ready-made quotes which can be added to using a standard text editor or a wordprocessor. This file, called Quotes.Dat, can be found in the CoverDisk's S: directory, and for the program to work on another disk must be transferred across.

In other words, if you have a hard drive called Workbench, you would boot from the hard drive, insert the CoverDisk, and drag the Quoter drawer across, then open a Shell and type:

```
COPY AC62:1/QUOTES.DAT TO S:
```

Users of floppy drives can do the same to put Quoter on another disk, with the one difference that they might have to delete a few files first.

Quoter also requires the HsiofBasic library, which can be found in the CoverDisk Libs drawer. To copy this to your regular system disk, type the command:

```
COPY AC62:1/LIBS/HsiofBASIC.LIBRARY TO LIBS:
```

The program should now function perfectly.

Readers who have access to a book of quotations or who find their favourite isn't in the data file can add their own and have the Quoter run on every boot-up. To do this, edit your startup-sequence and add the line:

```
RUN >LIB: <LIB: C:\DIR\QUOTER
```

where [DIR] is the name of the directory into which you have copied the program. It really can brighten up a boot-up.

PrintManager v1.1

Author: Nicola Salmoria

Print spoolers are utilities which the non-printer owning public will take one look at and ignore. The rest of us, however, will recognise them as one of the most useful and time-saving utilities ever devised.

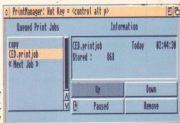
When a program prints to any printer, be it a slow or fairly fast model, the output is passed to the print buffer which, if available, is normally a few kilobytes of RAM - hardly enough for a page of text.

When a DTP layout is printed, the resulting reduction in speed while the program waits for the printer to complete the page can be exasperating.

The result is a loss of productivity and, if using a very slow printer, sanity. PrintManager is a priceless utility for Kickstart 2.0 and above which intercepts all print jobs sent to the printer ports, no matter which program originates them, and spools them to a waiting queue of print jobs.

Depending on the user's preferences, the directory to which the print jobs are spooled can be either a floppy, a hard drive, or the RAM disk. A tool type found on the PrintManager icon can be altered to suit any system, so if the user has a hard drive but not much memory, spooling to disk is the obvious and easy choice.

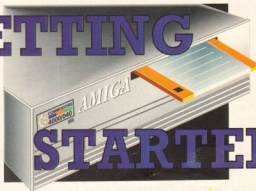
A graphical interface controls all organisation of jobs, enabling the pausing and rearranging of the queue, and as PrintManager runs like a Commodory, it can be hidden and controlled using Exchange.



Working as a WIZ
Commodity,
PrintManager
is easy to use
and friendly with it

The Amiga Computing CoverDisk is designed to be as simple to use as possible. Follow these instructions and you'll be up and running in no time!

GETTING STARTED



New readers may have difficulties using our CoverDisk, so we have included this page to help you out.

Below we explain how to copy files from one disk to another, how to copy the entire CoverDisk and how to de-archive programs, none

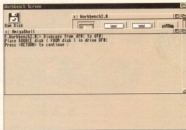
of the first things you must do when get your CoverDisk is make a backup copy, then put the original CoverDisk away for safe keeping. As a rule you should also do this with the majority of your software collection.

How to make a backup

To copy the entire CoverDisk, load up your Workbench disk, then either click once on the CoverDisk icon and select Duplicate, or select Copy from the Workbench menu, or open CLI/Shell and type:

```
DISKCOPY FROM DFD: TO DFD:
```

When prompted, put your CoverDisk (the source disk) in d0: and be ready to replace it with your blank disk (the destination disk). Follow the Amiga's on-screen prompts until the disk copy is completed. Now put the original away in a safe place and use your backup.



Copying individual files

You might at some point want to copy a single program from a CoverDisk to your compilation, Workbench disk or even your hard drive.

To do this you'll need the COPY command. As most CoverDisk programs are staged away in their own directories, the quickest way to copy a program is to copy the whole directory at once. Use the command:

```
COPY [directory] TO [newdisk] ALL
```

where [directory] is the full pathname of the directory you wish to copy, and [newdisk] is the name of the disk and directory into which it will be copied.

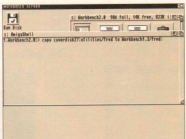
For example, if you wanted to copy a utility called FRED from CoverDisk 27's Utilities drawer to a directory called FRED on your Workbench disk, you'd type:

```
COPY COVERDISK27/UTILITIES/FRED TO WORKBENCH3/FRED ALL
```

Alternatively, you can click once on the FRED directory icon and drag it across to the new disk's window. This has the advantage of creating a new directory for you and copying the icon as well.

Once you have moved a particular program to where you require it this could experience some problems running the program. This is sometimes caused by the program not being able to find files which it needs to run.

A good example is the text files on the CoverDisk. These have been crunched using PowerPacker, so when you try to copy them to another disk and then try to read them you can't unless you have also copied the PowerPacker library into your LIBS drawer.



So if you have copied a program from the CoverDisk to your Work disk or hard drive make sure you also copy any other files the program requires, ie fonts, libraries, device drivers and Ccommands.

De-archiving

Occasionally we have so many programs to fit onto the CoverDisk that we have to archive them. Archiving is where we take the entire contents of a disk and compress them into one file which is much smaller, giving us space to fit more programs onto the disk.

De-archiving programs which are on the CoverDisk is a very simple task. If a program has been archived then you will need a blank disk to dearchive it onto.

Say we have archived a program called FRED. You simply double click on FRED's icon, and will be asked if you have a blank disk ready to dearchive to. Type "y" or "n" accordingly.

Your computer will then copy the archived file into its memory and ask you to insert your blank disk. It will proceed to format the disk, and will then de-crunch the archived file onto your blank disk.

Once this has been done you can simply reboot your machine with the disk which contains the dearchived program on it and then use the program as instructed in the CoverDisk pages.

Note that if you have a Workbench 2 or upward machine you must boot with the CoverDisk write-enabled to perform the dearchiving process.



Workbench 3

If you have a Workbench 3 machine, don't worry - most if not all of the programs on the CoverDisk will work on your machines.

If the program is specifically designed to work with Workbench 3 then you may have to copy the program to your hard drive or Workbench disk using the process described earlier on this page.



Upgrade your

BARS & PIPES

J U N I O R

THE
BLUE RIBBON
SOUNDWORKS
LTD



Here's a money-saving opportunity to upgrade from this month's cover disk **Bars&Pipes, Jr!** Just **£199**, including VAT and p&p, buys you the new **Bars&Pipes Professional 2.0** from The Blue Ribbon SoundWorks! That's a **£100 saving!**

Bars&Pipes Professional 2.0 is without doubt the hottest item in both the sequencer and multimedia markets...

Amiga Computing

CoverDisk

The upgrade kit includes two disks, an excellent 384 page manual in a binder, and a registration card that qualifies you for upgrades and new product information.

Extra features of arguably the most powerful user interface ever include:

- **Media Madness; a state-of-the-art built-in multi-media system**
- **A huge variety of tools that provide unparalleled processing power**
- **Simple mouse-driven point and click operation**
- **Excellent printing and notation options**
- **Built-in expandability to the entire Blue Ribbon range**
- **Unlimited number of tracks which can be edited in seconds**

Order form

Please send me the Bars&Pipes Professional 2.0 Upgrade (9547)

I enclose either:

- This original order form, or
- My original CoverDisk together with a photocopied form.

I wish to pay **£199** (inc VAT and p&p) by:

- Cheque / postal order payable to Europress Direct

- Credit card expiry date: / /

Card No

Deliver my order to...

Name

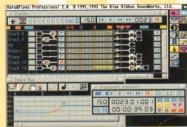
Address

Postcode

Daytime phone

Allow 28 days for delivery

☐ Tick this box if you do not wish to receive promotional material from other companies



To upgrade* to the best Amiga music and multimedia package, Bars&Pipes Professional 2.0, send this order form to Europress Direct, PO Box 2, Ellesmere Port, South Wirral L65 3EA. If you don't want to cut up your magazine you can send your original CoverDisk together with a photocopy of the form.

*The upgrade includes UK tech support



Marcam
LIMITED

Do you want to overlay computer graphics or titles onto your videos? If so, you will need a Genlock. Rendale Genlocks are built to a very high standard, and are used widely in the professional environment.

62 Tenter Road,
Moulton Park
Business Centre,
Northampton,
NN3 1AX,
England.

Tel: (0604) 790466

Fax: (0604) 647403

THE GENLOCK PEOPLE

RENDALE 8802 £139 -

The Rendale range of Amiga Genlocks begins with the 8802. This is a Genlock, which, when attached to an Amiga computer and a suitable video system, will allow you to mix video and computer graphics. It offers all the functions that you need, such as:

* RGB feed through, allowing for a preview monitor.

* High quality output video, which in default mode provides video with overlaid computer graphics.

RENDALE 8802 FMC £178 -

It can be supplied with a device which will allow you to fade between computer graphics and the video source, and also a mode control unit so that you can move between Amiga only, video only, background mode and keyhole modes 1 & 2.

RENDALE SUPER-8802 £499 -

The Rendale Super-8802 is a development of the basic 8802 unit, it performs the same functions, but has the added capability of also working with Super-VHS signals. The unit will allow the user to cross fade between the Amiga and video signal. In addition, some basic wipe patterns are provided, and also a fade to black option. Mode control is also provided via hardware.

NEW! RENDALE FMC £45-fitted

8802 FMC Unit

This is a brand new piece of kit which will improve the capabilities of the popular Rendale 8802 Genlock. This unit allows you to cross fade between the Amiga and video signals, so that you can gently fade computer titles in and out. Also, the ability to switch between the various modes offered by the 8802 is provided. The required mode is selected by a push switch, giving smooth, flicker free transformations.

The FMC unit does need to be soldered into the 8802, we can do this at our factory if required.

8802 UPGRADES £45 - £400 -

UPGRADE PATHS

Rendale Genlocks are designed to be flexible, and the ability of your Genlock to grow with your system was deemed to be of paramount importance in our design process.

As a consequence, existing 8802 users can follow one of two upgrade paths. The fade and mode control unit (FMC unit) can be purchased independently, and fitted to your 8802 genlock by our engineer. We would only require your unit for around two days.

The other upgrade path is the move from a purely composite 8802 to the Super-8802. This can also be done simply, although we do have to perform the upgrade work at our factory. We would only require your unit for around two days.

PRICES INCLUDE VAT AND DELIVERY. ACCESS AND MASTERCARD ACCEPTED.

AC

Beat that!

While the photographer set up his shots, Greg Makangi quipped: "You're lucky to get a picture of us, a Scottish newspaper has offered us thousands for a picture of us together since we announced our engagement."

Such is the fame of Evelyn Glennie, especially in Scotland, where she was recently voted Scotswoman of the Decade. When newspapers start taking an interest in your private life, you can pretty much say you've arrived.

She was born in Aberdeen, where she studied timpani from the age of 12, and in 1982 she entered the Royal Academy of Music. From then on it was literally hopping from one award for excellence to the next and onto the platform with some of the world's most famous musicians.

She's played the Hollywood Bowl with the LA Philharmonic, and in Japan, Australia, and New Zealand.

Because nobody really does what she does, everything Evelyn does is a first. You may have seen her on the TV as networks in the UK and USA have all done documentaries on her.

She's on radio all the time too, not only performing but also talking about her extraordinary life and work—for example she was on Radio 4's Desert Island Discs where famous people get to choose the records they'd take to a desert island.

Now she's so famous, composers are actually writing tunes especially for her, like Dominic Muldowney, John Dankworth, John McLeod, and Richard Rodney Bennett. Basically if she hasn't worked with them, who are they?

Evelyn is a slight, soft spoken woman who laughs readily and pays close attention when other people are speaking, and although slightly reticent to talk about herself, is very enthusiastic about her work and music in general.

I asked her how this fame affects her. Does she mind being so famous?

"When I decided to become a musician I hadn't thought about becoming famous, and that's still the case. I'm just interested in my work and doing the best I can, and I don't want extra pressures.

"All my aims are personal ones. If I reach them, fine, if I don't, that's also fine. If I decide to give up music tomorrow I don't want the whole world coming down on me.

"It's good for percussion that there is the recognition. If there's any recognition of what I do then I see it going towards percussion. A lot has to be done for solo percussionists, that's my area if you like."

Does she want to expand the number of styles she performs in or does she want to stick with the classical style?

"I'm very interested in spreading my wings a lot more and working with all sorts of musicians. Still keep the solo percussion side going, that's my main thing, live performances. But the compositions and things is something I want to explore too."

As a percussionist, and a particularly well travelled one, Evelyn has more in common with so-called world musi-

cians than a lot of Western musicians who try and fail to meld the many styles from around the world.

"When people ask me 'what sort of musician are you?' in a taxi or something, I'll say percussion and they'll say 'oh, which group do you play in?'

"I'm not a classical musician, I'm not a jazz musician, I'm just a musician. I'm interested in all styles of music."

People, especially people who work for newspapers, love to categorise, and Evelyn defies categorisation. Writers tend to latch on to the fact that despite being in an almost exclusively hearing profession, Evelyn is in fact profoundly deaf. Does this annoy her?

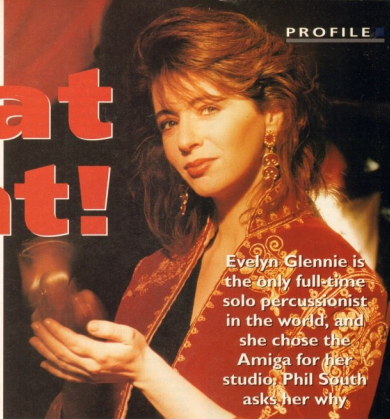
"Nowadays it does, especially in this country. I get a wee bit frustrated now if it's constantly brought up. I usually make a point to newspaper journalists who are basically talking about your life. I'll mention it but that's not going to be the focus.

"No matter what you do they'll write what they want. But abroad quite often the reviews for concerts will not mention anything and quite often reviewers will not know, and that's good for me."

In fact at some concerts overseas nobody present, not the audience, the orchestra or the press, will know about Evelyn's deafness. This is the way they like it, as the risk is that someone will say the music is good "for someone who's deaf" rather than just the music is good.

Evelyn does, however, have the career of someone twice her age, and her credits are stunning by any yardstick. But as I said she puts all this back into music, teaching young people about music, and demonstrating through example that musicians are hard working people and you don't just turn up on the night in a flowery dress.

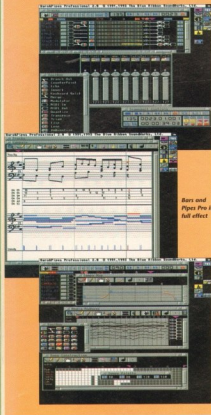
Practice looms large in the life of any musician, more so in the life of a top musician, and Evelyn is no exception. The next evening she was due to do a performance and was practising hard when we arrived, and doubtless



Evelyn Glennie is the only full-time solo percussionist in the world, and she chose the Amiga for her studio. Phil South asks her why.



Evelyn with a familiar set of percussion instruments



Bars and Pipes Pro in full effect

would be when we left. She is learning new instruments all the time, some old and traditional, some new like the MIDI DrumKat in the studio. In fact she doesn't know how many instruments she can play these days - she's lost count.

"A lot of them are related. I play all the main instruments, all the tuned percussion, timpani, various drums, a lot of hand percussion, bodran, lots of things.

"I constantly collect instruments, and if a piece requires an instrument I've never come across before, I'll try and find out about the instrument, and find a specialist on that instrument and learn from them."

Greg relates the learning of a new instrument to learn-

ing a computer language.

"If you've already learned Amos, then Basic or Database Management Language is that much easier to get into. And the more languages you learn the easier the next one is to learn, the more points of reference you have."

One of the reasons I was talking to Evelyn was that she and Greg have recently completed their studio, which is entirely run (business and MIDI) using Amigas.

The A4000 nestling in the studio among the racks and digital recorders runs everything via Bars & Pipes Pro 2. Although the studio was made so they could record and rehearse, Evelyn composes using something far more sophisticated - the human brain.

"A lot of it is just done in my mind. Nearly all the pieces I've written are stored in my head. I haven't really got around to writing them down, which I really have to do now."

"Sometimes I compose at the keyboard, but very rarely do I compose at the marimba or something like that. I'm really keen to explore TV music, documentary and film music because I love to write just little snippets of music. I'm basically a composer with a tiny 'c'."

She holds her forefinger and thumb about two millimetres apart. Despite this opinion of her composing skill, she's hoping her new Amiga-based studio will help her to explore the world of music for TV and films at her own pace.

"And if in the future I consider cutting back on the performances I can always work from here. I think I mentioned this to Greg and so we thought we'll get very basic stuff, and the idea grew and grew until Greg took over and left me way behind with the equipment."

So now they have a studio in which they can record everything from classical CDs to hard grungy rock. You think they wouldn't like that? Greg is anxious to work with all kinds of players, as long as they're into quality rather than quantity.

I asked him if he thought using MIDI tripped up the musical process by placing too many options at a musician's disposal.

"I think you've hit the nail on the head. I think MIDI is designed to aid those people who aren't musicians. MIDI is actually very difficult to work with if you're a musician. We had problems."

"The quantise was off, no metronome or anything and Evelyn just played, and of course when we came to edit something it was impossible because the music notation

And it's all controlled by an Amiga...



Greg hard at work on the very Amiga in question



Evelyn Glennie and Greg Mahangi in the studio Greg built

was all over the place. With standard classical music notation it would be relatively easy, but with MIDI it takes everything very literally."

With regular music it's all very loose, as far as the rest of the world is concerned, but very tight within itself.

And as Greg pointed out, it's the little imperfections that make classical music a performance rather than a squeaky clean record.

"I'm currently talking to the people at Blue Ribbon Soundworks about Bars & Pipes because it's very much geared towards the MIDI musician, and I think we're one of the few people that are working with sequencers on the Amiga that are musicians."

"So we're trying to work out ways of keeping the classical notation straightforward while allowing the freedom underneath it. I think the way forward is for the notation to be quantised without the music itself being quantised. I have to say Blue Ribbon are very helpful."

"It's getting there, but time signatures are still a problem. That piece I played to you earlier was in 10/8 and is the machine that's broken down into 1, 2, 3, 1, 2, 3, 1, 2, 1, 2. Getting a definable metronome is something Blue Ribbon are working on."

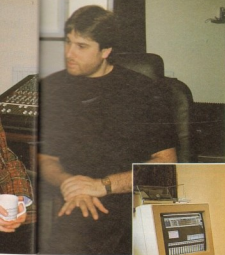
As far as Greg is concerned, on the Amiga Bars & Pipes is the best sequence available, and he's tried them all. He was always an Amiga fan, and he wanted to do it all using the Amiga if he could.

He demonstrated why using the A4000. While running a sequence through the MIDI stack, he brought Superbase Pro 4 to the front and did a sort of the hundreds of sounds in the Proteus modules.

The music didn't stop, and so multitasking increases the productivity of the studio without causing all the hang-ups you'd get with the Mac or PC, which would stop the music while you worked on the database of sounds or Evelyn's blistering performance schedule.

If the phone goes while he's laying a track down to the digital recorder, Greg can print out a list of tour dates and do it all there and then without holding up the session.





All the equipment in the studio is paid for, and Evelyn's career as a performing musician ensures that they can keep the place running even if they don't get anyone through the door to record there.

It does mean that they can choose their customers and allocate quite a lot of time to them while they're there. One thing Greg is keen to do is make sure he keeps a wide spectrum of work, so he'll be cutting a CD for one of Europe's top brass ensembles, but also a demo CD for a local rock band.

"What it means is that I can really be certain of the quality. If I get someone coming in who hasn't got a great deal of money, but has got a lot of enthusiasm and what I think are some great ideas, I can say 'Look, we'll do it for what you can afford' if it takes two weeks, if it takes two weeks. You pay me for the finished product.

"It does mean I'm losing money compared to a conventional studio, because there'll be a lot more down time, but as I said before that's not a real concern.

"If for example you've got a reader who's come up with some particularly good ideas on Bars & Pipes, and yet they haven't got the couple

of thousand pounds a week that a studio like this would expect to charge, that might not necessarily be a problem.

"There are limits - I can't spend four weeks on something for £200, but having said that I'd be reasonably flexible."

Publicity isn't a problem due to who Evelyn is. But on the other side of the coin, it means that any work leaving the studio has to be of very high quality, to match her reputation as a quality performer.

If she had to name one event which would be her greatest achievement, what would it be?

"If I had to name one event it would be the carnival in Rio de Janeiro, Brazil."

Evelyn is one of the few Europeans who's ever been allowed to compete, and even then she had to wear the male costume and wear dark make-up to make her look like a Brazilian.

"Generally though I'm happy to be the first full time solo percussionist, which means there will be others now

For their upcoming TV work, Bars & Pipes is the first for the job, as the sequencer and the DMR8 digital recorder can be slaved to the video machine, everything running in perfect sync through SMPTE timecode.

Blue Ribbon have been sending Greg updates for problems they encounter on a regular basis, all of which will be included in the new release.

The studio serves many more purposes than simply recording Evelyn, or providing her with a place to rehearse. There are many difficulties with working in recording studios, the key difficulty which affects the quality of the final recording is time.

So in setting up their own facility they ensure that time is a luxury they can afford, which comes out in Evelyn's sparkling recordings. Greg is also fairly critical about the methods used to record the music.

"Also if you start playing instruments that are outside the engineer's field of experience... anything really apart from piano, violin, guitar or drum kit."

Pause while everyone laughs their socks off.

"I'm not really having a go at sound engineers, because they have to get the best sound out of music in the time."

So as ever the commercial aspects of music as a business begin to obscure the act of creating a piece of art. They have enough time to get everything perfect.



Who says percussion can't be hi-tech?

Studio spec

Although the studio is 16-track digital, the 64 virtual Midi tracks bring this up to about 80 tracks in total.

Live area 15ft by 35ft
Control room 16ft by 24ft

Extensive collection of percussion instruments
(no kidding)

Amiga 4000 with Bars & Pipes Pro 2
Yamaha DMR8 16-track, 20-bit digital recorder
Akai S3000 sampler
Proteus 1 XR synth module
Proteus 2 XR synth module
Proteus 3 XR synth module
Proteus ProCussion synth module
Korg Wavestation AD synth
Yamaha SY99 synth
Alesis SR16 drum machine
Yamaha RX5 drum machine
AKAI MX1000 master keyboard controller
DrumKAT with additional 3 Daz pads
Soundtracs Solo 32-channel mixer
(just for the Midi kit!)

Sony R7 reverb
Sony D7 digital delay
Lexicon LXP15 reverb
Korg A1 reverb
Aural Exciter C2 with Big Bottom (R)

Fender Star Elite
Vantage
Ovation Electric Legend Acoustic
Gibson Les Paul Custom
Ana RS 850
ESP Horizon

plus Drawmer outboard gear, and Marshall and Mesa Boogie amplification

following, I sometimes look around at musicians who are at the very top of their tree, if you like, who've been in the profession for many years.

"I don't want to be there at that point for the next 10 or 20 years. I think about that a lot and I don't want to be touring around, playing in different venues, playing... not the same repertoire but it will get like that. I feel I've got to create different avenues to keep me fresh.

"If you asked me for example ten years ago, how do you see your future?, I would never ever have mentioned a recording studio. So who knows what may happen?"

Finally, if people are unfamiliar with her music, which CDs should people look out for to introduce themselves?

"I think probably Rhythm Song, as it has a lot of the well known pieces, but it's also got a couple that are quite atmospheric. It would give you a gentle introduction to my work."

Her current noisier and more dangerous album Rebounds is out now on RCA/BMG records, which Greg says is his mother's least favourite for precisely the reasons she likes it!



Contact

If you'd like to record at Heritage Studios - obviously having your music on Bars & Pipes would be an advantage - then you can call for details on 0480 891772.

UNIVERSAL COMPUTER



DIRECT MAIL ORDER

47 Oxford St.
Whitstable
Kent CT5 1DB

OPENING HOURS mon/fri. 9.00-8.30 sat 9.00-5.30

FREE HOTEL ACCOMMODATION for two, with any standard AMIGA purchased

CALL OUR HELP LINES

Tel: 0227 773177

Fax: 0227 771076

The Best Value & Service Direct To Your Home

AMIGA A1200

The Amiga A1200 is the 90's AMIGA 68020 Processor operating at 14MHz, AGA Graphics Chip set gives you a palette of 16.8 MILLION Colours, 256,000 colours on screen at any one time. The A1200 comes with 2Mb of Chip RAM as standard and a 1 Year on site maintenance warranty FREE. A 32BIT HOME COMPUTER

U.C.S. PRICE £349.95

AMIGA A1200 COMIC RELIEF Pack

This A1200 comes to you with a free copy of Sleepwalker software worth: £25.99. £10.00 will be given to comic relief for every pack sold.

U.C.S. PRICE £365.99

AMIGA A600

The Amiga A600 Standard Pack Amiga A600 with single drive, 1Mb Chip RAM, Built in TV Modulator, Mouse & Manuals, Workbench 2.4 1 Year on site warranty.

U.C.S. PRICE £229.99

A600 WILD, WEIRD & WICKED Amiga A600 as above With four excellent Titles: Deluxe Paint III, Formula one Grand Prix, Putty & Pushover.

A600 With Software pack

Amiga A600 standard pack with Dpaint III & Lemmings.

U.C.S. PRICE £284.99

A600HD Epic Hard Drive Pack Amiga A600 standard pack. With four Software Titles: Dpaint III, Trivial Pursuit, Epic & Rome. + An Int.Fitted HARD DRIVE.

With 40MB Hard Drive..... **£393.99**

A500 plus Stand Alone

Limited number please phone A500+ 1Mb RAM, TV Mod, Workbench 2.4, Mouse & Manuals. **£184.99** Above with Cartoon Classic Software pack..... **£214.99**

A600/1200 H/Drives
A/B5000 ACCELERATOR cards
PLEASE PHONE

AMIGA 4000-040

The ULTIMATE AMIGA 68040 blistering Processor 25MHz, AGA chip set, 256,000 colours from 16.8 million, flicker free display, 3.5/1.76 MB 3.5" drive, Cross Dos, WB. 3 2Mb Chip Ram (32Bit) 4MbFast Ram (32Bit), 120MB HD, 1 year on site Warranty..

U.C.S. PRICE £1985.99

AMIGA 4000-030

68030 Processor 25MHz AGA Chip set as above. 4 Mb of RAM (32Bit) WB.3 1 year on site Warranty With 80MBHD..

U.C.S. PRICE £919.99

With 120MBHD..

U.C.S. PRICE £1029.99

AMIGA 3000

The AMIGA 3000

52 Mb Hard Drive, 68030 Processor 25MHz, 3.5 880K FD, spare drive bay 512K 32Bit ROM, 4 Zorro III slots 52 Mb Hard Drive. 1Mb Chip, 1Mb Fast RAM.

Above with 105MBHD..... **£1048.99**

U.C.S. PRICE £885.99

MONITORS

1960 multi-sync Commodore 1084 S..... **£379.99**
£193.99

Phillips 8833-col..... **£219.00**
(Inc.Loua Tube, Challenge FREE.)

ALL U.C.S.Monitors come with a FREE cable

AMIGA CDTV

CDTV Multi-Media Pack

U.C.S. PRICE £479.99

CDTV Stand Alone Player

U.C.S. PRICE £385.95



**FAST UK DELIVERY.
SAME DAY DESPATCH.**

HARD DRIVES

Commodore A590 20Mb

20Mb Hard Drive with sockets for up to 2Mb Fast RAM, ext.SCSI interface autoboots with Workbench 1.3+, built-in Fan..... **£174.99**

GVP. Series II HD8+ Hard Drives

The A500-HD8+ provides the ultimate in hard disk performance for the Amiga 500/+ simply the best..

GVP A500-HD8+ 42Mb.... **£279.99**

GVP A500-HD8+ 80Mb.... **£359.95**

GVP A500-HD8+ 120Mb.... **£439.95**

GVP A500-HD controller..... **£174.99**

GVP IMPACT SERIES II hard drives, with game switch, SCSI port, Int.RAM expansion up to 8Mb FAAASTROM SCSI Driver and a full 2 year Guarantee.

GVP Series II 1500/2000

GVP 42Mb HD & Ram card **£274.99**

GVP 80Mb HD & Ram card **£329.99**

GVP120MbHD & Ram card **£404.99**

GVP controller & Ram card **£119.99**

ACCELERATORS & HARD DRIVES

A500/500+

GVP A530 Combo

A530 40MHz/42Mb Hard Drive..... **£629.99**

A530 40MHz/80Mb Hard Drive..... **£704.99**

A530 40MHz/120Mb H/Drive..... **£789.99**

A530 40MHz/213Mb H/Drive..... **£899.99**

A530 68882 Co-processor..... **£218.99**

32 Bit Simms 1MB..... **£ 64.99**

32 Bit Simms 4MB..... **£175.99**

1500/2000

G-Force ACCELERATORS

G-force 030-25mhz + 1Mb..... **£454.99**

G-force 030-40mhz + 4Mb..... **£739.99**

G-force 030-50mhz + 4Mb..... **£999.99**

G-force 040-33mhz + 4Mb..... **£1,399.99**

G-force 040-28mhz (A3000)..... **£1,399.99**

DISK DRIVES

A500+ Replacement INT.drive..... **£POA**
UCS EXT. floppy..... **£47.99**
CUMANA CAX 354 EXT..... **£56.99**
BOCCO EXT.floppy..... **£63.95**
POWER DUAL DRIVE..... **£122.95**
Zappo ext. Drive..... **£56.99**
CDTV ROM DRIVE
COMM. A570CD rom drive..... **£149.99**

ZOO S/WARE PACK

This amazing offer available with any amiga purchased, includes: Zool, Striker, Pinball Dreams & Transwrite normal retail price **£127.92**

U.C.S price £8.99

HOW TO ORDER

ALL MAJOR CREDIT CARDS ACCEPTED

We offer same day despatch for credit card orders placed before 5pm, or send cheques, bankers draft, postal orders to UNIVERSAL COMPUTER SYSTEMS 47 Oxford st, Whitstable, Kent, CT5 1DB. Please allow 7 working days for personal/business cheques to clear. Send your Name & address, along with your daytime Telephone number (if possible) and your order requirements. BY PHONE, phone our order hotline with your credit card number, address & order requirements. AND WE WILL DO THE REST.

POST & PACKAGING Please add £1.00 per item of software & small periph. Add £5.00 per item for large Peripherals & Hardware

FREE P.D. SOFTWARE With any order over £100.00

PRINTERS

CANON	
CANON BJ 105X Portable	£290.95
CANON BJ 200 Desk Top	£345.95
CANON BJ300DT/80column	£374.95
CANON BJ300DT/130 " "	£479.95
CITIZEN	
CITIZEN Swift 200 colour	£214.95
CITIZEN Swift 200 mono	£186.95
CITIZEN Swift 240 colour	£262.95
CITIZEN Swift 240 mono	£249.95
SEIKOSHA	
SEIKOSHA SL95 colour	£209.95
SEIKOSHA FP 1900PLUS mon	£109.95
STAR	
STAR LC 100 colour	£164.95
1000x1000 with paper parking, 8 fonts and DTP switches	
STAR LC24-100	£184.95
in 800x1200 with compressed disk	
STAR LC 20	£120.95
STAR LC 200 colour	£194.95
STAR LC24-200 colour	£269.95
STAR LC24-200 mono	£214.95
STAR XB24-200 colour	£279.95
STAR SF48 bubble jet	£209.95

GENLOCKS

GVP	
GVP G-Lock Genlock	£331.95
ROCCON	
ROCCON pen	£144.95
ROCCON Rocky	£279.95

MICE & TRACKBALLS

Roctec Mouse	£13.95
Power Mouse	£17.95
Alpha Data (Optical Mouse)	£33.95
GOLDEN IMAGE	
Mega Mouse	£12.95
Alt/Optic Optical Mouse	£31.95
Infrared Cordless Mouse	£47.95
Optical Pen Mouse	£39.95
Crystall Trackball	£35.95
GI-600	£14.50
NEW 400 Dpi Mark 2	POA

MEMORY

A500/500+	
POWER Ram Exp. UNITS	
1Mb pop to 2Mb	£125.95
1Mb pop to 4Mb	£189.95
1Mb pop to 8Mb	£289.95
TRAPDOOR EXPANSIONS	
A500	
A500 512K with clock	£25.95
A500 512K without clock	£21.95
A500 plus	
A500 1Mb	£32.95
A600	
A600 1Mb with clock	£44.95
PCMCIA	
A6001/200 PCMCIA card 2Mb	£115.95
A6001/200 PCMCIA card 4Mb	£184.95

A1200 Trap-Door Exp.	
POWER	
A1200-32Bn PCI 204 4Mb Exp.	£163.95
Microchips	
MBX Bare Board to FPU	£118.95
MBX B/B 14MHz-68881	£133.95
MBX B/B 25MHz-68882	£190.95
MBX B/B 50MHz-68882	£281.95
1MB/32Bn/for above	£5.95
4MB/32Bn/for above	£147.95

SCANNERS

GOLDEN IMAGE	
Alfa Scan Hand Scanner	£119.95
Alfa Scan Plus H/Scanner	£139.95
Alfa Scan OCR (inc. OCR S/W.)	£269.95
POWER	
Power Scanner Mon.v3 A500+	£107.95
Power Scanner Col. A500+	£224.95
Power Scanner Col. A1500	£224.95
FLAT-BED	
Epson Flatbed 6500	£749.95

ROM SHARERS

A600 Rom Sharer	£28.50
Rom Sharer Kickoff	£16.95
POA	
1.3 Rom	POA

ACCESSORIES

LEADS & CABLES	
Amiga 8833 M2	£8.95
Amiga Multisync	£10.95
Amiga Scart	£9.95
Disk Drive Extension	£9.95
JoyStick Long Extension	£5.95
Mini Midi 4M	£3.95
Modulator Extension	£5.95
Mouse & Joystick Ext.	£5.95
Mouse & Joystick Splitter	£18.95
Printer 1.5M	£4.95
Printer 3.0M	£7.95
Bits & Things	
14" Monitor Dust Cover	£5.95
14" T/B & Swivel Stand	£15.95
A500 Dust Cover	£3.95
A600 Dust Cover	£3.95
Anti Glare Screen Filter	£14.95
Control Centre A500+	£38.95
Control Centre A600	£38.95
Lockable Disk Box 100cap	£8.95
Lockable Disk Box 80cap	£7.95
Lockable Disk Box 40cap	£5.95
Mouse Mat	£3.49
Stereo Speakers	£14.95
DISKS	
Branded Box of 10	£9.95
Unbranded Box of 50	£26.95
MUSIC	
GVP Digital Sound Studio	£44.95
Stereo Sampler	£29.95

JOYSTICKS

Cheetah Bug	£12.95
Competition Pro 5000	£13.95
Cruiser (Black)	£11.95
QuickJoy Jettifighter	£11.95
QuickJoy 137 F Python	£9.95
QuickJoy 155 Aviator	£25.95
QuickJoy FootPedal	£20.95
QuickJoy TopStar	£20.95
QuickJoy Turbo Touch 360	£30.95
FreeWheel	£25.95

SOFTWARE

GAME ZONE	
Street Fighter II	£17.95
Alien Breed Special ED	£8.49
ZOO	£16.49
ZOO 1200 Ver.	£19.49
WWF 2	£22.49
Indiana Jones, Fate of Atlan	£22.49
Silly Putty	£16.49
Premier Manager	£16.49
A Macleans Pool	£16.49
Wing Commander	£22.95
ASB Harrier	£22.95
Sensible Soccer 92/93	£16.49
Lotus Fin. Challenge	£16.49
Leathal Weapon	£16.49
Sam Lurp	£22.95
Pig-Fighter	£5.49
Bubble Dizzy	£6.49
Robocop II	£6.49
Prince of Persia	£6.49
Lemmings Double Pack	£18.95
F1 Grand Prix	£21.95
Read RASH	£15.95
PGA Tour Golf Plus	£18.95
Roving Mad	£15.95
Civilisation	£21.95
Legend of Kyrandia	£21.95
Assassin	£15.95
Trolls	£15.95
Darkseed	£21.95
Smash T.V.	£6.49
Jaguar X1220	£15.95
J. Whites W/ind Snooker	£18.95
Nigel Mansell World Champ.	£18.95
Le Cheeks Revenge	£22.49
Big Kid	£15.95
Humans	£18.49
Super Cars II	£6.95
Battle Hawk	£9.49
Campaign	£21.95
Batman II	£21.95
Nick Faldo Golf	£21.95
Shadowark	£15.95
Fire & Ice	£15.95
New Zealand Story	£6.49
Crash	£9.95
J. Madden Football	£15.95
Superlifter	£15.95
3D Pool	£6.49
Leopard RAC Rally	£6.49
James Pond	£6.95
Swix	£7.95
Superring	£20.95

APPLICATION S/W.

Wordworth 2	£87.95
Excellence 3	£54.95
PerfPro	£35.95
Final Copy 2	£69.95
The Publisher	£36.95
Home Accounts 2	£37.95
Hyper Book	£49.95
CanDo V2	£90.95
Amos	£37.95
Amos Pro	£44.95
Amos Compiler	£19.49
Directory Opus IV	£49.95
Quarterback	£42.95
Quarterback Tools V5	£59.95
Cross Dos + V5	£21.95
Pro-Mult Interface	£17.95
VideoMaster	£44.95
D-Print IV AGA	£69.95

MANY MANY MORE TITLES IN STOCK - PLEASE PHONE.

CALL US
0227 773177
FAX 0227 771076

£5.00
Next Day
Delivery

SAME
DAY
DESPATCH

PRICE
BUSTING

WE WILL TRY
TO BEAT
ALL OTHER
PRICES

P/X
YOUR
OLD
AMIGA

Order Form

Name

Address

Postcode

Tel.No

Description

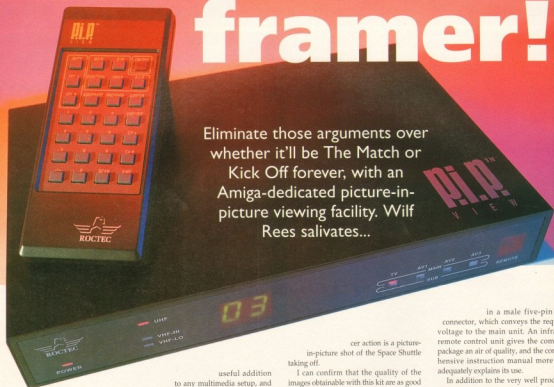
Enclose cheque/PO for

£

U.C.S
WILL
SAVE
YOU
£££



Picture framer!



Eliminate those arguments over whether it'll be The Match or Kick Off forever, with an Amiga-dedicated picture-in-picture viewing facility. Wilf Rees salivates...

Many of you video buffs out there will be familiar with the name RocTec. For some time they have provided the Amiga market-place with a range of reasonably priced, yet effective genlocks.

This latest piece of kit is directed straight to the heart of those of us who just cannot resist techno goodies, and offers a range of facilities which extend the Amiga's capabilities even further.

PIPView is essentially a Picture in Picture viewing facility, combined with a TV tuner. Now you might say "So what?"

I accept that many VCRs exist which offer this facility, and applied to television and video situations, are about as useful as a second-hand Atari, but what no company has considered doing is looking at that facility, adding a TV tuner, extending the capabilities to perform many additional useful tasks, and marketing it at an acceptable price. The outcome is an extremely

useful addition to any multimedia setup, and could provide additional complex and sophisticated capabilities to broaden even the most advanced system.

The first obviously quality feature of this piece of gear is the packaging. A very large picture adorns the cover, of a TV screen, showing Newcastle United in full glory (nice one RocTec!). Inset into the soc-

cer action is a picture-in-picture shot of the Space Shuttle taking off.

I can confirm that the quality of the images obtainable with this kit are as good as the illustration describes. The unit itself is a matt-black box, 30mm high, 200mm deep and 300mm wide – almost the same size as a Sinclair ZX Spectrum.

In addition to the main unit there is yet another of those horrid external power supplies of the brick type, as opposed to the mutated 13 amp plug. This terminates

in a male five-pin DIN connector, which conveys the required voltage to the main unit. An infra-red remote control unit gives the complete package an air of quality, and the comprehensive instruction manual more than adequately explains its use.

In addition to the very well produced documentation comes a tatty photocopied insert, describing how one might connect PIP to an Amiga system. This I am sure was a well intentioned afterthought, no doubt equally prepared for other computer systems which it might serve as well.

ASSORTED

Gathering up all of the video gear I could muster, I began bunging all manner of assorted signals into the various inputs. I used a camcorder, a VHS VCR, a laserdisc player, an old betamax recorder and an Amiga. All functioned perfectly.

What was I able to do? I was able to manipulate the various video sources, either by selecting which source occupied the main screen, and which the picture in picture, or vice versa. The audio input was also selectable between the main screen and a subsidiary input. An additional feature was the option to locate the picture-in-picture image at any one of four corner locations on the screen.

If nothing else, this unit converts a

Inputs for all

To the front there are no external controls. All system or programme changes are accomplished by means of the remote controller. An LED numerical read-out offers information on channel selection and tuning, while seven other assorted LEDs provide details on inputs and/or frequency reception (UHF, VHF-Hi or VHF-LOW).

The rear of the unit is really the business end, bristling with a collection of 12 phono inputs, one RF input, one five-pin DIN input, one three-position slider switch and a miniature jack socket.

To eliminate the obvious, the DIN socket is power-in, the miniature jack socket is headphones, and the three-position slider is a volume adjustment level with three presets.

RF In is the TV aerial input. This leaves the 12 phono sockets, and it is the permutations of these sockets which offer the versatility.

Three of them are output, one video and the other two left and right audio. The remaining nine phono sockets are inputs, divided into three separate channels, each one being video and two stereo sound channels.

standard 14in monitor into a remote control colour television, and makes a very effective switching box, allowing choice between assorted video signals. It also serves to convert an old TV into a remote controllable set. The innovation is in the ability to add a computer image inset into a TV picture and vice versa, and it is this feature which I think offers really exciting possibilities.

There is of course the obvious, in that you can enjoy playing a game, or typing a letter, while keeping an eye on a television programme. This could just be a precaution to ensure you catch the beginning of that crucial episode, or when preparing to record a particular programme.

Remember, with PIP you can listen to the TV audio output from your monitor, while using DPaint, for instance. It may well be that you just wish to see a particular item on a programme, and that rough monitoring will avoid you listening or watching to the unwanted information.

Using the unit conversely, you may well be waiting for your Amiga to complete a computation, complete a ray-tracing, or update a spreadsheet, in which case, the press of a button will reverse the image allowing you to watch a TV or video source, with the Amiga inset as a PIPView. You can then successfully monitor the progress of the Amiga.

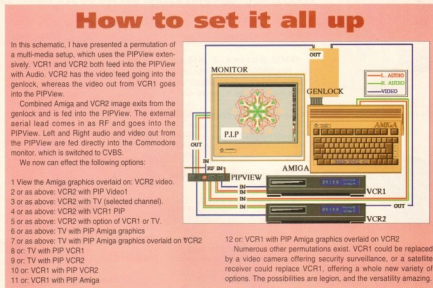
INFRA-RED

These may well be sufficient reasons in themselves to warrant you buying the PIP, but to me, what is far more interesting is the possibilities this facility offers in broader applications.

Not long ago I was reviewing the Switchoff I/O port which affords control facilities to the Amiga's parallel and joystick ports. I still hadn't returned the gear, so, out it came, and after an hour of fiddling with electronic components and an old security camera, I had rigged up a connector to the infra-red sensor on the alarm outside my house.

Now, as the sensor (one of those fitted below a twin lamp) is triggered, the I/O port detects it, and switches on the old security camera.

This in turn is connected to the I/O port, via the mains controller unit, and on to the PIPView. All of this system is rather Heath Robinson, but as I am working on my Amiga, my 12-year-old son



Turn your monitor into a remote controlled TV in minutes

approaches the back door of my house. The infra-red sensor is tripped.

Voltage change is detected by the I/O port, which switches on the camera and the PIP, and there is my son unknowingly demonstrating one of the cheapest and effective security systems I have seen.

Remember, this device could equally work with your Amiga running through your TV. In effect you could have a continuous security monitoring facility as you watch your TV in the evening.

This would be a particularly useful device for anyone living in a remote area, or a person living on their own. Alternatively, a small business could

utilise three cameras, and continually move around them checking different locations, using the PIPView.

Using the same basic principle, a camera could be pointed at a baby's cot, and sound and vision monitored during the course of an evening, displaying the sleeping (or otherwise), little dear simply by calling up a picture in picture image on any screen.

Aside from security applications, the PIPView has much greater potential as a device to enhance the nature of presentation material. Demonstration videos could easily be made, which utilise the inset images to illustrate visually the nature of the message or procedure being exhibited.

An example might be the kind of video often seen in big electrical stores, which advertise a new kind of electrical appliance.

The main screen could be showing a broad overview of the equipment in use, while the PIPView could zoom very close in on particular features which the manufacturers wish to highlight.

Anyone who uses and Amiga to create

videos could include playback animation, or zoom detail within the insert, then record back to capture the two images.

This is a piece of equipment which I was initially hesitant about reviewing. First thoughts are that it is just another techno-gimmick, offering clever effects, but not really of any use.

CIRCUITRY

On a banal level, it allows you to use your Amiga and monitor two other TV channels simultaneously. It will even allow you to record from air, and actually eliminate the commercial breaks from the recording, due to sensing circuitry in the unit.

At this level of performance, it is an accessory worth considering. However, I believe PIPView has a very rare quality among the myriad of paraphernalia constantly appearing on the computer scene, and a characteristic which I readily salute.

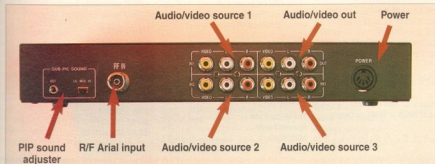
That quality to which I refer is the effectiveness of its use. The PIPView can be many things to many people - only the imagination of the user will eventually discover both its capabilities and its limitations.

AC

The bottom line

EASE OF USE 7
IMPLEMENTATION 9
VALUE FOR MONEY 7
OVERALL 8

Supplier: First Computer Centre
Phone: 0532 319444
Price: £133



Award winning innovative products from Po

A2000 Hard Cards

GVP Series 2 HD

- Up to 8Mb SIMM RAM on-board
- Supports external SCSI devices
- 14MHz SCSI controller

Base.....	£129
40MB.....	£249
80MB.....	£319
160MB.....	£449
200MB.....	£549

Bare SCSI Hard Drive

- SCSI or IDE 3.5"

80MB.....	£199
160MB.....	£329
200MB.....	£499

(Suitable for GVP G-Force, GVP HD or Nexus HC)

Other sizes of HD available, please call

1 Gigabyte HD

- Internal Hard Drive
- A1500 / A2000

1GB Hard Drive.....	£999
---------------------	------

Power Board

- New RAM board from Power
- A1500 / A2000 RAM board

2MB.....	£99
4MB.....	£149
8MB.....	£239

Macintosh Emulator

AMax-II Plus.....£299

(Mac ROM Chips required)

Commodore Amiga

- Amiga 4000 includes
- 68040 micro processor
- 25MHz clock speed
- 16.8 million colour palette
- Display up to 256,000 colours on screen
- Built-in 3.5" high density disk drive

Amiga 4000 & 120MB HD.....	£2099
Amiga 3000 & 52MB HD.....	£1299
Amiga 3000 & 105MB HD.....	£1499
Amiga 3000T 100MB HD 5MB RAM.....	£1999
Amiga 3000T 200MB HD 5MB RAM.....	£2499

NEW Amiga 4000

- New Amiga 4000 now available
- A choice of 68030 or 68040 processor

Please enquire

Video Backup System

- Use VCR as a backup storage device
- Blank video tape is all that is required
- 200 Amiga floppy disks fit on a 4hr tape
- Can be used for hard disk backup
- There is room for 175MB of data
- Backup an Amiga diskette in 1 minute
- Low cost storage, 2 pence per MB
- Menu driven software
- You can watch TV on a 1084s monitor

Video Backup System.....£59.95

Monitors

Philips CM8833 Mk2

- With cable
- Available with Lotus Turbo Challenge 2
- On-site maintenance

CM8833 Mk2.....£229

Other Monitors

Commodore 1084S.....	£199
Commodore 1960 TRI-SYNC.....	£479
NEC Multisync 4FG.....	£549

ICD Flicker Fixer

Flicker Free Video 2

- Stop that annoying flicker
- Fits internally in the A500
- Multi-sync monitor required

Flicker Free Video 2.....£199

Music



- The complete music kit for the Amiga
- Includes:
- Music Kit package
- Real Time Sound II
- Over 32 special effects
- Can work with MIDI instruments
- Digital Studio III
- Midi interface
- Stereo sound digitiser
- Stereo speakers
- All leads & software

The Music Pack.....	£69.95
Speakers only.....	£15.95
Midi interface.....	£15.95

Optical Hard Drive



- Manufactured by Power Computing
- 128MB on one optical disk
- Read and write optical disks
- 40ms running speed
- Built-in power supply
- High power cooling fan
- 25-way and 50-way SCSI ports
- Thru' port built-in
- SCSI ID switch
- Compatible with major SCSI controllers

128MB optical drive (Internal).....	£849
128MB optical drive (External).....	£999
128MB 3.5" optical disk.....	£39.95 each
SCSI controller card.....	£129
(for A1500 / A2000)	
(Compatible with Amiga, PC, and Mac. A SCSI controller is required on the Amiga and PC)	

1.76MB Disk Drive

1.76MB Disk drive now available.....£129

Miscellaneous

G-Lock Genlock.....	£349
Image Effects.....	£299
CineMORPH.....	£99
I-O Extender.....	£149
030 Autochange kit.....	£39
AT Autoboot Eprom kit.....	£59
FastROM Series 2.....	£29
ROM Share.....	£19.95
ROM Share A600.....	£29
ROM Share A600 inc. v1.3.....	£55

Accelerator

GVP G-Force

- 68030 accelerator board
- 68882 Maths co-processor
- 25MHz 1MB RAM.....£499
- 40MHz 4MB RAM.....£759
- 50MHz 4MB RAM.....£1099
- Hard drive mount kit.....£35
- 68040 Fusion 40 inc. 4MB.....£999
- 68040 Pro-Peripherals inc. 4MB.....£999
- 1MB x 8SIMM.....£25
- SIMM 32 x 4MB-60.....£179
- SIMM 32 x 1MB-60.....£59

Award Winning Manufacturers

Power products come with full technical support

"The Power Mouse is my pick of the month" **CU Amiga**

PC880B "Well worth spending your hard earned pennies on, an excellent buy" **Amiga Computing**

Dual Drive "Now this is a bit special" **Amiga Computing**

Power Scanner **Amiga Shopper Best Buy**

Power Scanner **Amiga Format Gold**

"Power Scan is quite simply the best Amiga hand scanner available" **Amiga Format**

Credit Card Hotline

0234 843388
10 LINES

Fax 0234 840234
Technical 0234 841882

VAT included

(UK mainland only)
48hr delivery £2.50
24hr delivery £4.50
Parcel post delivery £1
(Not for orders over £50)

Power Computing Ltd
Unit 8 Railton Road
Woburn Road Ind. Estate
Kempton Bedford
MK42 7PN



Established 1985

Specifications & prices
subject to change without notice
All trademarks acknowledged

Auto ROM Sharer



- One of the most advanced kickstart ROM sharers available
- Res A500, A500+, A1500
- No messing with switches
- No CIA adaptor or other trailing wires
- Simple internal fitting*

*Kickstart requires the lid to be removed from the Amiga. Please void your warranty.

ROM Share	£19.95
ROM Share inc. Kickstart v2.04	£55
ROM Share inc. Kickstart v1.3	£39
ROM Share for A600	£29
ROM Share for A600 inc. Kickstart v1.3	£55

Kickstart v2.04

2.04 Kickstart (chip only)	£32
----------------------------------	-----

Chips

4MB x 8SIMM	£POA
1MB x 8SIMM	£25
256K x 4DRAM	£5.00
1MB x 160MB	£4.50
1 x 4 ZIP	£14.95
1 x 4 DIP	£19.95
A3000 Static column RAM	£19.95
SIMM 32 x 1MB-60	£59
SIMM 32 x 4MB-60	£179

(These chips cover most memory & hard drives i.e. GVP, Supra, Commodore)

Spares

A500 Power supply	£39.95
v1.3 Kickstart ROM	£24
v2.04 Kickstart ROM	£32
Fetter Agnus 8372	£44
Big Fat Agnus 8375	£48
Hi-Res Denise	£29
CIA 8520	£9.95
Data Switches 2 way	£15.99
Data Switches 3 way	£17.99
Data Switches 4 way	£19.99
IDE Cable for A600, A1200 (inc. installation software)	£15.95
Modem Cable	£9.95
Printer Cable	£6.95
SCSI Cable	£9.95
SCSI Dual Connector 2 way	£15.95
Monitor Cable for Philips 8833	£9.95
PC880B Upgrade, compatible with X-Copy	£15

A500 Hard Drives

GVP A530 Turbo HD



- 40MHz 68030EC accelerator
 - Optional 68882 maths co-processor
 - Up to 8MB FASTRAM on-board
 - Award winning
- | | |
|-------------------------|------|
| 40MB HD 0MB RAM | £499 |
| 80MB HD 0MB RAM | £599 |
| 160MB HD 0MB RAM | £729 |
| 200MB HD 0MB RAM | £829 |
| 68882 Upgrade kit | £224 |

GVP Series 2 HD

- Up to 8MB FASTRAM on board
- | | |
|------------------------|------|
| 40MB | £299 |
| 80MB | £379 |
| 160MB | £529 |
| 200MB | £599 |
| Each 1MB x 8SIMM | £25 |

Video Backup System

- Use VCR as a backup storage device
- Blank video tape is all that is required
- 200 Amiga floppy disks will fit on a 4 hour tape
- Can be used for hard disk backup
- There is room for 175MB of data
- Backup an Amiga diskette in 1 minute
- Restore even to an unformatted disk
- Hard disk backup, software allows you to specify which files and directories to be stored
- Low cost storage, 2 pence per MB
- Menu driven software
- Allows you to watch TV on a 1084s monitor
- Very high reliability
- Log files, contain title and counter position of every backup
- Video connection check, ensures fool proof operation
- Effective error-correction scheme
- Easy to understand manual
- Highly rated

Video Backup System

The Power BBS

- Free technical and buying advice
- Thousands of free files available
- Great discounts on all Power products
- On-line ordering to ensure speed of delivery
- Conferencing with top computer magazines
- Regular bulletins with latest product information

The Power House BBS
0 2 3 4 8 4 1 5 0 3

24 hours
All speeds up to 16.8K

Amiga 600

Amiga 600	£285
Amiga 600 & 40MB HD	£455
Amiga 600 & 60MB HD	£489
Amiga 60 & 80MB HD	£529

Amiga 1200

Amiga 1200	£390
Amiga 1200 & 40MB HD	£560
Amiga 1200 & 60MB HD	£595
Amiga 1200 & 80MB HD	£639

2.5" IDE Internal HD

- A600/A1200 compatible (inc. cable & installation software)
- | | |
|-------------------------|------|
| 40MB Internal HD | £179 |
| 60MB Internal HD | £205 |
| 80MB Internal HD | £229 |
| 130MB Internal HD | £359 |

Commodore CDTV

CDTV multi-media pack	£399
-----------------------------	------

CDTV Software

A Bun for Barney	£29.99
Barney Bear goes camping	£29.99
Battlefish	£39.99
Case of the Cautious Condor	£34.99
CD Remix v2	£34.99
Fred Fish CDDP Collection	£19.95
Guinness CDTV Disc of Records	£24.99
Fun School (5-Yrs)	£24.99
Fun School (Over 7yrs)	£24.99
Guinness CDTV Disc of Records	£34.99
Illustrated Holy Bible	£29.99
Music Maker	£34.99
NASA Heroic Age of Space	£19.99
Power Pinball	£29.99
Sim City	£29.99
Trivial Pursuit	£49.99
World Vista Atlas	£54.99
Xenon 2 Megablast	£29.99
More titles available	

THE BEST DEALS, THE LATEST AMIGA TECHNOLOGY

AMIGA 600 WILD, WEIRD, & WICKED PACK



Comprising the Amiga 600 computer with 1 Mb RAM, 3.5 inch 1 Mb floppy disk drive PLUS mouse, manuals, Workbench 2.0, all connections to your TV set, and the following FREE software:

- MICROPROSE GRAND PRIX
- SILLY PUTTY
- PUSHOVER
- DELUXE PAINT III

all for £319.95 inc.

...and you can add even more games or accessories with our exclusive added value packs detailed lower down this page.

AMIGA 600 EPIC & LANGUAGE LAB PACK

Comprising the Amiga 600 computer with 1 Mb RAM, 20 Mb hard disk drive, 1 Mb 3.5 inch floppy disk drive, PLUS mouse, manuals, Workbench 2.0, all connections to your TV set and the following free software:

- EPIC ● MYTH ● ROME
- TRIVIAL PURSUIT (in 3 languages)
- DELUXE PAINT III (painting package)
- AMIGA TEXT (Word Processor)
- FIVE LANGUAGE DICTIONARY



all for £449.95 inc.

...and you can add more value, either games or accessories, with our packs detailed below.

AMIGA 600 DELUXE PAINT & GAME PACK

Complete Amiga 600 computer, with 1 Mb RAM, 3.5 disk drive, one game (normally Lemmings) and Deluxe Paint III. **£269.95 inc.**

AMIGA 500+ CARTOON CLASSICS PACK



Comprising the Amiga 500 plus computer with 1 Mb RAM, 18 key numeric keypad 1 Mb 3.5 inch floppy disk drive, PLUS mouse, manuals, Workbench 2.0, all connections to your TV set and the following free software:

- LEMMINGS
- THE SIMPSONS
- CAPTAIN PLANET
- DELUXE PAINT III

all for £269.95 inc.

...and you can add even more games or accessories with our exclusive added value packs detailed below.

NEW!



AMIGA 1200 THE NEXT GENERATION AMIGA

- True 32 bit computer with a 68020 processor running at blistering 14Mhz, 5 x faster than previous Amiga's!
- 2Mb of 32 bit memory expandable via smart card slot
- New AA graphics chips give maximum 262,000 colours on screen from a palette of 16.9 million!
- Styled similar to Amiga 600, but includes numeric keypad
- Compatibility mode for existing Amiga programs, whilst new releases will feature Amiga 1200 enhancements
- Includes new Workbench 3.0 operating system

Amiga 1200, only £369.95 inc.

AMIGA 1500 PACK

Comprising the Amiga 1500 computer with separate system unit and detachable keyboard, 1Mb RAM and two 3.5 inch disk drives, new internal expansion slots, Workbench 2.0 and Kickstart 2.0, and the following free software:

- THE WORKS Platinum Edition (Word Processor, Spreadsheet, Database)
- HOME ACCOUNTS ● DELUXE PAINT III
- CLP ● TCK ● PUZZNIC ● GET THE MOST OUT OF YOUR AMIGA BOOK

all for £539.95 inc.

AMIGA 3000

Comprising the Amiga 3000 computer with separate system unit and detachable keyboard, fast 25Mhz processor speed, 2Mb RAM and one 3.5 inch disk drive, latest version 2.0 machines, available with the following hard drives:

52Mb hard drive £1299.95

105Mb hard drive £1479.95

1935 SVGA monitor £259.95

1960 multisync monitor £419.95

AMIGA 4000 MULTI-MEDIA SYSTEM

New awesome multi-media platform featuring 68040 32 bit processor running at 25Mhz, new AA chipset with 16.9 million colours, 6Mb RAM and high density 3.5 inch disk drive, latest Workbench 3.0 operating system

A4000 40Mb HD

£1999.95

A4000 120Mb HD

£2199.95

CDTV ENTRY PACK

CDTV player complete with remote controller, plays audio CD's, CD audio plus graphics disks, and Amiga interactive titles, comes complete with the following software:

- WELCOME DISK
- HUTCHINSONS ENCYCLOPAEDIA
- LEMMINGS (the award winning game)

all for £369.95 inc.

AMIGA CDTV PACK

MULTI-MEDIA SYSTEM

Combination of the CDTV and an Amiga compatible computer including CDTV player, black Amiga keyboard, infra-red mouse, 3.5 inch black Amiga disk drive, Workbench disks and remote controller

all for £469.95 inc.

.....ADD MORE GAMES, MEMORY OR ACCESSORIES WITH OUR VALUE ADDED PACKS!

Zool PACK

- Includes:
- Zool - with rated AMIGA COMPUTING
 - STRIKER - 24x rated GU AMIGA
 - PINGBALL DREAMS - 24x rated AIA
 - TRANSWRITE - printer word processor worth over £127 in total!

ONLY £20 EXTRA!

AWARD WINNERS PACK

- Includes four award winning games:
- KICK OFF 2 ● PIPEMANIA
 - POPULOUS ● SPACE ACE
- ...worth over £122 in total!

ONLY £10 EXTRA!

PHOTON PAINT

(THE 4096 colour painting package)

● GFA BASIC

(potential for selling your own program)

ONLY £10 EXTRA!

ACCESSORIES PACK

Essential extra's including Ziplock Super Pro joystick, 10 blank 3.5 inch disks, 40 capacity disk box, high quality mouse mat and dust cover

ONLY £20 EXTRA!

EXTRA 1Mb RAM

for A500

ADD £30

or A600

ADD £35

FUTURE TECH

Orderline & enquiries telephone (0908) 211665 open 7 days a week 9am-7pm

PHILIPS 8833 MKII COLOUR MONITOR



The best selling monitor for the Amiga gives a crystal clear colour display together with fantastic stereo sound!

- FREE LOTUS TURBO 2 GAME
- FREE AMIGA CABLE
- 12 MONTHS IN-HOME SERVICE
- OFFICIAL UK PRODUCT

all for **£179.95 inc.**

tilt & swivel stand **£10.95**
dust cover **£3.95**

PRINTERS

Canon
CITIZEN

star
**HEWLETT
PACKARD**

All printers include ribbons & Amiga cable!

Citizen 1200 9 pin mono	£109.95
Citizen SWIFT 9 pin colour	£169.95
Citizen SWIFT 200 24 pin mono	£194.95
Citizen SWIFT 200 24 pin colour	£244.95
Citizen SWIFT 240 24 pin mono	£264.95

Star LC20 9 pin mono	£119.95
NEW! Star LC100 9 pin colour	£149.95
Star LC200 9 pin colour	£169.95
NEW! Star LC24-100 24 pin mono	£184.95
Star LC24-200 24 pin mono	£199.95
Star LC24-200 24 pin colour	£239.95
Star X324-200 24 pin colour	£259.95
Star SL48 inkjet	£194.95
Star Laserjet 4 laser	£699.95
Star Laserjet 4 postscript laser	£949.95

Canon BJ10ex inkjet	£219.95
Canon BJ20ex inkjet inc. s-feeder	£309.95
Canon BJ300 inkjet	£369.95
Canon BJ330 wide carriage inkjet	£489.95

HP Deskjet 500 mono inkjet	£324.95
HP Deskjet 500 colour inkjet	£449.95

Sheet Feeders			
	GENUINE RIBBONS	MONO	COLOR
	one £	six £	one £
Citizen SWIFT manual sheet feeder	£27.99		
Citizen SWIFT auto sheet feeder	£74.99		
Star LC20 auto sheet feeder	£57.99		
Star LC100 auto sheet feeder	£59.99		
Star LC200 auto sheet feeder	£59.99		
Star LC24-100 auto sheet feeder	£62.99		
Star LC24-200 auto sheet feeder	£62.99		
Star SL48 auto sheet feeder	£45.99		

Canon BJ10ex auto sheet feeder	£49.99
--------------------------------	--------

	GENUINE RIBBONS	MONO	COLOR
	one £	six £	one £
Citizen 1200	3.95	20.95	
Citizen SWIFT series	4.45	21.95	15.95
Star LC101/C26/LC40	4.25	22.95	5.49
Star LC200	5.45	30.95	11.95
Star LC24-200	6.45	36.95	12.45
Star LC24-200	15.45	88.95	
Star SL48x, Canon BJ	21.45	105.95	25.45

HARD DRIVES

GVP HARD DRIVE 8 for A500 & A500 plus	52Mb drive £	120Mb drive £
with no RAM fitted	329.99	429.99
with 2Mb RAM fitted	369.99	469.99
with 4Mb RAM fitted	409.99	509.99
with 8Mb RAM fitted	489.99	589.99

GVP A530 COMBO, a hard drive and 68030 accelerator for the A500 & plus	52Mb drive £	120Mb drive £
with 1Mb RAM fitted	659.99	759.99
with 2Mb RAM fitted	699.99	799.99
with 4Mb RAM fitted	799.99	899.99
with 8Mb RAM fitted	879.99	1039.99

68882 maths co-pro for A530	£219.95
PC 286 emulator for GVP HD 8	£189.95

GVP HARD CARD 8, a combined hard drive and RAM board for the A1500 & A2000	52Mb drive £	120Mb drive £
with no RAM fitted	279.99	409.99
with 2Mb RAM fitted	319.99	449.99
with 4Mb RAM fitted	359.99	489.99
with 8Mb RAM fitted	439.99	569.99

CDTV ROM DRIVE

Allows your Amiga to play CDTV titles and music CD's. Models for 500+/600/1200

only **£269.99**

FLOPPY DRIVES

Cumana 3.5 inch 1Mb drive	£49.95
Rockett Roulie 3.5 inch 1Mb drive	£59.95
Power PC800E 3.5 inch 1Mb drive	£47.95
Power PC800B 3.5 plus BLTZ	£57.95
Power PC800B 3.5 plus X-Copy	£72.95

MEMORY

512K RAM exp. for A500 & plus	£17.95
512K RAM & clock exp. for A500	£22.95
1Mb RAM exp. for A500 plus	£34.95
1Mb RAM exp. for A500	£32.95
1Mb RAM & clock exp. A600	£37.95
2Mb RAM smartcard A600 & 1200	£114.95
4Mb RAM smartcard A600 & 1200	£174.95

SIMM BOARDS

1Mb SIMM suitable for GVP HD8 etc	£21.99
4Mb SIMM suitable for GVP HD8 etc	£39.99
1Mb 32bit SIMM for GVP Combo etc	£31.99
4Mb 32bit SIMM for GVP Combo etc	£151.99

ROMS & SHARER

Kickstart 1.3 ROM	£23.99
Kickstart 2.0 ROM	£34.99
Keyboard switchable ROM sharer A500	£16.99
Next! A600 ROM sharer	£29.99
Official Commodore V2.0 upgrade kit, inc. V2 ROM, V2.0 disks & manuals	£79.99

CUSTOM CHIPS

CIA 8520A I/O chip	£7.99
Super Denise custom chip	£21.99
Father Agnus 8372A custom chip	£30.99

SCANNERS

Power B&W scanner, 64 greyscale, up to 400 dots, software inc.	£94.99
New! Power colour scanner, 4096 colours, up to 400 dpi, software inc.	£229.99

MICE, TRACKBALLS

Naksha upgrade mouse inc. freebies	£23.99
Squik quality replacement mouse	£11.99
Golden Image mega mouse	£12.99
Golden Image crystal trackball	£29.99
Zydec trackball	£3.49
High quality 8mm mouse mat	£3.49

3.5 DISKS, BOXES

10 3.5 1Mb bulk 100% certified	£4.95
25 3.5 1Mb bulk 100% certified	£10.95
50 3.5 1Mb bulk 100% certified	£19.95
100 3.5 1Mb bulk 100% certified	£37.95
500 3.5 1Mb bulk 100% certified	£174.95
Box of 10 branded TDK 3.5 1Mb	£7.95
Box of 50 branded TDK 3.5 1Mb	£37.25
Box of 100 branded TDK 3.5 1Mb	£69.95
10 capacity 3.5 disk box	£1.49
40 capacity 3.5 disk box - lockable	£2.95
80 capacity 3.5 disk box - lockable	£4.95
500 3.5 disk labels	£5.95
1000 3.5 disk labels	£9.95

JOYSTICKS

Quickshot II Turbo	£8.95
Quickshot joystick	£10.95
Quickjoy Topstar	£17.95
Quickjoy Superboard	£16.95
Zipstick Super Pro autofire	£10.95
Competition Pro autofire, bursfire	£12.95
Voltmace Delta 3A analogue	£7.95

CONTROL CENTRES

View centre, monitor stand only:	£24.95
A500 & A500 plus version	£20.95
Control Centre, monitor stand & shelf:	
A500 & A500 plus version	£39.95
A600 version	£34.95
Super Control Centre, monitor stand & two shelves:	
A500 & A500 plus version	£54.95
A600 version	£49.95

We offer you

- Free delivery in the UK
- All prices include VAT
- Price match
- Computerised ordering
- Staff with 10yrs experience
- Commodore products
- Free catalogues
- 12 month warranty on all products (in-home service on Amiga's & Philips monitors)
- Free collection of product in warranty period, if necessary

How to order

Call our orderline shown below if you have a credit or debit card, or if you have any queries before you purchase. Be ready to quote your card number, expiry date and your name, address and contact telephone number.

OR, send your order into us at the address shown below, together with your personal cheque or a bank or building society draft made payable to, Futuretech Consumer Electronics Ltd. Please state your requirements clearly, along with your name, address and telephone number.

FUTURETECH

Unit 3, Frederica
Caldecote Street
MILTON KEYNES
MK16 0DD

Telephone (0908) 211665

Fax (0908) 217984



Please state specifications are subject to change without prior notification. E & O.E.
Goods are sold subject to availability and are not supplied on a stock basis.
Personal cheques require 7 days to clear.
Futuretech is a registered company. Futuretech is registered in England. All trademarks acknowledged.

CALL US NOW AND ASK FOR YOUR FREE AMIGA CATALOGUE!

FUTURETECH

Orderline & enquiries telephone (0908) 211665 open 7 days a week 9am-7pm

Connect up to comms!

CompuServe

Claim your free introductory membership to the world's largest online database

Amiga Computing and CompuServe have joined forces to bring you this valuable free introduction to the comms world. You can have one month's unlimited connect time to CompuServe's basic services and \$15-worth of usage credit towards the extended services.

You will join more than 1.3 million members worldwide who, through this easy-to-learn and

simple-to-use service, retrieve information from databases around the globe and use interactive communication links to other personal computer enthusiasts.

In addition the first 25 to take up this offer will also receive a free CompuServe wall chart.

You can claim your free introductory membership package by either phoning CompuServe on

0800 289378, quoting the reference *Amiga Computing*, or by writing to this address, again quoting *Amiga Computing*:

Europress Direct
Amiga CompuServe Promotion
PO Box 2, Ellesmere Port
South Wirral L65 3EA

This offer is valid until July 30.

Missed a great opportunity?

Are you using one of our recent CoverDisks and wish to take up an offer that went with it? Well, here's another chance to make the most out of your free programs



Vidi Amiga 12

Only £69
Save £21

Digitiser, grab function and manual

This superb package offers...

- The new improved version of the original award-winning digitiser, which enables you to load and capture images from live video and digitise your own to the quality demonstrated on the CoverDisk.
- The grab function allowing existing Vidi Amiga 12 owners to upgrade to the fully functional v2 software
- The manual clearly explaining everything you will need to know.

Or you can buy the manual and grab function for only **£9.95**

Or you can simply buy the manual for only **£4.95**

HiSoft BASIC

Fill in this form and send it to HiSoft, The Old School, Greenfield, Bedford MK45 5DE, or phone on 0525 714181, quoting ref no. ACHB1 / QP

Please send me HiSoft BASIC I for £21.95

I wish to pay by...

☐ Cheque/postal order payable to HiSoft

☐ Credit card

Expiry date

Card no

Name

Address

Postcode Daytime phone

Allow 28 days for delivery

☐ Tick this box if you do not wish to receive promotional material from other companies

Vidi Amiga 12

Fill in this form and send it to Amiga Computing Offer, Rambo Productions Ltd, Boad Road, Kirkton Campus, Livingston EH54 7AZ

Please send me...

☐ New Vidi Amiga 12 manual ☐ £4.95

☐ Manual and full software inclusive of grab function ☐ £9.95

☐ Manual, full software inclusive of grab function and digitiser ☐ £69

I wish to pay by...

☐ Cheque/postal order payable to Rambo Productions Ltd

☐ Credit card

Expiry date

Card no

Name

Address

Postcode Daytime phone

Allow 28 days for delivery

☐ Tick this box if you do not wish to receive promotional material from other companies

HiSoft Basic

This complete package includes an extensive 350-page ring-bound manual and the two-disk set which gives you an extended 1Mb compiler/editor, plus many extra examples, libraries and more.

This special offer also includes a HiSoft BASIC 2 upgrade coupon, which ensures that when you buy the upgrade you will receive a special price and priority treatment.

Only £21.95

OPEN ALL HOURS

WELL, NEARLY!
9am-10pm Mon-Sat
10am-6pm Sunday

AMIGA COMPUTERS

A500+	£199.99
A500+ with Cartoon Pack	£229.99
A600 + Zool Pack	£249.99
A1200	£389.99
A1500/A2000	£phone
A3000	£phone
A4000	£phone
1084ST Monitor	£195.00

RAM & DISK DRIVES

Ext. Disk Drive	£58.00
A570 CDROM + Software	£149.00
A500 int drive	£49.00
A500 512k + clock	£18.95
A500 512k + clock	£23.50
A500 + 1meg exp	£37.00
A600 1meg + clock	£44.00
A500 1.5meg	£79.00
A500 8meg, 4 fitted	£169.00
GVP 42meg	£299.99
GVP 80meg	£369.99

PRINTERS & RIBBONS

Star LC20	£133.00
Star LC24-10	£199.00
Star LC100 Colour	£169.00
Star LC200 Colour	£194.00
Star LC24-200 Colour	£274.00
LC100 mono ribbon	£4.50
LC100 colour ribbon	£6.75
LC200 mono ribbon	£5.50
LC240 mono colour ribbon	£13.50
LC200 mono ribbon	£4.50

LEADS & CABLES

Printer	£3.99
Null Modem	£5.99
Joystick Extender 3 metre	£3.99
Joystick/Mouse Extender	£3.99
Amiga to SCART	£7.99
4 Player + SPECIAL +	£2.99
Analog Joystick Adapter	£4.99

LOOK! LOOK! LOOK!

TRACTORFEED DISK LABELS

Now you can print your own professional disk labels!
500 Plain white disk labels on tractor feed,
complete with FOUR disks of software and artwork.

**Yours for ONLY
£8.95**

**1000 Labels with software
ONLY £13.50**

SPECIAL OFFERS!!

AVAILABLE NOW:

AMIGA MODULATORS

ONLY £19.50

A500 POWER SUPPLIES

ONLY £29.99

4 PLAYER ADAPTERS

ONLY £2.99

HURRY WHILE STOCKS LAST

DISKS & LABELS

All disks are supplied with labels.
UNBRANDED DISKS are 100% error
free.

In the unlikely event that any of our disks
are faulty, then we will replace the disks.
AND reimburse your return postage!

3.5" DSDD	£0.37 each
3.5" Rainbow	£0.44 each
3.5" DSHD	£0.58 each

Why not try our BRANDED disks!
Supplied in boxes of 10 disks.

3.5" DSDD Fuji	£4.90
3.5" DSHD Xerox	£8.90
5.25" DSDD Fuji	£2.50
5.25" DSHD Fuji	£4.90

1000 3.5" labels	£6.50
1000 3.5" tractorfeed	£8.50

STORAGE BOXES

Our high quality disk storage boxes are
constructed from high impact plastic
and have smoked perspex tops. Or for
space saving economic storage of large
disk collections, why not try our
stackable disk drawers.

Most types are available for 3.5" or 5.25"
disks.

10 capacity	£0.95
40 capacity	£3.49
50 capacity	£3.95
100 capacity	£4.50
80 capacity Bantix drawer	£8.49
150 capacity Posso drawer	£14.99
200 capacity drawer	£19.50

MISCELLANEOUS

Mousehouse	£1.80
Mousemat 9mm thick	£2.50
Diskdrive cleaner	£1.80
A500 Dustcover	£3.50
A600 Dustcover	£3.50
A1200 Dustcover	£3.50
Monitor Dustcover	£3.50
LC200 Dustcover	£3.50
LC100 Dustcover	£3.50
LC200 Dustcover	£3.50
LC24-200 Dustcover	£3.50
Robotcuff	£13.95
Amiga Lightpen	£32.00
Optical Mouse	£32.00
Megamouse	£12.95
Primax Mouse	£12.95
Itas Mouse	£12.95
Adaptive Trackball	£26.95
Crystal Trackball	£32.00
Zydec Trackball	£25.95
Zylfi Amp/Speakers	£37.50
Action Replay Mk III	£56.95
Technosound	£32.00
Midi Master	£26.50
Turn/Turn Monitor Stand	£9.95
2-piece Printer Stand	£3.49
A4 Copyholder	£4.99
ROM Shaver	£14.95
V1.3 ROM	£25.95
V2.04 ROM	£35.95
Microsoft Tractorfeed Paper 500 sheets	£4.50
2000 sheets	£13.00

JOYSTICKS

All joysticks have autorefire feature
except those marked *.

Tigger Grip Models	
Quickshot turbo	£6.95
Python 1M	£7.99
Jettlighter	£12.00
Topstar	£19.50
Intruder	£21.50
Base Fire Button Models	
Maverick 1M	£12.95
Megastar	£21.50
Zipstick	£12.95
Comp Pro 5000*	£10.95
Comp Pro Extra	£12.95
Comp Pro Star	£12.95
Cruiser Multicolour*	£9.95
Comp Pro Star MINI	£14.95
Aviator 1 Flightyoke	£23.50
Handheld Models	
Speedking	£10.50
Navigator	£13.95
Bug	£12.00

ANALOG JOYSTICKS

These Joysticks will fit any Amiga

Warrior 5	£14.95
Sniper	£16.95
Speedking Analog	£13.95
Intruder 5	£21.50
Aviator Flightyoke	£23.50
Adapter to use any PC analog joystick on an Amiga	ONLY £4.99

COMPUTER SUPPLIES
Direct
0782 206808 or 0782 642497 Weekdays
0782 320111 or 0630 653193 Evenings & Weekends



BUSINESS HOURS

9am to 10pm Mon-Sat, 10am to 6pm Sun
All items and offers subject to availability. E&OE

P&P £3.30 All Prices inc VAT

We accept POs, cheques & credit cards

BUSINESS AND EDUCATION ORDERS WELCOME

DIRECT COMPUTER SUPPLIES 36 HOPE STREET, HANLEY, STOKE-ON-TRENT ST1 5BS

Before the inevitable stroll through the huge and slightly terrifying features list, now might be a good time to describe what the new Real3D is all about, and who it has been designed for.

The answer to the first question is probably animation, with the main thrust of the new release revolving around a plethora of new techniques which without doubt make the program the most comprehensive animation tool on the market.

As for the second, the answer is two-fold. For the professional willing to invest the considerable amount of time needed to master the system, it offers a state-of-the-art platform that with practice will generate images that simply aren't possible on any other platform.

For those who don't fit into the first category, the user base is likely fall into two spheres, with the first being the dedicated ray tracing enthusiast for whom time and money is nothing compared to their addiction.

Coffee table

The second could perhaps be described as the coffee table professional. In short, the kind of person who will buy the package, play with it once or twice and then leave it lying around ready to inspire dreary conversations about what they would do "if only I had the time".

Although a rather brutal introduction I feel it's justified if only to counter the inevitable feeding frenzy generated by the bandwagon of Amiga journalists who often feel duty-bound to scream the praises of a package without giving the punter and the application of his or her latest investment a second thought.

In short Real3D 2 personifies professional Amiga software. It isn't a point and click paradise, it doesn't hand you the images on a plate and as a result demands as much attention as it does - hard cash.

Thanks to the intuitive design of most Amiga releases we've all become a little spoiled when it comes to user friendliness. Real2 gives no quarter in that department



A classic image from the new Real3D featuring B-splines in all their glory

Even better real thing

offering a unique approach which puts the ball firmly in your court. After a little over two weeks working with the program I'm not in the least bit ashamed to admit that I've only begun to scratch the surface - however that doesn't mean I'll be offering a regurgitated press release which certain magazines consider a format for success.

A classic example of the program putting you in the hot seat is the new and

totally unique interface. Within this initially alien environment almost anything goes and it's up to you what does, and what doesn't. Instead of the old-style multiple screens of its predecessor you're provided with a collection of components which can be added, removed, sized and placed to your own design.

Of course this doesn't mean you're provided with a blank screen and expected to fill it, as initially you're offered a default layout containing the three key elements to the interface.

They are the view, select and tool windows. However before a detailed description of each, a brief overview of the main principles of the new environment would be wise.

We're all well aware of the multitasking skills of the Amiga but the new Real attempts to take multitasking a step further by offering an asynchronous, no wait state design.

In English this means each window behaves as almost a program within a program with the various element multitasking independently making it possible to render in one view while editing the mapping attributes of the object - ready for a simultaneous render from a different angle in another window.

To take things to their extreme, you could have half a dozen view

Real3D v2 promises to be the most complex modelling and animation system ever to hit the Amiga. Paul Austin grits his teeth and takes it on

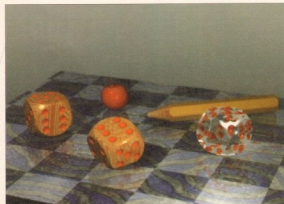
windows all rendering in different styles simultaneously. In short, no matter how fast you apply changes the program will keep track, running each as a background task. Taking things further still, you can open as many environments as you wish providing a series of designer screens with their own views and tool selections, each remaining completely independent of the parent and

After two weeks working with the program I've only now begun to scratch the surface...

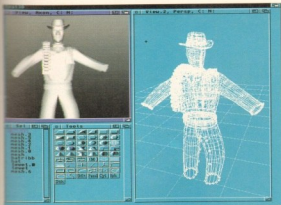
even running in a different resolution.

This is ideal for specialist animation environments, freedom modelling, point editing or emulation of other programs - the old Real, Imagine, Caligari and so on. A touch of overkill perhaps but it's all available if there's a need.

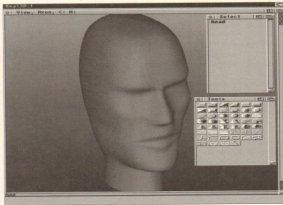
Still, however ingenious, it isn't with-



Spot the deliberate mistake within what is sure to become a familiar image



Hi resolution screen modes look great but they can take an age to render



B-splines offer great results but again rendering time can be a problem

r than the

out its faults – a testament to this being the two days spent organising environments and attempting to eradicate quirks and apparent bugs when running the program on hi-res interlaced and productivity machines.

This problem could have been avoided if only the authors hadn't chosen to supply all the example environments in hi-res only.

To return to the description embarked upon earlier, the obvious place to start is the view windows, which due to their introspective nature provide a unique set-up screen to define not only what appears on-screen but also where the output of any renders will be targeted.

Once active, a hot-key or pull-down reveals view's specific requester, ready to

render the image either to the window, a file, or an external display device, the selection of which can be defined via the main interface.

Like Real's old render screen, each view can be customised with various options for lighting; the degree of anti-aliasing; the background colour – whether it be a gradient or solid; the output file size and location; the application of environment and background texture mapping and so on.

Within each output option you can also define the quality of the image to be generated from six presets,



Keep on moving

Animation is arguably the biggest beneficiary of the new release. Like the rest of the package, animation has undergone some dramatic changes, not least of which is the total redesign of the way in which the program handles the animation process.

In the past, Real3D operated strictly on a frame-by-frame basis using key frames and tween points. Now however the programmers have cast aside the old frame format completely in preference for animation over time.

The advantage is that re-computation of a sequence is now simply a matter of adjusting the relative time of the element or scene thereby allowing the software to re-interpolate the sequence automatically.

When this new approach is combined with the hierarchical combination of object, mapping and animation, you arrive at a very logical, clean and self-contained approach to problem of complex animation – and believe me some of the program's anim techniques can produce very complex animations indeed.

Needless to say, due to the variety and complexity of the anim options you're likely to spend just as much time mastering the various animation techniques as you model the various components of the scene.

To illustrate the various anim options here's a brief rundown of the available methods. Obviously basic motion via paths has been included, in addition to more sophisticated options allowing shape modification to produce undulating organic forms.

There's morphing – possibly in conjunction with textures; skeletal anims, which provide a common structure for related elements; and of course inverse kinematics – ideal for combination objects which interact to produce the illusion of joints such as hands and fingers.

On top of this comes the program's particle animation system which allows the addition of real world effects such as gravity, velocity, spin, mass and surface friction.

As a result, pool table anims will no doubt be the in-thing as the virtual cue ball crashes into the pack, automatically sending the balls spinning across the baize interacting with their counterparts just like the real thing.

To put the anim options into perspective, almost 70 example scenes come as part of the package, each of which illustrate a different technique.

They include (deep breath) paths; rotation; sweeps (alias tracking); size manipulation; stretches; direction; control curves; skeleton effects; inverse kinematics; morphing; transformations; radial force (alias gravitational effects); directional force (such as turbulence); tangent (centrifugal force); collision detection; creation (for example boiling water or wriggling snakes) and finally liquids (whether they be single drops or an entire ocean).



A great example of what can be produced with practice – image by Frank Vogt

namely draft, environment, lampless, shadowless, normal and outline, with the variations providing everything from quick rough renders which ignore any texture mapping to the ultimate quality the software can provide.

The somewhat less conspicuous but equally essential select window is next under the microscope and it's from here where the underlying structure is applied and edited.

Old Real users will already be familiar with the program's hierarchical approach to the modelling process and thankfully this has been retained in the new version – complete with a few embellishments of course.

In a nutshell, Real organises its scenes in a similar manner to a disk, with a root directory containing various sub-directories which in the case of Real translate into the various objects and their components.

In a slight break from tradition, literally everything now becomes part of the hierarchical approach with texture maps and even animation all appearing in the overall structure.

Target objects

For example, adding a texture or multiple textures to an object involves simply placing it/them within the same level as the target object – thereby appearing as objects themselves with names such as wood(T). These can be edited when necessary while still remaining unique to the object they accompany.

The real beauty of this hierarchical approach is that if other objects or sub-directories appear within that level they automatically share the same mapping attributes without any additional editing on the part of the user.

A similar approach applies to everything else with even an object's animation attributes appearing as a pseudo object within the selection window.

In short, it's a very neat, logical and



An image rendered by Real 3DClassic. If your need the animation power of the new package spend the extra cash but otherwise its predecessor is a real bargain

natural approach – and of course multiple windows mean you can spotlight parts of the structure in one window while still retaining an overview in another.

Moving on to the last window, we come to the tools which although similar to the selection of icons found in the original Real do hold a few surprises, not least of which is the disappearing hot-keys which I – and many others – had become so familiar with.

One of my main complaints initially was that many of the original hot-key short-cuts were missing or had been hijacked. Thankfully however they had only migrated to the tool window where they now appear as icons offering all the familiar cut and paste options thereby eliminating the tedious trek through the enormous and somewhat confusing array of pull-downs. In total, 13 categories of tool are available providing all the familiar primitives, Boolean and freeform options in addition to mapping, editing and much more. And because the tool

windows also share the internal multitasking design you can open a series of user defined tool boxes with as many or as few tools as you need.

Like its predecessors, the new Real is a solid modeller with a heavy emphasis on primitives as its primary building blocks. As a result a huge range of shapes can be created from preset forms, either by selecting the object style from a pull-down or more often by clicking on the appropriate tool icon. Once an object is defined – whether it be a prim, tube, polygon, polyhedron or whatever – it can be move, scaled, stretched, rotated or perhaps edited more dramatically courtesy of the program's Boolean operations; a feature which allows one object to act as a cutting

implement on another.

Depending on the Boolean operation chosen, chunks can be removed from the target object or perhaps the original removed completely leaving only the intersection of the two objects behind. Better still, Booleans even offer the ability to leave the texture and attributes of the cutting tool on the target's surface.

If Booleans are not enough, the program also provides freeform tools which can generate much more complex shapes to be edited with a selection of almost 100 tools specifically designed for freeform objects.

At the forefront of the organic side of the software comes the new B-spline surfaces allowing ultra smooth freeform curves, guaranteed facet free – not a single polygon in sight!

As you can see from the head image, the quality offered by B-splines is unbeatable but like many of the power features it has a dramatic impact on rendering – at least quadrupling the time taken to generate similar shapes created by the program's primitive, compound and lathe tools.

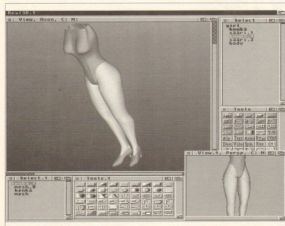
Macros on disk

Another impressive feature of the modelling environment is the program's Macro feature, an option which allows any actions to be recorded and then repeated automatically as many times as necessary. Better still, such processes can be stored on disk or even appended to a hot-key or tool icon to produce designer automated tools.

On a more exotic note, Real also provides a built-in fractal generator for both trees and landscapes, both of which come



Animation takes on a totally new direction in the latest release



Not incredible quality but state-of-the-art animation to boot!

Rendering in detail

As you can see from the screenshots, the program offers full support for the AGA with all screen modes supported – even HiRes.

However, it must be stressed that actually operating in such resolutions does mean a dramatic increase in rendering and updating times. While on the subject of time, this is probably a good time to mention Activision's claim that the new Real is the fastest ray tracing environment on the machine.

This may indeed be the case in certain situations, however when the program's power features are applied I must admit to experiencing little or no difference in relation to its predecessor.

Prime candidates for painfully slow rendering include the much-hyped soft shadows and motion blur, which although dramatic, do cause huge increases in rendering time. However, having said that, even these pale in significance when compared to complex B-splines.

Even with the specially optimised 040 version – claiming rendering times eight times that of its 020/030 counterpart – I still wasn't over-impressed. If ever a package screamed out for an 060 processor, this is the one!

Leaving the rendering time aside, it must be said that the quality of the finished product is spectacular, boasting arguably the best anti-aliasing and overall image quality on the market.

When this is combined with the respectable rather than spectacular times and the unique effects mentioned above, you can't fail to be impressed.

Conclusion

As you've probably guessed, the new Real is very serious stuff which offers the most advanced ray tracing environment yet to appear on any desktop machine.

As far as the manual and assorted support is concerned things are a little mixed, with a manual which is roughly three to four times the size of its predecessor. As for readability it scores slightly higher than the Imagine2 manual courtesy of a wide selection of step-by-step examples.

Nevertheless it must be said that the authors often assume a bit too much of the reader – especially the beginner.

On the other hand, what the manual lacks the huge selection of example animations, scenes and mapping demos more than make up for.

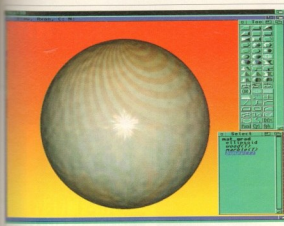
In fact, once you've mastered the basics, exploring the examples can be a much quicker method of picking up the finer points. In addition to the support files and manual, a built-in hyper-text help system also awaits if quick reference is required.

Continuing on the theme of support the package comes with a familiar selection of display and conversion utilities in addition to the aforementioned huge variety of example images and scenes.

After the rollercoaster ride of the main article, hopefully your mind will already be made up. If not, here's a woefully inadequate potted opinion.

For any would-be investor the question has to be in the six months needed to really master the package worth the new features and the £400 asking price?

For the professional I'd say the answer is yes, but for those new to ray tracing, Real3D Classic at roughly a quarter of the price is a much more attractive option – which in time could lead on to an upgrade when your requirements and skills demand the attentions of its muscle-bound bigger brother.



An example of multiple image blending on a single object

with the mandatory requesters bristling with assorted option – especially in the case of tree generation.

Support has also been added for Autodesk DXF files – a format fully catered for within the new Pixel 3D Professional. Although not spectacular news for the majority, it nevertheless adds a powerful option for commercial artists who may require a means of translating existing structured artwork or plans into the world of Real3D. Assuming the objects are complete, mapping them with the appropriate texture or defining a suitable surface attribute is the next essential step in the creation of a believable finished product.

In the past Real3D has taken some flak in the mapping department primarily due to the challenge offered by Imagine2 – a program which has supplied multiple maps for some time.

Unfortunately although Real has also always offered maps they've been strictly singular for each object in the scene. Now that's all changed with the new version

offering unlimited maps for each object in wide variety of formats. However, even though multiple maps are an exciting addition, they're only a part of the program's material skills. Aside from applying standard Amiga graphics or 24-bit

“... the most comprehensive mapping system in the business”

files onto the surface, the actual attributes of the objects can be defined by a selection of parameters allowing anything from a cloud of gas to a diamond.

Thanks to the solid modelling approach mentioned earlier, Real3D also has the advantage of accurately reflecting and

refracting light which means that if you create a flattened oval object and add the necessary attributes to create glass you'll produce a perfect lens which would be used just like its real world counterparts.

Obviously then the attributes of an object – whether it be chrome, glass, plastic or whatever – are combined, the object colour and any maps that may have been applied can lead to spectacular results.

However that's only the tip of the iceberg courtesy of the program's 12 mapping techniques which can make the impossible an everyday event with features such as bump and clip maps all adding to the overall power of the most comprehensive mapping system in the business.

Morphed

On a personal level I'm impressed most of all by the ability to blend maps together on the same object creating hot-spots for the materials in question. In addition materials can also be morphed or animated by simply appending sequential file names.

Unfortunately it's not all good news when it comes to mapping, and although flagged as one of the major selling points of the package, the program's new procedural and mathematic textures are likely to remain beyond most of us for a long, long time.

The reason is the appearance of the dreaded RPL programming language. In order to use the aforementioned features at least a rudimentary understanding of the RPL is required. Based on FORTH, the Real3D derivative isn't exactly what you'd call easy reading.

After a couple of hours wading through the RPL I can guarantee non-smokers will be reaching for the Woodlindes while the alcoholics leap from

the wagon like lemmings from a cliff. If the program's authors really think that a perverse interest in higher mathematics and programming in general is infectious, I'm afraid they're sadly mistaken.

By nature most artists recoil at the prospect of programming and quite frankly at £400 a time they shouldn't be expected to suddenly develop an interest.

As a result I'd be very surprised if more than one in 100 users will ever make serious use of the RPL – a sad fact because not only will the new mapping options largely be ignored but also the advanced customising potential of the language throughout the package.

In reality for most people applying the RPL will be a matter of downloading files or perhaps buying in third-party RPL support software as the program gains momentum.



Yet another scene created by Frank Vogt showing the mapping and modelling potential of the new release

SYSTEM ESSENTIALS

Accelerator	Hard drive	RAM
Hi-res monitor	4 Mb	Display device

The bottom line

Easy of use 6
Implementation 9
Value for money 7
Overall 8

Supplier: Alternative Image
Phone: 0533 440041
Price: £399



HARD DISK DRIVES

Remember you can specify a pre-fitted 40/60/80/120Mb. Hard Drive when buying your new Amiga A600 or A1200. Call for latest keen prices.

AMIGA FLOPPY
DISK DRIVE VERSION

But only whilst stocks last

at just... **£244.95**

OR... With POWERPLAY GOLD BUNDLE

at an amazing... **£289.95**

AMIGA FLOPPY
DISK DRIVE VERSION

WITH A NEW...

WICKED SOFTWARE

PUSHOVER

SILLY PUTTY

PROSE GRAND PRIX

DELUXE PAINT III

at only... **£289.95**

AMIGA 20/40 HARD
DRIVE VERSION

WITH A NEW...

EPIC SOFTWARE

EPIC MYTH: ROME

DELUXE PAINT III

TRIVIAL PURSUIT

MULTI LANGUAGE

DICTIONARY

AMIGATEXT WORD

PROCESSOR

20Mb. Version...

£379.95

40Mb. Version...

£429.95

Capacity Drives.

If you want a DIFFERENT SIZE hard drive simply ask for the price. You can choose from either a 40/60/80/120Mb. Capacity Drives.

THE GOLD SERVICE
SEE PAGE 4 FOR FULL DETAILS

the latest AMIGA technology acknowledged experts

COMPARE OUR TOTAL PRICES

WHAT DO WE MEAN BY THIS?

We'll never try to disguise the total you'll pay by advertising low hardware prices and then when you call, try to add essentials such as cables, delivery and a proper after sales service... all at EXTRA COST! When deciding where to buy, compare our service, check out what the "Extras" really add to those attractive looking prices elsewhere... You'll soon see the REAL COST!



All Harwoods new (and fully valued) Kingdom specification and include the following features... 1Mb. Disk Drive, 1Mb. RAM, 4096 Colours, Integral TV Modulator, Mouse, Workbench Disk, Manuals, PLUS all Leads - AND... FREE 1 YEARS IN HOME SERVICE!

...Harwoods...
EXCLUSIVE!



POWERPLAY

THE GOLD PLUS

SPECIAL EDITION

ADD our great **GOLD PLUS** POWERPLAY PACK to your order for only...

you get: A Superb High Quality Microswitched Competition Pro 5000 Joystick • 10 Essential 3.5" Blank Disks • Disk Storage Box • Tailored A600 Dust Cover and a High Quality Mat to enhance accuracy & protect your mouse

PLUS THE NEW MEGA-RELEASE GAME...ZOO!

and a FANTASTIC selection of TWENTY more great games. THESE TITLES ARE NOT PD BUT FULL PROFESSIONAL GAMES WHICH

ORIGINALLY SOLD FOR PRICES OF BETWEEN £20 TO £30!!! Xenon 2 Megablast • Pinball Dreams • TV Sports Football • Hostages • Jumping Jackson • Striker • Bubble Plus • TinTin on the Moon • Bloodwych • Stir Crazy • Krypton Egg • Skychase • Eliminator • Purple Saturn Day • Saferi Guns • Lombard RAC Rally • Captain Blood • Strike Force Harrier • Lancaster • Sky Fox II AND...Transwrite • Word Processor for the Amiga

With ALL THIS you won't need to buy anything more for ages!

£49.95

21 GAMES & WORD-PRO PACK

why not buy your Amiga A600 with a FULL 2Mb. for just £47.95 extra

AMIGA 1200
32 BIT-2Mb
68020 PROCESSOR

the latest AMIGA...
FIRST NEW
AMIGA FOR 5 YEARS
AVAILABLE NOW!

The new A1200 is the Amiga of the 90's and the first true advancement to the already powerful Amiga range

Operating at 14MHz this is a revolution in power for the home market. With the new AGA Graphics chip set you have a truly remarkable colour palette of some 16.8 million colours allowing up to 256000 colours at any one time and... it runs lots of existing Amiga software! JUST THINK OF THE IMMENSE POSSIBILITIES!

The A1200 is supplied with 2Mb RAM and has a full one years on site maintenance warranty FREE!

Available at Harwoods with optional hard disk drive - fitted!

Floppy Drive Version ONLY...

£384.95

80Mb Hard Drive Version ONLY...

£599.95

FOR A LIMITED PERIOD...

RED NOSE PACK including Cinesaver, The Red Nose Game With ALL A1200's!!!

If you need a DIFFERENT CAPACITY Hard Drive simply call for our LATEST priced Choice from 40/60/120Mb Sizes

0773 836781

*Finance Facilities Available, please contact us for your personal information pack.

gordon
from the

0773-836781

If you want the POWER, then
look no further...

Harwoods have put together some great top of the range Amigas that will fit the bill for even the most demanding Amiga user. We've taken the powerful A1200 and turned it into something extra special with a massive 80Mb. Hard Drive! But if that's not powerful enough for you, just look at the other available options and note the tremendously low prices! **WE'VE GOT THE POWER!**

AMIGA 1200 NEW PROPAGANDA

Everything you'd expect from a 1200 then LOTS MORE!

AMIGA A1200 COMPUTER FITTED WITH 80Mb. HARD DISK DRIVE and supplied with... CITIZEN 240C COLOUR PRINTER INC. all leads required plus Citizen Print Manager program ALSO... A1200 Dust Cover, 240C Dust Cover, Mouse Mat, Printer Paper and Labels plus the brilliant new Final Copy II Word Processing package.

FOR A LIMITED PERIOD... **only: £939.95** (including Stampax The Red Nose Game With all A1200's!)

If you need a DIFFERENT CAPACITY Hard Drive simply call for our LATEST price! Choose from 40/80/120Mb Sizes!

AMIGA 4000
FANTASTIC 68030 MODEL AMIGA Operating at 25MHz with 2Mb. Chip RAM and 2Mb. FAST RAM Built-in 3.5" Floppy (1.7MB) Drive and your Choice of either 80Mb. or 120Mb. Hard Disk Drive.

80Mb HD £979.95
120Mb HD £1079.95

Phone about 040 Versions!!!

15" Monitor/Television

Superb definition Philips Monitor TV! Ideal for all Amiga and CDTV Users giving for the first time true 80 column text Monitor Quality from a fully featured Teletext television set and... at a really AFFORDABLE price! Far better than domestic TV quality!!!!!! Just look at the extensive features...

- ★ 2000 Character Dark Glass FST Picture Tube for Superb Text Quality and Graphics Displays
- ★ Direct SCART connector for Amiga/CDTV/VCR or Satellite
- ★ Auto-Program, Auto-Switch Off, Auto FineTune, Sleep timer
- ★ Full Fast ext Teletext Facilities (using external aerial socket)
- ★ Headphone Jack Socket ★ Infra-Red Remote Controller
- ★ Loop Aerial for indoor use ★ On-Screen Display (OSD)
- ★ Free SCART cable for direct audio and RGB connections

philips **PRO+ 2000** only... **£239.95** Includes a FREE cable to your TV AT A MIGA

philips 14" stereo COLOUR with a FREE cable and dust cover + In-Home Service

£224.95

Now with a FREE name: **LOTUS TURBO challenge 2**

Add a CM 8833/II monitor or Monitor TV when buying your Amiga and pay the low PHILIPS GOLD DISCOUNT prices to save even more! (Only when purchased with an Amiga!)

CM 8833/II **£219.95***
MONITOR/TV **£229.95***

Commodore 1084S Monitor £199.95
14" Colour, Stereo Sound, 12 months warranty

A600/A1200 RAM UPGRADES

PCMCIA Cards
600 & 1200
Memory Card
2Mb. Card, £119.95 4Mb. Card, £174.95

GVP 1230
OPTIONAL 68082 Maths Co-Processor
ACCELERATOR BOARD
40MHz 68030c Processor, 32Bit RAM
Various configurations, from 0 to 32Mb.

1Mb. £289.95 4Mb. £479.95

MICROBOTICS MBX 1200
RAM BOARD
Available in various configurations...

14MHz: 0Mb. £149.95
1Mb. £214.95
4Mb. £304.95

25MHz: 0Mb. £214.95
1Mb. £279.95
4Mb. £369.95

50MHz: 0Mb. £324.95
1Mb. £389.95
4Mb. £479.95

32Bit SIMM for MBX BOARDS
1Mb. £69.95
4Mb. £159.95

A1200/3/4000 MONITORS

AMIGA 1200/3/4000
14" COLOUR SVGA
CBM1936 £265.95
28" dot pitch
CBM 1936 gives limited screen Modes on Amiga A1200/A4000

CBM1960 Multiscan £409.95
28" dot pitch

CBM 1960 monitor gives access to ALL Amiga A1200/4000 screen modes, without interface flicker.

EXTRA RAM UPGRADES

AMIGA A500 1/2Mb £32.95 A500-1Mb £39.95
A600 1Mb £47.95
A500 & A600 RAM expansions inc. Battery Backed Real Time Clock

SIMMS FOR GVP'S
HCB & HDB Drives add RAM in 2Mb. increments
1Mb Simm £29.95 4Mb Simm £132.95
32-Bit SIMM for GVP Accelerators (min. 2Mb. increments)
1Mb x 32Bit £64.95 4Mb x 32Bit £174.95

AMIGA 600/1200 Internal HARD DISK DRIVES

40Mb. Only... £149.95
60Mb. Only... £199.95
80Mb. Only... £249.95
120Mb. Only... £299.95

All our Amiga compatible hard drives are IDE units from reputable sources... Conner, Seagate, Western Digital etc depending on size... and are supplied with our 1 Year Gold Service Warranty

REMEMBER:
In the price... Harwoods collect, fit the hard drive, configure, test & return by courier, and then add Our Gold Warranty. Can you be SURE of this service anywhere else?

ALL PRICES ARE INCLUSIVE OF

VAT AT 17.5%

GORDON HARWOOD Computers

0773-836781

AMIGA software

Listed below is a sample from our vast range of software at competitive prices. If you need a quote for your requirements, please phone us and we'll be delighted to quote for your requirements.

word processors/publishing

Pen Pal V1.5	£49.95
Final Copy II Release 2	£39.95
Kindwords 3	£37.95
The Publisher	£39.95
Professional Page V4.0	£129.95
Pagesetter III	£49.95

integrated titles

Mini Office	£42.95
-------------	--------

databases

Homebase	£19.95
Superbase 2 Personal	£29.95
Family Pictorial Slide ShowDB	£39.95

CAD & structured drawing

X-CAD 2000	£109.95
X-CAD 3000	£269.95
Expert Expression	£149.95
Expert Draw	£49.95

video

Video Master	£59.95
Scala 500	£79.95
Scala Professional	£189.95
Broadcast Titrer 2	£169.95

miscellaneous

GB Route Plus	£37.95
Voyager	£54.95
Turboprint 2.0	£34.95
Movie Screen Teaching Typing	£24.95
Workbench Upgrade Kit	£29.95
Action Replay III	£64.95
Softpages 1 to 4	£49.95
Softpages 1 to 4	£29.95
Softword Prolog Grammar: Grammar checker, for All Amiga WPs	£49.95

animation and graphics

Deluxe Paint 4.1	£64.95
Deluxe Paint 4 (AGA)	£79.95
3D Construction Kit	£49.95
Adorag	£54.95
Vista Pro 2	£54.95
Vista Pro 3	£99.95

Audio Department

Professional V2	£149.95
DCV Composite Video	£24.95
24-Bit Graphics	£49.95
System (PAL)	£529.95
Morph Plus	£149.95

utilities & development

Quarterback V5	£44.95
Quarterback Tools	£54.95
Cross DOS	£29.95
Easy Amos	£24.95
Amos The Creator	£36.95
Amos Compiler	£23.95
Amos 3D	£25.95
Amos Professional	£49.95
New SAS Lattice C V6	£239.95
Devpac 3	£54.95
Directory Opus V4	£54.95
Can Do 2	£99.95
Charts & Graphs	£49.95

games & entertainment

Phone for access to our massive competitively priced range of Amiga Software Titles now and pick up a great deal!!!

AMIGA accessories

Colour Pic Plus	£679.95
Super Pict	£379.95
Rombo Vidi 12 V2.00	£39.95
Vid 12 & Sound & Vision	£39.95
MegaMix Master	£39.95
Amas 2 Sound Sampler & Midi Interface inc. Microphone C74.95	
Audio Engineer Plus	£179.95
Technosound Turbosampler	£32.95
Miracle keyboard	£299.95
Music X full version 1.1	£24.95
Midi interface Sport cable	£24.95
Super JAM	£79.95
Bars & Pipes Professional	£209.95
ZYRI Stereo Speakers with	£39.95
separate power supply	
Clarity 16	£109.95
Stereo Master	£31.95
Power Mono NEW V3.0 Hand	
Held Scanner	£109.95
Power Colour Hand	
Held Scanner	£239.95
Sharp JX 100 Colour	
Flatbed (A4 Paper size)	£49.95

ProGen - Perfect high quality

entry level true video signal	
genlock	£84.95
Progen Plus	£139.95
Remodel 8802 line switch	£779.95
and fader controls, A1200	

HQ Microswitched MEGA MOUSE

excellent magazine review...	
NEW LOWER PRICE	£12.50

HQ Microswitched mouse

Mouse Mat & Holder	£19.95
High Quality micro-switched Optical mouse	£28.95
HQ Microswitched Trackball	£29.95
Automatic Mouse and Joystick Switcher	£77.95

GVP 286 PC Emulator

For GVP A500 HD8530 that simply plugs into your GVP drive mini slot (no DOS). Tap into a wealth of PC compatible software for the new low price of just...

£149.95

IBM PC emulators

Premier Control Centre & Monitor	
Print with shell:	
For Amiga A500	£39.95
For Amiga A600	£34.95
For Amiga A1200	£39.95

Sticks

Competition Pro-Star autofire	£11.95
Competition Pro-Star autofire	£11.95
Pyron IM	£19.95

Full range of Quikkey and other makes

stocked - please call us for prices	
50 Sony 3.5" DS DS	£8.95
50 Sony 3.5" DS DS	£34.95
Certified Bulk Disks with	
10 with library case	£6.95
30 Disks - only...	£24.95
250 Disks - only...	£34.95
3.5" Disk Head Cleaner essential	
for reliable loading	£2.95

DISKS

monitor

IBM PC emulators

Sticks

Full range of Quikkey and other makes

stocked - please call us for prices

50 Sony 3.5" DS DS

50 Sony 3.5" DS DS

Certified Bulk Disks with

10 with library case

30 Disks - only...

250 Disks - only...

3.5" Disk Head Cleaner essential

for reliable loading

£2.95

Before you choose from whom to purchase, please phone us. We are always happy to discuss your requirements and answer any queries you may have. And, remember Harwood's have always provided THE BEST service in the industry...

FREE GOLD SERVICE

Any computer, monitor or printer that requires service in the first year is collected FREE OF CHARGE (UK Mainland only). Remember at Harwood's we charge no more for this GOLD SERVICE. The fastest turnaround possible is GUARANTEED by our OWN SERVICE ENGINEERS. Many items have In-Home Warranties - TECHNICAL SUPPORT. We will give you Exclusive Technical Support. Phone Number to call should you require any help or advice on any aspect of the system you have purchased.

MINIMUM 12 MONTH HARDWARE WARRANTY

Items purchased within 30 days of purchase are replaced with NEW Units faultily within 30 days of purchase. For the guarantee period, warranty service will be completely FREE OF CHARGE (some items are 2 yr warranty). Your SYSTEM MAY GO AWOL! Most hardware products supplied with mouse plugs and leads - just connect up and use straight away.

How to contact us...

☒ BY PHONE: Phone our Order Hotline with your Access Vias, Mastercard Switch or Lombard Creditcharge Card. quoting number & expiry date (Master Cards, Current Cards, NACS and other 'store' cards are Lombard Creditcharge) and are happily accepted by us).

☒ BY POST: Make cheques, bankers building society drafts or postal orders payable to GORDON HARWOOD COMPUTERS. Personal cheques are accepted. Please to clear from day of receipt whereupon your order will be despatched. Please send Name, Address, and most importantly if possible, a daytime Telephone Number with your order requirements. Please check you are ordering from our latest advertisement before posting (phone if you require confirmation). Please remember that for example many Saturday publications close before August, etc., therefore please see we may have changed letter up or down!!

☒ EXPORT: Most items are available at TAX FREE PRICES for UK residents and sample personal. Please contact us for confirmation of export prices before ordering.

FREE DELIVERY by Parcel Post, UK Mainland only

GREEN MEAT WORKING DAY COURIER SERVICE. Available for major items for guaranteed delivery for £10 (for Saturday delivery). UK Mainland most regions. Despatch tomorrow or day of order at payment clearance.

All listed prices are what YOU PAY! There are NO HIDDEN EXTRAS! VAT and postage are included (but there are some at point of sale in post (Post) don't miss any price tag in store (Offers and Services) are subject to availability and to being sold on a limited basis. Please note some items are supplied on a stock basis. - F&O.

VISIT OUR SPACIOUS SHOWROOM

Why not take a trip out to visit us and see our full advanced range and more, available at the SAME COMPETITIVE PRICES. (Please see opening times). There's plenty of FREE parking nearby too!

How to find us...



OPENING TIMES

9.00 until 5.00 Monday to Saturday

Wednesdays - 9.00 until 1.00

GORDON HARWOOD Computers

Enquiries & Order Line:

0773-836781

Finance Facilities Available*

* Please phone us for information, your personal application pack and full terms details.

Mastercard VISA

GORDON HARWOOD COMPUTERS

DEPARTMENT ACO/H8, NEW STREET,

ALFRETON, DERBYSHIRE. DE5 7BP

TEL: 0773 836781 FAX: 0773 831040

The Closer you look, The Better we look

AMIGA+ - x + a b c

software FOR EDUCATION easy learning

micro science - to GCSE standards	£18.95	11to12 or 14to15	
micro maths - to GCSE standards	£18.95	english	£18.95
micro english - to GCSE standards	£18.95	maths	£18.95
micro french - to GCSE standards	£18.95	14to15 age group	
micro german - to GCSE standards	£18.95	english	£18.95
primary maths - 3to12's	£18.95	noddy's playtime	£18.95
mega maths - A level	£19.95	fun school (4 various ages)	£18.95
reading and writing courses - over 3's	£18.95	fun school 2 - 2to6, 6th, over 6's	£6.45
compendium six	£27.95		

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

NEW... Childs Play Activity Centre

fun school 4 software: choose - under 5's, 5to7's or 7to11's, only... £19.95 each

ALL PRICES ARE INCLUSIVE OF

AMIGA shop

FAST reading

Amiga A1200 Insider Guide

Amiga A600 Insider Guide

Mastering Amiga Assembler

Mastering Amiga C

Mastering Amiga Workbench

Mastering Amiga DOS Volume 1

Mastering Amiga DOS Volume 2

Mastering Amiga AMOS

AMIGAS books also in stock (please phone for prices)

AMIGA REPAIRS

Repairs undertaken to Amiga 500 computers at £44.95 inclusive of parts, labour, VAT and return postage/packing

Commodore registered for full technical support

Computers repaired in the quickest possible time

All machines will be overhauled with a full soak-test to ensure optimum reliability

Entrust your machine to the experts, full 90 day warranty

Repairs to disk drive and keyboard also included (extra charge possible if found to need complete replacement)

Repairs to other Commodore systems undertaken - phone for details
COLLECTION SERVICE AVAILABLE
Upgrades and expansions supplied and fitted - phone for details

£44.95

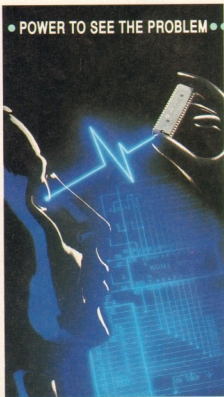
To take advantage of this exceptional offer, simply send or hand deliver your computer to our workshop complex, address details below, enclosing this advertisement-voucher, payment, fault description, return address, along with your daytime and evening telephone number and we will do the rest. Should you require Group 4 Security return delivery, simply add £3.00 to the repair charge.



WTS Electronics Ltd Chaul End Lane Luton Bedfordshire LU4 8EZ Tel 0582 491949 (6 lines)

(We reserve the right to reject machines which, in our opinion, are beyond repair. Normal charge applies)

• POWER TO SEE THE PROBLEM •



• AND SUPPLY THE SOLUTION •

ACS Electronics is an established service centre for AMIGA equipment. We specialise only in the repair and maintenance of computer hardware. Dedicated to a programme of quality customer care, our continual expansion enables us to offer you, our customer, a service that we believe to be second to none. Our service includes:

FAST EFFICIENT SERVICE,
most repairs are carried out within ONE DAY

QUOTATIONS RATHER THAN FIXED PRICES,
fairer to you, and in practice faster to process. Each repair is quoted for separately, no fixed charges full of exclusions, or hidden extras.

REPAIRS FROM £23

FREE CARRIER SERVICE with insurance,
FREE diagnostic inspection, free 90 day warranty, **FREE** soak test, **FREE** software.
No hidden charges.

OPTIONAL EXTENDED WARRANTY
at competitive rates.

Experienced and qualified engineering and support staff.

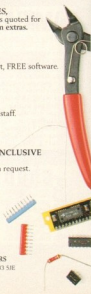
5% DISCOUNT
available to students and OAP's.

UNBELIEVABLE UPGRADE FITTING PRICE OF £15 INCLUSIVE

Trade and Education welcome. Dealer pack available on request.



COMPUTER MAINTENANCE, UPGRADES AND REPAIRS
B.E.C. ELDON STREET, SOUTH SHIELDS, TYNE & WEAR, NE33 5JE
TEL. (0911) 4554300 FAX. (0911) 455 1847



Blame the parents!

I have just read the feature "Sex, lies, and video games" and I would like to bring up a point that no one has addressed. Who is it that buys most of these games? Most of the time it's the parents.

During Christmas, how many children went and bought Street Fighter 2? Now compare this to the number of parents who bought it for their children. It is unfair to blame the software industry totally for these claims made by the press.

As it is usually the parents who buy games software, don't you think it is their choice to allow their children to play these "violent" games?

Colin Cassidy, Rothsay

I don't know of any statistics which show the relative number of parents and children who buy games, so your contention that parents buy most of them must remain unsubstantiated. Whether or not parents do buy violent games for their children is, however, a side issue.

The law as it stands is more a supporting structure for leopoles than a guardian against unsavoury software, and the more sophisticated hard sell advertising techniques are levelled at children every time they tune in to TV after school or on Saturday morning.

In such conditions, to spout from on high about parental responsibility and choice is a bit like criticizing the Light Brigade for an unsuccessful charge.

Most parents will, of course avoid games with titles like Chainsaw Massacre II, but the one you mention is no more or less violent than many others on the market at the moment, and its title no more alarming.

So much hype and peer pressure was built up around Street Fighter II that many parents must have been immensely relieved when it was finally released so they could buy it and shut the noxious little beasts up for ten minutes.

Can you blame them?

Disk decisions

I have some questions which I would be very grateful if you could answer.

- Why did you drop the second disk from the magazine just like Amiga Format did?
- Why don't you have playable demos of new games on the CoverDisk?
- What software packages have you got on forthcoming CoverDisks?
- Do you know of any books about GFA Basic?

Thank you very much.

Peter Armann, Leicester

We dropped the second disk because it was becoming an expensive exercise to publish two disks and push up the price of the magazine when the supply of widely popular software was dwindling.

It would be pointless to stick an extra disk on the cover for the sake of doing so, especially if less than half our readers wanted the software it contained.

Playable game demos haven't appeared on the CoverDisk since about 1989 because they take up most of the disk and there doesn't seem to be much demand for them from our readers.

Yours is the first letter for many months which I can remember calling for games demos, though the debate is always open.

If enough letters are received on one side or



A1200 printers

Is there anyone else out there using a single disk drive A1200 and having problems with getting printer drivers to appear in the printer preferences editor, even after copying the printer driver to the printers drawer on the Workbench 3.0 disk?

All you need do is copy the printer preferences editor on the Extras3.0 disk to the Workbench 3.0 prefs drawer and use it from there. The same goes for the other prefs editors. Hard disk and double floppy users don't suffer this problem.

D J Andrews, Little Stoke

Thanks for the tip, my techie buds have already answered a few enquiries from users on this problem, but neglected to mention the need to copy prefs programs to the prefs drawer, possibly because they thought this too obvious a step.

Just goes to show you how important the end user's perspective on a problem can be, eh?

Other of this question, we will look at the game demo situation again, so keep these missives coming. I can't answer your third question as it's an industrial secret, but for help on your fourth query you might try Computer Manuals in Birmingham. They cover most areas and can be reached on 021-706 6000.

Lame Lemmings

I am writing to let you know that I have saved all the Lemming Tribes, and not only saved them but sent them on their way into the sunset with a piece of gold talisman each (smart alec! - Ed).

For other Lemming saviours out there who read your truly amazing magazine, tell them not to rush as the end result is a bit of an anti-climax. I was expecting a small piece of animation as there is in the introduction, but there was just a load of unfunny credits, not Lemming-like at all.

Could you please find out why the menu has an exit sign on it covered with crosses, though even when the game is finished the crosses remain which makes the exit button useless?

Graham Wood, Northwich

Thanks for being a clever dick! It's slightly disappointing to hear that the climax to this excellent game is so lame, but I'd rather have more gameplay than an over-worked finishing sequence any day, and I'm sure the majority of Amiga game players agree.

The button you mention is a mystery to us, too, and we don't want to ask Prognosis because we'll look silly. Any ideas, folks?

Protext prefs puzzler

At the beginning of this year, I bought an A1200 as an upgrade to my A2000, and as I have a large collection of application software on my old hard drive I consequently purchased an IDE drive for my A1200.

At that time it was not possible to obtain an "official" hard drive upgrade, so I took the risk of installing it myself. I appreciate that this voided my warranty, but Commodore's stupid policy left me no choice.

A friend of mine has an A4000, so I used his software to install Workbench 3.0 on the hard drive and all seemed well until I installed Protext v4.3. When I attempted to execute Protext I encountered the same problem as Mr McKechnie did in his letter published in your April issue.

I am rather surprised at this as I installed Workbench using the method you recommended (an A4000 install

disk). However, I did some investigating of my own and came up with a partial solution that is not entirely satisfying, but which works.

In the startup-sequence is a command "IPrefs" which, I believe, initiates the Workbench with the user's preference settings. If the startup-sequence is executed without IPrefs, Protext functions perfectly, so my solution is to make a second startup-sequence without the offending line.

Once this has been done, your must boot with both mouse buttons held down, select "boot with no startup-sequence", and then type:

EXECUTE S:STARTUP-SEQUENCE.COPY

Workbench will appear as normal and Protext will func-

tion correctly. I realise this is not a complete solution, but it does allow one to use Protext from a hard drive-equipped A1200.

Simon Kerridge, Brighton

For the past month one of our technical gnomes has been trying to sort out the Workbench 3.0 hard drive solution, and this sort of thing is all he's come up with. It appears that Protext has a problem with the new display modes and the only way to get around the obstacle is to boot without invoking IPrefs.

Of course a more elegant method might be to include an ASK statement in the startup-sequence or use a utility such as MBPress (which was on a CoverDisk a few months back) to detect for a mouse button press during startup.



More A1200 thoughts

I bought my A1200 back in November and since then I have been reading with interest all topics and letters about the A1200, compatibility with games and external drives, and so on, so I've done some experimenting with some of my mates' utilities and games.

Most work without problems, and choosing the correct chip set and display option gets the game working on some of the reluctant ones, but some are still not usable even after trying all the possible options.

The best I have found is to disable the CPU caches and choose the enhanced chip set before booting the game.

Funnily enough, the age of the software seems not to be important, as I have tried stuff going back to 1988 which works fine.

Some of the games I have managed to get to work I have seen in some software lists, and even some magazines, as not working on the A1200. These include Fire and Ice, Switchblade II, and Lure of the Temptress (though I've only tried disk one of the latter). Never releases such as Nick Faldo's Championship Golf work fine.

As for fitting an external floppy drive, Iphoned Power Computing for a PC800B and was told that the problem with A1200 wiring had been corrected and there was no longer a problem with compatibility, so I bought one. No problem - it's much quieter than the garbage disposal unit inside my A1200.

Speaking about noisy drives, I read an article about misaligned drive heads causing disks to fail to load. I have experienced this myself with Crystal Kingdom Dizzy. My machine gives an on-screen message saying "Software Protection Failure", but my mate's machine loads it perfectly. Is this or could it become a serious problem, and should I return my machine for repair?

David Hurst, Topham

I recently bought the game Pirates from a second-hand car boot sale. When I returned home to examine my prize bargain, however, I was dismayed to find that part of it (the map to be precise) wasn't there.

I contemplated suicide, decided this was too drastic, and phoned Microprose instead to see if they could help. The phone gave but two short rings, then a friendly voice said "Can I help you?". I told her my problem, to which she replied "We have one in stock, I'll get it sent off to you."

Lo and behold, the missing piece of paper flopped onto my door mat the very next day. It is good to see that customer and after-sales service is still important on occasion and I congratulate Microprose on a job

well done. On another note, I am contemplating trading in my old A500 and investing in an A1200, but I have heard that some software doesn't work on the new machine. Oh, and congratulations to Amiga Computing for producing an enjoyable adult magazine for other Amiga users. You wouldn't by any chance know the average age of Amiga owners?

Richard Henderson, Leyton

The average age turned up by our reader surveys varies a bit, but is usually well into the twenties and there are a significant number of people over the age of 30 among the AC readership, resulting in a much older audience than that enjoyed by some of our

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to reading your letters and selecting the most interesting for publication. Drop him a line at:

Ezra Surf's PostBag, Amiga Computing
Adlington Park, Macclesfield SK10 4NP

Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop

A vector too far

Am I the only reader of your magazine who's interest in fractals measures somewhere below absolute zero? This area of mathematics has become something of a party bore over the past few years, with seemingly constant reviews of fractal landscape generators, fractal screen blankers, and fractal this and that and the other.

No-one who works for Amiga magazines has twigged that most of us don't care a hoot whether it is mathematically possible for farting butterflies in Brazil to cause share prices to fall in New York.

I mean, I don't ask the man in Dixons to draw me a circuit diagram and explain the behaviour of air particles subjected to sound vibrations when I buy a hi-fi, so why do reviewers presume that I'm interested in phones and gourds and other members of the Teddium Hall of Fame?

Do you really expect me to gasp in astonishment when you let drop pearls of wisdom about Mandelbrots, Julias and Lyapunovs?

The three fractal stooges sound more like a dodgy legal firm than a set of interesting computer concepts. Think about it: Mandelbrot, Julia and Lyapunov, specialists in cases of divorce caused by mental torture through repetition. Give us a break, guys!

Peter Hunter, Coldstream

Plus! You certainly put your point across. In fairness to AC, you might have mentioned that we've resisted the temptation to talk directly about fractal mathematics for a long time, and only looked at the error when a program such as Vista Pro 3.0 uses fractal techniques to do something interesting.

Other magazines tend now and again to pick a subject and extract as much tiresome trivia as possible from it, but despite the temptation we've resisted the urge to indulge in this sort of page padding. I hope our readers agree...

You seem to have reached the same conclusion as many other A1200 owners in that you have discovered the much vaunted compatibility problem isn't half as bad as it was originally painted by some, and certainly shouldn't put people off the new machine.

Your experimentation seems also to have led you to the most useful method for ensuring compatibility, so you might not require

the software list published in this month's Gamer - but take a peek in case it contains a game you were thinking about buying.

Misaligned drives can be a problem when they come up against heavily protected software which uses non-DOS disk structures, but the problem is seldom bad enough to cause loading problems. I would suggest you return the machine for repair as soon as possible.

In praise of Pirates

distant relations who specialise more in the field of platform games and the like.

We don't write for a specific age group, however, and a great many younger readers enjoy the magazine. Let's just say we cater for a certain type of reader who values the depth of editorial coverage we have always striven to make our hallmark. Your comments about Microprose are applicable to many Amiga suppliers these days, but it's always nice to hear positive feedback as opposed to tales of negative experiences.

Speaking of negative experiences, your choice on whether or not to upgrade to an A1200 should be eased by the comprehensive games compatibility list you can find in this month's Gamer.

Pinball wizard

Having always been more than a trifle cynical regarding the playing of computer games (you know, they're a substitute for scripping out a life ad infinitum) I write to confess to a curious change of heart.

After some highly absorbing sessions with Pinball Fantasies, which must be the most realistic pinball simulator on any format, I now have at least a dim comprehension of what all the flippers, lights, chutes and bonuses mean, and can make a game of three balls last for more than 60 seconds.

Achievement enough in itself, but the real test came when I found myself with the usual bunch of friends in the pub last Sunday, and someone suggested a game on the old pin table.

Well my turn came around, and you can imagine my glee as the oversized ball-bearing zipped around the table, kissing bonuses, gleefully rolling from chute to flipper to minimal jackpot and back again.

Before I knew it, my score was in the multi-millions, my pint was going warm and flat and feeling decidedly unwanted, and my cigarette had an overhang of ash longer than one would believe to be structurally possible.

The sigh I uttered as my last ball was finally lost was far more akin to the "top sportsman robbed" kind of sigh than the "idiot fails to make any mark at all" variety previously preferred.

Not that this episode has helped me in any discernable way to achieve the sexual freedom I so desperately crave, but I fancy I ordered the replacement pint and in a fresh cigarette with just a hint of the "treat 'em bad, make 'em mad" masculinity which has such effect in the mating rituals of top Hollywood stars and other Gillette-using men for generations.

Who fan, Manchester

It's gratifying to read a story about a computer game which has a positive rather than a negative social effect, and even more so when a direct link can be shown between the playing of a game and the development of hand-eye co-ordination skills.

If only there was a "Six Pints and Chicken Biryani Without Regretting It" game with similar beneficial effects on the real life activity.

CITIZEN PRINTERS
FROM SILICA SYSTEMS

- **FREE DELIVERY**
Next Day - Anywhere in the UK mainland
- **2 YEAR WARRANTY**
(including the dot matrix printer head)
- **FREE STARTER KIT**
With Citizen dot matrix printers from Silica
- **WINDOWS 3.1**
Free Windows 3.1 driver with Starter Kit
- **FREE HELPLINE**
Technical support during office hours

FREE STARTER KIT INCLUDES:

- 3 1/2" Disk with Windows Print Manager
- 3 1/2" Disk with Amiga Pro 2.1 Driver
- 1.8 Mbyte Parallel Printer Cable
- 200 Sheets of Continuous Paper
- 100 Continuous Tractor Feed Address Labels
- 5 Continuous Envelopes on Tractor Feed

AMIGA PRINTING MANAGER V2.0
For Amiga printing from your Amiga. Available for IBM and more advanced desktop PCs. Double the energy as part of the Silca Prostar Starter Kit.

Features include:

- Improved image smoothing
- Image scaling
- Superior printer emulation
- Variable resolution
- Reduces/eliminates banding

KIT VALUE \$49.

PERIPHERALS & ACCESSORIES

CITIZEN **PRINTER STAND**
For Swift 9, 90, 24, 246,
200, 240 and 224 Printers

- Helps ease pace with Citizen Printer's powerful paper handling
- Robust & Durable Construction
- Saves space and protects continuous stationery from dust and damage

PRINTER STAND
PRA 1717 254/267/224/246/240/224

ORIGINAL RIBBONS

90 90 220	1350/50 Swift 90 Black	£10.00
90 240 240	Swift 240 Swift 90	£10.00
90 240 240	Swift 240 Swift 240	£10.00
90 240 240	1350/50 Swift 240 Black	£10.00
90 240 240	1350/50 Swift 240	£10.00
90 240 240	224/246 1350/50/240/246	£10.00
90 240 240	PR46 Swift 240	£10.00
90 240 240	PR46 Swift 240	£10.00

COLOUR KITS

Compatible with postscript and laser fonts

£19
+VAT £22.50 - PPM 1242

PM4 ACCESSORIES

PM4 1236 24/600 9600/4000000 130
PM4 1240 Swift 12/600 130
PM4 1142 PM4 Battery 130
PM4 1151 PM4 Cable Line 125
PM4 1163 PM4 Car Adapter 110

INKJET 360 CPS 80 COLUMN

Claron Projet
inkjet - 80 column

2

NEW

- 360cps Draft,
120cps ALG
- 50 Nozzle Head -
Whisper Quiet 47dB(A)
- 8N Preder Stuffer
- RAM Card Options
- 2 Fonts Built-in
- Optional HP
Postscript, Four

• Parallel and Serial Interface
 • Graphics Resolution: 300 x 300dpi
 • HP Deskjet Plus Emulation
 • 2 Year Warranty

RRP £496
 TOTAL VALUE: £496
 SAVING: £217
 SULLIVA PRICE: £279

£279
 +VAT+POST+BP-PH 2000

SILICA SYSTEMS OF

- **FREE OVERNIGHT DELIVERY:** On all hardware orders shipped within the continental U.S.
- **TECHNICAL SUPPORT HELPLINE:** Team of technical experts available 24 hours a day.
- **PRICE MATCH:** We normally match competitors on a "Barre product for Barre product" basis.
- **ESTABLISHED 14 YEARS:** Proven track record in professional markets.
- **\$12 MILLION TURNOVER** (with 80 staff). Solid, valuable investment.

- **BUSINESS + EDUCATION + GOVERNMENT:** Visit our website at www.silica.com for more information.
- **SHOWROOMS:** Demonstration and training facilities at all of our regional offices.
- **THE FULL STOCK RANGE:** All of your requirements from a single source.
- **FREE CATALOGUES:** We be mailed to you with offers + info on all our products.
- **PAYMENT:** Major credit cards, cash, cheque or monthly terms.

Before you decide when to buy your new printer, we suggest you think first. Consider what sort of printer you need, how often you use it, what features you require, what peripherals and accessories, or help and advice. A contact you with details of new products? At Silica Systems, we are aware about. We have been established for almost 14 years and, with our experience, we can now claim to meet our customers' requirements.

CITIZEN PRINTERS
WITH 2 YEAR WARRANTY

24 PIN **270** CPS **80** COLUMN

2 YEAR WARRANTY

CITIZEN Stylis 200

**COLOUR KIT
OPTIONAL
EXTRA**

<ul style="list-style-type: none"> • Citizen Swift 200 - 24 pin - 80 column • 270cps SD (real), 216 cps Draft, 72cps LQ • 8K Printer Buffer (40K max) + 6 LQ Fonts • Parallel Interface • Graphics Resolution: 360 x 360 dpi • Epson IBM, & NEC P20 Emulations 	<p>SWIFT 200</p> <table> <tr> <td>SRP</td> <td>\$299.00</td> </tr> <tr> <td>SALICIA STARTER KIT</td> <td>\$249.00</td> </tr> <tr> <td>TOTAL SUGAR</td> <td>\$309.00</td> </tr> <tr> <td>SAVING</td> <td>\$179.00</td> </tr> <tr> <td>SALICIA PRICE</td> <td>\$129.00</td> </tr> </table>	SRP	\$299.00	SALICIA STARTER KIT	\$249.00	TOTAL SUGAR	\$309.00	SAVING	\$179.00	SALICIA PRICE	\$129.00
SRP	\$299.00										
SALICIA STARTER KIT	\$249.00										
TOTAL SUGAR	\$309.00										
SAVING	\$179.00										
SALICIA PRICE	\$129.00										

● Quarter Printing and Auto Set Facility
● Ultra Quiet Mode - 43dB(A)
● Colour Kit - Optional Extra (See Below)
● FREE Silica Printer Starter Kit

£179
+VAT+£210.30 - FREE J&K

24 PIN **300** CPS **80** COLUMN

A Citizen SW60 240 calculator is shown with its instruction manual. A red circular badge in the top left corner of the image states "2 YEAR WARRANTY". The manual cover features the text "CITIZEN SW60 240" and an illustration of a person.



FREE!
STARTER KIT
\$49.95
SEE ADVERT.

• Citizen Swift 240MONO: 24 pin - 80 col
• 100 cps - 100% duty cycle - 100% reliability

SWIFT 240 MONO

[illegible]

• FREE Silica Printer Starter Kit
 • Epson Swift 24in - 24 pin - 136 col
 • 1360dpi Draft, 640dpi NLG
 • 8K Printer Buffer = 4 Fonts
 • Parallel Interface
 • Graphics Resolution: 260 x 260dpi
 • Epson, IBM and NEC PG Emulation
 • Colour Option Available
 • FREE Silica Printer Starter Kit

192 CPM **136 COLUMN**
2 YEAR **WARRANTY**
LOW ON PRICE
LOW ON PRICE



<p>£299 <small>AVAILABLE 20 APR 2014</small></p>	<p>FREE! STARTER KIT <small>WORTH £400 - SEE ABOVE</small></p>
--	--

9 PIN **144** CPS **80** COLUMN

2
YEAR
WARRANTY

CITIZEN 1200+

<ul style="list-style-type: none"> • Citizen 1200+ - 8 pin • 144cps Draft, 30cps NLQ • 4K Printer Buffer + 2 Fonts • Parallel or Serial Interface • Graphics Resolution: 240 x 216dpi • Epson and IBM Emulation • Pull tractor & bottom feed 	<p>CITIZEN 1200+</p> <table> <tr> <td>RPP:</td> <td>£19</td> </tr> <tr> <td>SILICA STARTER KIT:</td> <td>£14</td> </tr> <tr> <td>TOTAL VALUE:</td> <td>£34</td> </tr> <tr> <td>SAVING:</td> <td>£10</td> </tr> <tr> <td>SILICA PRICE:</td> <td>£24</td> </tr> </table>	RPP:	£19	SILICA STARTER KIT:	£14	TOTAL VALUE:	£34	SAVING:	£10	SILICA PRICE:	£24
RPP:	£19										
SILICA STARTER KIT:	£14										
TOTAL VALUE:	£34										
SAVING:	£10										
SILICA PRICE:	£24										

FREE Silica Printer Starter Kit

The Citizen 1200 printer comes supplied with a parallel interface as standard. If you require a serial interface instead, please state ref. P90 2125 when placing your order with Silica.

£115
+VAT = £136.13 - P90 2125

9 PIN 240 CPS 80 COLUMN



FREE!
 SWIFT 90
 MONO
 \$499.95
 (SEE LISTING)

• Citizen Swift 90 - 9 pin - 80 column
 • 100% reliable

SWIFT 90 MONO
 \$799.95

• 1000 x 1000" Tables (1000 x 1000)	STANDARD SET: £480	 E169 01474 477336 • 090 122 911 111
• 1000 x 1000" Tables (1000 x 1000)	STANDARD SET: £480	
• 1000 x 1000" Tables (1000 x 1000)	STANDARD SET: £480	
• 1000 x 1000" Tables (1000 x 1000)	STANDARD SET: £480	

• Citizen FH43 Notebook Printer
 • Non-impact Printing on Plain Paper
 • Approx 10 - 4K Buffer + 2 Fonts
 • Near Letter Quality Paper Loading
 • Parallel Interface
 • Graphics Res: 360 x 360dpi
 • Open ROM, MICR & Citizen Emulation
 • Power: Mains, Battery or Car Adapter

TOTAL PRICE: £199 DELIVERY: £20 DELIVERY PRICE: £219	
--	---

10 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX No Late Night Opening	Tel: 081-309 1111 Fax No: 081-308 1111
50 Tottenham Court Road, London, W1P 0BA No Late Night Opening	Tel: 071-580 4400 Fax No: 071-580 4400
100 Essex Road, London, N1 1LJ No Late Night Opening	Tel: 071-429 1111 Fax No: 071-429 1111

SIDCUP SHOP:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-302 8100
Opening Hours:	Mon-Sat 9.00am-5.00pm	Fax: 081-302 8100
ESSEX SHOP:	Keddles (one floor) High Street, Southend-on-Sea, Essex, SS1 1LA	Fax: 0702 468100
Opening Hours:	Mon-Fri 10.00am-6.00pm; Sat 10.00am-4.00pm	

To: Silica Systems, AMCOM 6700-55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4
PLEASE SEND A BROCHURE ON THE CITIZEN RANGE
 Mr/Ms/Ms: _____ Initials: _____ Surname: _____ Date: _____
 Company Name (if applicable): _____
 Address: _____

_____ Postcode: _____

Tel (Home): _____ Tel (Work): _____

Make your Amiga more intelligent and see your bright ideas blossom!



See all of your plans come to perfection with MaxiPlan4. This upgrade of Amiga's best-selling spreadsheet is more than an improvement, it's a real revelation.

FANTASTIC FEATURES

For financial analyses, database lists and marketing research, MaxiPlan4 has it all. More charts, graphs and presentations. More eye-catching colours. More macro commands. You can create up to 50 charts per spreadsheet in a faster, friendlier environment. With everything from user-definable page breaks to file linking and various data viewing modes.



MORE FOR LESS

A list of each and every benefit would simply take up too much space. But one fact is immediately obvious.

At just £49.99*, MaxiPlan4 makes your money - and your ideas - go far further. It all adds up to yet another hit from The Disc Company.



MaxiPlan4
SPREADSHEET

Superior
software
from

THE DISC COMPANY

KindWords3
WORDPROCESSOR

KindWords3 gives Amiga's most popular word processor a big boost. This new version

is faster, more powerful and fantastically friendly.



Incorporating the incredible Human Interface

Protocol™, it works harder for you, so you don't have to work so hard.



OVER 25 MAJOR IMPROVEMENTS

Get to grips with words and graphics instantly. Advantages include automatic text wraparound for pictures. Import from all graphic file formats of any colour or resolution. Up to 255 fonts are available, including high density printing fonts. There's also on-line help, a WYSIWYG display ... and much more. While a digital clock keeps track of time.

PERFECTLY PRICED

So what's the price of this superior software? That's the best news of all - only £49.99*. Which proves that the best really can cost less!



Outstanding Upgrade Offer!

Yes, I want to make my Amiga more intelligent, at the outstanding upgrade price of £19.99. To qualify for this offer, I am returning the original disks or manual cover from my current word processor or spreadsheet program.

Name _____
Address _____
Town/City _____
Postal Code _____ Country _____
Daytime Phone _____
Credit Card Number _____ Expiry Date _____
Signature _____

Send me _____ MaxiPlan4 at £19.99 each inc. VAT + £3 shipping charge £ _____

Send me _____ KindWords3 at £19.99 each inc. VAT + £3 shipping charge £ _____

Cheque, Visa, Master Card, EuroCard, Switch and Money Orders are accepted. DO NOT SEND CASH. Make cheque payable to: The Disc Company (UK) Ltd.

Send to: THE DISC COMPANY (UK) Ltd., C/O IMEDIAT, B3, Edison Road, St. Ives, Huntingdon, PE17 4LF, United Kingdom. Allow three weeks for delivery.

For additional information, demonstration disks, or brochures visit your Amiga dealer

Both upgrades require: Amiga 500, 500+, 600, 600 HD, 1000, 2000, or 3000, Workbench 1.3 or 2.0, 1 MB RAM (additional memory recommended). Two disk drives or hard disk recommended.

* Suggested retail price.

AmiigaDOS, as you will soon discover, is computing at its purest. It is what separates real computers from consoles; the men from the boys; the wheat from the chaff.

Learning AmigaDOS unlocks a whole new world of possibilities, allows anyone to reach new heights but above all, it provides a sense of achievement that no graphical user interface (GUI) could ever offer. You can take pride in your work and in the knowledge it was your skill and experience that did the job faster, eas-

ier and better. The series is going to teach you AmigaDOS and will be concentrating on v2 and v3. While these allow some of the operations to be performed from Workbench, you are encouraged to follow the steps using AmigaDOS only.

Over the next few months, we'll be looking at the construction of standalone boot disks including everything you need to get an application up and running; whether it's Workbench or Wordworth, this series will show you how.

Think about this for a moment — what actually constitutes a bootable disk? Such

will work — anything less will cause problems. Workbench 2.1 and 3.x are essentially the same; the higher version is intended for use with the AGA chip set.

the same data but cease to function at all. This is exactly what older virus killers (and a lot of viruses) used to do to game disks. Swat a fly and the essence of insect still exists but the life has gone.

A boot disk is not a life form of course; it is not capable of independent thought and cannot replicate itself although such features could be simulated at a rudimentary level (this is, in fact, exactly what computer viruses do, hence the name). A lot of this is still far away,

make a copy of your Workbench disk — the one you normally start the machine with on a daily basis will do. If you have added or deleted anything from this disk, then you should make a copy of the original Workbench floppy and perform the initial configuration checks detailed in your user manual, set the preferences and so on.

If your machine is equipped with a hard disk, you could use that but since AmigaDOS can be finicky it is better to begin with a floppy. Mistakes on a hard disk can be difficult to rectify.

It is essential to ensure you have the correct "keymap" set for the machine, and even if you did not bother with this previously you must do so now. This is a menu selected under 2.04 and operated from the Input Preferences screen from 2.1 onwards. Leave the disk write enabled and mark it clearly: AmigaDOS Working Disk. Now follow these steps:

1. Boot the machine from the new disk and open it.
2. Locate and open the System drawer.
3. Locate and select the icon labelled "Shell".
4. Select Leave Out from the icons menu. Shell will now move to the desktop — this is a good place to have it since you're going to need it a lot.

Now the preparatory steps have been

A kick up the floppies

In the first of a new series, Mark Smiddy explains how to harness the hidden power in every Amiga...

disks are specially prepared to start the machine. Awaken it, if you like. They make the startup screen go away and present you with Workbench, a game, application or whatever. Other than that there is nothing to separate bootable disks from ordinary ones.

Some thinkers consider a valid boot disk should contain more than this "proto boot-disk". True to an extent: but no-one doubts that an amoeba is a life-form any more than they dispute that mammals are — albeit more complex ones!

If you remove the essence of what makes a boot disk bootable, it will still contain

and at this stage we need to get over some basics.

For now, you will need:

- Your Workbench disk
- One blank disk

At this stage you should

You will also need to know the general version of Workbench and Kickstart you are using. If you have an A500 Plus or an upgraded A500 you will be running Kickstart 2.x; later machines such as the A1200 are fitted with Kickstart 3.x.

Provided your machine is not fitted with a hard disk these Kickstart ROMs can be identified from the Startup screen which shows a simple animation of a disk inserted into a drive.

The version number is shown in the bottom left of the display. Machines bearing a static "disk-and-hand" display on startup are NOT fitted with the correct ROM.

Workbench should be easier to identify. Three versions are in common use with these machines and this is printed on the disk labels. Provided the version number is two or higher, everything detailed here



taken, you can get to AmigaDOS proper. Open the Shell icon and you'll get a window. This is an AmigaDOS "Shell" window.

Shell is a fancy name for a single-line wordprocessor and parser all rolled into one. Each Shell will announce itself with a standard title and a message to the effect: "New Shell process xx". Don't worry if the number (xx) shown on your machine is different from the one illustrated.

The Amiga is a multitasking environment and you can have many Shells open at the same time; the only limitation is the amount of available memory.

Process (Shell) numbers are automatically assigned by the machine - you have no control over them - although AmigaDOS will attempt to fill any free slots. If Shell numbers 1, 2, 3 and 5 were already in use and you opened a new Shell, the next Shell would open as Process 4. Don't fret, it just works like that.

On the next line you'll see something called a "prompt". As before this may look different on your machine - but it will be there. The prompt is separated into four distinct parts:

- The current process (Shell) number as just described.
- A full stop. This is called a delimiter - it's a form of punctuation which breaks the line up and makes it easier to read.
- The current directory. This will probably (but not necessarily) be showing the name of your boot disk followed by some more punctuation - the full colon (:).
- A right-handed angle bracket (>).

Just to the right of the prompt is a small square blob. This is known as the cursor and shows that AmigaDOS is ready to accept input (if the cursor is shadowed, make sure you make the window active by clicking inside its boundary).

Forget about all that for now. For the sake of this series we'll simplify things a little and adopt convention.

1>

This prompt is universal. It just means whatever follows should be typed in at the keyboard. That's what AmigaDOS is all about - leaving behind the "buttons and ball" approach and discovering how to communicate with a computer from a keyboard.

Try entering your name - not forgetting to press Return at the end of the line. For instance:

1>kaige Computing

dutifully, AmigaDOS responds:

kaige: Unknown Command

AmigaDOS does not know the word "kaige" - it's not in its vocabulary.

However, the AmigaDOS vocabulary by its very nature is infinitely extensible. Even so, basic knowledge of around 20 commands (lexicographers call them verbs) will get you started.

Each command is like a simple English sentence - it has a verb and one or more noun clauses. You don't have to be a polyglot to understand AmigaDOS though, consider this:

Jump!

This word is a verb meaning to bounce, leap or vault. In itself it constitutes a complete sentence, albeit an abbreviated and demanding one. Add a few more words and you have a more specific sentence, viz:

Jump over the fence.

This is the sort of basic English we learn in school at a very early age. So is AmigaDOS really that complex? In essence, it is like a military English. The words are, initially, strange but the grammar and construction are the same. How about other languages? If the sentence

phrase (do) to open the question - something which crept into our colourful language several hundred years ago. The practice of redundancy has never evolved in computer parsing: its too tricky to program and wasteful. In order to understand AmigaDOS you have to think at a simpler level, or at least like a Frenchman. A verb (valid command) always comes first followed optionally by

It may help you to forget computers for a while...

a list of noun clauses (options or arguments). The AmigaDOS vocabulary is quite large, and since each command can be followed by a multitude of command arguments, the list of possible instruction variants runs into thousands.

Don't be put off by that - it just means you have access to a tremendously powerful system. If the command cannot be

looks it up in its internal dictionary, and, if it cannot be found there, searches certain chapters (drawers) on the initial startup disk. You can override the and specify a particular volume if you wish.

Things can become a little confusing at this stage because over the years, two completely different naming conventions have arisen.

The original system talks of books - volumes and directories and the later one speaks in terms of an office filing system: desktops, drawers, projects, tools and so on. The evolution of GUIs (such as Workbench) is responsible for this and the AmigaDOS user should be aware of both.

All you need to know at this stage is that a drawer is a container for a collection of items, just as a directory is a list of the items held therein: an inventory if you like.

It may help you to forget computers for a moment and consider this. The analogies may seem unclear until you can get hold of something we take for granted.

Nip into your kitchen and have a look through a few drawers: the cutlery drawer is usually a good bet. Inside you will find a collection of knives, forks, spoons, teaspoons - possibly cheese graters and an egg slicer: all manner of kitchen detritus.

If you're lucky enough to live in a well-ordered household, there's a good chance the eating items are all stored together in a drawer inset - knives in the knives slot; spoons all together and so on. But if the drawer were missing where would everything go?

The organisation of a disk is no different and an intelligent user keeps similar items together. Items are sometimes stored in a sub-group.

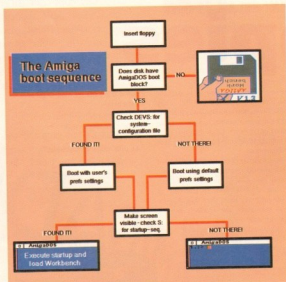
Just like the insert in your cutlery drawer, the Amiga can store containers within containers - which computer scientists refer to as a "directory hierarchy" or a "hierarchical filing system".

You can see this in action from the Workbench (go on, one last time). Open your Workbench disk and select Show ... All Files. Now locate and open the drawer marked DEVS. In there you'll see a few items littered about - plus more drawers like Printers and Keymaps.

Now as a parting gesture for this month - those of you who're desperate to jump in at the deep end wearing concrete boots might like to try this from AmigaDOS. Enter this:

1>DIR DEVS:

This will give you the same information you just retrieved from Workbench. Note the drawers are marked in the listing (dir). That's because, as I have said, AmigaDOS refers to drawers as directories and (dir) is merely an abbreviation to prevent overcrowding the display with redundant information. Computers are good at that...



The standard Amiga boot sequence is really quite simple

"Parlez vous Francais?" is positionally translated into English it looks this:

Speak you French?

The French would argue this is more logical and simple since the verb comes first (just like "jump" in the previous instance). In polite English we would write this:

Do you speak french?

We use a redundant prepositional

found in the AmigaDOS dictionaries it complains with the error Unknown Command.

So where are all those commands? You may remember from time to time seeing a message like this: "Please insert volume: Workbench in any drive". Although AmigaDOS is asking for a disk, the noun "volume" is another designation for a book - a dictionary perhaps.

There's no accident in that - the designers chose the analogy deliberately. When you ask AmigaDOS to find a command it

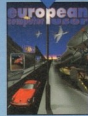


AT SENSIBLE PRICES

A small selection from the vast range of titles we stock.
Phone for a complete price list.

TITLE	PRICE	TITLE	PRICE	TITLE	PRICE
3D CONSTRUCTION KIT 2	32.99	IRON JONES LAST GUARD	10.99	THE MAGIC OF MUSIC & MIDI	11.99
4D SPORTS BOOKING	11.99	INT RUGBY CHALLENGE	16.99	LOST VIKINGS	23.99
688 ATTACK SUB	9.99	SHIR-LEGEND OF FORTRESS	10.99	LOTUS CHALLENGE 2	7.99
A-TRAIN	23.99	KID GLOVES 2	10.99	LOTUS THE FINAL CHALLENGE	14.99
ABANDONED PLACES 2	23.99	KID	19.99	MANIAC MANSIONS	9.99
ALBRECHT SPECIAL 1ST	8.99	KID PIX	16.99	MEGAMIX	19.99
ANCIENT WAR IN SKIES	23.99	KNIGHTMARE	10.99	MERCENARY 3	9.99
AQUATIC GAMES	10.99	LEGEND	10.99	METAL MUTANT	9.99
ARABIAN NIGHTS	15.99	LEMMINGS 2	19.99	MIDWINTER	9.99
ASHES OF EMPIRE	15.99	LEMMINGS DOUBLE PACK	19.99	MONKEY ISLAND 1	19.99
AVES HARRIER	23.99	LETHAL WEAPON 3	14.99	MONKEY ISLAND 2	25.50
B-17 FLYING FORTRESS	23.99	LION HEART	16.99	MOONSTONE	10.99
BATTLEDUNKS 1942	23.99	LOST TREASURES OF INCOGNITO	29.99	MORPH	15.99
BLUES BROTHERS	10.99	AMIGA INSTRUCTION VIDEOS	13.99	NUCK FALDO'S GOLF	21.99
BOOY!BLOWS	17.99	QUICK! SCHNICK! KID! KID!	9.99	OPERATION STEALTH	10.99
BOSTON BOMB CLUB	7.99	AMIGA GRAPHICS VOL 1	9.99	PACIFIC ISLANDSTEAM Y 2	17.99
BUDOKAN	9.99	AMIGA PRIMER	13.99	PANZA KICK BOXING	7.99
CAPTIVE	16.99	AMIGA SERVICE MANUAL	9.99	PIRATES	9.99
CHAMPIONSHIP MANAGER 92	16.99	ANIMATION VOL 1	9.99	POPLOUS & POPLOUS LINES	9.99
CHAOS ENGINE	16.99	ANIMATION VOL 2	9.99	POPLOUS 2+	23.99
CHUCK ROCK 2	16.99	AUDIO PRODUCT FOR THE AMIGA	11.99	PREMIER MANAGER	16.99
CIVILISATION	23.99	DELUXE PAINT VIDEO GUIDE	13.99	PRINCE OF PERSIA	6.99
COHORT 2	20.99	DESKTOP VIDEO VOL 1	11.99	PITCH	14.99
COMBAT AIR PATROL	19.99	DESKTOP VIDEO VOL 2	11.99	READY FOR THE SKIES	10.99
COMBAT CLASSICS	19.99	HISTORY OF THE AMIGA	7.99	ROAD RASH	16.99
COOL WORLD	14.99	HOT ROD YOUR AMIGA	9.99	ROBOCROSS	17.99
CREATURES	16.99	HOW TO ANIMATE	9.99	ROBOSPORTS	17.99
CRYSTALS OF ARBOREA	7.99	STAR WARS ANIMATIONS	7.99	ROFLAND	7.99
D/GENERATION	14.99	THE AMIGA VIDEO	9.99	ROME AD 92	24.99
DARKMERE	23.99			SABRE TEAM	15.99
DARKSEED	23.99			SCARABLE	17.99
DESECT STRIKE	20.99			SENSIBLE & SENSIBLE 9088	15.99
DOUBLE CONFRONTATION	19.99			SHADOWWORLDS	15.99
DOUBLE DRAGON 3	5.99			SHOOT EM UP COME KICK	7.99
DUNGEON MASTER AND CHAOS	21.99			SHUTTLE	19.99
DUNE 2	21.99			SILENT SERVICE 2	22.99
DYNABLAST	19.99			SIM CITY LIKE	25.99
EYE OF THE BEHOLDER 2	19.99			SIM CITY:POPULOUS	19.99
F19 STEALTH FIGHTER	11.99			STEEL EMPIRE	19.99
FANTASTIC WORLDS	23.99			STORM MASTER	9.99
FLASHBACK	21.99			STREET FIGHTER 2	17.99
FUTURE WARS	9.99			STRIKE FLEET	9.99
GOAL (1 MEG)	21.99			SUPER FROG	17.99
GRAHAM GOOD CHOKIT	20.99			SUPER TETRIS	13.99
GRAHAM THUNDERBOLT CHAMP	14.99			TERMINATOR 2	6.99
GLOBAL EFFECT	12.99			THE GREAT	19.99
HERO QUEST	7.99			THEIR FINEST HOUR	15.99
HIRED GUNTS	20.99			TRANSARCTICA	17.99
HISTORY LINE	23.99			TROODLERS	14.99
HUMAN SPACE JARRICK LEVELS	20.99			WALKER	28.99
HUMANS	14.99			WWF 2	14.99
IRON JONES LAST GUARD	10.99			ZACK M-KRACKER	9.99

FOR YOUR FREE
COMPLIMENTARY
COPY OF OUR
BRILLIANT ECU
MAGAZINE
CALL US TODAY



All titles are subject to availability. Prices can be subject to change. E & OE.
Post and packing: UK = 75p per item 2nd Class. £1.50 per item 1st Class. £1.80 per item 1st Class Recorded.
EEC post = £2.75 per item; non EEC = £3.75 per item.
Express Air Mail = £4.75 per item.
Some titles may not be relevant at time of going to press. Please telephone for availability and a full copy of our terms and conditions.

NAME		PRICE	
ADDRESS		PRICE	
POSTCODE	PHONE	PRICE	PRICE
ITEM		POSTAGE	
ITEM		TOTAL	
ITEM			

Visa/Mastercard/Switch Number:

Switch User No: Card Expiry Date:

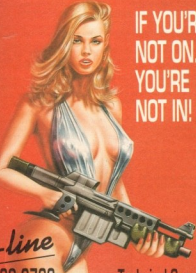
SIGNATURE:

☐ TICK THIS BOX IF YOU DO NOT WISH TO BE ENTERED ONTO THE ECU DATABASE

Make cheques payable to:
European Computer User
& send to:
Units A2/A3 Edison Rd,
St Ives,
Huntingdon, CAMBS PE17 4LF

FEDERATION

IF YOU'RE
NOT ON...
YOU'RE
NOT IN!



On-line

081-539 6763
8-N-1

Technical Support
081-558 6114

Fonts

VISA MasterCard

400 CG fonts - 8 volumes
Each volume includes 50 fonts
complete with installation instructions
Suitable for use with Pro-Page 2.0/4.0, Pro-Draw (all versions),
PageSetter 2.0/3.0, Wordworth 2.0, Wordbench 2.0/2.0, ProWrite 3.0,
Quaint 4.1 & v4.5 AGA, OpalVision, Scalapix.

600 Type1 fonts - 12 volumes
Each volume includes 50 fonts
complete with installation instructions
only £10.00 per volume
PageStream 2.1/2.2, Art Expression, FinalCopy 2(rev2), The Publisher

PageStream 2.2 - £99.99 (paid first)
or Try before you buy - Demo disks(2) only £5.99
Softlogik Typesmith Demo
Try before you buy - only £2.50

EPS Structured clipart
3 Volumes - each over 100 clips on 6 full disks
Suitable for PageStream 2.0/2.2
only £15.00 per volume
SPECIAL OFFER - £35.00 for all 3 volumes

Sampler Disk - £4.00 - packed full of examples of
our Type 1 fonts, CG fonts, ProDraw & EPS clipart
(includes £2.00 FontShop discount voucher)

Payment by: VISA/ACODE/MASTERCARD/EUROCHECK
Cheques (with Bank Card No. and Expiry Date on reverse) or Postal Order.
Engines please send full form S.A.E. for printed Type & Client examples.
Post UK - FREE, Europe £1.50 per vol. Rest of World £2.50 per vol.

Adobe Type 1 Fonts

Fonts Dept (ACT)
22 Sincil Street, Lincoln, LN5 7ET
Tel: 0526 398403 Fax: 0522 546131

EMULANT

Electronic Micro-Processor Level Amiga Native Task

BLITTERSOFT
(DEPT. AC) 40 COLLEY HILL,
BRADWELL, MILTON KEYNES,
BUCKS. MK13 9DP
TELEPHONE/FAX: 0908 220196



Credit Card Orders Attract a 2.5% Handling Charge

EMULANT is a hardware/software system designed to allow the emulation of virtually any computer using the Amiga. A simple software driver and ROM(s) from the computer to be emulated are all that is required. Multiple emulation modules can be run at the same time using a single **EMULANT** board!

Support for custom EPROMs, static RAM and SIMM modules makes **EMULANT** compatible with all existing methods of storing a computer's operating system. Up to 2Mb of extra RAM (static, with battery back-up) can be installed on the **EMULANT** board. There is an on-board audio digitiser for emulations that can use it. A special processor slot allows the installation of custom processor boards (6800x, 80x86, 6502, Z80 etc.) for greater emulation speed.

BLITTERSOFT offer four different versions of the **EMULANT** hardware. Dual serial ports that can be used on the Amiga side can also be used with all emulation modules. AppleTalk, printer, midi and serial support is provided through these two ports for the MAC emulation. A high speed SCSI controller allows any SCSI drive to be plugged directly into the **EMULANT** hardware (i.e. scanners, SyQuest drives, hard drives etc.). The **EMULANT** hardware is a standard Zorro III plug in card for the AT1500/2000/3000/4000 (A500/1200 owners will need a Zorro Bus adapter). A PCMCIA version for the A600/1200 will be available soon.

About the MAC Ix emulation software

Support for up to 16 channels is provided for non-Amiga hardware. A4000 owners can use a full 256 colours! Work in progress to support several third party video boards such as Harlequin, DCTV, Firecacher, IV-24, EGS, Vivid-24.5, OpaVision, Domino, Rainbow I/III etc. Support for AMAX format, MAC hard drives, SyQuest Cartridges, AmigaDOS devices (RAM, VIO, DHD etc.), MAC 800K floppies (requires SYBIL hardware, sold separately), MAC/IBM 1.44Mb floppies and IBM 720K floppies is provided with easy to use set up menus. Like ALL of the emulation modules that will be released for use with the **EMULANT** hardware, the MAC Ix emulation module **MULTITASKS** with the Amiga's operating system! You can simply pull down or flip screens and get back to the Amiga side... and the MAC stays running at full speed!

What about speed and compatibility?

A 25MHz A3000 runs the MAC Ix emulation exactly twice as fast as a real MAC Ix! (The A4000 speed is incredible!) The emulation runs ALL known MAC programs (in full colour, if available) and at white MUL7TASKSING with the Amiga! (The MAC Ix emulation module requires an accelerated Amiga - 68020/3024 with MMU and 256K MAC ROMs). Not all MAC Ix emulation modules require an accelerated Amiga - some will be released for use with the **EMULANT** hardware, the MAC Ix emulation module emulation modules will require accelerated machines. Four megabytes of memory is recommended for use with System 7.

Future emulation

Since the **EMULANT** hardware is so versatile, a completely new and different computer can be emulated by changing the emulation software patch and the ROM(s). IBM AT (386/486), Mega ST, C64/128 and even game machine (MEGA DRIVE/SNES) emulators are planned in the near future.

- | | | |
|-----------------|---|----------------|
| BASIC | - EMULANT system | £254.95 |
| OPTION A | - BASIC EMULANT system with high speed serial ports/AppleTalk support | £299.95 |
| OPTION B | - BASIC EMULANT system with high speed SCSI interface | £299.95 |
| DELUXE | - BASIC EMULANT system with both serial AND SCSI options | £329.95 |
| SYBIL | - Hardware for using 800K MAC disks with standard Amiga floppy drives | |
| | Bought with any EMULANT (Includes disk back-up and Compressor) | £59.00 |

LATEST DEVELOPMENTS

Support for the **RETINA** board, giving 256/16 million colour modes.

New multi-screen size drivers for PAL/NTSC for both ECS/AGA machines, supporting all Amiga screen resolutions available to your monitor.

AMAX cartridge support to use actual MAC drives if required. UK BBS support imminent.

The World's First Multi-Platform Emulation System!

E&OE

COLOUR KITS for MONO PRINTERS

Ever wished you'd bought a colour printer instead of a mono one? Wouldn't it be nice to print out pictures in colour? Now you can with Amiga. **Flexidump Kit**. Each Amiga Flexidump Kit comes complete with everything you need to print in colour, including superb software. The colour kit is simple to use, the ribbon kit exactly the same way as your black ribbons so it will not affect your gammas. Also all of models listed below paper alignment is automatic, you don't have to manually adjust. PRINTS AS GOOD AS COLOUR PRINTER. If your printer is not listed below please phone. Amiga Flexidump kits for Star LC10, LC20, all Star 24 Pin, Panasonic 106/81/112/114, Epson FX80, FX80, LQ800 etc. Citizen 120x, NEC P6, P6+. Please note colour kits come complete with coloured ribbons.

FLEXIDUMP 2

- Total COLOUR CONTROL
- Select area to print
- Select size to be printed
- Balance control for enhancing dark pixels IFF or HAM
- Now includes new feature to insert colour pics into word processor documents. • Page control. • Colour sieve
- Ink correction. • Pattern rotate. • Dot pattern control
- Automatic poster mode for larger than A4
- Production Graphics: Test Labels/Letterheads
- Multiple copies control
- PRINT FULL COLOUR ON YOUR BUBBLE JET PRINTER
- Colour separation for 8 jets. • Laser quality colour graphics
- Import larger than standard size files and use Flexidump to reduce (produces superb letterheads)
- Gamma correction (fully adjustable and variable)
- Colour/Mono catalogue function. Will print a mini picture size selection of a complete disc (sorted alphabetically) including titles
- Ideal for T-shirt printing. Drives a wide range of Colour and Mono printers. Star LC20, LC20, Citizen Swift, Nec, Panasonic KP120/121/213, Canon etc.

£39.95

UPGRADE FROM FLEXIDUMP TO FLEXIDUMP 2 £11.75 inc. RETURN MATTER

T-SHIRT PRINTING RIBBONS

PRINT ON NORMAL PAPER IRON ON T-SHIRT

- 4 Colour Citizen Swift £28.95
- 4 Colour Citizen Swift (Reload) £14.95
- 4 Colour Star LC10 £14.95
- 4 Colour Star LC200 9 Pin £19.95
- 4 Colour Star LC200 9 Pin (Reload) £12.95
- 4 Colour Star LC200 24 Pin £24.95
- 4 Colour Star 24 Pin (Reload) £24.95
- 1 Colour Citizen 120/21/Steiff £23.95
- 1 Colour Star LC10 £11.95
- 1 Colour Star LC200 9 Pin £11.95
- 1 Colour Panasonic KXP 1080 £11.95
- 1 Colour Epson FX80/LQ400/MX80 £11.95
- 1 Colour Epson L800 £11.95
- 1 Colour Epson FX100 £11.95
- 1 Colour Panasonic KXP 1080 £11.95
- 1 Colour Tascan/Canon 1080A £11.95
- Heat transfer Pens 5 large red/orange/yellow/green/blue, Large pens have a marker size rib £14.95 a set
- Heat transfer Pens 5 small red/orange/yellow/green/blue, Small pens have a finer size rib £11.95 a set

T-SHIRT RIBBONS NOW AVAILABLE IN RED, BLUE, GREEN, BROWN, YELLOW AND BLACK AND FOR A WIDE RANGE OF PRINTERS

ALL PRICES INCLUDE VAT AND CARRIAGE

COLOUR PRINTER RIBBONS

Don't throw away your plastic printer ribbon cases when the ribbon wears out. Just take the top off, take out the old ribbon and reload it with a new one. It's simple. Full instructions supplied.

- Rebels for: Star LC200 9 Pin 4 Colour (Normal Ink) 1 Reload - £2.99 5 Rebels - £23.95
- Star 24 Pin 4 Colour (Normal Ink) 1 Reload - £6.99 5 Rebels - £29.95
- Citizen Swift 4 Colour (Normal Ink) 1 Reload - £6.99 5 Rebels - £29.95
- Panasonic 4 Colour (Normal Ink) 1 Reload - £6.99 5 Rebels - £29.95
- ink ribbons also available in Gold, Silver, Magenta, Orange, Purple, Brown, Green, Blue, Red for a wide range of printers.
- Special rebels for Panasonic printers and Star LC200 9-pin ribbs 30ml bottles £14.95

HP DESKJET/CANON BUBBLEJET REFILLS

"CARE THREE PACK" will refill HP9500A Cartridge 3 times. The Canon BC-01548A Cartridge 3 times. Three Pack available in Yellow, Magenta, Cyan, Red, Blue, Green, Brown, Purple, Black 0149 each.

"TRI-COLOUR PACK" 1 Yellow, 1 Magenta, 1 Cyan refill £27.95 available for Bubblejet and Deskjet. "CARE SIX PACK" will refill HP9500A Cartridge 6 times. The HP9500A High Capacity 3 times. The Canon BC01 Cartridge 6 times.

Please state type when ordering a BLACK REFILLS ONLY £8.95



Dept AMC, 15 Holland Gardens, Garston, Warrford, Herts. WD2 6JN. Fax: 0923 672102



ORDER LINE ON 0923 894064



AMIGA 1200



Amiga 1200, 68020 processor, 14.19MHz, 32-bit, 2Mb chip RAM standard, AmigaOS v3.0, optional hard drive (see below), AA chip set for enhanced graphic capabilities, 16.8 million colour palette, 2-256,000 colours on-screen, PCMCIA smart card slot for memory exp, 96 key keyboard with numeric keypad and 1 year on-site warranty. Also with free package from BattleAxe containing a word processor, database, spreadsheet and 3 games...

Comic Relief Pack while stocks last

Prices for AMIGA 1200 Inc Hard Drive

40 MEG.....	£569	60 MEG.....	£599
80 MEG.....	£639	120 MEG From.....	£689
170 From.....	£710	210 From.....	£750

Hard Drive Models Come With Our Own 12-Months Warranty

HARD DRIVES

2.5" IDE 1200

40 MEG.....	£169.00
60 MEG.....	£199.00
80 MEG.....	£239.00
120 FROM.....	£289.00 fitted
170 FROM.....	£310.00 fitted
250 FROM.....	£380.00 fitted

500 DRIVES

CALL FOR LOW PRICES

LARGER SCSI DRIVE AVAILABLE. PHONE FOR PRICES.

BARE SCSI DRIVES

120 MEG.....	£255.70
213 MEG.....	£343.72

A1200 EXPANSION

- Now with clock
- Maths co-processor, speeds up floating point operations up to 55 times (Ray tracing etc)
- 0/2/4/8 Meg populated (Sims)

BOARD CLOCK/68881.....	£149.00
BOARD CLOCK/68882.....	£320.00

2 MEG 32BIT SIMS.....	£99.50
4 MEG 32BIT SIMS.....	£149.50
8 MEG 32BIT SIMS.....	£289.50

MODEMS/COMMS

THE FASTEST FAXMODEM V.32 bis (14400 baud!!!)

Allows you to send and receive fax messages at 14,400bps. This new modem has full 14400 baud capability. Spec includes V.32bis, V.32, V.22bis, V.22, V.21, MNP2-5, V.42, V.42bis, Class 1 & 2 commands, 9600/14400 Group 3 fax Hayes compatible. Store number, latest error correction and data compression techs. Includes free Amiga comms and fax software, power pack and all necessary Modem cables.

£269

E&E
Price subject to change without notice

PERIPHERALS

Triax Turbo Touch 360

Fantastic New Console Type Control

A radically new style of hand-held controller from Hornby. Feather-touch direction pads and 3 buttons. We believe this will improve gameplay and provide superior control!!

£17.99



G.V.P. Digital Sound Studio

High quality 8-bit stereo sampler. Sample up to 51,000 samples/second in stereo. Special effects inc echo, mix, filter, re-sample & much more. Works with any Amiga inc 1200, 4 track sequencing software with midi support, creates SoundTrax compatible and stand alone song files with the great DSS software v1.6.

ATTENTION 1200 USERS

New A1200 4Mb trapdoor expansion with clock!

Just slips into your trapdoor, giving you 4Mb of fast memory.

Only £184.99

CREDIT CARD HOTLINE

9am (0603) 261060 9pm



A500, A500+ & A600 MEMORY

A500 1/2 MEG
WITH CLOCK £24.99, WITHOUT CLOCK £19.99

A500+
1MB EXPANSION WITH CLOCK
£39.95

A600 1MB EXPANSION WITH CLOCK £39.99

NEW!! G.V.P. G-LOCK GENLOCK

!!! Supports AA Chip Set (Amiga 1200/4000) !!!

Features include:

- 2x composite video, 1xS-VHS inputs
- RGB composite video & S-VHS outputs available simultaneously
- Sound mixer, 2 mono inputs & 1 output
- Full software control via control panel, joysticks and/or AReX.



£339.99

GVP's G-LOCK Genlock is a true price/performance breakthrough. Works with all Amiga computers and even supports the new chrome key modes of the ECS/AA chip set (Amiga 1200 etc). The only choice for the mid-range Amiga video enthusiast.

VIDEO



Video-Amiga 12 is the ultimate low-cost colour digitiser for the Amiga. There are no filters and no separate RGB splitter. Colour Images can be captured in less than a second, mono images are grabbed in real time. Fully compatible with any Video Source.

Comes with support software, save in IFF etc for use in DPaint or any other art package, S-VHS inputs. Digitise animations and play them back, cut, paste, masking and more.

Please Call For Low Low Price!

ACCESSORIES

100 Capacity Disk Box.....	£7.99
Mouse Mats.....	£3.99
Modem & Null Modem Cables.....	£9.99
Amiga to Scart Cables.....	£9.99
Disk Drive H/Cable Kit.....	£3.49
Printer Cables 2M.....	£6.99

ACCELERATE YOUR A500

With our range of Accelerators. Very fast at reasonable price. Phone for prices and details

MIDI INTERFACE

For the Amiga 500, 500+, 600 and 1200

Connect your Amiga to the world of musical instruments

!!! INCLUDES LEADS !!!

- Amiga Puss Thru serial port designed
- Supports 1 Midi In, 2 Midi Out and 2 Midi Thru
- Midi, Serial Activation included by I.E.D.
- Standard Midi with full open isolated

£24.99

When ordering by post, please make cheques payable to BattleAxe, and include Name, Address, Postcode and if possible a daytime telephone number along with your order requirements. Thankyou.

BattleAxe

125 KINGSWOOD, THORPE MARRIOTT, NORWICH, NORFOLK NR8 6UW

WE PUT YOUR PIECES TOGETHER

*Puzzled about music and the Amiga?
Look to us for the answers!*

At The Blue Ribbon SoundWorks, we've developed a strong lineup of talent. Each of our products receives the special care it takes to produce a winner. That's why you'll find a Blue Ribbon on every box!



Take SuperJAM! With this automatic copyright-free composer, you'll be writing the next hit song or creating the perfect soundtrack for your video production in no time. SuperJAM! comes with over 30 different musical styles and a backup band that performs beautifully, whether it's Mozart or Motown. And with the Extras Disks for SuperJAM!, you can instantly increase your repertoire with styles like Fusionist, FunkJungle, Rachmaninoff and Rockapeggio.

Our One-Stop Music Shop turns your Amiga into a powerful music machine! This hardware-software combination includes all you need to get 16-bit stereo multi-timbral audio for an incredible price!

When you're ready for multi-track recording, automated mixing, notation printing and state-of-the-art MIDI sequencing, you're ready for BARS&PIPES PROFESSIONAL. Special effects, multi-media sync, sophisticated

BARS&PIPES
PROFESSIONAL

harmonies, non-destructive editing, and an unlimited number of tracks for recording only begin to describe it. Plus, you can integrate it seamlessly with SuperJAM!

If you're into MIDI but don't need full power, check out BARS&PIPES, music software made simple. BARS&PIPES features multi-track recording, graphical editing, tempo mapping and more. BARS&PIPES is expandable, so it grows as you do.

Once the music is flowing, pick and choose from the BARS&PIPES ADD-ON SERIES. These packages make BARS&PIPES or BARS&PIPES PROFESSIONAL even more fun to own.

Use the Creativity Kit to invent fresh musical ideas, or the Pro Studio Kit for complete control of your MIDI studio. The Internal Sounds Kit eliminates the need for MIDI altogether. Imagine, multi-track recording inside your computer! To round it off, we present Rules for Tools, documentation and C source code for writing your own musical features.

Can't find it nearby? Call us!

To get organized, grab The PatchMeister, our graphical, universally-configurable MIDI patch librarian. It comes with dozens of MIDI drivers and templates. Don't see what you want?

Make it yourself with the special driver creation feature. And, The PatchMeister integrates easily into BARS&PIPES PROFESSIONAL for the ultimate composition environment.

Want to triple the capacity of your MIDI studio? Use Triple Play Plus, our MIDI interface that includes 3 separately-addressable MIDI outs for 48 simultaneous MIDI channels. Of course, we designed it especially for our software. No compatibility problems here.

Synchronizing with video and audio tape is simple with SyncPro, our universal SMPTE synchronization box for audio, video and multi-media production. Yes, it comes with special Blue Ribbon software and works with any Amiga application that supports MIDI Time Code.

*The Blue Ribbon SoundWorks.
When it comes to quality, we don't miss a beat!*

THE
BLUE RIBBON
SOUNDWORKS
LTD

Venture Center
1605 Chantilly Drive NE
Suite 200
Atlanta, GA 30394 USA
(404) 315-0214
Fax (404) 315-0213
UK Support (081) 339 6959

Upgrade your
cover disk today!
See page 28 for
details.

EADE - Advertised prices and specifications may change - Please refer to the record for the latest information

TOP VALUE 400dpi HANDY SCANNER

QUALITY SCANNING - AT THE RIGHT PRICE!

At a genuine 400dpi scanning resolution, this scanner produces truly superb quality images. It has a full 100mm scanning width, variable brightness control and 100/200/300/400dpi resolution. **Business Professional Version 2** scanning and editing software allows real-time scanning in either line art or up to 64 simulated grey scales. Provides powerful editing features and excellent compatibility with most CPM and Word Packages, eg. Lotus Word 4. Touch-Up. Also supplied is The Publisher Desktop Publishing package, ideal for incorporating your scanned images into flyers and newsletters.

STILL ONLY £99.99

TRUEMOUSE

300dpi resolution

WE GUARANTEE that this is the smoothest, most responsive and accurate replacement mouse you can buy for the Amiga. Excellent performance, now with a 300dpi resolution. Amazing new price!

£14.99 SATISFACTION GUARANTEED

GOLDEN IMAGE OPTICAL MOUSE Amiga/ST compatible - excellent travel accessory. **NEW LOW PRICE! £29.00**

TRACKBALL



High performance trackball, directly compatible to any Amiga or Atari ST. Plugs into mouse or joystick port. Super smooth and accurate - you probably won't want to use a mouse again after you've used this Trackball! Full mechanical control. Top quality opto-mechanical design, giving high speed and accuracy every time. No driver software needed.

ONLY £29.95

NEW! A500 ROM SWITCHER

SWITCHING BETWEEN VERSIONS OF KICKSTART ON YOUR A500 IS EASY WITH OUR NEW ROM SWITCHER!

You can transfer software compatibility on your A500 PC by fitting our ROM switcher; you can alternate between the Kickstart 2 already included and another version of Kickstart ROM, eg. giving you the freedom of choice. Fitting is very simple indeed, and requires no specialist technical knowledge. Fitting allows two methods of switching, either by keyboard reset, or by an external toggle switch. A.B. Kickstart ROM not supplied. A500 Revision 5 boards will require circuit modification.

Kickstart 1.3 ROM supplied separately. **ONLY £29.95**
Kickstart 2.0 ROM supplied separately. **ONLY £29.95**
A500 Revision 5 PCB Circuit Modification Service. **£29.95**

ZY-FI Amplified Stereo Speakers

REALISE THE TRUE SOUND POTENTIAL OF YOUR AMIGA WITH THIS PAIR OF FULL RANGE SPEAKERS!

Your Amiga produces fine quality full stereo sound. Bring quality stereo sound reproduction to the full with this designer horn speaker system! Incorporates a built-in amplifier. Fitting allows two methods of switching, either by keyboard reset, or by an external toggle switch. A.B. Kickstart ROM not supplied. A500 Revision 5 boards will require circuit modification.

Speaker Dimensions: 100x100x100mm (HxWxD)

ONLY £39.95

REPLACEMENT POWER SUPPLIES

Genuine Commodore Amiga A500 type replacement Power Supply Unit. Good quality 'switch mode' type. Super low price!

ONLY £39.95

Replacement Power Supply for A500 Hard Disk **£49.95**

ACCESSORIES

MSD Interface converts to serial port. **£19.95**
Virus Protection file to save drive in system, protecting all drives. **£5.95**
VSD-12 Amiga video digitizer package inc. VSD-Chrome. **£119.00**
Home Automation V7. **£49.00**
Deluxe Paint 4. **£79.95**
Deluxe Video 3. **£49.95**

SOFTWARE

Digital Wordworth. **£99.00**
Kind Words 3. **£49.95**
Protext V6.5. **£109.00**
Home Automation V7. **£49.00**
Deluxe Paint 4. **£79.95**
Deluxe Video 3. **£49.95**

R A500 HARD DISKS

Reference

All the features without the price

AMIGA with 1MB FORMAT

Verdict 84%

"Very attractive indeed - you get a good deal for a decent drive."

- SCSI HARD DISK MECHANISMS for optimum performance. Fast Access Time & Buffering.
- Fully using its own DEDICATED PSU. IBM recommends against use of Hard Disks without independent power supply.
- Option for up to 4MB additional easy RAM EXPANSION, using 28000.
- COOL... by popular demand, we have fitted a Cooling Fan!

- GAME SWITCH allows Games to be loaded without disconnection.
- Includes SCSI HARDWARE in a rear for further expansion.
- Compatible with Reference Add-On Hard Drive and Reference RAM Unit.
- High quality metal casing, colour and style matched to the Amiga 500.
- Includes HD Setup 2 (internal SCSI level format and partitioning) and INTERLOCK PRO (Security utility).

40Mb MODEL ONLY £229
100Mb MODEL ONLY £329

3Mb RAM Version: Add £70.50
4Mb RAM Version: Add £141.00

Reference Add-On Hard Drive
Cassette Hard Disk with power supply
40Mb...£199 100Mb...£299

R A500 RAM UNIT

Reference

- RAM access LED
- RAM test/run switch
- Uses 1Mb 4-bit ZIPS
- Style matched to the A500
- Very low power consumption
- Throughport for further expansion
- Compatible with A590 and most other SCSI Hard Drives (please call to check)
- Optional PSU (allows Amiga to power other devices)
- Available fitted with 2Mb, 4Mb, or fully populated with 8Mb

Incorporating the latest 'ZIP' DRAM technology, our External Memory Upgrade allows the A500 / A500+ to be upgraded by up to a further 8Mb of auto-configuring FASTRAM.

N.B. Any memory fitted to this unit is in addition to that on your machine already, to a maximum of 8Mb on the external unit.

With 2MB fitted...£112.99 with 4MB...£159.99 with 8MB...£259.99

PARTIALLY POPULATED UNITS EXPAND TO 8MB WITH 2MB MODULES. AVAILABLE SEPARATELY AT ONLY £29.99 PER 2MB. *OPTIONAL POWER SUPPLY £14.95

AMIGA 600 EXCITING NEW PACKS

STANDARD PACK

With 12 months on-site maintenance

ONLY £244.99

2MB RAM/CLOCK VERSION £384.99

WILD WEIRD WICKED PACK

Features: 20MB Hard Disk • Push-over

• Grand Prix • Putty • Deluxe Paint III

• 12 months on-site maintenance

ONLY £294.99

2MB RAM/CLOCK VERSION £294.99



Built-in TV Modulator • Built-in IDE Hard Disk Controller • Kickstart 2 • 1Mb ChipRAM • Accepts Memory Cards

4MB RAM CARD

For any A600...£189.00

STANDARD PACK

Special Hard Disk Model

Supplied with Evesham Micros fitted

60Mb Hard Disk

Please note that the Hard Disk installation is not covered by our on-site maintenance

ONLY £409.99

2MB RAM/CLOCK VERSION £489.99

EPIC PACK

40Mb Hard Disk • 12 months on-site maintenance

ONLY £449.99

2MB RAM/CLOCK VERSION £489.99

AMIGA 1200

KickStart/Workbench 3.0 • Fast 68020 processor • ADA chipset • CPU/ROMA expansion port • PCMCIA expansion slot

£379.99

Hard Disk Model

With Evesham Micros fitted 60Mb Hard Disk.

£549.99

UPGRADE YOUR OWN A600/1200 TO HARD DISK

Bring the benefits of a Hard Disk installation to your existing Amiga 600/1200 with our easy to fit upgrade.

60Mb kit...£229.00

A600 1MB RAM/CLOCK UPGRADE

UPGRADE YOUR NEW A600 TO 2MB WITH THIS SIMPLE PLUG-IN MEMORY UPGRADE!

- Simply Plugs Into the A600's trapdoor expansion area
- Increases total RAM capacity of A600 to 2Mb 'ChipRAM'
- RAM Enabled / Disable Switch
- Battery-Backed Real-Time Clock

ONLY £44.99



When developer Jim Drew first started touting the capabilities of the Emplant board, most Amigans gave his claims about as much credence as they tend to give politicians when they promise to lower taxes. Unlike the typical politician, though, Emplant shows every sign of meeting some of the pledges made for it.

As it stands now, Emplant is a Zorro II card for the Amiga 1500/2000 (with an accelerator board), 3000, and 4000/040 that gives you Amiga the ability to run colour Macintosh software. Developers Utilities Unlimited say that Emplant will work with accelerated A500s with Zorro II adapters like the Singshot.

Emplant's selling point at the moment is its ability to run Macintosh software. However, UU tout the board as an all-purpose emulation solution.

They claim that modules will eventually be available which will allow you to run software designed for the IBM PC; Atari ST, TT, Falcon, and 400/800; Commodore VIC 20, 64, 128, and PET

chase Macintosh ROMs from Apple repair centres.

You plug the ROMs into the Emplant and then run a utility that creates a disk-based copy of the ROM chips. You can then remove the chips and store them away for safekeeping. If you do have a Mac, you can use the included ROMInfo utility to create a disk-based copy of your Mac's ROMs to use on the Amiga.

ONE AT A TIME

Legally, though, only one copy of the ROMs may be in use at a time, so if you take this approach the Mac and Emplant shouldn't be in use simultaneously.

As mentioned before, you need at least a 68020 processor. You'll also need at least 2Mb of Fast RAM (4Mb if you're running Apple's System 7), and a hard drive is strongly suggested - mandatory for System 7 use. If you think an Amiga's a pain to use with no hard drive, try a Mac - it's torture.

If you have one of the new Commodore 1.7Mb floppy drives, you can read and



Adobe Photoshop running on Emplant in black and white, 16 colours, and 256 colours

write high-density Macintosh disks. If you only have the standard 880k drives, you'll also need to purchase Utilities Unlimited's £34 Sybil board, which reads real Mac disks fairly reliably, but at the moment doesn't write to them very well.

Emplant will also read disks created by the ReadySoft A-Max emulator in standard Amiga drives, so if you have access to one of those you can use it to transfer disks to an Emplant-readable format. The high-density drive is the best solution,

though, especially if you need to get it back to a real Macintosh.

Once you have all the necessary parts, it's time to get up and running. Simply plug the Emplant board into a vacant Zorro slot inside your Amiga. If you've got actual Mac ROM chips, plug them in, and you're ready to go, hardware-wise.

If only the software side were so easy to get up and running. The included 36-page manual (marked "preliminary", which is as big an understatement as call-

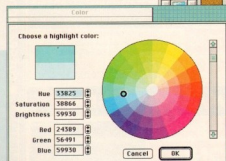
Emplant unleashed

Denny Atkin keeps abreast of technology with Utilities Unlimited's Mac-in-a-box

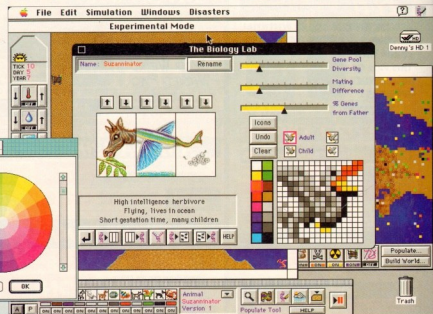
2001; Sinclair ZX-81 and Spectrum; Sega Genesis (the US version of the Mega Drive); Super Nintendo; Gameboy; and others.

Of course, you should never purchase a product on the basis of promised future capabilities, but if even a few of those emulations come to be will be a wonderful bonus - and a fantastic way to show off your Amiga! Although the Mac emulation requires at least a 68020, Drew says some of the other emulations will work with the 68000.

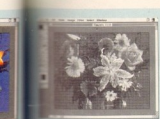
To get started with Emplant, you'll need a set of 256k operating system ROMs from a Macintosh II, Ix, Icx, or SE/30; and Macintosh System 6 or System 7 disks. If you don't own a Macintosh, you can pur-



The Macintosh's colour wheel in 256-colour mode. This should look strangely familiar to Workbench 3.0 users



Why wait for the port? The Mac version of SimLife works fine under Emplant



(nowhere is this documented...)

You'll now see the Mac Emulation Setup screen. Here you tell Emplant how much memory it can use, what kind of video display you want to emulate, where your ROM image file is located, and which Amiga devices should be used for Mac storage. You can allocate some or all of your Fast RAM for Emplant use.

FAST CRASH

There's another chance for a crash here, though. The Emplant video driver (which can use up to 800k on AGA machines) needs some Fast RAM as well, and this number isn't included in the free memory totals on the memory allocation screen. To be safe, leave at least 1Mb of Fast RAM free.

The final task in setting up Emplant is allocating hard drive storage. There are two options here. You can either dedicate a specific partition on your Amiga's hard drive, or you can directly connect a SCSI hard drive to Emplant's optional internal

ing the sun warm) is no help at all, and the outdated ReadMe files on the disk don't add much either.

Trial and error and some help from Amiga Unlimited's BBS finally got me up and running, after two days of frustration.

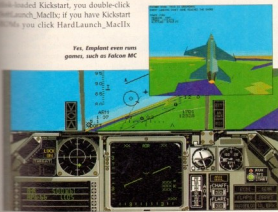
To set up Emplant, you'll need to copy all the files from the Emplant disk to your hard drive. Make sure you don't miss the files in the Libs directory, or Emplant will mysteriously crash when you try to run it.

You'll then need to add the RsvMem34 (for 1.3) or RsvMem37 (for 2.x and 3.0) command to your Startup Sequence. This needs to be the first command, before even SetPatch, as it reprograms your Amiga's MMU.

Because the Mac emulation makes heavy use of the MMU on the 030 and 040, you can't use Emplant with the EC030 found in the A4000/030.

Now you can load the Emplant software. If you're using an A3000 with a disk-loaded Kickstart, you double-click on Launch_Macfile; if you have Kickstart ROMs you click HardLaunch_Macfile

Yes, Emplant even runs games, such as Falcon MC



Emplant lets you run Quark XPress, the premier desktop publishing program, on your Amiga

Wide-ranging options

BASIC - Consists of the basic hardware necessary for emulating various platforms. Includes Mac II/x/cx emulation module. Retail price: £254.95

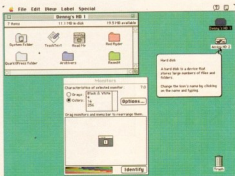
OPTION A - Consists of the basic package plus two serial ports which are RS-422 standard (8-pin mini-DIN connectors). These ports can be used as RS-232 ports with the appropriate cable. Retail price: £299.95

OPTION B - Consists of the basic package plus a high-speed SCSI interface that can be used on the Amiga or Amiga side. Everything from SyQuest cartridges to hand scanners has been tested and supported by this SCSI port. Retail price: £299.95

DELUXE - Consists of the basic package plus the two serial ports and the high speed SCSI interface. Retail price: £329.95

Distributed in the UK by Bitsoft, tel 0908 220196

Utilities Unlimited, 1641 McCulloch Blvd, Suite #25-124, Lake Havasu City, Arizona 86403 USA. Tel: 0101 602 680-9004.



The Macintosh Finder in 256-colour mode. Note the built-in help - Mac users can have everything explained to them

That box on your desk now holds not only an Amiga, but a Macintosh IIfx as well...

SCSI connector. If you use Amiga hard drive partitions, they're limited to 32Mb in size, although you can have multiple partitions. Drives connected to the SCSI interface can be of any size. For this review I created two 32Mb partitions on my Amiga 4000's IDE drive.

Once your hard drive is configured, you're ready to install the Mac software. Start the emulation software and your speedy, colourful Amiga screen becomes a black-and-white Mac screen asking for a disk.

Plug the Macintosh hard drive utilities disk that comes with the System software into your floppy drive and the little smiling Mac icon appears. Follow the instructions on the screen to format your Mac hard drive partitions, install the System software, and you're ready to go!

After everything's set up, re-boot your

Amiga and start the emulation again. That big metal box on your desk now holds not only an Amiga, but the functional equivalent of a Macintosh IIfx as well (or a Mac Quadra if you're lucky enough to have an A4000/040).

MULTITASKING

But best of all, unlike the earlier A-Max emulator, you can run both Amiga and Mac programs at the same time!

If your Amiga is equipped with the ECS chipset, then you can run Mac software in black and white, four colours, or 16 colours. If you've got an AGA system, then you can run in 256-colour mode.

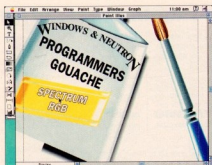
The highest-colour mode on your particular Amiga model does slow down quite a bit, since your Amiga's graphics chips are fighting with the Emplant software for access to memory.

Still, 16-colour mode is acceptable on ECS Amigas, and blazingly fast on AGA machines. The latest software update supports the display database on 2.1 and 3.0 Amigas, so you can open in any mode, including 800 x 600 and 1,280 x 512.

Although screen updates are a bit slower than the equivalent real Mac, actual processing speed is very comparable to the real thing. This

is because the Mac uses the same Motorola processors as the Amiga, so

You have full control over the amount of memory, disk space, and other system resources that Emplant uses



The Macs top drawing program Adobe Illustrator



Welcome to Macintosh IIx, welcome to Emplant, that lol

there's no translation step necessary like there is for software-based IBM emulators.

An indicator of how well – and how fast – the emulation works is that I was able to run Macintosh games on my Amiga. Falcon MC, a colour Mac version of the classic flight simulator, ran faster on my A4000 running Emplant in 16-colour mode than on a real Mac IIx at work.

Velocity's Spectre Supreme, a 3D arcade game similar to Stellar 7, ran at blazing speed under Emplant. And I was even able to play against another player on a real Macintosh using an AppleTalk connection!

NO TROUBLES

Compatibility is excellent. Every Mac program I tried on Emplant, including the games listed above and heavy-duty applications such as Adobe Photoshop and Illustrator, worked with no problems.

I also tried a number of public domain and shareware programs, once again with no troubles. I was even able to use Apple File Exchange to read an MS-DOS disk in my Amiga's DF0 drive.

According to Utilities Unlimited, the only programs they've found that won't work under Emplant are Apple's DiskCopy program (which talks directly to the Mac hardware) and a couple of Microsoft applications, including Word.

Apparently Microsoft break a few of Apple's programming guidelines, and UU are working on patching those problems so even misbehaving programs like Word will work. Stereo sound is available if you're running System 6, but the emulation is silent under System 7 due to changes in

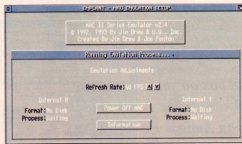
how the OS handles sound. UU plan to address this problem in a future update.

The Emplant board is available equipped with two Macintosh-compatible serial ports, which is necessary if you plan to use a modem or printer with your Mac software, or if you want to connect Emplant to an AppleLink network.

The ports are hardware-compatible with those on a real Mac, so you can even attach a Mac MIDI interface to them for use with music software.

Note that the Mac System software only supports ImageWriter and LaserWriter (PostScript) printers, so if you've got another model you'll have to purchase a separate Mac driver for your printer – unlike A-Max, Emplant doesn't provide ImageWriter emulation for other printer models.

As I mentioned, you can run Macintosh and Amiga programs simultaneously. This is the best way to get multitasking on the Mac – actually, Amiga users will find the



This panel controls the screen refresh rate while Emplant's running

Compatibility is excellent. Every Mac program I tried worked with no problems.

Mac idea of multitasking simultaneously laughable and frustrating.

MultiFinder under System 6 and the Finder under System 7 do allow you to run more than one program, but many applications aren't multitasking-friendly and will block out other programs for long periods of time.

Also, the Mac operating system busy-waits, which means that even when Emplant is sitting there doing nothing except displaying the Macintosh interface, it's taking up about 40 per cent of your processor time.

You can adjust Emplant's system priority so that it takes up less time when it's just running in the background.

The emulated Mac's screen is a standard Amiga screen which can be flipped and pulled down. Screenshots for this article were saved with a standard Amiga screen grabber.

Unfortunately, as of this writing UU still haven't implemented any sort of file transfer software, so the two brains in your Amiga can't talk to each other.

To transfer files from the Mac side to the Amiga side I was forced to connect the Amiga's serial port to one of the Emplant

Multiple personalities

UU plans to emulate a number of other 16-bit and 8-bit platforms using the Emplant hardware. Most likely next in line is the IBM 386/486 emulator.

Although UU had indicated early on that they might make an adaptor to plug an Intel processor onto the Emplant board, they now believe that they can achieve 486 speed on the A4000 using software translation only.

Although many knowledgeable Amigans are sceptical of this claim, these same folks also said there was no way you could create a Mac emulator that would multitask with the Amiga.

The game console emulators will be handled by an adaptor that attaches to the ROM sockets and will add a cartridge connector that you can plug game cartridges into. Nintendo and Sega are a bit lawsuit-happy, though, so I'll be surprised if this capability ever makes it to market.

All Amiga emulation modules will multitask with Amiga programs.

serial ports with a null-modem cable and use terminal programs on each side to move the files.

UU have confirmed that transfer software should be available soon that will allow direct copying of files from Amiga partitions to Mac partitions.

As mentioned earlier, Emplant is available with optional SCSI and serial ports. On the Emplant disk you'll find a driver called Emper.device which allows you to use the Emplant serial ports on the Amiga side when the Mac emulation software is running.

EXPANSION

Although it wasn't ready as of this writing, UU also promise a driver soon that will let you set up Amiga partitions on devices attached to the Emplant SCSI port.

Another promised driver will let you plug four 128k SRAM chips into the Emplant board, add a battery, and have 512k of auto-boot, battery-backed-up RAM storage. So Emplant is more than an emulator – it's also a multi-function expansion card for your Amiga.

Is Emplant worth it? If you absolutely need to run professional-quality software such as Quark XPress and Adobe Photoshop that's not available for the Amiga At £255 for the basic board and about £150 for a set of 256k Mac ROMs, you get the capabilities of a £1,700 Macintosh.

And although the Mac is an odd machine, it's much easier for Amiga users to make this transition than to the PC. Even if UU never deliver on the additional emulation modules, Emplant is a great Mac emulator. Any additional features are extra icing in the cake.

Things change constantly

Emplant is still a product under development. When it first shipped in late 1992, it wasn't ready – the emulation was unstable, and it didn't even support hard drives.

As this review is written the company are up to v2.5, and Emplant finally shows signs of stability and maturity. However, Utilities Unlimited are still hard at work on improving the Macintosh emulation.

Among features planned for future updates are support for the sound digitiser built onto the Emplant board; Amiga-to-Mac file transfer; and support for 24-bit video boards including Retina, Rainbow II and III, DQTV, Resolver, Domino, ImpactVision-24, Vivid-24, and Firecraacker 24.

UU say that OpalVision, Merlin, and Harlequin support may be provided eventually as well, pending support from the manufacturers.

Updates of the Mac emulation software are available free of charge on various online networks, from UU's BBS, and from Emplant dealers.

The Best Selling Word Processor and Database just became even better... **VALUE!**

Since its launch, Pen Pal has become the
most popular package of its type

Not surprising when you consider the extensive features at your fingertips, combined with user friendly simplicity, it was bound to be a winner! In a comprehensive Word Processor test, Amiga Format commented "There is little to fault Pen Pal, it deserves to do well" - quite a prediction it seems! Amiga Format have since said that it's "Still the best value for money..." If you're not a Pen Pal user yet, we hope you soon will be, because at just £49.95... the best just became better, even better value!

Pen Pal

A superb package, with immense power, to fulfil all your Word Processing needs, and... with an integrated Database too! It's all so easy to use, you'll rarely need to refer to the extensive 250 page lay-flat spiral bound manual. Users frequently tell us that they've never found a program they get on with so well.

THE WORD PROCESSOR. You can... Open multiple documents simultaneously; search and replace; cut, copy and paste; check your spelling with a 110,000+ word dictionary; import your favourite IFF/HRG graphics, from programs such as DPaint, or Clip Art files in various sizes and colours; automatically flow text around graphics in any Workbench compatible font (there are over 200 available styles) in different sizes and colours to suit your design... Even as you type!

Full Page View with position, edit and creation of graphic objects and extremely useful forms designer. All this from a word processor and... Much, Much, More! As you can see from the documents shown on the left, this is no ordinary program!

THE DATABASE: With 32 fields per record, 32,000 records per database and a fast sort of 1000 records in less than 5 seconds, this is a real database. Mail merging into the Word processor couldn't be simpler, with easy creation of templates for letters or reports, into which information can be merged.

AND... Remember, Pen Pal comes with full support for the new or experienced user completely free!
Friendly help for all registered owners is just a phone call away.

SoftWood - Quality software for your Amiga

With Pen Pal you're not just getting a one off product! SoftWood are acknowledged as the World's leading software company who develop just for Amiga and no other system. Once you're a registered SoftWood product owner your investment is protected as you'll have access to unlimited free technical support (others charge you) and preferential upgrades to other SoftWood titles, both existing and future. Exciting new products are being developed right now. Pen Pal - your first step on the SoftWood ladder of Amiga software.

Pen Pal is available from all good Amiga software
Dealers or from SoftWood. Call for
your list of stockists.

SoftWood Products Europe
PO Box 19 Alfreton
Derbyshire DE55 7RW England
Tel: 0773 836781 Fax: 0773 831040
Pen Pal is compatible with any Amiga from A500 to the
latest AT2000/M4000 ranges with a minimum
of 1 Mb. available free memory



White Knight Technology



PROFESSIONAL
AMIGA Specialists



(0992) 714539

10am - 7pm Monday - Friday
And 11am - 4pm Saturday



E40E

PO BOX 2395, WALTHAM CROSS, HERTS, EN8 7HQ

68020

ACCELERATORS

All For A500/500+/1500 & 2000

SSL A5000 16.7MHz 020+ 881

2Mb 32-Bit RAM Fitted £229

4Mb 32-Bit RAM Fitted £309

68030

ACCELERATORS

SSL B5000 25MHz 030+ 68882

2Mb 32-Bit RAM Fitted £379

4Mb 32-Bit RAM Fitted £479

SSL B5000 33MHz 030+ 68882

2Mb 32-Bit RAM Fitted £479

4Mb 32-Bit RAM Fitted £579

Below Are For A1500/2000 Only

COMMODORE 2630 25MHz

68030 And 25MHz 68882 FPU

With 2Mb 32-Bit RAM £369

With 4Mb 32-Bit RAM £459

GVP G-Force 030 - 25MHz

1Mb 32-Bit RAM + SCSI £399

GVP G-Force 030 - 40MHz

4Mb 32-Bit RAM + SCSI £699

GVP G-Force 030 - 50MHz

4Mb 32-Bit RAM + SCSI £999

GVP A530 Turbo 40MHz 68030

1Mb RAM & 40Mb Drive £489

1Mb RAM & 80Mb Drive £589

1Mb RAM & 120Mb Drive £685

1Mb RAM & 210Mb Drive £779

68040

ACCELERATORS

PP&S 040/2000 28MHz 68040

For A1500/2000 with 0Mb £599

PP&S 040/2000 33MHz 68040

For A1500/2000 with 0Mb £799



Almost All
Professional
AMIGA
Hardware & Software
Supplied

White
Knight

**ALL PRICES INCLUDE
VAT AND POSTAGE**

ADD £10 FOR COURIER

A4000/030

25MHz 68EC030 & 4Mb RAM

80 Mb - £949

120 Mb - £1069

A4000/040

25 MHz 040 & 6Mb RAM

120 Mb - **CALL**

A3000

25 MHz 030 & 2Mb RAM

52 Mb - £899

A1200-HD

14 MHz 68020, 2Mb RAM And

85Mb Hard Drive £599

WARRANTY VALID

PP&S ZEUS 28MHz 040+SCSI-2

For A1500/2000 with 0Mb £749

PP&S ZEUS 33MHz 040+SCSI-2

For A1500/2000 with 0Mb £949

PP&S 040/3000 25MHz 68040

For A3000, No RAM £599

PP&S Mercury 28MHz 68040

For A3000, Exp. 32Mb £749

PP&S 040/500 28MHz 68040

For A500/500+ (4Mb) £599

PP&S 040/500 33MHz 68040

For A500/500+ (4Mb) £799

HARD DRIVES

BARE SCSI DRIVES

40Mb (1") £199

52Mb (1") £229

120Mb (1") £275

210Mb (1") £375

425Mb (1.6") SCSI-2 £729

525Mb (1.6") SCSI-2 £799

850Mb (1.6") SCSI-2 £1029

1Gb (1.6") SCSI-2 £1149

1.6Gb (1.6") SCSI-2 **CALL**

2Gb (1.6") SCSI-2 £1499

A600/1200 DRIVES

40Mb (2.5" IDE + cable) £159

60Mb (2.5" IDE + cable) £189

85Mb (2.5" IDE + cable) £239

120Mb (2.5" IDE + cable) £309

210Mb (2.5" IDE + cable) £399

A500/500+ DRIVES

GVP HD8+ (No Drive) £185

GVP HD8+ 42 £299

GVP HD8+ 80 £385

GVP HD8+ 120 £485

GVP HD8+ 213 £585

GVP A1230

40MHz 68030 & 68882

Accelerator For A1200

With 4Mb RAM (Exp. 32Mb)

£489

1Mb SIMM £59, 4Mb SIMM £165

Available with 0Mb RAM but

without 68882 for only £295

SUPRA 28MHz

68000 A500/2000

ACCELERATOR

£159

MBX 1200 RAM & FPU

25MHz 882, 1Mb RAM £269

14MHz 881, 1Mb RAM £199

ART EXPRESSIONS £159

MORPH PLUS £159

XCAD 3000 £229

IMAGE F/X £189

ART DEPT PRO £159

IMAGINE 2 £159

ALADDIN 4D £259

PIXEL 3D PRO £159

CALIGARI 24 £389

BARS & PIPES PRO 2 £259

VIDEO BACKUP SYSTEM

Backup Hard or Floppy Disks to Video Tape using a VCR.
Works with all Amigas. Speeds up to 40Mb an hour. Backup and restore to any path. Verify & logging.

£59

VORTEX "GOLDEN GATE" 386Sx25 BRIDGEBOARD

£399

COMMODORE 386Sx25 BRIDGEBOARD

£199

COMMODORE 486Sx25 BRIDGEBOARD

£299

WORKBENCH 2.1

Enhancer Kit
FLOPPY DISK BASED UPDATE
FOR USERS ALREADY HAVING
THE 2.04 KICKSTART ROM CHIP

Workbench 2.1 Kit **£59**
Kit With 2.04 ROM **£99**

COMMODORE A590 (20Mb)
Exp. 2Mb RAM + SCSI **£199**
ALFA-POWER IDE Hard Drive
Controller for A500/+
No Drive (Exp. 8Mb) **£129**

A1500/A2000 DRIVES

GVP HC8+ (No drive) **£129**
GVP HC8+ 40 **£289**
GVP HC8+ 80 **£339**
GVP HC8+ 120 **£405**
GVP HC8+ 213 **£559**
ICD ADSCSI 2000 **£85**

REMOVABLE DRIVES

Syquest 44Mb Internal **£299**
Syquest 88Mb Internal **£375**
External Case & Cable **£120**
44Mb Cartridge **£75**
88Mb Cartridge **£100**

Panasonic 128Mb Optical
Drive (in ext. SCSI case) **£999**
128Mb Cartridge **£40**

FLOPTICAL DRIVES

21Mb 3.5" SCSI internal **£309**
External Floptical Drive **£389**
Floptical Disks (each) **£29**

MEMORY

32-Bit 4Mb 60ns SIMM for
G-Force 030 & A530 **£165**
32-Bit 1Mb 60ns SIMM for
G-Force 030 & A530 **£59**
1x4 SC ZIP RAM 4Mb **£189**
4Mb x 32 A4000 SIMM **£160**
1Mb x 32 A4000 SIMM **£40**
2Mb SIMM (MBX1200) **£99**

Suppliers of almost all Amiga
Hardware and Software.
Please call for latest Prices

For Latest Prices & Technical
information call

THE BIG BANG BURGER BAR

Bulletin Board System

081 909 2064

For Online Help, Page APE!

SCANNERS

Epson GT-6500 Colour A4
Flatbed Scanner, 600dpi **£799**

MONITORS

Commodore 1960 14" Multisync
(1024x768, 0.28mm 15-38KHz)
For all Amigas **£399**
Microvitec Cub-Scan 1440
14" Multisync (15-40KHz)
For all Amigas **£459**
Commodore 1084S Stereo,
RGB & Composite + Leads **£199**
Microvitec Auto-Scan 2038
20" Multisync (15-38KHz)
For all Amigas **£1199**

MODEMS

Supra V32bis Fax Modem **£299**
Supra FaxModem Plus **£149**
Supra 2400 Zi+ (Internal) **£119**
Supra 2400 Plus (MNP5) **£129**
Supra 2400 **£89**

MISCELLANEOUS

GVP PHONEPAK Phone & Fax
System (A2/3/4000) **£349**
GVP IMPACT VISION 24
Graphics Card inc. Genlock &
Flicker Fixer (A2/3/4000) **£999**
With Transcoder Unit **£1299**
PC-286 Emulator for GVP
HD8+ A500 Hard Drive **£99**
SUNRISE AD516 STUDIO 16
8 Track Digital Recorder **£1350**
++ Call For Full Brochure ++

DISCOUNT SOFTWARE

SCALA PRO V1.13 **£79**
AUDIO ENGINEER Plus **£85**
PAGESTREAM 2.22 **£99**
SCULPT ANIMATE 4D **£79**
P.PAGE 2+ P.DRAW 2 **£79**
VIDEO TITLER V1.5 3D **£45**
PRO DATA V1.2 **£39**
MEDIASHOW **£39**
AMIGA VISION **£25**
SUPERBASE PERS. 2 **£20**
DELUXE PAINT III **£20**

A1200 68030 ACCELERATOR Microbotics M1230XA

Trappdoor expansion with a choice of 33MHz or 50MHz 68030 (inc. MMU) Battery Backed Clock on board, and an optional 68882 FPU (PGA Type) Supports 128Mb of 32-Bit RAM.
M1230XA (33MHz 030 + 0Mb) **£309**
M1230XA (33MHz 030 + 4Mb) **£459**
M1230XA (50MHz 030 + 0Mb) **£369**
M1230XA (50MHz 030 + 4Mb) **£519**

QUALITY OF SERVICE

SORRY. WE DONT TRY TO MATCH OTHERS ON PRICE - INSTEAD WE PREFER TO OFFER A KNOWLEDGABLE AND PERSONAL SERVICE.

YOU CAN'T BEAT OUR SERVICE AND TECHNICAL EXPERTISE - TRY US!

You May Place An Order By Phone Using SWITCH, DELTA, CONNECT, ACCESS, VISA & MASTERCARD etc. Prices given are for CASH, CREDIT cards attract a 2.5% surcharge



Please Send Your Cheque. Draft Or PO To:

White Knight Technology

PO BOX 2395, WALTHAM CROSS, HERTS, EN8 7HQ



0992 714539



Although the Amiga has always won great praise for its internal sound, the ever increasing popularity of Midi and CD has meant that audio standards are much higher than they used to be – especially for those involved in presentation, video and of course music.

With the increasing complexity and sophistication of multimedia in general, Midi support is becoming the norm rather than the exception, and it's this window in the market that The One Stop Music Shop has been designed to exploit.

As you've probably guessed, TOSMS is pretty unique in the world of Midi modules – rather than connection via a standard Midi interface, the card slides into a Zorro slot offering stereo RCA outs plus a built-in twin Midi I/O port at the rear.

Free port

The question is, why bother? With the huge range of modules and keyboards on the market, what's the big advantage in having an internal version?

Well, for the studio musician the answer is none at all. However for multimedia exploits, freeing the serial port has distinct advantages, as indeed it does for DTV, which often depends on additional kit connected via the serial.

Obviously with the aforesaid port free, existing serial-based production tools are still available which can then be combined with TOSMS via ARexx, SMPTE or the excellent multimedia options available

**The Amiga's first
plug-in synth
offers 16-bit Midi
sound from inside
the machine.**

**Paul Austin
auditions...**

B&PPro or SuperJam.

If you don't happen to own any of the aforementioned software the hardware can still be used, however this will require connection of the card's second Midi connector to a standard Midi interface, effectively making the Amiga the world's biggest ever PSU.

In short, running TOSMS without Blue Ribbon software means much of the appeal of the unit is sacrificed, primarily due to the occupied serial port and, of course, the lack of any direct links to the

plete sound editor designed specifically for the Proteus SoundEngine at the heart of the TOSMS.

In addition to the essential and excellent editor – which I'll return to later – the utilities include a Loop-Back option allowing direct control of the module via a mother keyboard.

Once active, any channel or patch changes are passed directly to the card allowing the auditioning of sounds without the need for on-line sequencing software.

In a blatant attempt to capitalise on the card's multimedia potential, a dedicated One-Stop Midi Player comes as part of the package, allowing any previously recorded song to be loaded-up either singularly or as part of a complete set and then played back at the click of a button. No channel changes, no patch selection, just a simple load and play.

As well as a point-and-click interface, the player also boasts full ARexx support, a feature which is ably demonstrated by a demo provided as part of the software support.

This ARexx link again illustrates the card's multimedia pretensions allowing any ARexx-compatible software to address the card, loading and playing complete works as part of a wider presentation.

An added bonus for the already impressive player is the General Midi standard adopted by the module. In effect this means that any Midi composition designed on a similar GM module will play back faultlessly, as both modules by default share common sounds at any specific patch number. As mentioned earlier, TOSMS comes complete with its own sound editor which in my opinion is one

The One Stop Music Shop

within the new B&PPro2 which provides links to various 24-bit boards, Scala, genlocks – the list goes on and on...

Once safely installed, complete with connections to an amplifier and preferably a compatible master keyboard, you're in business – assuming you're the owner of either a version of B&Pipes,

software in the form of default bands and assorted tools and plug-in accessories.

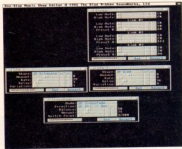
With the hardware hidden within the bowels of an A1500 or whatever, control obviously has to be software-oriented, and as a consequence the disk accompanying the hardware contains not only assorted utilities for managing the card but a com-

of its biggest attractions providing the most approachable editing environment available for any Midi module.

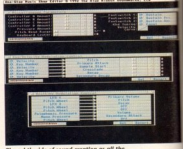
As you'd expect from Blue Ribbon, the interface is attractive, intuitive and easy to manipulate with the main thrust being aimed at the manipulation of the



A close-up of the main edit window to concert with the twin primary and secondary sound sources



The impressive sound building power of the link option alongside the LFOs and crossfade control



The subtle side of sound creation as all the elements blend to create the ultimate patch

card's primary and secondary sound sources.

These two elements are the key to the E-MU Proteus SoundEngine allowing the combination of any two of the 213 sampled waveforms stored within the ROMs at the heart of this award-winning synth.

At its most simplistic, sound generation is simply a matter of selecting two complementary sounds which then combine to produce the new tone.

As you can see from the screenshots, each instrument source comes complete with a selection of slider controlled parameters to adjust the tuning, volume, pan position, starting point and the relative delay of the component sound within the overall sound.

Envelopes

In addition, each of the components has its own amplitude envelope providing complete control over the Attack, hold, decay and release of the chosen sound – with any changes being auditioned instantly via a miniature keyboard with chorus and sound reversal close at hand with a simple click on the appropriate button.

Assuming the new sound is roughly to your taste, the fine tuning can begin courtesy of the most ingenious element within the editor.

In order to blend the component instruments within the new sound, adjusting the volume within each instrument window will be more than adequate. However if a more dramatic combination is required, the editor's crossfade option has to be the next port of call.

From here you can define exactly how the two sounds interact, either over time or according to the relative strength of the key depression. For example, at its most simple a crossfade could start with one sound and gradually evolve into the next using the speed and direction of your choice.

Alternatively, when combined with the real-time and velocity modulation options the crossfade can produce a split keyboard, or perhaps a sound that uses one tone below a certain depression strength while switching to the second, and perhaps more dynamic, sound when struck

Saving your creations

Assuming your new patch or bank of patches are finally complete, the next task is to save it. Obviously the new sound can't be written to the ROM and if the Amiga happens to be switched off all your hard work will be lost.

As a result, either individuals or entire banks can be saved to disk and loaded back into the synth as required – temporarily overwriting the defaults.

Obviously for performance use constantly loading the editor and subsequently the necessary voices would be cumbersome at best.

As a consequence yet another utility allows an entire user-defined sound set to be loaded by simply clicking on a start-up icon on the Workbench or alternatively placing the appropriate command in either the WB startup drawer or startup-sequence.

more firmly.

Assuming tone generation, mixing and cross fading is complete, we can safely move to the penultimate duet in the editing department, namely the twin LFOs, or Low Frequency Oscillators that dominate the left side of the main edit window.

Five waveforms are available within each LFO, including sawtooth, sine, triangle, square and random with each LFO applying its particular selection to add old favourites such as vibrato, modulation and tremolo to the rapidly evolving sound.

If required, the effects produced by the LFO duty can be combined with other features within the editor such as real-time and key velocity modulation to apply the desired feature over time and according to the strength of key depression.

Although rather complex initially, both forms of modulation and their relation to the LFOs do become clearer with a little experimentation.

With the duty chosen and assorted parameters applied you'd think the new sound would be complete, but there's one last twist in the tail. Courtesy of yet another window hidden in the upper right corner of the main window, even more tinkering awaits.

Once opened, the Link option reveals a series of sliders allowing an additional three existing presets to be appended to the one already being edited.

As a result it's possible to build really big sounds via a multiple preset combination. However, it must be stressed that using multiple presets to build a new

voice does have its drawbacks.

Just like the original Proteus, the Amiga variant – like most sound modules – has a maximum 32-note polyphony which means that no more than 32 notes or voices can be played simultaneously.

As a result, adding up to four presets to a single note means polyphony can suffer quite dramatically, especially if the aforesaid note is played as part of a triad chord thereby instantly burning 12 of the 32 voices on just one chord and leaving precious few for the rest of the composition.

Keyboard splits

However, this doesn't mean the feature is useless, and in fact if used wisely with perhaps two or three presets and thoughtful application any voice and thereby song can really improve.

In addition, all the component presets can be defined to play between a specific pitch allowing multiple keyboard splits with up to four voices spread over a single patch location.

On the plus side the accompanying software is excellent offering all the utilities and editing options you could ask for.

In addition, the card fits seamlessly into the overall Blue Ribbon range with input and output tools for B&PPro, an accessory version of the editor for on-line editing, a pre-defined plug-in band for SuperJam v1.1 plus total compatibility with Patchmeister – Blue Ribbon's very own librarian software. When you add all of the above to the board's obvious multimedia talents, and probably one of the best

sound-to-noise ratios available from a module, the overall combination seems unbeatable.

However TOSM isn't without its faults. Firstly the preset tones can sound a little dated in relation to the latest stand-alone modules, primarily because the ROMs inside are from the very first generation of the SoundEngine which is now in its third revision.

Addition

Although the ROM sounds are a little disappointing the situation could have been easily resolved by the addition of the one thing that the module lacks more than anything else – a built-in digital reverb.

Almost all modern stand-alone modules come with reverb as standard but also the TOSM isn't one of them, resulting in a very dry overall sound.

Even with the problems mentioned TOSM remains a viable and portable solution to the problem of incorporating quality sound into multimedia productions. It's pretty unlikely the card will find its way into the average studio but for those involved in DTV and multimedia in general it's worth consideration.



SYSTEM ESSENTIALS

v1.1.1 - Essential XELLOW - Recommended

Zero required	1MB RAM	Amplification
Mid gear required	Hard drive	

The bottom line

Easy of use 9
Implementation 7
Value for money 6
Overall 7

Supplier: Meridian Software
Distribution Ltd.
Tel: 081-543 3500
Price: £589.95

Video YC-24

Complete YC system
£ 599.00 inc Vat

AVIDEYOYC Complete Graphics Solution

The AVideo YC gives the Amiga and DTV graphic artists the following tools and hardware features: 60 seconds to fit, plugs into Parallel & Video port. Broadcast Quality RGB output. SVHS / Hi8 / Composite Genlock with RGB out. SVHS/Hi8/C composite 24 bit YUY Grabber. 24 bit YUY display frame buffer 768 x 580 pixels. Up to 25 frames per second animation. True 24 bit Paint package new software. Three Video layers, Live action video, Amiga, High Quality video for high speed animation.



Software:

- "Paint24" is a true 24 bit desktop paint package.
- "AVTools" Utility for controlling YC functions.
- "AVideo" software for your programmed 1224 bit image up to 25 frames per second animation.
- "AVAnim" software for high speed animation.



VIDEOYC now shipping

Video 24 Starter System

Video "PAINT24"

Missing out on the AGA quality, miss out no more!

Original AVideo 24 Bit

768 x 580 resolution in 16.8 million colours. Up to 25 frames per second 12 bit animation in new last mode. Overlay Amiga Graphics on top of 24 bit image Fully Genlockable with adaptor cable. Includes true 24 bit display Paint package. Video 24 system £ 299.00

For Amiga 500/1500/2000/3000/3500

See HiQ and AVIDEYOYC's at the Future Sound & Vision Show!

Hi8 and Hi780 Hardware

Need a HardDrive for your A1200?

We can supply 2.5 inch IDE drives for these great machines.
120mb - £299.00

Price inc VAT.

Fitting and partition pack with Cable, Software and P&P only £20.



Hardware - Best Prices

Call for details on the new Amiga 1200 accelerators- 68030/882 40Mhz 4mb ram, 12 mips and upto 32mb. Only £ 549.00

This product is now shipping so order now!!

HiQ limited are pleased to announce the new Amiga 1200 accelerator from IDC

VIPER

The VIPER1230 uses the Motorola 68030 card in the low cost 32bit EC version and the 50mhz version with MMU. This card uses the industry standard high speed 32 bit Ram Simm modules to keep ramp prices low and expandable to 32mb. However, the best feature is the 16 bit DMA port which can have the VIPERSCSI 2 board added which will give an external 10mb/sec synchronous and sustainablespeed port. Viper will be available mid May.

Please call for prices and details!!



Opus ver 4.0 £49.00

Software

FRACTALITY 24 bit

For The AMIGA by Tormas Northcote

Features:-
-Supports Amiga
-AVideo 24 Support
-ATV 24 bit Output
-16.8M colour support
-Automatic Genlock
-Full Paint/Retrace
-Full Paint/Retrace
-Manual Genlock
-Jitterless
-48000/4000 support
-15.3.3.3 Priority
-Device disk available
£24.95

Now includes 256 colour AGA support as standard.



HiQ Ltd

176 Kenton Lane, Harrow
Middlesex, HA3 8SU, UK
Sales/Support

Tel +44 (0)81-909 2092

Fax +44 (0)81-909 3885

Prices include VAT.

Call for a Demo of these products

New Horizon Computers

The Hard Drive Specialist

A1200 & A600 2.5" IDE HARD DRIVES

The ESSENTIAL add on for all SERIOUS Amiga users.

Upgrade your A1200 or A600 with a brand new 2.5" internal IDE Hard Drive. Upgrade Kits include fully prepped and formatted drive complete with cable and mounting screws and comprehensive fitting instructions. Workbench, HDToolBox and Install utilities included. All drives are 100% Compatible with A1200 & A600 and sourced from Brand Name suppliers eg Seagate, Connor, WD etc.

HARD DRIVES SUPPLIED AS KITS OR PRE-INSTALLED IN A1200 OR A600's PHONE FOR LATEST LOW LOW PRICES

20, 40, 63, 85, 120, 137 & 209 Meg In Stock Now!!!

☆☆☆ SPECIAL OFFER ☆☆☆

New Horizon will collect your Amiga, fit the drive of your choice and deliver it back to you within 48 hours. Full 12 month RTB Warranty on your Computer when we install the drive. Phone our Sales Hotline for further details on this Special Offer.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

NEW HI-RES MONITORS NEW

15", 17" & 20" Flat Screen Technology with Lo-Radiation option. ideal for AGA Graphics. Phone for latest Prices

NEW BLIZZARD 32 BIT MEMORY & FPU ACCELERATORS NEW

Zero Wait State, Real Time Clock, 68881 & 68882 FPU Options. Four & Eight Meg Memory options. Fits A1200 Trapdoor Expansion Slot.

NEW A4000/030 NEW

The New Low Cost Mid Range Amiga
Phone for Prices & Availability

HOW TO ORDER

- By Phone. FREE Delivery on all items shown. Next Day delivery on Computers and Monitors add £10.00.
- By Post. Send a cheque or Postal Order made payable to New Horizon Computers and post with your Order to

New Horizon Computers (Mail Order)
High Hope, Lea, Ross on Wye, Herefordshire, HR9 7LN



CREDIT CARDS WELCOME





PUBLIC DOMAIN SOFTWARE AT ITS BEST!

**FAST SAME DAY SERVICE, HELPFUL SALES STAFF, ESTABLISHED FOR OVER 5 YEARS
40,000 MEMBERS THROUGHOUT THE WORLD, WELL OVER 4000 TITLES IN STOCK!**

HOW TO ORDER

BY PHONE

(0924) 366982

Access/Visa/Delta & Switch

BY FAX

(0924) 200943

Please Leave Order & Credit Card Details.

BY POST

PLEASE MAKE CHEQUES

PAYABLE TO:-

17 BIT SOFTWARE

1st FLOOR OFFICES

2/8 MARKET STREET

WAKEFIELD

WEST YORKSHIRE

WF1 1DH

OFFICE HOURS

MON-THURS 9.00 to 8.00

FRI & SAT 9.00 to 5.30

WE ARE OPEN TO PERSONAL
CALLERS FROM 9.00 to 5.30

DISK PRICES

17 BIT, FISH ETC.....	£1.25
SCHEME 17.....	£2.00
AMFM MAG.....	£2.50
AMFM SAMPLES.....	£2.50
CLR SINGLE TITLE.....	£3.50
CLR 2 DISK SET.....	£4.50
CLR 3 DISK SET.....	£4.99
CAT DISKS.....	50p

POSTAGE RATE

UK PD ORDERS.....	50p
OVERSEAS ORDERS.....	20%
(MIN OVERSEAS P&P.....)	(£1.00)

PLEASE ADD 75p P&P FOR
COMMERCIAL, GAMES, DISK
BOXES ETC

BUY 10 DISKS AND GET

1 EXTRA DISK FREE!

BUY 20 DISKS AND GET

3 EXTRA DISKS FREE!

PLEASE NOTE: (AB) AFTER A DISK
NUMBER MEANS 2 DISKS ETC.
PLEASE STATE WHEN ORDERING!

**NEW FOR
CDTV!**

The 17 Bit Collection
Over 1000 disks worth
of the best in public domain
games & demos etc. All on a
double CD! Hundreds of
Demos, Pics, Games & Utilities for
only £40.99 including P&P!
Unbeatable Value!

COMMERCIAL STASH!

Amos 3D.....	£18.99
Amos Compiler.....	£18.99
Captive.....	£12.99
Chaos Engine.....	£18.99
Defender Of The Crown.....	£5.99
Dream Team Compilation.....	£17.99
Harlequin.....	£14.99
Lemmings 2.....	£22.99
Lionheart.....	£21.99
Max Compilation.....	£12.99
Megalomania.....	£11.99
Myth.....	£14.99
No Second Prize.....	£17.99
Nigel Mansell World Cup.....	£17.99
Putty.....	£11.99
Realms.....	£9.99
Sprite (Art Package).....	£17.99
Thunderhawk.....	£17.99
Wind Commander.....	£16.99
Zool.....	£17.99

HOT TEAM 17 SOFTWARE!

Alien Breed Remix.....	£9.99
Assassin.....	£18.99
Body Blows.....	£18.99
Project X.....	£17.99
Superfrog.....	£18.99

LSO "LEGAL TOOLS!"

We currently stock all the LSO legal
tools utility compilations from 1 to
80! A catalogue is available of these
titles for £1 inc P&P or free with
orders of 10 disks or more.

Attention Overseas Traders!

We are currently looking for reliable companies
to represent us in the overseas market. If
you would like to be an official 17 Bit Dealer, and
would like to know how YOU can benefit.

Contact us by Tel or Fax NOW!

Join The Leaders in Public Domain!

CDPD VOLUME #1

Containing Fred Fish disks from
F001 to F660!

Well Worth £19.99 + 75p P&P!

That's over 650 disks Worth!!

CDPD VOLUME #2

Continuation of Fred Fish from
F661 to F750 + The Entire SCOPE

& JAM Ranges! Another packed CD

for only £19.99 + 75p P&P

DEMO CD VOLUME #1

For the Connoisseurs, this CD

contains Demos, Intros, Cliparts,

Modules, Samples etc!

Only £19.99 + 75p P&P!

BITS 'N' BATS

"SPACE WARS"

See the latest in Amiga Animation

on VHS Video! 24 bit dynamic

Hi-Res movie from T. Richter

Only £11.99 + 75p P&P

ALISTER BRIMBLE PRESENTS

"Sounds Digital". A professional

music CD which includes tracks from

Project X, Assassin & others! Great

Music. Only £10.99 + 75p P&P

"THE FINAL FRONTIER"

A 4 disk mag which no Trekkie

should be without. Includes exclusive

artwork by T. Richter and upto date

seminar news etc. Only £6.95

"AM/EM"

Issue 11 of this ever popular disk mag

for music enthusiasts is now available

Only £2.50 or £5.00 with sample disk.

Back issues also available!

"LSO GRAPEVINE #14"

As always, our most popular disk

mag is packed with controversial

topics and news from the "Scene"

Don't miss it at £3.75!

ASSASSIN'S GAMES DISKS!

If you thought the first 30 were good,

you should see the next lot! Now a total

of 56 issues available at incredible

prices! Have a look below!

Any 10 for £45.99 Any 20 for £21.99

Any 30 for £29.99 Any 40 for £37.99

Any 50 for £45.99 or just take the

whole lot for an incredible £49.99!

WE STOCK THE LOT!

FISH TO 840!

AMOS DISKS!

TBAG DISKS!

NZ DISKS!

AMICUS!

AMIGAN!

ALL CLR TITLES!

LATEST DISKS!

+2554.	Beach Animation
+2553.	BootX 5.23
+2552.	Amos Games Disk #1
+2551.	Skyboards Music III
+2550.	Egg Blasters
+2549.	Classix Gold R. Baxter
+2548.	HP-550C Printer Driver
+2547.	System Defender Game
+2546.	Russian Fronts Disk
+2545.	CryptoBurners Pics. Mega
+2544.	Misery TRSL
+2543(AB).	Dreams
+2542.	Freedom Crack #10 Mag
+2541.	Talent Demo
+2540(AB).	Blob Animation
+2539.	Alien Bash
+2538.	Mandelbrot Mania
+2537.	Zircon Mag #2
+2536.	Zircon Mag #1
+2535.	Diskmanager III
+2534.	Stirling Engine III
+2533.	Util Disk Maker V1.1b
+2532.	Star Trek TNG Quiz
+2531(AB).	Team Hoi, 1200 Only
X2530.	Lemmings Revenge
+2528(AB).	Desert Doo Anim
+2527.	Duncan Dung Beetle
+2526.	Charly Cat Anim 2 Meg
+2525(AB).	Printer Driver Collection II
+2524.	The Maths Adventure
+2523.	Tronicart
+2522.	MicroMarket V1.1
+2521.	Oceastuff Music
+2520.	J.R. Comm 1.02
+2519.	A1200 WB Hacks
+2518.	More A1200 WB Hacks
+2517.	Dong Demo!
+2516.	Electronic Bible
+2515(ABC).	Quality Time (5MB)
+2514(ABCD).	The NEW Superlenses
+2513.	The NEW Superlenses
+2512.	The NEW WB3 Superlenses
+2511.	Amos Pro Updater V1.11
+2510.	Landscape/marks C/Art 2
+2509.	Wildlife C/Art
+2508.	Landscapes/marks C/Art 1
+2507.	EasyCalc Spreadsheet
+2506.	17 Bit Utils Vol 3
+2505.	Fantasy Art Pics
+2504.	Black Energy Music Disk
+2503.	Windblend A1200 FracGen
+2502.	More 1200 Only Utils
+2501.	Childrens Songs
+2500.	Gladiators Music Disk
+2499.	Fruit Salad Game
+2498.	Picture Puzzle
+2497.	Marcos Box Of Fun (1.5MB)
+2496.	Excel! Database
+2495.	Attraction Music Disk
+2494(AB).	18th Hole Golf Game
+2493.	The Enforcer Anim
+2492.	Ham 8 Vistas
+2491.	Vidi Effects
+2490.	Drum Loops/Samples
+2489.	Cindy Crawford Slides #2

CLR TITLES

CLU07	Philo
CLU08 (2)	Word Finder Plus
CLU10	Power Accounts
CLU11	CALC V1.3
CLU12	Virtual Windows
CLU13	Datos
CLU14	Stock Controller
CLU15	Epoch VI
LEB01 (2)	Dinosaurus
LEB02 (2)	Geology
LEB03 (3)	Solar System
LEB04	Colour Pad
LEB05	A-Chord Guitar Tutor
LEB06	T.A.M.I. (Maths Instructor)
LEB07 (2)	Total Concepts Fishing
LEB08	Night Sky
LEB09	Words & Ladders
LEB10 (3)	Basically Amiga
LEB11	Lets Learn
LEB12	Alphabet Teach
LEB13	Home Brew
LEB14 (3)	Ecology
LEB15	Fastfire II
LEB16 (2)	Kings & Queens
LEB17	Thingamajig
LEB18	Work And Play
LEB19	Play It Safe
LEB20	Big Top Fun
LEB21	JugMania
LEB22	Paradox
LEB23	Sonic Smartiehead
LEB24	Splodge
LEB25	Imbrium
LEB26	Skun 19
LEB27	Jungle Bungle
LEB28	Flower Power
LEB29	Stocking Fillers
LEB30	Marvin The Martian
LEB31	Easy Money

CLIPART!

MACART PACK

Packed with hundreds of bitmapped images from weddings and Christmas to Vic characters! 18 disks full for only £12.00 Inc!

CLIPART GALORE

14 disks crammed with loads of bitmapped images. The disks are categorised and cover a wide selection of topics
All 14 disks for only £15.00 Inc!

MORE CLIPART!

CA-15 Disks: £6.00
Miscellaneous
CA-24 Disks: £5.00
Occupation Etc.
CA-35 Disks: £6.00
Fruit & Veg & Others
CA-43 Disks: £3.75
Boris, Girls & Babies
CA-55 Disks: £6.00
Christmas Clipart
CA-62 Disks: £2.50
Mythological Monsters
CA-72 Disks: £2.50
Flowers, Star Signs
CA-85 Disks: £6.00
Weddings, Churches
CA-91/0 Disks: £7.00
Lots & Lots of Animals!
Take the lot for £40.00 Inc!

MISCELLANEOUS

GAMES GALORE PACK

12 disks full of games for the kids to play on a rainy day during the hols. Over 100 of the better PD games for only £13.00 including postage and packing! Take the phone off the hook, lock your doors and bid the cunts off your joystick... In time to rest the men out from the boys etc...

INSTRUMENT PACK

Literally hundreds of instruments thrown on 10 disks for you to use with your favourite music sequencer.
Compatible with all the more popular sequencers such as Sound Tracker, Protracker, Med, Octalayer etc. All 10 disks are available for £12.00 including postage and packing!

A1200 SLIDES PACK

"Ahh, but my PC has better graphics than your Amiga..." Sounds familiar? If so, make your mates eat their words, just ram an A1200 none flicker Hi-Res picture down their throats and watch 'em turn a paler shade of green than a mulla underpants.
All 10 disks for only £12.00 inc P&P

NEW TO PD?

Our starter pack should get you going. Contains 4 catalogue disks, an update and a samples game disk! £3.95

"HOBBITS & SPACEHIPS" - BLOOM LYNNE & SEPPA BURKE H12.99 + 5pp P&P
If you are new to bit-tech you won't forget this amazing CD from the ex-console makers.
Now on limited stocks so hurry!

17
BIT
SOFTWARE
Est. 1988

SCHEME 17

SS23	Personality Analysis
SS22	Lockout (HD Security)
SS21	Mindmaster
SS19	Techno Attack IV
SS18	Pools Predictor
SS17 (3)	Finlandia
SS16	Frakscene #1
SS15	Kids Karaoke
SS14	Crystal Symphonies II
SS13	Techno Attack III
SS12	Christmas Karaoke
SS11	Techno Attack II
SS10	Techno Attack
SS09	Tuff Enuff
SS08	Best of Seb Lentfert
SS07	MAB 2.0
SS06	Techno Upstart
SS05	KI Samples
SS04	Alkal 550 Samples
SS03	Alkal 550 Samples
SS02	Alkal 550 Samples
SS01	A. Brimble Music

Please Note, SS Disks are £2.00

FOR EUROPEAN/ NON EUROPEAN READERS, WHY NOT SAVE POSTAGE COSTS AND ORDER OUR DISKS FROM AN OFFICIAL OVERSEAS DISTRIBUTOR! SEE BELOW FOR MORE DETAILS

SWEDISH PD LIBRARY

SOFTLER SOFTWARE

All prices are in SEK

Borx 242 S-124 02 Bandhagen tel. int. +46- (0)8-749 08 06

Beställ 17 Bit diskar från oss!
Den enda officiellt godkända leverantören av 17 Bit diskar i Skandinavien
Priser: 1 till 10 diskar...20kr/st 21 och fler...17kr/st
1 till 20 diskar...18kr/st Fred Fish...14kr/st
Ej kommersiella titlar.
Priser inkl. moms & frakt
Ring 08-749 08 06 for info.

Protracker 3.01 - NY VERSION!
Användarvänligt! 20:-
Instruments, ST01-ST10 170:-
Telecs Röster, 5-diskar 85:-
Bach's Rytmer, 5-diskar 85:-
Modula, låtar, 5-diskar 85:-
Alla utvärderande för endast 395:-

PC på Amiga!

Matruskande PC XT enheter med CGA grafik, systemdisk och några PC program (MS-DOS kan behövas)
SR.364 PC<Amiga 20:-
SR.364 Konverterare 20:-
För text & grafik

Betala på PostGiro nr

426 99 36-3
Moms och frakt ingår. Inget tillkommer vid PG inbetalning. Vid telefon beställning vid tillkommer 21.50 i postförskott! Sätt gift.
NORGE, DANMARK & FINLAND
Var god betala 20% extra per order.
min. SEK 30:-
Betaling endast i svenska kronor.

Endast för A1200/A4000:
Tetriz AGA 20:-
Aven Gif database for Wb
Super HAM 115:-
Grafik i 262.000 färger
Gå och håll dig! 6-disketter
Weird Science 95:-
Hi-Res, 256 färger, 5-diskar

CDPD
För CDTV/A570
- CDDP 1 Fred Fish 1-660!
- CDDP 2 Fred Fish 661-760
Scope 1-220, mm
- The Demo Collection
1000-tals moduler, demos, spel, clipart, fonter mm
325:-/st
- 17 Bit Collection
En diskett CD med över en GIGABYTE av spel, demos och nyttiprog! Motav. 1700 disketter. Kräver en diskettstation 565:-

Vi har över 4000 PD diskar!
Diskatalog 30:-
på 4 diskar, inkl. 17Bits PD

AMIGA のプロショップだ!

A4000X SET V2.04	64,000	A500 V1.3 1MB RAM	59,000	A1200 V3.0 AGA	79,800	A1200HD V3.0 AGA 8MBs	129,000
A2000 V2.05-EC	61,000	A3000 T200 1MB/CT0008	61,000	A4000 6040 1MB/CT0008	69,800	A2000H 6040 1MB/CT0008	119,000

グラフィックス		DC-TV	58,800	エミュレータ	
SCENERY ANIMATOR 2	14,800	CALIGARI 24	48,800	AMIGA E PLUS	57,800
BRIGHTLINE	27,800	ALACRIZ 40	48,800	ROMAN FOR AMIGA E PLUS	45,800
TELLER PRINT AGA	18,800	PLANARIMATOR	48,800	PC286 BRIDGE BOARD	48,800
IMAGER 2	48,600	REAL TO CLASSIC	18,800	ACORN BRIDGE BOARD	34,800
IMAGE MASTER	27,800	VIDEO 24 PRO	58,800	PC286 BRIDGE BOARD	179,800
FIRE CRACKER TMR	168,000				
ビデオ		ROCKEY CRYSTAL	62,800	ハードディスク	
IMPACT VIDEO 24	298,000	DAVID VIDEO G-LINK	48,800	AMIGA PROFESSIONAL	14,800
VIDEO TUTORIAL V2	264,000	UPPERMORSE VIDEO V1	128,000	SAFE LATCH V1 (V.0)	48,800
PERSONAL TSC V1	135,000	ACT DESPT PRO AGA	28,800	DEPT V1	48,800
MORPH PLAYS	28,800	CLUCKER VIDEO 24	38,800		
VIDEO AMIGA 12 AGA	24,800	AZURIO DESPT DANCER	38,800		
(PRICES QUOTED IN YEN)					

Mindscape's Miracle keyboard, reviewed some months ago, attracted rave reviews in this and most other magazines because it was easy to use, extremely well thought out, and usually capable of teaching idiots like me to play the piano.

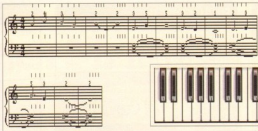
Since the original review, I've been progressing haltingly through the songs supplied with the package, but recently have failed to keep up with practice because many of the songs are less than contemporary.

For example, the ultimate lesson which, I hasten to add, I'm still some way off, focuses on Handel's Water Music. Now, I wouldn't want to offend our classical-loving readers by casting aspersions on this piece's attraction to the modern ear, but it's not exactly toe-tapping stuff, is it?

Never fear! To the rescue of the jaded musical palate come the Miracle Song Collection volumes one and two, each disk crammed with 40 songs from a variety of artists, some of whom are actually still breathing.

The net has been cast fairly wide to make up the numbers, and a quick scan of the disks will confirm the presence of songs as diverse as the gut-churningly soppy Hello from Lionel Richie and perhaps the ultimate indictment of American culture, Rhinestone Cowboy.

Taking the collection as a whole, some of the songs seem to have been included so that one can practice a tune for Christmas to which old aunty Gladys knows the words,



The idiot's guide to modern musical classics



The second coming



Song files to breath new life into the Miracle keyboard, and Imagine gets a revamp. Stevie Kennedy reports

but sheer diversity makes up for this.

Passing the disks around the office brought a variety of reactions, from pleasant surprise to outright embarrassment (the latter from the Lionel Richie fan), so there seems to be a fair amount on each to suit most tastes. My own favourite inclusions are Hey Jude, In the Midnight Hour and Dream Weaver, and though I can't play any of them yet, I'll be having a damned good try.

Installing the songs is simply a matter of double clicking on the disk's Install icon and following instructions. When installed, the songs

will be accessible to Miracle software, but only as additional practice pieces.

Extra songs (of which there are over 200 on the original disks) can be played in the practice room using either left, right, or both hands at a user-defined tempo until a degree of competence is reached, but there is none of the superb tuition associated with Miracle's set lessons.

This to play a song from the new collection it is a prerequisite that the user progresses through the original lessons to the

same level as the song.

Any attempt to jump straight into one of the more difficult ones is therefore doomed to failure as the budding pianist runs into unfamiliar chords and techniques he or she has never before had to use. Luckily, those clever Software Toolworks chaplains have built a certain degree of idiot-proofness into the collection.

SKILL LEVELS

Each and every song comes in two flavours, easy and difficult. The easy songs are usually pitched at around level 15 in Miracle terms (less than half way to the final level 40), and the difficult versions at a knuckle-busting level 35 or beyond.

It is therefore possible for the beginner to learn his or her favourite tunes while still on the nursery slopes, then progress to the black runs with the development of either sufficient mastery or enough blind arrogance.

I had a crack at the easy level 15 version of Hey Jude and found it to be playable, though not exactly a version Mr McCartney would have been proud of, so there's hope for the rest of the collection.

Overall, the Song Collection disks are a "must buy" for any Miracle owner and enhance the wider appeal of the whole ensemble to prospective new students of the ivories.

The disks are available from Mindscape (0444 246333) and cost £49.95 each, a price which is pretty steep for a single floppy, but which presumably takes into account the fact that the 40 original titles all have owners and all of them take a small cut.



Learn to play Motown songs with alien help

Imagine 3.0

The review of Real 3D v2 in this issue is guaranteed to build speculation and expectation for the release of the next version of its closest rival.

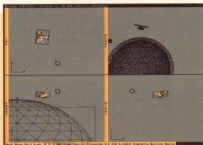
Imagine 3.0 is due to see the light of day later in the summer and promises to include enough features to ensure hostilities on the ray tracing front recommence with their old vigour.

Developments in the commercial world which have been reflected in Real 3D v2 include modelling tools such as twist, taper, bend, and shear, all of which will appear in Imagine 3.0.

In addition, the inclusion of brush and texture "tacking" - the process of assigning brushes aside to individual polygons rather than entire objects - should make complex objects much easier to create.

Jointed objects, which have always been rather unwieldy, could become a thing of the past with Imagine 3.0's new bones feature. Working in much the same way as skeletal spines, bones will make human or animal-like figures more natural and give the user much more control over the way they move.

Other major new features include real-time 3D animation preview, AGA support, an enhanced forms editor, a new terrain ed-



The face of Imagine 2.0 will soon be changing for the better

tor for creating landscapes, and (at long last) much improved anti-aliasing.

One area in which Impulse have so far remained silent is animation, and there is no way of knowing if Imagine 3.0 will be able to match Real 3D's advanced animation techniques such as the new collision detection feature.

Watch this space for more updates as they happen.

PRO PUNTER 2 PLUS

DO YOU WANT TO INCREASE YOUR CHANCES OF WINNING ON THE HORSE? THEN LOOK NO FURTHER.

Independent comparison reviews confirm that Pro Punter is still the performance benchmark by which all others are judged.

The best racing software... Available. The racing that.

Officially proven to be the racing press and other magazines by sending time and date transfer letters by Post Office mail. ProPunter has shown that it can predict winners.

With remarkable accuracy. ProPunter is also available with your money. If it thinks there is any doubt about the outcome of the race, it will advise you not to bet.

The 16th second generation ProPunter is written to professional standards and is attractive and easy to use. It features full editing and review of race data entered and also a unique low-maintenance database that does not need constant updating.

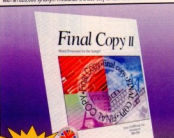
In addition to UK features, ProPunter 2 contains unique counselling/graphics editors and will configure to metric weights/distances, thus allowing configuration for racing worldwide.

ONLY £49.95

Product Price Order No.
ProPunter 2 v.146 (MS) £49.95 027.00 1991

FINAL COPY II

Final Copy II is not only the Amiga's most powerful word processor with every feature you would expect, plus many more normally found in DTP packages, but it also gives superb scalable outline fonts with any Amiga, even at your printer's highest resolution, with almost PostScript laser perfection - no matter what printer you may have. It includes a 110,000 word British-English Collins premium spell checker, along with an 820,000 synonym Thesaurus. It is also easy to learn and to use.



ONLY £69.95

Product Price Order No.
Final Copy II £69.95 032.00 1992

POWER SCANNER

The Power Scanner v3.0. Features:

- 100-400 DPI scanning resolutions
- 64 Greyscale
- Thru-port for printer
- Award winning editing, image manipulation and scanning software

The Power Computing colour hand held scanner for the Amiga is also now available. This scanner offers the following features:

- 4096 colours
- 50-400 DPI
- 6 scanning modes
- Text
- Greyscale
- Colour halftone
- Colour



ONLY £113.95

Product Price Order No.
Power Scanner v3.0 £113.95 033.00 1992

VGA MONITOR ADAPTOR

The AMI VGA Adaptor is a handy little gadget which gives most Amiga owners easy access to the higher resolution display of a VGA monitor.

- It is very easy to use - just plug in and off you go
- Works with any standard VGA or Multisync monitor
- Use screens of up to 640 pixels x 480 lines without interface and without flicker
- Compatible with Amiga 500, 500+, 600, 1200, 1500, 2000
- Operates with Kickstart 1.3, 2.045 and 3.0
- Screen driver software supplied
- Through-port allows the connection of a CGA display
- Full technical support telephone service

ONLY £37.95

Product Price Order No.
VGA Monitor Adaptor £37.95 034.00 1992

X-COPY PROFESSIONAL

This superb package enables the Amiga user to back up their discs efficiently and effectively.

Features include:

- The most comprehensive back-up utility
- Includes floppy disk back-up, hard disk back-up and file back-up
- Also backs up ST, IBM etc disks
- Checks disks for errors
- Copies disks for better loading
- Fast formatting
- Copies up to 4 disks in 48 seconds
- Full update service available

Includes 100% Copyrite protection for copying copyrighted software to a second disk.



X-COPY PROFESSIONAL, users for all your needs, included in the package is a small hardware interface that plugs into the external disk drive port at the rear of the Amiga and you external disk drive (if you have one) plugs into the back of the interface. This allows the Digital Bit Image Copy Mode to use the Adaptive Pulse Width Modulation technique to backup virtually all known discs.

100% COPYRIGHT ACT European Direct neither condones nor authorizes the use of this software for the reproduction of copyrighted software. The facilities offered by X-Copy Pro are intended to backup users own software, PD Software & other such programs where permission has been given. It is illegal to make copies of copyrighted material without the permission of the copyright holder.

ONLY £35.95

Product Price Order No.
X-Copy Professional £35.95 035.00 1992

VIDI AMIGA 12

The ultimate low-cost colour digitiser for the Amiga! No RGB splitters or optical filters are required, and you can grab full-colour images in less than a second (none are grabbed in real time). With an abundance of the format, full multitasking and composite or S-video output, it's versatile and powerful.



ONLY £75.95

Product Price Order No.
Vidi Amiga 12 £75.95 036.00 1992

TURBO TOUCH JOYPAD

This is a radical new style of hand held controller. Just pass your finger over the sensor - No more finger fatigue or blisters. And thanks to better diagonal and circular (360°) control, the newest and most challenging games are easier to control and more fun to play. The Turbo Touch 360 brings a new dimension of control and comfort to video game play.



ONLY £16.95

Product Price Order No.
Turbo Touch Joypad £16.95 037.00 1992

WORKSTATION 2

Are you confused by CLI? Baffled by backups? Frustrated by files? Here's your answer...

WorkStation 2 is here

Have you got the very latest Amiga? If so, you need the ultimate Workbench 2 accessory. Whether you have an A500 Plus, A600, A1500 or perhaps a Kickstart upgrade on a 1.3 machine, the time has come to take control thanks to the amazing WorkStation 2. It's the disk the Amiga world has been waiting for...

WorkStation 2 has been designed specifically for the new breed of Amiga with the express purpose of simplifying the computing process while providing all the computing tools you'll ever need.

This indispensable collection of utilities includes the very latest and best shareware compiled within a smooth and simple user friendly interface. No more CLI or Shell, a simple point and click is all you'll ever need...

This is just a small selection of the tools and utilities on offer. Others include ScreenX and GPOMem.

For the artists out there Icon Edit awaits to produce customised icons, while MacPrefs adds the option for a 16 colour designer backdrop, animated pointers and non clicking lappies. Screen Saver provides a tailor made designer look to your system and transforms the appearance of your Workbench screen forever.

Qsd - After its massive success on the original Workstation disk we have added the very latest version of this essential text editor. Ideal for all levels of word processing and single writing needs.

Product	Price	Order No.
Workstation 2	£4.50	8209
Workstation 2 A500 Plus	£2.50	8210
Workstation 2 A600	£2.50	8211
Workstation 2 A1500	£7.50	8212
Workstation 2 A1600	£8.50	8213

If you have Workbench 2, you need WorkStation 2!

ONLY £4.50

POWERPACKER PROF

Here's a winner! Using this powerful utility, you can fit around 40% more information on every disk you use - sometimes up to 70%. The powerful 'truncating' routines actually shrink your programs, and expand them on running. Along with the supplied utilities, this contains all you need to pack these disks.



SPECIAL OFFER:
Buy PowerPacker
and Kill Da Virus
together at the
special price of
£25 and save
nearly £5

IN ADDITION TO POWERPACKER,
this superlative software system
includes four distributable utilities
including disk full power
and screen displays,
and printing and animations

Product	Price	Order No.
PowerPacker Professional	£14.95	8214
PowerPacker Professional + Kill Da Virus	£25.00	8215

ONLY £14.95

GAME MAKER'S MANUAL

Author of several authoritative computer manuals, Stephen Hill is well placed to offer page after page of invaluable information covering every single aspect of writing games, from high-speed sprites to simulations, animation to assembler - all you need to know to design and create your masterpiece!



Product	Price	Order No.
Game Maker's Manual	£16.95	8880

ONLY £16.95

MASTERING AMIGA AMOS

Amos is one of the most exciting programming environments in the Amiga. This book explains the fundamentals and the skillful shortcuts to great programs, with lots of example codes for the reader to experiment with. Games, 3D and demo programming developments are brought right up to date. This book covers Amos, Easy Amos and Amos Professional.

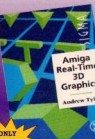


Product	Price	Order No.
Mastering Amiga Amos	£14.95	8216

ONLY £14.95

REAL-TIME 3D GRAPHICS

Learn how to write programs with smooth flowing 3D effects and produce high speed animation in real time controlled by the Amiga joystick with this book. At the same time, learn about Amiga assembly language patiently and enjoyably. Listings disk also available to avoid the effort of typing them all out!



Product	Price	Order No.
Real Time 3D Graphics Book only	£14.95	8833
Real Time 3D Graphics Book + Disk	£24.95	8834

ONLY £14.95

ALPHA DATA TRACK BALL

Features include:

- Supports auto-feel and key lock function
- Top quality construction with 100% mechanical encoder
- Ergonomically designed for easy one hand operation
- Effortless finger-tip operation with reliable microswitch buttons



Product	Price	Order No.
Alpha Data Track ball	£29.95	8557

ONLY £29.95

AMOS PROF & EASY AMOS

Easy Amos - Even the complete beginner can learn how to master graphics, animation, music and speech and soon you'll be turning out animations, education programs, and games. Amos Professional - With over 700 commands, an easy-to-use and comprehensive 100-page manual, two example disks and countless built-in routines.



Product	Price	Order No.
Amos Professional	£29.95	8217
Easy Amos	£29.95	8218

FROM £29.95

DRAGON MOUSE

The Dragon Mouse is optically encoded. Has 280 dpi resolution, the Amiga version has 2 buttons with a full warranty against button failure.

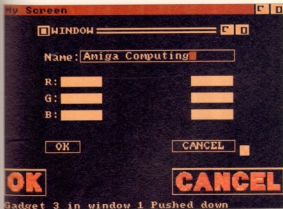


Product	Price	Order No.
Dragon Mouse	£15.95	8858

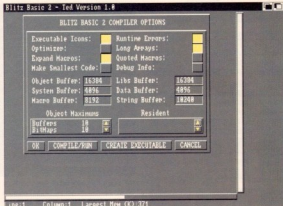
ONLY £15.95

AMIGA
READER OFFERS

Order form and more great offers over the page



Blitz 2 intuition displays are easy to create



All the usual types of compiler options are provided

Blitzing the competition

Blitz Basic has been around for quite a while, during which time it has acquired the reputation of being one of the most interesting Basics available.

The package has never really been aggressively marketed in the UK although elsewhere in the Amiga world there are a great many satisfied Blitz users. With the demise of the original AmigaBasic, and the resultant gap in the Basic interpreter/compiler market, a lot of alternative Basics have come to the fore, including HiSoft and GFA Basics.

Of late, however, it has been Amos that has stolen most of the limelight, but there is little doubt that the latest update of Blitz Basic, called Blitz Basic 2 - or Blitz 2 for short - will also make its mark on the Amiga Basic scene.

Blitz Basic 2, like its predecessor, can produce incredibly fast code - easily fast enough for most commercial games writers. As with most Basics it offers its own set of Amiga-specific commands although, having said that, quite a few of its "main core" Basic commands follow, with one or two quite surprising exceptions, the usual

de facto standard set by Microsoft Basic.

When you get to the more esoteric goodies, Blitz 2 has its own way of doing things but of course in this respect it is no different from any of the alternative Basic packages.

Talking of packages, the new Blitz 2 offering consists of three disks - Program, Library and Examples - plus an assortment of manuals, Blitz magazines and so on.

EXTRA GAMES

The review package also provided a couple of other disks containing some Blitz 2 public domain games, but to be honest it wasn't made clear whether these are now part of the Blitz 2 package or were just thrown in as extras on this occasion.

The main documentation is split into

Paul Overaa puts the latest version of Acid Software's Blitz Basic 2 compiler under the spotlight. The results are quite literally stunning

two parts, namely an A4-sized reference manual, and an A5-sized user guide. The reference manual is clearly written, clearly laid out, and very adequate.

One of the things that I particularly liked is that commands and functions are grouped according to use, rather than simply being thrown together as a straight alphabetical keyword/commands listing.

This makes the manual easy to use and it's a doddle for example to locate all the string functions, or all of the program flow control statements, offered by the language. There are plenty of examples of use (one for almost every command) although the main tutorial-style discussions are reserved for the user guide which does an equally reasonable job at providing an overview and gentle introduction to the language.

To enter and compile Basic programs you need a text editor. Blitz 2 comes with an editor called Ted which acts as both an interface to the Blitz 2 compiler and as a standalone text editor.

Ted is a fast, reliable editor which has

all of the usual types of project and block loading and saving options. There's mouse controlled cut and paste and search/replace facilities which include case sensitive/insensitive search toggles.

As with most such editors, Ted is fairly average looking display-wise but it's pretty obvious that some thought has gone into this offering and in use some nice touches can be found.

HIGHLIGHTS

You can, for instance, reset the current directory from Blitz 2's file requester - this is useful when additional files need to be loaded as a program is run.

Another feature, especially useful for structured programmers, is the Amiga-A combination which automatically highlights the current line and any lines above or below it which are indented by the same number of spaces.

The compiler itself is called directly from the editor menu and provides all the usual types of user-definable options for

Grand graphics

On the graphics front, Blitz 2 scores very highly indeed. The language provides the programmer with a whole range of easy-to-use high-level objects including intuition event-oriented mouse, menu, gadget, window, and screen support.

Also on offer are objects which concern themselves with sprites, bitmaps, palettes, shapes, Intuition fonts and Blitz fonts (special 8 x 8 fonts for fast Bitmap text).

Incidentally, Blitz 2 also allows the use of both IFF samples and Soundtracker/Noisetacker song modules. One of the nice things about the overall Blitz 2 approach is that all objects tend to be handled in a similarly consistent fashion - this helps to make programs easier to both write and read.

Building structures

Anyone who has ever done any C programming on the Amiga knows how important the C structure is. Structures are complex variables which allow the programmer to bundle together sets of use-related variables and treat them as a single unit.

One of the most interesting additions to Blitz 2 is that the compiler now supports NewType variables which to all intents and purposes are Blitz 2-style C structure definitions. Supposing, for example, that you wanted to define a unit for storing details of appointments held in a computerised diary. With Blitz 2 you could do it like this:

```

NewType appointment
time:g
day:d
month:m
year:y
details:d
END NewType

```

Once this type of unit has been defined variables can be assigned to it by using the NewType name as a suffix, eg example.appointment, and from this point on individual members of the unit can be manipulated using the backslash (\) character:

```

example.day=5
Print example.day

```

NewTypes are extremely useful and as well as being able to include other NewTypes within a NewType definition it is also possible to include arrays.

Some more good news for the serious programmer is that direct support for linked list operations has now been implemented. Lists are dimensioned in much the same way as arrays but can be manipulated with special commands and functions such as ResetList, AddItem(), AddLast(), NextItem() and so on.

If, for example you wished to create a list of 30 of the appointment structures just illustrated you could do it like this:

```

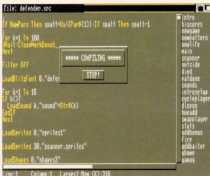
30 List June.appointment(30)

```

and from that point on you could use any or all of Blitz 2's List manipulation functions on that NewType variable set! The Blitz example disk has some extremely good illustrations of how lists of graphic object NewTypes can be created and manipulated.

Another facility that Blitz 2 supports, and which though not usually found will be beloved by users with some C experience, is the use of a 'pointer operator'. More C style magic is provided with support for manifest constants, conditional compilation, Blitz 2 macro definitions and the use of Resident files that contain pre-compiled lists of NewTypes, macros and constants.

If this is not enough the manual mentions that facilities that allow programmers to link Blitz 2 programs to C code modules will be available in the near future.



The editor - simple but effective



The Intuition utility in action

including debugging info, minimising code size, creating icons for executables and so on.

In addition to this, the compiler supports an array of control directives that when placed within the programs themselves control such things as mode selection, file inclusion and error message generation.

Like most Basic compilers Blitz 2 can report two types of errors - compile time errors which cause the compiler to stop and display a diagnostic message on the screen, and run time errors.

To help with detection of the latter, Blitz 2 provides a run-time debugger that, if enabled, will be activated automatically when, and if, such errors occur.

It's possible to trace program execution, switch between debugging and program displays, and perform things like expression evaluation. Trace options include both backwards and forward single stepping and of course the ability to step backwards through the code that was executed prior to a break gives the programmer much better than average chances of seeing why the error occurred in the first place.

ASSEMBLER

Blitz 2 also provides other tools including the Intuitools, shape maker, and map edit utilities, and... an assembler.

Like all Basics, Blitz 2 has areas where it has its own flavour and one of these is in the way variable types are declared. Blitz 2 supports six different types of primitive variables - five number types plus the usual string variables.

Numeric variables can be byte (8-bit), word (16-bit), long word (32-bit), or floating point and there's also a q (quick) number type which offers a two-byte fixed point format for fast manipulation of decimal numbers.

Where Blitz 2 differs from other Basics is in its type notation - number variables have to be given letter-based suffixes so whereas in, say, HiSoft Basic you'd might write a 16-bit integer called loop_count as loop_count.w you'd need to use loop_count.w with Blitz2.

Although it is admittedly easy enough to convert from one form to the other it,

...blisteringly fast and offers some stunning Amiga-orientated graphics

to minimise potential portability problems, probably a good idea to instead use Blitz2's DType command. This allows you to pre-define variable types and so avoid the use of explicit letter-based suffixes.

Surprisingly Blitz Basic does not recognise REM as a remark indicator - it uses the semicolon instead (a common 68000 assembler convention). To my mind this is plain stupidity in the world of Basic but to be honest it doesn't really cause any serious problems once you are aware of the fact.

Even when physically converting files written using other Basics it is only a matter of globally replacing all REMs with semicolons!

One things that is likely to attract many of the more advanced Amiga programmers to Blitz 2 is the fact that an in-line 68000 assembler is provided.

OK, so 68k coding isn't everybody's cup of tea, but it's nice to know that these facilities are there if, or when, you need them. The good news for most coders is that even without dropping into 68k code, Blitz Basic 2, like the original Blitz Basic, is blisteringly fast and it offers some stunning Amiga-orientated graphics facilities.

These include super-smooth scrolling and dual-playfield tricks available using Blitz Basic's Blitz Mode command, which allows programs to suspend normal multi-tasking and take over the whole machine.

While many of the Blitz 2 display tricks can be achieved by anyone (including beginners) there is no shortage of provision for the more advanced user and if you fancy a Basic whose options include commands for things like copper list manipulation and so on, then you need look no further than Blitz2.

I've certainly been very impressed with the enhancements provided by Blitz Basic

2, especially with the C-style language extensions, but when I first encountered the Blitz way of doing certain operations my first reaction was "some of these things may cause problems for the new Basic coder".

Within hours of using the package I'd changed my mind and now suspect that because the overall size of the language (even with its extensions) is smaller than alternative offerings, Blitz Basic 2 is going to be less difficult to get to grips with than many other Basics.

Certainly even novice programmers are going to be able to produce a lot of clever effects very easily indeed. Needless to say the more experienced coders will find that Blitz 2 offers stunning possibilities.

It deserves to do well, but obviously acquiring this success is likely to be something of an uphill struggle given that Amos, HiSoft Basic and GFA Basic have already captured most of the potential market.

Whether current Basic programmers will swap to Blitz 2 remains to be seen, but it may well draw its support from other areas. There are, for instance, an awful lot of serious C/assembler coders who currently tend to be unimpressed with Basic. If you fall into this category my advice is to have a look at Blitz 2 because I suspect that it may change your mind.



SYSTEM ESSENTIALS
Blitz - Essential YELLOW - Recommended

1 Mb RAM	2 Mb RAM	Normal monitor
-------------	-------------	-------------------

The bottom line

Ease of use: 8
Implementation: 9
Value for money: 8
Overall: 8

Supplier: HB Marketing
Phone 0753 686000
Price £69.95

Ladbroke Computing



**33 Ormskirk Rd,
Preston, Lancs,
PR1 2QP**

Ladbroke Computing International are one of the largest established home computer dealers in the U.K. We have developed an extensive customer service policy which involves testing of all hardware prior to dispatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup.

All prices are correct at copy date 17/3/90 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery.

How to Pay

You can pay by order by Cheque/Postal Order made payable to Ladbroke Computing. Or give your credit card details over the phone.

Delivery

Postal delivery is available on small items under £40 (Normally £3. phone for details). Add £7 for courier delivery. Next working day delivery on mainland UK subject to stock (£11 for Saturday delivery).

Open Mon-Fri 9.30am to 5.00pm
Ladbroke Computing Ltd trading as Ladbroke Computing International.

Fax: (0772) 561071
Tel: 9am-5.30pm (5 Lines)

(0772) 203166

Printers



Star	
Star LC200 Colour	£165.00
Star LC120	£124.00
Star LC24/100 Mono	£179.00
Starjet SJ48 Bubblejet	£210.00
SJ48 Sheet Feeder	£55.00
SJ48 Ink Cartridge	£19.00

Citizen

Citizen Swift 240 Colour	£270.00
--------------------------	---------

Hewlett Packard

HP Deskjet 510	£329.00
HP Deskjet 550 Colour	£620.00

Lasers

Seikosha OP104	£549.00
● 512K RAM (Exp to 2.5Mb)	
● HP Laserjet IIP emulation	
● 14 resident fonts	
● Centronics/RS232C/RS422	
● 12 months on-site warranty	
Seikosha 512K RAM upgrade	£69.00
Seikosha Toner (2 units)	£19.00
Seikosha Drum unit	£79.00
Ricoh LP1200	£759.00

Add £3 for Centronics cable and £7 for next working day courier delivery.

Bio-Con Pen Mouse

"The Natural way to draw"

- 290dpi resolution
- 2 Microswitched buttons
- Opto/Mechanical mechanism
- Switchable between Amiga/ST
- Direct Mouse Replacement

BioCon Pen Mouse

£24.99

Speed Mouse

- 290dpi resolution
- 2 Microswitched buttons
- Opto/Mechanical mechanism
- Switchable between Amiga/ST
- Direct Mouse Replacement

Speed Mouse

£11.99

GVP II Hard Drives



- Quantum SCSI Hard drive
- Ultra fast 11ms access
- Up to 8Mb RAM on board
- 2 year warranty

42Mb No RAM	£249.00
80Mb No RAM	£349.00
120Mb No RAM	£399.00
213Mb No RAM	£564.00
2Mb SIMM Upgrade	£59.00
4Mb SIMM Upgrade	£115.00
8Mb SIMM Upgrade	£230.00

Repair Services

Our Service department can repair Amiga's in minimum time at competitive rates. We can arrange for courier pickup and return delivery of your machine to ensure its safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, ROM upgrades. We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge. Please note: The minimum charge covers labour, parts are extra.

Quotation service	£15.00
Minor repair charge	£35.25
Courier Pickup	£11.00
Courier Return	£7.00
Same day service	£15.00

Floppy Drives

- 880K formatted capacity
- Double sided, Double density
- Through port

Cumana CAX 354	£54.99
Amiga 500 Internal drive	£49.99

Amiga Packs

Amiga A600 £244.99
Includes: The new reduced size keyboard, internal modulator, 1Mb on board RAM, Workbench 2.05. Will take smart cards. Also includes 12 months on site Warranty

Amiga 600 Wild, Weird and Wicked Pack £279.99
Includes A600 with Pushover, Microprobe Grand Prix, Putty and Deluxe Paint III

A500 Plus Cartoon Classics £224.99
Includes A500+ with Simpsons, Lemmings, Captain Planet and Deluxe Paint III

A500+ No Software £194.99
Includes A500+, mouse, modulator, PSU, workbench

Amiga 1200 Comic Relief Pack £369.99
Includes A1200 with 2Mb RAM, Sleepwalker game

A1500 Home Accounts Pack £429.99



Software

Mini Office £39.99
Wordprocessor, Database, Spreadsheet, Disc Utilities and Graphics

Pen Pal £34.99
Powerful wordprocessor with text wrap around graphics, Forms manager, Database manager, calculated fields etc. 100,000 word spelling dictionary, Mail Merge

Final Copy II £69.99
Amiga wordprocessor, 110,000 word spell checker, 626,000 word thesaurus, Automatic hyphenation, graphic columns, HAM & 24 bit multiple support, Built in Postscript support

Deluxe Paint IV AGA £69.99
Paint and animate in 262,000 colours. Developed specifically for the Commodore A1200 and A4000, takes full advantage of the new AGA chip set. Metamorphosis, instantly transform the shape and image of one brush into any other brush, HAM support, Paint stencil mode, Translucency and tinting features for special effects. Requires 2Mb RAM, kickstart 2.04 or greater

Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
- 1.44Mb 3.5" Floppy, up to 14Mb RAM. Displays 65536 colours from 262144 palette at 768 x 480 resolution
- 8 Channel, 16 bit higher than CD quality, Stereo sound sampling

FALCON 4Mb 65Mb HD £959.00

Hand Scanners



Golden Image Hand Scanner

- 100, 200, 300, 400dpi resolutions
- 1 letter mode, 3 photo modes
- Includes two of the most respected graphics packages, MICROGRAPH'S TOUCH UP and DELUXE PAINT III

£89.99

While stocks last

RAM Upgrades

A500 512K upgrade

£14.99

A500+ 1Mb upgrade

£19.99

A600 1Mb with clock

£44.99

Plugs straight into A600 trap door, compatible with A600, A600HD

Accessories

50 3.5" Disks	£23.50
100 3.5" Disks	£44.65
3.5" Disk head cleaner	£4.00
50 Disk Box	£5.00
100 Disk Box	£8.00
A500 Ductcover	£4.00
Mouse/Joystick extension	£5.00
PRO 500 Joystick	£7.00

Monitors



Philips 8833 MKII £229.99

Includes 12 Months on site warranty (Mainland UK) and Leto Lotus Turbo Challenge 2 game

Commodore 10845 Colour £189.99
Amiga Colour, stereo monitor including cable

Philips 15" FSTXTV TV £259.99
Fully remote control, 60 channel, Fast text TV with scan input for near monitor quality display

Colour SVGA Monitor £249.99
High quality colour SVGA Monitor, 28 dot pitch. Includes Falcon Adaptor

Falcon VGA Adaptor £9.99
Philips SCART to Amiga 8833 MKII to Amiga £9.99

OPEN SUNDAY 10-3PM.

City Centre

Global Top

Malvern

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

Walsley

TRILOGIC

UNIT 1,
253 NEW WORKS RD,
BRADFORD, WY,
BD12 0QP
FAX 01274 601510 Ext 1944

SALES

0274 69 11 15

OPEN EVERY DAY

ACCESS VISA

SWITCH DELTA

CONNECT AMX*

PART PROFESSIONAL MARKETING

SERVICE

1 Order by telephone using your credit,

debit or postal order payable to

2 Order by mail - sending cheque

3 Order by mail - sending cheque

4 Order by mail - sending cheque

5 Order by mail - sending cheque

6 Order by mail - sending cheque

7 Order by mail - sending cheque

8 Order by mail - sending cheque

9 Order by mail - sending cheque

10 Order by mail - sending cheque

11 Order by mail - sending cheque

12 Order by mail - sending cheque

13 Order by mail - sending cheque

14 Order by mail - sending cheque

15 Order by mail - sending cheque

16 Order by mail - sending cheque

17 Order by mail - sending cheque

18 Order by mail - sending cheque

19 Order by mail - sending cheque

20 Order by mail - sending cheque

21 Order by mail - sending cheque

22 Order by mail - sending cheque

23 Order by mail - sending cheque

24 Order by mail - sending cheque

25 Order by mail - sending cheque

26 Order by mail - sending cheque

27 Order by mail - sending cheque

28 Order by mail - sending cheque

29 Order by mail - sending cheque

30 Order by mail - sending cheque

31 Order by mail - sending cheque

32 Order by mail - sending cheque

33 Order by mail - sending cheque

34 Order by mail - sending cheque

35 Order by mail - sending cheque

36 Order by mail - sending cheque

37 Order by mail - sending cheque

38 Order by mail - sending cheque

39 Order by mail - sending cheque

40 Order by mail - sending cheque

41 Order by mail - sending cheque

42 Order by mail - sending cheque

43 Order by mail - sending cheque

44 Order by mail - sending cheque

DIGITISERS, GHERLOCKS, SCANNERS

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

ROCKWELL PLUS NEW GVP \$139.99

A superb value Gherlock with 1600 lines

WHY NOT VISIT OUR NEWLY REFURBISHED & ENLARGED SHOWROOM

MAJOR REDUCTIONS ON GVP

IV24

A530

& A1230

SPECIAL PRODUCTS

SUPERB 2 STEREO SYSTEM - HI FI QUALITY

A VERY HIGH QUALITY, PROFESSIONAL & POWERFUL STEREO

Hi-Fi stereo system with 2 x 15W speakers, 2 x 15W amplifiers, 2 x 15W tuners, 2 x 15W recorders, 2 x 15W cassette decks, 2 x 15W CD players, 2 x 15W DVD players, 2 x 15W Blu-ray players, 2 x 15W HD players, 2 x 15W 4K players, 2 x 15W 8K players, 2 x 15W 10K players, 2 x 15W 12K players, 2 x 15W 14K players, 2 x 15W 16K players, 2 x 15W 18K players, 2 x 15W 20K players, 2 x 15W 22K players, 2 x 15W 24K players, 2 x 15W 26K players, 2 x 15W 28K players, 2 x 15W 30K players, 2 x 15W 32K players, 2 x 15W 34K players, 2 x 15W 36K players, 2 x 15W 38K players, 2 x 15W 40K players, 2 x 15W 42K players, 2 x 15W 44K players, 2 x 15W 46K players, 2 x 15W 48K players, 2 x 15W 50K players, 2 x 15W 52K players, 2 x 15W 54K players, 2 x 15W 56K players, 2 x 15W 58K players, 2 x 15W 60K players, 2 x 15W 62K players, 2 x 15W 64K players, 2 x 15W 66K players, 2 x 15W 68K players, 2 x 15W 70K players, 2 x 15W 72K players, 2 x 15W 74K players, 2 x 15W 76K players, 2 x 15W 78K players, 2 x 15W 80K players, 2 x 15W 82K players, 2 x 15W 84K players, 2 x 15W 86K players, 2 x 15W 88K players, 2 x 15W 90K players, 2 x 15W 92K players, 2 x 15W 94K players, 2 x 15W 96K players, 2 x 15W 98K players, 2 x 15W 100K players, 2 x 15W 102K players, 2 x 15W 104K players, 2 x 15W 106K players, 2 x 15W 108K players, 2 x 15W 110K players, 2 x 15W 112K players, 2 x 15W 114K players, 2 x 15W 116K players, 2 x 15W 118K players, 2 x 15W 120K players, 2 x 15W 122K players, 2 x 15W 124K players, 2 x 15W 126K players, 2 x 15W 128K players, 2 x 15W 130K players, 2 x 15W 132K players, 2 x 15W 134K players, 2 x 15W 136K players, 2 x 15W 138K players, 2 x 15W 140K players, 2 x 15W 142K players, 2 x 15W 144K players, 2 x 15W 146K players, 2 x 15W 148K players, 2 x 15W 150K players, 2 x 15W 152K players, 2 x 15W 154K players, 2 x 15W 156K players, 2 x 15W 158K players, 2 x 15W 160K players, 2 x 15W 162K players, 2 x 15W 164K players, 2 x 15W 166K players, 2 x 15W 168K players, 2 x 15W 170K players, 2 x 15W 172K players, 2 x 15W 174K players, 2 x 15W 176K players, 2 x 15W 178K players, 2 x 15W 180K players, 2 x 15W 182K players, 2 x 15W 184K players, 2 x 15W 186K players, 2 x 15W 188K players, 2 x 15W 190K players, 2 x 15W 192K players, 2 x 15W 194K players, 2 x 15W 196K players, 2 x 15W 198K players, 2 x 15W 200K players, 2 x 15W 202K players, 2 x 15W 204K players, 2 x 15W 206K players, 2 x 15W 208K players, 2 x 15W 210K players, 2 x 15W 212K players, 2 x 15W 214K players, 2 x 15W 216K players, 2 x 15W 218K players, 2 x 15W 220K players, 2 x 15W 222K players, 2 x 15W 224K players, 2 x 15W 226K players, 2 x 15W 228K players, 2 x 15W 230K players, 2 x 15W 232K players, 2 x 15W 234K players, 2 x 15W 236K players, 2 x 15W 238K players, 2 x 15W 240K players, 2 x 15W 242K players, 2 x 15W 244K players, 2 x 15W 246K players, 2 x 15W 248K players, 2 x 15W 250K players, 2 x 15W 252K players, 2 x 15W 254K players, 2 x 15W 256K players, 2 x 15W 258K players, 2 x 15W 260K players, 2 x 15W 262K players, 2 x 15W 264K players, 2 x 15W 266K players, 2 x 15W 268K players, 2 x 15W 270K players, 2 x 15W 272K players, 2 x 15W 274K players, 2 x 15W 276K players, 2 x 15W 278K players, 2 x 15W 280K players, 2 x 15W 282K players, 2 x 15W 284K players, 2 x 15W 286K players, 2 x 15W 288K players, 2 x 15W 290K players, 2 x 15W 292K players, 2 x 15W 294K players, 2 x 15W 296K players, 2 x 15W 298K players, 2 x 15W 300K players, 2 x 15W 302K players, 2 x 15W 304K players, 2 x 15W 306K players, 2 x 15W 308K players, 2 x 15W 310K players, 2 x 15W 312K players, 2 x 15W 314K players, 2 x 15W 316K players, 2 x 15W 318K players, 2 x 15W 320K players, 2 x 15W 322K players, 2 x 15W 324K players, 2 x 15W 326K players, 2 x 15W 328K players, 2 x 15W 330K players, 2 x 15W 332K players, 2 x 15W 334K players, 2 x 15W 336K players, 2 x 15W 338K players, 2 x 15W 340K players, 2 x 15W 342K players, 2 x 15W 344K players, 2 x 15W 346K players, 2 x 15W 348K players, 2 x 15W 350K players, 2 x 15W 352K players, 2 x 15W 354K players, 2 x 15W 356K players, 2 x 15W 358K players, 2 x 15W 360K players, 2 x 15W 362K players, 2 x 15W 364K players, 2 x 15W 366K players, 2 x 15W 368K players, 2 x 15W 370K players, 2 x 15W 372K players, 2 x 15W 374K players, 2 x 15W 376K players, 2 x 15W 378K players, 2 x 15W 380K players, 2 x 15W 382K players, 2 x 15W 384K players, 2 x 15W 386K players, 2 x 15W 388K players, 2 x 15W 390K players, 2 x 15W 392K players, 2 x 15W 394K players, 2 x 15W 396K players, 2 x 15W 398K players, 2 x 15W 400K players, 2 x 15W 402K players, 2 x 15W 404K players, 2 x 15W 406K players, 2 x 15W 408K players, 2 x 15W

NEW FOR 1993

WANT TO PRODUCE PROFESSIONAL TITLES ? DO YOU USE DELUXE PAINT IV OR V ?

DELUXE PAINT is a registered trademark of Electronic Arts Inc.
TIRED OF THE SAME OLD FLYING LOGOS ? TOO BUSY TO BE MORE CREATIVE ?
TIRED OF TYPING IN THOSE X,Y,Z VALUES ? OR JUST WANTING TO BE THE MOVIE REQUESTER ?

FLIGHTPATHS

ALL
AMIGAS

by
MEDIA SCOPE

IS A WHOLE NEW TWIST TO YOUR
ANIMATIONS!

CAMCORDER USER
GOLD AWARD 86%
C.U. AMIGA

MICRO MART

* capable of some impressive feats of animation*

* if your 'into animation or video titling you'd do well to
take a look*

A full range of MULTI-STAGE moves from complex Ricochets to graceful curves, Ripples, Spirals, Bounces, Loops, Elegant, Sophisticated animation is as simple as stamping a brush and loading in a few premade moves. FLIGHTPATHS contains over 130 MULTI-STAGE MOVES, plus 70 others. Complete instructions with tips, hints, variations, and a descriptive directory to help locate the right effect. Plus tutorial video with Demos!

PLUS BONUS COLOUR FONTS DISK

8 Hi-Res Colour antialiased Headline Fonts, Inc = Chrome, Metal, Gradient and Nugget Film.

£49.95 plus £1.90 p&p (inc's Video)

Sole U.K. & European Distributors

MERIDIAN
SOFTWARE

SUBSIDIARIES OF AMERICAN SOFTWARE CORP.

MERIDIAN SOFTWARE - Dept AC - 9 Gurney Cresc.
Littlethorpe - Leics. - LE9 5JL. Tel: (0635) 863501

Demo Video only £12.50
plus £1.50 p&p
£12.50 deductible when
purchasing FLIGHTPATHS

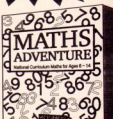
Cheques & P.O.s to:-

INCREDIBLE NEW RELEASE

FOUR GREAT GAMES

and all this Maths revision...

Times Tables
Addition
Subtraction
Multiplication
Division
Fractions
Decimals
Using calculators
Shape & Space
Money problems
Measurements
Number patterns



SUPER FREE GIFT
only for the AMIGA version
**CASIO SCALAR
CALCULATOR**

AMIGA MATHS ADVENTURE

For ages 6-14

Price £25.99 inc. VAT

Now available from your dealer or direct from Kosmos.

Write or telephone for our new FREE 16-page colour brochure of Educational and Leisure software (please state computer type)

Kosmos Software Ltd, FREEPOST (no stamp needed)

DUNSTABLE, Beds, LU5 6BR

Telephone 0525 873942 or 875406



Kosmos



MJC COMPUTER SUPPLIES

Suppliers of Discount Software
since 1984

European orders please call for quotations. All goods subject to availability, prices subject to change without notice. E&OE.

Price includes VAT and delivery by post.
Courier delivery from £3, please ask for details. Please allow five days for cheque clearance.

TO ORDER: Please call the number listed below to place a credit card order (Access/Visa) or send cheques/P.O.s made out to MJC Supplies to:

MJC COMPUTER SUPPLIES (AC),
Unit 2 The Arches,
Ickfield Way,
Letchworth
Herts SG6 1UJ
Tel: (0462) 481166

ACTION REPLAY MK3

The ultimate Amiga utility?
Features include:- Trainer Mode,
Video Detection, Buffer Nibbler,
Slow Motion Mode, Disk Copy,
Boot Selector, Disk Monitor,
Diskcoder, Music Tracker,
Sprite Editor, Autoframe Manager
and much more.
MJC Price £54.95

AMOS PRODUCTS

AMOS PROFESSIONAL - NEW LOW PRICE!

The enhanced, professional version of the very popular AMOS program - for serious programmers. Contains over 200 new commands and a brand new 650 page manual. Now reduced in price.

MJC Price £31.95

EASY AMOS: for those who are beginners to the world of programming and need a helping hand Easy Amos is written in very easy to follow language and contains on screen help.

MJC Price £12.95

AMOS 3D: the 3D add-on module for AMOS

MJC Price £26.95

MINI OFFICE AMIGA: A great new integrated pack from the manufacturers of AMOS, Featool, Spreadsheet, Database, Spreadsheet, Graphics and Disk Utilities. All for a bargain price.

MJC Price £73.95

ACCESSORIES

AMIGA 600 CONTROL CENTRE: By Premier Micro, these are made of epoxy coated sheet used to perfectly match the AM600. Makes an ideal base for your TV/Monitor and has a shelf for your second drive or peripherals.

MJC Price £29.95

ROBOSHIFT: Auto sensing joystick router switch box. Automatically detects device being used.

MJC Price £13.95

DRAGON MOUSE: Budget priced optical mouse. Features micro switches and 280 dpi resolution.

MJC Price £12.95

GOLDEN IMAGE

**MICE
PLEASE CALL
FOR DETAILS**

AMIGA EDUCATIONAL

FUN SCHOOL

The all time best selling educational software from Europe. Each contains a number of programs covering a range of subjects.

FUN SCHOOL 2 - 8 Programs per pack
Fun School 2 - For 2 to 6 years 68.95

Fun School 2 - For 6 to 8 years 68.95

Fun School 2 - For over 8 years 68.95

FUN SCHOOL 3 - 6 Programs per pack
Fun School 3 - For 2 to 5 years 62.95

Fun School 3 - For 5 to 7 years 62.95

Fun School 3 - For over 7 years 62.95

FUN SCHOOL 4 - 6 Programs per pack
Fun School 4 - For 2 to 5 years 63.95

Fun School 4 - For 5 to 7 years 63.95

Fun School 4 - For over 7 years 63.95

FUN SCHOOL SPECIALS

In response to consumer demand a range of Fun School Specials have been developed to help children in specific areas of learning.

Merlin Maths £16.95

Spelling Fair £16.95

Paint & Create £16.95

LAUGH & LEARN WITH ADI

ADI is a friendly animal which appears to guide you through this large range of educational software from the makers of Fun School. Each package is designed to follow the National Curriculum for a particular school year.

ADI English 11/12 12/13 13/14

ADI Maths 11/12 12/13 13/14 14/15

ADI French 11/12 12/13 13/14 14/15

£16.95 each or £32.00 for two

please state exactly which year you require.

ADI Junior Reading £47.95

ADI Junior Reading £67.95

ADI Junior Counting £47.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

ADI Junior Counting £67.95

NODDY'S FLAYTIME

A complete entertainment and learning package for young children. (Min 18m).

MJC Price £18.95

COOMBE VALLEY SOFTWARE

This is a range of excellent educational adventure games for various age groups

Maths Dragons (5-12 years) £10.95

Cave Maze (8-13 years) £10.95

Reasoning with Trolls (8-13 years) £10.95

Fraction Golfers (8-13 years) £10.95

Picture Fraction (7-10 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Tidy the House (5-9 years) £10.95

Old hard drive

Q My son has an Amiga 500 Plus and has just recently acquired a hard drive with extra memory and power supply from a defunct A500.

Problem is, the person who gave my son the drive did not give instructions on how to install it and unfortunately has since emigrated to Singapore.

I therefore ask your advice and, if possible, full instructions for installation. Also, as it is a "used but good" hard drive, how does my son de-install it in future if it fails?

Are there any manuals available dealing with hard drives, both the hardware and software side, which cover topics such as creating directories, copying files, and so on?

I have heard that some games will not run from a hard drive. Please explain why and whether there is any indication when buying the game that they will not run.

Lastly, do you know of any reputable companies supplying shareware or PD software specifically for the A500 Plus or even any bulletin boards specifically for the Amiga? I have access to a PC-based modem at work. Are there any utilities to convert IBM games to run on the Amiga?

D Lewis, Caerphilly

A Hmm ... a nervous first time Amiga hard drive owner if ever I've seen one. Luckily, as the hard drive has already been used on an Amiga, you might have very little work to do.

Assuming the drive has not been damaged, plug it in, turn on (first the drive power, then the Amiga power) and wait until boot-up. With luck, the hard drive will kick in and you won't have to bother with formatting or any tiresome partitioning process.

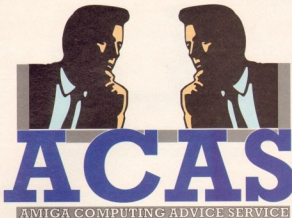
If the drive fails to boot, check to see if it has a game switch and, if so, that it is in the boot position. If this pans out, you may have to locate the drive's manufacturers for software with which to format it.

As you failed to mention the drive make or model, I can't help you on this score, so we'll assume the drive works.

Manually do exist for hard drives in general, but they are more often than not a bit technical and concentrate on the hardware side almost exclusively. A good general AmigaDOS guide from Bruce Smith Books (0923 494355) would be of far more use.

Finally, games which require a full 1Mb RAM in which to run will often fail to run from hard drive because the act of booting a Workbench uses as much as 200k.

If the hard drive comes with its own RAM expansion, this should not be a problem, but the insistence of Amiga software companies on disk protection which makes it impossible to install a game to hard drive will cause you much more grief. Good luck!



Monitors, broken disk drives and poorly power supplies tax our experts in the definitive Amiga technical clinic

Out of print

Q I have an Amiga A500 Plus and a Commodore MPS 1270 printer. The problem is, I can't get the printer to work. I've tried several books but with no success. Please give me a step-by-step guide on what to do. I'm desperate.

David King, Marham

A Er ... at the risk of sounding facetious, have you read the manual which comes with the printer? You should follow the standard troubleshooter steps such as making sure the printer is plugged in, switched on, and a suitable cable is connecting it to the Amiga.

Next, make sure that the printer is on-line by checking the front panel for the indicator light which is present on every printer. It might be labelled "ready", but as long as it is active, your printer is ready to receive data.

If all this is taken care of and the printer has paper, boot from Workbench, open a Shell, and type:

```
COPY S:STARTUP-SEQUENCE TO PRN:
```

As long as you have some sort of printer driver selected in your prefs settings (generic will do to begin with), the printer should now feed off your startup-sequence. If it doesn't, go back to the beginning and check all the above steps, and if your printer is still not working take it back for a refund!

CDTV queries

Q I have an A500 with 512k fast RAM and 512k chip RAM and I am considering buying the A570 CD-ROM drive now that the price has gone down to £150. However, I have some

questions before I buy:

1. How do I boot up CDTV software? Does the Amiga boot using a CDTV-style Kickstart?

2. When using Workbench, does the A570 count as a device like an external floppy or a hard drive?

3. Does the A570 have a SCSI through port so I can fit a hard drive or extra memory?

4. How will I be able to hook up my Amiga to a hi-fi so that I can play CDs

using my amp and speakers?

Finally, one of my main reasons for getting the A570 is the fact that I buy a lot of PD, so the CDPD collections could be of great use to me. However, I thought the idea of PD was that people could only charge for the disc copying costs. Surely this is less than £19.99?

Jim McKenzie, Old Stenage

A In answer to your questions, I should start by pointing out that use of the A570 requires 1Mb chip RAM and Kickstart 2.04, so please bear in mind that you'll have to upgrade your machine before buying the drive.

1. With the A570 in place, the Amiga will boot either from the internal floppy, if it contains a disk, or from the CD.

2. Yes, the A570 appears as CDD:, and if a non-protected disc is being used its contents can be accessed using the usual AmigaDOS commands.

3. The A570 has no SCSI or DMA through port, so you'll have to make sure that you can buy a hard drive or RAM expansion with a through port, then connect the A570 to the end. You'll have a very long A500, but it will be a rather powerful one.

4. To enable the playing of CD music through external speakers, the A570 has stereo audio out phono sockets in the rear casing, so it is a simple matter of hooking the drive up to your amplifier's line in to play audio CDs as normal.

Your comments on the price of PD CD discs should really be redirected to Alunethra Systems, producers of the CDPD collection. I'm sure they'll be happy to answer any queries you have about buying 600 PD disks for £20.

Diskfont dabbling

Q I have an A500 Plus and an Amstrad NC100 Notepad which I bought after reading the review in your Amiga Market Shop Window section. The only drawback in what is otherwise a fine machine is the non-backlist screen.

I have Protext v4.3 from the January CoverDisk, so I decided to invest in the Lapcat software and cable and now the Amiga can talk to the Notepad and vice versa. However, on loading Lapcat my system tells me "Error opening library DiskfontLibrary v37". Strangely enough, if you click on Abort, the program comes on and runs perfectly well.

I rang Amor at Peterborough where I purchased the Lapcat software and they told me that the program doesn't call for this library. He said it must be a problem with the Workbench.

What does the Amiga want? This is most annoying every time you load up Lapcat, which is not a self-booting disk and must be loaded from Workbench. What can I do?

David Langley, Cambridge

A You can check the Libs drawer on your Workbench disk for a start. It should contain a copy of the DiskfontLibrary and if it doesn't, you should copy it to the drawer immediately. Other than this, I can't figure out what might be wrong.

The copy of Lapcat we use in the office has no problems on our Workbench 2.04 and 3.0 machines, so there is no bug in the software. In the last analysis, the problem is merely annoying and not fatal, so you can at least live with it if you need to.

Screen trouble

Q I have recently upgraded to an A4000/030 (can I be your friend?) - Ed and I am experiencing some compatibility problems with serious programs and hardware that I had expected to work correctly. Can you help?

A I cannot get Amos v1.3 to run in DIBPAL mode, even with mode promotion on. Is there an easy solution and does Amos Professional have the same problem?

I am also experiencing problems with my 16in NEC 4D multisync monitor as I am not able to display a full width Workbench screen, even when using overscan.

This monitor's horizontal sync is from 30kHz to 57kHz and displays a very stable picture when VGA only is activated, but almost an inch of viewing width on both sides of the Workbench backdrop is inaccessable.

The monitor worked fine with my ICD flicker fixed A500 and utilised all the available viewing area.

Your recent articles and reviews on monitors make no mention of such problems with VGA or multisyncs. Can you offer any advice? Also, your A1200 and A4000 articles mention that you need multisync monitors which horizontally sync from 15kHz to 75kHz to display all the

new resolutions, but with the exception of Commodore's 1960 monitor, only 30kHz minimum sync rate VGA monitors have been reviewed.

Can you please review a greater range of multisync monitors, especially ones that can display lower resolutions including Super72 mode?

P Sadler, Redditch

A Amos 1.3 does not work under Workbench and instead uses its own screen, so it does not work well with mode promotion. There's nothing I know of which can be done about this apart from buying Amos Professional, which functions

better under Workbench 3.0. Phone Eurospare Software on 0625 859333 for more details.

Your monitor won't use the entire viewing area because the AGA chips don't output a standard VGA signal, unlike the flicker fixer you mention which does this and a lot more besides. The inch of lost screen area cannot be regained on most monitors, though you may be able to reduce it by experimenting with different monitor types.

Finally, the reason we mentioned only the 1960 in relation to the complete range of AGA screen modes is because it is the only monitor which will carry out this feat.

A new range of Commodore AGA monitors with stereo sound are on the way (look out for a review soon!) and other manufacturers look set to release better matching monitors in the near future, so keep your eyes peeled for news.

Which printer?

Q I own an A500 with 1Mb RAM and I was thinking seriously about converting to the new Amiga 1200. However, I have only had my A500 for about seven months and my parents aren't too keen on the idea. Could you outline the advantages so I can use them as arguments?

I am now studying for my A-levels and need to use a wordprocessor for reports and essays. Which printer can you recommend for about £200? The same goes for monitors. Can you recommend one?

Will the PD program Kick1.3 work with the A1200 to make it more compatible with older games and so on?

David Bromley, Grimsby

A I wouldn't dream of advising an abetting an avaricious teenager in the pursuit of shallow materialistic ends!

As for your printer, the Canon B10x or Star LC24-20 M82 are the obvious choices. A bit more cash would secure you a faster bubblejet or a few extras such as colour or a sheet feeder, but the basic printers should be good enough for essays and reports. Try First Computer Centre on 0532 319444.

For the price range you specify, the only real choices are the 1084 or the Philips CM8833. Indie Direct are doing a good deal on the 1084 at the moment, so check out that first.

Video titler

Q I have bought an A600 to use for video titling. At the moment I use a VEC 1070 video processor (an excellent unit) and a Sony Video Sketch Titler for titling, though the latter is not powerful enough.

I will have about £200 to spend on a genlock, but will the genlock work with video processor, and what type or make do you recommend?

With a good freeze frame on my video recorder, would the genlock act as a frame grabber?

Lastly, I want to send messages or even digitised pictures across the country to my family. What type of modem and message cruncher/de-cruncher software would you recommend for £120?

Brian Gibson, Blackpool

A Any Amiga genlock will work perfectly with your video processor as long as you ensure you have the same sort of signals. In other words, make sure that if your video processor accepts composite PAL signals that you buy a composite PAL genlock rather than an S-VHS unit.

Most of the cheaper genlocks are composite, so this should present no problem unless you have an S-VHS processor, in which case you'll need a much more expensive genlock.

Try the Roegen unit available from a number of our advertisers. It is reliable and has a good quality output and shouldn't cost more than about £140. One other good entry level unit with good output is the Rendele 8802, so shop around for a good price.

In common with most genlocks, neither unit will act as a frame grabber, and for this you'll need some extra hardware. The Vidi! Amiga 12 for our May issue CoverDisk sounds ideal for you, as it offers a high quality colour digitiser for only £89. If you didn't catch that issue, buy it for the bargain price of only £3.10 courtesy of our back issue service.

A cheaper Supra model should just about squeeze into your budget for such a device, though the money you save on the genlock might go towards a faster model which would be cheaper in the long run.

Software for comms use is mostly excellent and most shareware. You might give NComm and JRFComm a look, and you'd be mad not to go for PowerPacker 4.0 from Eurospare Direct.

You got problems too? Then drop a line to Amiga Computing Advice Service, Europa House, Skidington Park, Macclesfield SK10 4NP and we'll move heaven and earth to help in these columns. But sorry, we cannot reply personally, so save those SAEs.

Brother bother

Q I am using an old Brother HR-40 with my A500 Plus and have found it to be very reliable. However, I am thinking of replacing it in the near future and I have been looking at the new Brother HJ-1001.

Will I be able to use the HJ-1001 with my Amiga? Resident emulations are IBM ProPrinter X24e and Epson LQ550, and the interface is Centronics parallel, which I assume is the same as my HR-40. It's only a mono printer, but being an inkjet I imagine I should be able to use fonts which I can't at the moment.

I have seen the HJ-1001 advertised at £299 including the connection lead and VAT, which seems a very reasonable price for an inkjet and would be ideal for my needs (letters, CVs, and so on). I have never seen it reviewed in your magazine, so information about this printer is scarce.

I would be grateful for any advice that points me in the right direction, as I have heard of many people buying printers then having trouble with them.

Phillip Cole, Coventry

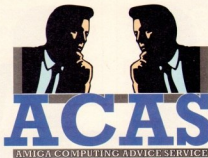
A As the printer you mention emulates the Epson LQ550, it should work perfectly well with the EpsonQ printer driver supplied with your A500 Plus Workbench 2.04 disks. The parallel printer lead you presently use will also work fine with the new printer.

As for using more fonts, only a PostScript laser printer actually gives access to more fonts, but any that you have will print better on a decent quality inkjet. I don't know much about the Brother HJ-1001, so check before you buy what its maximum print resolution is.

This shouldn't be less than about 300dpi if the printer is to justify its price tag, and you might like to compare it to the Star SJ-10 reviewed in this month's Shop Window section.

The SJ-48, a Canon BJ-10 rebadge, will print at 360dpi, albeit slowly, and costs only £215. Alternatively, try taking a look at the Hewlett Packard 550, a much quicker printer with sheet feeder as standard.

It retails for about £330, so isn't much more than the Brother and takes quite a bit of beating in the value for money stakes.



Everything you need to enter the exciting world of Amiga Graphics



"...arguably the ultimate Amiga-based graphics system" – *Amiga Computing*, June 1993

VLAB

- Real-time YUV Digitizers for all Amigas
- Capture high quality images from Live Video
- Supports all Amiga graphics modes inc. AGA
- Direct support for Harlequin & Retina
- Saves in IFF ILBM & IFF DEEP
- Full Alpha support
- Resolution up to 710 x 500
- Uses 768k high speed field RAM

VLab £340.75
VLabipar £381.87
VLab Y-C £381.87

RETINA

- Retina 24 bit Graphics Card
- Workbench emulation in high resolution
- 2000 II slot for Amiga 1500, 2000, 3000, 4000
- VD Paint 24 bit software free
- Compatible with packages such as AdPro, Morph Plus, ProPage, Profitrite, Pagestream, ImageMail
- Directly supports VLab

1Mb £345
2Mb £409
4Mb £499

HARLEQUIN

- Broadcast specification RGB 32 bit framebuffer
- Resolutions from 740 x 576 to 910 x 576
- Interface or Non-interface
- Alpha Channel/Double buffer options
- Supported by all major 24/32 bit graphics S/W
- Four models available

New pricing:

Harlequin 1500 £940.00 Harlequin 3000 £1028.12
Harlequin 3000 £1116.25 Harlequin 4000 £1286.62

IMAGE MR

- 24 bit Image Manipulation for the Amiga
- Full 24 bit Morphing
- Work on any number of 24 bit buffers
- Hundreds of Image Processes
- Over 50 image compositing tools
- Control 24 bit Alpha blending
- Massive Alpha interface
- Expandable by any developer
- Support for Harlequin and Retina

£175

TVPAIN 2

The 32 bit Paint package for graphic artists

- Features include:
- Pressure sensitive touch tablets
- Anti-aliasing
- Full Alpha interface
- Alpha Channel
- Grayscale support
- Available for Harlequin and Retina, and also Avidex 24, Domino, A2410, EOS, TV94, Sage, VD0001, Picasso

£705

PERSONAL SFC

- Hardware & Software for single frame recording
- Supports a full range of frame accurate video recorders including Betacam 11, Hi8, Umatic, D9, D3, S-VHS and Hi8.
- Full support for Harlequin output & VLab input as well as native Amiga output
- Full VTR control, time lapse support and sequence creation features
- Real-time 80% accurate preview mode

£458.25

Contact your local dealer or:

AMIGA CENTRE SCOTLAND

Harlequin House, Walkerburn, Peeblesshire EH43 6AB

Tel: 089 687 583. Fax: 089 687 456

All Prices include VAT & Next Day Courier Delivery. Trade enquiries welcome

STOP PRESS:
HARLEQUIN
NOW AVAILABLE

SUBSCRIBE NOW!

IT'S THE EASY WAY TO GET YOUR

Have your favourite magazine delivered to your door, postage free, and choose one of these great offers. Pay by Direct Debit and save 67p on the cover price, that's £8 a year!

Make sure you don't miss out on this essential, authoritative and entertaining guide to your Amiga.

AMIGA COMPUTING

SAVE
£29.99



FREE

Premier Manager

You can have Premier Manager, the most comprehensive and sophisticated football strategy game ever, absolutely free. Start your career in the Conference League and use your management skills to leap up the divisions

SAVE
£29.99



FREE

Sports Masters

Simply the best sports compilation around – instant addition. Indy 500, PGA Tour Golf, Advantage Tennis, European Championship 1992 – and they're all free!

SAVE
£14.95



Alpha Data Mega Mouse

Subscribe to Amiga Computing and for only £3 more you can have this superb quality mouse which has a tracking speed of 290 dpi

SAVE
£12.00



FREE

Two free issues and a binder

As well as a high quality Amiga Computing binder this great offer gives you two free magazines by extending your subscription for an extra two months

This offer ends July 30

AMC SUBSCRIPTION ORDER FORM

Which subscription...

New	Renewal	UK subscription	£39.95 (including P&F)
9314	9315	European/Eire subscription	£47.95
9316	9317	Rest of World subscription	£62.95
9318	9319	Canada/USA*	\$98

*Canada and USA subscribers send to: Europress (North America), Unit 14, 225 Benthams Park Drive, Woodstock, Ontario, N4Y 1Y1, Canada. Tel: 519 539 8200, Fax: 519 539 9725.

The FREE gift/special offer I want is...

<input type="checkbox"/> 9358 Sports Masters	<input type="checkbox"/> 9352 Alpha Data Mouse (£33)
<input type="checkbox"/> 9357 Premier Manager	<input type="checkbox"/> 9129 2 extra issues + binder

How to pay...

☐ I enclose a cheque/Eurocheque payable to Europress Enterprise Ltd
☐ Please debit my credit card

Expires

No.

☐ Quarterly direct debit (£7.99 – complete form opposite, UK only) 9353

Deliver my magazine to...

Name Tel No

Address

Postcode

☐ Tick if you do not wish to receive promotional material from other companies

Subscription Direct Debit Instruction

Complete this form only if you have ticked the Direct Debit option. Send the original form, no faxes or photocopies please.

AUTHORITY TO YOUR BANK/BUILDING SOCIETY TO PAY DIRECT DEBITS

Name of bank/building society

Address

Name of account

Your account no.

Sort code

Signature(s)

Date

FOR OFFICE USE ONLY

Originator's Identification No.

Ref No.

Your instructions to the bank/building society:

- ☐ I instruct you to pay Direct Debits from my account at the request of Europress Ltd.
- ☐ The amounts are variable and may be debited on various dates.
- ☐ No acknowledgement required.
- ☐ I understand that Europress may change the amounts and dates only after giving me prior notice.
- ☐ I will inform the bank/building society in writing if I wish to cancel this instruction.
- ☐ I understand that if any Direct Debit is paid which breaks the terms of the instruction, the bank/building society will make a refund.

Bank/building society may decline to accept instructions to pay Direct Debit from some types of accounts.

Send this form to: Europress Direct, FREEPOST, Ellesmere Port L65 3EA (No stamp needed if posted in the UK)
If you can't wait to get your hands on one of our great gifts you can fax or telephone your order using a credit card:
Phone 051-357 1275, Fax 051-357 2813 (Don't forget to give your name, address and credit card number)

AMC SUBSCRIPTION ORDER FORM

[illegible]

OF CARS

[illegible]

INS GAMES PACKS!
of 50 games ever assembled

[illegible]

APOSTS COMPILER

US HAND DRAWN PICTURES
US UTILS
 Create wave mod files
 250 patches 1-Y
 1-Patulous samples
 for patch changes
 as above!
 It needs seq. + Y
 as mod stuff +
 samples-Ring for data
 R 2.6 Excellent, on 2
SAMPLES Studio
 DIGICE PULS for DX7
 DIGICE SCOTCH for the
 DX7 full 1-Y
 1-Y
 1-Y
THE LATEST VER
 TXK12, DXK27, DXK11
 channel MED sequen
 4.6 Multitasking mod
FILES Superb 10at 1
FILES 3 disks full of
 Super Samples disk,
 More Super music dis
 ks of large music
 2.63 3 disks heavy
AMOS PD
R LATEST VERSION
 Bomb the buildings
 from kids game 1-Y
SELLER + MOED 5
 MAIL prephical adv

APOSTS COMPILER

SHOPPING LIST **NEW!**
VIDEO DATABASE LISTS
UPDATE, LATEST
FLORIAN & MAZDA
 The second game!
LEAGUE Football
Version V1.1 Just in
NEW!
WHITE RABBIT Games
Amiga game - V1
 Try em up space game
GRAPHY CODE useful
 for learn: reading!
 keep record of playlogs
 was database program
 for video tiffing - v1
 quick emulated
Test your Amiga
on EURO GAMES
CONSTRUCTION
PACK Games useful
 & PCK databases
 radio software!
 1986 version in Can Do
DATABASE For Pric page 2
for databases for vintages
 3 part game animation
NEWSROOM and Star
 3 1st 1208 demo!
 of COMMODORE
AMCN DOWNLOAD

BY PHONE: Call us with your card number and details for a 1st class service. All major cards accepted.

REMEMBER: We stock Fish 1-810, 1bag 1 74, Amos, Scope, Snog, Amicus, Amiga & lots more superb PC disks!!

After the post-Christmas lull, the quality seems to be returning to the public sector – obviously a proportion of whizz-kid Amiga-for-Christmas programmers are getting the grip of their Amos's and Seucks and beginning to churn out some original stuff.

Whatever the reason, this month sees a truly absorbing golf game which could well have been worthy of commercial release only a short while back; a bizarre and fresh arcade game in the strangely titled Bomb Jacky; and possibly the most polished music disks I've ever had the aural pleasure of reviewing.

Before starting, my apologies to everyone who's sent me stuff which I haven't had room to review. I've been inundated with disks of late, so a lot of worthy programs have, unfortunately, had to fall by the wayside.

Text Engine

17 Bit, 2465

If you're short of money but decide you need a wordprocessor for your Amiga, you may wish to look and see what's available for free in the public domain.

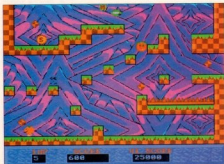
Until recently, PD wordprocessors have lacked too many of the features of their commercial rivals to warrant serious consideration by all but the most light users, but the arrival of disks like Text Engine is heralding an end to all of that.

Text Engine is a professional-looking, fast and solid program, which has enough of the features you'd find on a commercial variant to make it genuinely useful to the average user.

On loading, it immediately resembles – both in colour and in the rules across the top and down the side – Wordworth or Kindwords 3, and has a palette adjuster allowing you to alter the colours of pen, paper and guidelines to suit your preferences. Included in its impressive list of

Phil Morse sifts the very best from a large postbag of quality gear to bring you the latest top quality free and shareware games, utilities, animations and music

PUBLIC SECTOR



Frail Sated or rhabarb and custard? Either way, a rather strange platformer

can-dos are a 36,000-word dictionary, full support for Ascii loading and saving (so files can be used from other wordprocessors, or you can take Text Engine-created disks and use them elsewhere), the ability to handle interlace if you're lucky enough to have a compatible monitor, and a comprehensive set of editing options.

Add to this macro support, a large selection of font styles (although only one font) and the ability to print to all Epson-compatible printers, and it becomes clear that Text Engine is nothing less than a perfectly acceptable basic wordprocessor for the price of a meagre shareware fee.

EasyCalc

Roberta Smith, 2507

Spreadsheets. Even the word is enough to induce involuntary falling of the eyelids. Plain, boring and impossible to use are just some of the criticisms thrown at the

majority of examples in the public domain – either that, or they're so completely basic that their use for anything which might possibly warrant the painful learning curve necessary is nigh-on impossible.

All criticisms which the author of EasyCalc noted when trying to find a spreadsheet worth using, before giving up and deciding to write his own.

Spreadsheets – for those who have the good fortune of having never found out – are meant to simplify accounts, forecasting cashflows and the like, by taking in all of your numerical information and learning the links between say, salary and tax, automatically adjusting all projections when you get that whopping pay rise you were hoping for, to cite an unlikely exam-



Spook hands on a planet which looks suspiciously like a rarely-troddden corner of, er, Earth

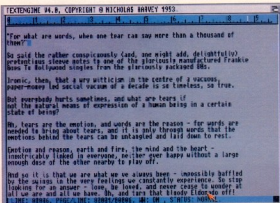
Of our brace of animated spectacles this month, possibly the lesser is Spar Trek 2 from NBS (P100/101). That's not to say it isn't worth a look, though – far from it.

During the customary age it takes to load – a fact about which it warns you sardonically as the tedious process begins – we're left to wait with the faint hope of something amusing at the end of it all.

And indeed, although it is a bit awkward, the plot getting cluttered by the



The USS Enterprise, about to embark on a dangerous mission...



Text Engine in use is as professional as it looks

ple. Claiming to be easy to use, by containing all of the basics without superfluous extras (the very extras you pay heavily for when investing in a commercial spreadsheet), EasyCalc's author is anything but modest about the capabilities of his program.

Luckily, it lives up to all of the claims. From the word go this is very professionally presented – you know, the icons look polished, it does indeed race along at a hare's pace as the author claims, and overall has all the hallmarks of a designed-from-the-ground-up package.

So should you be looking for a workhorse spreadsheet, this one justifies the rather steep shareware registration fee of £15 – there's even an order form on the disk!

Fruit Salad

17 Bit, 2499

In this unlikely platformer, your friends have turned into fruit and vegetables, and what's more, they've got it into them that your destruction is of prime importance.

You collect rather unoriginal "gems" from each screen, which allow you to leave by a predefined exit. When you collect the last gem, the background colours scroll rapidly, to great psychedelic effect. It's a case of get out quick before your monitor explodes, and I only exaggerate a little.

Indeed its looks – both in-game and the overall presentation – are its strong point, along with some amusing sound samples to pepper things up. The actual gameplay itself is rather average, which is not to say that it's unplayable, just that the characters



18th Hole is a pretty and fun-to-play golf game

move around rather simply and at a slowish pace.

Still, the use of the Fire button instead of joystick Up to jump is a first for me, and it's worth playing just for those backgrounds!

18th Hole

17 Bit, 2994A/B

A graphically excellent golf game, 18th Hole combines a complete course of varied holes with lots of engaging control over your shots, guaranteed to keep you playing right until the very end – especially if you utilise the two-player option and get some healthy human competitiveness in there.

You start by using a simple method to select direction, power and swing, and then watch as you hit the ball – which gets

bigger on your plan-view of the course as it rises – to what is hopefully somewhere nearer to the green.

When you reach the green you get a special, full-screen close-up of what's going on, as you attempt to glide the ball home and you onto the next hole.

The gameplay itself is actually quite unrealistic – how could a golf simulator on a computer be anything but! – and this one feels more like an obstacle course than a golf course.

This is because you cannot hit over the trees, of which there are quite a few more than you'd expect to find. What's more, they're invariably positioned between where you tee off and the green, meaning it's like going through a maze sometimes.

Nevertheless, the graphics, rules (you get an authentic score card), and neat touches lend the mood if not the authentic gameplay of the real thing. A great game, and well recommended for armchair golfers not impressed by the cost of commercial alternatives.

PD, please!

I'm always on the look-out for top quality PD, whether it be utilities, games, applications, animations or music (and music doesn't have to be rave!).

So if you're the author of something so off-beat or original that a languid commercial giant wouldn't touch it with a barge pole, then get it in the post with a great deal of haste.

Or if you run a library, send me your star disks for possible free publicity in these very pages.

Please ensure that all submissions come clearly marked with the title and type of program, the address it can be obtained from and any other information you feel to be relevant.

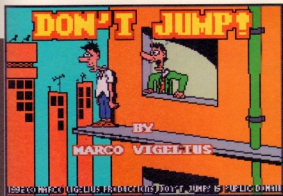
A ReadMe on disk is always useful as is a hard copy list detailing exactly what is enclosed in your package. All of these measures will dramatically increase the chances of your product making it into print.

Menu Launcher

17 Bit, 2486

A tool designed to start any application, game or whatever you've got installed on your hard drive, using a very simple method involving simply clicking on a button.

Menu Launcher shrinks on your Workbench to just a window with a title bar, and can be expanded to display up to 15 programs for choice of loading. It comes complete with a comprehensive on-disk manual explaining how to set up and use the utility. I envisage a use for this in, say, a



Don't Jump! is a wickedly humorous short animation

clumsy screenplay at times, it is also rather amusing, and is ultimately saved by the judicious use of original Star Trek music and samples.

The bit where Captain Kirk is moving his mouth on the screen in time to real audio footage of his voice is particularly impressive.

Indeed, with both William Shatner and Leonard Nimoy getting a shout in, a seemingly irrelevant green kangaroo-style thing and the emergence of a shock guest from Star Trek: The New Generation towards the end, this is a lark if nothing else.

More accomplished, though, is Marco's Box of Fun from 17 Bit (2497). A collection of four animations on one disk, this collection – penned by one Marco Vigelius – opens on a short relying on the old Fat Freddy's Cat gag of animal

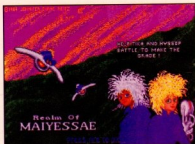
being cruel to owner. This time it's a dog, showing that our canine chums can be anything but Man's Best Friend when they want to.

What all four of these animations lack in graphical complexity they make up for in pleasing animation and a wickedly sick sense of humour. Oh, and they load quickly. Petty Amiga owners will most certainly extract a wry giggle from the anim entitled Atari ST Game – I'll leave it to you to find out what this one's all about.

HERE IS A GAME THAT IS ESPECIALLY WRITTEN FOR THE ATARI ST...



Good, the back stabbing cynicism of it all!



Strong gameplay indeed in Accursed Toys

small business where the computer is used exclusively for a number of pre-defined tasks, such as a wordprocessor, spreadsheet or calendar, or for setting up education games for a child to use unaccompanied, for instance - although in the latter case, it could do with being a little more colourful and welcoming to anxious young fingers.

Still, if you like it, it only costs a bargain £5 shareware registration, and for this you get a fully working version including the ability to load and save your preferences - quite an important addition, when you come to think about it.

Bomb Jacky

17 Bit, 2AT6

Apart from the wicked title, this is an awe-some example of what the public domain occasionally throws up - a game so fresh and off-beat that no commercial house, with their highly polished sprites and

movements, would ever consider releasing.

The excellent opening sequence involves the credits being written in 3D hand grenades (you gotta see it, really) combined with some punchy, drum 'n' bass rave-style music - all very professional.

The whole game feels very friendly and playable, from the bouncy, up-to-date tunes to the special effects to the

clever, colourful graphics.

It's basically a fast platformer, with a young edge devoid of the yawning, predictable nature of many a slick release. This originality, combined with well-programmed gameplay, makes Bomb Jacky as addictive as it is original. Respect!

Assassins games 58

NBS, A558

Three games are collected on this compilation by the Assassins bunch with the usual flash selection menu.

The first of these, a Seuck effort called Super Raid IV, exhibits the usual jumpy-'n'-clunky feel of Seuck games, but is in fact a half-decent copy of Thunderblade, complete with an Assassin's-aded unlimited lives feature at the beginning.

The second of the three failed to load on the basic A600 I was reviewing it on, but the third - apparently called Accursed Toys and opening on a rather sick picture involving a teddy bear and a knife -

is another Seuck effort, and decidedly weird to boot (no pun intended).

Apparently you're meant to 'help Tilka and Hyssop battle to make the grade', whatever that means. Anyway, it involves your scrolling vertically in a jumpy, clunky kind of way, shooting at ground-based plant-like creatures which emit balls of botanical nastiness in your general direction.

I can't work out exactly what the majority of the sprites are meant to be, but they're all original, which is nice to see considering the decidedly unoriginal constraints imposed on such games by the limitations of the construction kit.

Oh, and according to the game itself, it is actually called Realm of Maiyessae. Weird...

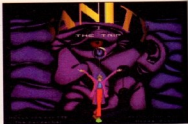
● Assassins game disk 1 to 64 are currently available from the same distributor.

Sanity

Amiganuts/Battleaxe PD

Hmmm. This one's about a character who - if the opening sequence is anything to go by - loses his mind, quite literally.

Not surprisingly, he wants it back, leading to a highly trippy platformer full of cycling colours and extremely fast gameplay, all set to manic tribal drums and music with definite hardcore



Out of their minds or off their trees? The jury's out on the programmers of Sanity...

leanings, including the classic 'here we go again!' sample. Oh, and as far as I can recall, I've never controlled a bubble before. Sanity? I have my doubts...

Where to get 'em

Amiganuts, 12 Hinkler Road, Southampton SO2 6FT

Battleaxe PD, 125 Kingswood, Thorpe Marriot, Norwich NR8 6UW

Andrew McKenry, 9 Layton Cross Road, Dartford DA2 7AP

NBS, 1 Chain Lane, Newport, Isle of Wight, Hampshire

Roberta Smith PD, 190 Falkland Way, Hampstead Garden Suburb, London NW11 6JE

17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield WF1 1DH



Recreate the excitement of a nightclub at 1am with No Limits!

It's all dance stuff this month - if you want to send me your sequenced Schubert I'd be more than grateful for the change, but of the disks that I could actually get to load, the only ones worth reviewing had a decidedly, erm, foot-tapping feel to them.

No Limits, by John Crawford, takes No Limits by 2 Unlimited and Felix's neo-hiNRG classic Don't You Want Me, and submits them to the classic Amiga cut 'n' paste treatment.

To the visual accompaniment of a crudely drawn but stroboscopically flashing dancer - complete with lights and even a glitter ball - the Amiga crunches its way through some crudely cut-up chunks of music, whose lack



of subtlety distracts from the actually quite effective on-screen colour onslaught. A 'no' from the jury, I'm afraid.

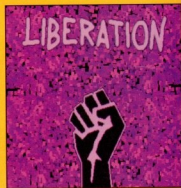
Far better musically, and indeed possibly the best sequenced Amiga dance music I've ever had the pleasure of reviewing, are entitled **Dance Classics 1 and 2**, which come from Andrew McEnery.

Six classic dance themes are here spread across two disks, from the fittingly chopped up Liberation (a song which itself borrows nearly everything from other records) to Italy's best Capella and the less immediate but undeni-

ably hypnotic (Hahland!) by Ramirez and Pizarro.

Even Zero B's seminal (and highly unavailable) Lock Up is here. This collection is presented complete with tasteful and fashionable on-screen stills.

Well sampled, seamless and presented in an uncluttered and pleasing form, this is a dance-on-disk milestone. The jury are chomped on the sofa with their hands in the air... I think they quite like it.



Dance Classics vols 1 & 2 - the best dance disks ever?

Is everybody happy?

GAMER

FLASHBACK

**A bit
of mindless
fun from US Gold**

Plus **REVIEWS...** WOODY'S WORLD • NIPPON SAFES INC • SINK OR SWIM
WORLD OF LEGEND • CHAMPIONSHIP MANAGER 93
INTERNATIONAL RUGBY GRAHAM GOOCH WORLD CLASS CRICKET AND MORE
ALSO... CRYSTAL KINGDOM DIZZY CRACKED • A1200 SOFTWARE COMPATIBILITY LIST
PLUS ALL THE LATEST EXCITING NEWS FROM THE AMIGA GAMES WORLD...

Gamer GLOBE

News from the world of Amiga games
that's almost too hot to handle...

Everybody walk the dinosaur...

Ocean are out and about on the movie tie-in front again, having signed the biggest and most expensive film of 1993. Mr Hype is once again roaring his ugly head as you can tell from this following paragraph taken from the press release:

"When the gates of Jurassic Park open, audiences will gain entry to a world they have never even imagined. A combination of scientific discovery and visual imagination, grand in its scope and diversity of life."

If you know what they are going on about write in and let us know.

Jurassic Park - The film is being directed by Steven Spielberg and is based on a book written by Michael Crichton. It's a story about a theme park with a difference. The park contains real dinosaurs which have been created using the latest bio-engineering technology. The



film will feature a stunning array of life-like visual effects that are like nothing else ever to be brought to the screen. Its worldwide premiere is on June 11, with its European debut in July.

That's the big screen, but details are being kept under wraps for the version on the small screen. The game will be multi-level and promises to feature some revolutionary techniques.

The designers have been in close consultation with Spielberg himself and have had unrestricted access to the special effects department, stills, story boards and script. The game will feature digitised dinosaur sounds sampled directly from the film's

soundtrack.

The software is currently in development on both sides of the Atlantic, in Ocean's San Jose and Manchester studios. If it is as half as good as the book then it's going to sell by the lorry load.

Too many cooks spoil the broth

Midrange are one of the busiest software companies around at the moment. They haven't even released Alfred Chicken or Captive 2 yet, but have already got another release planned.

Out to Lunch is an addictive platformer and features Pierre Le Chef, an eccentric yet world-renowned master of his trade. As he tours the world preparing international cuisine, his plans are plagued by setbacks.

Unfortunately for Pierre, the ingredients he requires for his dishes are unwilling to be used, so the bankers chef must first capture and contain his

ingredients in "The Cage". Pierre must also avoid and destroy the diseases and insects which infect or even eat his food.

Le Chef's main rival is an evil masked chef dressed in black called Chef Noir who is scheming to ruin Pierre's chances by releasing all his ingredients.

The game features 48 challenging levels spread across six countries, each with its own theme including specific foods and music to fully capture the flavour of each country.

Levels include the West Indies, Mexico and even



Pierre Le Chef is out to lunch

Pierre's home country of France. Also featured are tons of secret levels, unique power-ups and over 1,000 frames of superbly humorous character ani-

mations. Out to Lunch is planned for release on the Amiga at Christmas. Expect a preview in the next couple of months, but in the meantime, chill out and take a gander at this paltry screenshot.

Bullfrog hops back

Electronic Arts are back in the fray with the release of Syndicate. The brand new title from Bullfrog, the creators of the Populous and Powermancer series of games, Syndicate thus comes from one of the most innovative software development teams in the business.

The setting is a grim and dangerous future world some time after the Corporation Wars. The world's multi-national corporations had grown to such an extent that their power began to rival that of small countries. The CHP was then developed.

The CHP was a technological revolution that was better than any drug. Inserted into a person's head, it could alter a person's perception of the outside world, and give them hope by numbing their senses to the misery and squalor surrounding them.

For example a person living in a grimy apartment block could buy a Mansion CHP which once inserted would make the user believe he/she was living in a grand and expensive mansion.

Unfortunately this led to war between the corporations who were battling to monopolise CHP manufacture, toppling nations and governments in the process.

This greed began to attract dangerous criminals and soon the crime syndicates had infiltrated the corporate boardrooms. Using custom-built cyborg agents, they hunted down rivals and battled each other for ultimate control of the entire globe.

You take control of a young executive in one suc-

Team 17 rev up the releases

Team 17 have been working on their forthcoming release Overdrive which will be released in July. Team 17 supreme Martyn Brown explains: "We felt that the overhead perspective racing genre had really not been given adequate justice on the Amiga so a couple of new old titles so we thought we would give it 'the works'."

The game is a very fast, very smooth and superbly playable racer with four types of vehicle and five types of track. For technical reasons it is one player only - although a serial link allows two players to compete head-to-head - and involves racing through a combination of vehicles/tracks for prize money and features.

There are four, Formula One, Sports and Buggies - all of which handle differently on each of the five types of terrain. The game's feel is based on a number of all-time classics of the genre including Super Sprint but on a much bigger scale.

Gamer had a quick look at the game at the ECTS and we were duly impressed. It looks like Team 17 are back with another



A still from Overdrive



Overdrive arrives in July



Project X re-released on budget

INNARDS

Make a cuppa, chill out and look at...

REVIEWS • REVIEWS • REVIEWS

Woody's World.....110

The world's biggest Amiga platform game... allegedly

International Rugby Challenge.....113

Cor, try it and see. Acme Gamer Pun No 531

Flashback.....114

US Gold's cinematic experience arrives on the small screen

Sink or Swim.....116

Introducing Kevin Codner, but no Whifney Houston...

Championship Manager 93.....118

Domark's manager sim goes top of the league

Graham Gooch's World Class Cricket..120

Cricket is great! Cricket is exciting! Cricket is on your Amiga!

Nippon Safes Inc.....122

Yes that's a great title for a game, but what on earth is it about?

Worlds of Legend - Son of the Empire..124

Mindscape's Legend returns with more adventure than ever



REGULARS • REGULARS • REGULARS

Gamer Globe.....108

Enhance your life with all the latest Amiga games news. Enjoy!

A1200 List.....126

The definitive list of games that do or don't work on the A1200

Cheat Mode.....128

Codemaster's latest Dizzy game is given a thorough bashing



Syndicate is Bullfrog's biggest release since Populus 2

syndicate who is looking to make a name for himself. From his control platform in an airship high above the city, he observes as his agents spread the shadow of terror in a bid to conquer territory, ousting the rival syndicates and law enforcement forces.

The game features a stunning atmospheric intro sequence with state-of-the-art, television broadcast-quality rendered graphics. You are faced with over 50 missions, each set in a living city populated by intelligent men and women, cars and commuter trains, rival agents and law enforcement forces.

With the use of new graphic technology and realistic sound effects including music and digitised speech, Syndicate is Bullfrog's most unique title to date.

It will be available in June for £34.99, so start to save your money now because this is going to be worth every penny.

They call him Flipper

Digital Illusions are rumored to be working on the third instalment of their highly successful pinball series of games. The follow up to Pinball Dreams and Fantasies will be entitled Pinball Illusions. Sources say that the third game will include a new multi-ball feature. Digital Illusions say that they wanted to include it in their previous games, but couldn't due to the fact that it slowed the action down too much.

DI are trying to combat the problem by designing a brand spanking new mathematical model of a pinball table which will speed it all up considerably. Look out for it around Christmas time. Expect more news as we get it.

Short 'n' sweet

● Pygnosis return to the Amiga scene with the follow-up to First Samurai. The sequel is sidesplittingly entitled Second Samurai and gamers should expect more of the same. The sword-slashing adventure will this time have a simultaneous two-player option.

● Dark Seed fans will be pleased to know that the game won the 1993 Software Publisher's Association Excellence in Software Award in the Best Fantasy Role Playing/Adventure category. Even better news is that Cyberdreams are currently working on Dark Seed 2 which is meant to be ten times more scary and weird than the original.

● You can't beat a bit of Bull! Alternative Software's next release is Bull's Sporting Darts. It will retail at the incredibly low price of £9.99 and is unique in that it features six popular sports each played on a tailor made dashboard. Expect a full review next month.

● Alternative have also launched a brand new range of home computer games produced especially for 3 to 12-year-olds.

The Children's Range is a collection of award winning and best-selling titles with many based on popular TV and film characters.

Included in the collection will be current favourites such as Postman Pat, Thomas the Tank Engine, Popeye and The Munsters along with new arrivals Pixie & Dixie, Huckleberry Hound and Alvin & the Chipmunks. All games will sell at the low price of £7.99.

● The release of James Pond 3 has been put back to September. Subtitled Operation Starfish, it is a massive action-packed jump and run platform game which will feature over 100 sections, large character sprites, extensive parallax scrolling last seen in Pond 2 and in two-player mode. Finnis Frog - Pond's sidekick. It will initially be available for the A1200.

winner. Quick, grab Norris McWhirter because Team 17 are record breakers. Alien Breed Special Edition recently celebrated its 22nd continuous week at number one in the Gulp 16-bit budget chart.

This constitutes a brand new record, the previous longest stint being held by Rainbow Islands which spent 21 weeks there.

It might not be a record for long because Team 17 are on the verge of releasing some more budgets. Next up will be a revised edition of Project X.

The game features some lovely tweaks, such as not losing weapons when you die, shorter levels and in general changes which make it more playable for everyone.

Also re-released on budget is Assassin which will also have changed a little from its original format. The hero is now armed with a hand gun and the levels are built up of smaller stages rather than sprawling mazes.

Blimey, Team 17 are just about the most helpful and kindest software you could ever wish for. Which other companies bother to change their earlier games in an attempt to improve gameplay? Maybe other software houses should sit up and take notice because Team 17 are simply kicking your ass.



Improvements to Project X coming soon



The bonus round where Woody has to collect loads of cash. The money is then turned into points

If there was ever a genre that's been over-used since the day when computers first began, it has to be the platformer. The unusual thing about platformers is the fact that they are almost identical to each other.

That blasted Mario has got a lot to answer for. Every since the early days of computers we've been plagued by Mario wannabes and Sonic lookalikes. The shame is that a lot of these are just pure unadulterated crap.

Platformers are big business, mainly because everybody loves them. I can bet that every gamer in the world has at least one in their collection. For every amazing one you can expect another 20 copycats which are a load of old rubbish.

The Amiga world is packed full of rubbish as well, but when a good platform game comes out you know about it. Switchblade, Another World, Myth, Putty, Rainbow Islands, Zaxxon and more recently Superfrog are just a few examples I could mention.

The thing is that these tend to be fairly easy and are quite small in size. Vision Software claim that Woody's World is the world's biggest Amiga platform game - a pretty brash and bold statement, especially as this is their very first full price release.

It could well be true though. I've always fancied being a detective, so I'll don my deerstalker like Sherlock, my false moustache like Poirot, hop in

my Jag like Morse, be fat like Tosh from The Bill and investigate.

If you ask me, the evil baddies are a right pain. If they're not taking over a whole universe then they're robbing old Mrs Miggins, the lady down the street. This time in Woody's World they've stolen a magic crystal and a few TVs and videos to boot.

The King was inconsolable because the crystal had been stolen. Kingy had lost control and his marbles and his kingdom had been overthrown by, yep you've guessed it, evil baddies.

Woody was just your average kind of hero whose thoughts were more concerned with the up and coming all Olympics.

The King decided that Woody should find his beloved crystal because of the fact that Woody is, umm, an athlete and can

run fast, err probably.

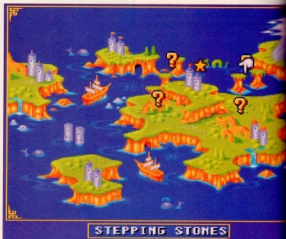
The King then gave Woody a map and described each of the castles illustrated and the dangers that surrounded them. He explained that there was a seventh castle that was missing from the map. It was at this castle that the King thought Woody would (ja ho) find the magic crystal.

Woody knew that he would have to travel across his whole world to find the mysterious seventh castle, but if that's what the King wanted then that is what he would have to do.

The chances of him finding the crystal before the Olympics would be very slim, but you never

The people behind the PD classic Cybernetix are dipping their toes into the pond of full-time computer games publishing with Woody's World, allegedly the biggest Amiga platform game in existence

WOODY'S



The map of Woody's World. Venture forth from the Steam Castle and the world is your oyster...

know, he might just get lucky. Woody then bounded off to complete his quest.

What this basically means is that this platformer involves you trekking through many different and varied levels in the desperate hope to find a crystal. A cheery plot doesn't always make for a bad piece of software though!

The adventure starts in the mysterious Steam Castle where Woody must beware of the, err, steam and also the evil beavers and birds that

inhabit the place. If you bumped in to Woody in the street he'd look a fairly normal chap and if he was your mate you'd probably buy him a pint, but Woody is far from normal. Remember it's always the quiet, shy, retiring types that are the serial killers. Woody changes his appearance more times than his underwear. He starts off in an off-the-shoulder wizard outfit and isn't that hero-like because he's quite slow and can only kill his enemies by bouncing on their heads. Continued in the



Woody is finally let loose in the outside level, but if he doesn't watch it he'll be playing the death level. Gulp!



Woody would you please bee-have! Oh dear a sad pun, but I just couldn't resist it...



It's not everyday you get chased by rocks unless your name is Indiana Jones. One of the many problems in the cave level

S WORLD



Age Aye Cap'n. Woody takes the helm and in meantime has to fight off some fish with an attitude problem...

game are hundreds of heart blocks. When Woody bangs them with his head he scores bonus points, but some of these blocks contain special power-ups. If you collect a sceptre, Woody transforms into Prince Woody which gives him greater jumping power and the ability to kick enemies.

If you manage to grab a crown then Woody turns into King Woody giving him greater jumping power and the ability to fire stars at his enemies, and he gets to wear a smart shiny crown to boot.

Each power-up also speeds Woody up thus making the game more smooth and in the process more enjoyable to play.

The graphics in Woody's World are brilliant and easily rival the standard set in Rainbow Islands. In fact to put it into perspective, imagine a cutsey puppy dog with sad eyes looking up at you with its tongue out and begging with its paw.

Aww cute you may think, but the graphics in Woody's are ten times cuter than that. Even when our hero dies it's really cute.

The backdrops are just as good as the sprites with some really nice effects - they're as impressive as anything I've seen for a long time.

For instance, take the clouds level where Woody jumps from cumulus to nimbus and where the wind actually blows our sticky hero all over the place making the game more interesting than just simply running through the level.

If I was stupid and didn't have much sense I could instantly compare this to Superfrog, but

some people will simply because it came out last month and is still in people's minds, but I won't because they are two totally different games.

If I had to compare it to anything it'd probably be Mario, but seeing as the fat Italian plumber has never and will never appear on the Amiga I can quite happily compare it, so there.

On the sound front there is a whole abundance of fantastic tunes. The music seems to fit the action perfectly and for a change it doesn't get annoying - you could actually find yourself humming it, even when you're not playing! The sound effects are kept to a minimum, but are more than adequate for this type of game.

Playability-wise I can't really knock it. There aren't any design faults that I could find. It looks suited to small kids, but it's one of the hardest platform games I've ever played and is recommended to platform experts wanting a bit of a challenge.

You only get three lives and these will rapidly run out if you don't keep on collecting energy and extra lives. It'll take you a while, before you actually manage to get through a few levels.

Longevity isn't a problem because I've carried out a thorough investigation and Woody's World is the biggest Amiga platform game to date.

The number of levels is incredible. Put it this way - you won't be able to complete it very quickly unless you're some kind of computer games hero or genius. Vision have come up with a crack-

Take time out on your adventure and inspect the local wildlife. The Woodster chills out...



er and for their full price debut they couldn't have written a better game. Woody's World has got everything - great graphics, top tunes, packed full of playability and an addiction factor that is so dangerous it broke the Gamer addictive-o-meter.

If you liked Superfrog then this is your cup of tea and I would heartily recommend it to anyone, although it is a bit of the difficult side, but more than definitely worth persevering with. Wood you believe it a brilliant debut and no mistake. Platform fans have never had it so good.

JONATHAN MADDOCK

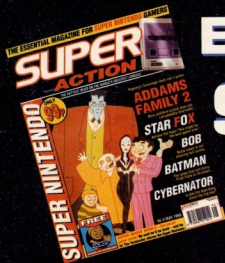


Beavers with spiky sticks. Not very fearsome you might think, but they're a right pain in the bottoy...



One of the elusive chests you need to complete the level. They didn't hide it very well, did they?

VISION	
VISION	92%
AUDIO	
DIFFICULTY	
LASTABILITY	
Woody's World is a major rival to Rainbow Islands in the playability and cuteness stakes. It's packed full of brilliant graphics and sound and is as playable as hell.	
Publisher	DMI
Developer	Vision Software
Disks	3
Price	\$25.99
HD Install	Yes
Size	1 meg



**BOTH
99p**

**AND
NOW**



MEGA ACTION

ON SALE MAY 20th...

The ultimate
add-on for your
Mega Drive and
Mega CD!

**ALL YOU CAN
HANDLE FOR
JUST 99p**

Another great magazine from
EURO PRESS
INTERACTIVE





The control screen - functional but not flashy



The managerial bit, in-depth enough if you want to get into the game but not too much to bog the gameplay



England's new all-stars team, England (Joystick) takes the pitch

INTERNATIONAL RUGBY

Sellotape back your ears and grunt at people with Domark's latest...



Conversion time - be careful of the wind, it really does make a difference

A very timely release indeed this, with England steaming through the Rugby Sevens to win. It seems fitting that we should release a game and have a quick gloot. But this respectable win doesn't take away the fact that you have to be six foot two, 15 stone and drink masses of bitter to be a rugby

player. If you are a ten-stone weakling and a coward to boot like me you don't want to be on the wrong end of huge bloke hurtling through the air with an odd-shaped ball.

So what can you do if you still want the excitement and the gameplay? Get the computer game, of course.

When I first booted up IRC I was impressed by the smoothness with which everything ran. The title screen and intros were very tastefully executed leaving you in a good frame of mind for the game.

The control screen isn't the most detailed I've seen but after a few minutes of fiddling you get the hang of what all the tools do.

One aspect I found very impressive was the use of hot keys on the menus – if it's possible to just press the one designated letter of the option you want instead of waiting until your cursor gets over there. By far my favourite aspect is the fact that you can play the game on different levels, so if you are purely interested in the action, you can completely ignore the management side and vice-versa.

If you just fancy going for a quick knockabout you don't have to take into account that three of your men are injured and that you are in deep financial trouble - that is if you don't want to. As soon

as IRC came into the office it was a case of nudge nudge, wink wink, some planker's made a rugby game.

But as it turns out they have made a pretty fair job of the control method. It's similar to many of the football simulations – the member of the team that you are controlling at one particular time is depicted by an arrow above his head. This changes as the ball move around.

As you probably know, you have to get the ball past the line at the end of the pitch and as near to the posts as you possibly can. Once this is achieved you can convert your try and gain more points.

The conversion entails you kicking the ball from a set distance away over the crossbar but still between the two upright poles. In Rugby the conversions control is very similar to a golf sim – you have to click at the right time for the speed and power then you have to click for the aim.

To pass to other players on your way down the field there are two methods. You can either click your button quickly and your player will make a pass in the direction where a team member should be, or you can hold down the button and a target will appear. You have to do this pretty quickly and aiming takes a bit of getting used to but it works in the end. As far as we could tell the

rules and the gameplay were almost perfectly faithful to the real thing.

There was the occasional discrepancy or niggle, for instance when the opposition kick the ball back into your half you men seem to run around it and not pick it up until the opposition have caught up with it. But apart from that IRC is a winner! Well done Denmark.

REN STYLES



VISION
○○○○○●●●●●

AUDIO
○○○○○●●●●●

DIFFICULTY
○○○○○●●●●●

LASTABILITY
○○○○○●●●●●

A fun and very
playable sports
simulation. It must
have been a tricky
thing to do but Domark
made a very good
job of it.

75%

Publisher ► Domark
Developer ► Domark
Disks ► 1
Price ► \$25.99
HD Install ► N/A
Size ► 1 meg

The natural thing to do would be to compare Flashback with Another World. Although they are aesthetically very similar, Flashback offers much more in the way of gameplay than Another World did.

In fact, there is a common misconception that Flashback is actually a sequel to Another World. This is not the case, which is further reinforced by the fact that sequels to both Another World and Flashback are under way.

Prince of Persia first set the standard by which character animation was subsequently judged, then came Another World and Cruise for a Corpse, both by Delphine. Flashback continues this animation excellence and throws in a large and healthy dollop of gameplay to boot.

Such animation, married with excellent background graphics, seems to be a trademark of games from our French friends. But despite the excellent visuals, they never quite seemed to register that most ethereal ingredient of good gameplay—until now that is.

Flashback is not only visually great—the control method, atmosphere and general difficulty level have been balanced to a point of perfection. This is a game everyone will finish because it will grab you by the throat and drag you back for more purely because it's so good.

So, what's it all about, I hear you ask? Well, the story goes something like this. Conrad B Hart, a research scientist, has prepared his... and at year thesis. He has developed a pair of glasses which can measure molecular density.

His device reveals aliens, whose molecular density is far greater than ours, living among the population. As is the case with the majority of aliens, they are not on Earth for a holiday but to take the place over.

Unfortunately, Conrad's investigations raise suspicion among the aliens who, quite understandably, don't want some human strolling around, conveying to all and sundry the exact nature of their presence on Earth. So, being a clever dick,



The Death Tower scenario is very reminiscent of the Arnold Schwarzenegger film, *Running Man*

combined with his fear of capture, Conrad prepares a holographic message and then saves the contents of his memory, which he then sends to his friend Ian.

Conrad is eventually captured and his memory erased by the aliens. Still held captive, he manages to escape via a hoverbike with the aliens in hot pursuit.

During the chase, Conrad's bike is shot and he crashes to the jungle below. Content that Conrad did not survive the fall, his pursuers leave. However, Conrad is a lucky bugger and has survived the crash.

He awakes, not knowing who he is or where he is. This is where you take over. You have to guide Conrad on his mission to find his pal, Ian, and to

FLASHBACK

recover his memory. However, as is the case with most missions, to find your memory as well as a bloke called Ian, things are not going to be simple. There are oodles of obstacles, most of which shoot at you, so some nifty joystick manipulation will be required.

Thank goodness good ol' Conrad just happens to have a rather mean handgun, which, as is humorously evident in so many TV Westerns, doesn't seem to exhaust its supply of bullets.

Thankfully, Flashback's control method is as good as the main characters animation which it controls. Too many good games have died a quick death due to poor joystick programming and Delphine are obviously aware of that fact.

Once you grab hold of the joystick, you will have Conrad running, jumping, rolling around and blasting baddies with consummate ease in no time.

In fact, the key to success is the ability to quickly master the various movements which Conrad is able to do. Those of you who have played Prince of Persia will no doubt take to the controls immediately as they are extremely similar.

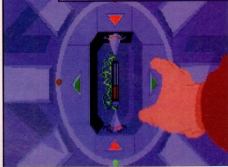
As you guide Conrad around the various screens, blasting away at opponents, you will also have to contend with puzzles. You will come across many objects such as a force field, anti-grav belt and even exploding mice, all of which you will find useful.

Besides the amazing character animation and great background graphics, there are also spot animations



Having completed the Death Tower, Conrad wins the first prize, a ticket to Earth

OK dear, this is your last chance. If you don't open up, I'm gonna blast ya with my big pistol



Recharge your shields at every opportunity to protect yourself from enemy fire

A rather energetic - and lengthy - jump is required to bridge this gap



Conrad takes off on a stolen hoverbike to get as much distance between himself and the aliens

FLASHBACK

Delphine do it again with this excellent arcade adventure featuring jaw-dropping animation and eye-popping graphics

provided as you complete each part and you have a system whereby even the most impatient of us - who throw the joystick against the wall shouting "Oh SHIT, it took me ages to get to this point!" - will find adequate.

Most gamers expect a lot from today's games, both in terms of visuals and sonics. Well, from the seventies, you can get a good idea of the overall look of the game - you'll just have to take my word for it about the stunning animation.

The sound effects are equally impressive. As well as various "spot soundtracks" as you move from screen to screen, there are lots of sound effects interspersed throughout the game.

These are especially evident on levels which are outdoors, where you get the effect of chirps, bleats and general noises of hidden alien beasts ringing in your ears. Very atmospheric I can tell you.

Besides the nasty occupants of this planet you find yourself on, which, in general, need to be shot as soon as you see them, there are also some friendly folk eager to help (if only to make a fast

back).

There is limited interaction with these people in that you simply walk over to them, press the joystick button and read the conversation between Conrad and the aforementioned person.

Many of the conversations will give clues as to your next course of action and pretty soon, Conrad regains his memory and the action really begins to speed up.

To conclude, Flashback is as slick as a James Cameron film and I for one can't wait for the sequel.

DARREN EVANS



The chap down below is one of the more difficult opponents to kill

Our hero lies unconscious, but still alive after the hoverbike crash. He's about to wake up in a not too friendly jungle

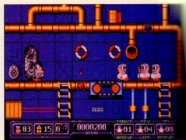
VISION	
●●●●●●●●●●	
AUDIO	
●●●●●●●●●●	
DIFFICULTY	
●●●●●●●●●●	
LASTABILITY	
●●●●●●●●●●	
<p>A massive thumbs up! Great graphics, animation and sound all add up to a superb gaming experience. I want more... now.</p>	
94%	
<p>Publisher > US Gold Developer > Delphine Disks > 4 Price > \$29.99 HD Install > Yes Size > 1Mb</p>	



Never play the same level twice



The passengers will avoid water



On the left is the escape route

Here's a novel variation on the old Lemmings theme. You play Kevin Codner, a man for whom integrity and bravery are so much a part of his make-up that they might as well be his middle names. As you read the intimate interview with the man whose very actions you'll soon be controlling, you realise the scale of your mission.

The SS Lucifer is, you see, sinking, and full of Dim Passengers, all with a marked dislike of rapidly rising waters. Your job is to guide them safely from where they enter each compartment to the exit. Sounds pretty similar to Lemmings still, doesn't it?

There are differences, though. For a start Kevin is an actual character who has nothing to do with the Dim Passengers. You can't make the passengers actually do anything like you can Lemmings - actions are controlled by a number of means apart from the passengers themselves, about which more later.

Also, the Dim Passengers might be lacking enough of the grey stuff to snatch the chair at MENSA from Sir Clive, but they haven't got a pathological desire to end it all in the same way that our off-loving chums of old have.

Indeed, they'll do everything they can to run away from the rising waters when they come across them.

Oh, and control is not via a crashbar and a mouse, but by the more conventional joystick and Fire button approach, your button being used to set off bombs, pick things up and so on.

So, we've established that, although based on the Lemmings idea, Sink or Swim has enough going for it to warrant consideration in its own right, so consider it we will.

Let's take a wander through the average level, shall we? Kevin appears, followed very shortly by a number of Dim Passengers. They're big, chunky affairs, and there aren't

Kevin comes with his own bombs



Kevin Codner does his Tarzan thang

SINK or SWIM

Kevin Codner stars in an action-packed platform romper that makes the Poseidon Adventure look like bath time



that many of them to look after. At the bottom of the screen are a host of statistics which it certainly pays to keep your eye on - especially the one that tells you how much oxygen you've got left. There are windows for passengers remaining to be saved, lives, and how much time is left on the fuses of any bombs you've planted...

JETPAC TO SAFETY

Various objects can be utilised as mentioned earlier. Jetpacs are very useful - when you pull them off the wall, they drop into any rising waters which have stranded passengers in it, allowing the passengers to jetpac to safety, or the top of the screen - whichever comes first!

There's cargo knocking around, which you use to make bridges and platforms to complete an escape route for your passengers, but conversely it can get in the way, hindering the essential route to the chute, in which case you can move it.

Burst pipes shoot out fatal steam at thousands of

degrees, but you can crawl along them and seal them... all with your Fire button!

There are various hazards apart from the water-based ones, crushers do just that to anything that gets in their way, for instance. Many other traps, landmines and various objects knock around the various levels - swinging chains, magnetic hails, electric fields, crew lifts - all have their uses, and those that don't teach you to avoid them very quickly indeed. There's even an emergency life raft for when things are all going horribly wrong.

Graphically the game is a couple of years behind its time, with clumsy, not particularly well animated sprites - although it must be said that the water effects are quite impressive, especially the wobbly reflection of the Lucifer in the title screens. But the movement of the characters does let it all down a little, as does their rather pedestrian speed.

Soundswise too it's OK, with some admittedly very nice water effects, but again it seems to be a couple of years behind its time - the theme tune reminds me of one of the better PD music demo disks.

SIMPLISTIC MAGIC

As for as the gameplay goes, it's a nice idea and a credible attempt to deviate from the Lemmings idea, but like so many copied games, the more it deviates, the more it seems to lose some of the kind of simplistic magic it feels rather cluttered, with too much superfluous stuff going on.

This has the effect of making it hard deciding exactly what's happening, which in turn makes it hard to settle back into some serious, contemplative, Pausan puzzle-type thinking as one could do with great pleasure in Lemmings. So, the presentation is

OK, the idea - albeit borrowed - is an excellent one, and the sound and graphics are passable but nothing special.

It's the kind of game that, should you have a particular maritime bent, you'll enjoy, but for the average gamer, I'd say that there's a lot to be said for a slicker, smoother and more exciting stuff around. Sink or swim? This one's struggling to tread water. I'm afraid.

PHIL MORRIS

VISION	66%
AUDIO	66%
DIFFICULTY	66%
LASTABILITY	66%
A nice idea, cluttered by average graphics, sound and gameplay. Still, Ben absolutely loves it, so if you're looking for an off-beat experience you could do worse.	
Publisher: Zappell Games Ltd	
Developer: Zappell Games Ltd	
Disks: 2	
Price: £25.99	
HD Install: No	
Size: 1 meg	

neo

WHALE'S VOYAGE



Prepare yourself for a fantastic voyage into the darkest reaches of the universe, where you will develop a career as a Galactic Merchant.

Manipulating genetic waste to produce the ultimate crew.

Lead them against the might of a totalitarian bureaucracy in the brutal world of the 24th century and experience what freedom really means...

Available on Amiga or Special Amiga 1200 Format

A NEO SOFTWARE PRODUCTION FROM FLAIR SOFTWARE

The Smithy Side, Ponteland, Newcastle upon Tyne, NE20 9BD. Telephone 0661 860260

CHAMPIONSHIP

Could you manage Manchester United and win the Premier League title? Here's your big chance, grab your mouse and get down to it...

The football league season is finally coming to a close. It's now the time of heavy promotion and relegation battles. Manchester United are, at the time of writing, sitting snugly at the top of the league and it looks as though Alex Ferguson has finally achieved league success for the Red Devils for the first time since 1957.

The pressure of controlling a football club must be immense. Not only do you have to run the team and make sure you've got the best 11 players on the park on a Saturday afternoon, but you must also keep an eye on the money situation and the general running of the club.

The question to be asked in this review is, could you have done it? Could you have taken a football club like Manchester United to the league title? Well thanks to Danmark you can find out.

As the great Bill Shankly once remarked "Football isn't a game of life and death - it's much more important than that."

There are two types of computer football games. The first is the action/arcade game like Sensible Soccer or Kick Off where you have direct control over your team. There is much more to football than just playing it, though, and this is reflected in the second type of game.

The management type has been around since



Here's the main menu where all the other options are at your disposal

the days of the Spectrum where Football Manager was the definitive football game. Not much in the way of graphics or sound, but the playability was unbeatable.

One of the most recent football games to hit the charts was Premier Manager by Grenin and a lot of you punters out seemed to have enjoyed it immensely.

A year or so ago, Danmark released Championship Manager and it fared pretty well in the cruel world of computer games sales. It was probably the most realistic football management game I'd ever played, so you can well imagine the grin on my face when I heard about the brand new updated version.

Yep, Championship Manager '93 is here and it promises to be the best football management simulation ever in the whole wide world. That's some statement, but I have the sneaky suspicion that Danmark fully intend not to break that promise. If I were to detail every new feature in this updated version of Championship

Manager then Gamer would be full up and besides I haven't got time. I'll run through a few of them though. Basically everything has been updated. The Premier League is now included plus all the cup competitions all have their proper names.

All the player data is now correct and when you click on the player's name you get a full screen of statistics. You basically get a full run down on the player in question from number of goals scored to his previous club history to the colour of his underpants.

This information coupled with the player's real name gives CM '93 that edge of realism, simply because you can relate to the players better.

Other features include a brand new scout system, player loans, upgrading of stadia, injury time, manager's salary, own goals, win bonuses, more board comments and many more.

There is also a five-week gap before the

start of the season, so that you can organise your transfers, then select your best team and get your players up to match fitness. This is a nice little touch and it's the first time I've seen it done in a football management game.

As I mentioned before the real names add that touch of realism to the game, but they also have the correct ages, so it's only going to be a matter of time before you have to re-name your team to Parkside Old Folks Wanderers.

To stop this from happening CM '93 generates new players to come into the game, obviously you won't be heard of them, but it's nevertheless a very good idea.

Another big addition to the game is the inclusion of foreign players into the transfer market. There are in fact 100 foreigners and the game includes a wide variety of players and countries. Unless you're a totally boring football fan then you will never hear of any of these apart from the odd Italian here and there and that's only thanks to Channel Four's Sunday afternoon TV programme. You never know, you might pick up a Pole or two!

Take a gander at the screenshots and you'll see that CM '93 is not graphically fantastic. The whole game is controlled using the mouse and controls around a menu system which involves a lot of clicking.

The only graphic of interest is the choice of pictures which you can have as your backdrop to the game. There are seven or so to choose from.

You can choose a nice picture of the charming Chelsea middlefield dynamo Andy Townsend, or you can even leave it totally blank - the choice as they say is yours...

One thing you should know about is the actual match day. Now this is nothing like what I expected when I first saw it. The set-up of the screen is incredibly basic with the time set in the top right corner, the two team names and six little bars at the bottom.

You get a running commentary of the game, but it's all done in broken English. An example would be "Both rounds keeper. Roll it in set. Goal. Goal disallowed. Referee spotted handball offence." It does seem strange at first, but after

Stockport Squad														
Trns	Staf	Leag	Fixt	Accs	Info	Rsrv								
BRANNEY T	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	MOORE C	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
BEAUCHANT C	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	PREECE A	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
CRASTHIRE J	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	KECCERAN D	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
EDWARDS N	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	MALLACE M	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
FINLEY A	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WARD F	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
FLVIN M	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WHEELER P	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
FRANIN O	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
FRANCIS K	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
GANNON J	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
JAMES M	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
KNOLES D	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
MCARD B	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
MILLER D	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	WILLIAMS S	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS	DAWKINS
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 SHP														
GLS BSP FWR FORN														
DONE					DEFS					MIDS				

MANAGER '93

about five matches you become used to it.

Well I can see the ref signalling to his linesman and we've played two minutes of injury time, so I'll sum up for you.

Championship Manager is the most complete football management sim I've ever played. The sheer amount of detail that's gone into it is unbelievable. Simply because so much time and effort has been put in by the games creators, it deserves a Gamer Gold.

Everything you think should be in a management game is in *Championship Manager 93*. Internationals, transfers, scouts, penalties and so on are all there. It will appeal to the dedicated football fan, but I also think it could do rather well with other gamers because it is so good.

Graphically it's not brilliant, but I don't think

that this type of game warrants amazing graphics anyway. The sound department is virtually non-existent with only a couple of cheers in there when you score a goal, but again it's not the type of game that needs sound. It's positively overflowing with playability and is highly addictive.

There are two ways to buy the game. The first is to run down the shops and pay £29.99 for it. The second is to upgrade your original *Championship Manager* by sending the disks and £7.99 to those nice chaps at Inteltek who can be reached at: *Championship Manager '93*, Inteltek, PO Box 1735, Bournemouth BH4 8YN.

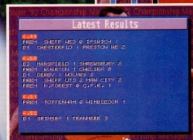
To put it simply, Championship Manager is Ryan Giggs, while all the other management games are Tony Adams. I rest my case.

JONATHAN MADDOCK

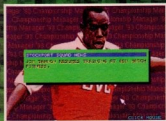


It's that all important match day and County have won!

Hmm, this program is true to life. Look County play the long ball game, just like in real-life. cool



The teleprinter
just like
Grandstand
have. Where's
Des Lynam when
you need him?



There is a brief news flash in-between games which keeps you up to date on the squad and job front.



VISION



AUDIO



DIFFICULTY



LASTABILITY



This is the best football management game that you can get. Graphically and sonically it won't set your pants alight, but as far as playability and addiction go you can't go wrong. Brilliant!

92%

Publisher ▶ Domark
Developer ▶ Interlek
Disks ▶ 1
Price ▶ \$29.99/ \$7.99
HD Install ▶ N/A
Size ▶ 1 meg

Few sporting moments can stir the juices of the back page headline writers as effectively as yet another England cricketing disaster, especially when defeat at the hands of Sri Lanka occurs only a few months before the Ozzies turn up to defend the Ashes.

National pride demands a spirited performance and nothing short of victory will drag the names of the 11 unfortunate white-clad sportsman out of the ninth circle of hell to which every sports journal in Wapping banished them after the winter tour.

Graham Gooch's World Class Cricket is the latest of a small group of games which have attempted to simulate the sport, and comes closer than anything yet released to the real thing.

Good games of this sort are difficult to produce because cricket doesn't lend itself as readily as football to a fast exciting computer game, but GWCC combines simulation accuracy with slick gameplay and brings it off very nicely.

Just about every rule and aspect of cricket is



Superb graphics in play as lashing delivery goes in another



Nowzat! An azzie goes for just one run

GRAHAM GOOCH WORLD CLASS CRICKET

implemented, from LBWs to run-outs, and the superb graphics catch the eye as soon as play commences.

Crammed onto one disk as it is, GWCC loads quickly, plays quickly, and disk access is minimal, so nothing gets in the way of the simulation.

In play, the game can be as complex or simple as one likes, and there should be enough options to keep even the cricket fanatics happy. Play can be over anything from one to five days and the number of overs can be set from 20 to unlimited.

A selection of world teams is on offer, complete with realistic and current player lists, but the novice need only have the computer select the best 11 to proceed to the action.

The more finicky among us can chop and change team selection by dipping into the full squad, and the even more dedicated will find the option to edit teams, team names, and even players' individual characteristics to suit any taste.

It would, for instance, be perfectly possible to have a nostalgic player to change the England and

Australia line up to repeat the infamous "body-line" tour of the 30s complete with Don Bradman and company.

In play, bowling, batting, and fielding are all taken care of in simple but effective fashion. Bowling is a matter of placing the intended landing point for the ball then clicking the joystick button, at which point one of two things will happen depending on the type of bowler being used. If playing a fast bowler, the player will see a speed bar in the corner of the screen which can be controlled by wagging the joystick back and forth to increase speed.

Spin bowlers vary in that they bring up a selection for leg or off spin, then the player waggles the joystick to increase the amount of spin. For added realism, a natural leg spin bowler will be able to spin the ball faster in that direction.

Tired of watching the familiar old middle order collapse? Now's your chance to don the white jumper and see if you can do any better

Batting can be tricky - my first innings score of ten all out should be ample testament to that - but with practice and good timing the eight types of shot on offer give the player enough flexibility to deal with all sorts of bowlers.

There is little in the way of the delicate touch, but the choice of where in the crease to stand, when to hit the button, and which shot to play makes batting a challenging enough affair without fancy extras.

Once you manage to pull a decent shot out of the bag, joystick waggling is again needed to make the batsman run of anything more than a relaxed canter, so play can become quite physical as one player waggles furiously to deliver a fast ball and the other does likewise to squeeze a single out of a short cut to the midfield.

Fielding is less controllable, but one feature I liked was the ability to set a different field placement for each bowler, then save them to disk for later use.

It is possible to arrange the fields for one fast bowler then copy it to all the other fast bowlers, so quick tactics changes are possible before and during play.

When an opposing batsman hits the ball, the display changes to a more distant view showing about a quarter of the field, and the fielder under control is highlighted by an arrow.

Players have little or no control over what happens, and my input seemed to be limited to just pressing the button to throw the ball.

Overall, despite using the same graphics for European, Caribbean, and Asian players, the lack of a tour or World Cup option, and a few reservations about some cricket fans' willingness

to indulge in joystick waggling, GWCC is easily the best cricket game available on the Amiga, and one of the most well polished and neatly implemented sports games I've ever had the pleasure to play.

STEVIE KENNEDY



Choose your weapon, all the best cricketing countries... and England

VISION

●●●●●●●●●●

AUDIO

●●●●●●●●●●

DIFFICULTY

●●●●●●●●●●

LASTABILITY

●●●●●●●●●●

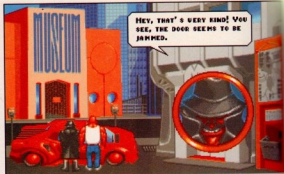
This is the best sports simulation for a while and easily the best cricket game around.

90%

Publisher > Audiogenic
Developer > Audiogenic
Disks > 1
Price > £39.99
HD Install > N/A
Size > 1 Meg



Yes, well that's the normal procedure when robbing banks. Let's go to work!



Dino gets caught up in some dodgy dealings with a suspicious and shady character

Remember the days when games were simple? When the graphics and sound were basic and the titles were straightforward, like *Asteroids* or *Frogger*? They more often than not told you something about the game. For instance, a game like *Frogger* obviously features a frog, but these days game creators just seem to call their games anything they want to, a prime example being *Nippon Safes Inc.*

What on earth is that all about? Well, from the title you'd think it'd be about a load of Japanese safes running around the world causing havoc and mayhem!

No, despite the title *Nippon Safes Inc.* is an interactive adventure game, and it has to be said that it's certainly a little bit strange. Not surreal and far out, but definitely weird.

It uniquely features three different central characters to choose from each with their own adventure and puzzles to solve. Each character's story proceeds alongside the others - they're irrevocably linked.

It's up to you whether you decide to solve them one at a time or alternate between them. The characters themselves are really different from one another, but they all have similar objectives.

The game is set in and around the fictitious city of *Yokyo* in Japan where in the more disreputable parts of the metropolis a shady character has been wandering around looking suspicious. The object is to discover who he or she is and what they could be up to.

Nippon Safes takes a lot of its ideas from traditional Japanese culture, incorporating tea making, geisha girls, sumo and so on - although it is set in the 90s.

It's certainly like no other adventure game I've

Strangely named and even stranger to play. Take a trip into the mysterious metropolis of *Yokyo* in this highly original adventure

played before and looks a lot different to everything else on the market at the moment. The graphics aren't quite as impressive as *Monkey Island 2*, but they do have a unique look to them. The presentation makes a nice change and the whole thing has a very cartoon-like appeal and feel to it. All the characters are quite well animated.

Your perspective changes as you play the game. It's hard to explain, but look at the screenshots on the page and you'll see the different views.

From the far away view on the highway to the full-screen close-up outside the Hot Sals Tube from the view from the Metro which uses only a small part of the screen, the different angles make it all that little bit more interesting.

Control is a point-and-click affair using the mouse, but there also is an icon system. This can be called up using the right mouse button and allows you to select either a command or an object

NIPPON

to use. There are four commands in all. You can pick things up, examine objects, open and close objects, and most importantly talk to people. When you talk to another character, a picture of you and his or her head appears. You then get two or three choices on what to say and the conversation will continue like this until you've said all you need to.

You can use objects with other objects, which can be done by holding the left mouse button down while clicking the right. All in all, the system is incredibly easy to use.

Some of the puzzles are very strange and not quite as straightforward as in something like *Monkey Island* or *Indiana Jones* and the Fate of Atlantis. You'll solve most of them by stumbling around different parts of *Yokyo*.

Unless you check everything you're likely to miss an object which will become very important later on in the game. It's always best to pick up everything you find because it can be a real hassle having to go back for stuff.

The centre of *Yokyo* is quite large, but several other parts of the city can be accessed using the very reliable Metro tube trains. Once bought the ticket can be used as many times as you like and will never run out. British Rail take note!

There is a certain amount of humour. For example, the programmers put in an appearance, but most of their jokes only apply to themselves.

Nippon Safes is nowhere near as funny as *Monkey Island*, but is far funnier than *Jimmy Turk*. Its best point is that it's so different from everything else.

The presentation is spot on and all the graphics are brilliant, especially the backgrounds. There isn't much to listen to on the sound front, but there are several spot effects like birds tweeting in the park to test your ears out on.

At least there isn't a bloody annoying tune that plays all the way through like some other adventures I could mention, but won't.

The control system is well designed and you'll be able to master it after only a couple of minutes' play. The biggest bonus has to be the fact that you've literally got three games in one. All three adventures, despite having similar objectives, are completely different.

One thing I have to mention is the fact that the game comes on five disks, so a hard drive is a

Three



Donna Fatale

Donna is a variety actress who abandoned a promising career as a ballet dancer to enter the glittering world of show business. She arrived in *Yokyo* dazzled by the promises of a sell-out impresario who, after having squandered all her possessions, left her to a life on the border of legality. Will do anything (ahem) to get ahead in show business.



Doug Nuts fails the bank job for the 137th time! When will he ever learn...

I'M INNOCENT!



Dino tries his hardest to get a walk-on part on *The Bill* while on his way to the local nick



Outside the Hot Sushi and I wouldn't mess about with that bouncer if I were you...

SAFES INC

e's company

Doug Nuts

An electronics genius who uses his knowledge for unlawful purposes although so far only with meagre results. His career as an electronic engineer at Oxford ended when he was caught fiddling the results of the exams stored in the faculty computer. Students, eh?

He then moved to Japan, the homeland of electronics. He gets picked up by the cops every time one of his gadgets fails when trying to break into his local bank. A dirty little too-legal and no mistake.

definite must. If you do play on disks then you'll be swapping until the cows come home - fine if you can put up with it! If you're gasping for an adventure having completed everything else around, Nippon Sales Inc could be well worth your time and money.

One thing I can't work out is just why the creators called it Nippon Sales Inc. I suppose it's just going to have to be one of life's little mysteries.

JONATHAN MADDOCK



Douns performs her infamous strip act at the Hot Sushi



Doug Nuts is let out of prison and begins his adventure in the city of Tyoko

Dino Fagioli

A former boxer with Italian origins. Basically a good and honest soul, but often falls into traps set by people taking advantage of the fact that he isn't very well endowed in the brain department.

After a series of defeats in the boxing ring, he boarded a ship bound for Japan working as a deck hand. Following his unpleasant scrape, he was thrown off the ship in Tyoko, where he is desperately trying to make ends meet.



Our beefy chum meets Mr Bill Stickers...

VISION

○○○○○○○○○○

AUDIO

○○○○○○○○○○

DIFFICULTY

○○○○○○○○○○

LASTABILITY

○○○○○○○○○○

This one of the strangest games I've ever played. The graphics are amazing and could have come straight out of a cartoon. Loads of disk swaps required if you haven't a hard disk.

85%

Publisher ▶ DMI
Developer ▶ Dynabyte
Disks ▶ 5
Price ▶ £29.99
HD Install ▶ Yes
Size ▶ 1 meg



The other three members of your group... on their way to the pub



The character creation screen with a very scary looking women being created

WORLDS OF LEGEND

I upset me to see how little time and effort it takes for such a large company to knock out a game like *Worlds of Legend*. The small amount of documentation that we get with states that it "provides new players with a completely new experience in adventure role playing".

The sad fact is that it brings nothing new to the world of Amiga games, the way the game is constructed is about as original as writing another *Space Invaders*.

So now I've completely destroyed it, I should explain why. Well for a start it's a totally original idea - how may games in the last year or so can you name that entail you controlling four characters with a quest to fulfil? Each of the characters having their own ratings for dexterity, skill and so

Can another role-playing adventure add anything new and fresh to a tired genre?

on! Sound familiar yet? The first to do this properly was *Dungeon Master*, which was and still is a classic. Some games have followed a slightly different vein and come good - *Sabre Team* for instance - but nothing has ever quite equalled the original.

Worlds of Legend begins when a messenger comes to tell one of the four members of the group of the death of his father. This death means that the land in which they live will be plunged into war. It is your job to investigate the fatality and

stop the whole land falling into the wrong hands. As soon as you get the message that your father has been murdered, the rest of the land goes crazy and starts fighting. This makes it very hard to travel to different towns because most people won't let you in unless you have the proper pass, so to get in you have to bribe them or beat them up which can get pretty tedious because it's the same old thing time and time again.

The fight sequences are laughable. The computer does most of the fighting for you - all you have to do is occasionally make the wizard cast a spell or turn one of the fighters into a berserker. You can even make one of the other characters sing a song!

What that is supposed to do I don't know - some prat singing "Tie me kangaroo down, sport" to several bloodthirsty, alcohol-crazed psychopaths isn't going to have much effect, I fear.

To look at, the fight sequences remind me slightly of *Space Crusade* only not as detailed. There are some really nice touches to the screen, for instance in the top left-hand corner there is a dumpy looking dragon with a briefcase observing and acting as a cartographer.

But as a rule the graphical representation of the people you meet is pretty bog standard and uninteresting, and the animation pretty poor as well. The character control method is pretty simple

- that's the game's saving grace, really. Nowhere does the gameplay involve you clicking on arrows moving your bond left, right, forward or back which is one thing I despise about the original *Dungeon Master*. But you do feel very limited as to what you actually have control over when playing *Worlds of Legend*.

I am, I'm afraid, very disappointed indeed.

BEN STYLES



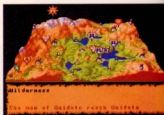
Whitesnake in their medieval period



The main screen graphics aren't that hot but the little icons round the side are very nice



Along the bottom of the screen you can see the menu bars which allow the different characters' skills



This is a map of all the places you might have to visit

VISION	
●●●●●●●●	
AUDIO	
●●●●●●●●	
DIFFICULTY	
●●●●●●●●	
LASTABILITY	
●●●●●●●●	
It's about time software houses stopped doing <i>Dungeon Master</i> clones. <i>Worlds of Legend</i> may have the odd feature which sets it apart but it is still a <i>Dungeon Master</i> clone.	
60%	
Publisher ▶ Mindscape Developer ▶ Mindscape Disk ▶ 1 Price ▶ \$78 HD Install ▶ N/A Size ▶ 1 meg	

A1200 Owners!

The most comprehensive list yet
produced of the games which
work (or not) on the A1200

Not compiled by Watstone computers. Reprinted by kind permission of Computer Trade Weekly

A320 Airbus	YES
AV8B Hammer	YES
Abandoned Places	YES
Accolade All Favourites	NO
Accolade Pack	NO
Air Combat Aces	Only GUNSHIP Works
Air Support	YES
Airball	NO
Airbourne Ranger	NO
Alien Breed'92	YES
Alien Beast	NO
Akrida	YES
Aquatic Games	YES
Archer McLean's Pool	YES
Archipelagos	YES
Arena	NO
Aura's Magic Hammer	NO
B-S-S Jane Seymour	Disable Cache
Back To The Future 3	YES
Bad Company	YES
Badlands	NO
Barbarians 2 (Palace)	YES
Barbarians 2 (Psychosis)	NO
Batman The Movie	YES
Battle Chess	YES
Battle Chess 2	YES
Battle Isles	YES
Battle Ships	NO
Battle Valley	NO
Beach Volley	NO
Beiter Maths	YES
Binap Collection	NO
Blood Money	Disable Cache
Bloodwych	Disable Cache
Blue Max	YES
Bubble Bobble	NO
BuFreak	YES
CJ Elephant Antics	YES
CJ in U.S.A.	Disable Cache
Cadeval	NO
California Games	NO
Campaign	YES
Captain Blood	Disable Cache
Captain Dynamo	YES
Carrier Command	YES
Cartoon Classics	Simpsons NO - Rest YES
Castle Master	YES
Cave Mania	Disable Cache
Chase H.O.	NO
Chessmaster 2100	YES
Chicago 90	NO
Chips Challenge	NO
Chuck Egg	NO
Civilisation	YES
Combo Racer	YES
Continental Circus	NO
Conqueror	NO
Cool/Crac Twins	YES
Count Duckula 2	YES
Cowart Action	YES
Crackdown	YES
Crazy Cars	NO
Crystal Kingdom Dizzy	YES
Curse of Enchantia	YES
Cyberball	NO
Damocles	NO
Deathtrap	Disable Cache
Delux Strip Teaser	YES
Demolition	NO
Disc	Disable Cache
Dizzy Collection	YES
Dizzy Exquisite Adventure	YES
Dizzy Piggy	YES
Dizzy Prince-Yolk Folk	YES
Dogs Of War	Disable Cache
Double Dragon	YES
Double Dragon 2	YES
Double Dragon 3	YES
Dragon Ninja	NO
Dragons Of Flame	YES
Dream Team T2	YES - Rest NO
Drum Studio	NO
Dungeon Master-Chaos	YES
Dynasty Wars	NO
E-Motion	Disable Cache
Electronic Pool	YES
Elvira	YES
Emlyn Hughes	YES
Enforcer	YES
England Champion	YES
Epic	YES
Escape/Robot Monsters	NO
European Rampage/WWF2	YES
European Super League	YES

Eye Of The Beholder	YES
F16 Combat Pilot	NO
Falcon	Works Too Fast
Fast Food	YES
Ferrari F1	YES
Fighter Mission	NO
Fighting Soccer	NO
Final Command	NO
Final Flight 101	YES
Final Flight Super Fight	YES
Fire Force	NO
Flimbo's Quest	Disable Cache
Footballer of The Year	YES
Football Worlds	YES
Fun School 2	YES
Fuzzball	Disable Cache
Games-Espana '92	Disable Cache
Gary Lineker's Hotshot	NO
Gauntlet 2	YES
Gauntlet 3	NO
Gems Wing	NO
Global Effect	Disable Cache
Go For Gold	YES
Gold Rush	YES
Goldrunner	NO
Grand Monster Slam	NO
Grid Iron	YES
Guardian Angel	Disable Cache
Hagar	YES
Hard Bull	NO
Hard Driver	YES
Harlequin	YES
Head Over Heels	YES
Heimdal	NO
Heroes Of The Lance	NO
Highway Patrol 2	NO
Hitchhikers Guide	YES
Hollywood Collection	Only BATMAN Works
HoYes	YES
Horror Zombies	YES
Humani	NO
Ice Hockey	NO
Impassable	NO
Indy Fate Atlantis Act	YES
Indy's Last Crusade Act	YES
Indy's Last Crusade Adv.	YES
International Soccer	NO
Italia 90	NO
Italy 1990	Disable Cache
Jaguar XJ220	YES
Jack Nicklaus Great 18	YES
Jack Nicklaus Unlimited	YES
Jahangir Khan Squash	YES
James Pond	Disable Cache
Jet Set Willy 2	Disable Cache
Jimmy White's Snooker	NO
Kick Off: Extra Time	NO
Kid Gloves	Disable Cache
Knightmare	YES
Kwik Snax	YES
Kyandia	NO
Last Battle	YES
Last Ninja 2	NO
Leander	YES
Lemmings - Oh No More!	Disable Cache
Lethal Weapon	YES
Little Puff	Disable Cache
Lotus 1	NO
Lotus 2	NO
Lure Of Temptress	YES
M1 Tank Platoon	YES
Magic Magic	YES
Magicaland Dizzy	YES

Manchester United	NO
Mani Completion	Only TURRICAN2 Works
Mean 18s Data Disk	NO
Mega Twins	NO
Mercs	Disable Cache
Miami Chase	Works but Fast
Microprose F1-GP	YES
Midnight Resistance	NO
Midwinter	NO
Midwinter 2 Flames	NO
Mig 29 (Codemasters)	NO
Mig 29M Super Fulcrum	YES
Money Island	YES
Monty Python	YES
Mousewalk	NO
Mousesnap	YES
Myth	NO
Narc	NO
Navy Moves	Disable Cache
Night Lord Story	NO
Nigel Mansell Champ	YES
Nightbridge The Movie	NO
Ninja Warriors	NO
Nitro Boost	NO
1000 Turbo	YES
Operation Thunderbolt	YES
Outhun	YES
Outhun Europa	NO
Paperboy 1	YES
Paperboy 2	YES
Parasol Stairs	YES
Passing Shot	NO
Phantasma	NO
Pictionary	YES
Pitball Fantasies	YES
Pit Fighter	YES
Plutos	NO
Popeye 2	NO
Populous 1	YES
Populous 2	YES
Postman Pat	YES
Postman Pat 3	YES
Pro Fight	NO
Prospector	YES
Protector	YES
Push Over	YES
Puffy	YES
Puzznic	Disable Cache
Quadralien	YES
Quantox	YES
Quatro Fighters	YES
Quests Glory	YES
Quest Of Agnain	NO
R-Type	YES
Rail Road Tycoon	YES
Rainbow Island	YES
Rambo3	YES
Raving Mad	YES
Rebellion	YES
Red Lightning	NO
Red Zone	YES
Roadmasters	YES
Robin Hood	YES
Robin Smith Cricket	NO
Robocod-James Pond 2	YES
RoboCop 2	YES
Robo Sport	NO
Robozone	NO
Rodand	YES
S.A.S. Bomb	YES
S.C.I. - Chase H2	NO
S.E.U.C.K	NO

Samurai	YES
Serial's Xmas Caper	YES
Savage	YES
Seconds Out Boxing	YES
Sensible Soccer '92/3	YES
Seymour Goes Hollywood	YES
Shadow Of Beast 3	YES
Shadow Sorcerer	NO
Shinobi	NO
Shufflepack Cafe	YES
Shuttle	YES
Shuttle	YES
Silent Service	YES
Sinbad- Throne of Falcon	YES
Sim Ant	YES
Simpsons Bart V Mutants	NO
Skid	NO
Sky High Stuntman	YES
Sky High Magic	YES
Sky Spy	YES
Snow Strike	YES
Soccer Pitball	NO
Sorcerer	NO
Sooty-Sweep Fun Numbers	NO
Space Ace 2	YES
Space Crusade	NO
Space Quest 1	YES
Space Station	YES
Special Forces	YES
Spellbound	YES
Spellbound Dizzy	YES
Spheretone	NO
Spies In Atlantis	NO
Star Blaze	NO
Starliner	YES
Starjumper	YES
Starjumper	YES
Steel	YES
Steel Empire	Disable Cache
Steg The Slug	YES
Steve Davis Snooker	YES
Street Fighter 1	NO
Street Fighter 2	NO
Strider	YES
Strider 2	YES but Very Fast
Strip Teaser+ Data	NO
Strike Fleet	YES
Striker	YES
Super All Stars	YES
Super Cars	NO
Super Fighters	WWF - NO REST - YES
Super Grand Prix	YES
Super Monaco GP	NO
Super Off Road	NO
Super Ski	NO
Super Tetris	YES
Swap	YES
Switchblade 2	NO
Swiv	NO
3D Pool	YES
Tag Team Wrestling	YES
Ted Drive	YES
Test Drive 2	NO
Test Drive 3	NO
The Boxing	YES
Thomas The Tank Engine	YES
Thomas Tank Fun Words	YES
Thunderblade	YES
Thunderhawk	YES
Thunderstrike	YES
Top Banana	YES
Tower Of Babel	NO
Total Recall	YES
Treasure Island Dizzy	YES
Turbo Trax	NO
Turmoil	YES
Tusker	NO
Twin Turbos	NO
Ultimate Golf	YES
Viz	YES
Voyager	YES
W.F.F. 1	YES
War Zone	YES
Windseeker	YES
Wing Commander	YES
Wipe Out	NO
Wiz Ball	YES
Wiz Kid	YES
World Class Boxing	NO
World Class Leaderboard	YES
World Class Rugby	YES
World Class Cricket	YES
World Series Cricket	YES
X-Out	YES
Z-Out	NO
Zak McKracken	NO
Zool	Disable Cache

ARABIAN NIGHTS



Sinbad Junior works for the "fair and just" Caliph as an apprentice gardener tending to his incredibly excessive palace gardens. Today however he gazes upon another beautiful flower - the Princess Laila as she stands on a balcony high above the gardens.

Away in an eerie floating castle dark deeds are at hand. The evil Vizier, in his dastardly plan to rule the kingdom, has dispatched a demon from the nether regions of hell to kidnap the princess and cast a mighty spell over the kingdom.

As Sinbad stares up at the balcony a dark shape descends from the sky, mauling and clawing at Laila.

Laila screams and the demon lifts off clutching the beautiful princess. Sinbad makes a desperate leap to grab the claw of the monster, but is left on the balcony flat on his back.

As the demon disappears into the clouds Sinbad is surrounded by the Caliph's guards and hurled into prison on a charge of sorcery. Now, taking on the role of Sinbad Junior, you not only have to escape the palace dungeons, but rescue Laila from the evil Vizier.

£25.99
AMIGA
1 MEG ONLY



Krisalis Software Ltd. Teque House, Masons Yard, Moorgate, Rotherham, S60 2HD. Tel: 0709 372290

SABRE TEAM

At long last we can dig the dirt on the Krisalis's Sabre Team. We sent in Ben Styles to smoke some embassies and complete the jungle level

First off I will list the four best troops and their main abilities - these are the ones that I found to be tops, but a different combination may work better for you.

W Jones - Trooper



His two most outstanding abilities are his speed and strength. He is very impressive when it comes to grenades as he can throw them further than any of his colleagues.

Unfortunately, Jones is lacking in the marksmanship department. This can be helped by giving him an L7A2 which will increase his ability.

He also lacks intelligence which plays a part in his ability to notice or hear things. His height can also occasionally be an advantage as he is pretty short.

C Calvert - Trooper



As he is renowned for his speed and perception, Calvert is exceptionally good at hearing and spotting enemy movement. He is quite good with a gun so he is more than capable of dealing with most situations.

He works best with a G3 which is the lightest weapon with the longest range. Make sure he is kitted out with at least two magazines. This is because he will have more encounters due to his ability to spot trouble.

T L Roderick - Sergeant



The leader of the group is also the third fastest soldier in the party. His ability with a gun is incredible so you should arm him with the M16A2.

Although he possesses an average perception rating and poor strength, his other qualities more than make up for it. One final thing to remember! Do not, under any circumstances, expect him to throw a grenade accurately.

This is extremely important when he is accompanied by a hostage.

L P McDonald - Lance Corporal



Although he is pretty much your Mr Average, McDonald has good speed, and when you give him an L7A2, his marksmanship is very good.

As the dodgy saying goes: "lack of all trades, master of none!" His main weakness is his perception but even in this department he is only second to Trooper Calvert.

Choosing the correct weapons and equipment is also important when you are about to enter a mission. Each player should be given a bullet-proof vest and an S10 respirator. Give CS gas grenades (no

more than two) to Trooper Jones and Lance Corporal McDonald. Give the medical kit to McDonald as well (I'll explain later) but don't use the spare. This will safeguard you in case McDonald is lost in action.

Make sure you only use one magazine for those guns that have a good capacity. Any more (except in the case of Calvert) are a waste if your soldiers are cut down in action.

Stun grenades are the least effective weapons but they can actually kill an enemy when they are used at close range. They are quite limited, however, so try not to use them all.

WEAPONS AND EQUIPMENT

L7A2

Usually two shots from this machine gun are enough to take out the enemy at a great distance. Unfortunately, only two are available and ammo is scarce. If you find any ammo for this gun, grab it quickly.

M16A2 & G3

These are usually the second choice for guns. There is nothing much between them in terms of close combat accuracy and weight. Three shots will usually kill someone but the G3 leaves a lot to be desired at great distances.

- Do not swap any weapon between the missions as this results in a loss of ammo which is already loaded in the guns.

The medical kit

There are only two of these to begin with but you

can find some more on later missions. It is a good idea to split the team up into teams of two, each can then carry a medical kit, passing it on to the injured person.

CS gas & stun grenades

These two items are both very handy in tight corners when you are under attack from all sides. Make sure you have enough action points to throw them or you could end up in a tricky situation.

Gas mask

An essential item and fortunately there are enough to go around.

Bullet-proof vest

Another indispensable item. It cuts down the amount of damage inflicted by bullets.





Name:
C. Colbert

Race:
Trooper

Age: 28 Weight: 73kg

Experience:
An operative in the
Malayan jungle over the
past two years. There,
he showed prowess as
an electronics expert.

Speed
of
con.
at.

Name: C.K. Sheridan
Strength: 77%
Marksmanship: 78%
Intelligence: 39% Load: 40-37

1. 65% - Brown, 20 Round magazine - 14
- 2.
- 3.
- 4.

7. 62mm, 20 Round magazine
Suitable for use with the following:

Self-Loading, P21
- Auto
G2 Assault Rifle



cheat
med

General tips

Always collect useful equipment from the deceased members of your team. For instance: gas masks, bullet proof vests, medical kits and any decent weapons. Always grab the medical kit!

Move slowly in teams of two and cover each other's backs. Save at least 20 action points in sticky situations.

JUNGLE TACTICS - LEVEL ONE

Your objective for mission one is to rescue four hostages who are being held within the confines of a prisoner of war camp. Once all the hostages have been rescued you must guide the remaining members of your team to safety.

When reinforcements are called in they usually come through the main gate that you used to enter the camp. It is a good idea if you leave one of your party on these gates to deal with them when they arrive. This acts as perfect protection when your other team members are bringing out hostages.

You'll probably find that McDonald is the best man for the job. You can also leave a medical pack with him as he will be in the best position to aid any of his fellow soldiers.

The first two hostages are in the hut at the bottom left-hand-corner of the camp. Trooper Jones is the best man to tackle this as there are quite a few enemy soldiers patrolling the area. Using his speed, he can get in the door

and dispose of the main guard. The main guards, unlike the randomly-placed enemy troopers, are always positioned in the same place. One such guard is always near the main gates at the beginning of this level.

The next hostage is placed in the hut directly in front of the main gates. As this is the easiest hostage to rescue, Sergeant Roderick is best used here as he doesn't quite have the speed of Trooper Calvert.

The last hostage is situated in the hut to the far right of the camp. He is one of the trickiest to rescue because of the surrounding windows and the open space. Use Trooper Calvert to get the hostage out and take him back through the trees.

Don't take him back near the fence as the reinforcements will be able to pick you both off with considerable ease.

When operating your soldiers, always try to leave them with about 15 action points at the end of their turn. This will give you a bet-

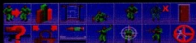
ter chance of getting an opportunity move.

When you are searching one of the huts and your turn ends, try to leave your soldier with his back to the wall. This way he can see all the camp and it will be easier for him to survive.

If you do get shot and manage to survive, try to head for cover. The two best forms of cover are the trees and huts so try to get to them if you have enough action points left.

Even after you have received treatment, keep well hidden until you have enough action points left to make it to some more cover.

The more experienced players will find this level pretty easy to complete with just two soldiers, namely Jones and Calvert. Although it will take longer, you'll be able to save your other team members for the later levels.



Move into the jungle, but keep an eye out for the enemy



Your team should be spread out otherwise the enemy could end your game in one go

WIN A DREAM ...anywhere!

Later this year one of our readers will be invited to go on a holiday of a lifetime – to just about anywhere in the world. It could see you basking in the Bahamas, or cruising in the Caribbean. It could be ambling around Australia, or night-clubbing in New York. Even trekking in Tibet, or pottering around the Pyramids. Literally, the world is your oyster! It could be a holiday for one. Or for a whole family. Just as you wish – providing the total cost comes to no more than £3,000.

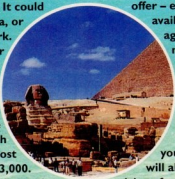
How do you go about winning such a fantastic invitation? Simply by completing the coupon opposite and handing it in to your newsagent. He will then enter it for

this unique competition, in time for the draw which will take place on July 12.

If you win you will be asked to select the holiday of your choice from any you see on offer – either nationally advertised or available from your local travel agent. There will be absolutely no restriction on the location, or the company you choose to provide the holiday.

It will be entirely up to you to decide which is the right holiday to suit your tastes.

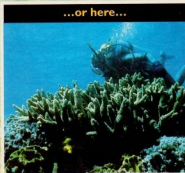
And that's not all. As a thank you to your own newsagent, we will also be sending him two free tickets for a fabulous holiday in Paris, staying at a top hotel, going on a grand sightseeing tour and taking in a spectacular show at an exotic night club!



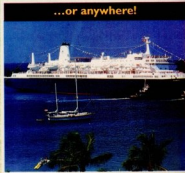
£3,000 could take you here...



...or here...



...or anywhere!



AND IF YOU WIN, THERE'S A HOLIDAY

AM HOLIDAY

in the world!

WHICH MAGAZINE FOR YOU?

ACORN – One of Britain's longest-running computer magazines, *Acorn Computing* (£2.95) is the pre-eminent choice for users of the Archimedes and BBC Micro.

COMMODORE – Three magazines serve the dedicated Amiga fraternity. For games players there is *Amiga Action* (£3.95) and *Amiga Force* (£1.95), while *Amiga Computing* (£2.99) covers every aspect of this versatile machine. Owners of the C64 will find all they need in *Commodore Force* (£2.95).

ATARI – For the Atari ST enthusiast there are three magazines – *ST Action* (£3.95) for gamers, with *Atari ST User* (£3.40) and *Atari ST Review* (£3.50) satisfying the more general ST owner.

NINTENDO – The whole of the ever-expanding Nintendo scene is covered by *N-Force* (£1.95), while dedicated fans of the Super NES have *Super Action* (99p) and for Game Boy freaks there's *GB Action* (99p).

PC – Most dynamic newcomer on the PC magazine scene is *PC Home* (£3.95), covering both business and leisure interests. *PC Today* (£3.95) is devoted to supplying practical solutions for the small businessman.

SEGA – All the Sega games machines have their champion in *Sega Force* (£1.95), with *Mega Action* (99p) serving the needs of Mega Drive owners (to be launched on May 20).



To enter this
£3,000 contest,
just hand this
coupon in to
your newsagent

I wish to place a regular order for the magazine(s) I have ticked below:
Please enter this form in the Europress Dream Holiday Competition

- ☐ I shall collect my copy each month
☐ Please deliver to my address:

Name _____

Address _____

Post code _____ Tel _____

My newsagent's name and address: _____

Newsagent's signature or stamp

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Acorn Computing | <input type="checkbox"/> N-Force |
| <input type="checkbox"/> Amiga Action | <input type="checkbox"/> Sega Force |
| <input type="checkbox"/> Amiga Computing | <input type="checkbox"/> ST Action |
| <input type="checkbox"/> Amiga Force | <input type="checkbox"/> ST Review |
| <input type="checkbox"/> Atari ST User | <input type="checkbox"/> Super Action |
| <input type="checkbox"/> Commodore Force | <input type="checkbox"/> PC Today |
| <input type="checkbox"/> GB Action | <input type="checkbox"/> PC Home |
| <input type="checkbox"/> Mega Action | |

europress
GROUP OF COMPANIES

MR NEWSAGENT: Please confirm this order and return the form to your wholesaler for entry in the prize draw

ANN PARIS FOR YOUR NEWSAGENT TOO!

AMIGA insight

Expert views on the latest applications



Alexx
Improve the quality of your text output within Alexx scripts. Alex Glas shows how to present words in a more attractive manner **132**



Video
Paul Austin takes to the air with flightpaths and peruses Agfa's impressive selection of video-specific Workbench 2 fonts **135**



Programming
Assembler programmers get the inside story on using text and graphics in intuition windows. Margaret Stanger cracks the code **137**



Music
The definitive low-down on a major revision to Blue Ribbon's Superjam gets the Paul Austin treatment... and lives **139**



Games
Phil South looks at a system which ensures that nothing you send through your modem can be seen by anyone unauthorised recipient... **141**



Amos
Love 'em or hate 'em, Fractals have become synonymous with today's power graphics computers. Phil South creates some using Amos **143**



Publishing
Ben Palmer explains how to devise, produce and print good-looking delay cards to revolutionise your music cassette collection **145**

Once you start getting to grips with the practical aspects of Alexx, one of the first issues that crops up is the control of its output. Since Alexx is so good with text-oriented applications, it makes sense to be able to present them attractively.

Various solutions have been proposed for linking Alexx with Intuition, the Amiga's windowing environment. However, these can be tricky for beginners; we have looked at them in the past, and no doubt we will look at them again in the future. Today, instead, we will look at something much simpler.

I am referring to the presentation of text-based output, which, at first glance, seems very limited. After all, the only output facility supplied by Alexx is the restrictive SAY instruction, right?

Readers of this column will know that things are not quite that bad. Along with the SAY instruction, Alexx can open its own text output windows (consoles), and write to them just as if they were files.

In addition, by using the so-called ANSI codes, you can spice up your display, with some control over the colour, fonts and so on. We looked at this subject briefly, way back in October 92, but there is currently enough interest to look at it again, in a bit more depth.

Of course, the trouble with using SAY is that it forces a Return after it has finished printing. You cannot write data on a line, get some more data, and then write it on the same line.

The way around this is to treat the console (ie the CLI window) as a file, and write data directly to it. This method is more flexible, and can be used to write either lines or characters. The procedure for opening a new window is very easy; we use the same function, open(), which we use for regular files.

The open() function takes three arguments. Firstly, a logical filename, or filename (which you specify), used for referring to the output stream. Secondly, the AmigaDOS specification for the window, which looks like this:

```
Device:cxp/w:width/h:height/n:mode/f:flags
```

The device is most often con - there are others, but they will not concern us here. Workbench 2.0 users may also use the optional flags, for instance to add a Close gadget. You can also specify the AmigaDOS shorthand for the current CLI window, which is "w".

Finally, there is a flag to say whether we are opening for reading or writing, which in our case is "w".

Before writing, remember to test if your new window has opened successfully - something may have prevented it!

```
success = openOutput("con:20/20/100/w:New Window","w")
If success THEN writeOutput("list.c")
```

Remember that if you have opened your own console window it will close automatically as soon as your program exits. This may not give the user enough time to



Alexx output does not have to be totally boring

read all the information. In this case you should either have a short pause, or else specifically ask the user if he/she is ready to quit. The best way to pause is by calling the delayticks function. A tick is 1/50 of a second.

The delay() function is not a part of the main Alexx package, but is found in the rexxsupport.library supplied with Alexx. You should therefore ensure that it is available, either by having the line:

```
rxlib rexxsupport.library 0-50 0
```

in your startup-sequence, or else by checking that it is present from within the program:

```
If "showLibraries, rexxsupport.library")
THEN addLib("rexxsupport.library", 0, 50, 0)
```

Now, onto a problem that is quite common once users start opening their own output windows. Suppose that a piece of code outputs some text, and then runs an AmigaDOS command which also outputs text, such as:

```
/**
success = openConsole(":", "w")
len = write(console, "Here is the c: directory (listing)")
ADDRESS COMMAND "list c:"
```

As long as the program is directing its output to the same CLI from which it was launched, you will not notice anything unusual. However, if the output is going to a different console, for instance, if the first line had been:

```
success = openConsole("con:10/10/100/70/output window","w")
```

then the output of SAY and write(console) would appear in the new window, but the results of the AmigaDOS commands would still get printed out at the old window!

The naive approach to this problem is to redirect the

Finely

AmigaDOS output to a temporary file, and then to read and print this file out in the new window. It works, but it's messy.

There is a far simpler and more elegant approach, which is not often documented (even some of the available books on Alexx do not mention it, however more of that story next issue, when we start reviewing the available Alexx literature...).

Alexx maintains a logical filename, called STDOUT, where all output (including stuff from AmigaDOS) is directed. By default this is the initial CLI or Shell. In the above example, even though you are writing to a new window, AmigaDOS is still writing to STDOUT.

The obvious thing to do then, is to close STDOUT, and reopen it in your new window. After this, everything will appear there correctly. Even the output of the SAY instruction will appear in the new window, since SAY xxxxx is equivalent to write(STDOUT, xxxxx). Here is an example:

```
/* changing STDOUT */
succ = close(STDOUT)
/* output is now disabled */
succ = open(STDOUT, "con:20/20/100/New STDOUT","w")
/* all output is now redirected to new window */
SAY "Here is the c: directory (listing)"
ADDRESS COMMAND "list c:"
len = write(STDOUT, "xxx Bye for now xxx")
delay(100)
```

```

/* AREXX_demo.resx */
/* The window we'll use */
window = 'con:220/200/200/Counters...'
open(output,window,'w')
/* Some codes we use */
CSI = '%b%'
bold = pen(1) ; italic = pen(3)
under = pen(4) ; reset = pen(0)
tab2 = '0009'x
newline = CSI || E
setwhite = CSI || '%0a' || pen(4) || CSI || I
clockpen = pen('32;41')
blackpen = pen('32;41')
clockfield = CSI || '%2;00a'
/* Set up our window */
writeln(output, setwhite)
writeln(output, clockpen || clockfield || time())
writeln(output, CSI || '%4' )
writeln(output, blackpen || ' Do some counting!')
writeln(output, CSI || '%2' )
writeln(output, bold || blackpen 'Number' reset)

writeln(output, italic || blackpen 'Res' reset)
writeln(output, blackpen 'Char.' )
writeln(output, '' under || '%in(1/10)' reset)
/* A report loop */
DO i = 45 to 90
  writeln(output, clockpen || clockfield || time())
  writeln(output, blackpen)
  writeln(output, CSI || '%6',
    newline tab2 || I,
    newline tab2 || d2(i) ,
    newline tab2 || d2(i) ,
    newline tab2 || delstr('sin(1/10),d3)
/* Delstr() was used to format the sin() */
/* The % signs converts the characters. */
/* resolved from resasmb10 to a number */
END
delay(100)
EXIT
/* Function for easier graphic codes */
pen:
RETURN CSI || arg(1) || '%'

```

Listing 1

AREXX also maintains two other logical filenames, or streams, called STDIN and STDERR. STDIN is the regular input, from which data is PULLED, and STDERR is used when tracing a program. If the global tracing console is open, it takes over as STDERR. The other way of controlling the appearance of the output is by means of ANSI codes. These are special characters, included in the text, which will not appear when it is printed.

They are most commonly used for creating effects like bold or italic text, and for changing the colour of the text and background.

An ANSI code is indicated by a Control Sequence Introducer, which is most often ESC (or '%b%' in AREXX), followed by the code. '%b%' can also be used.

The ANSI codes for the control of the console can do much more than just change the colour and the style of the text. They provide full control of the console, including random positioning of the cursor, control of tabulation, insertion and deletion of lines, clearing of the display, as well as a few more arcane, Amiga-specific functions.

With these resources at their disposal, AREXX programmers can

make versatile and useful displays, without having to resort to GUI programming. These displays are somewhat like the old DOS cursor driven displays or the Unix "curses" environment – not exactly state of the art, but they do the job.

A fairly comprehensive listing of the ANSI commands can be found in the Amiga ROM Kernel Manuals under console.device, but any ANSI documentation should list them. The codes are a machine independent standard. ANSI is the American National Standards Institute, a bit like our own BSI. There are many consoles and terminals that conform to the ANSI standard, and it is widespread in the comms world.

In addition many textfile readers (such as Muchmore) will accept embedded ANSI codes, and display them correctly. I have included a table of the most common and useful codes. In conjunction with the example shown in Listing 1, which you can run and watch, you may get a few ideas for your own programs.



Continued lettering

Commonly used ANSI codes

• <n> indicates a value and should not be typed directly.

Esc<n>#	Insert n characters (characters must follow)
Esc<n>A	Cursor n positions up (preserve horiz' pos')
Esc<n>B	Cursor n positions down (preserve horiz' pos')
Esc<n>C	Cursor n positions forward
Esc<n>D	Cursor n positions back
Esc<n>E	Cursor to next line
Esc<n>F	Cursor to previous line
Esc<n1,n2>H	Cursor to position n1,n2
Esc<n>J	Clear screen to end of display
Esc<n>K	Erase to end of line
Esc<n>L	Insert a line
Esc<n>M	Delete a line
Esc<n>P	Delete a character
Esc<n>m	This code controls the graphics rendition. Multiple values for n, separated by semi-colons are acceptable, E.g. Esc[3;32;41m

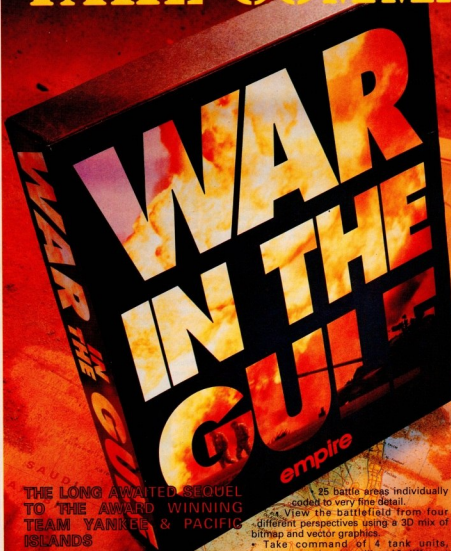
n All systems	n Workbench 2.0 only
0 Reset values	
1 Boldface	22 Bold off
3 Italic	23 Italic off
4 Underline	24 Underline off
7 Reversed	27 Reversed
30-37	Character colour (pen)
40-47	Cell colour (background)

The following are not ANSI codes, just regular useful ASCII codes that produce effects at the console:

'07'x	Beep (Flash on the Amiga)
'08'x	Backspace
'09'x	Next Tab

Alex Gian looks at ways of making your AREXX text output more interesting

TAKE COMMAND



THE LONG AWAITED SEQUEL
TO THE AWARD WINNING
TEAM YANKEE & PACIFIC
ISLANDS

1995...The Iraqi Republican Guard have overrun the oilfields of Northern Kuwait. War in the Gulf follows the fortunes of a crack unit of M1 tanks as the action unfolds.

- 25 battle areas individually coded to very fine detail.
- View the battlefield from four different perspectives using a 3D mix of bitmap and vector graphics.
- Take command of 4 tank units, simultaneously controlling 16 different vehicles through the unique split screen control system.
- Call upon the latest military technology including: laser-range finders, infra-red imaging, TOW, HEAT and SABOT missiles.
- Liberate Kuwaiti villages, capture oilwells and disrupt desert supply lines.
- Lay minefields and order up artillery barrages.



REALISTIC...GRIPPING...

THE ULTIMATE BATTLEFIELD SIMULATION

AVAILABLE FOR IBM PC, AMIGA & ATARI ST

Empire Software, The Spire, 877 High Road, North Farnley, London N12 8DA. Telephone: 051 343 9143
Empire Software is a registered trademark of Entertainment International (UK) Ltd.

empire

Flightpaths seems quite promising with two disks, a video and a mini manual – all for £49.95. However after close inspection of the photocopied video sleeve – complete with a different font for almost every word – my confidence slowly began to fade.

Intrigued by the dodgy packaging, I sat back ready to be impressed by the contents of the aforesaid video. Alas the exterior was only a taste of what lurked within.

The action began with a spectacular example of Amiga videographics at their most cheery with the graphics outdoors only by lacking music which screamed out for a vocal over-dub along the lines of: "Hi my name is Sven, would you like to see my knockwurst?" (F)

After suppressing the urge to do the over-dub myself, a disembodied voice of a thankfully anonymous orator began bestowing the virtues of the software to a now thoroughly unconvinced voyeur.

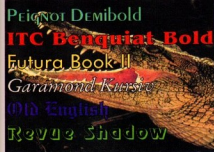
Apparently the whole point of this 25-minute epic is to explain how to use the move requester and move precisely its load option – the key to application of Flightpaths – otherwise known as pre-saved DPaint move files.

Over 200 moves await, 130 of which are multiples building into a varied collection of fairly complex and admittedly quite impressive manoeuvres, while the remaining 70 consist of standard single move ins and outs.

In the end, because of the multiple effects, each move segment is loaded sequentially and applied to the brush offering a variety of complete effects with titles such as chute, bounce, leaf, ricochet and so on.

As you've probably deduced, the moves available are primarily aimed at text with either complete words or their component letters flying about the screen according to the specified effect.

In addition, styles can be mixed within multiple brush anims to vary the performance. The necessary techniques and essen-



State-of-the-art scalable fonts for the serious videophile

As old computer hands will be aware, Agfa Typography Ltd are the de facto standard when it comes to font technology whether it be Mac, PC, Amiga or whatever else.

With such an illustrious background it's not a total surprise that their Video Unlimited fonts are of great quality – if perhaps a little pricey at £45 for the 25 typefaces on offer.

Although the prospect of spending £45 might not be your first choice when it comes to improving presentation, the Agfa collection isn't a simple selection of bitmaps. In fact all the typefaces included are scalable being designed specifically for WB 2.04 and above. For those not familiar with scalable technology, such fonts can be scaled to any size you

require without affecting their quality, in a similar vein to the PostScript fonts used to lay out this page.

This brief excursion into publishing reveals another potential use for the Agfa collection. Due to their scalable design all the fonts can be used direct within DTP packages such as PageStream2 thereby allowing seamless continuity between video and any hard copy that may accompany it.

The built-in versatility doesn't stop there – in fact the growing popularity of scalable fonts means that continuity can spread across an entire multimedia pro-

duction with presentation, painting and publishing all combining to produce a uniform quality production.

As you'd expect from a collection costing £45, an installer comes as part of the package, however in my experience by far the easiest and quickest way to install any scalable font is to temporarily cast the installer aside and simply copy the <[Fontname(D)]type for each font into the Bullet_Outlines draw in your fonts directory.

Once safely added simply run the intelligence utility from Workbench which will promptly inform that installation is not

total hints and tips are provided during the video thereby helping to make sense of the rather sparse manual.

I'm not exactly impressed by a collection of move files lumped together on a floppy retailing at £49.95. Of course you do get a free fonts disk with not one but two colour fonts, each with four fill styles and a selection of alternate palettes – what a bargain!

Oh yes, and let's not forget the video – 25 minutes of lift music and jerky graphics spattered with the odd Scala backdrop and transition – obviously in a vain attempt to add some much-needed glamour.

If you happen to be utterly useless when it comes to the move requester, Flightpaths does offer a viable solution. However if you are looking for quality tiling, investing in either BAS2 or ScalaHVT would be a much more effective use of your cash.

It's obvious that the creators of Flightpaths have a detailed knowledge of

VIDEO



Flights of fancy

Paul Austin takes off with Flightpaths and peruses Agfa's impressive selection of video-specific fonts

Workbench 2 Unlimited

complete, at which point simply finish the process by clicking OK for each font you've added. Alas it's not all good news especially for DPaint fans as 10 per cent of the fonts in the collection flatly refuse to work with DPaint.

However the fault doesn't appear to be with the fonts themselves as all work perfectly with other packages such as PageStream – perhaps it's time for yet another update to the DPaintIV.

If you're interested in the Agfa collection contact Megatype on 0759 58988. If the Agfa asking price is a bit much but you're still interested in additional scalable fonts try contacting George Thompson Services for information on their PD scalable font collection on 0707 664 654.

CLR

- 1 disk titles = £3.50
 - 2 disk titles = £4.50
 - 3 disk titles = £4.99
- (Number of disks shown in brackets)

CLR EDUCATION

COLORING PAD

colouring pad for young kids (1)

ACHORD

guitar chord tutor (1)

T.A.M.I.

GCSE music tutor (1)

NIGHT SKY

a must for all teenagers (1)

WORDS & LADDERS makes 8 hidden spelling games (1)

BASICALLY AMIGA a must for new Amiga owners (3)

LET'S LEARN

various programs for 5, 7, 9 olds (1)

ALPHABET TEACH

great for young kids (1)

HOMIE BREW

word recogniser (1)

FAST FRET

guitar scales tutor

KINGS & QUEENS

all about the English monarchs (2)

THINGAMAJIG

2000 pictures (1)

WORK & PLAY

learn then play games (1)

PLAY IT SAFE

trick & kids about safety (1)

BIG TOP FUN

4 circus based games (1)

JIGMANIA

2000 picture game/memo (1)

CHESS TEACHER

a beginners guide (1)

MIND YOUR LANGUAGE

vocabulary trainer (1)

SPEED READING

improve your reading skills (3)

CHORD COACH

piano chord tutor (1)

C.A.T.T.

unlock the mysteries of the Tarent (3)

FUN WITH CUBBY

8 educational games (1)

PREHISTORIC FUN PACK

6 great dinosaur games for kids (1)

PEG A PICTURE

understand the children's game (1)

UNDERSTANDING AMOS

A must for Amos users learn all about

Bohs (2)

SNAP

trick & kids games (1)

ENCYCLOPEDIAS

The following disk based encyclopedias cover a range of interesting subjects. Using a combination of text, diagrams, drawings & photographs each title is entertaining as well as educational.

DINOSAURS (2)

GEOLOGY (2)

SCALES SYSTEM (2)

FRESHWATER FISHING (2)

ECOLOGY (3)

MESSERSCHMITT B109 (2)

YOUR FIRST POET (2)

CLR UTILITIES

VIDEO TITLER

professional style for your videos (1)

FISH INDEXER

designed Fish fishing (1)

TYPING TUTOR

corrects errors & speed tests (1)

ALPHABETIC

competence & graphing prog (1)

SOUNDSOUND 3

3 hidden wordplay prog (1)

WORD FINDER PLUS

a must for crossword fanatics (2)

PLAY N RAVE

music module link/player (2)

POWER ACCOUNT

keep track of your bank account (1)

CALC V1.3 spreadsheet (1)

STOCK CONTROLLER (1)

EPOCH (1)

X-STITCH LITE (1)

INVOICE MASTER (1)

HARD DRIVE MENU (1)

PRINTER FONTS

LC1000 (1), LC2000 (1)

24 PIN PRINTERS (1), CANON BJ (1)

SEASOFT

The Logical Choice

OctaMED Pro V4.03 - £22.00

Latest version of this famous music editor - 8 tracks, built in sampler, MIDI support etc.

(OctaMED Manual - £8.50 Program and Manual - £30.00)

AMFC (Amiga Music File Converter) - £10.00

Converts many standard music files to OctaMED format

AM/FM

for the serious Amiga musician

Issue 13 now out

£2.50

(issues 1 to 12 also available)

ACC

AMIGA CODERS CLUB

hints, tips, tutorials & source codes for all your assembly language programmers

£4.00 per issue

AM/FM

SPECIAL ISSUE

PROTRACKER

V3.02 - £2.50

CATALOGUE DISK

£1.25 (inc P&P)

FREE!

with your first order

AM/FM

SAMPLES

13 disks packed with high quality samples

£2.50 per disk

ACC

AMIGA CODERS CLUB

The best of issues 1 to 4 available on a single PD volume

£1.50

A-GENE V4.33

The latest version of the best genealogical database for the Amiga is now available from Seasoft

£15.00

ASSASSINS

GAMES DISKS

LATEST ISSUES ALWAYS AVAILABLE, PLEASE CALL FOR COMPLETE LISTING

WHITE RABBITS

Brilliant new CLR puzzle game. Save the bunny from a fate worse than casseroles. 60 levels of increasing difficulty. Highly addictive.

£3.50

COUNTRYWIDE COMPUTER MARTS

Why not pop along and see us at one of the many computer marts around the country at BRIGHTON, GILLINGHAM, NOTTINGHAM, NORWICH, PLYMOUTH, SALISBURY, SOUTHAMPTON, SLOUGH

£1.00 off admission with this advertisement

(To avoid disappointment please give us a call to confirm the dates of shows that we are attending)

OVER 2000 DISKS OF QUALITY P.D. ALSO AVAILABLE

including:-

GAMES

STARTRK (2)

the best PD Survival simulator

GOLDEN FLEECE (1)

excellent test adventure game

ADVENTURES CAVE (1)

highly addictive puzzle game

TOTAL WAR (1)

Real style board game

CARD SHARP (1)

various picture games

STORYLAND 2 (1)

great adventure game for kids

FLAG CATCHER (1)

original puzzle game

SUPER PACMAN (1)

best version of the classic arcade game

AMOS CRICKET (1)

UTILITIES

AMIGA FOX (1)

diskless printing on a budget

TEXT PLUS V3 (1)

new test editor/word processor

V-MORPH (1)

create smooth morphs and warps

OctaMED Pro V4 (1)

new version of the best music editor

A64 EMULATOR (2)

latest & best Commodore 64 emulator

KICKSTART 2 (1)

emulates Kickstart 2 on a 128k

NUMPAD (1)

create a mouse keypad to an AM60

KICK 1.3 (1)

new you can run these original A500 programs on your new A500+, A600, A1200

EDUCATIONAL

T.C. ASTRONOMY (1)

brilliant disk based encyclopedia

EDUCATIONAL ANIMATIONS

GAS TURBINE ENGINE (1)

3D VIDEO REAR ENGINES (2)

STEAM ENGINE (1)

2 STROKE ENGINE (1)

DEMOS

HOI AGA DEMO (1)

brilliant A1200 only demo

JESUS ON E's (2)

excellent new demo - needs 2 drives (double

cache on A1200)

WE ALSO HAVE A GROWING COLLECTION

OF SUPER-HIGH PICS FOR YOUR A1200

PLEASE CALL FOR LATEST DETAILS

CLR GAMES

NORRIS

excellent platform game (1)

DARK THINGS

platform game (1)

PHASE 2

adventure style shoot-em-up (1)

X-SYSTEM

shoot-em-up (1)

TRUCKN-ON

run your own trucking company, miles 2, 4, 6, 8, 10, 12, 14, 16, 18, 20

DRAGON TILES

excellent puzzle game (1)

MOTOR DUEL

3D car racing shoot-em-up (1)

FUTURE SHOCK

shoot a bad head in a box (1)

ALL GUNS BLAZING

2 player overhead racing game (1)

BUILD-ROB BOB

great Amiga game (1)

PARADOX

platform game (1)

SONIC SMARTIE HEAD

kids platform game (1)

SPOOLING THE ESCAPE

platform game (1)

IMBRIUM

adventure game (1)

SCAN 29

quiz platform game (1)

STELLAR ESCAPE

3D vertical shoot-em-up (3)

JUNGLE BUNGLE

kids adventure game (1)

FLOWER POWER

kids game (1)

STOCKING FILLERS

collection of sample kids games (1)

MARVIN THE MARTIAN

shoot 'em up (1)

WHITE RABBITS

excellent brilliant (1)

MONSTER ISLAND

excellent adventure for kids (1)

RIFT

excellent platform game (1)

DEJAVU

£3.99 each

TYPEE

brilliant platform game for children.

Find the letters to spell a word

WORD FACTORY

spelling teacher

ROCKET MATHS

maths tutor (1)

MUSIC BOX

help to write music

DIRTY CASH

brilliant slot machine game

CONCERT BOX

learn to play Music Box

FUN TO LEARN

learning C&B for

POWER TEXT

powerful word processor with

spelling checker & mail merge

AMOS DATABASE

MOUSE CODE TUTOR

THORI CAD

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

TELL THE TIME

This month's programming page features graphics, text, and Intuition window events for new assembler programmers. There is also a home grown pseudo-random number generator which will give a random number in a required range.

The last Programming page featured Intuition window events, and graphics library routines for C programmers. When an event occurs in an active Intuition window, an informational message is generated. Blocks of data (or data structures) called message ports can be used to communicate with these messages.

An Intuition window has two separate message ports, the UserPort for IDCMP events, and the WindowPort for window events handled automatically by Intuition.

Each IDCMP flag represents an event that a program could be informed about by a message in the window's UserPort. The main feature of an Intuition program is usually a polling loop which waits for an event to occur and interprets the message.

The demonstration program's blue window polling loop waits for a VANILLAKEY, MOUSEBUTTONS, WINDOWCLOSE or INTUITICKS event to occur, stores the class and code in its own variables and releases the memory for the next incoming message.

The second window has a message port that is only informed about MOUSEBUTTON and RAWKEY events.

When a key is pressed, it can be interpreted as a RAWKEY or VANILLAKEY event. For a RAWKEY event, the code structure member of the Intuition message contains the raw key code, depending on the key's position on the keyboard. For a VANILLAKEY event, the Ascii value of the key is stored as the "code" value.

A low resolution screen is like a page with 256 narrow lines, and 320 dots (pixels) on each line. Each pixel can be clear (logical colour 0) or set in logical colour 1. Each logical colour is allocated a physical colour, made up of differing proportions of red, green and blue.

If more than one page (orbit-plane) is used, more logical colours are available. The Amiga graphics library commands can draw lines and shapes, paint large areas, or write on the screen.

Many of these commands used the address of the Window's RastPort, which is a structure containing all the Window's options for drawing shapes or producing letters on the screen. The full structure,

PROGRAMMING

with any flags used, is found in an Amiga Assembler header file.

The routine SetAPen() can be used to change the logical colour of the foreground pen. SetDMd() can be used to change the way the foreground pen is used, relative to the background.

The Draw() command will draw a line between two given pixels on the screen, and the RectFill() command will fill a given rectangle in the current foreground colour.

The Move() command will move the graphics cursor to specific pixel on the screen. The Text() routine can be used to display a given string of Ascii characters, from a starting point at the graphics cursor.

The cursor's x (or horizontal) position gives the left hand edge, and the y (or vertical) position the baseline of the first letter.

The SetRGB() command can change the quantity of red, green and blue in one of the screen's logical colours. The routine uses the address of the Screen's ViewPort, which is a structure containing all the Screen's display options (see the Assembler header files for the full structure).

The DisplayBeep() command flashes the screen's background colour briefly - it takes the address of the Screen structure as input.



Assembling windows

Random seeds in microseconds

A routine is needed to generate random numbers. Higher level computer languages, like C, have a pre-written library routines.

Most computers use a pseudo-random number generator, which will give a series of random numbers, starting from an initial number or seed.

Each time the current number is modified by a bit of arithmetic, so that a different number will be generated next time the routine is used. My routine doubles the last random number, EORs it with a constant, and stores the result.

If the initial number is not seeded, or given a unique initial value, the sequence of random numbers will be

the same every time the program is run. By reading the microseconds from the system time, a unique number can be used to seed the random number generator.

The Intuition library routine CurrentTime() can give this value, or a lower level command from the timer device can be used.

The timer device is a collection of software routines like a library. When a device is opened, there is an associated parameter block which contains all the structures a device may need to handle incoming and outgoing messages.

The Message structure includes a node (which keeps the message place

in a linked list) a message port (for replies) and the length of the message in bytes. The message port in turn has its node, flags, its own signal bit, its task, and a pointer to the header of the task list.

For reading and writing the time, messages are not required, and most of the values and pointers are null. There is an extended block for timer requests, using values form the TIMEVAL structure.

The timer device can be set up, as in the fully documented source code of the demonstration program, and a timer request block initialised for the commands and the data, and the system time obtained.

Margaret Stanger looks at text and graphics in intuition windows for assembler programmers

If you've not encountered SuperJam before, a brief history lesson is probably in order. As the name suggests, the package is essentially the Amiga's very own version of Band in a Box, with numerous unique refinements thrown in which make it ideal for both beginners and experts alike.

The idea behind the system is that you're provided with a five-piece backing band which can then be orchestrated via a selection of styles. Your primary input is providing the styles and a suitable chord progression for your automated counterparts to jam along with.

In theory, the quintet will then jam an infinite number of variations on the theme – no matter how many repeats are made – and believe it or not 99.9 per cent of the time that's exactly what happens!

This access to infinite variety is personified in the Section Design window, an area which invariably becomes the next stop on the creative road after setting up instrument patches and experimenting with the various styles on offer.

Once safely entrenched in the section window you're presented with the specified number of bars complete with all the virtual musicians mapped above.

You then simply punch in/out the various players as required and assign your preferred chord changes via a pop-up requester offering literally every chord imaginable – and if by some weird quirk of fate the chord you require isn't on hand you can create your own in seconds courtesy of yet another pop-up requester.

Your newly created masterpiece can then be played and more importantly saved by the program's Snapshot function. Due to SuperJam's tendency to jam over every playback, the snapshot option becomes essential to preserve your favourite version of each measure within the bar.

Once active the snapshot holds the last playback for each instrument in each bar.

If the bar is then locked the playback will always repeat the selected variation. As a result it's easy to build the best section possible by simply auditioning the passage bar by bar to build the best possible verse, chorus or whatever...

In addition, the much-hyped Turbo sounds and samples which claimed to offer a stereo SuperJam voice direct from the Amiga sound chip flatly refuse to do as promised.

Fortunately, this again has been revised and now both TurboSound – alias FM synthesis sounds – and Turbo Samples both work perfectly in stereo.

Perhaps the most dramatic improvement of the new version is four grooves within each style which in effect mean a song in a specific style can build and vary within itself before the various players add their own embellishments.

Thankfully Blue Ribbon have also added patch storing within each style, so now if you create a selection of patches which are ideal for that particular style they remain resident every time you apply that style in the future productions – saving literally hours of imitation and re-selection for regular users. Another pleasant

touch is the option to select between two octaves when making chord changes which in effect means much more direct user control over the virtual musicians during the construction of sections.

For the musically disabled, an embarrassingly simple system entitled the Easy-Matic MusicMaker has been added which in effect means the software will not only jam around the chosen chords but will also generate a fitting chord progression for you.

When active, simply tapping in suitable rhythm on a selection of four keys generates a fitting riff or progression for the selected style – spoon feeding at its most patronising perhaps but nevertheless quite handy if inspiration alludes and either studio time or deadlines are a little too close for comfort.

Yet another major innovation is the addition of graphic volume and pan editing, with all the players depicted as icons within a small matrix.

With the assistance of the mouse they can



Won't you come Jammin' 2?

be moved up, down, left and right, thereby adjusting the output in real time – even during playback.

Although the title and game-esque graphics do tend to paint a picture of a glorified version of a cheap and cheerful Casio variant, don't be deceived. Under the user-friendly veneer lurk some real power features.

Like most quality products, the closer you look, the better it becomes. In the case of SuperJam 1.1, this is personified by style editing options built-in to the software.

Thanks to this hidden depth, it's possible to dissect any style removing any elements which offend, or perhaps create new styles using an existing style as a foundation.

With the assistance of standard B&PPro editing tools, the imperfections can be removed from your virtual drummer's technique prior to recording the section thereby saving valuable editing time later on.

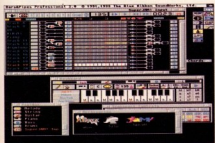
The reference to editing offers a prime opportunity to round off the column with a mention of SuperJam's potential as an accessory to the aforementioned B&PPro.

Although SuperJam and B&PPro are pretty special as individuals, when combined SuperJam really starts to shine. Once installed, SuperJam 1.1 provides virtual musicians as tools which can be dropped direct into the B&PPro pipeline.

Although the cutesy graphics and title don't inspire much confidence, don't be put off. For the amateur it's a great learning tool that can be fun as well as functional. For the professional it's very much a matter of application.

For would-be pop stars there's very little originality, however if you need quality lift music for video, multimedia or whatever else, it's ideal and worth every penny.

Paul Austin
explores a major
update to Blue
Ribbon's smash hit
music generator as
the new SuperJam
takes to the stage



Using Super Jam from within Bars & Pipes Pro

Price £129.95 • Upgrade from 1.0 – £35.99
Upgrade from TigerCub or Sontax – £79.95

Your Specialist



**stores:
North West:**

Bolton Computer Centre	Bolton	0204 814937
Castle Computers	Lancaster	0524 61133
Computer World UK	Bolton	0204 495011
VU Data	Ashton Under Lyne	061 339 0326
VU Data	Stockport	061 477 6739

Midland and Wales:

Comptazia	Merryhill, Birmingham	0922 614346
Garnes World	Bristol	0272 251533
Long Eaton Software	Long Eaton, Notts	0602 728555
Miles Better Software	Cannock	0543 466577
Mr Disk	Queensway, Birmingham	021 6161168
North Notts Computers	Sutton in Ashfield	0623 556686
ST Electronics	Nottingham	0602 632467
Soft Centre	Cwmbran	0653 868131

South East:

Adams World	Finchley	081 446 7170
A & C	Farnborough	0252 375088
ACM	Alton	0420 541167
Barkmans	Kingston Upon Thames	081 546 5941
ADM Computing	Kent	0227 762590
Bits 'n' Bytes	Ipswich	0473 219961
Computer Cavern	Reading	0734 583062
Computer Cavern	Wallingford	0491 834366
Computer Cavern	Marlow	0628 891101
Computer World	Canterbury	0227 766788
Database	Thurrock	0708 890976
Erol Computers	Walthamstow	081 520 7763
Faxminster	Hatfield	0707 272919
Gamer	Brighton	0273 726681
GB Microland	Waterlooville	0705 269333
Input	Ratthorne Place, W1	071 6362666
Invicta	Tunbridge Wells	0892 511542
J.C. Computers	Hampshire	0252 311766
Logic	Cheshunt	0992 25323
Platinum	Essex	0268 778909
Spa Computers	Leamington Spa	0926 337648
Softly	Milton Keynes	0908 670620
Sore Thumbs	Billerica	0277 633003

North East:

Maughan Micros	Gateshead	091 493 2308
Chips	Middlesbrough	0642 252509
Tomorrow's World	Hull	0482 24887
Topsoft	Stockton	0642 670503

For your nearest Computer Store dealer telephone
Head Office on: 0302 890000

europress
SOFTWARE

Europa House, Adlington Park,
Macclesfield SK10 4NP
Telephone: 0625 859333

Laugh while you learn ...with



**A1200
Compatible**

Explore English, Maths and French with ADI, the lovable extra-terrestrial. As you learn, he'll entertain you with funny remarks, whistly voice and weird faces. He'll congratulate you when you do well and cajole you if you make mistakes.

There's one package for each school year and the software closely follows the guidelines of the National Curriculum, drawing on the talents of some of the most gifted teachers in the country. As a result ADI ideally complements what students are learning in school, and acts as a superb revision tool.



Available NOW:

English 11/12 12/13 13/14 14/15

Having problems with your nouns and adjectives? Can't sort out your suffixes and prefixes? You need ADI English, covering all the basic elements of English grammar required by the National Curriculum syllabus.

Maths 11/12 12/13 13/14 14/15

If your algebra and geometry are causing you grief, look no further than ADI Maths. These are just two of the topics covered by the packages - whatever your maths problem, ADI's got the answer.

French 11/12 12/13 13/14 14/15

Say bonjour to French with ADI! The ADI French 11/12 package introduces first year students and beginners to France and French, and older students will find the 14/15 package ideal as a revision aid.

...and each pack costs just £25.99!

Join the ADI family today!

europress
SOFTWARE

Europa House, Adlington Park,
Macclesfield SK10 4NP
Telephone: 0625 859333

Available for
the Amiga, PC
and ST.

On sale at all good software
retailers including Boots,
Virgin and WH Smith.

The subject of computer security is one which will never go away. If it's not the guy next door peeking in your window it's the government listening to your phone calls.

It's a paranoid world out there, and none more paranoid than the USA where more people are frightened of the FBI than they are of the bad guys.

But Land of The Free, Home of the Brave is also home to some security which is for free. PGP stands for Pretty Good Privacy, an encryption software which is highly portable, PD (with only marginal pressure to pay any money, sort of guiltware) and very high security.

Anyone who happens across any files you might have will find it totally impossible to get at it unless they have the key. The system is so well made, in fact, that the FBI want to make it illegal.

Yes, unbelievably they want to force all security software to have a trapdoor to which they have the key. Thank God such things couldn't happen here.

Or could they? In case they do I'd get a line on this privacy thing before it's too late!

PUBLIC-KEY ENCRYPTION

I got my copy from Internet, and it's really very impressive. PGP Amiga port author Colin Plumb told me that "a mostly-working version of PGP 2.2 is available on your local aminet site. I use ftp.etsu.edu in Texas, and the centre of the universe is amiga.physik.unizh.ch, in Switzerland.

"I think there's one in England: the amiga.physik.unizh.ch welcome screen gives a list. It's not part of the official release (a few glitches relating to temp file placement), but it works well enough."

Indeed it does. PGP uses public-key encryption to protect Email and data files. It allows you to communicate securely with people you've never met, with no secure channels needed for prior exchange of the keys you need to decrypt the files.

PGP is a high security cryptographic software application. According to the author Philip Zimmerman, PGP allows you to exchange files or messages "with privacy, authentication and convenience."

"Privacy means that only those intended to receive a message can read it. Authentication means that messages that appear to be from a particular person can only have originated from that person."

"Convenience means that privacy and authentication are provided without the hassles of managing keys associated

Big brother?

Why are so many agencies alarmed by something which provides better security on computer files, the property of private individuals like you and I, which they shouldn't be allowed to see in the first place?

OK, so all this could just be hype to get the program noticed, but I don't think so. Why bother, especially as they're not charging for it? The sad fact is that now international bodies have noticed computers and computer networks, they want to at best be able to peek into them whenever they want, and at worst take control of them completely.

Sounds like paranoid rubbish, but it's a fact of life in some places. Eastern Bloc countries now free from communism are tooling up with programs like PGP so that the "police state", should it arise refreshed from its little sleep can't stomp all over their newly-spread computer networks.

You may not think such measures are necessary in the UK, and to an extent you'd be right. Of course we have a reasonably stable society and nobody really wants to pry into your private life. But...

with conventional cryptographic software."

No secure channels are needed to exchange keys between users, which makes PGP much easier to use. This is because PGP is based on a powerful new technology called "public key" cryptography. This technology has been available to high end users for some time, like governments and military, but PGP is public key cryptography for the masses.

A single key system works by me having a key to decrypt something you send me. We both have the same key.

Top secret!

That key has to be sent to the other person securely, or you risk it being stolen and the encryption is rendered useless. So you send the keys back and forth through secure channels... but if you have a really secure channel what do you need encryption for? This is where public keys come in.

COMPLEMENTARY KEY

In public key cryptosystems, everyone has two related complementary keys, a publicly revealed key and a secret key. Each key unlocks the code that the other key makes. Knowing the public key does not help you deduce the corresponding secret key. The public key can be published and widely published across the communications network.

This protocol provides privacy without the need for the secure channels that a conventional cryptosystem requires. It's complex but doubly secure.

It doesn't matter if you distribute keys in non-secure channels because if you aren't authorised to open the file you can't use it. The keys rely on each other to decrypt the file. Which is what all the legal heat in the US is all about.

All this legal nonsense is very disturbing, as it is disproportionate to the impact such a technology will have on computer security - you have been able to protect files on your computer for years anyway, as anyone with a copy of TransScript will tell you.

If like me you're deeply paranoid regardless of assurances to the contrary, you'll buckle up now and worry about people calling you a maniac later. You're being private if you send letters in envelopes rather than on postcards, so why send your Email open to anyone with the desire to peek at electronic media?

COMMS



Phil South looks at a system which ensures nothing you send through your modem can be seen by anyone except the intended recipient

Secure contacts...

Sources of PGP for all platforms are available via anonymous FTP on Internet and very soon on your local friendly security-conscious BBS. Or Email the writers:

Philip Zimmerman
prz@sage.cgd.ucar.edu

Colin Plumb
colin@web.apc.org

DOUBLE CD PACK!

17 Bit

Collection for Amiga CDTV

Contains over 1700 disks from the 17 Bit Public Domain Library.

**"The One" - 98%
their highest ever rating!**

"...a real stunner...worth buying an A570 for" - Amiga Format
"there really is a superb variety of programs...snap this up before
17 Bit realise their mistake and up the price." - The One
"Double disc delight" - Just Amiga Monthly

Compiled by
Almathera

The 17 Bit Collection is available now at £39.95 from all usual outlets or direct
from Almathera and 17 Bit. Call and order your copy now either from
Almathera : (081) 683 6418 or 17 Bit : (0924) 366 982

AMIGA 4000/030 ONLY £939.95!

- AA Graphics Chipset with 16.7 million colours gives photo-realistic images.
- 680EC30 Processor at 25Mhz.
- Four Zorro III high-speed card slots, including 24-bit video slot.
- Built-in IDE Hard drive interface (SCSI and SCSI2FAST options available)
- Free 12 Months "At-Home" Warranty

Amiga 4000/030 **£939.95**
80Mb Internal IDE Hard disk
2Mb Fast RAM 2Mb Chip RAM

Amiga 4000/030 **£1059.95**
120Mb Internal IDE Hard disk
2Mb Fast RAM 2Mb Chip RAM

PARNET CABLES

Enables a network link between two Amigas via the parallel port.

- Works with all Amigas including CDTV, A1200, and A4000
- Connect to a CDTV to access data on a CD-ROM from your Amiga.

Parnet Cable : **£19.95**

CD-ROM DRIVES NEW MODELS AVAILABLE

SCSI CD-ROM drives plus the drivers to run them on any Amiga with a SCSI interface.

- Also reads PC CD-ROMs.
- Internal CD-ROM Drive : **£289.95**
- External CD-ROM Drive : **£349.95**
- Internal double speed Drive : **£399.95**
- External double speed Drive : **£499.95**

AMIGA 4000/040 ONLY £1999.95!

- 68040 25MHz CPU with built in maths co-processor.
- 6Mb internal RAM expandable to 18Mb.
- 120Mb internal IDE hard drive.

Amiga 4000/040 **£1999.95**
Extra RAM available, please call for details.

IDE HARD DISKS

- 2.5" for Amiga 1200 internal fitting:
- 60Mb Western Digital : **£149.95**
- 80Mb Western Digital : **£209.95**
- 213Mb Toshiba : **£459.95**
- 3.5" for Amiga 4000 internal fitting:
- 170Mb : **£219.95** 213Mb : **£269.95**
- 250Mb : **£289.95** 340Mb : **£449.95**

We have an extremely wide range of SCSI and IDE hard disks available - if you do not see what you require here don't hesitate - call us now!

Almathera

Sales: (081) 683 6418
Fax: (081) 689 8927

Almathera Systems Ltd, Challenge House
618, Mitcham Road, Croydon, CR9 3AU

All prices inclusive of VAT.
Contact us via Email on: almathera@cd.com or almathera@cd.com
All prices correct at time of printing EDOE

CDTV TITLES

- 17Bit PD Collection CD* : **£39.95**
- CDPD : **£19.95**
- CDPD2 : **£19.95**
- DEMO CD : **£19.95**
- Fractal Universe : **£29.95**

*2 CDs. Floppy drive required

Fractals are a popular use for home computers. Their creation is a tricky thing involving a lot of maths and heavy duty repetitive calculations.

In fact without computers there would be no fractals, because although mathematicians who invented the processes like Mandelbrot and Julia did long-hand calculations on paper, the true beauty of fractals didn't really shine through until the advent of personal computers in the late '70s.

To create fractals in Amos you simply need a formula, and to pump that formula with numbers over and over until you build up a picture of the fractal in question.

Our Amos Mandelbrot program begins by setting up all the program's basic screen modes and then starts the procedure FRAC to which it passes some variables about the screen size and so on:

```
Screen Open 0,320,220,32,Lowres
Flash Off : Hide On : Curs Off : Cls 0
Pen 2 : Paper 0
```

This loop sets all the variables and then activates the proc:

```
Do
  B=320
  Y=200
  Z=32
  Cls 0
  FRAC(CX,Y,Z)
  Wait Key
Loop
```

Then we get to the main procedure. All the basic variables are assigned, and these are by necessity floating point variables due to the fractional nature of fractals (fractals are based on fractional dimensions, a unique topological principle):

```
Procedure FRAC(X,Y,Z)
  CX=CX: CY=CX: B=Z
  XBX=X-2.25 : XBX=XBX : YBY=Y-1.5 : YBY=YBY
```

Having given values to all the variables, we can then start to manipulate them and add more variables with values based on simple sums:

```
XB=XBX+YBY/CX : YB=YBY+XBX/CY
```

CX and CY are equal to the screen size. Due to the nature of this program, it scans the fractal in line by line, the height and width of the screen is important to when points can be plotted and where the fractal sits on the screen.

Next we have the loop which calculates the position

Amos news

Contrary to what other Amiga mags might tell you, Amos Pro compiler isn't out yet, at the time of me writing this anyway. It will however be out on June 17, according to Europress Software.

The new improved and bug-tested Amos Pro v1.12 is being distributed via the usual PD networks and should be widely available by the time you read this.

I hope that Pro is stable now - I'd like to think it's 100 per cent bug free, but then I suppose what can you say that about? At least now the compiler is out (or at least will be very soon) we can get started evaluating exactly what kind of program Amos Pro really is.

Once you can compile programs you stand at least a moderate chance of producing something serious with it, although I for one won't be trading up fully to the new system just yet.

I can trust my old Amos, it does the job and is hassle free about 98 per cent of the time. Don't get me wrong, I think Pro is definitely the future of Amos, but like most futures it hasn't happened yet.

AMOS

of the points by doing the sums over and over again so we have two nested loops:

```
For A=0 To CY-1
  For B=0 To CX-1
    XBX=XBX+YBY : YBY=YBY+XBX : D=0 : Z=0 :
  YB=0
```

which contain this conditional loop, which returns to the label L when $R < 4$ and $D < K$.

```
L:
  XBX=XBX : YBY=YBY : D=D+Z :
  YB=2*YBX+YBY : Z=XBX-Z+YB : Inc D
  If D#4 and D#6 Then Goto L
```

And finally after a little curb to make sure D doesn't go above the value of Z, we actually get to the plotting command. The line scans across the screen and the colour of the plot changes as the calculations decide which part of the fractal are



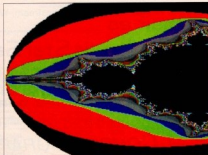
Chaos is beauty

at that point. End the proc and the two loops and you're out of there.

```
If D=0 Then D=0
Plot S,A,Z
Next B
Next A
End Proc
```

Once you have a formula actually writing a program to plot them is easy. Fractal formulas are easy to get hold of, as most fractal programs are peppered with them.

The plot routine is really nice in this program, so simply strip out the initial values and initial sums from the first few lines of the FRAC procedure and replace them with your own.



Mandelbrots are really easy with Amos

Phil South jumps on the fractals bandwagon and shows you how to make them using Amos

Invent your own

I feel in a party mood, so how about a little competition? Write me a fractal program in Amos, 2D, 3D anything you like, and send it in to me.

The best one will be put on the CoverDisk accompanied by a blow by blow in the Amos Almanac. Usual address, mark your envelope FRACTAL COMPO.

E.M.COMPUTERGRAPHIC SPECIALISING IN THE PROMOTION OF DTP ON THE AMIGA

WINNERS OF THE 1992 AMIGA SHOPPER TOP TYPEFACE AWARD

PAGESTREAM 2.2 DEMO DISKS £5.99 Have you thought about buying either Pagestream or TypeSmith? Want to see if these programs are suitable for you? Well, what are you waiting for? Here's your chance...try the demo!

EMC would like to point out that many UK PD libraries have purchased our disks and have simply issued CD-Rom disks for sale. EMC WILL NOT under any circumstances offer any form of backup to customers of other PD companies. EMC has gained an excellent reputation for both customer support and for distributing high quality DTP products. EMC is a dedicated and specialised Amiga DTP company and we were also the 1st UK company to offer UK and European Amiga Desktop Publishing software.

Remember, if you aren't on the EMC database, and have EMC disks... We suggest that you seek technical backup from the company you bought the disks from! >> Amiga Public Domain/Shareware DTP Packs <<

Bitmapped Clip Art

Fully sorted and saved as brushes, ready to import directly into your programs.

EMC Volume 1 - 5 Disks - £12.50 - Bitmapped Clip Art
EMC Volume 11 - 5 Disks - £12.50 - Bitmapped Clip Art
EMC Volume 15 - 8 Disks - £20.00 - Bitmapped Clip Art
EMC Volume 22 - 5 Disks - £12.50 - Bitmapped Clip Art

Type 1 Fonts

All with IFP font previews. For Pagestream, Publisher and Final Copy2 release 2 only.

EMC Volume 4 - 5 Disks - £12.50 - 67 Type 1 Fonts
EMC Volume 5 - 5 Disks - £12.50 - 63 Type 1 Fonts
EMC Volume 6 - 5 Disks - £12.50 - 83 Type 1 Fonts
EMC Volume 7 - 5 Disks - £12.50 - 68 Type 1 Fonts
EMC Volume 16 - 5 Disks - £12.50 - 76 Type 1 Fonts
EMC Volume 17 - 5 Disks - £12.50 - 79 Type 1 Fonts
EMC Volume 27 - 5 Disks - £12.50 - 86 Type 1 Fonts and Utils.

CG Scalable Fonts

For PPage, PSetter2/3, WWord1/2, WWord3, Opalvision, Scala and DPaint 4.1 etc.

All with IFP font previews.
EMC Volume 8 - 5 Disks - £15.00 - 61 CG Scalable Fonts
EMC Volume 9 - 5 Disks - £15.00 - 64 CG Scalable Fonts
EMC Volume 10 - 5 Disks - £15.00 - 57 CG Scalable Fonts
EMC Volume 23 - 5 Disks - £15.00 - 58 CG Scalable Fonts
EMC Volume 24 - 5 Disks - £15.00 - 64 CG Scalable Fonts
EMC Volume 25 - 5 Disks - £15.00 - 66 CG Scalable Fonts
EMC Volume 26 - 5 Disks - £15.00 - 71 CG Scalable Fonts

Professional User Fonts

For use with all versions of Professional Draw.

EMC Volume 18 - 5 Disks - £15.00 - 60 PDraw Fonts
EMC Volume 19 - 5 Disks - £15.00 - 63 PDraw Fonts
EMC Volume 20 - 5 Disks - £15.00 - 50 PDraw Fonts

Emulated Postscript Clip Art

This clipart is suitable for use with Pagestream, PPage and any application that supports EPS. In Pagestream it can be viewed/edited and printed to A4 or printer. PPage users need a postscript printer and/or a postscript interpreter to print the clipart.

EMC Volume 12 - 6 Disks - £15.00 - EPS Clip Art
EMC Volume 13 - 6 Disks - £15.00 - EPS Clip Art
EMC Volume 14 - 6 Disks - £15.00 - EPS Clip Art

Other Fonts and Clip Art for Pagestream Users

EMC Volume 2 - 6 Disks - £15.00 - PC Clip Art
 200 fully scalable bitmapped clip art and images.
EMC Volume 3 - 2 Disks - £ 5.00 - Pagestream Fonts
 34 Pagestream format fonts, compatible with all versions of Pagestream.
EMC Volume 21 - 6 Disks - £15.00 - PCX Clip Art

AWARD CONSTRUCTION KIT

Award Construction Kit offers Amiga users the ability to easily create customised awards and certificates. ACK comes complete with 6 different headline fonts, 8 body text fonts, 5 seals and 11 different borders along with 50 pre-defined award styles. All of these can be edited and mixed to suit your individual needs. ACK also offers the ability to save frequently used user styles.

The program will work on any Amiga and has an excellent 'point and click' user interface which has intentionally been designed to be simple to use. ACK is a modular programme, which gives users the ability to add new fonts and styles easily from additional ACK data disks, which will be available soon. ACK is available exclusively from E.M.C., and for a special introductory period the program is available for:-

£29.99

Including VAT and UK postage/packing
 European - please add £3.25 for reg. airmail postage
 Rest of World - please add £3.00 for reg. airmail postage

THE MAGAZINES HAVE SAID...

Amiga Computing in issue 52 said...

"E.M.Computergraphic are the **FIRST** and **FOREMOST** Font distributors in the UK"

they then placed us at...No.1 in the TOP 10 of the Amiga hardware/software chart!

Ian Wrigley from Amiga Shopper in issue 16 said...

"...I must say that I'm quite impressed..."

Amiga Format in issue 36 said...

"...E.M.Computergraphic have an enormous amount of expertise in the tricky area of fonts and can provide professional help and advice to customers"

Amiga Format Special Edition said...

"...the best value rescalable fonts available anywhere...there's no cheaper way of getting quality fonts"

CUAmiga in the issue of September '92 said...

"...you couldn't do much better than taking a look through the sets offered by E.M.C."

Amiga Shopper January 1992 gave Safari Fonts and EMC...

"The Top Desktop Publishing Typeface Award For 1992"

Pat McDonald from Amiga Format in issue January 1992 said...

"The best person to talk to about fonts, in the UK at any rate is Erol at E.M.C"

Amiga Mart November 1992 said...

"EMC's emergence into the cut-throat retail area has come none too soon, their service and technical backup is second to none."

OPALVISION UPDATE DISKS

These two update disks contain ALL the very latest OP software upgrades directly from Centaur Developments USA. The disks are being updated constantly, sometimes on a daily basis. Please phone for latest details of the disk's contents!

£5.99

E.M.COMPUTERGRAPHIC are the **EXCLUSIVE UK** and European Distributors of the...



COMPUTER SAFARI Desktop Publishing Typefaces

FULLY compatible with WB2/3, PPage, PSetter 2/3, Pagestream, Wordworth, Opalvision, Scala, DPaint4.1 etc.

NEW SAFARI DISK 25 £14.99

TRIANGLES **MovieStarSans** **TYCONNUS A**
MovieStarSpurSerif **TYCONNUS A OUTLINE**

PLEASE NOTE - SAFARI FONTS ARE NOW ALSO AVAILABLE IN COMPILATION PACKS - SERIOUS, SCRIPT, FUTURE, DISPLAY AND STARFONTS

For more information on EMC's PD/Shareware library and Computer Safari Fonts, including prices and printed typeface sheets PLEASE send us a SAE



VISA

E.M.COMPUTERGRAPHIC



Credit Cards Welcomed - £10 min. order
 Cheques / Postal Orders to:

8 Edith Road, Clacton, Essex. CO15 1JU
 Tel : 0255 431389 Fax: 0255 428666



I am one of those music freaks who likes to make up compilation tapes of favourite tracks from several albums. I've always used one computer program or another to produce inlay cards for tapes, but in the past they've always been simple – and very boring – text-based ones.

With the acquisition of a colour printer I thought this would be the ideal time to spruce up the collection, so I set about DTPing my inlays. As there was a considerable number, I chose a simple design which could be produced quickly, while at the same time giving enough flexibility to individualise each inlay.

ProPage was used for the design, but you could just as well use PageStream or PageSetter3. I considered creating a ProPage page gentic to automate the job, but in the event there was no need.

The first things to fix are the overall dimensions and basic elements. My inlays have a backflap that can be read through the window on the rear of a cassette case, a thin spine, a front cover or face, and an inside flap that folds into the case for a more detailed listing of what's on the tape.

The overall dimensions are 16.5cm wide by 10cm high. To provide room for cropping marks on the printout – they make it easier to cut out the inlay accurately – increase the page size by 1cm in both directions to 17.5cm by 11cm. Turn the Snap to Grid feature on and make the grid 0.5cm square.

Create a box 16.5cm by 10cm and position it 0.5cm from the left and 0.5cm from the top of the page. If the inlay is to have an overall background colour, this is the box to shade.

Before we go any further, let's place the crop marks. From the top left corner of the box you have just created draw a 0.5cm line to the left of the page, and another to the top. Repeat this for all four corners. When the inlay is printed you will be able to line up your ruler with these marks ready to run the knife along.

The backflap is the next job. Create a box 2.5cm by 10cm and position it exactly over the left-hand side of the large box. The backflap is where you will list all the names of the tracks and artists on the tape.

Now there needs to be a fold between each of the elements of the inlay – backflap, spine, face and inside flap – and I've allowed 0.1cm for each of these. So the left-hand edge of the next element, the spine, will be positioned 0.1cm to the right of the right-hand edge of the backflap.

Create a box 1.2cm by 10cm and position its left edge at 3.1cm. On the spine will go the title of the tape. This will be printed sideways, so when you are ready to do that part of the inlay create a box 10cm by 1.2cm, type in the text, rotate it by 270 degrees, and place it into position over the spine element (PageSetter3 doesn't allow rotated boxes, so if you are using this program you'll have to come up with another idea).

Now for the face. Create a box 6.4cm by 10cm and position its left edge at 4.1cm (the top edges are at 0.5cm, by the way). On the face will go the title of the tape plus a graphic to indi-

PUBLISHING

visualise it. It's often nice to make the background colour of the face different from the background colour of the other bits. Up to you.

Finally the inside flap. This box is 6.1cm by 10cm, and its left edge is positioned at 10.5cm. The right edge of this box should be exactly on top of the right edge of the big background box we drew to start with. On the inside flap will go a more detailed listing of tracks, artists, publishers, playtimes, and so on.

And that's it. All you have to do now is the fun bit – fill in the elements with the relevant details, print it, cut it out, and gently score three folds between the four elements. Obviously the thicker the paper you print on to, the more robust will be your inlay.

Blue Peter eat your heart out.

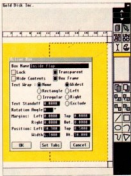
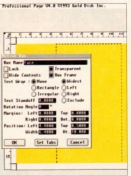
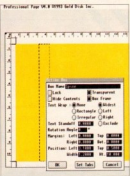


Sound and vision



Add good-looking inlay cards to your favourite cassettes with a DTP package. Ben Pointer shows you how

The fun bit is filling in the details



The cassette inlay has just four basic elements

shop window

the locator

AMIGA MARKET

Shop Window..148

Reviews of the latest hardware and software releases including GVP's A1230

Classifieds..152

Dozens of second hand Amiga bargains to save you a fortune

Software Spotlight..155

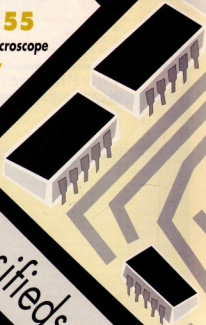
Animation packages go under the Amiga Microscope

Hard Times.. 157

All the best floppy drives rounded up and examined

Locator ..151

classifieds



Shop Window

A1200 68030 accelerator card with
space for extra RAM and FPU
Supplier: Silica Systems
Phone: 081-309 1111
Price: £299 (0Mb) 4Mb SIMM: £141

It is one of the most significant facts about the early A1200 market that a host of third-party manufacturers rushed immediately upon the machine's release to produce FPU/RAM expansions and accelerator cards.

With the machine's potential as a graphics and multimedia workstation limited by its lack of co-processor and slowish 68020 CPU, manufacturers on both sides of the Atlantic dashed to be the first to soup it up.

The result is that little more than six months after the A1200's launch, the ambitious owner has a choice of several FPU and RAM expansions with a crop of 68030 and SCSI boards on the way.

Of the more powerful cards being developed, GVP's A1230 has reached the Amiga Computing offices first, beating the Microbotics VXL1230 and ICD's Viper by a length, so we decided to test just how close the lowly A1200 can come to its bigger brother.

Designed as a fairly standard 68030 board and utilising techniques taken from the A530 to squeeze more power into a smaller package, the A1230 is a small card with space for CPU and FPU socket, and two SIMM slots. GVP claim the latter will enable the board to be upgraded to 32Mb, but few users will require or have funds for anything more than 8Mb.

Provided that 16Mb SIMMs can be found and eventually fall in price, 32Mb is a possibility with this board, but most users will no doubt settle for less.

As with the A530, a 40MHz 68EC030 chip provides the

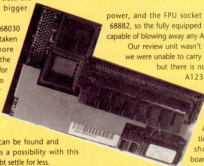
power, and the FPU socket will accept a 40MHz 68882, so the fully equipped A1230 machine will be capable of blowing away any A3000 or A4000/030.

Our review unit wasn't fitted with a 68882, so we were unable to carry out floating point tests, but there is no reason to believe the A1230 will be any slower than, say, a 40MHz combo card with FPU.

Tested against an A4000/040, the limitations of the 68030 chip showed up, with the board less than half as fast in even its best tests, but this

With the addition of GVP's latest accelerator, the A1200 comes of age...

Thirty something



is only to be expected. In tests against a GVP 33MHz 68030 combo and a standard 25MHz A3000, the A1230 wiped the floor with the opposition, its significantly faster clock speed giving it an advantage in every area.

The AGA chips help in tests such as WritePixel, which depend mostly on the graphics chips, but this really only serves to highlight the power of an AGA Amiga with a beefy processor in tow.

Retailing at £299 with no RAM, and about £440 with a 4Mb SIMM, the A1230 is capable of boosting the A1200 way over the head of the A3000, and at this price, it is bound to do well, though the surprising early popularity of the A4000/030 might dampen the A1200 68030 card market in months to come.

The Playroom

Educational software
Supplier: Infogrames
Phone: 071-738 8199
Price: £25.99

This is one of the best presented pieces of educational software on the market. Inside the colour box are two disks, a manual, some colouring pencils (more later), the copy protection sheet, a registration card and a set of stickers which can be attached to the keyboard as your child is learning what to do - very nice indeed.

The manual is extremely well pitched and presented. As well as containing clear and concisely presented information on using the software, it also contains various exercises and extra bits and pieces to be used in conjunction with the software to squeeze that little bit more out of your investment.

What better way to show that you wish to give the very best value for money for your products than to

include a set of colouring crayons and a colouring book-style selection of characters and activities in the back of the manual?

The game is set, Fun School-like, in a world where the child explores by clicking on anything that interests him or her. However, unlike Fun School there is no difference between the environment and activities - you click on something that interests you and use it, returning to where you left off afterwards - simple.

It is advisable to install this program onto your hard drive, as the disk prompt will pop up every now and then when the child selects an object or activity - not conducive to keeping attentions focused where they should be.

To give a feel for what the software is about, I'll look at a few of the activities on offer.

Clicking on the computer lets the child play a letter recognition game, where the "computer" asks the child to type in a letter, or select one using the arrow keys, to match that which is on the screen.



The parent can make this more challenging by switching the case, altering the level of testing and choosing words to be spelled, all by selecting the parental use control panel. A more conventional activity is the



Shop Window

Power XL Drive

1.76Mb high density external floppy drive

Supplier: Power Computing

Phone: 0234 843388

Price: £129

In development for almost two years, Power Computing's XL floppy drive at last hits the streets this month, and becomes the first drive of its kind to offer every Amiga user the same storage capabilities as enjoyed by A4000 owners.

Formatting HD floppy disks to a capacity of 1.76Mb, the XL drive doubles up on capacity and makes possible the reading of 1.44Mb PC and Atari formats.

Installation, as one would expect of a floppy drive, is painless and quick. The user simply boots from the supplied disk and chooses to carry out either a hard drive or floppy installation, then reboots his or her machine, at which time a patch program will run at the beginning of the startup sequence to insert the operating system patch, thus forcing Workbench to write HD floppies.

If the patch program installation is not used or, as in the case of a commercial game which boots from its own custom disk, cannot be activated, the drive will act as a standard 880k drive for writing purposes, though the system will still be able to read HD disks of either 1.44Mb (PC and Atari) or 1.76Mb (Amiga) capacity.

However, it is when the drive is fully set up and used under Workbench that it comes into its own. The XL drive accepts

standard HD disks as used on other machines and will format them to 1.76Mb. Workbench and CLI, automatically adjusting to the new capacity depending on what type of disk is in the drive.

With the use of the Workbench 3.0 CrossDOS utility, or the shareware MultiDOS, the user can also choose to format Atari HD or 1.44Mb PC disks, a fact which alone will make the drive a favourite with IBM emulator owners.

Speed is good in all modes, and the Amiga 1.76Mb floppies format in about two minutes and 50 seconds, only



a few seconds slower than equivalent disks on the A4000 internal drive.

IBM 1.44Mb format takes longer at about four minutes 25 seconds, but this is unlikely to bother those who have previously never had access to the most popular PC disk format.

To compensate, standard Amiga 880k and IBM 720k formats take place at a good speed and the drive is almost whisper quiet in most modes.

Probably the XL drive's only drawback is its price, which at £129 is very high for a floppy drive. In its favour, the XL is at the moment the only HD floppy available for the Amiga and it works very well, but users with no real need for HD will probably stick with cheaper standard drives.

Those to whom the drive will appeal include those who regularly transfer files to and from PC, those who need larger floppies for 24-bit files or other artwork, and hard drive users looking for a much more effective backup system. To these people, the Power XL drive will be a godsend.

A1200 hard drive kit

80Mb IDE hard drive with cable and formatting software

Supplier: First Computer Centre

Phone: 0532 319444

Price: £195.99

Though it is true that one IDE drive unit is much the same as another, it is certainly not the case that one piece of hard drive formatting software is in any way similar to another designed to do the same job.

Since the A1200 was released without hard drive or formatting software, the quality of hard drive kits has varied between the passable, which will prep and format a drive after some painful fiddling about, and the downright garbage which simply won't work.

The hard drive kit from First Computer Centre is one of the best so far released, and it's all thanks to an excellent toolbox disk containing software from the experienced American company Microbotics.

RDPrep is an easy to use program which will enable the A1200 user to prep and partition any IDE drive (the unit supplied was a reliable Seagate), which can then be formatted from Workbench in the same way as a floppy.

What struck me as particularly helpful was that the icons for prepping, formatting, and installing Workbench 3.0 to the drive were numbered 1, 2 and 3 to avoid confusion.

All steps towards setting up the drive are painless and quick, and to top things off, the excellent Commodore Installer program will automatically install the user's Workbench disks to the system partition.

As a bonus, the software checks which version of Kickstart is being used and asks for either the Workbench2.0 or Workbench3.0 disks as required.

This is a neat, quick, and simple solution to the hard drive problem for any upgrading A1200 user, though until Commodore release their iron-like grip on the official upgrade path it will remain one which invalidates the machine's warranty.

mixed up toy, which is a character containing three parts - a head, a body and legs - which are - you've guessed - mixed up. Clicking on any body part will swap it for a new one. In time, the child will work out how to create complete characters, encouraging logical thinking as well as playful creativity.

Other activities include the Mousehole, which is a board game involving the child practising his or her counting skills; the clock, which shows what Pepper the Mouse is doing at any time selected by the child; and a favourite of mine - the spinner toy.

This contains two wheels, one with numbers on, one with objects. Spinning, say, the number five on one wheel and an apple on the other will result in five apples being displayed on the screen.

It's simple, fun and very educational, teaching a myriad of skills such as learning to recognise a number of objects without counting them, the whole concept that "five" means "five" whether it's apples or UFOs... and a first lesson in the roulette concept!

Hmmm... This software, as well as being designed for the child, has the guardian or parent very much in mind too, which is partly the reason it stands out.

Parents gain an unequalled amount of control thanks to a Playroom menu on F1 (again, no disable for prying hands) allowing alteration of the case (upper or lower) that the games' text appears in; various levels of numbers and letters to suit various stages of a child's development; the ability to choose between keyboard, joystick and mouse for control; and various printer options.

You can save your preferred settings, meaning that this menu only need be accessed when the child's skills are developing.

The Playroom is excellent. Not as graphically excellent as Mickey's Puzzles, it makes up for this in the breadth of its scope. It's well presented, well written, and contains enough to keep a child happy for quite a while. Above all, it's excellent value. Another winner!



Starjet SJ-48 printer

Bubblejet mono printer with optional battery pack and sheet feeder

Supplier: First Computer Centre

Phone: 0532 319444

Price: £214.99

The low end of the bubblejet market has become one of the most fiercely contested peripherals markets of recent years, and since the release of the Canon BJ10, an increasing number of printers have jostled for position at the consumer feeding trough.

The Star SJ-48, in reality a rebadged BJ10, makes no pretence to be anything other than a cheap printer with good output, but at its present price it is great value for money.

In the main, the only substantial difference between the Star and the BJ10 is that the latest version of the Canon has a larger printer buffer which gives it a speed advantage, but for those on a tight budget the Star's £20 price advantage will outweigh this.

Options for expansion are identical to the BJ10, with an automatic sheet feeder and NiCad battery pack available for the owner with either a heavy print load or a burning desire to be portable.

The tight design of the unit, with its diminutive dimensions and weight of only 4lbs, makes it a doddle to slip into a briefcase, though we didn't have a look at the battery pack, so can't say how bulky or heavy that might be.

In operation, the SJ-48 is quiet and fairly quick, turning in a respectable 100 characters per second letter quality text. Roughly translated, an A4 page of mixed text and graphics will print in around three minutes, though a page

of text using one of the two built-in printer fonts will appear in half this time. Print quality is superb for internal fonts and just about as good when using scalable fonts such as Agfa Intellifonts.

The downside of this and most other bubblejet printers is that draft mode is fairly slow compared to a dot matrix and there is no facility for tractor-feed continuous stationery.

Users with requirements for fast draft output – vital when proofing large documents – would find the SJ-48 virtually useless.

Others with letter writing, business, or other correspondence needs can rest assured that the Star SJ-48 is an excellent, low cost printer and a thoroughly good buy.

SignEngine

Sign making and cutting software

Supplier: Parallel Motion Graphics

Phone: 0101 519 942 8822

Price: \$559

Possibly the first specific sign making software available for the Amiga, SignEngine is a curious beast combining the talents of a basic layout package with the specific requirements of a program designed to cut shapes and signs from plastic or vinyl using a plotter.

Many readers might wonder of what possible use a program such as this can be, but SignEngine is actually a well targeted response to a solid practical application gap which few Amiga programs have hitherto attempted to fill.

Signs of all kinds from company logos to advertising slogans, posters, and signposts are produced every day on thousands of vinyl cutters worldwide, and the flexibility of being able to generate and cut a sign in the same room cannot be understated.

Exhibition companies who design and erect stands for computer shows, TV companies who need quick production graphics, and many other organisations make regular use of either their own in-house cutter or go to another company for sticky-backed output. SignEngine makes it possible for the Amiga to fulfil these commercial needs for the first time.

The program is fairly straightforward in use. No drawing tools are included, so the user must import either a ProDraw clip format or IFF-DR2D structured drawing. Once imported, however, the user has an exhaustive list of controls over the final product.

Using the Arc-weld tool, letters which overlap can be merged, saving a lot of fiddling about at the cutting stage, shadows, borders, and outlines can be placed around and below any object with user-definable attributes, and there



SignEngine is a powerful, if expensive, specialist tool

is an auto-tiling feature to enable the production of huge billboard-size designs. More than 50 sign cutter specific controls are included to give the user as much say over how the finished sign will look, including everything from the exotically named Pseudo feature to an automatic allowance for vinyl shrinking.

In all, SignEngine, though expensive, offers a great deal more than the existing Amiga packages with HPGL plotter support and opens the way for Amiga infiltration in a very specialised marketplace.

The 17 Bit Collection

Double CD compendium of PD software

Supplier: Almathero Systems

Phone: 081-683 4418

Price: £39.95

If, as Kelly Sumner recently said, CDTV's time has been and gone, one would expect the software available on CDTV format to decline in both number and quality, but the latest offering from Almathero systems bucks this trend by doubling the number of CDs and halving the quality.

The 17 Bit Collection is made up of a huge number of PD demos, tunes, games, and utilities from the gargantuan vaults of one of the biggest libraries around, and at first glance looks to be an attractive buy. However, when one discovers the price and opens the package, things begin to turn sour.

One entire CD is given over to what is euphemistically titled The Early Classics, in reality a wedge of old demos which ceased to be state-of-the-art several years ago (remember the Red Sector vectorballs?), utilities which are often way out of date, and so on.

The second disk is a great improvement as it offers more recent material, much of which can be very useful, but as a complete compilation this one fails to impress.

To ask £40 for what is a collection of freely distributable software is to ask too much, and though many users would no doubt buy the second CD on its own, I'd be more than a little gob-smacked if the 17 Bit Collection made its compilers anything approaching a fortune.





AmiVGA

VGA adaptor for machines with Super Denise chip (A500 Plus and later)

Supplier: Advanced Micro Interfacing

Phone: 0703 511164

Price: £39.99

Touted as a VGA adaptor, the AmiVGA box is a monitor connector for all Amigas, A500 Plus and beyond, which have the Super Denise chip installed, and promises to bring the benefits of non-interfaced high-resolution displays to anyone with access to a suitable monitor.

A hardware and software double act, AmiVGA consists of a small black box with monitor ports for both a 15-pin SVGA connector and the standard Amiga 23-pin cables. It fits in the Amiga monitor port and its through port allows the connection of two monitors at the same time.

AmiVGA's software is a simple initialisation program running off a floppy supplied with the hardware which, when activated, offers the choice of VGA or CGA screen modes.

Amiga monitors

CGA, for those not familiar with quaint PC terminology, is similar to the standard Amiga 1084 display, and will enable the user to make use of any normal Amiga monitor.

The VGA driver software survives warm reboots, so the floppy boot disk will only have to be used once per session. Some sort of hard drive-based solution would have been better, but as initialisation is very quick, the floppy-phobic (all hard drive owners, in other words) shouldn't suffer too much distress.

In use, AmiVGA was less than trouble-free, and proved incapable of displaying a strong signal on one of the standard SVGA monitors we borrowed for testing. The picture was stable enough and dot pitch appeared high enough

for a sharp display, but despite cranking brightness way up, the little black box's image remained very dark.

Users with Super Denise-equipped Amigas would be advised to give this cheap VGA solution a look, but are advised to check thoroughly beforehand whether the monitor on which they intend to use it will be capable of displaying a decent picture.

Trying to lay hands on Commodore's £30 adaptor for the A1200/A4000 might be a wiser course of action, though the latter can be incredibly difficult to find.

Mickey's Jigsaw Puzzles

Educational software

Supplier: Infogrames

Phone: 071-738 8199

Price: £25.99

You'd expect something special from a product with Mickey Mouse and Disney plastered all over the box, and indeed this looks a very slick package from the beginning.

Inside the box are the usual couple of disks, instruction manual and registration card. It's nice to see that the program is hard drive installable – so much Amiga software neglects to allow one to do this, which is especially important with education packages, where the differences in ease of use and speed between a hard and a floppy drive could be the difference between a child having fun or losing his or her patience and/or interest.

Basically the program is what it sounds like – a collection of puzzles (15 in all) featuring Walt Disney's favourite cartoon hero. Of course, being done on a computer, there are various twists...

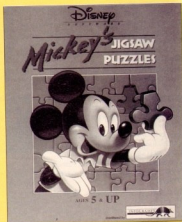
Provided the program is installed to a hard disk, you can see on loading a selection of buttons down the right of the screen allowing you to choose a puzzle to attempt (floppy owners have to load puzzles from disk when they want them – hardly a major chore).

No picture is tied to any type of puzzle. You can select a picture and then decide what type of puzzle you wish it to be.

For instance there's the silhouette puzzle, where you drop darkened shapes into the picture – this teaches children shape skills. Or you can choose normal jigsaw pieces or square bits. You can also select the number of pieces – the range is from 4 to 64.

The method of actually putting the puzzles together is very simple. You get a piece to start with, drop it where you think it goes, and then the computer automatically "picks up" another piece for you.

You can move two or more puzzle pieces at



once, and control can be by mouse (the easiest), joystick or keyboard, using the arrow keys. There is a timer option so the puzzles can be constructed against a ticking clock, adding an element of fun for the child who has cracked the idea and can do 64-piece puzzles without much effort given all the time in the world. The added incentive for finishing a puzzle is the ability to animate the completed picture on doing so – what more would you expect from Disney?

Clicking on the little camera which appears when a puzzle has been finished does the business here, and the animations are very good indeed – again as one would expect. This is the bit children will really love, as the pictures are brilliant enough anyway before any movement has taken place.

The function keys offer a good deal of flexibility, and some cheats, too – it would have been nice to have a way of disabling these to force impatient little minds to think instead of taking short-cuts.

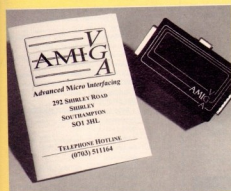
Helpful functions

As it stands, though, F1 will show you where a piece goes, or the entire puzzle, depending upon whether Mickey actually has a piece in his hand at that time; F2 rearranges the jigsaw correctly should you have completed it but got some pieces in the wrong places.

The other function keys concern themselves with toggling the puzzle grid lines, the timer, text messages, Mickey's hand (the cursor), the music, and pausing the game – only necessary if you're jigsawing against the clock, of course.

Finally, it's possible to print the puzzles out, although to do any justice to the quality of these 15 pictures – which are all shown in full colour in the booklet – means that unless you have thousands of pounds for a decent colour laser printer, you're best off admiring them on-screen.

I liked Mickey's Jigsaw Puzzles. It's a non-nonsense program, taking a very traditional infant pastime and adding more in genuine flexibility to it than it removes in lack of simplicity. Recommended.



A good idea, but is it powerful enough?

22 St. Cuthberts Avenue, Great Glen,
Leicester LE8 0EI Fast Delivery Free Post



Software spotlight

Accelerators aren't of any particular use in Amiga animation, but a hard drive certainly is. Large animations, especially if created in HAM mode, will consume huge swathes of disk space and should always be given the freedom of a hard drive to gallop around in.

Memory is also crucial, but only up to a point. The sort of animations created by most animators not using ray tracers are demanding on chip memory (you'll need 1Mb chip RAM for sure) but usually don't require more than about 2Mb to run in, and a lot less during the creation process.

If the intention is to produce five-minute long demos stretching across three or four floppies, then 4Mb RAM would be better, but for most purposes 2Mb is ample.

Disney Animation Studio

Coming from the past masters of animation, you'd think this program would be the best around. That it doesn't quite make it to the top of the ladder, however, shouldn't put off the potential animator.

DAS is made up of three programs: One for creating pencil drawings, one for colouring the finished animation, and another for synchronising the anim with sound effects and other clips of animation. In effect, it works in a similar manner to the real animators – a fact that the manual is at pains to point out.

In terms of features, DAS can stand up there with the likes of DPaint, but it is most definitely a non-HAM package designed for cartoon drawings.

The onion skin feature, enabling the artist to see the last three cells through the present cell, is ideal for creating smooth animations, but if you want a spinning logo or a HAM animation, try another package.

As a paint package, DAS does well enough, if not brilliantly, but where it scores very highly is in its dedicated nature. Budding Disney's can learn a great deal about the animator's art from this package, helped by some wonderful Disney demonstration anims, so it is easily the best package for the educational environment.

Supplier: Entertainment International
Phone: 0268 541126
Price: £79.95

Spectrator

Basically a HAM paint package, Spectrator was the first of its kind to offer animation, and has a few extra features which help the program to give DPaint a run for its money.

Morphing is one, a feature which Spectrator boasted many months before DPaint 4 was released, but the brush wrapping is Spectrator's most unique tool. This enables the user to pick up a brush then "wrap" it around a sphere, cube, or one of the seven basic shapes supported, to produce quite remarkable effects for a program in this price bracket. There are a few draw-

Put life into pallid pixels
with some of the Amiga's
best animation software for
everyone from beginners
to Walt Disney

backs with Spectrator, of course, and the main one is that it is HAM only. If you want to produce an eight-colour anim you can, but it will just be an eight-colour HAM anim, which means slow refresh rates and wasted memory.

To add to this, the animation controls are a little difficult to come to terms with, so unless the unique features are desperately required, Spectrator is best used as a static image generator.

Supplier: Micro-PACE
Phone: 0753 551888
Price: £77.54

Take 2

A recent product and one which is designed more as an animation finisher than something in which to create the entire anim. For this reason the paint facility is limited.

Instead, the animator creates cells and, more importantly, plans which key cells will be used more than once in another package, then ports them across to Take 2 for editing.

Once the cells are available, Take 2 can go to work on them using its powerful dose sheet and video scripting utilities.

The former enables the correct timing of when a frame will be played and allows the setting up of complex routines to mix and match frames, use them more than once, and generally harangue them into a sequence.

Video scripting enables the correlation of scenes and sequences as one large anim ready to be taped to video.

The most powerful feature of the program, however, has to be its ability to run four-level line tests. This means that the animator can have up to four separate animations going on at once in the same screen, and can edit or cut any one of them at any time.

It is the sort of feature usually found only in professional

packages costing hundreds, or even thousands, of pounds, and could lead to Take 2 making an appearance in commercial studios as a valuable and very cheap line tester.

Supplier: Rombo
Phone: 0506 414631
Price: £49.95

Animation Station

A package with certain similarities to Take 2, Animation Station manages to sit on its own as an animation editor and special effects generator.

Like Take 2, Animation Station is designed to be used once all animation cells are complete. At this stage, the user loads the sequence into Animation Station, and uses the power of the package to combine animations, tack other on at the end, swap frames around, and assign times for the exposure of individual frames.

Special effects, such as wipes, resizing, scrolling, and others can be added across a user-defined number of frames, making it possible for the user to create professional cuts and edits in a computer cartoon.

Animation Station supports all Amiga resolutions and screen modes, including interlace and overscan, so it is a great tool for use in conjunction with one of the more traditional paint and animate packages.

Supplier: Marcam
Phone: 0604 790466
Price: £99.95

Deluxe Paint 4

Though a little slow as a HAM paint package, DPaint has been many things since the release of v3, not the least of which is probably the best animation program available on the Amiga. Version four's improvements to the already powerful animation section have simply reinforced the package's position.

Animators can now use a "light table" similar to the Disney "onion skin" to enable the creation of smooth animations, and all animation controls, such as frame advance and add frame, have been gathered together on a VCR-style panel for easier control.

In addition, there is now a morphing feature which can transform one brush into another over a series of frames, and though painfully slow, this feature can be a great aid when animating.

As usual, the DPaint perspective controls and move requester are still available, the latter of which has given birth to countless rotating, tumbling logo animations. As an overall package for the animator, DPaint 4 is number one.

Supplier: Electronic Arts
Phone: 0753 549442
Price: £89.95

Roclitte RF382C

If speed and style is what you're looking for the Roclitte is the drive of your dreams. Being by far the smallest, slimmest and fastest drive we had on test, it's a suitable opener for the definitive guide to the best in external technology.

At roughly twice the speed of the standard Commodore internal, the Roclitte is pretty impressive as well as being near silent. Unlike most of the other drives it Roclitte comes in either CDTV black or the usual vanilla.

Again unlike at lot of the competition it comes with anti-click and anti-virus which when added to its pure elegance and speed make it a very attractive buy. If you're looking for a stylish slim-line drive that can outpace the opposition and still retail at a respectable price, Roclitte is the one for you.

Price: £66.99

Supplier: The First Computer Centre
Tel: 0532 319444

Cumana

Cumana drives have been around almost as long as the Amiga and to their credit I'd be surprised if the very first unit isn't still providing sterling service.

Strong, sturdy, reliable, boring, noisy... in fact we're talking the computing equivalent of the Volkswagen Beetle.

If you're not after the whistles and bells of more modern drives but simply want a unit that will last longer than "you will" the Cumana is the perfect choice and dirt cheap to boot.

Price: £57.95

Supplier: Gordon Harwood
Tel: 0773 836781

Power Dual Drive

As the name suggests, the second offering from Power Computing is a twin drive comprising two PC8808 drives within one amazingly small case. Like Power's single drive both the

If you're repelled by the designer label look, the Zycdec drive provides the minimalist appeal and space conscious design that any environmental friendly Amiga user would happily swap his or her 2CV for.

Although small and amazingly quiet considering the lack of any anti-click hardware, the Zycdec does have a few faults in comparison to its more bulky and feature packed opponents.

Because of the extremely slim

styling, the designers have been forced to add vents on the top and rear of the drive. Although this may initially seem a perfectly acceptable design, the cold light of day or perhaps a cup of coffee could reveal a drawback to placing holes in the top of computer hardware.

In my personal experience floppy drives invariably see more cups than

HARD TIMES

This month's shoppers' guide looks at the most important addition to any Amiga setup – the essential external floppy...

component units offer anti-click, anti-virus and of course the Bliz copying option.

The drives themselves are totally independent as far as the Amiga is concerned and like all the drives in the roundup through ports and on/off switches are provided as standard.

Unlike all the other available units the Dual Drive also boasts a separate power supply – an extremely useful addition if you're machine is already heavily laden with additional hardware.

It's worth stressing that the anti-virus option does not actually check for a viral presence. Both the single and dual drives simply disable the machine's ability to write information to disk whether that be the Power drive or the internal.

Because of this it's still essential that your disks are write protected where possible. The anti-virus option wouldn't

the average coaster. As a result, a minor spill could be a major disaster. If you're looking for a basic but efficient drive the Zycdec is fine, but considering the extra features offered by many of the opposition I must admit it wouldn't be my first choice unless desk space was extremely tight.

Price: £52.99

Supplier: Evesham Micros
Tel: 0386 765500

Zycdec

know a virus if it ran up with a box of chocolates and a bunch of flowers, it simply disables the ability to write data – so don't let your guard down.

If you're in the market for a twin external system the Dual Drive offers a compact, economical and feature packed answer that avoids the power problems often encountered on heavily expanded system.

Price: £125

Supplier: Power Computing
Tel: 0234 843388

Power PC880B

Now here's a drive that's fit to burst with additional features. Aside from working as a standard drive the unit also boasts an anti-virus mode which immediately write protects all the your floppies by completely disabling the write-to option.

The next feature is a slightly dubious addition which takes the form of a software/hardware copying system entitled Bliz copy. As you might have guessed this isn't meant for normal Amigados copying tasks and that's about as far as we should go with this particular line of thought.

Although rather long the drive still remains surprisingly thin considering the amount of hardware crammed inside – anti-click, Bliz and of course the drive mechanism itself.

As an all-purpose drive the PC880B has to be one of the best buys on the market especially when its obvious flexibility is combined with a very reasonable asking price. Available in both black and vanilla.

Price: £65

Supplier: Power Computing
Tel: 0234 843388

Internal exchange

In a break from the external tradition, the final drive in the roundup offers an even more important purchase – especially for those in the somewhat trick position of owning a dicky internal.

For those working exclusively on a floppy system, the loss of the Amiga's essential internal is nothing short of a catastrophe. If the unthinkable happens a fast and reliable replacement is a must.

In such dubious circumstances, Evesham Micros can come to the rescue with a replacement double density drive compatible with the entire Amiga range – including the A1200 and 4000.

Thankfully the installation is a breeze even for the technically inept thanks to very simple and straightforward instructions.

The drive unit is the same tried and tested mechanism found within the Zycdec mentioned earlier – as a result, reliability shouldn't be a problem. Simple to fit, reliable and cheap. What more could an ailing Amiga ask for.

Price: £44.99

Supplier: Evesham Micros
Tel: 0386 765500

**Special
Prices for
BULK
BUYERS**



ALL AMIGA PUBLIC DOMAIN SOFTWARE

UTILITIES

Text Engine V4.0
Epoch V
C Manual V3 - 120
V Morph
WR2 Utils - 140
Kick 1.3
Amos Updates 1.36 - 2D
CPD Utilities - 13D
OPaint 3 Tutorial
Anti Virus Disks
Amos Pro Update 1.1
Dig Art Disks - 90
Ham Lab 2 (WR2-3 only)
Hard Drive Utils
Set Up Disk
PC Task (WB3)
Amiga Tutorial
CJ Tutorial
Lyuapunov
Comms Pack-2D
Edvord V2
Label Designer
Messaged 2
D Copy V2.0

GAMES

Lemmings
Tetris Gameboy
Nurture
Donkey Kong
Chess Age - 4Mb
Star Trek - 2Mb
Crazy Sue II
Solitaire
Wozzy Quest
Helixone
Kikriss
21 Games
Roulette
Super Pacman 92
Leadings
CPD Games - 90
Wozzy Quest
Parachute Joust
Airmania
Kids Disk Drops
Amos Com Pack
Chess Tutor
Pick a Puzzle - 30
Liamatron

OTHERS

Ham Slides
Lemmings Revenge 2Mb-2D
Jig Paj 2 Bit Pics - 90
Guil War Anim - 2Mb
Arti Gameboy Anim
WWF Slides
Dolphin Dreams Anim
Star Trek Anims - 5D
Dracula Animation
CPD Demos - 90
Med V3.20
Jesus on a 2D
Sapores Slides - 1Mb
Chip
At the Movies 2 - 40
Walker 1+2 (1+2 Mb)
Unsporing (2Mb)
Puggs in Space
Alcatraz Odyssey - 5D
Sword of Tip Sultan
Chernomorph Demo
Perfect Sound - 4D
Music Modules - 6D
Coyote 2 (1.5Mb)

Just a small selection of disks - 100's more available.
Send ten 1st class stamps to receive catalogue disk with all the latest titles

* Ask about Special A1200 Disks *

Disk prices £1.25 per disk with free postage - no hidden charges

Please make Cheques/Postal Orders payable to Chris Price

Telephone Chris on 0283 516736 - 7 days a week - 9am to 10pm or write to:

**CPD, 3 Dunedin Crescent, Winhill,
Burton upon Trent, Staffordshire
DE15 0EJ. Tel: 0283 516736**

MILLENNIUM MICROS

DISCOUNT MAIL ORDER COMPUTER SUPPLIES

THIS IS ONLY A SMALL SELECTION OF OUR STOCK - SO IF
YOU CAN'T FIND WHAT YOU WANT BELOW - PHONE

Amiga 1200/2500/3500/4000/4860/5000/5500/6000/6400/6800/7000/7500/8000/8500/9000/9500/10000/10500/11000/11500/12000/12500/13000/13500/14000/14500/15000/15500/16000/16500/17000/17500/18000/18500/19000/19500/20000/20500/21000/21500/22000/22500/23000/23500/24000/24500/25000/25500/26000/26500/27000/27500/28000/28500/29000/29500/30000/30500/31000/31500/32000/32500/33000/33500/34000/34500/35000/35500/36000/36500/37000/37500/38000/38500/39000/39500/40000/40500/41000/41500/42000/42500/43000/43500/44000/44500/45000/45500/46000/46500/47000/47500/48000/48500/49000/49500/50000/50500/51000/51500/52000/52500/53000/53500/54000/54500/55000/55500/56000/56500/57000/57500/58000/58500/59000/59500/60000/60500/61000/61500/62000/62500/63000/63500/64000/64500/65000/65500/66000/66500/67000/67500/68000/68500/69000/69500/70000/70500/71000/71500/72000/72500/73000/73500/74000/74500/75000/75500/76000/76500/77000/77500/78000/78500/79000/79500/80000/80500/81000/81500/82000/82500/83000/83500/84000/84500/85000/85500/86000/86500/87000/87500/88000/88500/89000/89500/90000/90500/91000/91500/92000/92500/93000/93500/94000/94500/95000/95500/96000/96500/97000/97500/98000/98500/99000/99500/100000/100500/101000/101500/102000/102500/103000/103500/104000/104500/105000/105500/106000/106500/107000/107500/108000/108500/109000/109500/110000/110500/111000/111500/112000/112500/113000/113500/114000/114500/115000/115500/116000/116500/117000/117500/118000/118500/119000/119500/120000/120500/121000/121500/122000/122500/123000/123500/124000/124500/125000/125500/126000/126500/127000/127500/128000/128500/129000/129500/130000/130500/131000/131500/132000/132500/133000/133500/134000/134500/135000/135500/136000/136500/137000/137500/138000/138500/139000/139500/140000/140500/141000/141500/142000/142500/143000/143500/144000/144500/145000/145500/146000/146500/147000/147500/148000/148500/149000/149500/150000/150500/151000/151500/152000/152500/153000/153500/154000/154500/155000/155500/156000/156500/157000/157500/158000/158500/159000/159500/160000/160500/161000/161500/162000/162500/163000/163500/164000/164500/165000/165500/166000/166500/167000/167500/168000/168500/169000/169500/170000/170500/171000/171500/172000/172500/173000/173500/174000/174500/175000/175500/176000/176500/177000/177500/178000/178500/179000/179500/180000/180500/181000/181500/182000/182500/183000/183500/184000/184500/185000/185500/186000/186500/187000/187500/188000/188500/189000/189500/190000/190500/191000/191500/192000/192500/193000/193500/194000/194500/195000/195500/196000/196500/197000/197500/198000/198500/199000/199500/200000/200500/201000/201500/202000/202500/203000/203500/204000/204500/205000/205500/206000/206500/207000/207500/208000/208500/209000/209500/210000/210500/211000/211500/212000/212500/213000/213500/214000/214500/215000/215500/216000/216500/217000/217500/218000/218500/219000/219500/220000/220500/221000/221500/222000/222500/223000/223500/224000/224500/225000/225500/226000/226500/227000/227500/228000/228500/229000/229500/230000/230500/231000/231500/232000/232500/233000/233500/234000/234500/235000/235500/236000/236500/237000/237500/238000/238500/239000/239500/240000/240500/241000/241500/242000/242500/243000/243500/244000/244500/245000/245500/246000/246500/247000/247500/248000/248500/249000/249500/250000/250500/251000/251500/252000/252500/253000/253500/254000/254500/255000/255500/256000/256500/257000/257500/258000/258500/259000/259500/260000/260500/261000/261500/262000/262500/263000/263500/264000/264500/265000/265500/266000/266500/267000/267500/268000/268500/269000/269500/270000/270500/271000/271500/272000/272500/273000/273500/274000/274500/275000/275500/276000/276500/277000/277500/278000/278500/279000/279500/280000/280500/281000/281500/282000/282500/283000/283500/284000/284500/285000/285500/286000/286500/287000/287500/288000/288500/289000/289500/290000/290500/291000/291500/292000/292500/293000/293500/294000/294500/295000/295500/296000/296500/297000/297500/298000/298500/299000/299500/300000/300500/301000/301500/302000/302500/303000/303500/304000/304500/305000/305500/306000/306500/307000/307500/308000/308500/309000/309500/310000/310500/311000/311500/312000/312500/313000/313500/314000/314500/315000/315500/316000/316500/317000/317500/318000/318500/319000/319500/320000/320500/321000/321500/322000/322500/323000/323500/324000/324500/325000/325500/326000/326500/327000/327500/328000/328500/329000/329500/330000/330500/331000/331500/332000/332500/333000/333500/334000/334500/335000/335500/336000/336500/337000/337500/338000/338500/339000/339500/340000/340500/341000/341500/342000/342500/343000/343500/344000/344500/345000/345500/346000/346500/347000/347500/348000/348500/349000/349500/350000/350500/351000/351500/352000/352500/353000/353500/354000/354500/355000/355500/356000/356500/357000/357500/358000/358500/359000/359500/360000/360500/361000/361500/362000/362500/363000/363500/364000/364500/365000/365500/366000/366500/367000/367500/368000/368500/369000/369500/370000/370500/371000/371500/372000/372500/373000/373500/374000/374500/375000/375500/376000/376500/377000/377500/378000/378500/379000/379500/380000/380500/381000/381500/382000/382500/383000/383500/384000/384500/385000/385500/386000/386500/387000/387500/388000/388500/389000/389500/390000/390500/391000/391500/392000/392500/393000/393500/394000/394500/395000/395500/396000/396500/397000/397500/398000/398500/399000/399500/400000/400500/401000/401500/402000/402500/403000/403500/404000/404500/405000/405500/406000/406500/407000/407500/408000/408500/409000/409500/410000/410500/411000/411500/412000/412500/413000/413500/414000/414500/415000/415500/416000/416500/417000/417500/418000/418500/419000/419500/420000/420500/421000/421500/422000/422500/423000/423500/424000/424500/425000/425500/426000/426500/427000/427500/428000/428500/429000/429500/430000/430500/431000/431500/432000/432500/433000/433500/434000/434500/435000/435500/436000/436500/437000/437500/438000/438500/439000/439500/440000/440500/441000/441500/442000/442500/443000/443500/444000/444500/445000/445500/446000/446500/447000/447500/448000/448500/449000/449500/450000/450500/451000/451500/452000/452500/453000/453500/454000/454500/455000/455500/456000/456500/457000/457500/458000/458500/459000/459500/460000/460500/461000/461500/462000/462500/463000/463500/464000/464500/465000/465500/466000/466500/467000/467500/468000/468500/469000/469500/470000/470500/471000/471500/472000/472500/473000/473500/474000/474500/475000/475500/476000/476500/477000/477500/478000/478500/479000/479500/480000/480500/481000/481500/482000/482500/483000/483500/484000/484500/485000/485500/486000/486500/487000/487500/488000/488500/489000/489500/490000/490500/491000/491500/492000/492500/493000/493500/494000/494500/495000/495500/496000/496500/497000/497500/498000/498500/499000/499500/500000/500500/501000/501500/502000/502500/503000/503500/504000/504500/505000/505500/506000/506500/507000/507500/508000/508500/509000/509500/510000/510500/511000/511500/512000/512500/513000/513500/514000/514500/515000/515500/516000/516500/517000/517500/518000/518500/519000/519500/520000/520500/521000/521500/522000/522500/523000/523500/524000/524500/525000/525500/526000/526500/527000/527500/528000/528500/529000/529500/530000/530500/531000/531500/532000/532500/533000/533500/534000/534500/535000/535500/536000/536500/537000/537500/538000/538500/539000/539500/540000/540500/541000/541500/542000/542500/543000/543500/544000/544500/545000/545500/546000/546500/547000/547500/548000/548500/549000/549500/550000/550500/551000/551500/552000/552500/553000/553500/554000/554500/555000/555500/556000/556500/557000/557500/558000/558500/559000/559500/560000/560500/561000/561500/562000/562500/563000/563500/564000/564500/565000/565500/566000/566500/567000/567500/568000/568500/569000/569500/570000/570500/571000/571500/572000/572500/573000/573500/574000/574500/575000/575500/576000/576500/577000/577500/578000/578500/579000/579500/580000/580500/581000/581500/582000/582500/583000/583500/584000/584500/585000/585500/586000/586500/587000/587500/588000/588500/589000/589500/590000/590500/591000/591500/592000/592500/593000/593500/594000/594500/595000/595500/596000/596500/597000/597500/598000/598500/599000/599500/600000/600500/601000/601500/602000/602500/603000/603500/604000/604500/605000/605500/606000/606500/607000/607500/608000/608500/609000/609500/610000/610500/611000/611500/612000/612500/613000/613500/614000/614500/615000/615500/616000/616500/617000/617500/618000/618500/619000/619500/620000/620500/621000/621500/622000/622500/623000/623500/624000/624500/625000/625500/626000/626500/627000/627500/628000/628500/629000/629500/630000/630500/631000/631500/632000/632500/633000/633500/634000/634500/635000/635500/636000/636500/637000/637500/638000/638500/639000/639500/640000/640500/641000/641500/642000/642500/643000/643500/644000/644500/645000/645500/646000/646500/647000/647500/648000/648500/649000/649500/650000/650500/651000/651500/652000/652500/653000/653500/654000/654500/655000/655500/656000/656500/657000/657500/658000/658500/659000/659500/660000/660500/661000/661500/662000/662500/663000/663500/664000/664500/665000/665500/666000/666500/667000/667500/668000/668500/669000/669500/670000/670500/671000/671500/672000/672500/673000/673500/674000/674500/675000/675500/676000/676500/677000/677500/678000/678500/679000/679500/680000/680500/681000/681500/682000/682500/683000/683500/684000/684500/685000/685500/686000/686500/687000/687500/688000/688500/689000/689500/690000/690500/691000/691500/692000/692500/693000/693500/694000/694500/695000/695500/696000/696500/697000/697500/698000/698500/699000/699500/700000/700500/701000/701500/702000/702500/703000/703500/704000/704500/705000/705500/706000/706500/707000/707500/708000/708500/709000/709500/710000/710500/711000/711500/712000/712500/713000/713500/714000/714500/715000/715500/716000/716500/717000/717500/718000/718500/719000/719500/720000/720500/721000/721500/722000/722500/723000/723500/724000/724500/725000/725500/726000/726500/727000/727500/728000/728500/729000/729500/730000/730500/731000/731500/732000/732500/733000/733500/734000/734500/735000/735500/736000/736500/737000/737500/738000/738500/739000/739500/740000/740500/741000/741500/742000/742500/743000/743500/744000/744500/745000/745500/746000/746500/747000/747500/748000/748500/749000/749500/750000/750500/751000/751500/752000/752500/753000/753500/754000/754500/755000/755500/756000/756500/757000/757500/758000/758500/759000/759500/760000/760500/761000/761500/762000/762500/763000/763500/764000/764500/765000/765500/766000/766500/767000/767500/768000/768500/769000/769500/770000/770500/771000/771500/772000/772500/773000/773500/774000/774500/775000/775500/776000/776500/777000/777500/778000/778500/779000/779500/780000/780500/781000/781500/782000/782500/783000/783500/784000/784500/785000/785500/786000/786500/787000/787500/788000/788500/789000/789500/790000/790500/791000/791500/792000/792500/793000/793500/794000/794500/795000/795500/796000/796500/797000/797500/798000/798500/799000/799500/80

FAST AMIGA REPAIRS

Upgrades + Engineering requirements

SAME DAY SERVICE

£34.99 + parts
(comps in by 11am)

NORMAL SERVICE

£24.99 + parts
(Typically 24 hrs)

Door to door pick up + delivery anywhere in the U.K. Also Monitors + Hard Drives

HCS ENGINEERING
144, Tanner St., Tower Bridge, London SE1 2HG
Tel. 071-252 3553

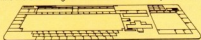
Central
London

Low Cost
memory upgrading

A500/A500+ to 1mb £17.50
A500+ to 2mb £29.99
A600 (w.clock) to 2mb £34.99

AMIGA KEYBOARD OVERLAYS

...now you can write the keyboard commands on the keyboard!
...no more referring to the manual for which key does what



Get one for each of your favourite programs and speed up the human interface - brilliant for flight and other simulations, and for games, music, graphics, DTP, word processors, programmers & all.

Silverbird computing

Cheques and money orders only to: Silverbird, Dept AC7, 47 Barton Road, Harlington, Bedfordshire LU5 6LG, England. For all Amigas except A1000, CDTV, A600. Also fits New Amiga 1200! Sold only in packs of five for £5.20 PLUS post and packing: UK 80p, Europe & BFPO £1.50. Rest of the World £2.50.

Amiga-64-Link

- Links C64 peripherals to Amiga parallel port
- C64 Not required

Connects C64 printers to the Amiga

- Supports MPS, DPS, VIC, Star, Brother, Seikosha & Citizen printers
- Graphics output on dot-matrix printers
- Works with all software

Transfers C64 disk files to the Amiga

- File transfer programs
 - Read/Write text, binary & program files
- Standard "Ami-64-Link" £35.25 Prices include VAT and delivery
Budget "Ami-64-Link" £23.50 Budget stops multi-tasking during printing

York Electronic Research (0904) 610722
The Paddocks, Jockey Lane, Huntingdon, York YO3 9NE

STD Index

STD Index is a stand alone database of over 9500 UK and Worldwide dialling codes in an easy to use package which will save you £££'s compared to obtaining the information from directory enquiries when they are charging over 40p per enquiry. Simply run STD Index and type the town or village you wish to search for. A search takes no more than ONE SECOND! That's faster than dialling 192! If you see an item advertised for sale then simply type the dialling code into STD Index and STD Index will pinpoint where in the country you will be travelling to if you have to collect it. STD Index is also ideal for MODEM owners ringing up bulletin boards. You could save more than the price of this program on your next phone bill by knowing where a bulletin board is situated before calling it. £16

Wordsmith

Wordsmith is based on a 50,000 word dictionary and using fast search algorithms can provide answers for crosswords, word puzzles, anagrams, and those annoying competitions where you have to make as many words as possible out of the letters "RadioOneRoadShow" (Wordsmith can find 580), typing "ology" will find 95 words containing "ology" in about 2 seconds. Selecting ANAGRAM and typing "REAREINREDI" will solve this anagram in under a minute. Wordsmith is an educational tool for children or as a puzzle solving aid. £16

Ask to be added to our database for full details of all our programs sent to your door in our regular mailshots

Touch Typist



Learning to type has never been easier, why struggle with the keyboard when you can type without thinking about where your fingers are going, when you can touch type you simply have to think what you want to write and the text appears on the screen without any thought on your part. Touch Typist will teach you to touch type and provide you with graphs, certificates, and prompts to help you on your way. 402 lessons are provided as well as a lesson editor built in to the program so you can customise the lessons to your requirements. Touch Typist is ideal for beginners and will cope with speeds of over 150 WPM for those wishing to brush up on their keyboard skills. Touch Typist watches you as you type and even charts your accuracy for each finger. Touch Typist is not a typing tutor dressed up with silly games but a serious course designed to teach a skill that will save you hours each week by not having to look at the keyboard. Touch Typist is suitable for ages 10 to adult and requires 1 meg to run. Half meg version also available if required. £16



Touch Typist received a 5 STAR review in CU Amiga, Dec 91

Amiga Shopper Index

If you have back issues of Amiga Shopper magazine then you NEED this program. When was the modification to the Microvitec monitor to allow 4096 colours? Where would you find the review of the Trilogic Stereo Sampler? The answers are Page 113 issue 3 July 1991 and page 49 issue 5 September 1991. All the articles, letters, news items and reviews are cross referenced in a very easy to use package. £12

Amiga To Z88 Link

Use your Amiga files on your Z88 portable or back up your Z88 to Amiga disks using our Link and cable. Easy to use, full support for batch files and full restore facilities. Software and cable £25

Sector Software
39 Wray Crescent
Ulnes Walton, Leyland
Lancashire PR5 3NH
Tel 0772 452414



Access/VISA Accepted



Most programs also stocked by those nice people at Trilogic

All prices include VAT and postage and packing. Cheques should be made payable to Sector Software. Telephone enquiries are best made on a Monday or Tuesday daytime or any evening up to 9pm

Locator

Your at-a-glance guide to shopping through the pages of AC. All our advertisers, all their products, and all in an easy to find format. Your Amiga Market Locator makes finding that bargain infinitely easier.

COMPANY	AMIGAS		PRINTERS		PERIPHERALS		SOFTWARE		MISC	
	Amiga	Amiga	Amiga	Amiga	Amiga	Amiga	Amiga	Amiga	Amiga	Amiga
1st Computer Centre										
17 Bit Software										
ACS										
Arnor										
ASGI Inc										
Ashcom										
Austrian Computer Services										
Batkease PD										
Bitcon Devices										
Calculus										
Checkmate										
Computeworld										
Database Direct										
Dataplex Computers										
Delta PI										
Digital International										
Dynasite Computers										
Eagle Software										
EM Computergraphic										
Empress Software										
Everest Micro										
Font Shop										
Gastner										
GLS										
Gold Star										
Gordon Harwood										
HB Marketing										
HQ										
Webbyte										
India										
Ladbroke										
Marble										
Marion										
Millennium Micro										
Power Computing										
Premier mail order										
Rafex Technology										
Rumba										
Silica Systems										
SoftLogix										
Special Reserve										
Sysam Associates										
The Disc Company										
Videoware										
Virus Free PD										
West Midland Computers										

ADVERTISERS' INDEX

17 Bit Software	82, 83	Empire Software	134	RTS	162	Selectionist Company	158
1st Computer Centre	44, 45	Epic Marketing	78	ICV Software	154	Sidmouth Software	159
ACS Electronics	54	Eurospex Direct	86, 87, 88	Ladbroke	92	Silica Systems	29, 57, 69
Amiga Centre Scotland	142	Europress Software	140	LCS	84	Silverdard Computers	160
Amvision Software	97	Futuretech	40, 41	Marcam	30	Softcell	84
Arnor	21	Gastner	17	Meridian Software	94	Software Demon Ltd	57
Batkease PD	66, 67	Gordon Harwood	10, 11, 50, 51, 52, 53, 75	Microvalue	117	South Hams Software	154
Bogdan Computer Supplies	158	Graphics Assembly Ltd	146	Millennium	159	Special Reserve	12, 125
Bitliffers	64	Handsoft	156	MIC Supplies	94	Switchsoft	162
C.P.P.D.	159	Hawkesley Electronics	150	New Horizon Computers	81	Systec PD	162
Cane Electronics	64	HCS	160	On-Line Entertainment	63	Technomail	154
D.D.P.D.	146	HS Soft	15	Orion PD	156	Ten out of Ten Educ Systems	154
D.T.S.	99	HQ	81	PD Direct	158	Triplex	92, 93
Delta PI Software	99	Hobby	22, 23	PD Soft	146	United Public Domain	100, 101
Direct Computer Supplies	43	Homebased Business	156	Patroler PD	153	Universal Computer Systems	34, 35
Discovery PD	106	ICP U.C.	154	Power Computing	38, 39, 180	Virus Free PD	105
E.M.C.	144	Indie Direct Mail	2, 3, 4, 5, 6	Profil	80	Vuage Computers	159
Eagle Software	121	JAM	146	Rumba	136	Whale Knight Technology	76, 77
ECU	63	Knossex Software	94	Sector Software	160	WTS Electronics	54
		Krisalis Software Ltd	127			WTS Electronics	58, 59
						York Electronic Research	160

Power Computing's innovative 4MB 32-bit memory expansion for the Amiga 1200 is now available. The PC1204 includes these many features:

Zero Wait State - Unlike some other expansions the PC1204 never leaves the processor waiting around for data, which means that your A1200 can run at its maximum speed.

Ultra Fast FPU - An optional maths co-processor speeds up intensive calculations. A 50MHz chip will speed up operations by up to fifty times.

Real-Time Battery Backed Clock - Allows files to be date-stamped with the correct time and date so that you know exactly when they were created.

Low Power - High density RAMs means low power consumption.

Easy To Fit - Fitted in minutes without the need to remove the computer's case.

Optional FPU Disable Switch - Disable the FPU instantly for software that will not run with a maths co-processor installed.

	Power PC1204	A leading competitor
Speed Vs standard A500	4.84 times faster	4.79 times faster
Speed Vs standard A1200	2.19 times faster	2.17 times faster
CPU MIPS	2.95	2.93

PC1204 4MB with clock, no FPU Processor **£185.95**

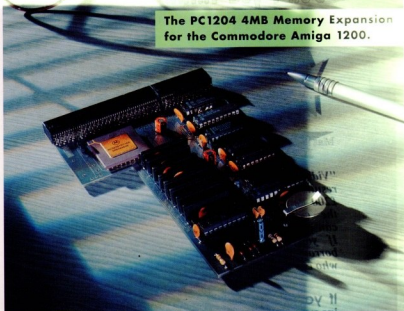
PC1204 4MB with clock, 20MHz 68881 FPU **£259.95**

PC1204 4MB with clock, 25MHz 68882 FPU **£279.95**

PC1204 4MB with clock, 33MHz 68882 FPU **£289.95**

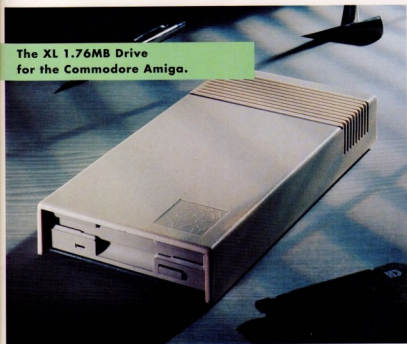
PC1204 4MB with clock, 40MHz 68882 FPU **£299.95**

PC1204 4MB with clock, 50MHz 68882 FPU **£339.95**



The PC1204 4MB Memory Expansion for the Commodore Amiga 1200.

The XL 1.76MB Drive for the Commodore Amiga.



Power Computing's XL 1.76MB Drive* for the Commodore Amiga is now available. The XL Drive includes these many features:

Formats to 1.76MB - Using high density disks you can fit a massive 1.76MB on each disk.

Acts as a standard drive - Insert an 880K Amiga disk and the drive behaves like any other Amiga drive.

Fully compatible - Will read and write disks with an Amiga 4000 internal high density drive.

Compatible with PC disks* - Also read and write high density PC disks using a suitable device driver.

Compact size - No larger than a standard 880K floppy disk drive.

High quality design - Uses a high quality Sony high density mechanism.

Free - Box of 10 3.5" Polaroid high density disks.

Comes complete with disable switch and through port.



XL Drive £129.95

*Requires Kickstart 2 or above. *Requires Workbench 2.1 or above.

48Hr delivery **£2.50**, 24Hr delivery **£4.50**

Parcel Post delivery **£1** (Orders under £50 & UK mainland only)

Specifications and prices subject to change without notice

All Trademarks acknowledged. VAT included



Power Computing Ltd
Unit 8 Railton Road Woburn Road Industrial Estate
Kempston Bedford MK42 7PN
Tel 0234 843388 Fax 0234 840234

Goods are sold subject to our standard terms and conditions of sale and are available on request

DISTRIBUTION
ENQUIRIES
WELCOME

Don't you think these images speak for themselves !

ONLY
£99.95

Jason Mulhurn, Amiga Format
December 1992 issue..

"Vidi Amiga12 ... The best
value digitiser on the market !"

Mat Broomfield, C1 Amiga
January 1993 issue.

"Vidi 12 gives unequalled
results for anything within
£200 of its price....Forget
the competition. If you
can afford Vidi 12, buy it.
If you can't afford it,
borrow it from someone
who can !"



Alan Pacey, Amiga User Int.
January 1993 issue.

"..I compared Rombo and
Digiview digitisers
extensively. To summarize
them...I judged the Rombo
results to be more
consistent and have the
edge on quality !"



New Ver. 2.00
software with
AGA chipset
support.

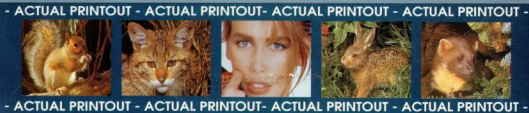
If you want the ultimate quality
images at a price you can afford
then there is only one
choice...Vidi Amiga 12. The
Video Digitiser that all others
follow !

Now supports all new A1200
modes up to a maximum
resolution of 704 x 566, has
improved animation features
with enhanced user interface.



ACTUAL SCREEN

VIDI-AMIGA 12



THE WORLDS BEST SELLING AMIGA DIGITISER

For more Information call: (44) 0506 414631 or Fax (44) 0506-414634
Rombo Productions Ltd. Kirkton Campus, Livingston, SCOTLAND, (UK), EH54 7AZ.