

FREE CD!
Compatible with all Amigas including CD32

Issue 86 May 1995 £3.99 Overseas price £4.25 Hfl 18.95

AMIGA

COMPUTING

May 1995 All Amigas 1Mb required

Smartypaints

Feature packed and extremely versatile, this unique art package caters for all age groups and abilities

COMPLETE PROGRAM Worth £30




World exclusive!

**Lightwave 4:
AC takes the
first look at
the ultimate
in rendering
and
animation**



PLUS

- Cobra 275Mhz
- 3D Digitiser
- Squirrel
- CanDo 3
- Internet Add-ons
- Office round-up
- Cross Mac
- Aminet 1
- DPaint 5
- Easy Ledgers

The Weird Science Multimedia Toolkit

AMIGA

IMAGES

- 500 Ham
- images
- 500 24-bit
- 500 Ham8

Clip art

- 2100 mono files
- 1300 colour files

Audio

- 750 music modules
- 2300 sound samples

COLOURED CLIP ART

- 120 bitmapped
- Amiga fonts
- 100 colour fonts
- 100 Adobe fonts
- 80 PostScript

Plus 79

Compugraphic fonts & scalable clip art

Plus: Also includes all the utilities, viewers and support files needed to make the most of this amazing CD Compatible with all Amigas - including CD32!

**The first
Amiga
magazine to
bring you a
useful CD!**



INDI

DIRECT

CALCULUS

Stores

OPTIONS

*ALL INDI PRODUCTS ARE DELIVERED FREE OF CHARGE

Buying Mail Order is convenient and the prices are great. But sometimes it is important to actually see the product and take it away the same day. That's where our new Options scheme comes in. INDI Mail Order or a visit to one of our Calculus Stores, the choice is yours. The same quality Service and with this Exclusive reader offer, Calculus will match any INDI Mail Order price on the Spot. Add No Deposit Credit and Nothing to pay for 6 Months and we believe that this is the most exciting offer any where.

ORDER ANY INDI ADVERTISED PRODUCT OVER £100,
USE IT FOR 6 MONTHS BEFORE YOU PAY A PENNY

Option 1
BUY TODAY FROM EITHER
INDI OR CALCULUS. PAY
BY CHEQUE OR CREDIT
CARD
TO OBTAIN INDI PRICES YOU MUST SHOW A COPY OF THIS ADVERT

Option 2
BUY TODAY FROM EITHER
INDI OR CALCULUS WITH
NOTHING TO PAY FOR 6
MONTHS THEN CHOOSE TO
PAY OVER 6 TO 36 MONTHS.

INSTANT CREDIT AVAILABLE FROM
NEARLY 100 OFFICES NATIONWIDE

CREDIT CARDS



EXPRESS CHEQUE CLEARANCE

Simply write your cheque guarantee card number, name and address on the back of your cheque and we will normally be able to dispatch your order the day that we receive your cheque. Cheques, received without a cheque guarantee card number, will normally clear within a maximum 7 working days.

CUSTOMER CARE

The substantial volume of sales calls coming into our office has resulted in delays in the crucial area of customer care. To ensure that all customer queries are handled speedily and efficiently a new customer care department has been established. Our new department will be happy to assist you on their new number
Mon-Fri 10am-4pm 01543 419921

01543 419999

*9am - 6pm Monday to Friday 9.30am - 3.30 Saturday

* APR 29.8% Subject to Status.

FREE
Zappo or
Zappo Store
with purchase

ZAPPO *Smart* *plus*



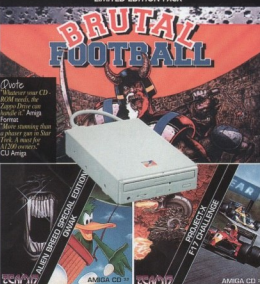
Plugs into the PCMCIA Slot of the Amiga 600 & 1200 and is ready to go. Excellent build quality at an amazing price.
12 Months Warranty

130Mb---	£149.99
214Mb---	£189.99
270Mb---	£204.99
540Mb---	£259.99

DRIVES HAVE COME DOWN SO INDI PASS THE ADVANTAGE ONTO YOU

WITH THE PRICE OF CD ROM'S GOING DOWN IN PRICE INDI AND
CALCULUS CAN PASS THE BENEFIT DOWN TO YOU.

ZAPPO AMIGA 1200 CD ROM DRIVE LIMITED EDITION PACK



We understand that some non standard Accelerator boards may cause problems when using the Zappo CD ROM. Please confirm compatibility at the time of order as Indirect cannot accept responsibility for this problem

GREAT GAME
99 WORTH £50.00

* **Brutal Football**
"It's a first rate... it'll keep you in stitches for months" 94%

* **Alien Breed**
"A supreme challenge to new and old players alike" 90%

* **Qwak**
"The most playable Amiga game ever" 92%

* **Project - X**
"Incredible graphics, awesome speech... a true classic" 92%

* **F17 Challenge**
"Fast moving graphics, excellent gameplay... a game to be reckoned with" 94%

(Win 24th House Award)
PLUS a superb multi button, joypad worth £14.99
ZAPPO CD ROM DRIVE
Limited Edition

£199.99
SPECIAL PRICE

2.5" INTERNAL HARD DRIVE PRICES

The massive reduction in hard drive prices has forced us to reconsider our position and stock 2.5" drives

170 Mb	£159.99
260 Mb	£252.50
420 Mb	£269.99
540 Mb	£402.50

Complete with installation disk and lead

AMIGA 600 HARD DRIVE
30 Mb £49.99
Includes Trivial Pursuits, Myst, Rome A.D. 92, Epic

MICROVITEC MONITORS



This superb monitor offers a high quality 0.28 dot pitch and low radiation total MPR-II compliance. Complete with external Stereo Speakers and includes all leads - this is the monitor that we have all been waiting for.

£279.99

SHARP MONITOR / TV



The superb Sharp 14" Monitor / TV provides a real alternative to a Commodore Monitor with full function remote control 39 channel electronic auto search tuning digital on screen display and 1.5 watt Mpo audio output. All you need to know is the low low price. The Sharp Monitor / TV is the product for you complete with scart socket and connectivity cable and including 12 months Warranty.

£164.99

* A copy of this advert to is required to obtain our Mail Order Prices at Calculus Stores. Prices valid until 19th May 1995 Some Calculus Stores may not carry the full Indirect Range. Please to avoid disappointment.

* Insured deliveries by secure are delivered Free of Charge Monday to Friday. A surcharge of £10 is required on a Saturday (UK Mainland)

Prices are subject to change without prior notice

MAIL ORDER SALES HOTLINE 0543 419999

All trademarks are acknowledged. E&OE APR 29.8%



INDI DIRECT CALCULUS

Options

**INCLUDES
WORDWORTH
The Ultimate Word
Processing Package**

***ALL INDI PRODUCTS ARE DELIVERED FREE OF CHARGE**

NEW Panasonic KX-P2135

A 24 Pin Quiet colour printer, designed for those who need low cost, high quality output, giving all your documents and presentations eye catching colour. The NEW KX-P2135 incorporates a 20 page built in sheetfeeder, a fast belt push tractor feed to facilitate easy loading together with a noise level of only 46.5dBA (45.5dBA in super quiet mode).

- Quiet Printing 46.5 dBA and 7 letter quality
- Multiple font capabilities including 3 draft and 7 letter quality
- Tractor feed
- 2 paper paths
- 250 cps Draft Micron, 83 cps LQ
- 1 Year Warranty

FREEPHONE
0800 444220
for your FREE Amiga
Driver Disk



£164.99

Please note all Panasonic, Dot - Matrix printers are supplied with a tractor feed, FREE of Charge. Other Companies can charge approximately £50 extra for this feature.

NEC Printer

NEC PINWRITER P2Q

New to the Calculus Printer Range the NEC P2Q takes 24 pin dot matrix technology to its limit offering a real cost effective solution to the home or small office user * Flexible paper handling, bottom feed continuous, multipart cut sheet and envelopes * 148 print buffer * 76 CPS in letter mode and a superfast 192 CPS in draft mode * < 48dBA acoustic noise * Paper Parking * Manual Feed slot



£124.99

Canon PRINTERS

NEW Canon BJ-200ex

The NEW BJ-200ex has print speeds of over 33ppm, it incorporates an in built 'smoothing' function giving effective resolution of upto 720 x 360 dpi. At the faster speeds of 294cps HQ, and 248cps HS. The BJ-200ex still maintains the whisper quiet operation of 42 dBA, and of course the built in 100 x A4 automatic sheetfeeder.

Canon BJ-C-4000

* Colour desktop bubble jet with Separate CMYK ink tanks * 360 DPI, 720 with black only * 248 cps HS, 175 CPS HQ (BC-200 opt.) 146 CPS HS, 346HQ * Prints on media * Built in Sheetfeeder * Windows compatible * 8 standard typesets * 1 year Canon Warranty **£351.33**

Canon BJ-C-600

* Windows compatible * Fast print speeds for colour and black * Separate CMYK ink tanks * 8 resident typesets, 20 truetype fonts * Prints on various media * 1 Year Warranty **£413.60**

ROMBO

MEGANIX. Low cost, hi spec digital effects cartridge plugs into the printer port of the Amiga. Allows stereo sampling from almost any rival source. **PRICE £29.49**

TAKE TWO.

Animation package is a must for computer artists and enthusiasts of all ages. As used in Rolf Harris Cartoon Club. **PRICE £37.49**

VIDI AMIGA 12.

The ultimate low cost colour digitiser for the Amiga, "the best value full colour digitiser on the market" - Amiga Format. **PRICE £72.49**

ROMBO VIDI AMIGA 12 (RT)

Based on the best selling Vidi Amiga 12. This all new version offers real time colour capture from any video source. Full AGA chipset support as standard for all A1200/A4000. **PRICE £132.49**

ROMBO VIDI AMIGA 24 (RT)

Plus FREE Power Supply For the more serious user, this 24 bit version will again capture from any video source with true photo realistic images! A staggering 16.8 million colours can be utilised with incredible results. Full AGA chipset support. **PRICE £222.49**

SCOOP PURCHASE

Top Quality 100% Error Free

BULK DISKS

50 Disk Pack £15.49 Disk Labels 500 Pack £7.49

PRINTER ACCESSORIES

- 1) **Printer Dust Cover** Tailored dust cover for the Panasonic KX-2135 printer **INDI PRICE £11.49**
- 2) **Paper Pack** 500 sheets of quality A4 paper **INDI PRICE £12.49**
- 3) **Continuous Paper** 2000 sheets 1 part listing paper **INDI PRICE £22.49**
- 4) **Parallel Printer Cable** Used for connecting Amiga to Panasonic printers **INDI PRICE £11.49**
- 5) **Panasonic Colour Ribbon** - Colour ribbon for KX-P2123 **INDI PRICE £15.49**
- 6) **Panasonic Black Ribbon** Black ribbon for KX-P2123 **INDI PRICE £9.49**

MBX 1230 XA 50 Mhz 50 Mhz 68030 & MMU

- * Allows you A1200 to run 1.5 times faster than a A4000 / 030
- * Easy trap door installation (No soldering required) * Fast RAM upgradeable to 128 Mb (72 pin 32 bit) * On board battery backed clock
- * Does not interfere with PCMCIA port

50mhz £204.99 50mhz +50mhz FPU £234.99

AMIGA REPLACEMENT FLOPPY DRIVES

Amiga 500 / 500+ **£39.99**
Amiga 600 / 1200

Commodore 601

Trapdoor upgrade for the Amiga 600, 512K **£22.49**

Do You Own An AMIGA A1500 / A2000 / A3000 Or A4000

2091 SCSI CONTROLLER CARD

- * 6.6 Roms for use in the A4000 * Up to 2Tb of 16 bit dpts can be fitted
- * Any 3.5" SCSI Hard Drive can be fitted
- * Install software for SCSI Hard Drive Any other standard SCSI device can be added
- * Tape streamer * SCSI Scanner
- * External Hard Drive

£69.99

256K DRAM memory **£4.49**

SX-1

CD32 EXPANSION MODULE

The Amazing SX-1 Module slips into the back of your Amiga CD32 and a whole world of expansion opens up for you. Add a keyboard, floppy drive or even to a superfast hard drive. Instantly your CD32 is no more console, it's a real computer.

FREE FRED FISH SX-1 EXPANSION MODULE

£199.99

EXPANSION OPTIONS

BLACK KEYBOARD £42.99

ZAPPO FLOPPY DRIVE £49.09

SX-1 Compatible

SX-1 SUPER BUNDLE

* SX-1 Expansion Module

* Black Keyboard

* Zappo Floppy Drive

£264.99



CALCULUS STORES NATIONWIDE

SOUTH		TAMWORTH		CALCULUS	
AYLESBURY	31 Friar Square Centre Tel: 01494 436011	WALSALL	48 Park Mill Saddle Centre Tel: 01922 311922	 OUR CALCULUS STORE IN MAIDENHEAD	
MAIDENHEAD	48 Park Mill Saddle Centre Tel: 01628 770058	NORTH ALTRINCHAM	11 South Park Freemans Centre Tel: 01602 301302		
Hemel Hempstead	11 Princes Mead Shopping Centre Tel: 01525 777722	LEEDS	11 Bond Street Centre Tel: 0113 265402		
MIDLANDS BURTON-UPON-TRENT	The Octagon Centre, New Street Tel: 01283 517505	NORTHWICH	15 Victoria Street Tel: 01606 47803		
COVENTRY	24 Orchard Walk Shopping Centre Tel: 01203 230778	SUTTON COLDFIELD	26 The Parade Tel: 0121 3534839	PRESTON	St George's Centre Tel: 01772 259494
WARRINGTON	52 The Mall Golden Square Tel: 01925 157053	WYKES	18 The Galleries Shopping Centre Tel: 01947 323913	SHEFFIELD	67 The Moor Sheffield Tel: 0114 2721192

INDI DIRECT MAIL, incorporation of Trade Marks and Copyrights All prices are correct at time of going to press, £ & P. Some Calculus Stores may not carry a full range of Ind products. Please to avoid disappointment.

MAIL ORDER SALES HOTLINE 01543 419999

* Insured deliveries by courier are delivered Free of Charge Monday to Friday. A surcharge of £10 is required on a Saturday (Jn Plainhead)



CONTENTS

SYSTEM

The essential guide to Amiga gaming

System On-line 100

Amiga games aplenty. Tina Hackett brings you the latest exciting news from the Amiga games scene

Beat the System 104

Plenty of hints and tips for Gremlin's excellent beat-'em-up, Shadow Fighter

Preview: Brutal Paws of Fury 106

On, two, three, "aah." See this non-violent and rather cute beat-'em-up from Gametek

Preview: Baldies 122

Gareth Lofthouse takes a look at Gametek's latest strategy game featuring the folkically challenged

Preview: Lost Eden 124

Take a sneak preview at Cryo's stunning adventure coming to a CD32 near you soon

System Essentials 126

System takes a look at the latest re-releases. This month, Guardian for the A1200 and Theme Park for the CD32

Game Reviews

TFX 108

It's Cricket 112

Ruffian 114

Whizz 115

Super Skidmarks 2 116

Championship Manager Italia 120

Angst 121



Flair Software pull out of the hat a different kind of platformer - page 115



REVIEWS

Easy Ledgers 35

Let your Amiga take the pain out of balancing the books

Squirrel 36

The standalone SCSI II interface that makes an A1200 a very serious machine



DPaint 5 40

We lead the new look old soldier in to fray as the paint package battle heats up

3D Digitiser 54

Stevie Kennedy gets interactive with the latest in modelling technology

Cross Mac 69

Read, write and format Mac hard drives and floppies with the best in cross-compatibility

FEATURES

Home Office Roundup 26

Would-be tycoons take note, as we put the best to the test

Internet Add-ons 62

Frank Nord continues the Internet crusade with details for the Internet newbie, including how to download all the files you need to get online with Demon Internet Services



Software Repairs 72

Our very own DOS doctor takes the sting out of Amiga maintenance

Assembler 91

The allicionado of assembler does what nobody does better

Pro Flying Logos 79

Video tuition from the head honcho at Amblin Imaging. A must for Waveriders

Studio 16 Pro 79

The art of noise. A video guide to professional AV editing on the Amiga

CanDo 3 80

The authoring system comes of age. Ben Vost test the latest incarnation of CanDo

Twist 2 84

Yet another Amiga database, but this could very be the best in the business

Aminet 1 89

Quite simply the best serious CD combo ever seen on the Amiga

Cobra 275 Mhz 97

Faster, cheaper and infinitely more flexible. The Raptor has met its match



Next issue
on sale
4 May

COVER STORY



THE COVERDISKS Page 20

Multimedia Toolkit CD

Well and truly stuffed. That's just one of the descriptions about our amazing CD give-away which features 547 Mb of files for you to use with your Amiga.



SmartyPaints

A versatile and feature-packed art program for all ages which can also be easily configured for use as an edutainment tool for infants



Cover Image:
Kevin Stenning
Contact: 01843 292150
Available for freelance modelling

World Exclusive

The first look at
NewTek's latest
version of lightwave.
No other Amiga
magazine gives you
the best, first

See page 30

REGULARS

News

9

WTS get what they deserve while C=UK fight off a new contender

USA News

14

The closure of Amiga World. Denny Atkin views what went wrong

Weird Science Offer

24

Make our CD special even better with this great offer

SmartyPaints Offer

44

Our usual disk offer still stands this month. Don't lose out

ESP

45

The place to vent all your anger and praise - it's the letters page

PUBLIC SECTOR

50



The impresario
of PD sorts the
best from the
rest

ACAS

59

Techy problems put to the sword courtesy of Daz the destroyer

137

ARenn

Paul Overaa shows you a naming system to remember your files by

141

Video

No more rough edges. Gary Whiteley proves what anti-aliasing can do

143

Music

Paul Overaa's ever-promised review of Steinberg's Pro 24 sequencer

139

Comms

Phil South reviews the movies before they're out over here

135

Amos

It's the turn of a reader who reveals a couple of his useful programs

145

Publishing

Paper folding on an Amiga? Phil South shows you what he means

AMIGA GUIDE

Amiga Medical 129

Frank Nords guide to Amiga maintenance and efficiency

Amiga 3D 133

Stevie Kennedy makes realistic 3D models without a digitiser



Subscriptions



Turn to page 76...

...for details of Amiga
Computing's subscription
offers this month

GameSmith

The Game Development System

Are you tired of those "BASIC" game development systems? Ready for one that you can really sink your teeth into? Fast Parallax scrolling? No problem. Dual Playfields? A piece of cake! Multiple viewpoints with multiple animated objects on independent paths with multiply defined background and object collision detection??? Child's play!



Creating fast parallax scrolling landscapes is easy with the GameSmith system

Professional game development is made easy with the new GameSmith Development System. Over 3 years in the making, GDS gives you the low level power to create the masterpiece of your dreams in a single, comprehensive, easy to use development system. Build up your animations graphically in the interactive character animator CITAS and then output in C or Assembler source code.

- ✓ Customise all aspects of the object, including sequence, placement, speed, display method, priority & object collision detection parameters.
- ✓ Save complex animation sequences out as a single object addressable by the system!
- ✓ Optional custom encryption to protect your work.
- ✓ Fully supports AGA chipset and mode promotion.
- ✓ Hardware level smooth scrolling on a per viewpoint basis. Fast Parallax scrolling! Independently scroll in dual playfield mode.
- ✓ Custom object lists. Custom hardware sprites.
- ✓ Over 350 pages of documentation fully describing the system, utility programs, and over 130 library functions.
- ✓ Detailed manual tutorial walks you through the creation of an actual game that exercises all the major components of the system!
- ✓ Extra disks full of commented example source code.
- ✓ Complete animation system with transparent double buffering and prioritised object display.
- ✓ Define custom object-to-object and object-to-background collision detection and response.
- ✓ Automatic placement and animation of multi sequenced animated objects with a single call.
- ✓ Chain objects. Animating one object animates them all!
- ✓ Automatic virtual space and virtual object handling.
- ✓ Dynamic animation control. Modify on the fly!
- ✓ Complete audio system to make audio playback easy! Automatic load and play of IFF samples. Interrupt driven background sound replay.
- ✓ Easy-to-use, customisable joystick polling routines.
- ✓ Very fast and efficient ELEM picture loader.

The GameSmith Development System fully supports and is compatible with all Amigas including AGA. A C Compiler or 68000 Assembler is required. From shoot 'em ups to graphic adventures, from intergalactic conquest to strategic simulation, the GameSmith Development System is the perfect solution.

GameSmith now comes complete with *Daypac Lite* and a reduced version of *Dice C* so you can start programming straight out of the box.

Don't let the limitations of yesterday keep you from forging the masterpiece of tomorrow!

Termite

Telecommunications for your Amiga



Afraid of becoming a hedgehog on the Information Super Highway? Don't worry! Termite is so easy to use that even a first time telecommunicator will feel at home. Yet it has all of the power and flexibility to satisfy the most seasoned modern warrior!

Termite is designed to take full advantage of all of the newest features of Workbench 2.11 and beyond. It is 100% Amiga Style Guide compliant and provides you with all of the modern user interface features to really enjoy playing in the highway!

- ✓ Speeds from 300 to 115,200 bps
- ✓ Flexible phone book with unique configurations for each number.
- ✓ Supports Amiga standard XPR libraries allowing you to choose from a wide variety of transfer protocols such as Xmodem, Ymodem, Zmodem, Kermit, and more.
- ✓ Supports Amiga standard XEM external terminal emulations in addition to the built in ANSI and VT-102 terminal emulations.
- ✓ Configurable review buffer with cut and paste editing between any window.
- ✓ The unique script recording function watches your actions and writes complex scripts for you!
- ✓ Flexibility! Termite is so completely configurable that everyone can make it their own dream terminal program!
- ✓ User configurable floating Button Bar! Assign any program function, macro, or AReXX script to any button. Want your own icons? Just assign any IFF image to the button!
- ✓ Automatic call logging. Where you were, for how long, and how much you spent, all saved for you.
- ✓ Configurable text macros.
- ✓ Support for multiple line BBSs.
- ✓ Fully AReXX programmable for complete automation. Assign your scripts to the button bar or install them as a menu option.
- ✓ Multi-tasking chat window. Great for those real time conferences.
- ✓ Completely font and screen sensitive. You choose the font and screen mode and Termite automatically adjusts everything.



the Termite Button Bar

Termite comes complete with a comprehensive manual explaining the operation of every program function including a quickstart tutorial, AReXX programming examples and a telecommunications glossary. We have also set up the button bar with useful, instant access to CIX and other popular BBSs.

Termite (RRP £39.95 inc) and GameSmith (RRP £99.95 inc) should be available now from all good Amiga stores. In case of difficulty you can order directly from HiSoft...

HiSoft

High Quality Software

The Old School, Greenfield,
Bedford MK45 5DE UK
Tel: +44 (0) 1525 718181
Fax: +44 (0) 1525 713716



NEWS

By ADAM PHILLIPS

Mail order company raided by fraud squad

Punters left licking their wounds after dealing with the now notorious Luton-based WTS Electronics mail order company can take comfort in the raid carried out on the firm by the Bedfordshire fraud squad on 1 March. While the main target was WTS, Total Computer Supplies, based in Hemel Hempstead, were also raided because the police believe the two firms may be connected.

David Pleece, managing director of WTS and his co-director, Mark Barnby, were arrested and company documents seized after a staggering 800 complaints were made to various governing bodies such as the trading standards council and the Advertising Standards Authority.

Thirty Bedfordshire and Luton fraud squad officers, both plain clothes and uniformed, swooped on the suspects at dawn. Also arrested were Sean Saint, company secretary of Total Computers, and the

director, Patricia Dykes. DC Ron Lack, one of the key players in the operation, told Amiga Computing that the four individuals have been released on bail as he and his team continue their lengthy breakdown of the thousands of documents the case has thrown up. The department has been snowed under with phone calls from angry customers of WTS and he expects this to continue.

"People who ordered at Christmas usually phone a company up afterwards if they don't receive their goods. They're fobbed off with some excuse and then told they'll receive it in a month's time. This doesn't happen and come mid-March, beginning of April, people start to take serious action such as hiring a solicitor" commented Lack.

The bad news for punters eager for a speedy conclusion is that they'll have to be patient for the time being while police continue their extensive investigations.



WTS Electronics: Major police raid carried out after 800 complaints received

Dark horse

When the German company Escom appeared for the first time last year, not many people outside of its home country had heard of them. With over 200 retail stores in Germany and central Europe, the firm has only recently bought retail outlets in England. To give an idea of the size and success of the company, Escom is the second largest computer manufacturer in Germany and recently, two new shareholders have come on board, each allegedly worth 80 billion and 15 billion German marks respectively, both having major plans to move into interactive media and cable television.

With this kind of clout and an ex-Commodore chief in its management, Escom are hopefully in a position to offer Amiga users a bright future if their buyout is successful.

The next generation of Amigas?

Interesting news has surfaced about an Amiga-compatible graphics and video workstation called the DraCo from German company Macrosystem GmbH. The makers have side-stepped the Amiga custom chips by replacing them with powerful software and hardware combinations.

Macrosystem believe that any

software compatible with the Amiga will work on the DraCo such as Lightwave, ImageFX and AdPro. Also, hardware that doesn't rely on the Amiga custom chipset should work fine.

The first machine using this technology is planned to be unveiled at the NAB show in Las Vegas on the 9 April, with the

product going on sale in early summer. It'll come in a full-size tower with a minimum of 4Mb expandable to 128Mb of on-board 72-pin SIMMs. A parallel port and triple speed CD-ROM drive will also be included. After this initial machine, a variety of different speeded models are also being produced to suit particular user's needs.

Brush with disaster

The Commodore buyout has been at the centre of another shock with Escom, a German company that has over 200 chainstores spread throughout Europe, apparently having their bid accepted by the liquidator, Franklyn Wilson. This, as usual, means that the bidding process should get underway in the next four to six weeks.

The revelation came about after Escom bought a key Commodore trademark from the bankruptcy trustee Bernard Hembach of the now defunct German subsidiary. This sale went through on 16 February despite the US bankruptcy court trying to block the sale with a temporary restraining order.

Allegedly, Escom's original intention was to use the trademark to produce clone machines to fill the hungry Amiga market, and that they had no interest in the other facets of the defunct company.

The reaction in the Bahamas and America was one of fury as the liquidators there said that the German liquidator had no right to receive the \$1.4 million paid for the trademark because it belongs to CEL, not simply the subsidiary. The US judge wanted to know why Hembach shouldn't be held in civil contempt and a situation was created that could have derailed the whole proceedings for several weeks.

Hembach has argued that the American court has no jurisdiction in the matter, saying the logo was owned by the German subsidiary, not the parent company.

Allegedly, David Pleasance, managing director and head of the MBO at C=UK, threatened to pull out if Commodore's trademark was not included in the buyout.

While Pleasance wants to rename the company, they, like Escom, are rumoured to have intentions for licensing Amiga technology to third-party developers, but without the trademark - this wouldn't be possible.

Fortunately, Escom has now backed down and agreed to buy the remnants of Commodore from the Bahamian liquidators, with the promise of handing over the trademark if their bid should be topped by one of their competitors.

At the moment the liquidators are in the process of arranging the day on which the bidding process will take place.



Combi-Centre workstation:
Features a slide-out tray for access
to CD32 loading bay

Taking your CD32 higher

For owners wanting to make the most out of their CD32 console, Premier Developments have released the Combi-Centre 'workstation' for serious multimedia users. Designed to allow the CD32, SX1 Expansion, monitor, keyboard, disk drive and other peripherals to sit on a special shelving unit, the workstation's unique feature is the sliding shelf which allows easy access to the CD32's loading bay.

Costing £49.99, phone John Germany on 01487 823684 for more details, or pay a visit to an Amiga specialist near you.

Amiga under the spotlight

After the success of last year's show, Spotlight '95 returns again between the 10 and 11 of June at the Hammersmith Novotel hotel. The exhibition is aimed at the more serious end user who, while interested in games, wants to get more out of their machine.

With the backing of our good selves at Amiga Computing, the show is also being sponsored by various manufacturers and distributors. The organisers, Gastelner Technology, are predicting a fourfold increase in size, with a wide variety of companies attending. These include Commodore UK, Power Computing, HiSoft, First Computer Centre, Meridian Software and more.

For further information on booking, give Priscilla Bell a call on 0181-345 6000.

New wide bay printer

Seikosha, makers of watches and printers, have announced the arrival of their latest addition to the dot matrix range, the MP-5450. Featuring a 9-pin print head and a facility for printing larger than usual sheets, the company claim that the printer is capable of 300 characters per second and can print in colour if required.

The price tag attached to the new model is a rather substantial £349. While prices will drop once in the shops, we haven't seen such an expensive recommended retail price for a low-end machine in quite some time. Let's hope it's something really special.

The company is also releasing the Speedjet 360 Colour at a more reasonable cost of £279. Featuring a colour print head with 51 nozzles and the ability to print both landscape and portrait orientation, more details can be obtained from Seikosha on 01753 685873.

CompuServe heads for the Internet

Taking a major step closer to offering its users the Internet via their services, CompuServe have acquired SPRY for approximately \$100 million in the largest ever acquisition in the rapidly growing Internet industry. SPRY manufacture the number one selling Internet access product as 'Internet in a box'.

"This move is of tremendous importance to the industry and offers outstanding opportunities for CompuServe," said Maury Cox, CompuServe President and Chief Executive Officer. "It addresses three significant opportunities available to CompuServe: Internet

access from the CompuServe Information Service; the creation of future services on the Internet; and the ability to assist our corporate network customers in accessing the Internet. This acquisition turns us into the premier one-stop shop for Net access and services."

The main benefit being touted for the end user is the Internet Made Easy feature of SPRY's one-button installation of their Internet Mosaic software. Internet access will be offered from 140 countries with more than 420 points of presence for local dial-up connection.

NEWS

Internet begins trading

The First Bank of Internet, the FBOI for short, has announced the initiation of transaction processing services for the Internet electronic commerce. Purchases over the Internet can now be made without exposing personal credit card information.

Usually, Internet purchase procedures require personal credit card information that can be monitored by thousands of people all over the world. It has been known for users to attempt to either decode the credit card information or impersonate the customer in future transactions.

The new system uses the Automated Teller Machine card which has a cash limit prepaid by the customer. The FBOI say the system is safe because access to ATM funds without the possession of both the ATM card and the Personal Identification Number is not possible.

All transactions are handled by the bank itself with both customer and supplier going directly through it via the use of e-mail. The only downside is that the FBOI charges five per cent for every transaction, but if this system points the way towards a safer security on the information highway, perhaps it's a price worth paying.

A complete range of paper and film specifically designed to give a quality output from inkjet printers has been launched by Infotec Supplies. For anyone whose use one of the temperamental machines, they can be very picky about the paper they're printing onto.

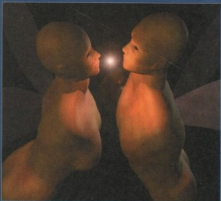
Bleeding text and images, paper jams and an assortment of other niggling details can often make a print out look as if it just popped out of a 9-pin dot matrix machine. Bob Milford, head of Infotec's Supplies division commented: "Many inkjet printer users have experienced serious problems by using paper not designed for inkjet printers. We have designed the Imagejet range solely for the inkjet market, even down to specific papers for specific machines, to ensure that these problems are eliminated."

There a variety of paper types in the range to suit the needs and wallet of users, and a technical line has been set up to aid buyers in making the right choice for their particular printer. For more information, contact Infotec UK on 0181-207 2700.

Art, darling, art

For those that have a little cash stored away for a rainy day and have an avid fascination with computer graphics, a trip to the Bit Movie '95 from the 13 to the 17 April could be of interest. Being held at Riccione in Italy, the festival covers art derived from the production of computer images, animations and musical compositions.

For more details, contact Carlo Mainardi on 39 541 643016.



Bit Movie '95: An example of the work being shown - True Love by Beny

Hollywood in Commodore buyout script shock

With all the twisting and turning of the dragged out Commodore situation, three major studios in Hollywood are offering substantial amounts of money to buy a script based on the bankruptcy proceedings for adaptation to the big screen. The unknown script writer, apparently a former MD of Commodore, is selling the rights for the story to the highest bidder.

Several stars are rumoured to be interested including Omar Sharif as corporate and bridge playing Medhi Ali, Warwick Davies as David Pleasance (famous for his role as lead Ewok in Return of the Jedi), Demi Moore as the cruel money-crazed creditor and Sharon Stone as the sun tanned liquidator with an attitude. Allegedly.

You can expect to see this potential Oscar grabber called *Delayed* come January... 1999.

Godsend for inkjet users



Inkjet-specific paper: Bleeding text may well become a thing of the past

News briefs

Stop the press

Wired? Connected? Hooked? If you've recently plugged in to the Internet then your first port of call has to be Amiga Computing's new home page packed with reviews, previews and news.

Reach us by tapping in this URL web address:

<http://www.demon.co.uk/amigacomp/>

Enjoy and make sure to send us your opinions and views on what you see and what you would like to see. Cybersurfs up dudes and dudettes!

Motion magic

For non-linear editors, DTV users and 3D artists, the US-born Motion Clips is a CD-ROM containing over 8,000 frames of royalty free stock footage. Consisting of 20 image sequences that can be used as backgrounds, textures, or reflection maps, these anims can be imported to a wide selection of programs such as Lightwave, Wavemaker, ImageFX, Hollywood FX, AdPro and more. Look out for our review in next month's Amiga Computing.

Unstoppable print machines

Printers seem to be the only peripheral that, like modems, never go out of fashion, with a constant influx of new models pumping into the showrooms. Now, Intergex Systems have unveiled their ColourJet Master, a thermal inkjet-based printer at a reasonable price of £249.

Offering 300 by 300 dpi in colour and 600 by 300 dpi in colour, the printer has a built-in 150 sheet feeder and a duty cycle of up to 2000 pages a month.

Envoy sequel

After the success of Envoy, the peer-to-peer networking software, its makers, Intangible Assets Manufacturing, have released the sequel, Envoy 2. Its new features include support of Amiga 2.04 DOS packet types, support for removable media, enhanced reliability and robust recovery, localisation, AmigaGuide documentation and more. For users of the original Envoy, upgrades are available, and anyone interested can call Amathers, IAM's UK distributors, on 0181-687 0040.

Swelling popularity

After Lightwave Pro magazine comes the arrival of the latest addition to Lightwave extras, Into The Light. This monthly newsletter has tutorials, new product releases, tips, tricks and business advice for professional animators. Subscription charges are \$25 for 12 issues and for more details, e-mail Jose Burgos on IntoLight@aol.com.

Aardman results

A few months ago, we featured those horrifically talented people at Aardman Animations in our humble pages. While there, we managed to scrounge three Wallace and Gromit T-shirts from Nick Park and co. and set a competition for you, the readers. The results are as follows: Jon Glendering, Brighton, Adrian Pang, London and Lucy Marr up in sunny Glasgow. Well done, and expect your prize any day soon.

now open late
night Wednesday
& Thursday
all 7.30pm

OPEN SUNDAY
11AM TO 4PM

FIRST COMPUTER CENTRE (LEEDS) Tel: 01132 319444

CD ROM Drives

PRIMA A1200/600
CD-ROM
DRIVES

CD-ROM drive, complete with heavy duty internal psu, (the PRIMA CD-ROM will not put a strain on your Amiga's psu). Allows up to 6 further SCSI devices to be attached. Full SCSI compatibility.

Complete with the highly rated PRIMA Shareware Vol. 1 CD valued at £11.99 and driver software.

The PRIMA CD-ROM drive comes in a range of speed versions

PRIMA CD-2X2 (Dual) £219.99

PRIMA CD-X3 (Triple) £245.99

PRIMA CD-X4 (Quad) £345.99

Internal SCSI CD ROM Drives

Toshiba 3601B X4 (quad) £269.99

Panasonic CR503B X2 (half) £132.99

SCSI Controllers

GVP A4008 SCSI-II card £124.99

Oktagon 2008 SCSI-II card £124.99

NEW Squirrel SCSI PCMCIA Interface

only £40.00 (when bought with drive, £159.99 separate)

HARD DRIVES

PRIMA A1200/600
External SCSI
Hard Drives

This new range of PRIMA SCSI external Hard Drive brings to the Amiga the capability of up to 8 GIG. of Hard Drive space. Using a standard SCSI interface, there's no need to go inside your Amiga or visit your warranty.

The PRIMA HD range comes in the following sizes:

PRIMA HD-350 (350MB) £259.99

PRIMA HD-450 (450MB) £305.99

PRIMA HD-700 (700MB) £379.99

PRIMA HD-1000 (1000MB) £544.99

PRIMA HD-1300 (1300MB) £899.99

PRIMA HD-2100 (2100MB) £1894.99

PRIMA HD-9100 (9100MB) £2659.99

www.firstcomputercentre.co.uk

2.5" Hard Drives

with A1200/600 install kit

inc. software, cables and full fitting instructions

60Mb £99.99 130Mb £149.99

80Mb £109.99 170Mb £179.99

350Mb £204.99

2.5" IDE Hard Drives

with A1200 installation kit

(We recommend 3.5" drives to be installed by fully qualified computer engineers)

260Mb £159.99 420Mb £179.99

540Mb £199.99 720Mb £260.99

1.0Gig/Mb £389.99

Full fitting service available, includes fully insured UK mainland pickup and delivery

only £30.00

3.5" Hard Drive upgrade kit to HD only £18.99

(Covers complete with cables, instructions & software)

STEREO/SPEAKER SYSTEMS

Aerospace Deluxe £47.99

Zyfi Stereo System £39.99

Zyfi Pro Stereo System £57.99

ROMBO PRODUCTS

VIDI 24 R/T £139.99

Real time colour digitising from any video source. Full A&S support. 13 VHS PSU for above included.

VIDI 24 R/T Pro £209.99

24 bit accurate real time digitising from any video source. Full A&S support. 13 VHS PSU for above included.

VIDI I2 A £59.99

Full support for A&S chipsets. Colour images captured in less than a second, more images in real time with any video source. Multitasking too. VHS & Hi-Fi.

TAKE 2 £35.99

Features include load and save from D. Paint animations and Megamix Master £26.99

8 bit, high spec, speaker. Special offers include advice that can be added at real time, fully multitasking & easy to use.

PRINTERS

All our printers are UK spec, come with ribbon/toner, printer drivers (if available), paper & cables!

Canon

Canon BJ10x £189.99

110 cpi/s speed, 360 DPI, Black/White, A5/F £49.99

New! Canon BJ200x £269.99

3 ppi/s speed, 720x360 DPI, 100 page sheet feeder.

New! Canon BJ4000 £345.99

4 ppi/s speed, 720x360 DPI, high quality colour.

Canon BJ5600 £434.99

CITIZEN

Citizen printers have a 2 year guarantee

ABC Colour printer £154.99

simple (as easy as ABC) to use 24 pin printer. Comes as standard with 50 sheet Auto sheet feeder.

Tractor feed optional at £14.99

only £139.99 if bought without the colour option

NEW! Project II colour £269.99

High quality Colour Ink jet, 3000PI, 180cpi/s.

Swift Auto Sheet feeder £79.99

EPSON

Epson LX300 £129.99

Parallel & Serial VHS Std., 240 cpi/s, Col. upgrade.

LQ150 colour £209.99

24 Pin Draft 24cpi/s, LQ79cpi

Sylex 800+ £239.99

Home Inkjet, 360 x 360 dpi, 100 sheet feeder.

Sylex colour £439.99

Colour Inkjet, up to 7200PI, 480 cpi/s, 3 print modes.

hp HEWLETT PACKARD

HP 320 Portable £234.99

HP 320 Auto sheet feeder £299.99

NEW! HP 540 mono £299.99

HP 320/540 colour upgrade £36.99

NEW! HP 660 colour £429.99

All Hewlett Packard printers come with a full 2 year warranty

Star

The new Star range of dot matrix printers are here

featuring a built in 55 auto sheet feeder

Star LC90 9 pin Col. £109.99

Star LC240C 24 pin Col. £144.99

Star LC240 24 pin Mono £125.99

Tractor Feed for the new range only £13.99

Star SJ144 Colour Thermal

Stunning affordable colour printer. 3PPM, 1600dpi, 1200x1200

only £239.99

LASER PRINTERS

Panasonic KXP4400 £354.99

4 PpM/s, 1200x1200 dpi, 1200x1200 dpi, 1200x1200 dpi

Old 4000x £359.99

4 PpM/s, 1200x1200 dpi, 1200x1200 dpi, 1200x1200 dpi

PRINTER CONSUMABLES

RIBBONS

Citizen Swift mono ribbon £1.99

Citizen Swift Colour ribbon £1.99

Star LC90 mono ribbon £2.49

Star LC180 mono £1.99

Star LC180 colour £1.99

Star LC240 mono £8.99

Star LC240 colour £11.99

Star LC240 24 pin Mono £125.99

Most other makes of ribbon available call

Reflex Supply for more ribbon prices

COVERS

Canon printer covers £5.99

Citizen printer covers £5.99

Hewlett Packard printer covers £5.99

Star printer covers £5.99

PAPEX, printer caps only when ordered with printer or purchased direct from the shop

Fullford (tractor feed) 500 sheets £4.99

Fullford (tractor feed) 1000 sheets £7.99

Fullford (tractor feed) 200 sheets £4.99

Single sheet 1000 sheets £8.99

Single sheet 2000 sheets £17.99

Delivery for 1000 sheets £8.99 when purchased without printer

NEW LOW PRICES

Think again if you are considering buying a modem from anywhere else. We are probably the largest supplier of modems for the Amiga, supported by a wealth of experience. Log into our free BBS modem list for technical and sales, available 24 hours a day.

Supra

SupraFAXmodem 288

NEW Super Fast V34! 28,800bps + 14,400bps

The best modem in its class! only £19.99

SupraFAXmodem 144LC

V.32 bis (14400 baud!)

Low cost version of the classic V288 Fax modem. Features as below but class 1 only and only L3D option

now only £91.99

SupraFAXmodem V.22bis

14400baud Includes V.22bis, V.22, V.23, V.24, V.25, V.26, V.27, V.28, V.29, V.30, V.31, V.32, V.33, V.34, V.35, V.36, V.37, V.38, V.39, V.40, V.41, V.42, V.43, V.44, V.45, V.46, V.47, V.48, V.49, V.50, V.51, V.52, V.53, V.54, V.55, V.56, V.57, V.58, V.59, V.60, V.61, V.62, V.63, V.64, V.65, V.66, V.67, V.68, V.69, V.70, V.71, V.72, V.73, V.74, V.75, V.76, V.77, V.78, V.79, V.80, V.81, V.82, V.83, V.84, V.85, V.86, V.87, V.88, V.89, V.90, V.91, V.92, V.93, V.94, V.95, V.96, V.97, V.98, V.99, V.100, V.101, V.102, V.103, V.104, V.105, V.106, V.107, V.108, V.109, V.110, V.111, V.112, V.113, V.114, V.115, V.116, V.117, V.118, V.119, V.120, V.121, V.122, V.123, V.124, V.125, V.126, V.127, V.128, V.129, V.130, V.131, V.132, V.133, V.134, V.135, V.136, V.137, V.138, V.139, V.140, V.141, V.142, V.143, V.144, V.145, V.146, V.147, V.148, V.149, V.150, V.151, V.152, V.153, V.154, V.155, V.156, V.157, V.158, V.159, V.160, V.161, V.162, V.163, V.164, V.165, V.166, V.167, V.168, V.169, V.170, V.171, V.172, V.173, V.174, V.175, V.176, V.177, V.178, V.179, V.180, V.181, V.182, V.183, V.184, V.185, V.186, V.187, V.188, V.189, V.190, V.191, V.192, V.193, V.194, V.195, V.196, V.197, V.198, V.199, V.200, V.201, V.202, V.203, V.204, V.205, V.206, V.207, V.208, V.209, V.210, V.211, V.212, V.213, V.214, V.215, V.216, V.217, V.218, V.219, V.220, V.221, V.222, V.223, V.224, V.225, V.226, V.227, V.228, V.229, V.230, V.231, V.232, V.233, V.234, V.235, V.236, V.237, V.238, V.239, V.240, V.241, V.242, V.243, V.244, V.245, V.246, V.247, V.248, V.249, V.250, V.251, V.252, V.253, V.254, V.255, V.256, V.257, V.258, V.259, V.260, V.261, V.262, V.263, V.264, V.265, V.266, V.267, V.268, V.269, V.270, V.271, V.272, V.273, V.274, V.275, V.276, V.277, V.278, V.279, V.280, V.281, V.282, V.283, V.284, V.285, V.286, V.287, V.288, V.289, V.290, V.291, V.292, V.293, V.294, V.295, V.296, V.297, V.298, V.299, V.300, V.301, V.302, V.303, V.304, V.305, V.306, V.307, V.308, V.309, V.310, V.311, V.312, V.313, V.314, V.315, V.316, V.317, V.318, V.319, V.320, V.321, V.322, V.323, V.324, V.325, V.326, V.327, V.328, V.329, V.330, V.331, V.332, V.333, V.334, V.335, V.336, V.337, V.338, V.339, V.340, V.341, V.342, V.343, V.344, V.345, V.346, V.347, V.348, V.349, V.350, V.351, V.352, V.353, V.354, V.355, V.356, V.357, V.358, V.359, V.360, V.361, V.362, V.363, V.364, V.365, V.366, V.367, V.368, V.369, V.370, V.371, V.372, V.373, V.374, V.375, V.376, V.377, V.378, V.379, V.380, V.381, V.382, V.383, V.384, V.385, V.386, V.387, V.388, V.389, V.390, V.391, V.392, V.393, V.394, V.395, V.396, V.397, V.398, V.399, V.400, V.401, V.402, V.403, V.404, V.405, V.406, V.407, V.408, V.409, V.410, V.411, V.412, V.413, V.414, V.415, V.416, V.417, V.418, V.419, V.420, V.421, V.422, V.423, V.424, V.425, V.426, V.427, V.428, V.429, V.430, V.431, V.432, V.433, V.434, V.435, V.436, V.437, V.438, V.439, V.440, V.441, V.442, V.443, V.444, V.445, V.446, V.447, V.448, V.449, V.450, V.451, V.452, V.453, V.454, V.455, V.456, V.457, V.458, V.459, V.460, V.461, V.462, V.463, V.464, V.465, V.466, V.467, V.468, V.469, V.470, V.471, V.472, V.473, V.474, V.475, V.476, V.477, V.478, V.479, V.480, V.481, V.482, V.483, V.484, V.485, V.486, V.487, V.488, V.489, V.490, V.491, V.492, V.493, V.494, V.495, V.496, V.497, V.498, V.499, V.500, V.501, V.502, V.503, V.504, V.505, V.506, V.507, V.508, V.509, V.510, V.511, V.512, V.513, V.514, V.515, V.516, V.517, V.518, V.519, V.520, V.521, V.522, V.523, V.524, V.525, V.526, V.527, V.528, V.529, V.530, V.531, V.532, V.533, V.534, V.535, V.536, V.537, V.538, V.539, V.540, V.541, V.542, V.543, V.544, V.545, V.546, V.547, V.548, V.549, V.550, V.551, V.552, V.553, V.554, V.555, V.556, V.557, V.558, V.559, V.560, V.561, V.562, V.563, V.564, V.565, V.566, V.567, V.568, V.569, V.570, V.571, V.572, V.573, V.574, V.575, V.576, V.577, V.578, V.579, V.580, V.581, V.582, V.583, V.584, V.585, V.586, V.587, V.588, V.589, V.590, V.591, V.592, V.593, V.594, V.595, V.596, V.597, V.598, V.599, V.600, V.601, V.602, V.603, V.604, V.605, V.606, V.607, V.608, V.609, V.610, V.611, V.612, V.613, V.614, V.615, V.616, V.617, V.618, V.619, V.620, V.621, V.622, V.623, V.624, V.625, V.626, V.627, V.628, V.629, V.630, V.631, V.632, V.633, V.634, V.635, V.636, V.637, V.638, V.639, V.640, V.641, V.642, V.643, V.644, V.645, V.646, V.647, V.648, V.649, V.650, V.651, V.652, V.653, V.654, V.655, V.656, V.657, V.658, V.659, V.660, V.661, V.662, V.663, V.664, V.665, V.666, V.667, V.668, V.669, V.670, V.671, V.672, V.673, V.674, V.675, V.676, V.677, V.678, V.679, V.680, V.681, V.682, V.683, V.684, V.685, V.686, V.687, V.688, V.689, V.690, V.691, V.692, V.693, V.694, V.695, V.696, V.697, V.698, V.699, V.700, V.701, V.702, V.703, V.704, V.705, V.706, V.707, V.708, V.709, V.710, V.711, V.712, V.713, V.714, V.715, V.716, V.717, V.718, V.719, V.720, V.721, V.722, V.723, V.724, V.725, V.726, V.727, V.728, V.729, V.730, V.731, V.732, V.733, V.734, V.735, V.736, V.737, V.738, V.739, V.740, V.741, V.742, V.743, V.744, V.745, V.746, V.747, V.748, V.749, V.750, V.751, V.752, V.753, V.754, V.755, V.756, V.757, V.758, V.759, V.760, V.761, V.762, V.763, V.764, V.765, V.766, V.767, V.768, V.769, V.770, V.771, V.772, V.773, V.774, V.775, V.776, V.777, V.778, V.779, V.780, V.781, V.782, V.783, V.784, V.785, V.786, V.787, V.788, V.789, V.790, V.791, V.792, V.793, V.794, V.795, V.796, V.797, V.798, V.799, V.800, V.801, V.802, V.803, V.804, V.805, V.806, V.807, V.808, V.809, V.810, V.811, V.812, V.813, V.814, V.815, V.816

PRIMA A500 & A600 RAM

Trap Door Modules

A500 512k RAM (no clock)

£19.99

A500 Plus 1 Mb RAM

£34.99

A600 1 Mb RAM (with clock)

£39.99

MEMORY MODULES

1 Mb 72 pin SIMM £39.99

2 Mb 72 pin SIMM £95.99

4 Mb 72 pin SIMM £145.99

8 Mb 72 pin SIMM £269.99

16 Mb 72 pin SIMM £409.99

4 Mb 30 pin SIMM £24.99

4 Mb 30 pin SIMM £124.99

256Kx4 DRAM (DILs) (each) £5.99

1Kx4 DRAMS (DILs) £39.99

256Kx4 ZIPPS (each) £5.99

1Kx4 ZIPPS (121Mb) £32.99

Part exchange available on your old memory call for best pricing.

CUSTOM CHIPS

Kickstart 1.3 £23.99

Kickstart 2.04 £30.99

Kickstart 2.05 (for use in A600) £30.99

Fatter Agnes 8372A £26.99

Super Denise £18.99

6571-0326 Keyboard controller £13.99

CIA 8520A I/O controller £10.99

68882 Copro 25 PLLC £34.99

68882 Copro 33 PLLC £44.99

68882 Copro 40 PLLC £79.99

68882 Copro 40 PGA £89.99

68882 Copro 50 PGA £99.99

NEW PRODUCTS

Prima SCSI enclosures

Suitable for external SCSI devices to be connected to suitable SCSI interface eg. Squirrel, GVP, Oktagon etc.

Single drive enclosure £69.99

Double drive enclosure £89.99

Quad drive enclosure £139.99

All enclosures have built in SCSI ID selector, low noise cooling fan and shielded heavy duty internal PCB. Enclosures can be delay ordered.

100% RATED!



Personal Paint 4 now only £3.99 when purchased with a Tabby!

AMIGA COMPUTING
AUGUST 94
The amazing new graphics tablet for the Amiga developed with the help of First Computers. 80% rated in 'ST' format January issue. Requires 1.04 MB or above
only £59.99

SCANNERS

Alfa Data Alfa Scan only £119.99

hand held scanner up to 800 Dpi

Alfa Data Alfa Scan 256 only £119.99

hand held scanner with up to 800 Dpi and 256 grey scales

Alfa Data Alfa Colour Scan only £239.99

180 scanner with 256 colours for the collection

Just add £20.00 for OCR software on all Alfa Scanners (normally £39.99)

Power Scanner V4 £119.99

With the latest optical fibre for longer & sharper grey scale performance

Flexible scanned image display - magnification, pan, Clean up, rotate, etc.

Colour version only £249.99

EPSON GT6500 Colour Flatbed

NEW LOW PRICE! £499.99

Phone for information pack.

Art Department Pro Scanner S/W only £99.99

compatible with Epson GT6500 & GT6000.

MICE & TRACKBALLS

Alfa Data Mega Mouse

90% rating, 400 Dpi

only £13.99

Zydec Trackball only £29.99

Alfa Data Crystal Trackball

only £34.99

DISK DRIVES

AMITEC 1 mb 3.5" drive

Features Anti Click, Anti Virus, Spin Mech, 3 year warranty

only £54.99

NEW! Power High Density drive

2.04 or above only £64.99

Cumans 3.5" Ld. offer only £49.99

1 meg external drive. The best name in disk drives

A500/1200 internal drive £39.99

A600 internal drive £39.99

A4000 internal HD drive £99.99

GENLOCKS

hama ON DEMO NOW!

The Professional answer

hama 292 £279.99

S-Video, and composite compatible

hama 290 £679.99

S-Video, and composite mixing, plus for editors

hama A-CUT Video Editor £185.99

Roggen Plus only £164.99

Includes dual connector for overlay and telecine effects, comes with 800 lines. Check for compatibility

Rendale 8802 Film only £164.99

New Rendale 9402only £299.99

Features S-VHS, tape Amiga graphics in and out, cross fade between Amiga graphics and video

Roggen Rockey only £164.99

For creating special effects in video production with graphics.

MONITORS

All our monitors are UK spec. All monitors come complete with a free Amiga lead!

NEW! Philips 8833 MK2

This famous Storos, colour monitor is back. Similar spec to the old Comtronix 1884C.

only £239.99

Titl and Standl only £29.99

If you purchase with monitor

Microwite Autocscan I438

28 dpi, 1578KHz, all Amiga modes, AGA compo audio, titl & standl

now only £295.99

only £1200 cable £6.99 extra

AKF 52 Multisync

only £229.99

add £6.99 for adaptor if using with A1200

ACCELERATORS

VIPER-II 68030 Series

68030 accelerator, clock at 28MHz

expandable to 128 MB 32 Bit RAM

prices) Optional SCSI adaptor.

Viper 28 EC £114.99

Viper 28 MMU £134.99

Viper 33 MMU £179.99

Part exchange available on your old memory call for best pricing.

SUPRA 28

for the A500/A500+ & A1500/2000

28 MHz, uses A500/A500+ side port

only £172.99!

PRIMA ROM SHARERS

The high quality ROM sharer features a built-in video connection so that it can be used as a video monitor within your Amiga PC suite. Full replacement warranty

now only £17.99 or £24.99

for keyboard/switchable version

MISCELLANEOUS

Real Time A1200 internal disk module only £75.99

Mouse/joystick automatic port switcher **only £9.99**

Amiga A500/400 1000 Power Supply £34.99

Amiga 500/1000 Plus keyboard £45.99

Amiga 500 Plus Motherboard £129.99

Amiga 500 Plus Case £129.99

QUALITY HOUSE MATS £2.99

10 CAPACITY DISK BOX £0.99

30 CAP LOCKABLE DISK BOX £12.99

30 CAP LOCKABLE DISK BOX £12.99

100 CAP STACKABLE BANK BOX £44.99

100 CAP STACKABLE POROS BOX £38.99

*All £38 drive if parking just one Power or Base box. Normal delivery plus postage with other product or when buying 2 or more.

AMIGA 4000 DUST COVER £2.99

AMIGA 1200 DUST COVER £2.99

14" MONITOR DUSTCOVER £5.99

NEW! Interchangeable Covers £14.95

AMIGA TO SCART CABLES £2.99

STD 1.8 METRE AMIGA PRINTER LEAD £2.99

MODEM AND NULL MODEM CABLES £2.99

AMIGA CONTROL STATIONS £2.99

A500 or 1200 VERSION £2.99

A600 VERSION £2.99

DISKS

All disks are 100% error free guaranteed

New High density 3.5 inch blank and branded

Please phone for best prices!

QTY Blk DS/DD Brand DS/DD

10 £4.49 £5.49

30 £12.99 £14.99

50 £20.99 £22.99

100 £37.99 £42.99

200 £69.99 £79.99

500 £168.99 £190.99

1000 £324.99 £365.99

Branded disks come complete with labels

Disk Labels 500 £6.99

Disk Labels 1000 £9.99

SOFTWARE

CD ROM SOFTWARE

17 Bit Collection	£39.49
17 Bit Construction	£14.49
17 Bit Music 2	£14.49
17 Bit SD compendium 1	£16.99
17 Bit SD compendium 2	£16.99
Adult Simulation	£16.99
Amiga CD-ROM 1	£14.49
Amiga CD-ROM 2	£14.49
Amiga CD-ROM 3	£14.49
Amiga CD-ROM 4	£14.49
Amiga CD-ROM 5	£14.49
Amiga CD-ROM 6	£14.49
Amiga CD-ROM 7	£14.49
Amiga CD-ROM 8	£14.49
Amiga CD-ROM 9	£14.49
Amiga CD-ROM 10	£14.49
Amiga CD-ROM 11	£14.49
Amiga CD-ROM 12	£14.49
Amiga CD-ROM 13	£14.49
Amiga CD-ROM 14	£14.49
Amiga CD-ROM 15	£14.49
Amiga CD-ROM 16	£14.49
Amiga CD-ROM 17	£14.49
Amiga CD-ROM 18	£14.49
Amiga CD-ROM 19	£14.49
Amiga CD-ROM 20	£14.49
Amiga CD-ROM 21	£14.49
Amiga CD-ROM 22	£14.49
Amiga CD-ROM 23	£14.49
Amiga CD-ROM 24	£14.49
Amiga CD-ROM 25	£14.49
Amiga CD-ROM 26	£14.49
Amiga CD-ROM 27	£14.49
Amiga CD-ROM 28	£14.49
Amiga CD-ROM 29	£14.49
Amiga CD-ROM 30	£14.49
Amiga CD-ROM 31	£14.49
Amiga CD-ROM 32	£14.49
Amiga CD-ROM 33	£14.49
Amiga CD-ROM 34	£14.49
Amiga CD-ROM 35	£14.49
Amiga CD-ROM 36	£14.49
Amiga CD-ROM 37	£14.49
Amiga CD-ROM 38	£14.49
Amiga CD-ROM 39	£14.49
Amiga CD-ROM 40	£14.49
Amiga CD-ROM 41	£14.49
Amiga CD-ROM 42	£14.49
Amiga CD-ROM 43	£14.49
Amiga CD-ROM 44	£14.49
Amiga CD-ROM 45	£14.49
Amiga CD-ROM 46	£14.49
Amiga CD-ROM 47	£14.49
Amiga CD-ROM 48	£14.49
Amiga CD-ROM 49	£14.49
Amiga CD-ROM 50	£14.49
Amiga CD-ROM 51	£14.49
Amiga CD-ROM 52	£14.49
Amiga CD-ROM 53	£14.49
Amiga CD-ROM 54	£14.49
Amiga CD-ROM 55	£14.49
Amiga CD-ROM 56	£14.49
Amiga CD-ROM 57	£14.49
Amiga CD-ROM 58	£14.49
Amiga CD-ROM 59	£14.49
Amiga CD-ROM 60	£14.49
Amiga CD-ROM 61	£14.49
Amiga CD-ROM 62	£14.49
Amiga CD-ROM 63	£14.49
Amiga CD-ROM 64	£14.49
Amiga CD-ROM 65	£14.49
Amiga CD-ROM 66	£14.49
Amiga CD-ROM 67	£14.49
Amiga CD-ROM 68	£14.49
Amiga CD-ROM 69	£14.49
Amiga CD-ROM 70	£14.49
Amiga CD-ROM 71	£14.49
Amiga CD-ROM 72	£14.49
Amiga CD-ROM 73	£14.49
Amiga CD-ROM 74	£14.49
Amiga CD-ROM 75	£14.49
Amiga CD-ROM 76	£14.49
Amiga CD-ROM 77	£14.49
Amiga CD-ROM 78	£14.49
Amiga CD-ROM 79	£14.49
Amiga CD-ROM 80	£14.49
Amiga CD-ROM 81	£14.49
Amiga CD-ROM 82	£14.49
Amiga CD-ROM 83	£14.49
Amiga CD-ROM 84	£14.49
Amiga CD-ROM 85	£14.49
Amiga CD-ROM 86	£14.49
Amiga CD-ROM 87	£14.49
Amiga CD-ROM 88	£14.49
Amiga CD-ROM 89	£14.49
Amiga CD-ROM 90	£14.49
Amiga CD-ROM 91	£14.49
Amiga CD-ROM 92	£14.49
Amiga CD-ROM 93	£14.49
Amiga CD-ROM 94	£14.49
Amiga CD-ROM 95	£14.49
Amiga CD-ROM 96	£14.49
Amiga CD-ROM 97	£14.49
Amiga CD-ROM 98	£14.49
Amiga CD-ROM 99	£14.49
Amiga CD-ROM 100	£14.49

NEW! PRIMA CD-ROM Volume 1

1000s of facts, artwork, photos, demos, etc.

now only £16.99

DISCOUNT Sums £29.99

MUSIC/SOUND £74.99

Amiga £74.99

Deluxe Music Construction Set v2 £59.99

Pro MIDI Interface by Microdeal £29.99

Techno Sound Turbo £29.99

Techno Sound Turbo II £29.99

PUBLIC Domain Top 30 from £1.99

National Library Predictor £1.99

Amiga World calls it quits USA

The first all-Amiga magazine, Amiga World, closed after the April 1995 issue, almost exactly ten years after the first issue hit the stands. That issue offered little hard information about the then new computer, and the graphics proudly displayed throughout the magazine seem positively primitive compared to what's being done on Amigas today. But to computer users of the day – weaned on Commodore 64s and CGA IBM XT's – they looked like digital masterpieces.

At one time there were 10 Amiga magazines in the US. With the death of Amiga World, due to fewer ads and a dropping number of subscribers, we're down to one Amiga magazine over here, and that hasn't been able to meet its monthly publication schedule lately. Luckily, we can still obtain Amiga Computing and lesser UK Amiga magazines, so US users aren't completely out of luck – although we get awfully jealous when we read of how much software and hardware support there is still available on your side of the Pond. Still, it's sad to see a magazine go that's supported the computer for a decade. R.I.P. Amiga World.

Amiga publishing isn't completely dead over here, mind you. There are a number of video-oriented magazines that still cover our favourite

Denny Atkin reports on the decline of the US Amiga magazine industry



The closure of Amiga World means only one Amiga mag left in the US

computer, as well as on-line publications (such as the well-known Amiga Report) and some speciality newsletters. One of the best of the latter category is Scientific Amiga, Walter Lounsbury's



newsletter devoted to research, analysis, design, and technical education with Amigas.

If you want to use your Amiga for more than saving Lemmings, you'll enjoy this fascinating look at how the Amiga can be used in science. Some of the material could easily fit in a dry, scholarly journal, but this newsletter also packs plenty of interesting opinion and neat ideas on new uses for your Amiga. For information, write to Scientific Amiga, P.O. 60685, Savannah, GA 31420-0685 USA; e-mail waltai@well.sf.ca.us; or call or fax (912) 898-1760.

Last plane to NAB

Cutting it a little close, multimedia users needing expert advice and a look at some of the latest gear to aid in productions on all scales should consider heading for the nearest airport. The NAB Multimedia World is a Las Vegas-based show that is running from 9 to 13 April and covers a wide range of topics such as Video Toaster and Lightwave to seminars on how to use America's hottest DV equipment.

There are more than 100 of the world's leading multimedia developers and manufacturers on call to answer questions and offer advice on how to improve your productions. For more details, fax the organisers on 0101 301 216 1847 or e-mail them on register@nab.org.

Pyro mania continues

After receiving glowing accolades from this humble magazine, VCE Inc are releasing the sequel to Pyromania, aptly titled Pyromania 2. Following in the footsteps of its predecessor, the special effects compilation is made up of 37 Quicktime movies, 1736 PICT files representing 16 PICT sequences, and three fire loops. The new visual trickery that can be incorporated into Lightwave and other packages is made up of fire, smoke, fireworks, and more.

All footage was shot on 35mm motion picture film and, if it's anything like its forerunner title, should be something rather special. To order by fax, call 0101 818 362 3490.

Premature PC – too soon for its own good

Utilities Unlimited's PC emulator for the Emplant board, the E586DX, has finally shipped. Unfortunately, it seems that's not a call to rejoice. Jim Drew and company seem to have jumped the gun on this one, as the current emulation is incomplete and problem-plagued. Like the first release of the Emplant Mac emulator, compatibility problems abound and documentation is minimal. Drew assures me that the problems will be addressed very soon with a new revision of the emulator ported from the PowerPC version he's been working on – this update should be smaller (500K versus 1.4MB) and more compatible.

To UU's credit, though, while the first release of the Emplant Mac emulation was a disaster, the current revision of the emulator is a fine-tuned, highly compatible system that does a great job running the vast majority of Macintosh software. Given time, the E586DX emulation will likely be similarly capable.

The \$99.95 module (which requires the Zorro II-based Emplant board, which starts at \$279.95) is supposed to support the entire Pentium instruction set, including protected and virtual modes. The sales literature claims the emulation supports MDA, CGA, EGA, VGA, and SVGA video modes, sound, hard and floppy drives, CD-ROM drives, SCSI devices, joysticks, and other PC features. Advertisements feature the emulation running Doom II and Windows.

The emulator that shipped to users in mid-March, though, didn't run Doom II or Windows. In fact, as this was written (about a week after the E586DX release), users on the online networks and Internet reported success-only in running DOS, some old games, and text-based programs like WordPerfect.

Even getting those running was a challenge, though, since Utilities Unlimited shipped the product without the BIOS ROM necessary for PC emulation – they had problems licensing a BIOS in time for release.

Drew says he's writing a custom BIOS for the E586DX, but in the meantime users need to find a real PC to borrow a BIOS chip from, or download BIOS images from PC manufacturer bulletin boards or from FTP sites such as american.megatrends.com.

Also missing from the first release are serial and parallel port support, SVGA support (there are no drivers for custom Amiga graphics cards), and the ability to turn on the full CPU transcription mode that promises to make this faster than other PC emulators. Many users also reported problems getting CD-ROM support to work.

In short, this product was released before it was completed. Given the precipitous state of the US Amiga market, UU may have felt pressure to just get it out the door and prove that it was on the way. Whatever the reason, the PC Emplant just isn't very useful yet. But Jim Drew's track record with the Mac emulation suggests he'll get the PC emulation running smoothly in short order. It should be in better shape by the time you read this. Your best bet is to contact UU distributor Blittersoft and see if updated software is available.

The E586DX module is available from Utilities Unlimited, 790 N. Lake Havasu Avenue #16, Lake Havasu City, AZ 86403 USA. Phone (602) 680-9004, or fax (602) 453-6407. It's distributed in Europe by Blittersoft, phone (0)1908 261466, fax (0)1908 261488, or e-mail plesurf@cox.computelink.co.uk.

Flight of fantasy?

No... with a Blizzard or Cyberstorm Accelerator, your Amiga will fly!

If you've ever sat and waited for your Amiga to catch up, you'll know that an extra boost of power would be just the ticket.

But, the only problem is the cost... isn't it?

Well not any more. When you compare our cost per MIP with other boards you'll be surprised at just how little you'll have to pay to enhance the performance of your Amiga computer.

Then, the sky's the limit!



BLIZZARD 1220-4 4Mb TURBO

The multi award-winning 1220-4 offers by far the best price/performance ratio of any A1200 32-Bit RAM expansion on the market. Of course the 1220-4 also incorporates everything else that a good memory expansion should too, such as a Real Time Clock, further RAM expandability, optional FPU etc. as well as offering a Clock Speed Doubling Circuit which runs the 32-Bit FAST RAM at an amazing 28MHz. Not only does the 1220-4 give Amiga A1200 owners all this, but the price has broken the sound barrier too!

- Integrated 28MHz 68EC020 32-Bit RAM Clock Speed Doubler for up to 300% overall performance increase
- Factory Installed Tested 4Mb of 32-Bit FAST RAM
- Expandable to 8Mb with Add-4 Board
- Integrated Battery Backed Real Time Clock
- Easy Trapdoor Installation, retains CIB Warranty
- Can be disabled in situ for full games compatibility

1220-4 Turbo

4Mb 32-Bit Fast RAM 28MHz 68EC020 CPU £229.95

Add-4 Board (extra 4Mb for 1220-4) £169.95

4Mb 32-Bit Fast RAM add-on

Motorola FPU £Call

68882 PLCC 25/30MHz

NEW

BLIZZARD 1230-III TURBO ACCELERATOR MEMORY



The NEW BLIZZARD 1230-III TURBO ACCELERATOR MEMORY BOARD is the highest performing 68030 accelerator for the A1200. With its rapid 40 MHz 68EC030 CPU, or faster still 50MHz 68030 with MMU, it offers up to 500% performance increase overall.

The 1230-III has further expansion options with its integral Fast Expansion Bus for Add-on Modules such as the SCSI-2 Controller (due for release early '95). With its industry standard SIMM socket it provides up to 52Mb of

auto-configuring 32-Bit FAST RAM.

- PGA FPU Socket up to 50MHz
- Instruction & Data Burst Modes
- Automatic, Kickstart Re-Mapping (can be disabled if required)
- Battery Backed Self Recharging Real Time Clock
- Easy Trapdoor Installation

FASTLANE Z3 SCSI CONTROLLER

Lightning FAST DMA SCSI-II interface for Amiga A4000 owners. Expandability up to 64Mb of 32-Bit Fast RAM. Doesn't require any 'Buster Chip' upgrades. Use with hard drives, CD ROM etc. £299.95

1230-III Turbo (4Mb, 40MHz 68EC030) £189.95

1230-III Turbo (4Mb, 50MHz 68030 & MMU) £229.95

SCSI-II Module for 1230-III £179.95

Motorola FPU 68882 PGA 25/30/50MHz £Call

4Mb SIMM RAM Expansion 32-Bit, 72 pin £Call

LARGER SIMMS AVAILABLE £Call



For all Zorro-3 Amigas this 64-Bit high speed graphics engine filter has up to 1600 x 1200 pixels in 8-Bit colour or 1024 x 768 pixels in 24-Bit True Color. 2Mb of display memory (4Mb user upgradeable). Call and request our technical brochure. Just £299.95

NEW CYBERSTORM 660 A4000 ACCELERATOR

Upgrade your A4000 030 or 040 with the new CYBERSTORM MODULAR ACCELERATOR, and you'll have "The Worlds Fastest Amiga". With its new 50MHz 68060 CPU (due February '95), it provides up to 10 Times the performance of standard A4000 030s (82.2 MIPS, compared to 15.4 MIPS). Optional SCSI-2 and Ethernet I/O Module. Call and request our 4 page technical brochure. £PHONE

The Blizzard Performance Advantage...

Just look below to see how well your Amiga really could fly!



gordon harwood computers
the UK's favourite Amiga Dealer

POST, FAX or PHONE YOUR ORDER TODAY!
Tel: 01 773 836781
Fax: 01 773 831040

Mr/Mrs/Miss/Ms:	Initials:	Surname:
Address:		
County (Country)		
Daytime Phone		Postcode:
Items required:		Evening Phone:
		Card holder's signature:
Card No.:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
Expiry Date:	Issue No./Switch Only:	Department: ACO

Cheque/Bank Draft/Postal Order for £ payable to Gordon Harwood Computers Limited.
(All prices are UK including VAT and postage. Overseas customers please call to confirm pricing before ordering)
Gordon Harwood Computers Limited, New Street, Alfreton, Derbyshire DE55 7BP. Tel: 01 773 836781 Facsimile: 01 773 831040

It's big, it's clever, but what the hell is it? And what exactly will it actually get out of it – apart from the kudoes of quoting an e-mail address once in a while.

If you listen to pretentious ramblings of media, you'd be quite right to envisage the Internet as a pseudo intellectual utopia, where access guarantees a near psychedelic experience – what a load of old cobblers!

What it does provide is a means for more mortals to get the one thing which increasingly makes the difference between the haves and the have nots in the modern world. In short, access to information.

It's obvious from the Amiga Computing mail that the average reader is getting just a little cheesed off with the seemingly endless supply of mind-boggling acronyms and buzzwords that make up this ethereal electronic soup.

Basically, if you strip away the hype you're left with five key areas, each of which boasts its own collection of utilities and applications to help control and access the information you send and receive.

E-mail

E-mail and your individual address is the basic element in the equation. For example, ezra surf's address is ezra@acomp.demon.co.uk, and in affect this works just like a virtual PO box number. Literally everything ezra sends and receives has to quote this unique address, and if you've got internet access, a modem, and a phone line, you can send him e-mail from anywhere on the planet – but please don't.

Better still, he can dial-in from anywhere, quote his password and account details and download all the mail sent to him. The actual information is constantly maintained and

What does it all mean?

Paul Austin puts the Internet into perspective, with a rough guide to exactly what all the fuss is about



updated for you by your internet provider – in this case Demon Internet. When ezra next logs-on, Demon knows when he last downloaded mail and will check the in-basket and send anything still pending.

FTP sites

In short, an FTP site is the Internet's name for a freely accessible software archive. When you log-on to an FTP site you're actually directly accessing someone else's hard drive.

This becomes obvious when you run utilities such as GUI-FTP. On one side of the screen you'll see your directories, and on the other will be the list of directories and files at that particular site. If you see something you like, select it and copy it across – it's that simple. There are literally thousands of FTP sites all over the world, some of which have dedicated Amiga sections known as the Aminet.

Gophering

Actually visiting all the FTP sites individually would be impossible, and that's where utilities like Archie and Gopher come into their own. Both offer an automated search facility. Archie

will search for keywords within a list of FTP sites and files maintained by your provider, whereas Gopher provides a point-and-click search facility of Gopher-specific FTP sites via an Amiga Guide front-end.

Basically, both provide an invaluable means of filtering file information, allowing you to find and get what you as quickly as possible.

Newsgroups

This is where the truly weird and wonderful make their mark. Strange, surreal, interesting and in some cases outrageous is definitely the order of the day. If you're interested in a particular subject, no matter how obscure, I guarantee there'll be a newsgroup dedicated to it – and even if by some bizarre quirk of fate there isn't, you can always start one...

Newsgroups are probably best described as off-line, topic-specific, citizens band e-mail. Confused? So you should be. Basically, when you subscribe to a newsgroup you become a member of a band of like-minded individuals, each of whom automatically receive all the new news posted in that particular group every time they elect to get their news.

When you actually get news via nntptransfer, the software checks which groups you're a member of then grabs all the new postings since your last visit. You can then reply directly to another member, comment on a message, or post your own messages of files.

Well, that's the basics. There are many more involved but the point is, don't be put off, get involved, and most important of all have fun.



Web browsing

A web browser such as AMosaic offers a similar means of filtering and navigating the net, however Web browsers filter information rather than files.

When you read an Internet article you'll invariably come across a screen shot of a Web browser. In short, browsers are the pretty face of the internet.

Like users, Web pages have their

own addresses and all you need to do is enter an address into your browser and you'll go directly – or at least indirectly – to information you need.

For example, if you're interested in a new sports car the motor sports homepage would seem a logical place to start. From there you might click on a hypertext button for new models, which in turn might have a

link to a review of the latest Porsche, and so on...

That's how the majority of Web pages operate – you simply browse around for related links until you reach the precise information you need. And of course, if you find a page you'll want to visit regularly, it can be added to your hotlist and then visited directly whenever you feel like it.

The AC team

EDITOR Paul Austin
DEPUTY EDITOR Darren Evans
ART EDITORS Tim Lecky
Terry Thorne
Adam Phillips
NEWS EDITOR Judith Chapman
PRODUCTION EDITOR Jonathan Maddock
STAFF WRITERS Tim Hackett
Gareth Lefthouse
Dave Cosick
Simon Lee
Jane Norrington
AD SALES Sue Horsfield
AD PRODUCTION Barbara Newall
MARKETING MANAGER Claire Newbery
PRODUCTION MANAGER Sandra Childs
SYSTEMS MANAGER David Stewart

CIRCULATION DIRECTOR David Wren
COMMERCIAL DIRECTOR Dennis Wright
DISTRIBUTION COMAG (0895) 440055
SUBSCRIPTION 051-357 2961

Member of the Audit Bureau of Circulations

ABC 54,305

July-Dec 1993

Published by IDG Media
Media House, Adlington Park,
Macclesfield SK10 4NP
Tel 0425 878888
Fax 0425 850652

CHAIRMAN Richard Hease
MANAGING DIRECTOR Ian Bloomfield

We regret Amiga Computing cannot offer technical help on a personal basis either 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.

©1995 IDG Media. 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.

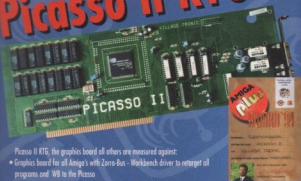


For six years Amiga Computing has been the leading magazine for Amiga enthusiasts. As a key member of the IDG communications group, Amiga Computing promises to inform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available.

12 issue subscription £44.99 (UK), £49.99 (EEC) £49.99 (World)
Opening quarterly direct debit £10.99 (UK only)

Printed and bound by Duncan Webb Offset (Macclesfield) Ltd

Picasso II RTG



Picasso II RTG, the graphics board all others are measured against:

- Graphics board for all Amiga's with Zero-Bus - Workbench driver to reformat all programs and OS to the Picasso
- Supports up to 256 colors with WB3.1, even an A2000 and A3000
- WB resolutions definable up to 1600 x 1200 pixels
- HiColor (16Bit) and TrueColor (24Bit) graphics: 16M color!
- Drivers for most graphic programs such as Adobe, Image7K, ImageMaster, Real3D
- Allows connection of any VGA or Multiscan monitor
- A1084 and A1081 are still usable with a special cable
- Block borders gone forever, takes full advantage of monitor's capabilities
- System-compliant implementation of multitasking, resolution select table using screen mode requester
- Monitor File compliant with System 2.x or higher, resolution selectable using screenmode requester
- View regular Amiga and special PicassoII-RTG screens on same Monitor without changing cables.
- Screen promoter to make older programs work on Picasso
- Draggable screens
- Available with 1MB or 2MB, upgrade double from 1MB to 2MB at anytime

2 MB

£ 299.95

1 MB

£ 259.95

Pablo

The video module Pablo, expands your Picasso II with two new video outputs. Using the

Pablo, you can view your Picasso output on any TV or VCR. All with quality that you would only expect to see from broadcast video encoders. That is why the Picasso II video encoder module,

Pablo, was in the (German) magazine 'Amiga Magazin'

Once S'P'ed for video encoders.

- Three cables included: RCA, S-VHS and SCART
- Once S'P'ed for video encoders
- 5 floppy disks included: RCA, S-VHS and SCART
- 24Bit animation program included
- 15kHz overlock protection
- 2 well written manuals
- Plugs onto the Picasso II - no Zero-Slot required
- Easy installation of video modes

£ 129.95

AMIGA
OS 3.1

A500/A2000

£ 84.95

A1200/A3000/A4000

£ 94.95

MainActor Professional

£ 49.95

Open your mind and dreams to the world of great animation, what

Picasso users have been doing for a long time with the demo and full versions, you can do, too. MainActor

Professional offers a high degree of functionality including multi-platform support

- (i.e. AM and JLI) animation file formats
- Synchronizes animations with sound effects
- Supports several graphic boards with special loader modules
- Uses 2MB files
- Plays animations directly from RAM or from hard drive
- Convert animations and picture formats
- Playable within a window on WB3
- Complete AltiVec support
- Supports 14 different animation file formats
- Supports Video For Windows format
- Special, fast animation format for Picasso II

Liana

Are you in need of a fast and easy connection between two Amiga's? Liana, the low-cost network solution, is exactly what you want! Just plug it in, install the software, and it's done! Nothing could be easier than that. Liana is the network solution for those with a small budget and big needs. You can even share your hard drives and printers.

For every (1) Amiga from WB 2.0 on with a hard parallel port

- Includes cable
- Includes Commodore's Easy networking software
- English manual
- automatically reconnection after file sharing without new startup
- Every machine capable as server and client

£ 59.95



VILLAGE
TRONIC

Wollweg 95 D-31157 Sarstedt - Germany
Tel: +49 (0) 5046 7111-10
Fax: +49 (0) 5046 7111-11
Tel: +49 (0) 5046 7111-40
Fax: +49 (0) 5046 7111-49

Technical Hotline
Orders
Mailbox
FAX



Blittersoft • 6 Drakes News • Growthill • Milton Keynes • Buckinghamshire • MK8 0ER
Order Line +44 (0) 1508 2614-66
Queries/Technical +44 (0) 1508 2614-77
Fax +44 (0) 1508 2614-88
BBS +44 (0) 1508 2614-99

White Knight Technology



120 Amiga/64000 Cables, 100% Switch at Your Choice

THE PROFESSIONAL
AMIGA SPECIALISTS
SUPPORTING SERIOUS USERS



01920-822321

9.30am - 6pm Monday - Friday

PO BOX 38, WARE, HERTS, SG11 1TX **FAX 01920 822302**



ALL PRICES INCLUDE VAT

A1200 ACCELERATORS

GVP A1230 Performance Series II

Two SIMM Slots (GVP's 4 or 16Mb only),
Clock, Optional 68882 FPU And SCSI Port

WITH 40MHz EC030, 4Mb RAM	£ 299
40MHz, 4Mb RAM & FPU	£ 399
50MHz 030, 4Mb RAM	£ 419
50MHz, 4Mb RAM & FPU	£ 509
Additional 4Mb SIMM for A1230-II	£ 195
GVP A1291 SCSI I/F for A1230 II	£ 59

VIPER 68030 By Power Computing

One SIMM Slot (Industry Standard, 72 pin),
Clock, Optional 68882 FPU And SCSI-2 Port

Various Versions 28,33,40 & 50MHz with or
without MMU are available FROM £ 129
Please call for full specification & prices

A4000 ACCELERATORS

CYBERSTORM

50MHz 68060

Accelerator For The Amiga 4000
RUNNING AT OVER 80 MIPS !

Only **£ 995**

Full Specification Sheet Available

40MHz 68040 Version	£ 765
040 Version w/o CPU	£ 449
Fast SCSI-II Controller	£ 175
I/O Module (SCSI-II, Ethernet & 2Mbit Serial port)	£ 375

BLIZZARD 4030 TURBO 50MHz 68030 +
MMU, Opt. FPU (For A3000/4000) £ 209
COMMODORE A3640 Card, 25MHz 68040
(As Fitted In Amiga 4000-040) S/H £ 419

WARP ENGINE 28/33/40MHz 68040
4 x 72Pin SIMM Slots for upto 128Mb RAM
Built in FAST SCSI-II DMA Interface
28MHz Version (With 68040/25) £ 799
40MHz Version (With 68040/40) £ 1099

LIGHTWAVE 3D V3.5 £ 449

Amiga & PC Version 4 Due Soon
Expected Price £ 695 + VAT. Buy V3.5
now, upgrade to V4 and SAVE £££'s

LIGHTWAVE TUTORIAL VIDEOS

Five Available - £ 49 each / £ 199 set

AUDIO PRODUCTS

SUNRISE AD516 / STUDIO 16

8 Track, 16-Bit, DAT Quality, Direct to Disk
Recording, Timecoded Cuesheet. Can be used
with Bars & Pipes Professional, the PAR etc.

Full Specification Sheet Available

£ 999

TOCCATA 4 Track, 16-Bit, Direct to
Disk Recording, With Sampled Software.
Ideal for Vlab Y/C's IFR, or the Vlab Motion

£ 349

HARD DRIVES

Bare SCSI

350 MB SCSI 3.5"	£ 199
540 MB SCSI2 3.5"	£ 289
1.0 GB SCSI2 3.5"	£ 649
4Gb Micropolis AV SCSI2	
7200rpm, 9ms, 1Mb	£ 1699

SEAGATE BARRACUDA

2.1Gb £ 999
4.2Gb £ 1499

A4000 IDE

420 MB IDE 3.5"	£ 159
540 MB IDE 3.5"	£ 209
730 MB IDE 3.5"	£ 229
850 MB IDE 3.5"	£ 259
1.08 GB IDE 3.5"	£ 339
1.28 GB IDE 3.5"	£ 359

DRIVES FOR PAR

Micropolis 2217A £ 899

FAST SCSI-II CONTROLLER

FASTLANE Z3

+ Upto 256Mb RAM (A4000)

Now Only £ 295

MEMORY SIMM'S

32MB SIMM-32	£ 1099
16MB SIMM-32	£ 575
8MB SIMM-32	£ 315
4MB SIMM-32	£ 150
2MB SIMM-32	£ 85
1MB SIMM-32	£ 29
GVP SIMM-32's	
4MB	£ 195

EDIT CONTROLLER

The KRP 'TES30'

Uses "Burned In" Timecode. Controls
Up to 5 Machines. RCTC compatible,
SMPTC, GPI Trigger, LANC /
Panasonic / RS232 etc. Shot Lists,
Mixer control, Audio cues, synchronised
audio dubbing. Upgradable to 8 parallel
control industrial machines RS422.

From £ 549

Call For Full Specifications

MONITORS

PHILIPS CM6833-II 14" PAL RGB, Y/C &
Composite Input (0.38 dot pitch, Stereo) £ 239
MICROVITEC CUB-SCAN 1438 14"
(Multi-sync, 0.28 dot pitch, No Sound) £ 295
MICROVITEC AUTOSCAN 2038 20"
(Multi-sync, 0.31 dot pitch, With DMS) £ 1175

Workbench / Kickstart 3.1 Upgrade Kits

Rom(s), Disks, Manuals & Fitting Instructions

A500/500+/1500/2000 £ 89.95

A1200/3000/4000 £ 99.95

NETWORKING

AMIGANET Ethernet for A2/3/4000 £ 249
ARIADNE Ethernet for A2/3/4000 £ 149
I-CARD PCMCIA Ethernet - A1200 £ 299

Network Software Available On Request

Eg. ENLAN DFS, ENVOY, TCP/IP, NOVELL, DECNET

CPU's & FPU's

68881 20MHz PGA	£ 24	68882 25MHz PGA	£ 39
68882 33MHz PGA	£ 69	68882 50MHz PGA	£ 89
68882 25MHz PLCC - For A4000/030 etc.	£ 69		
68882 33MHz PLCC - For A4000/030 etc.	£ 79		
68882 40MHz PLCC - For A4000/030 etc.	£ 119		
68840 25MHz - For Upgrading A4000-LC040	£ 165		
68030 25MHz with MMU (PGA Style)	£ 89		
68030 33MHz with MMU (PGA Style)	£ 89		
68030 50MHz with MMU (PGA Style)	£ 109		

VIDEO PRODUCTS BROADCASTER ELITE

This Zorro III card performs the major functions of a Broadcast Quality, On-Line, Non-Linear, Digital Video edit suite (CCIR601 720 x 576 resolution). It provides REAL-TIME, Full Motion JPEG (50 fields / second) Capture & Compression, direct to disk. The video can be edited and played back in REAL-TIME, at 50 fields/sec in broadcast quality - direct to Betacam etc. The board has full LTC and VITC timecoding (on all connectors - Composite, Y/C and YUV). It also interfaces with the AD516 Studio 16 and New Amadeus 16-Bit audio cards to enable simultaneous audio and video editing. It requires an Amiga 4000 with full 68040 processor, large SCSI-2 hard drives, and fast SCSI-II controller.

Complete System - From £11,950 plus VAT
BroadCaster Elite Card - £4098 plus VAT

System Requirements (minimum) :-

Amiga 4000-030 or 4000-040 (2 + 8Mb 0.5Gb HD)

Broadcaster Elite (Zorro III Card) with Software

Warp Engine 28MHz with SCSI-II or Fastlane Z3

2.1Gb Fast SCSI-2 3.5" HD (For Video)

Sunrise AD516 or Amadeus (Audio Card)

MultiSync & PAL Monitors

**GIVING FULL BROADCAST QUALITY,
ON-LINE, NON-LINEAR,
VIDEO & AUDIO EDITING !**

All systems are fully configured and tested and are supplied with limited telephone support. Technical support is additional for purchase of individual cards.

**FOR MORE INFORMATION, OR TO ARRANGE A
FULL DEMONSTRATION, PLEASE CALL**

Dealers - We are Exclusive UK Distributors

GVP TBC Plus TBC card with
transcoding PAL/SECAM/NTSC etc. £ 595

G2 M5TC Multi-Standard TBC with full
transcoding, genlocking etc. 19" rack £ 1749

VLab Motion Real-time JPEG Compression
& Playback Video & Animation card £ 999

VLab Y/C Real-time Hi8 digitiser card £ 349

PAR - Personal Animation Recorder
Output Your 24-Bit Rendered Animations To
Video Tape - At Broadcast Quality £ 1849
Video Capture Card - For PAR £ 999

Other Professional Video Products Available

SOFTWARE

LIGHTWAVE 3D	V3.5 PAL	£ 449
ART DEPT. PRO.	V2.5	£ 149
REAL 3D	V2.4	£ 299
IMAGE F/X	V2	£ 195
PHOTOGENICS		£ 49
BARBS & PIPES PRO	V2.5	£ 215
MEDIA POINT	V3.28	£ 219
TPAINT 2 (Picasso / Retina / Harlequin / EGS)		£ 169
SCALA TOSHIMEDIA 211 (AGA)		£ 95
SCALA MULTIMEDIA 300 (AGA)		£ 239
SCALA MULTIMEDIA 400 (AGA)		£ 289
SCALA MM 400 + ECHO 100		£ 385
MORPH PLUS		£ 149

Other Professional Software Available On Request

24BIT GRAPHICS CARDS

AMIGA 3000 & 4000 ONLY

CYBERVISION 64 ULTRA FAST	
64-BIT, Zorro III, 1280x1024 - 2Mb	£ 319
4Mb, Version of CYBERVISION 64	£ 399
RETINA BLT23 Zorro III, - 1Mb	£ 459
RETINA BLT23 Zorro III, - 4Mb	£ 599

AMIGA 1500/2000/3000/4000

PICCOLO SD64 ALPINE 64-BIT	
RTG card 2Mb, Zorro II/III Switching	£ 295
4Mb, Version of PICCOLO SD64	£ 345
PICASSO II 2Mb with TVPaint Jr.	£ 295
RETINA 2Mb with VD Paint.	£ 365
RETINA 4Mb with VD Paint.	£ 465
OPALVISION Call For Latest Information	

GENLOCKS

GVP G-Lock External Composite & S-VHS / Hi8 unit. S/W Controlled	£ 265
HAMA 292 External Composite & S-VHS / Hi8 unit. RGB correction etc.	£ 279
HAMA 290 External Composite & S-VHS / Hi8 unit. RGB correction, Picture Enhancement, Fade to Black, Keyhole.	£ 679
G2 VIDEOCENTER VC1	£ 579
G2 GENESYS VIDEOCENTER	£ 929
G2 VIDEOCENTER PLUS VC2	£ 1139
G2 VIDEOCENTER VC3 From	£1399

Full Details OF HAMA & G2 Items Available On Request

REMOVABLE DRIVES

SYQUEST

88MB SCSI INT. 5.25" DRIVE	£ 279
88MB REMOVABLE CARTRIDGE	£ 59
105MB SCSI INT. 3.5" x 1" DRIVE	£ 255
105MB SCSI EXTERNAL DRIVE	£ 399
105MB REMOVABLE CARTRIDGE	£ 49
270MB SCSI INT. 3.5" x 1" DRIVE	£ 415
270MB SCSI EXTERNAL DRIVE	£ 569
270MB REMOVABLE CARTRIDGE	£ 59

Syquest Drives Supplied With A Cartridge

MAGNETO OPTICAL

IBM 230MB SCSI INTERNAL	£ 669
IBM 230MB SCSI EXTERNAL	£ 765
BOX OF 5 230MB MO DISKS	£ 179
SINGLE 230MB MO DISK	£ 39

DAT TAPE BACKUP

4MM SCSI DAT - 2Gb, Internal	£ 729
4MM SCSI DAT - 4Gb, Internal	£ 799
8MM Exabyte DAT - 3.5 / 7Gb, Int.	£ 1199

CD ROM DRIVES

TOSHIBA XM5201B SCSI-2 (Int.), 3.4 x Speed, Multi-Session (Tray Load)	£ 179
PANASONIC CR533S SCSI-2 (Ext.), 2 x Speed, Multi-Session (Caddy Load)	£ 195
POWER Ext. A1200 with Squirrel I/F	£ 199

MPEG DECODER

SCALA MD100, Zorro II
card. Play MPEG bitstreams
from hard disk or CD. Can
be controlled from SCALA
MM300 & MM400. Includes
encoding software. £ 599

EMPLANT

MAC / PC EMULATOR

Basic Version	£ 245
SCSI or AppleTalk	£ 295
Deluxe (Both)	£ 339

A4 SCANNERS

EPSON GT-6500 600dpi, 24Bit with s/w & Cable	£ 699
EPSON GT-8000 800dpi, 24Bit with s/w & Cable	£ 999

NEW SERVICES

We now offer a number of
services to Amiga users :-
RENDERING frames from
Lightwave, Real or Imagine
OUTPUT frames to video
tape (VHS/S-VHS/Beta SP)
PICTURE Format Conversion
(MAC/PC/AMIGA/SGI etc)
NON-LINEAR EDITING
(VHS/S-VHS/Beta SP etc.)
DATA TRANSLATION
(Syquest, MO, DAT, QIC etc.)

SPECIALISTS

WE OFFER SERVICE, AND
AFTER-SALES BACKUP THAT
IS SECOND TO NONE

DEMONSTRATIONS

DEMONSTRATIONS OF OUR
HIGH END SYSTEMS CAN BE
MADE BY PRIOR ARRANGEMENT

DELIVERY CHARGES

Express Small £ 6
Medium £ 7

For large items, please call.

SURCHARGE

If ordering with ACCESS or VISA
there is a 2.5% surcharge.
**No surcharge for DELTA,
CONNECT or SWITCH.**

HOW TO ORDER

HAVE YOUR CARD DETAILS
READY, AND CALL :-

01920 822321

9.30 - 6 Monday - Friday

BY POST :-

**CALL FIRST TO VERIFY
PRICE AND AVAILABILITY,
BEFORE SENDING YOUR
ORDER TO :-**

**"WHITE KNIGHT
TECHNOLOGY",
P.O. BOX 38, WARE,
HERTS. SG11 1TX**



THE Cover Disks CD spectacular

Weird Science Multimedia Toolkit

Supplier: Weird Science

*A massive 547Mb of Amiga files await you on our exclusive
Multimedia Toolkit CD. Plus our usual CoverDisk, with art for all
ages from the complete and easy-to-use Smartypaints program*

What's this on the cover of Amiga Computing? Yes indeed! (he says in dubious Ben Elton style), this one's for all you readers out there with CDTV's, CD32s or those nifty PCMCIA SCSI host adapters such as Squirrel.

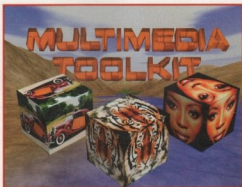
If you check out the adverts in computer magazines, you will no doubt find a lot of CD titles are sprouting up with masses of Amiga gear on them.

Well, we managed to get our sweaty hands on one, and in conjunction with Weird Science we thought it would be a good idea to give it away, free, to all you wonderful readers because we love you so much.

Name game

And just what is the name of this CD adorning your beloved Amiga Computing this month? Well, it's the Multimedia Toolkit with 547Mb of images, fonts, clip art, sound modules and samples.

If you dabble in DTP or use a word processor, there are thousands of fonts, images and clip art to help spruce up your artwork and documents. Or if you're a

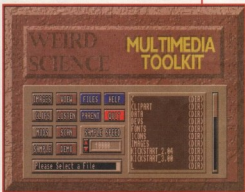


music nut who likes to create kickin' sound tracks with your favourite music tracker, there are thousands of complete music modules to listen to as well as samples for you to create your own music. You will

also find two top music trackers to use.

To top it all off, there's half a megabyte of icons to replace those dreary defaults which Workbench provides you with.

To use the CD-ROM you will need



Using the Multimedia Toolkit Main Program, you can view and listen to the thousands of picture and sound files

To figure out what all these buttons do, click on the blue HELP button. You are then in help mode and can click on any button for a description



either a CDTV, CD32 or an Amiga equipped with an adapter that allows you to connect CD-ROM peripherals, such as the Squirrel and Zappo devices.

There are two ways to access the files on the CD-ROM. For CDTV and CD32, as well as Amiga devices that allow you to boot from the CD-ROM, resetting your machine with the Multimedia Toolkit in the drive will automatically load the Multimedia Toolkit program.

Once loaded, you are given the choice of what device to use for the program (mouse or joystick). Click on either and you will then find yourself at the Main Menu. From here you can choose to access the Multimedia Toolkit Main Program, or fire up the slideshow to sit back and view the many pictures on the CD.

The Main Program provides you with an easy-to-use method of browsing through the files on the CD-ROM. With it you can view both images and clip art files, as well as listen to the thousands of music and sample files – all at the click of a button.

Copying

It also provides a simple file manager utility which supplies tools for copying files from the CD to your hard disk or floppy drive.

Using this, you can transfer files such as the huge collection of fonts to your fonts directory for immediate use by the appropriate programs.

To find out what the various buttons on the interface do, simply click on the blue Help button. This puts you in (yes, you guessed it) help mode. Now, clicking on any button will display a description of what that button actually does.

With 547Mb of files, I'd call that a well-stuffed CD. So, what are you waiting for? Fire up your CD-ROM drive, jam the Multimedia Toolkit CD in it and see how long it takes you to view and listen to everything.

Bear in mind that although CDTV and CD32 owners can view and listen to the various images and sound modules on this CD, to transfer the files for use from the CD the appropriate hardware is required.

What on earth?

So, just what does this huge 547Mb of files consist of then? The following, that's what:

- 500 original 24-bit images with HAM and HAM Interlace versions
- Over 1300 coloured clip art
- More than 2100 Mono clip art
- 120 standard Amiga fonts
- 100 plus coloured fonts
- Over 100 Adobe fonts
- 80 PostScript fonts
- 750 music modules
- 2300 samples
- Utilities to view and listen to many of the files



SmartyPaints

Supplier: Chroma

When it comes to graphics, there's not much that can touch the Amiga's powerful capabilities. That's why you can find the Amiga generating the graphics for such TV series as Babylon 5 and Star Trek.

Because of this obvious strength in the graphics department, it's hardly surprising to find that there's quite a lot of graphics software available for the Amiga.

Most of these packages, you will find, tend to be aimed at users of intermediate or advanced experience, and the demands of such powerful packages also often require an Amiga with lots of memory and powerful add-ons – which are probably beyond the price range of many users.

Novice to expert

SmartyPaints is different, however. It's an art package that caters for users ranging from a young child, right up to intermediate level. You may ask how such a wide range can be catered for by one art package, and the answer lies in the 'smart menu' feature which allows you to customise SmartyPaints depending on the needs of the user. It can also run on Amigas with a minimum of 1Mb, although the more memory you have the more screens you can work with.

SmartyPaints has evolved from early 1990 where it was available for the Nimbus PC as the Borealis trilogy of schools' art programs. Borealis Jr was aimed at infants, Borealis was for 7-11 year olds and Borealis Gold was for adults. It is thus a natural progression from these early concepts and now serves all three age groups, and thus its smart menu facility.

This facility allows the owner to tailor the drawing tools icon display according to age groups and abilities. SmartyPaints is not designed to be immediately used by a small child without any adult intervention.

It initially loads with all menus, icons and functions set up for a user with intermediate knowledge. It therefore needs to be configured for individual children according to their

There are lots of tools and features to aid the Amiga artist in the creation of an artistic masterpiece

abilities before they are given it. Configuring the menus is very simple. To try it out, load up SmartyPaints and read the tutorial that follows. Once loaded, you will see there are many function icons to choose from. In this particular mode, all features and tools are available for the intermediate user.

For a small child, you can choose which drawing tools should be displayed by altering the smart menu. If you now click the right mouse button you will be taken to the drawing screen and as you can see, there is a selection of tools and palette icons to choose from.

This is the smart menu and can be removed while drawing on the screen by clicking again on the right mouse button. Another right mouse click will bring it back again. Depending on the configuration you have set, there will also be a Main menu icon button on the far left of the screen. Clicking on this will take you back to the main menu.

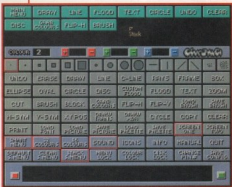
If you have a small child, so wish to create a special 'kids version' of the program, you need to decide which tools are appropriate for their age.

Indicators

Once you have a list of appropriate tools, it may be a good idea to draw a simple layout design to indicate which tools will be grouped together etc. This needs to be done because when you are choosing tools to be included in your custom menu, they are added from right to left, top to bottom. SmartyPaints doesn't allow you to arbitrarily remove and replace a single icon from within the middle of a list.

Once you have a design for your custom layout, it's time to configure SmartyPaints. First of all you will have to clear the default smart menu, so click on the light blue icon marked Clear S. Menu. After a brief delay, the current smart menu will be displayed in blue at the top of the screen.

You may now click on each icon to erase it from the list (be sure to click on the lower



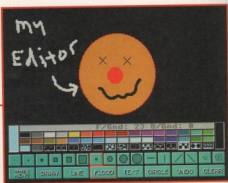
At the top of the screen, in a nice shade of blue, is a custom smart menu under construction



Assembler series files

For those budding coders out there following our regular Assembler programming series, this month's example files can be found on the Smartypaints disk in the drawer called AC_CoverDisk.Files.

The drawing screen and smart menu bar, complete with a little something I prepared earlier!



Smartypaints graphics competition

Now that you have a versatile art package at your fingertips, why not create some of your own masterpieces and enter our great competition?

All you have to do is send in any number of pictures created (at least partially) with Smartypaints on a standard AmigaDOS formatted disk, along with the registration card you receive when you buy the Smartypaints manual (see disk offers).

There's no age limit, but age will be taken into consideration when judging the entries.

The prize

The winner will receive an Amiga bundle of goodies which include the following:

- 3.5" Amiga floppy disk drive
- 50 floppy disks
- A disk storage box to keep things tidy
- A pair of Screenbeat 3 stereo speakers. Great for playing games
- A cuddly cute Amiga mouse
- A cartoon mouse mat

All entries must be in by the 29th of June.

Send your entries to Smartypaints Competition, Chroma, 153 Holt Road, Fakenham, Norfolk NR21 8JF.

Name:

Address:

Postcode:

Tel: Age:

right of each button icon). Notice that it's not possible to delete the Main Menu button. This is because you will always need some way of returning to the main menu screen.

Once you have deleted the icons you don't need, click again on Clear S. Menu and you will see the smart menu disappear. If you now click on the right mouse button to revisit the drawing screen and smart menu display, you will see that the buttons you erased have indeed gone from the smart menu.

Availability

Click on the Main Menu button and we will now add our own buttons to the smart menu. Click on the Stack S. Menu button and the smart menu will again appear at the top of the menu (minus the buttons you erased earlier). Now, by clicking on any of the light grey icons you can choose which functions will be available within the smart menu. As you click on each function, you will see it appear in the smart menu displayed at the top of the screen.

Continue adding functions until you are satisfied with the list that is going to be available for the smart menu, then click on Stack S. Menu to finish. If you click the right mouse button now, you will be taken to the drawing screen and will see the smart menu now contains your custom functions.

You may now click on the Save Config

icon from the main menu to save your smart menu layout, and Smartypaints will load your smart menu automatically when it's run.

Of course, we all know how small children like to explore and experiment, so we now need some way of preventing them from accessing the main menu and messing up things like your PIN number, or accessing other inappropriate functions.

Once you have your custom smart menu for your five-year old artist or whoever, clicking on Menu Lock will disable the Main Menu icon button from the smart menu. For security, you will be asked for a PIN number to enter before the function is executed. The default PIN number is 1234, but this can be changed to your own personal number by clicking on the Change PIN # button. You will be asked to enter your new PIN number twice for confirmation and then the number will become permanent. Keep a note somewhere of the new number so you don't forget it.

When you have entered the PIN number for the Menu Lock function, go in to the drawing screen with the smart menu and you will notice that the Main Menu button will disappear, preventing your child from accessing the main menu. Smartypaints is now in 'kid proof mode.'

If at anytime you wish to access the main menu for some reason, a secret 'hot key' lets you gain access. Simply hold down the Help key and the letter M until the main menu appears.

You can now click on Save Config and your Smartypaints disk will always load up in 'kid mode' (until you alter things of course).

That's it. Now you can customise your Smartypaints art package for either yourself or your little one to play with.

Smartypaints manual and disk offer

There are many more features available in Smartypaints, so to get the most from this versatile and educational program, you can send off for the printed Smartypaints manual and disk. The disk contains lots of kids clip-art for your child to create their own pictures. For details of this special offer, turn to page 44

Faulty CoverDisks

If you should find your Amiga Computing CoverDisk damaged or faulty, please return it to: TIB Pic, TIB House, 11 Edward Street, Bradford, W. Yorks BD4 7BH.

Please allow 28 days for delivery

Next Day **£5.00**

2-3 Days **£2.50** Saturday **£10.00**

Deliveries are subject to stock availability

Allow up to 7 days for cheques to clear



POWER

TELEPHONE **01234 273000**

POWER COMPUTING LTD
44a/b Stanley St. Bedford MK41 7RW
Tel **01234 273000** Fax **01234 352207**



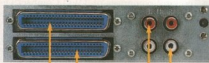
NEW
CD-ROM
INC. CD³²
EMULATION

CD-ROM



£199
x2 CD-ROM

DOUBLE SPEED CD ROM



SCSI Connectors

Audio In/Out



£299
x4 CD-ROM

QUAD SPEED CD ROM



110v

240v

SCSI ID Switch

Cooling Fan

SCSI Connectors

Audio In/Out

POWER CD-ROM

COMPARISON CHART

	POWER	OTHER
DOUBLE SPEED, MULTI SESSION	✓	✓
MAX TRANSFER (INTERFACE)	3MB	1.5MB
CD32 EMULATION	✓	✓
NUMBER OF SUPPORTABLE DEVICES	7	1 OR 2
THRU PORT FOR ADDITIONAL DEVICES	✓	-
HIGH QUALITY METAL CASING	✓	-
FULLY SUPPORTS 'HOT UN-PLUG'	✓	-
AUTOMATIC BOOTING OF CD-ROMS	✓	-
CD + AMIGA SOUND MIXING FACILITIES	✓	✓
COMPATIBLE WITH ACCELERATOR CARDS	✓	?
12 MONTHS WARRANTY	✓	✓
COMPLETE WITH UTILITY SOFTWARE	✓	-
COST	£199	£199

The new Power CD-ROM for the Amiga 600/1200 plugs directly into the PCMCIA port and provides a direct SCSI-I and SCSI-II interface, allowing up to six additional peripherals to be connected, for example: Syquest Drives, Hard Drives, Flatbed Scanners and Dat Drives. What's more the Power CD-ROM features a 'Hot-Plug' and 'Un-Plug', which allows you to connect/disconnect at any time the Power CD-ROM and any additional devices, even when your Amiga is switched on.

The CD-ROM comes with a SCSI interface, PSU, manual, audio lead, mains lead* and software: Audio CD, CD32 Emulation, MPEG Film Decoder and PhotoCD software.

Amiga 600/1200

Double - Speed
CD-ROM **£199**

Quad - Speed
CD-ROM **£299**

Amiga 4000 No SCSI Interface

Double - Speed
CD-ROM **£159**

Quad - Speed
CD-ROM **£259**

Accessories

Amiga 4000
SCSI-Interface **£129**

Multi-media Speakers
80 Watt **£54**



**80 WATT
SPEAKERS
£54**

*UK only

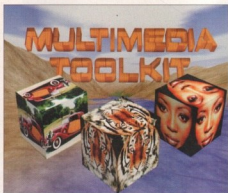
Trade and Educational orders welcome - Worldwide distribution available

All prices include VAT. Specifications and prices are subject to change without notice. All trademarks are acknowledged. All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available free of charge on request.

Weird Science

Weird Science Ltd, 1 Rowland Close, Leicester, Leicestershire LE4 2SE
Telephone 01116 2340682 Fax 01116 2364932

SPECIAL OFFERS



New Release

Multimedia Toolkit 2

Following on from the highly successful Multimedia Toolkit (featured with this magazine) is the NEW Multimedia Toolkit 2. Multimedia Toolkit 2 comprises of TWO Compact Discs for the multimedia Professional. Over 1.2 gigs of the very best graphics and sound awaits. This double CD set has been geared towards the music and video professional with 500 new 24-bit images of backdrops and textures. Ham8, 256 and 16 colour versions included for use with Scala. Octamed 5.04 Full Version (with Aura support), support files from many Octamed experts such as modules and samples. Over 50 megs of Midicraft midi files, samples and modules. (Midicraft are professional musicians producing Compact Discs such as 'A Drop in the Ocean', described below.) 200 megs of Imagine and Lightwave objects and support files. Thousands of items of Clip art, Fonts, Samples, Modules and Midi files. Plus many, many tools and utilities to improve your multimedia presentations. All the items are available direct from the Compact Discs with Octamed running straight from the CD.

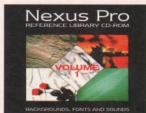
Absolutely outstanding quality and value for money.

Multimedia Toolkit 2

*Introductory offer
for readers of
Amiga Computing*

From £29.95 to £24.95

Offer ends May 1995



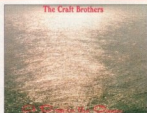
Nexus Pro CD

Reference Library CD-ROM

- 300 New 24-bit backgrounds
- 150 Original images
- 470 Compugraphic fonts
- 80 16-bit samples

From £49.95 to £39.95

Offer ends May 1995



A Drop in the Ocean

by The Craft Brothers

A music Compact Disc completed entirely on the Amiga coupled with some very high quality musical instruments and an awful lot of talent.

Special Offer at only

£10.99

Weird Science Additional Offer

£5.00 off

all orders over

£20.00

excludes CDs on this page

Offer ends May 1995

Emerald Creative Technology

BOOKS



Amiga 1200 Inside Guide
The perfect insight into the Amiga 1200, covering Amiga screen modes, Workbench 3 and much, much more!
£12.95

Secrets of Frontier Elite	£8.95
Amiga 1200 Inside Guide	£12.95
Amiga 1200 Next Steps	£12.95
Amiga Drive & Drives	£12.95
Assembler Guide	£13.95
Imaging Hints & Tips	£7.95
Workbench A-Z	£13.95
Mastering Amiga Amos	£17.95

IMAGE PROCESSING & CAD

Imagine 3 The latest version of the premier Amiga raytracer. New features include bones, more FX deformations and more. £99.95	
Art Department Professional v2.5... £139.00	
Amiga 1200 Inside Guide	£12.95
Amiga 1200 Next Steps	£12.95
Amiga Drive & Drives	£12.95
Assembler Guide	£13.95
Imaging Hints & Tips	£7.95
Workbench A-Z	£13.95
Mastering Amiga Amos	£17.95

Lightwave	£449.95
Maxon Magic	£23.95
Screen saver	
Morph Plus	£129.95
Broadband quality morphing & warping - hotlinks to Art Dept and Art Dept software	
Essence vol 1 + Forge	£79.95
Essence vol 2 + Forge	£79.95
Collections of algorithmic textures for Imagine 3 - Forge manipulates them	
Pro 3D Pro II	£59.95
Real 3D Classic	£59.95
Real 3D V2.4	£299.95
X-CAD 2000	£39.95
Good quality CAD package	
X-CAD 3000	£119.95
Adds full 3D capabilities and rendering to X-CAD 2000	

HARDWARE

The amazing new Squirrel SCSI interface lets you add SCSI devices to your Amiga 600/1200, including CD Drives (includes CD32 emulation) £64.95	
Pro Grab 24RT	£125.95
24 Bit Real Time Colour Frame Grabbing	
Render 8802 Genlock	£159.95
Good quality Genlock. Fakes Chromakey, etc.	
Render 8402 SVHS	£279.95
As Above, But Super VHS	

Squirrel SCSI Interface	£54.95
Video Backup System - Phonix cable £54.95	
Backs Up Hard Drives onto Standard VHS Video	
Video Backup System - S-Cart cable £57.95	
Vidi Amiga 12 AGA	£64.95
Vidi 12 Real Time	£149.95
High Quality 24 Bit Real-Time Frame Grabber	
Picasso 2 + 2Mb & TV Paint Junior £289.95	
High Quality, Fast 24 Bit Graphics Card	
Tabby Graphics Tablet	£57.95
AG Graphics Tablet - Great With Brilliance	
Personal Paint 4.0	£49.95
Power Plottery Drive	£49.95

DATABASES

Datasearch Nim	£24.95
Digital Database New	£49.95
Final Data New	£39.95
Base Pro 4	£139.95
Base Personal 4	£69.95
GB Route Plus	£31.95
Mailshot Plus	£35.95
Music Librarian	£29.95
Plants For All Seasons	£22.95
Library of plants, preferred soil types	

EDUCATION

ADI GCSE Maths	£19.99
ADI GCSE English	£19.99
ADI GCSE French	£19.99
ADI Junior Reading	£15.99
ADI Junior Counting	£15.99
Kid Pix	£19.95
Print and Create	£16.99
Spelling Fair	£16.99
Noddy's Playtime	£16.99
Noddy's Big Adventure	£16.99

VIDEO & MULTIMEDIA	
Big Alternative Scroller 2	£49.95
Can Do 3	£229.95
Media Point v3	£249.95
Montage 2.4	£259.95
Scala HT100	£49.95
Scala MM211 New Lower Price	£34.95
Scala MM300 New Lower Price	£19.95
Scala MM400	£249.95
Scala Echo EE100	£139.95
PACKAGE DEAL - SAVE £39.95!	
Scala MM400+EE100	£349.95

Power Quad Speed CD Rom Drive

Plugs directly into PCMCIA slot and provides SCSI interface for another 6 SCSI!

Connects to Syquest Drives, DAT, Scanners, Hard Disks & more



CD ROM

Band/Pipes Pro v2.5	£199.95	PatchMaster	£79.95
Upgrade v2 to v2.5	£79.95	SuperJAM 1.1+	£39.95
Creativity Kit	£24.99	Synthes SMART Box	£15.95
Internal Sounds Kit	£24.99	Triple Play Plus	£159.95
Multimedia Kit	£24.99	Aura 12 bit Sampler	£79.95
Musidbox A or B	£24.99	Deluxe Music 2	£69.95
Performance Tools Kit	£29.99	Megaloound Sampler	£23.95
Power Tools Kit	£29.99	Music X 2	£74.95
Pro Studio Kit	£29.95	Pro Midi Interface	£119.95
Rules for Tools	£29.99	Technosound Turbo 2	£25.99

PC EMULATION

PC Task 3

PC Task 3 allows you to run software designed for IBM PCs and compatibles on your Amiga! It emulates a 80286 based PC, so you can run Windows 3.1 and applications like Microsoft Word and Excel. On an Amiga you can even run SVGA screen modes!
RRP £79.95 - Emerald Price £59.95
Upgrade from v2 £34.95 - please call for details
Upgrade from PD version £44.95! - Limited offer runs until the 30th April



PAINT PACKAGES

Brilliance 2 Still the best all round price/performance paint package. Fully supports AGA screenmodes, animations, and it's fast! £45.95		Deluxe Paint 4.1	£54.95
		Non AGA version	
		Personal Paint 6.1	£39.95
		Latest version - now supports HAM and animations	
		Protopics	
		Mac beast! Hundreds of natural effects	
		TV Paint 3	£99.95
		Simply the best pro package for the Amiga artist with hundreds of incredible features!	
Deluxe Paint 5 AGA	£69.99		

SOFTWARE DEVELOPMENT

Gamesmith The integrated games system. Comes with Dice GS C compiler, Devpac GS assembler, custom libraries, and an excellent manual. £79.95		Amos Professional	£29.95
		Amos Pro New	£24.95
		Cygnus Ed Pro 3.5	£39.95
		DevPac 3	£51.95
		Hisoft BASIC 2	£54.95
		Intos	£25.95

Wp & DTP

Final Copy 2	£47.95	Cashbook Combo	£59.99
Final Writer 3	£69.95	Digital Home Office	£39.95
Mini Office	£37.95	Money Managers	£34.99
Pen Pal	£29.99	Personal Manager	£19.95
TypeSmith 2.5	£118.95	System 3E	£49.99
PageStream 3	£174.95	TurboCalc 2	£49.95
Wordworth 3.1SE	£44.95		
Wordworth 3.1	£79.95		
Personal Fonts Maker	£119.95		

VIRTUAL REALITY

Distant Suns 5.0	£27.95		
Vista Line (only 2mb required)	£27.95		
Makepath Pro Vista	£39.95		
Terraform for Vista	£39.95		
Vista, Distant Suns, Makepath+Terraform	£59.95		
Vista Pro or Lite Makepath+Terraform	£39.95		

Directory Opus 5

£49.95

WORKBENCH UPGRADES

OS 3.1 for A500/2000	£83.95
OS 3.1 for A1200	£93.95
OS 3.1 for A3000	£93.95
OS 3.1 for A4000	£93.95

Emerald - Your One Stop Productivity Shop

HOW TO ORDER: CHEQUES made payable to Emerald Creative. Allow at least 5 working days to clear.

CREDIT CARD: Visa, Mastercard, Access, Delta, Switch. We bill your card when we despatch the order not before.

POSTAGE & PACKING: Charges within the UK are £3.50 unless otherwise stated. Recorded post is an extra £0.55p.

Next day courier is £4.95 inc. VAT within the UK mainland. Please ask for overseas pricing.

NOTE: All pricing includes VAT but not carriage. We reserve the right to change prices - you will be informed of any change when your order.

Problems: Faulty product will be replaced or repaired if returned within 30 days of purchase. We will refund if we can't repair the goods. E&OE

Tel 0181-715 8866

Fax 0181-715 8877

Rapid House, 54 Wandale Bank

London SW19 1DW

Lots of people have good ideas for making money, but very few of us actually do anything about them. How many of us, for example, have heard about a new product or service and cried plaintively: 'Hey, that was my idea!'

Getting a dream idea off the ground will take drive, imagination, hard work and persistence, and unfortunately your home computer will be no help whatsoever in these departments. However, organisation and presentation are equally important ingredients in the recipe for success, and in this respect the Amiga could be invaluable – even if you are starting on a shoestring.

The three major packages available are not new products, but they can now be picked up at cheaper prices than ever before – making them worthy of consideration for anyone taking their first tentative steps into the world of small business.

ASSESS YOUR NEEDS

The PC has become such a common feature in the workplace you'd be forgiven for thinking that starting a business without Microsoft's Windows is like deep diving without an air supply. Yet these machines are expensive; even if you get a cheaper (and consequently less reliable) make with all the software bundled in, it's a big financial commitment to take when initially testing the water for your project's viability.

Whether you start out with one of the all-in-one packages reviewed, or choose pricier but more professional options like Wordworth 3.1 and TurboCalc, the Amiga's virtues as a machine for small business should not be overlooked.

Remember, many business needs can be catered for very cheaply: Advertising leaflets, business correspondence, client databases or spreadsheets need not always be flashy to be effective or efficient. What's more, even if your business outgrows your software's capabilities, these packages will already have paid for themselves within the first few months.



Mini Office

Europress's Mini-Office carries the distinction of being the only truly integrated business package of the bunch – the rest are really composed of separate programs thrown together into a bargain bundle.

It's also the most comprehensive product of the lot, thanks to the fact that it included the five most commonly needed types of business program, all accessed from one main menu.

The word processor is more capable than might be expected at the price. There's a 50,000 word dictionary, the option to import ASCII text, the basic text formatting facilities, and wrap-around text. Alongside Digita's Wordworth SE it may look rather unsophisticated and lacking in advanced features, but it makes a good account of itself as part of the overall package.

Databases are an equally indispensable



Colourful icons and an integrated system make Mini Office the most enjoyable package to work with when it comes to swapping between programs

type of business software, so it's good news that this one is easy to use with all the standard sorting functions included. A less obvious but undoubtedly useful inclusion is the disk utilities program which acts as a basic file manager so you can keep

Head office

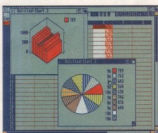
Home Office Deluxe

The main strength of Disc Company's Home Office Kit has got to be the inclusion of the highly respected Maxiplan 4. For a long time the unchallenged leader in its field, this feature-packed spreadsheet analyser would still be many Amiga accountant's first choice.

Considering the price, Maxiplan is amazingly powerful and flexible. Allowing users to create spreadsheets of more than 500 columns and 65,000 rows, and featuring extensive linking, analysis and import/export facilities, it is a must for anyone requiring advanced functions at an affordable price. The availability of Macros to automate repetitive tasks is also a definite boon.

Maxiplan includes a colour chart creator, which means that as well as crunching numbers it can present your data professionally. This aspect of the software is admirably simple, as usually you can select a range of data and a type of chart and the program will do the rest automatically.

Kind Words, by comparison, has fared less well with time. Inferior to Digita's



Wordworth 1.1 when it came out all those years ago, it certainly can't compete with the power of the budget Wordworth SE released recently.

That's not to say it's worthless – your word processing needs are basic, it will probably prove perfectly adequate. Though it's a bit long in the tooth, it does use Digita's Human Interface Protocol, which in English

No one's pretending spreadsheets are exciting, but at least Maxiplan delivers a bunch of powerful presentation tools

your work organised. Spreadsheets, by their nature, are not so simple to use as, say, databases, but at least there are keyboard shortcuts as well as menus to work with. What is appealing is the way data can easily be taken from the spreadsheet and made into a graph, which in turn can be imported into the word processor as part of a document.

Like the Lotus Suite on the PC, Mini Office maximises ease of use by maintaining a consistent control system through each of the sub-programs. The video recorder-style toolbar isn't brilliantly successful, but it's nonetheless strange that more developers haven't attempted a similar approach on the Amiga.

It has to be said that the package is looking slightly dated now, and the inclusion of a few new features would not go amiss. The Amiga needs an integrated package like this, so it's a shame that Europress has not seen fit to develop a new update – in my view, doing so would justify a higher price. For

some, however, Mini Office remains a better option than other more expensive alternatives – and that's despite its age. Its ease of use and uniform control system should make it attractive to those who find some aspects of computing daunting, and as an all-rounder there is still nothing to beat it at this price.

The bottom line

Product: Mini Office
Price: £59.99
Supplier: Europress Software
Tel: 0625 859333

Ease of use	9
Implementation	7
Value for money	8
Overall	8

Great things often come from small beginnings, particularly true for successful entrepreneurs. For those with big ideas but empty pockets, Gareth Lofthouse reviews three business packages under £50



Building up a database starts here by defining the columns and types of information with this control panel

records within minutes. Columns and rows can be moved and resized using the mouse and, for those daunted by Maxiplan, it also includes basic calculation options.

That's all very dull and handy, but what's peculiar is the option to create an automated slideshow with sound using Infotile – especially since this is set up using the same database interface. Why this was included in the same package I'm not sure, but who knows, it might prove useful.

If serious financial analysis is a must for your business then Maxiplan 4 should make you give this package more than a cursory glance. Since it's available separately for £30, however, you may decide not to bother with the whole bundle.

means it's easy to control.

In the printing stakes, Kindwords lack of support for Postscript fonts is quite a serious flaw, and advanced features like auto-correct were and dreams back in those days. Still, you get what you pay for.

Infotile makes up the third and final part of the package, and it turns out to be a rather strange little program. Primarily, it's a simple database that allows even technophobes to knock up information

The bottom line

Product: Home Office Kit Deluxe
Price: £69
Supplier: Silica
Tel: 0181-309 1111

Ease of use	8
Implementation	7
Value for money	7
Overall	7

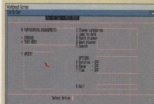
Digit Home Office

This old chestnut is composed of four programs: Home Accounts, Mailshot Plus, DG Calc and Day by Day, and costs roughly half as much as the other two packages.

Digit's package is the only one to include something resembling a diary/personal organiser, something that might have given it the edge over the other titles. Sadly, I'd much rather stick with writing memos to myself because this system is drab in appearance and amateurishly implemented.

Mailshot Plus is a handy little program for printing out labels for envelopes with the minimum of fuss, and naturally it allows for mailmerge with Wordworth. Our copy, however, was significantly bugged.

The Home Accounts manager is the predecessor to the recently reviewed Money Matters, so it's all about keeping your personal finances in order. It doesn't have the latest version's pretty icons but it will keep track of all those standing orders for you. After working



This program is supposed to remind you of important dates and appointments, but it's so drab I couldn't be bothered to look at it

with Maxiplan, the spreadsheet program in this package leaves a lot to be desired for the professional, and it's no surprise to find it lacks the power of that benchmark title.

Nevertheless, it's not quite so limited as it looks thanks to the availability of 52 formulae, a 'Goto cell' feature, password and cell locking facilities. There's also a feature allowing any row or column to be held on screen as the spreadsheet scrolls beneath.

Overall, the package feels outdated, hit and miss and unstable on the A1200 we used. It is cheap and better targeted for household finances/records than the other products reviewed, so it may be worth considering. Before spending any money I'd see what alternatives were available in the PD libraries first.

The bottom line

Product: Digit Home Office
Price: £35
Supplier: Digit International
Tel: 01395 270273

Ease of use	8
Implementation	7
Value for money	6
Overall	6

A computer virus!
A two disk collection of the best virus killers available for the Amiga. An essential purchase for any Amiga user. Very easy to use.
Only £4.00

VIP4-2. VIRUS KILLER SET

Workbench 3 is very good but Commodore forgot to include a few things, like a virus killer, a decent file manager, a system utility, a few WB games and more. £7

SCF7-3. STUFF COMMODORE FORGOT

Star Trek Action/Strategy game. You take control of all key personnel on the bridge, great sound & graphics make this a superb game. £8.00

STG6-3. STARTREK GAMES

Now the weather is nice, it's time to do the garden, and the best way to get out of doing it is to spend loads of time designing it.
Only £3.00

GRN3-1. 3D GARDEN DESIGNER

Make your own hard ware and save £32. Sound samples, memory expansions, Bridgeboards etc. Knowledge of LHA req. Only £4.00

HWP4-2. HARDWARE PROJECTS 2

Over 40 top quality compugraphic fonts for use on Workbench, WordPerfect, DPaint4, Wordworth/3.03 etc. A great value set of fonts. All for only £7

PSF7-3. COMPUGRAPHIC FONTS

A huge set of classic board games. Includes: Monopoly, Scrabble, Cluedo, Mastermind, Othello, Backgammon, and more. Great fun for all the family. Only £10

BDG10-4. CLASSIC BOARD GAMES

Kopy This is the most powerful Amiga disk copier available. Includes software and an external disk interface for better results. Only £29.99

XCOPY TNG

Simple to use, but complete colour Desk top publishing software for any Amiga.
Program Only £4.00

NRL4-1. NEWS MAKER

Over 500 game cheats on 2 disks for Amiga games. Most of the latest games cheats included.
All for only £5.00

CHT5-2. CHEATS GALORE 2

Thousands of General Knowledge questions and answers on this two disk Quiz Pack. Great fun for all the family.
Only £5.00

QUZ5-2. QUIZ CHALLENGE

A set of 10 of the best puzzle games for the Amiga. Frustration at an extreme. Superb value.
Only £7.00

MTG7-3. MIND TEASERS

A complete wordprocessing package. Features all standard options like cut, paste, spell checker etc. An essential entry to use package. Only £3.00

TXE3-1. TEXT ENGINE WP

Create your own fascinating 3D stereoscopic pictures on your Amiga. Complete with demo pictures, viewer and Magic Eye mask.
Only £5.00

RDS5-2. MAGIC EYE KIT

Get your finances in order with this excellent package. Keep track of your fuel, petrol, & food bills. Find out where all your money goes each month.
Only £7.00

FIN7-3. FINANCE PACK

A two disk set of new workbench backups and icons for use with Magic Workbench, on any Kickstart 2 or 3. MagicWB available. £3 MagicWB extra's. £5

MWE5-2. MAGIC WB EXTRA'S

The most powerful word search, crossword solver available on the Amiga. Includes a dictionary of over 50,000 words and you can add your own.
Only £5.00

WFP5-2. WORD FINDER Pro

If you're new to the Amiga then you may have problems with installing software etc on your working system. This disk contains all popular utilities, viewers and other popular programs.
Only £2.00

EFB2-1. ESSENTIAL FOR BEGINNERS

A selection of tools for degrading your A1200 or A4000 to allow you to run most of the older Amiga games, tools, and demo's.
Only £4.00

DEG4-2. A1200 DEGRADERS

Includes print manager, printer driver, printer driver, loads of other printer tools. Knowledge of LHA required for use.
Only £7.00

PRIT7-4. PRINTER TOOLS 2

If you're a budding Ian Beale or Floyd, then this Gourmet cookbook will get you going.
Only £3.00

GC83-1. COMPUTERISED COOKBOOK

Over 130 clipart images on 3 disks of all the Lion King characters, for use in any Amiga package.
Only £8.00

LKA6-3. LIONKING CLIPART

Over 100 clipart images on 3 disks of all the Lion King characters, for use in any Amiga package.
Only £8.00

LKA6-3. LIONKING CLIPART

If you want to learn to type like a pro, then our superb Typing tutor set will help you on your way.
Only £3.00

TYP3-1. TYPING TUTOR

If you want to linkup your Amiga to a PC or another Amiga then this is the software for you. You can easily transfer files from one machine to another. Only £8.00

COM8-3. NETWORKING SET

An essential purchase for any hard drive owner. Includes backup tools, virus tools, disk repair, and loads of other utilities.
Only £5.00

HDT5-2. HARD DISK TOOLS

Over 100 games on 5 great disks. All the classics are here, as well as loads of new original games. Hours of fun for just £10.00

GG10-4. 100 GREAT GAMES

A two disk collection of Workbench 3 backdrops. Very easy to use. Works with Hard disk of floppy disk. Grown up only.
Only £4.00

WGB5-2. WORKBENCH BACKDROPS

The complete Amiga office suite. Includes Wordprocessor, Database, Spreadsheet, and Diary. Compatible on all Amiga's.
Only £7.00

WPC5-2. WORD PROCESSING & Spreadsheets & Diary

The complete Amiga office suite. Includes Wordprocessor, Database, Spreadsheet, and Diary. Compatible on all Amiga's.
Only £7.00

IFC7-3. LITTLE OFFICE

Fifty of the best Bitmap fonts available. This pack also includes a powerful font editor. Compatible with Workbench, DPaint, etc.
£7.00

FNT7-3. FIFTY FANTASTIC FONTS

A ten disk collection of very high quality Amiga clipart, suitable for the Amiga, Star, Clippart, and more. All popular subjects included. All ten disks only £13

GFX13-10. PRO. CLIPART

This is the most up to date and comprehensive collection of printer drivers available for the Amiga. Star, Clippart, Panasonic, HP etc. etc. Easy to install. £3.00

DRV3-1. PRINTER DRIVERS

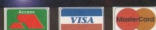
Six disks of Video fonts. Backgrounds, Titles, Video signs, and more. Great for producing your own video's.
All for only £12.00

VID12-6. VIDEO TITLING TOOLS

If you've just purchased your Amiga you may be a bit lost about how to use it properly. Well this Amiga software set will help you step through every basic thing to know. All the Amiga's for sale.
Only £5.00

ABG9-5. BEGINNERS GUIDE

SOFTWARE



Order Hotline:
01793 490988
Fax Order Line:
01793 514187

ORDERING BY POST
Simply send us your order, listing the items you require, the total cost and your name and address with payment either by cheque or postal order. Cheques payable to EPIC MARKETING. Most orders are dispatched within 48 hours.

ORDERING OVER THE PHONE
Call our line between 9.30am - 5.30pm Mon-Fri with your credit card details and a list of the items you would like to order.

COLLECTING YOUR ORDER
You are welcome to collect your order any time between 10am and 5.30pm Monday - Saturday.

OVERSEAS ORDERS
Overseas orders are welcome, but there is a minimum order of £30 plus postage and packing (a flat fee) and £2.00 per CD-ROM title for postage & packing.

POSTAGE & PACKING
UK & Mainland Europe a flat fee of £1.00 per floppy software.
EU & Rest of Europe the ordered amount.
INFORMATION
Goods we have not sold or a flat fee. EXCEP: PLEASE STATE YOUR AGE, OVER 18 WHEN ORDERING ANY ADULT TITLE.
Full Terms and Conditions available on request. We do not condone the use of non-registered software.
Actual screenshots may vary between different software versions.

to
them to
your set
your
£3.00

Up
PC, or
then for
you.
transfer
machine
only £8.00

SET

increase
on disk
sets of
£5.00

OLS

is on 5
the clas-
sical
original
just

CTIONS

ck-
y to
Hard
£5.00

PROPS

mail
udes
adhesi-
portable
£7.00

Bitemap
This is
a
tor.
Paint,
£7.00

ONTS

tion of
omono
for all
rent
reader
£1.00

IT

up to
printer
for the
izers,
etc. etc.
£3.00

ERS

two fonts,
16, or loads
producer's.
£12.00

DOLS

reased
you may
use to
of this
you stop
any
£9.00

JIDE


UK



A collection of Amiga card games including: Poker, Craps, Solitaire, Pontoon, Blackjack, Montana, Rummy and more.

Only £10.00

CRD10-4. CLASSIC CARD GAMES



Lottery Winner Professional attempts to predict the results of the Lottery. Every week you input the previous results numbers into a database. Only £3.00

LWP5-1. LOTTERY WINNER




Magic User Interface will complement Magic Workbench to enhance your Workbench even more. Knowledge of Shell is required. Only £4.00

MUI4-2. MAGIC USER INTERFACE



A set of over 50 superb professional looking colour clip fonts. Perfect for Video titling. Demo making or Desk top publishing. Only £5.00

CCF5-2. COLOUR CLIP FONTS 3



New collection of tools for WB2 & 3. Includes HD tools, Virus killer, sound & graphics tools, text editor and loads more. A bargain at £5.00

ATC5-2. POWER TOOLS



Amiga Betting Shop. If you like a little tittle now and then, then this one for the Adults, great fun. Only £5.00

CF55-1. CENTREFOLD SQ.



Retrieves lost or damaged files. Undelete deleted files, Repair, Salvage or Validate almost any Amiga disk, including Hard drives. Only £10.00

DRT5-2. RECOVERY TOOLS



This pack includes CIA, GEMBOY, BIOS, CDROM, BMA, SPECTRUM SINCLAIR QL & ATARI ST emulators and more. Only £5.00

AEP5-3. EVERY EMULATOR



A range of clipart for use with Page Setter. Dozens of subjects including: People, Animals, Vehicles, Sports etc. Only £3.00

MPC3-1. PAGESSETTER ART




Amiga Betting Shop. If you like a little tittle now and then, then this one for the Adults, great fun. Only £5.00

ABS6-4. BETTING SHOP



Girls and more girls, loads of 256 colour gird pictures, for use on the A1200 only. All 3 disks only £19.00

GRL6-3. GIRLS, GIRLS, GIRLS.



Includes GRAVITY SIM ELEMENTS TABLE UNITS CONVERTER GEO TIME CLOUD CREATOR EVOLUTION MODEL 3 disks for only £7.00

ST57-3. APPLIENCE OF SCIENCE



NEW VERSION... Test your drive, memory, Keyboard, GFX chips, sound chips, speed etc. Only £3.00

ENK3-1. ENGINEERS KIT



Play Poker with some of the most lovely women in the world. Includes superb graphics and digitised speech. Over 18 only. Only £10.00

DSP10-1. DELUXE STRIP POKER



With this language tutor you could learn to speak in any of the following languages: SPANISH, FRENCH, GERMAN, ITALIAN & JAPANESE. Only £8.00

LTP4-4. LANGUAGE TUTOR



Organise your Record, CD, Video and disk collection with this superb set of cataloguing tools. Only £5.00

CTG5-3. CATALOGUER'S



If you just got a new Hard drive for your A1200 then this set of disks are essential. Prep and Partition your drive then install WB 3 100% properly. £7.00

AHD7-2. HARD DISK SETUP



A new five disk set of high quality colour clip-art. All the major subjects included. OKAY on any Amiga package. Only £9.00

CCP9-5. COLOUR CLIPART



Imagine objects of MACLAREN, WILLIAMS and BENETON Formula One motor racing cars. (Ambs recommended) Only £5.00

RTR6-3. RAYTRACED RACERS



The complete graphics manipulation and converter set. supports GIF, BMP, PCX etc. etc. Only £5.00

GF52-2. GRAPHICS CONVERTER



Eight all time classic arcade games, Pacman, Frogger, Asteroids, Space Invaders, Centipede, Missile command, Q-bert, & Omega race. Great value for money. Only £5.00

ARC5-2. ARCADE CLASSICS2



Whether you're a complete beginner at chess or a champion, J Chess has something for you. Superb graphics and speech. Only £5.00

JIT5-2. CHESS & TUTOR



Includes Lightforce scenes & objects of the Delta fighter, Soul Hunter, two Vortan space craft, BS Station, two jumpships & nuclear space dust. £7.00

BF07-4. BABYLON 5



Over 500 superb quality Eye catcher clipart images for use in any Amiga package. Only £4.00

EYC4-2. EYE CATCHER CLIPART



ACCESS DENIED Password & file encryption tools. Put a pass word on your computer or make any file unreadable to anyone else. Not for the complete beginner. £10.00

PSW10-4. PASSWORD SET



ACCESS DENIED Password & file encryption tools. Put a pass word on your computer or make any file unreadable to anyone else. Not for the complete beginner. £10.00

PSW10-4. PASSWORD SET



Over 50 superb quality Eye catcher clipart images for use in any Amiga package. Only £4.00

EYC4-2. EYE CATCHER CLIPART



SPE5-3. SPECIFY EMULATOR & 50 GAMES £5. SPG16-7. 100 CLASSIC SPECIFY GAMES £5. CDSB3-3. 400+ SPECIFY GAMES & EM. £30. CDSB3-3. SPECIFY SENSATION CDROM £20

SPECTRUM STUFF

AMIGA CDROM TITLES

*TITLE MAY NOT BE AVAILABLE AT TIME OF GOING TO PRESS




Over 5000 of imagine & lightweight objects, textures, Animations, Picture files, Postscript files, Colour fonts, etc. Only £19.99

GF5X SENSATION Vol.1



Includes over 500 all time classic spectrum games on one CD for CD32, CDTV, Zapgo etc. Includes actual Specicy emulator aswell. Only £14.99

SPECCY SENSATION CD



All 21 volumes of the Encyclopedia on one CD. Includes over 20000 file like pictures and sound files. Why fill a shelf when you can fit your new? Only £20.99

GROLIER ENCYCLOPEDIA



Every arcade classic you could think of. Invaders, Pacman, Asteroids, Frogger, Q-bert, Missile command, Tempest, Centipede and loads more. £9.99

***ARCADE CLASSICS CD**



Amiga LUCKY DIP. Lucky dip volume one contains a varied range of games, demo, clipart, sounds, samples, modules etc. £5.00

LUCKY DIP CD Volume One



The latest release from the Amint series. contains hundreds of tools, demo, objects etc. Now only £14.99

AMINET 5 March/April '95



All the best and most useful tools for your Amiga. Includes Hundreds of essential utilities. Just £3.99

***ESSENTIAL UTILITIES Vol.1**



The biggest collection of Clipart available EVER! Colour, B&W, GIF, EPS, Pagestream, GIF, PCX, BMP, TIFF, Pagestream, WMF. Over 90 categories. DOUBLE CDROM. A bargain at just £17.99

WORLD OF CLIPART CD



Over 4000 full colour Adult images for use on your Amiga or PC. OVER 18 Only £19.99

ADULT SENSATION CD



The latest release from the Amint series. contains hundreds of tools, demo, objects etc. Now only £14.99

AMINET 5 March/April '95



NEW!!! The Star Trek Multimedia CD. contains: Animations, Sound samples and hundreds of pictures. Only £27.99

STARTREK MULTIMEDIA CD



The biggest collection of Clipart available EVER! Colour, B&W, GIF, EPS, Pagestream, GIF, PCX, BMP, TIFF, Pagestream, WMF. Over 90 categories. DOUBLE CDROM. A bargain at just £17.99

WORLD OF CLIPART CD

Although still in Beta test, this latest revision already promises much more than simply cross compatibility. Unlike its predecessor, version 4 is by no means a simple face lift from a previous incarnation. In fact, even in its present form it promises, and indeed delivers the most important change since the program's initial launch as a standalone PAL compatible.

To kick things off we'll start with a stroll along the control panels. First up is the Scene section, which ironically only offers one major change – however it's still pretty dramatic.

As you can see, the panel now offers a frames per second setting – in addition to an end-beep option. Obviously, an FPS setting will make designing for a whole range of applications other than just video much more straightforward. However, there's an even more important underlying change. In the past, Lightwave calculated all its animation in meters per second. Now that's changed, with the introduction of FPS as the default measuring system for textural animation.



A small change that makes a very big difference to how Lightwave handles its textural animation

In this panel the variety of new features really start to show. It's here where the first plug-in, entitled Plug-in Disp appears, which in this case offers access for third-party developers to produce add-on displacement programs, automated object manipulation and deformation systems, and of course particle animation software.

Next-up comes *Unseen-by-rays*. This again is another major innovation, allowing selected objects to be rendered as non-traced elements even though they're part of a ray traced scene.

Unseen-by-fog is another newcomer. It does exactly as the title suggests, thereby allowing certain objects, backdrops and projection-mapped elements to play an uninhibited part in scenes which use the fog effect.

There are major changes across the board here, the first being a much improved reflection map option which includes Backdrop only, Spherical map, ray traced & backdrop, and finally ray tracing & Spherical. As you've probably guessed, the latter two offer a new and much more flexible method of adding realism to object reflections within a scene.

Yet another new addition is an Alpha shadow option. This provides an easy method of adding shadow from objects to real-world elements within projection mapped scenes - 'dancing on the desk effects' with added panache.

Next-up come more plug-in options, this time the spotlight falling on plug-in textures. As you may already know,



More plug-ins, the excellent new reflection features plus the glorious glow button

Steve Worley – the creator of the essence procedural texture collection for Imagine – is already hard at work porting essence

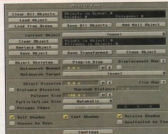
I can see the

Paul Austin oversees the refit of the most important software update of 1995, in an exclusive preview of Lightwave Version 4

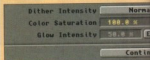
Like the images section, camera control hasn't really seen too many changes. In fact the only obvious addition is numerical input for aspect ratios. For the average videographer this isn't exactly earth shattering, but for anyone looking to work in film, or print, it is something of a godsend.

Although most of the control panels have undergone a minor reshuffle to accommodate the new features, none have altered dramatically – except the Effects/composition panel. This highly undervalued aspect of Lightwave has seen a dramatic change with an all-new layout providing a much clearer indication of exactly of what's on offer. Better still, there are plans for image processing plug-ins – which rumour has it will include a complete plug-in ImageFX module.

Aside from the physical change to the composition panel, it also holds some new features including foreground dissolve with envelope, plus a new high/low



The first of the all-important plug-ins, plus the excellent time saving addition of Unseen by rays



over as a Lightwave plug-in. Unfortunately, they won't ship as a standard feature of Lightwave V4.

The final newcomer in the Surfaces section is the long-awaited Glow Effect. Courtesy of glow you can add a user-definable aura or incandescence around any surface – no need anymore to slap lens flares everywhere if you need to fake some radiosity within a scene. Better still, Glow offers a means of easily generating some very tricky effects, such as realistic lasers, neon lighting and so on.

However be warned – adding glow does increase rendering times quite dramatically, as a separate image processing pass is required during render to generate the effect.

A spectacular object by Kevin Fleming proves there's more to Lightwave than amazing animation



Let there be...

At the top of the Lights panel sits another newbie to the Lightwave repertoire, namely Global Flare Int. Basically, this provides a means of ramping all the lens flares in a scene up or down automatically. The feature was specifically requested by makers of SeaQuest DSV to provide an easier method of controlling lens flares during power outpower ups and explosion sequences.

Lens flares are another area that's seen some major attention, with one of the biggest changes being the ability to user define Anamorphic distortion. Unfortunately, this can't be enveloped at present, but even as it stands it's pretty useful for generating the Star Trek TNG warp effect and other spatial anomalies.

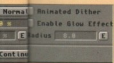
Add to that user-definable streak settings, which include the ability to set streak, intensity, density and sharpness, and you have a fairly comprehensive editing environment for all manner of flare effects.



A new look for an old interface, with new fader options and improved colour control colour feature for keying operations.

The only remaining element is the control system for the aforementioned Glow Effect. As you can see from the screen shot, configuring the new feature isn't exactly a tricky business.

The real surprises await in composition. However, there is a completely new section dedicated entirely to glow control



Seamless kinematic movement in a matter of minutes - impressive, no matter which way you look at it

On the record

Perhaps the most notable change in this section has to be the option for user-definable file naming conventions. According to NewTek this has been added to make Lightwave files more compatible with the filename requirements of other packages. I think it's been added to make life a little easier for the PC.

The only other new arrival is a rather mysterious Fader Alpha button, which without the aid of a manual remains something of a mystery. Best guess is that it's another add-on for improved keying during image composition.

Another notable change is improved support for third-party graphics cards. However, during testing I didn't notice any dramatic change with regards to the Picasso – although the interface was marginally faster when running a 800x600 display. Unfortunately, the preview option flatly refused to play back either wireframe or bounding box anims. Obviously with a Beta some bugs are to be expected and hopefully this one will be put to the sword prior to release.



No major changes, apart from a fresh approach to file names

Much improved user control over lens flare has to be the highlight of a seemingly unchanged lights panel



ScreamerNet

Unfortunately, power users aren't likely to be overjoyed when it comes to Network rendering. As it stands there appears to be no change to the basic ScreamerNet set-up.

One of the biggest disappointments of ScreamerNet in Lightwave 3.5 was the lack of batch rendering. Alas that's still the case. Let's hope the profusion of plug-ins will offer support for some sort of batch rendering add-on, but like all plug-ins it will undoubtedly mean additional expense.

Images as before

The image section is unique, because it's the only section not to boast any major changes – assuming you don't have access to a Flyer that is.

Not surprisingly, support for Flyer Clips has been added to the sequential image section. However, there's no direct support for the PAR, or any other third-party DV system. Plug-ins may appear later.

Inverse Kinetics

At first glance, life on the main layout screen seems almost identical to its predecessor. In fact the only obvious difference is the change from XY, XZ and ZY view buttons to a far more comprehensible Front, Top and Side selection.

However, look a little closer and you'll notice what has to be the most important new arrival in the entire package, and edit the mysterious Goal button. Believe it or not, this insignificant little gadget is the key to Inverse Kinematics. It's new, it's cool, and best of all it's really easy!

It's obvious that the arrival of features like bones, child bone and auto Key adjust in 3.5 was no accident. When these features – especially the bone options – are blended with the new found kinematic skills you arrive at spectacular end results. Unlike many 3D systems, kinematics in Lightwave is a dream to use and incredibly simple to set up. In the screen shot we've used bones to illustrate the technique, but you can use objects in exactly the same way.

Firstly you add the basic elements – which in this simple example was just two null objects. Then the four bones were added to the first null object –



A painfully simple example of Lightwave kinematics. But then again, that's the whole point! It's really, really, easy

that's where child bone option comes into its own. Next the bones were parented four to three, three to two and two to one, and finally bone four was told to treat the null object number two as its goal.

From then on it's playtime! You simply grab the second null object and move it around – at which point all the bones bend in classic kinematic style as they attempt to track the goal. I told you it was

easy! When you've arrived at a pose you like, a simple 'key all items' command makes it permanent. If you wish you can still move and edit the components in the kinematic chain without affecting their counterparts, or the basic kinematic relationship.

All things considered it is a near perfect solution. The only element missing is the ability to limit the movement, or angle of rotation for the various elements in the chain. For example, a forearm would happily revolve at the elbow and go straight through the upper arm and back out the other side. NewTek have admitted that kinematics still requires development, and are already working on the 'wish list' for the next revision.

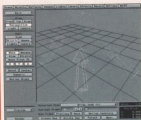
However, even with this minor inconvenience the overall implementation is excellent. For example, if we replaced null object one with a finger object, it would bend and flex just like the real thing. Thanks to the bones the object would also deform properly – given the necessary polygons. Seamless kinematic movement in a matter of minutes – impressive, no matter which way you look at it.

Added bonus

Although not immediately obvious, kinematics also provides a solution for another missing link in the Lightwave chain. In previous revisions it was impossible to target one object to another. However, thanks to Inverse Kinematics we finally have a solution. Because objects/bones don't need to be physically linked to each other, or the goal they're tracking, making one object 'watch and follow' another is really easy.

All you need is a parent, the tracking object and a target or goal object. You then parent the tracker and tell it to use the target object as its goal. Better still, you can target the goal object with as many trackers as you want, so, you could have every head in a tennis crowd follow the ball, or every gun on a ship track the incoming attacker.

Although this may not sound particularly revolutionary, it's a feature that many pro animators have been longing for. In fact, for many this will be just as important as full kinematics.



A simple example of kinematic tracking, as the arrows effortlessly follow the target around the scene

Glow

The all-new colour feature in action. Could this be the first of many image processing options to plug directly into the Lightwave interface?

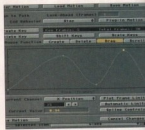
Plug-in motion

As already mentioned, plug-ins are going to play a big part in the future development of Lightwave. Nowhere will this be more apparent than within the move requester, which like its control panel counterparts has its own plug-in option.

From here you can expect the likes of WaveMaker, Dynamic Motion Module, Power Macros and Impact to make their mark with all manner of motion specific additions. According to NewTek's Brad Pebbler, a number of projects are well under construction, including a new module from the creators of Sparks which employs particle animation to generate realistic fur effects and other organic forms. Even NewTek are

getting in on the third-party act by enlisting the help of Elastic Reality – formerly known as ASDG. As a result, NewTek will license the rights to include over 20 ADPro-style loaders and savers within Lightwave V4.

Although not active in the Beta version, NewTek have already guaranteed that all the aforementioned loaders and savers will be a standard element, and will cater for all the major image formats, across all platforms.



Looks familiar, but when the plug-ins arrive motion control will probably be one of the biggest beneficiaries

And finally

Obviously, with the software still effectively 'under construction' there's still the odd feature which isn't exactly firing on all cylinders. However, even as it stands the new Lightwave has the makings of a truly spectacular product. Almost all the wish list elements have been included, in addition to a host of new features the quite literally put Lightwave on a par with the best that Wavefront, Alias and Softimage can offer. And all at a tiny fraction of their asking price.

Internally there's also very little to complain about. Lightwave 3.5 scenes, objects and textures all appear to work faultlessly with the latest version. And better still there appears to be no problem in porting Lightwave 4 files between formats.

Basically that's all that space will allow for this month. Next month we'll take a close look at the changes to modeller. However, if all goes well, we hope to bring you the first full review of the complete package, plus another very special Lightwave exclusive. Stay tuned...

CLOCK CARTRIDGE

Our unique and highly rated external clock cartridge will enable your Amiga to continually store the correct time and date in its own battery backed memory. Simply plug into the back of the Amiga and does not invalidate the warranty. Compatible with ALL Amiga.

IDEAL FOR
A1200



ONLY £19.99
(Plus £1.00 postage and packing).

SAVE £5
WHEN YOU
BUY BOTH

HARD DRIVES

Our high speed 2.5" IDE hard drives for the A1200 & A600 computers come complete with fitting cable, screws, partitioning software, full instructions and 12 months guarantee. All drives supplied by us are tested, formatted, partitioned and have Workbench installed for immediate use. Fitting is incredibly simple; if you can plug the mouse into the mouse socket, you will be able to plug the hard drive into the hard drive socket!

Free while-you-wait fitting for personal callers.

20mb	£ 89.99	210mb	£194.99
40mb	£ 99.99	258mb	£204.99
85mb	£109.99	344mb	£249.99
120mb	£134.99	405mb	£299.99
170mb	£179.99	540mb	£449.99

FREE

"HOW TO FIT YOUR HARD DRIVE"
video and Stakker disk to increase the
drives capacity with every
hard drive purchased.



siren

**No.1 for
mail order**

SALES HOT-LINE

FREEPHONE

0500 340548

ENQUIRIES: **0161-796 5279**

FAX: **0161-796 3208**

MEMORY EXPANSIONS

A1200 32 bit FASTRAM memory expansions feature a battery backed clock and an accelerator FPU socket. Easy trapdoor installation.

2mb	£129.99	33mhz	68882	FPU	£59.99
4mb	£179.99	40mhz	68882	FPU	£79.99
8mb	£319.99				

NEARLY
DOUBLES THE
SPEED OF THE
A1200



A600 memory expansions

1mb without clock **£34.99**

1mb with clock **£39.99**

SAVE £10.00

if you purchase an FPU at the same time
as a memory expansion.

**NEW
RANGE
APOLLO
POWER HARD DRIVES
& ACCELERATORS**

APOLLO A1230 Accelerators 1230 TURBO

Turbo 50 version includes 68030 CPU+MMU 50mhz
Turbo 28 version includes 68030 CPU+MMU+FPU
28mhz. Up to 64mb of Autoconfiguring Fastram
72mb/sec data transfer rate SCSI2 controller built
in with transfer rates up to 3.5mb/sec.

Real time battery backed
clock. 2 SIMM sockets for
72pin simms. 1, 2, 4, 8, 16 or
32mb simms. Turbo 50 light
includes 50mhz 68030.
FPU socket, 15mm
socket and connector for
optional SCSI2 adaptor.



A1230 Turbo 50 light	£199.99
A1230 Turbo 50	£269.99
A1230 Turbo 28	£189.99
4mb SIMM	£139.99
8mb SIMM	£289.99

**50 MHZ
68030
FROM
£199.99**

APOLLO A500/1500 HARD DRIVES

IDE interface for Amiga A500/A500+ and A1500 computers.
Easy to fit. Uses standard 3.5" IDE hard drive.

Interface only	£79.99
Interface with 100mb hard drive	£189.99
Interface with 365mb hard drive	£229.99
Phone for other sizes.	
A1500 IDE/SCSI/IRAM card	£129.99



NEW RANGE

A500/A500+ & A1500 ACCELERATORS

68030 processor complete with 68881 co processor
running at 28mhz speeds up your A500 by ten times!
Up to 4mb of RAM can be added. Plugs into the
expansion connector and has a through connector for
other peripherals. Can also be attached inside the Apollo
A500 hard drive interface.

A500 Accelerator	£149.99
A1500 68030-68882 25mhz+SCSI	£349.99
A1500 68030-68882 50mhz+SCSI	£499.99



NEW RANGE

ALSO AVAILABLE

3.5" HARD DRIVE FITTING KIT (A1200)	£17.50	INTERNAL REPLACEMENT FLOPPY DRIVE	£44.99
A600/A1200 CD ROM drive (POWER)	£191.99	EXTERNAL 3.5" FLOPPY DRIVE	£54.99
		GOLIATH HIGH OUTPUT POWER SUPPLY	£44.99

**Excite
your
Amiga**

**No.1
for Amiga
in Manchester**

Order **NOW** for immediate despatch

FREEPHONE

0500 340548

(for credit card sales only)

0161-796 5279 for enquiries
or fax **0161-796 3208**

**Open 9am to 6pm
Monday to Friday.
Saturday mornings
9am to 12pm.**

Access, Visa & Switch accepted.

Send cheques
(made payable to Siren Software).

Postal Orders

or credit card details to :-

**Siren Software,
178 Bury New Road,
Whitefield, Manchester,
M45 6AF England**

Personal callers welcome.
Please phone first to check
availability of any item.

Directions

From M62 junction 17, head toward
Bury. We are 50 yards
on the right after the third set
of traffic lights, opposite Masons pub.

All prices include VAT, postage and
packing will be charged at
£3.50 per order (U.K.), £7.50
Europe and £12.50
rest of the World.

We have now moved!
Come and visit us at
our new showrooms

Visage



Computers

(Dept AC)
27 Watnall Road
Hucknall
Nottingham
NG15 7LD

If you have found a
cheaper price
elsewhere in this
magazine, call us
and we will do our
best to beat it.

To Order
Telephone:

**(0115)
944 4501**

AMIGA PD

PARTY '94 DEMOS

- 1 Andromeda - Nexus7 AGA
- 2 Bomb - Motion Origins AGA (2)
- 3 Sanity - Roots AGA
- 4 Polka Bros - Twisted AGA 4mb (4)
- 5 Skirts - Soul Kitchen AGA (2)
- 6 Rebels-Whammer Stammer AGA(3)
- 7 Melon - Ninja AGA
- 8 Oxyron - Killing Time AGA (4)
- 9 Dig Dreams-Eternal MadnessAGA(2)
- 10 4K Intro

We also stock: Utilities, Fish 1-1000, Assassins 1-220, F1 Licenseware 1-44, and are now the sole distributor for LSD Legal Tools from #152 onwards. The LSD Legal Tools cost £1.25 per disk.

DISK PRICES & POSTAL RATES

DISKS	PRICE PER DISK	P&P
1-10	£1.00	£1.00
11-25	£0.95	£1.25
26+	£0.90	£1.50

HOW TO ORDER

BY POST - Please make cheques & postal orders payable to "VISAGE COMPUTERS". Please allow 5 working days for cheques to clear.

BY PHONE - Orders taken from 9.30am to 5.30pm.

AMIGA HARDWARE

HARD DRIVES

WESTERN DIGITAL

3.5" IDE

210MB	12ms	£159.99
340MB	12ms	£169.99
420MB	12ms	£179.99
540MB	12ms	£229.99
850MB	10ms	NEW! LOW PRICE £269.99
1 GIG	10ms	PRICE CRASH!! £349.99

QUANTUM

3.5" IDE

270MB	12ms	£139.99
420MB	12ms	£159.99
540MB	12ms	£189.99
730MB	10ms	£239.99
1-GIG	10ms	£299.99

3.5" SCSI 2

270MB	12ms	£199.99
540MB	12ms	£239.99
1-GIG	10ms	£549.99
2.1-GIG	10ms	£999.99

IBM

2.5" IDE

80MB	16ms	£109.99
130MB	16ms	£129.99
170MB	16ms	£159.99
340MB	12ms	£239.99
520MB	12ms	£299.99

All 2.5" Drives include IDE cable

3.5" IDE

365MB.....	12ms.....	£149.99
548MB.....	12ms.....	£189.99
3.5" Hard Drives will fit into the A1200/4000 (cable required for A1200 £19.99 - SEE ACCESSORIES). When you purchase your drive from us we can fit it for a charge of £19.99 (including collection & delivery). Please confirm current prices & availability before ordering.		

EXTERNALLY Cased DRIVES

1200 OVERDRIVES

270MB	£239.99
420MB	£249.99
540MB	£279.99
730MB	£349.99
1-GIG	£474.99

A500 ALFA POWER EXTERNAL

270MB	£234.99
420MB	£259.99
540MB	£289.99
730MB	£349.99
1-GIG	£489.99

Alfa Power HDs plug into the DMA port of the A500. Can be populated with up to 8MB of fast ram. Requires KickStart V2+.

SCSI - CD32 EXPANSION MODULE

Turns your CD32 games console into a full Amiga computer.
With FREE GoldFish CD £194.99
Keyboard for SX1 £37.99

GOLIATH 200W POWER SUPPLY

High powered PSU for the Amiga. Ideal replacement. Only £44.95

LOOK AT WHAT YOU GET FROM OUR HDs

Drives come ready to run prepped and formatted with WB

Installed with 100MB of FREE top quality Public Domain Software.

Only quality drives used, with at least 1 year warranty (Most 2 to 5 year).

PRINTERS

EPSON

Stylus Colour Inkjet Printer
Photographic quality output when used with optional 720DPI printer driver (coated paper required). Built in auto-sheetfeeder.
Only £429.99

STUDIO 2 - PRINTER STUDIO

Professional print studio for the Amiga. Enhance the output of your printer inc 720 DPI on EPSON STYLUS Colour. Only £49.95

Canon

BJ10sx Low Cost A4 BubbleJet 360 DPI £179.99
BJ200 Mono BubbleJet Printer 80 Page Auto Sheetfeeder. £239.99
NEW...BJC4000 Colour BubbleJet Colour 360DPI - Mono 720 x 360 DPI. An Amazingly Low £399.99

CDROM DRIVES

MITSUBISHI QUAD SPEED

Internal 600KB Per Second Transfer Rate £199.99
Requires Tandem CDROM Controller £69.99

CD32 CRITICAL ZONE PACK

32 Bit CD Console. With 7 games inc Cannon Fodder, Ultimate Body Blows & Liberation. Only £239.99

IN STOCK NOW!!!

A1200 BLIZZARD 1220/4 NEW!!!

Make your A1200 faster than an A4000/30 with this 4MB accelerator. Fits into the trap door. Expandable to 8MB RAM.
NOW AVAILABLE!!! £229.99

A1200 BLIZZARD 1230/4 MKIII

50MHz 68030+MMU.
NOW AVAILABLE!!! £229.99
4MB RAM for A1200 £130.00

CYBERSTORM 040/40

Dramatically speed up your A4000 with this replacement daughterboard £99.99

MODEMS

ALTO 14,400 External fax modem £139.99
ALTO 28,800 External fax modem £229.99
Fax class 3, V34 £229.99
Modems come supplied with Cables, manuals and Comms software.

MEMORY SIMMS

4MB 72 Pin 70ns	£139.99
8MB 72 Pin 70ns	£229.99
16MB 72 Pin 70ns	£449.99

DISK DRIVES

• Amitek Amiga External	£59.00
• A500 Internal	£44.00
• A600/A1200 Internal	£49.00

FUSION GENLOCK

Mixes video & computer graphics with ease. Inc. free Scala HT100 £99.99

RAM BOARDS

Machine	Memory	Clock	Price
A500	0.5MB	No	£20.99
A500	0.5MB	Yes	£25.99
A500+	1MB	No	£30.99
A600	1MB	No	£30.99
A600	1MB	Yes	£40.99
A1200	2MB	Yes	£134.99
A1200	4MB	Yes	£189.99

PRO-GRAB 24RT

PARALLEL PORT VERSION

24BIT Real-Time Colour Digitizer. A1200/4000 Recommended. 2.0 & 1.5 MEG Required. Only £129.99

PCMCIA VERSION

Same Specification as above. Increased speed. Only £159.99

ACCESSORIES

3.5" - 2.5" HD Lead	£19.99
Canon BJ-10 Refills	£12.99
Midi interface	£19.99
MegaMouse 400DPI	£14.99
Parnet Lead Inc Software	£10.99
Mouse Mats	£1.99
Amiga Dustcovers	£4.99
Parallel Printer Cable	£7.99
50 Capacity Disk Box	£3.50
100 Capacity Disk Box	£5.99

TDK FLOPPY DISKS

Call for best prices on TDK DS/DD. From .30p each

SQUIRREL SCSI2 INTERFACE

Fits into the PCMCIA interface of your A1200. Fast SCSI2 interface to connect CD Drives, Hard Drives, Etc. With Software. Just £69.99

DELIVERY CHARGES

STANDARD (3-4 DAYS)	£3.95
NEXT DAY COURIER	£5.95
SMALL ITEMS	£1.95

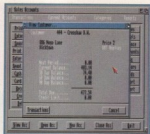
All prices include VAT
Prices are correct at time of going to press



CALL (0115) 944 4501 TO PLACE YOUR ORDER

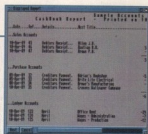
Every small business owner knows that cost cutting is a key element to staying afloat in financially hard times. Clear and concise organisation of costs, expenses and wages are vital. Computers over the last few years have helped businesses move from forests of intimidating paperwork into a single machine with hopefully two hard drives – one to use, the other for back-up purposes.

At present the PC rules, dominates and monopolises the work place. Whether it be a 286 or a Pentium, many companies have made the switch. What about the



Check up on customer details and whether they are falling behind on payments

Comprehensive listings and cross referencing can be called up with ease in Easy Ledgers 2



Easy earnings

alternatives, though, to the grossly expensive kit needed to run some of the more user friendly, graphically pleasing packages that have a resounding price tag starting from £150 themselves?

There's the Mac which, unfortunately at the moment, doesn't have any real accountancy programs to mention. Then there's the Amiga – a fraction of the cost of a PC and now, with the arrival of Easy Ledgers 2 at a mere £29.99, a very viable contender as a business machine for company accounts.

Coming on a single disk, the program is hard drive installable only but very simple to set up. To stop the likes of pirates sinking their teeth and hacking claws into the made-in-Australia title, a dongle has been included to slot into the joystick port on the Amiga, and a 208 page manual, nicely binded and an essential addition, has been included to wear any potential thief's photocopy out.

This is divided into four principal 'books', but despite the excellent instructions, the user is going to need their imports sorted from their exports to get cracking with

the wealth of facilities open to them with Easy Ledgers 2.

The four books are purchases, sales, ledgers and jobs. Clicking on one of these takes you into their specific sub-directories. Sales and purchases are obviously there to keep track on all the selling and buying that goes on in a thriving company, and invoices are easily produced with a few keyboard entries.

The Ledger is vital for detailing credits and debits, the Inventory holds all details of stock prices and quantities and, finally, the jobs icon gives you a breakdown of all work finished, in progress or just simply a quote to a potential customer.

COMPLEX

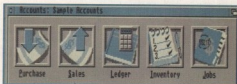
It has to be said that while the package is easy to use once set-up, actually doing so is a complex affair. At the end of the day though, it doesn't matter how user-friendly a package is – it's going to take time to master anything that deals with facts and figures of this nature.

There are masses of nominal codes for users to apply their own values to and there's little chance of ever actually running out. Customer lists, receipts, balances and credit card details can all be stored, shown on screen, exported to disk to be used on other packages, and printed out to show those dreadfully nice people at the Inland Revenue when they come knocking.

If I have any criticism it would have to be the ledger. On most packages, when altering the balance you would not be allowed to go out of balance at any point without the computer telling you so. In Easy Ledgers 2 you can do all your readjustments, leave and then only be told when you try and move into another section that you're in the minus figures.

This may sound like a minor detail, but when entering large amounts of figures it's always highly beneficial to be told at the time

With Britain edging its way out of those crippling recession-stricken years, Adam Phillips looks at a package that'll aid small businesses invaluable



The four books' panel which forms the hub of Easy Ledgers 2. Click on one of the icons and off you go

if something is wrong, and not later. Other than this though, for small businesses and dare I say it, medium-sized businesses as well, Easy Ledgers 2 makes perfect economic sense and has to come highly recommended. Coupled with a low price and a substantial amount of facilities that could fill several pages of this mag, accountancy has never had it so good.

Resentful



Fortunately for Easy Ledgers 2, this package isn't an example of a jack-of-all-trades, master-of-none. Produced by some of the programmers that created utility masterpieces such as Directory Opus, this all-in-one accountancy software has created something of a stir in the accountancy department at IDG simply because, on first impressions for the price, they've been impressed by the value for money on offer here.

Indeed, as you read, resentful looks at expensive PC-based hardware and software are being exchanged.

The bottom line

Product: Easy Ledgers 2

Price: £29.99

Supplier: Wizard Developments

Telephone: 01322 272908

Ease of use	8
Implementation	9
Value for money	9
Overall	9

The missing link

There are lots of tasty peripherals to add to your Amiga, yet for years owners have been denied a cheap, effective way of using them. Gareth Lofthouse reports on how Hi-Soft's Squirrel bridges the gap

Storage is an issue that every Amiga enthusiast will have considered in one way or another. It may be that they're interested in benefiting from the gigabytes of sounds, pictures and files available on CD-ROM, or they may require a second hard drive to supplement their internal HD. Equally, they may be attracted to portable storage media like Syquest or Flopticals.

For a long time there have been plenty of high quality add-ons available, the best of



Up to seven storage devices can be added, with a floptical drive being just one alternative



New horizons

To get an idea of just how much flexibility the Squirrel allows for, here are some of the devices you could be adding to your Amiga.

1. Hard Drives: SCSI is very fast, but limitations with the hardware mean you won't get the benefits of ultra-speedy Hard Drives. Nevertheless, that extra space could prove invaluable.

2. CD Drives: Hi-Soft have their own range, but you should be able to use any CD-ROM Drive – including the latest jukebox disc changers!

3. Syquest Drives: High-capacity storage media with the advantage over your hard drive of being portable.

4. Magneto opticals: Again cartridge based, but this media uses a laser to read/write information. Rather a pricey option.

5. Tape Streamers: Most affordable method of backing up

large volumes of data

6. Printers: Not directly supported in the software, but if you do have a printer with a SCSI interface, connecting it for use should be simple.

7. Scanners: Some scanners are also SCSI compatible – and that makes seven devices for starters.

which were SCSI-compatible devices. Unfortunately, A1200 and A600 owners had no truly affordable way of using SCSI devices, which meant their options for expansion were severely limited.

Now, Hi-Soft have produced the Squirrel SCSI device as an answer to this problem. Named after the famous storage-hungry animal, this utilitarian-looking device certainly isn't cute, but it could prove invaluable.

The Squirrel package incorporates the device itself, software to run it, plus a couple of disks worth of useful PD programs applicable to using the product. Meticulously, since SCSI chaining isn't always as simple as it may appear, Hi-Soft have also included an extremely comprehensive manual.

The hardware itself is very small, consisting of a black card connected to a SCSI cable. This cable is rather short but that's sensible when you realise the total length of the SCSI chain's cabling shouldn't exceed a certain length.

The Squirrel fits into the otherwise unused PCMCIA slot on the side of your Amiga. Physical connection is a precarious procedure because the pins inside your machine are extremely delicate, but that's a problem with the Amiga hardware rather than the SCSI

device. Using the PCMCIA slot as the connection port has the benefit of leaving the usually more valuable trapdoor slot free.

Unfortunately, the PCMCIA interface can interfere with some memory expansions using the trapdoor, but again that's an Amiga hardware problem rather than anything to do with Hi-Soft. At least this connection method avoids the need to open up your Amiga, which means there's no danger of invalidating the warranty.

The PCMCIA is supposed to allow for 'plug and play', which means you should be able to plug and unplug the Squirrel whether your Amiga is on or off. This could be slightly misleading when it comes to attaching the SCSI peripherals, however, since the manual recommends that the peripherals and the computer are turned off during the procedure. The best advice is to err on the side of caution.

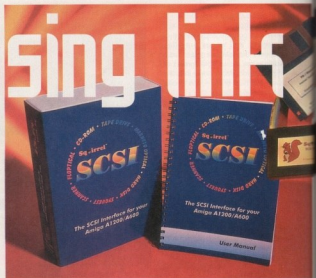
GUIDELINES

Setting up a chain of peripherals (SCSI allows up to seven to be attached) will generally be a problem-free process, providing some basic rules are followed. For each SCSI device on the chain you must select a different number between nought and six to allow them to communicate together without conflict.

This is rarely a difficult task since virtually all SCSI devices have little switches on the back allowing adjustments to the ID number to be made quickly. The only possible problem may arise if there's no external switch at all – however, there is probably a way of using the peripheral even if it means using the device as the only machine in your chain.

Termination, on the other hand, can be a more problematic issue. Basically, each end of the chain must be terminated to avoid 'bounce back' interference. Trouble arises if, for example, an internally terminated device is placed in the middle of the chain or one end is not terminated at all.

Thankfully, Hi-Soft have not taken a great





deal of technical knowledge for granted, so the ring-bound manual provided is very comprehensive and gives clear explanations of the more difficult areas of SCSI chaining. Add to that the fact that you will get free technical support for one month after purchase and it seems even a patient simpleton will be able to overcome problems should they occur.

Tecchie, and those with the need for speed, will be pleased to know that the transfer speeds achieved through the Squirrel are very reasonable – a rate of 1.2 Mb per second can be attained on the standard Amiga. The box claims that 3 Mb/sec is possible on an accelerated machine, but unfortunately 1.6Mb



is closer to the mark at the moment. This is not, as some have claimed, the fault of the PCMCIA slot (which should allow for a transfer of 3Mb per second) but rather the fact that faster hardware would inevitably prove more costly to produce. Despite this limitation, the Squirrel will allow for transfers at speeds double that of your IDE drive, and for 95 per cent of us that will do very nicely indeed.

HELPING HAND

That's the hardware pretty much dealt with, but of course the software supplied is equally important. Installation couldn't be easier, and again the manual supplements the Commodore installer program with helpful advice concerning the questions you will be asked during the process.

Most important is the inclusion of the vital software drivers which allow devices to be used. This means you should be able to use any SCSI CD-ROM drive, for example, which is a big bonus since the likes of Pioneer or Toshiba only supply driver software for PCs and Macs.

There's no need to mess around with the software once it's

PD software is supplied, including a number of audio players like Jukebox

installed. Every time you plug your Squirrel in it will mount and dismount devices on the chain automatically.

For the game players out there, the software is even better thanks to the in-built CD32 emulator. Until very recently, A1200 users who wanted to play CD32 games could only do so using a Zappo drive which, while being a perfectly good product, suffered from the limitation of not being a SCSI unit.

Now, however, the Squirrel allows you to buy any CD-ROM Drive and it will run the majority of CD32 titles available. It should be remembered, however, that A400 users will not have this option available since they lack AGA graphics capability.

As a final bonus, there are also two disks of PD software which include a variety of audio players so you can use the drive for music CDs. When you realise that computer drives are often better for audio reproduction than the average Hi-Fi CD player, thanks to their greater accuracy, such additions begin to look very handy. There's also a CD to HD sampler for users of music editors.

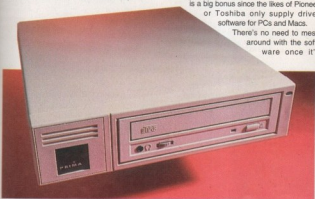
Verdict

Considering its potential, this is undeniably a very humble, not to mention dull piece of equipment to look at. I just hope this doesn't prompt any Amiga owners to turn the page before they've considered what the Squirrel can do for them.

It's hard to think of any package in the Amiga's history that has done so many things for such a small amount of money. Not only is SCSI now an affordable option for A1200/600 users, but it allows them to use a huge range of peripherals.

Add to that the CD32 emulation software and the quality of the documentation, and this product's exemplary standards become clear. Yes, the Squirrel is small and modest – but if you ever want your Amiga to evolve, do not overlook this product.

Everyone wants to get into CD Rom, and the Squirrel gives you the biggest range of options



SCSI 2: What and why?

The A1200 and A600 include an IDE interface as it is, so you may be wondering what's wrong with this method of connecting peripherals? Well, the problem is that the IDE interface was originally designed with just hard drives in mind and consequently suffers from marked limitations in comparison to SCSI. IDE, for example, can only control two devices at any one time, whereas the Squirrel can handle up to seven.

SCSI stands for Small Computer System Interface, and is an international standard allowing different hardware devices to talk to each other. By now, most people are aware that SCSI represents the most desirable and

professional method of expanding their computer.

The difference between SCSI 1 and SCSI 2 protocols, however, may leave people with some confusion and uncertainty. Since the Squirrel is a SCSI 2 device, owners of peripherals that use the older standard may fear compatibility problems.

Thankfully they need not worry. SCSI 2 is a new standard which makes improvements in the speed and power of the system, but compatibility was retained with the existing SCSI chips. So, even if you do have a SCSI 1 device, you should have no problems using it with the Squirrel.

SYSTEM ESSENTIALS

RED = Essential BLACK = Recommended



A1200 or A600

The bottom line

Product: Squirrel SCSI device

Price: £69

Supplier: Hi-Soft

Tel: 01525 718181

Ease of use	8
Implementation	10
Value for money	10
Overall	9

POSTAGE INFORMATION
Please include 50p Postage For
UK Disk Orders And 75p
Per Item For CD Orders
(Most Postage Payable To Us)
Europe Add 10% For Disk Orders
& £1.50 Per CD (Max £5.00)
R.O.W Add 20% For Disk Orders
& £1.50 Per CD (Max £5.00)
All Orders Sent 1st Class Or Air

1st Floor Offices, 2/8 Market Street
Wakefield, West Yorkshire WF1 1DH
TEL (01924) 366982 FAX (01924) 200943
Monday To Saturday 9.00 am To 5.30 pm
Answerphone Call All Times

£11.00
PER DISK

AMIGA PUBLIC DOMAIN

3620 PILER V3.23
Superb Directory Opus Clone
3618 PENGU DEMO
Superb Penguin Clone!
3618 FINDING THE TRUTH 3
LSD Magazine
3617 ROBBS HOT STASH #35
Always Red Hot With
3616 ROBBS HOT STASH #34
Another Superb UHS Comp
3615 (ABCD) CHARLEY CAT 11
"Gardening Cat" 2.5MB Anim
3614 TURBOCAT
Shwarze Cat Disk Maker
3613 TRILEMMA V3.0
Benny But Great Puzzle Game!
3612 THIRD DIMENSION #11
3D Cone Kit Disk Mag
3611 (AB) CYBERGAMES
Excellent Best Em Up!
3610 JUMP EM
Bouncing Ball / Puzzle Game
3609 INFECTION
Excellent Puzzle Game
3608 DEMON V1.01
Patience Type Card Game
3607 FLOWERS CARDSSET
For Klonika 1.2 or 3
3606 PHOTO CD CARDSSET
For Klonika 1.2 or 3
3605 BARTENDER V1.1
Superb Cocktail Database!
3604 BEGINNERS GUIDE TO WB3
Handy Easy Tutorial For WB3
3603 GFX UTILS & ICONS
Includes Icons etc
3602 NEW UTILS #9
Collection Of Useful Utils
3601 NEW UTILS #8
Includes VChecker 6.52
3599 (AB) FINDING THE TRUTH
Diary 1 & 2 About Niles & UFO
3598 ROBBS HOT STASH #33
Stacks More Superb Utils!
3598 PRETTY WOMAN CARDSSET
For Klonika AGA
3597 FINAL WRAPPER V3.0
Includes Loads Of Macros Tool
3596 DELUXE GALAXY V2.5
Mega Mega Mega Game!
3595 PUCKMAN
Arcade Perfect Pacman!

3594 PARNET HD!
The All New Parnet!
3593 LEAGUE SOCCER CARDS V1.1
Soccer Cards Game
X3592 JPEG AGA V2.1
Best AGA Jpeg Viewer
3591 CONNAMA PREVIEW
Playable Puzzle Game
3590 (AB) HOLIDAYS
Tutorial On Good Photography
3589 (AB) PHOTO TECHNIQUES
Good Photo Tutorial
3588 IMAGEDESK V1.2
Create Thumbnail Pics
3587 BOING V3
Tring On A Spring Game
3586 ROBBS HOT STASH #32
Includes BUCOO Drivers!
3585 NEW UTILS #7
More Srs & Bats
3584 ROBBS HOT STASH #31
Another Hot Utils Collection
3583 AGA SPECTRY EM V1.6b
Includes A Few Games Tool
3582 NEW UTILS #6
More Up To Date Utils
3581 INTERNET UTILS
Includes IRC Chat Client
3580 (AB) PAGESTREAM 3P UPDATE
Updates To 3P From 3D
3579 ROBBS HOT STASH #30
Another Packed Utils Disk!
3578 FRACTALS CARDSSET
3577 MARILYN 2D CARDSSET
For Klonika 1.2 or 3
3576 DRYXKO
Create Klonika Sets With ImageFX
3575 ACHILLEUS CARDSSET
3574 DRAGONALANCE CARDSSET
3572 VAPOR CARDSSET
3571 CINDY 2 CARDSSET
For Use With Klonika AGA
3570 ROCKET V2.25
Great Thrust Type Game
3569 (AB) MAG E ISSUE 7
Popular SD F1 RPG Mag
3568 LETHAL FORMULA
Graphic Adventure Game
3567 POKER MANIA
Good Computer Poker Game!
3566 F1 DEMOS
Inc. Erik, Jr Artist & Ultimate Quiz

3565 THIRD DIMENSION #10
The 3D Cone Kit Disk Mag
3564 SAMURAI SHOWDOWN
Demo Version. Best Em Up
3563 GRAPHIC UTILS #2
Utils & Magic WB Icons
3562 (AB) TRAVEL GUIDE
Travel Guide To The World
3561 CYBERPUNK NOW #4
Lots Of Cyber Related Assets
3560 NEW UTILS #5
Latest Utils Sheet!
3559 DESERT ISLAND DICK
Furry B&W Animation
3558 (AB) MAD HOUSE
Superb Lucas Arts Style Adv.
3557 ROBBS HOT STASH #29
Includes Viruschecker 6.50
3556 FINAL WRITER PATCH
Speeds Up Final Writer By Up To 400%!
3555 WORLD HISTORY TIMETABLE
Hyperbook History Program
3554 (AB) DOVE DEMO BY ABYSS
Superb Demo From Party 4.
X3553 (AB) VIRTUAL DREAMS
Best Ever AGA Demo! HD Required
3552 (AB) MAGNIFIC OBJECTS
Stewards Objects. Xwings, Twings Etc
3551 MUI V2.3
Latest Magic User Interface
3550 (AB) LION KING CLIPART
Lots Of Cuts H Res Clips
3549 SUICIDE MACHINE
Operation Wolf With Funny Animals!
3548 VIRUS WORKSHOP 4.7
Kill Those Nasty Viri
3547 AGA ICON DISK
More 256 Colour Icons
3546 HD GAMES INSTALLER 2
Installs Over 20 Different Games
3545 PHASE 4 INDEXER
Adds Front End. 2 Drives Req.
3544 JUMBO JAM
Overhead Drive Game
3543 INTERNAL COMBUSTION
Another Super Sprint Clone
3542 ROBBS HOT STASH 28
Another Hot Utils Clone
3541 ROBBS HOT STASH 27
Includes Latest Virus 1
3540 MAGNIFIC BITE & BOBS
Inc. Arcs. Sprints For Image 3

3539 GAMES DISK
Top Hit Wily & Challenge
3538 MAGIC SELECTOR V1.4
Changes Backdrops & Adds SFX
3537 TERM V4.3 EXTRAS
Includes Libs & Locals
3536 TERM V4.2 030a-VERSION
Arrived with NO Installer!
3535 TERM V4.2
030 Version With Docs
X3534 LION KING CARDSSETS
For You Know What!
3533 THIRD DIMENSION #9
3D User Magazine
3532 DYSG-STIK V1.1
Superb Disk Label Printer!
3531 ON FORM V1.33
Superb Invoice Print
3530 ADDRESS PRINT V4.4
Address & Mailing Prog
X3529 PERIHELION CARDSSET
Fantasy / Sci Fi Cardset
X3528 RIPPING WARMS CARDSSET
British Cartoon Raunch Cardset
X3527 SHERYLIN FENN CARDSSET
Stacy Klonika Cardset
X3526 VIFER AGA
6 Player Lull Cycles. Shwarze
3525 ROBBS HOT STASH #11
Loads Of New Games
3524 MINIMORPH V1.1D
Latest Minimorph Package
3523 MAGIC VIB ICONS
Yet Another Disk Full!
3522 ROBBS HOT STASH 26
Includes Exotic Ripper V3.0b
3521 NEW UTILS
Includes new .jpeg Datatype
X3520 NORMAL CARDSSET
For Klonika AGA
3519 VISUAL ARTS V2.0
Very Powerful GUI Designer.
3518 ZAXXON
Superb 256 Color Conversion!
X3517 (ABCD) KILLING TIME DEMO
Stunning 4 Disk AGA Demo
X3516 (ABCD) THUNDER AGA
Superb AGA Demo! Needs Fast RAM
X3515 NEXUS 7
AGA Demo By Andromeda
X3514 (AB) MOTION OMNIN 2
More AGA Excellence

AMIGA CD ROM'S

F1 LICENCEWARE

ILLUSIONS £29.99
Hundreds Of Random Stereograph
Pictures Complete With The Utils
You Need To Create Them!

SPECCY SENSATIONS £19.99
Full Of Nostalgic Spec Games
Complete With Emulators For
Both Amiga & PC!

LSD COMPENDIUM VOL.2 £19.99
Sequel To The Well Received
LSD CD. Improved Menu. More
AGAs Stuff, Online Degraded Etc.

ANIMATION CD [Double] £19.99
2 CDs Contain A Plethora Of
Superb Amiga Animations. Even
Includes Converted PC Anim!

THE LIGHT WORKS £39.99
Superb Collection Of Imagine,
Cinemaid & Reflections Objects
And Textures. Many From Tobias
Richer! Utterly Stunning Stuff!

AMINET #1 March 1995 £14.99
This Release Contains Over
400MB Of NEW Data Including
Over 1000 Games! Since No. 4!

AMINET SET [4 CDs] £29.99
Annets 1 to 4 Recombined With
No Duplication! This Set Even
Includes NEW Amnet Data!

3D ARENA £19.99
Imagine, Lighthouse & Real 3D
Objects Galore From The 24 Bit
Club In Scotland!

- F1 072 (4) SEAMUS O'MALLY
- F1 071 MUSIC 2 TAB
- F1 070 SOUNDS COMPLETE #1
- F1 069 OCCH
- F1 068 AQUANAUT
- F1 067 (2) BUBBLE TROUBLE
- F1 066 (3) G.R.A.C.
- F1 065 ULTIMATE QUIZ #2
- F1 064 GAME MUSIC VOL.#1
- F1 063 SPEEDRIS
- F1 062 JUNCTION ARTIST
- F1 061 CAPTAIN CANNAGE
- F1 060 THE ULTIMATE QUIZ VOL.1
- F1 059 PUNTER V2.0
- F1 058 BLAST EM
- F1 057 COUNTRY MATHS
- F1 056 GIDDY 1
- F1 055 (3) ALIVE
- F1 054 OFF YOU GO
- F1 053 WHEELIE
- F1 052 OPERATION FIREFORM
- F1 051 (2) TROUCHING WHEEN
- F1 050 (2) ABS. REG. GUIDE AMOS
- F1 049 (3) AMOS#NE #3
- F1 048
- F1 047 F1 MUSIC VOLUME 4
- F1 046 MAZE MADNESS
- F1 045 T-TEC MAZE
- F1 044 (3) BLACKBOARD V3.0
- F1 043 (6) MAGPIES CLIPART
- F1 042 (2) KIDS CLIPART
- F1 041 GP MANAGER 94
- F1 040 (2) HENRY'S HOUSE
- F1 039 TWO CAN PLAY
- F1 038 AMBASSADOR PRO
- F1 037 SUPER BUNDO V2
- F1 036 MUSIC CASCADE
- F1 035 (3) CHILLY CHAVEZ
- F1 034 F1 CHILLY LEVE V2
- F1 033 POWERPLANNER V1.1
- F1 032 TROU POWER V2.0

- F1 031 POWERBASE V3.30
- F1 030 FORTRESS 1 MEG
- F1 029 (2) AERO DE NEMIX
- F1 028 CLONED V1.0
- F1 027 THE STATES OF EUROPE
- F1 026 TAKE A LOOK AT EUROPE
- F1 025 (2) ART SCHOOL V1.1
- F1 024 MATHS MOJO
- F1 023 PICK N STICK
- F1 022 ASK ME ANOTHER
- F1 021 MULTIVERSE YANTZEZ
- F1 020 IMPACT
- F1 019 TOUCH N GO
- F1 018 (4) RELICS OF DELDRONEY
- F1 017 F1 MUSIC VOL.#3
- F1 016 ART SCHOOL
- F1 014 TOTS TIME
- F1 013 THROUGH THE RED DOOR
- F1 012 OBLITERATIVES
- F1 011 IFF VECTOR BALL DESIGN
- F1 010 KARATE MASTER
- F1 009 THE RAINY DAY DISK
- F1 008 F1 MUSIC VOL.#2
- F1 007 FORTRESS (2 MEG CHIP)
- F1 006 (2) BLACKBOARD V2
- F1 005 F1 MUSIC VOL.#1
- F1 004 SUPERFUN
- F1 003 AMOS FOR BEGINNERS
- F1 002 CRICKET CRAZY
- F1 001 MAGNUM PRO

THE
F1AL FRONTIER
DISKZINE
ISSUE 8 NOW IN STOCK
£6.95

F1 PRICES
1 DISK F1 TITLE £3.99
2 DISK F1 TITLE £4.99
3 DISK F1 TITLE £5.99
4 DISK F1 TITLE £6.99
5 DISK F1 TITLE £7.99
THE NUMBER IN BRACKETS AFTER THE
DISK CODE DENOTES THE NUMBER OF
DISKS IN THAT SET

WE STOCK ALL
THE TITLES
SUPPLIED BY
F1 LICENCEWARE

CD ROM PRICE MATCH
WE WILL DO OUR BEST TO MATCH
ANY CD LISTED ADVERTISED
ELSEWHERE. ALL ORDERS SENT
SAME DAY 1st CLASS POST

1st Floor Offices, 2/8 Market Street
Wakefield, West Yorkshire WF1 1DH
TEL (01924) 366982 FAX (01924) 200943

Monday To Saturday 9.00 am Till 5.30 pm

Answerphone At All Other Times



UK & OVERSEAS
TRADE ENQUIRIES
WELCOME ON ALL
CD'S LISTED

17 BIT
Software
EST 1988

AMIGA CD ROM'S



PRO FONTS £19.99
Over 4000 Adobe Type 1 Fonts, 1500 True
Types, 200 CD Fonts And A Whole Load Of
PCX, GIF, EPS & TIF Clipart!



DEMO CD II £29.99
For Those That Like A Broad Spectrum Of
Titles From The Demo World, This CD Is
Ideal.



W.S. CLIPART £9.99
Another Superb Budget CD! Includes The
Following Formats - Pagestream,
Pagecenter, EPS, IMG, IFF And More!!



AMINET III [JULY 1994] £14.99
Easily A Top Seller, This CD Contains 650
MB Of The Aminet Archives From The
Internet. Something For Everyone Here!



ULTIMEDIA VOLUME 1 £14.99
Magazines Of Images, Textures, Sounds &
Pictures, IFF, GIF, WAV, FLIC Etc. Utilities
To View Are All Included On The CD.



TOWN OF TUNES £19.99
Superb Compilation Of 1000 Of The Very
Best Music Modules Available. All Files Were
Hand Picked For Excellent Quality.



AMINET 4 [NOV 94] £14.99
Over 330 MB Of NEW Data From The
Internet Since The Aminet 3. This One Has
A Bias Towards Music & Utilities.



RAYTRACING VOL. 1 £19.99
Another CD Full Of Objects, Textures &
Attributes. Excellent Value For Those On
A Limited Budget.



SOUNDS TERRIFIC £19.99
A Superb Double CD Collection Containing
Over 1.2 GIGS Of Music Modules & Sound
Effects! Superb Value For Money!



EMERALD MINE'S CD £14.99
CD32 Or Zappo Drives Only. This CD
Contains Over 10,000 Levels Of The Classic
Emerald Mine Games!



17 BIT PHASE 4 £19.99
The Sequel To The Sequel! Contains Our
LATEST Disks From 2801 To 3351. Presented
Via An Excellent Easy Menu!



WEIRD SCIENCE FONTS £9.99
This Excellent Budget Fonts Disk Contains
Thousands Of Fonts From The Following
Types - CG, Adobe, IFF, PCX, PS & MORE!!



CDPO 4 £14.99
Contains Fish From 800 To 1000.
Complete GNU C++ Compiler With Includes,
Loads Of Imagine Objects & Lots More!!



17 BIT CONTINUATION £14.99
Disk 3 Of The Series, This One Contains
Disks 2301 To 2800 Of Our Library With
The Extra Bonus Of Several Other Ranges!



GIFS GALORE £19.99
Contains Over 5000 GIF Images From Over
40 Subjects Inc. Art, Cars, Fractals, Space,
Swimsuit, Raytrace Etc.



SPACE & ASTRONOMY £19.99
Spectacular Popular CD ROM Containing
Images Taken From Deep Space Probes,
Along With Over 5000 Official NASA Texts!



IMAGINE CD £39.99
One Of The Most Complete Collections Of
Textures, Objects, Backgrounds & Attributes
Available For Imagine Users!



GOLDFISH 2 CD £29.99
Contains Everything Produced By Fred Fish
AFTER Disk 2000. Literally HUNDREDS Of
Superb Amiga Programs!



RAYTRACING VOL. 2 £19.99
30 Object Overload! If You Raytrace, You
Really DO NEED These Superb CD's! You
Can Never Have Too Many Objects!



AMOS USERS CD £19.99
This Disk Is Ideal For Amos Users!
Includes Source, Sprite & Music Banks As
Well As The Entire Amos PD Library!



ULTIMEDIA VOLUME 2 £14.99
More Animations & Images In GIF & IFF,
Sound In WAV Etc! Superb!! All Necessary
Utilities Are Included On The CD.



AMIGA DTV £14.99
Backgrounds, Fonts, Objects
Tiling & Video Utils, Clipart, Your Name!!!
Superb Value For Any DTP User!



DEMO CD £9.99
A Little Dated Now, But Still Contains Some
Classic Software. Loads Of Music Mods,
Demos, Animations Etc.



IMAGINE ENHANCER £49.99
Contains Exclusive Data
Covering Objects, Maps,
Fonts, Backgrounds, Demos & Gallery.



EUROSCENE £19.99
If You Want Nothing But Music & graphics
Demos, Then This CD Is For You. Includes
Demos From The Gathering 93 & 94!



17 BIT COLLECTION £29.99
2 CD's Containing 1700 Disks From Our
Own Library. All Titles Are Easily
De-Archived Via A Simple To Use Menu.



LSD COMPENDIUM £19.99
You Name It, You Will Find It On Here!
Games, Demos, Mods, Animations, Plus Not To
Mention The Fielded LSD Tools Collection!



MULTIMEDIA TOOLKIT £19.99
Another Popular Title, Contains 5000 24 Bit
Images With H&M & H&M Versions And
Loads Of Fonts, Clipart, Mods & Samples



THE LIGHT ROOM £39.99
650 MB Of Objects, Images, Scenes, Attributes,
Maps & Textures In IFF & Targa Format. A
MUST For All Lightwave Users!



THE ASSASSIN'S CD £19.99
Hundreds Of Games For All CD Platforms
Including CD32!! Superb Menu Enables ALL
Games To Run Direct From CD!



NETWORK CD £14.99
Link Your CD32 To Any Other Amiga For CD
Access. Requires Serial Cable Available
Separately For £19.99



LSD COMPENDIUM 2 £19.99
Hot On The Heels Of The LSD CD Comes
Its Superb Sequel. Improved Menu, More
Features, More Superb Programs!



POWER GAMES £14.99
A Collection Of More Than 500 Superb PD
Games Covering CD32, CDTV & CDROM
Platforms. Arcade, Adventure, Strategy Etc.

ACCESSORIES

CABLES

PARNET CABLE £9.99
SERNET CABLE WITH KEYBOARD PASSTHROUGH £19.99
NULL MODEM CABLE £9.99
PARALLEL CABLE £9.99

STORAGE BOXES

40 CAPACITY LOCKABLE DISK BOX £4.99
100 CAPACITY LOCKABLE DISK BOX £8.99
30 CAPACITY CD-ROM STORAGE UNIT £14.99

MISCELLANEOUS

MOUSE MAT £2.99
SPAT MOUSE MAT £3.99
MANHATTAN MICROSWITCHED MICE £12.99
PLEASE INCLUDE £1.50 POSTAGE
FOR DISK BOXES

KLONDIKE CARDSETS!

FOR USE WITH KLONDIKE AGA 1, 2 OR 3!

3607 PHOTO CD
3606 FLOWERS
3598 PRETTY WOMAN
3578 FRACTALS
3577 MARILYN MONROE II
3575 ACHILLEOS
3574 DRAGONLANCE
3573 HEROINES
3572 BEAUTYS
3534 LION KING
3529 PERIHELION
3528 RIPPING YARNS
3520 NORMAL CARDSET
3490 ELLIE MCPHERSON II
3470 DUNGEONS & DRAGONS
3468 SAILORMOON
3467 NANNA
3412 XMEN
3411 NEXT GENERATION
3408 FACES II

3407 SWIMSUIT
3396 MARILYN MONROE
3353 STAR WARS
3334 BETTY PAGE
3333 STAR TREK
3244 ELLIE MCPHERSON
3196 SANDMAN
3195 IRON MAIDEN
3136 ART
3088 HAJIME
3087 ANIME
3086 FACES
3085 CINDY CRAWFORD
THE FOLLOWING WILL NOT
WORK ON KLONDIKE II
3571 CINDY CRAWFORD 2
3527 SHERILYN FENN
3438 FAST CARS
3402 EMPIRE STRIKES BACK
3401 RETURN OF THE JEDI
3400 DR WHO

MIDICraft Magazine
The Dismant That Directly Replaces AMFM
Packed With Goodies For Musicians,
Beginners & Expert Alike
£2.50 PER ISSUE OR
£4.50 IF PURCHASED WITH SAMPLES

The Deluxe Paint legend is nearly on par with Lightwave in some quarters. Around since the early days of the Amiga, the package has grown up and finally reached its fifth instalment under the protective wing of software giant, Electronic Arts.

Used for the last few years by amateurs and professionals alike for picture creating, sprite making and animation, its reputation in its field has been second to none. Then Photogenics happened – while not boasting any animation facilities, it's a package that offers some extremely powerful image manipulation functions at a cut-throat price.

With Deluxe Paint 5 and its pedigree in tow behind it, perhaps the young upstart can be put to shame. Well, yes and no...

Coming on four disks with a rather substantial manual weighing in at 337 pages, DP5 requires the minimum of installation fuss. My initial reaction when booting the package up was one of disappointment – the interface remains the same, but for a few tweaks here and there. I can live with this non-development quite happily but the main, immediately obvious gripe is the same old lack of speed – go up to a pop-down menu and it croaks open.

SLOW DOWN

Fair enough that in high resolution modes you're going to have some slowing down but, even on a 4000, the lack of speed is disheartening and easily detracts your attention away from some of the program's powerful features and upgrades. I couldn't help but feel that while there have been fresh rounds of ammo tucked into DP5's artistic arsenal, the same cranking code that made up DP4 remains and doesn't appear to have been touched, even though the manual states differently.

Getting through this disappointment though, and flicking to the new features list in the manual stops this tide of negativity and hope springs forth. There have been over 25 enhancements and updates to the program, some of which are extremely powerful and highly useful.

True Colour and ARexx support, the much needed natural media option, light table enhancements, loading animations of any size, key frame animation, improved file format support that now includes Anim Op-8 as well as the old Anim 5 format and many other facilities, options and fancy bits

**Unarduous
animation**



The main muscle of DP5's talent is animation and, whether it be brush or camera-based, is simple and produces some highly effective results. With the arrival of the latest version, we can show a couple of new features that deserve a mention:



Set your animation frames at the desired amount and stamp your brush down. Cutting up the movement menu, notice the adjust button – the ideal way to create beginning and end key frames



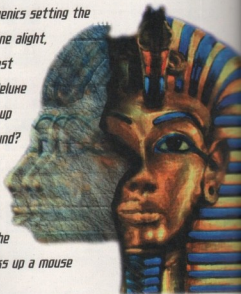
Clicking on adjust brings up a wireframe outline of your brush. Move, rotate and manipulate it into the desired position and hit enter. The opening key frame is set. Do the same with end position...



...and hit the draw button. The animation is produced in front of your very eyes. The same process is used to create camera movement

The next

With Photogenics setting the graphics scene alight, can the latest version of Deluxe Paint catch up on lost ground? Adam Phillips throws his canvas in the bin and picks up a mouse



have been included to create a formidable package.

For those who don't know, Deluxe Paint 5 has two main halves to it – the picture creating on one side and animation on the other. Each has always proven to be versatile and popular with users. Some of the professional companies interviewed by Amiga Computing during the last few months always quote DP4 as their main 2D image and animation creator.

The main screen is showing a drawing surface with a list of tools and palettes

down the right-hand side and a large amount of pull-down menus along the top. The painting side of the package has been improved upon. Along with the old favourites such as smear, blend, and smooth which are all as effective as before there is now a set of natural media and textures.

PAINTING ON CANVAS

A series of canvases can be loaded for example differing oil canvases, wire mesh, and varying grades of paper which can in turn be painted onto with different brush styles on offer. While the textures of the canvases may be substantial and on the whole look very effective, there's only a paltry amount of brush types available – watercolour, chalk, felt tip and oil.

Despite this, what is on offer works well and satisfying results can be gleaned very quickly. Remember though that this is computer graphics, not an exact simulation of the mediums being emulated – there are a few cases where the reactions seen on screen wouldn't happen on a real canvas.

24-bit graphics card users can relish the new true colour option which enables the loading, saving and editing

generation

A bugging issue

On several occasions while running Deluxe Paint 5, the computer packed in and crashed for no apparent reason. While not devastating by any stretch of the imagination, it's a worrying habit, so remember to save as frequently as possible to avoid losing your work, especially before any major graphics operations.

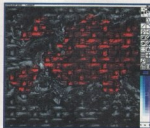
Another area that requires a whinge is changing the screen modes – when a new resolution is selected the program flicks back to Workbench, changes the resolution and then moves back into the drawing screen. In some cases, though, it remained in Workbench and I had to flick back manually to Deluxe Paint 5. Not a massive complaint but an annoying glitch all the same.

Insisive instructions

There's nothing worse than having a powerful, flexible product being plopped in your lap followed by an illegible, unintelligent manual that makes the package harder to use if you do decide to read it. Witness Imagine 2 and its appalling accompanying paper-wasting literature.

One of DP5's strong points is its mainly well-written manual. Easy to follow with a fair sprinkling of tutorials to break in the computer graphic virgins. Electronic Arts have come up with a hefty but not intimidating tome. There are a couple of weak areas that do need a little time going through them and a few more illustrations here and there would have been nice to exemplify some of the options that aren't massively clear in textual form.

For ARexx users, a full list and description of each available command is documented and should aid the learning curve necessary for picking up the basics of AmigaDOS.



The drawing screen remains the same as ever with only the odd, inconspicuous addition

go to town interacting with other programs and can create complex scripts to suit their needs. The colour side of DP5 has received something of a facelift as well. There's now an option to turn the grid around the colour cells on and off to do accurate side by side colour comparisons, and RGB and HSV sliders are shown simultaneously.

OPTIONS

Also, there are now true RGB colour cells, colour cell extended selections and a larger enhanced mixing area for the palette maestros among you. One feature that has been overlooked and would have benefited the program immensely is the lack of image processing abilities, for example being able to lay a texture over a picture as you can with Photogenics.

There's no emboss, false colour, motion blur, displace or other 'paint-on effects' that could have pushed DP5 in to the pole

position as the ultimate art tool for professional artists, and given a whole new dimension to the animation side of the package in terms of special effects.

The omission is surprising considering the programmers at Electronic Arts must have seen the potential from their side – Photogenics. Perhaps they didn't realise, or didn't have the time to inject some of the ideas into their own product. Maybe in the next version?

Deluxe Paint's strongest side has always been animation and it's that principle feature that has sold previous versions in lorry loads. One new feature outshines all the other in DP5: Being able to enter your key animation frame at both the beginning and end points of your sequence.

Echoing the user friendliness of Lightwave, select either the start or end of your anim and click on adjust. A wire frame preview of either the beginning or final position of your logo, character or whatever appears on screen. It can then be

Multiple media

There are now a wide range of textures, media and tools to choose from. Here is a list of some of the best and most eye-catching.



The all new and improved spray brush produces professional looking results



Watercolour – note the lighter tones used to give the impression of water



Rough paper



Heavy brush stroke



Marbled marble



Wood grain



Light fabric

Memory management

The instructions say that to get the most out of Deluxe Paint 5, it's best to have 4Mb of RAM or more. The absolute minimum you can have is 2Mb of RAM – in all honesty, this simply isn't accurate. When using the likes of the camera movement option in the animation section with a hi-res detailed picture, to even generate five frames of movement on a full screen image produces a 'not enough memory' message. And that's on a 4000 with 16 megs of RAM.

While using higher resolutions is always going to eat up the memory, for professional uses hi-res is absolutely essential – no client is going to fancy watching the logo for their new company in low resolution. With this in mind, I'd say the absolute minimum for animation work is 4Mb, with a recommended amount being in the 8 meg region.

manipulated, tilted and moved via the numeric pad 4 and then, with a press of the return key, whatever changes have been made are recorded and become the key frame for the animation. All numerical input-areas automatically updated by the computer.

This approach makes the whole process so much easier and removes any frustration at having to do it numerically through interfaces. Add to this the slow in and out options when an animated object comes to the end of its path and you have the potential for creating some very flowing moving images without any hassle.

For perfectionists out there, once the animation has been 'rendered' you're able to play the piece back and, if your computer can't maintain a specified animation rate, a speedometer can be called up at any point while it's running to provide you with an estimated animation rate. A small but useful idea. It's now possible to edit, create, load



The screen mode requester provides you with a substantial amount of screen options with a detailed analysis of each. Try as hard as I could, I couldn't get the half-brite mode to work though

and save multiple palette animations, something that the likes of Brilliance boasted over DP4, and play them back in the improved DeluxePlayer that also allows anims to be played direct from the hard drive.

One of the most revolutionary ideas to be implemented is the camera movement. In the past, it's only been brushes that could be shot all over the screen but now you can have the 'camera' pan, zoom in and zoom out of a scene.

The process is as simple as animating a brush, with the same key framing routine and X, Y, Z co-ordinates. Two 'pages' are needed to create the likes of scrolling so that the computer can wrap round to create the illusion of a seamless routine.

GOOD AND BAD

On the whole, the end results are rather good and I can imagine the facility being of real value for game's development. Scala presentations and the likes. Its only shortcomings are zooming right in, where everything becomes incredibly pixelised because it doesn't render each frame but simply uses the original. In turn, this affects the camera movement as it becomes horrifically jerky and slow.

The other bad point, which is perhaps understandable, is when using the cam movement in higher resolutions. Slap up a medium-sized logo and you'll be fine for moving and zooming in on, but if trying to move on a screen full of detailed graphics, no matter how much memory you have, you'll run out – the computer's chip RAM can't handle it. Other than these limitations, the camera movement is a welcome inclusion to DP5's range of features.

For those wanting to print their fine-tuned results, full printing options are available and include an animboard feature – this facility allows certain frames to be taken from an anim and printed out as a storyboard for reference work or for showing to clients.

An idea like this is invaluable for professional work. All these features add up to a very attractive proposition for animators who want a versatile 2D animation package.

Verdict

The rivalry between Deluxe Paint and Photogenics has the potential to become as full blown as the constant battle between Wordworth and Final Writer. Like the two word processors, it's a case of what you need the package for. While both boast extensive painting facilities for image making, when it comes to animation or image processing, neither shine in both departments.

Animators will have to stick with, and in most cases be very happy to have Deluxe Paint 5. There are faults with memory management and lack of speed but its painting facilities are smooth and easy to operate, gleaming convincing and in some cases rewarding results just from moving the water-colour brush over a light canvas background.

The main problem with the software is twofold – speed and lack of image processing tools. Photogenics on the other hand has these in an abundance but lacks any kind of animation facilities.

Perhaps some readers are sitting there shaking their heads and thinking these are two different packages for differing purposes. Correct in some ways, but if one of the enterprising companies involved could create an art package that encompasses all of the above, we could be looking at something exceptional and not just very good.

Until this happens, decide what you need – in both cases these are high calibre packages, with Photogenics just pipping the post for all-round professional excellence and sheer value for money.

The DeluxePlayer now comes with a variety of improvements. From displaying multi-palettised anims and playing them directly off the hard drive to providing full support for Afxase, the DeluxePlayer is still a handy addition to the Deluxe Painting package



SYSTEM ESSENTIALS

RED = Essential BLACK = Recommended

	2 Mb	4 Mb
or more		for 24-bit buffer editing
Any Amiga	8 Mb	

The bottom line

Product: Deluxe Paint 5
Supplier: All good Amiga retailers
Price: £89.99

Ease of use	9
Implementation	8
Value for money	8
Overall	9

ALL WORK AND ALL PLAY



£299

(excluding VAT)

THE TWO-IN-ONE MONITOR FROM MICROVITEC

There's a new, highly versatile, dual purpose colour monitor that's unbelievable value for both business and games use.

Compatible with all workbench modes, the Auto-Scan 1438 has high performance electronics and an ultra fine tube for sharp, crystal clear images.

Designed and built to exacting standards for

assured reliability and quality by Microvitec, the UK's leading monitor manufacturer, features include:

- 14" screen
- 0.28mm dot pitch
- 15-40 kHz
- Fully autoscanning
- MRPII compliant
- Designed and manufactured in the UK



MICROVITEC

WHEN PERFORMANCE MATTERS

Microvitec Plc, The Quadrant,
Chester West, Sealand Road,
Chester CH1 4QR
Tel: 0244 377566
Fax: 0244 373401

CALL NOW ON 0244 377566 FOR YOUR NEAREST DEALER

Smarty Paints



You can customise SmartyPaints with ease, allowing you to create versions for your children to use

Have you finished doodling and scribbling with our exclusive and fully-working SmartyPaints CoverDisk? Do you want to find out about all the other features hidden away in this great art program?

If you do, send off for the SmartyPaints manual which describes all the features and drawing tools available to the Amiga artists.

As well as the printed manual, we are also throwing in a disk containing lots of kid clip-art for the youngsters. With this clip-art, your child can easily create their own pictures by simply pasting the pictures to the drawing screen.

SmartyPaints order form

Please send me:

SmartyPaints printed manual and kid clip-art disk for the princely sum of £8 (includes p&p)

Deliver to:

Name (Mr/Mrs/Ms/Miss) _____

Address _____

Postcode _____

Daytime phone _____

I wish to pay by:

☐ Cheque/postal order payable to IDG Media

☐ Credit card

Card No. Expiry Date / /

Please allow 28 days for delivery while stocks last

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

SmartyPaints features

- Fully customisable to cater for all ages and abilities
- Sound effects to keep the kiddies interested
- Fully icon-driven interface for ease of use
- 15 drawing tools
- Comprehensive cut and paste editing tools
- Six different drawing mode
- Fast access keyboard shortcuts for many functions
- Supports multiple screens for Amigas with 2Mb or more

Current availability



I am a subscriber to your magazine and was reading the article entitled 'Straw pole' in January '95a ESP (issue 82). I was interested to read the first line which says that Amiga Computing is already available via the Internet. I would like to know in what way it is available. What services are currently accessible via the Internet and is it possible for me to access software, reviews etc? If so, how? Thanks for a great mag.

Gary Harris

garyh@ion.apana.org.au

Now this is what I'd call a timely letter. Although *Amiga Computing* has long been accessible on the Internet via our long-standing CIX account - amigacomputing@cix.compulink.co.uk - we can also be accessed via our CompuServe account on 70007, 4734.

However, as you're obviously well aware, having full Internet access to *Amiga Computing* is what's really called for. And as luck would have it, that's exactly what will be available by the time you read this. *Amiga Computing* is proud to announce what we consider to be the best and most interactive *Amiga* magazine on the Internet.

Via our new *Amiga Computing* Homepage, anyone running a Web browser can fully interact with the magazine by mailing directly to ACAS, ESP, System and so on.

In addition, we'll be providing tasters and even full reviews of the latest hardware and software, plus highlights of the forthcoming issue and special Internet subscription offers. The only element that won't be available - yet - will be an *Amiga Computing*-specific FTP site. Watch this space.

To access our URL/Homepage, search for *Amiga Computing* from any main index. Next month we will publish our URL/Homepage address for you so you can access the information directly.

Price breaker?

I have just bought your January '95 issue and was intrigued by the CanDo CoverDisk. However, the upgrade schemes are over-priced and do not cater for the low-end market. I am a student and unable to pay the high price, but I would like to learn the package. Is there any way the manuals could be sold separately?

This will probably generate more profit for INOVATronics, as I doubt the majority of users can, or will, upgrade through your magazine. Surely this will then apply to the Pareto effect of economics - that 80 per cent of the potential market will buy 20 per cent of their products. If more people wrote into you this might happen - you made a similar mistake with the Publisher CoverDisk by not catering for the mass market.

Ryan Morse
Milton Keynes

If only it was that simple. Unfortunately, you have a rather naive idea of how commercial CoverDisk give-aways actually operate. Although we can persuade a supplier to allow *Amiga Computing* to cover mount a particular product, we have no control whatsoever over the price for subsequent upgrades. Neither do we take a percentage if readers do indeed decide to upgrade.

In fact, the only part we play in the upgrade process is the provision of free pagination and design for the actual upgrade offer - which again is paid for by *Amiga Computing*. In reality, we

invariably make a substantial loss on the deal, as a supplier will often demand payment for the product itself before they'll consider being a part of the initial promotion.

To be honest you're probably right - lower cost equals higher profits. But alas that's something which is out of our hands. Although we may distribute a product as a one-off, copyright and commercial decisions remain firmly in the hands of the supplier.

Fixing the fonts

We have an A500 with a 512k upgrade which is connected to an Intex Colorjet Series 2 printer. If I type anything into the

computer using any program (e.g. Kindwords) then change the size or style of the printing, the monitor screen shows exactly what I require but the printer will only print everything in the same size and style. Can you please tell me if I have a printer driver problem?

If this is the problem, would you be so good as to advise me on a possible solution. I would be obliged if you would give me information on how best to upgrade the A500, say to a 2Mb RAM for instance, and would any upgrade be worthwhile.

Please say a BIG thank you to all the staff of *Amiga Computing* for such an excellent magazine. I was so impressed I took out a subscription, so please keep up the good work.

B. Dixon
Co. Durham

Well you'll be glad to know there's probably a simple solution to your first

Is anybody there?

I am writing to you in reference to B A Mills' letter in the February '95 issue about a Heim user group. I am a Heim user and purchased the program when it was released on the strength of two magazine reviews. I have had two disk-books reviewed in your magazine (*History of the World Cup*, and *First-Aid Essentials*) which I created with Heim and am currently working on a project to do with my job.

I have tried to get in contact with Eagle Tree Software about upgrades as I have found a couple of bugs in the version I have (1.44), but with no success. I am not even sure if they are still in business. I would be grateful if you include my name on

the Users list as the program deserves more than a slow death.

Gerard Fitzpatrick
Republic of Ireland.

It appears you missed the March '95 issue, which features the latest 1.65 revision to the program. Just in case there's anyone out there who was caught in the same snow drift on the way to the newsgroups, here's the details for any would-be upgraders or investors.

Product: Heim
Supplier: Eureka
Price: 99.95

Phone: 010 314637 0800

problem. It sounds like you haven't told the machine you want to use the Amiga fonts rather than the printer's own internal fonts.

To rectify the problem go to the printer set-up screen, which will probably appear as a button in the print requester. Once there, simply alter the settings from use printer fonts to use normal or internal fonts. The wording may vary, but the principle should remain the same.

As for your queries concerning A500 upgrades, you'll find a feature in the April issue which details a whole range of A500-specific accelerators, hard drives and RAM expansions which have just been released by Power Computing.

However, I'd strongly suggest you consider investing in an A1200, regardless of what you decide to do about upgrading your A500. If you're looking for long-term compatibility, an A1200 is increasingly becoming an essential for any dedicated Amiga fan.

Power to reply

I refer to your magazine's letters page in February '95 issue of *Amiga Computing* concerning a Mr C R Oldham of Manchester.

Mr. Oldham ordered a 200 Watt PSU and a 50mhz FPU from my company in August 1994. Power does not and never has stocked 200 Watt PSUs and this was a genuine error on my sales department side whom I can only presume misheard the order and sent the wrong product. A refund was issued within three weeks and not the two months that is stated in this letter.

As is common with other sellers of computer products, we do not issue refunds for computer chips or software as this can be copied, corrupted or mishandled. We will obviously exchange products if there is indeed a fault, but this was not the case (no fault was found by the company's technicians) and that is why a refund was

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
Addington 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.

Initially refused - we were unable to return the product to Mr Oldham as he said he would refuse the item if it was sent back to him. However, it was decided for customer relations to refund this gentleman in full, another fact Mr Oldham omits to point out.

I do feel we should have been asked about this complaint first as it is clear the contents of Oldham's letter are untrue. Power Computing have a customer relations record second to none, and unsubstantiated complaints like this can give a completely wrong impression to a reader.

I would like to have your comments on this matter.

Tony Ianiri
Power Computing Ltd.

It's pretty obvious that there's been a breakdown of communications across the board. However, that doesn't excuse a lack of professionalism on our part. It's true that greater efforts should have been made to substantiate Mr Oldham's story.

However, I think even Power would agree the angle and tone of the reply to Mr Oldham's letter did more to defend Power's position and reputation than anything else.

Over recent months *Amiga Computing* has done more to champion the cause of the consumer than any other Amiga title. Obviously, in this case more care should have been taken, but I do feel we deserve some credit for defending the buying public in the face of a powerful financial lobby of the advertising community, while also being willing to except and learn from our mistakes.

Question time

I want to submit an article, as well as suggestions for subjects I'd be happy to provide articles on. My questions are as follows:

1. Do you accept submissions by e-mail? If so, to what address?
2. If sent snailmail, to which address should I mail submissions?
3. Do you want disks with the text in addition to printed copies?
4. If so, what format should the text be in (ASCII)?
5. Do you have any guidelines for submissions? (maximum line length, maximum and minimum number of words etc...)

Vidar Horstad
vidarh@it.uio.no

Okay, first of all we're more than happy to receive e-mail submissions. In fact, e-mail is increasingly becoming the norm for almost all our freelance material. As for *Amiga Computing's* e-mail address,

you'll find a complete list of our assorted e-mail addresses in reply to the opening letter in this very column.

If anyone prefers to submit articles by post, it's essential it is supplied on disk, and as you suggest, it's also vital that the file is provided in the ASCII file format.

However, it doesn't stop there. Any submission must also be accompanied with a collection of screen grabs and demo images - where applicable - with on average three images per page. Each of these must be accompanied by an appropriate caption.

As for word count, *Amiga Computing* usually operates on 900 words per page - so multiplying this figure will roughly equal the required word count.

However, it must be stressed that any unsolicited editorial will only be paid for it, and only if it appears in print. So be warned! However, if you do fancy your chances as a freelancer, please feel free to give it a go. Our editor is always open to new ideas.

A helping ear!

I have only been using my Amiga 1200 for a year now and have tried reading numerous magazines. Out of all of them I prefer your magazine as it is easy to read and you give away some excellent disks.

However, I have encountered problems on two of your disks, Easy Amos and Anim Workshop. These, I think, could have been cleared up in a matter of minutes but instead I have to write in with the problem and wait for a reply.

Why don't you have a Helpline so that you could make things easier for everyone. This is the only reason I have not subscribed to your magazine. Please consider this...

Brian Goodfellow
Northumberland

In the past *Amiga Computing* ran a CoverDisk helpline as a permanent feature. However, over recent months we've been running without a full-time CoverDisk editor and unfortunately, until this situation is resolved I'm afraid the CoverDisk helpline will remain inactive.

However, when a replacement is found, rest assured the helpline will be reactivated. If anyone out there is interested in the job feel free to send an application. Please mark your letter RE: CoverDisk Editor Application.

users out there who would like a copy of your CoverDisk which contains InfoFile.

I have the CoverDisk, and if you are agreeable am prepared to supply a complete copy of the disk for £1 to cover the cost of the floppy, plus post and packaging. I will undertake to supply the copies by return of post ASAP.

Mr Johnson
Oxon

If you're interested in Mr Johnson's offer, address your letters to: Mr Johnson, 67 Oakley Road, Chinnor, Oxon OX9 4HR

Printing power

I am looking for an easy-to-use spreadsheet which has good output on an inkjet printer. Any suggestions?

Nicolaï R. Axelsen
Norway

Just the way I like a letter. Short, sweet, and to the point. Although there are a number of home office/spreadsheet combinations, my personal favourite is Maxiplan4. However, I strongly suggest you pop back to the contents page and take a close look at our home office round-up for a slightly less biased opinion on the subject.

Next Day **£5.00**

2-3 Days **£2.50** Saturday **£10.00**

Deliveries are subject to stock availability

Allow up to 7 days for cheques to clear



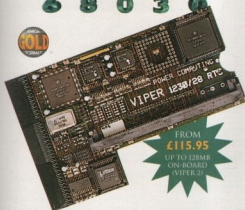
TELEPHONE **01234 273000**

POWER COMPUTING LTD
44a/b Stanley St. Bedford MK41 7RW
Tel **01234 273000** Fax **01234 352207**



VIPER

68030



VIPER 68030 SERIES

- RAM Up to 8MB (Viper 1)/128MB (Viper 2)
- Full Kickstart Remapping
- Optional SCSI-II adaptor
- On-board battery backed clock/68882 Co-processor
- Instruction and data burst modes

Viper -1 28MHz	Viper -1 33-42MHz
PGA/PLCC, FPU upto 50MHz	PGA/PLCC, FPU upto 50MHz
Bare Board ... £115.95	Bare Board ... £169.95
4MB Viper ... £249.95	4MB Viper ... £299.95
8MB Viper ... £399.95	8MB Viper ... £439.95

Viper -2 28MHz	Viper -2 40MHz EC
PLCC only, FPU upto 40MHz	PLCC only, FPU upto 40MHz
Bare Board ... £135.95	Bare Board ... £199.95
4MB Viper ... £269.95	4MB Viper ... £329.95
8MB Viper ... £419.95	8MB Viper ... £469.95

Viper Co-processors	Viper Options
28MHz FPU £25	SCSI-II Adaptor ... £79
33MHz FPU £50	4MB SIMM £139
40MHz FPU £70	8MB SIMM £299
50MHz FPU (PGA) £100	Other SIMMS ... £POA

Complete with Crystal, Wizard Board compatible

VIPER 68030

68030 40MHz RC or 50MHz RC with MMU, RAM upto 128MB, FPU-PGA only.

Bare 40MHz	.....£229.00
40MHz-4MB	.....£379.00
40MHz-8MB	.....£499.00

Bare 50MHz	.....£249.00
50MHz-4MB	.....£399.00
50MHz-8MB	.....£519.00

POWER 1208

- A1200 RAM board
- PCMCIA friendly
- Uses 1 x 32 SIMM
- Amiga Format Gold award
- Expand upto 8MB

2MB	.....£139.00
4MB	.....£189.00
8MB	.....£329.00

XL 1.76MB

The XL Drive 1.76MB measures half the height of a standard external floppy drive and allows you to store a massive 1.76MB on a high density disk. The A4000 internal drive fits perfectly underneath the original drive and no case cutting is required.

EXTERNAL	.....£59.95
INTERNAL	.....£55.95
A4000 INT.	.....£55.95

POWER DRIVE

The Power Drive now includes Blitz Amiga and Floppy Expander, free. Floppy Expander allows you to compress files on floppy disks by up to 50%. Other features include: Anti-Click, Anti-Virus, Isolation Switch, 2 Year Warranty, Thru-port, Cyclone Compatible Chip, Backup Hardware and Blitz Compatible feature.

EXTERNAL	.....£49.95
CYCLONE S/W ONLY	.. £10.00

INTERNAL DRIVES

Our internal drives use the same drive mechanisms as the Amiga to ensure complete compatibility.

PC881 A500	.....£30.95
PC882 A2000	.....£30.95
PC883 A600/1200	.....£35.95

All products have a 12 month warranty unless otherwise specified
Trade and Educational orders welcome - Worldwide distribution available

All prices include VAT. Specifications and prices are subject to change without notice. All trademarks are acknowledged. All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available free of charge on request.

THE U.K.'S NUMBER 1 AMIGA FONT AND CLIPART DISTRIBUTORS - AMIGA COMPUTING ISSUE 52

EMC Volume 1 Aesthetics, Art, Architecture, Music, Poetry, Religion, Science, Social Sciences, Sports, Travel, Visual Arts, Writing	5 Disks	\$14.00	Classic IFF Clipart
EMC Volume 11 Aesthetics, Art, Architecture, Music, Poetry, Religion, Science, Social Sciences, Sports, Travel, Visual Arts, Writing	5 Disks	\$14.00	Classic IFF Clipart
EMC Volume 22 Aesthetics, Art, Architecture, Music, Poetry, Religion, Science, Social Sciences, Sports, Travel, Visual Arts, Writing	5 Disks	\$14.00	Classic IFF Clipart
EMC Volume 28 Aesthetics, Art, Architecture, Music, Poetry, Religion, Science, Social Sciences, Sports, Travel, Visual Arts, Writing	5 Disks	\$14.00	Classic IFF Clipart

*Extremely large object which produces products of amazing quality
for formats and completely with ALL major applications.
We recommend that you have at least 200 of memory to use these images!*

- EMC Volume 34** - 5 Disks - **E14.00** - **IFF Animals 1**
EMC Volume 35 - 5 Disks - **E14.00** - **IFF Animals 2**
EMC Volume 36 - 5 Disks - **E14.00** - **IFF Animals 3**
EMC Volume 37 - 5 Disks - **E22.00** - **IFF Transport**
EMC Volume 38 - 5 Disks - **E14.00** - **IFF Business**
EMC Volume 39 - 5 Disks - **E14.00** - **IFF Fantasy 1**
EMC Volume 40 - 5 Disks - **E14.00** - **IFF Fantasy 2**
EMC Volume 41 - 5 Disks - **E14.00** - **IFF People 1**
EMC Volume 42 - 5 Disks - **E14.00** - **IFF People 2**
EMC Volume 43 - 5 Disks - **E18.50** - **IFF Boscra**
EMC Volume 44 - 5 Disks - **E14.00** - **IFF Plants**
EMC Volume 45 - 5 Disks - **E14.00** - **IFF Natural**
EMC Volume 46 - 5 Disks - **E14.00** - **IFF Plants 2**
EMC Volume 47 - 5 Disks - **E14.00** - **IFF Plants 3**
EMC Volume 48 - 5 Disks - **E14.00** - **IFF Education 1**
EMC Volume 49 - 5 Disks - **E14.00** - **IFF Education 2**
EMC Volume 50 - 5 Disks - **E14.00** - **IFF Education 3**
EMC Volume 51 - 5 Disks - **E14.00** - **IFF Education 4**
EMC Volume 52 - 5 Disks - **E14.00** - **IFF Animals 4**
EMC Volume 53 - 5 Disks - **E14.00** - **IFF Animals 5**
EMC Volume 54 - 5 Disks - **E14.00** - **IFF Animals 6**
EMC Volume 55 - 5 Disks - **E14.00** - **IFF Animals 7**
EMC Volume 56 - 5 Disks - **E14.00** - **IFF Animals 8**
EMC Volume 57 - 5 Disks - **E14.00** - **IFF Animals 9**
EMC Volume 58 - 5 Disks - **E14.00** - **IFF Animals 10**
EMC Volume 59 - 5 Disks - **E14.00** - **IFF Animals 11**
EMC Volume 60 - 5 Disks - **E14.00** - **IFF Animals 12**
EMC Volume 61 - 5 Disks - **E14.00** - **IFF Animals 13**
EMC Volume 62 - 5 Disks - **E14.00** - **IFF Animals 14**
EMC Volume 63 - 5 Disks - **E14.00** - **IFF Animals 15**
EMC Volume 64 - 5 Disks - **E14.00** - **IFF Animals 16**
EMC Volume 65 - 5 Disks - **E14.00** - **IFF Animals 17**
EMC Volume 66 - 5 Disks - **E14.00** - **IFF Animals 18**
EMC Volume 67 - 5 Disks - **E14.00** - **IFF Animals 19**
EMC Volume 68 - 5 Disks - **E14.00** - **IFF Animals 20**
EMC Volume 69 - 5 Disks - **E14.00** - **IFF Science**
EMC Volume 70 - 5 Disks - **E14.00** - **IFF Education 5**

Run, Run, Run... Run!	\$4.00	IFF Various 4
EMC Volume 100 - Various	\$4.00	IFF Various 4
EMC Volume 101 - Various	\$4.00	IFF Various 5
EMC Volume 102 - Various	\$4.00	IFF Various 5
EMC Volume 103 - Various	\$4.00	IFF Various 5
EMC Volume 104 - Various	\$4.00	IFF Various 5
EMC Volume 105 - Various	\$4.00	IFF Various 5
EMC Volume 106 - Various	\$4.00	IFF Various 5
EMC Volume 107 - Various	\$4.00	IFF Various 5
EMC Volume 108 - Various	\$4.00	IFF Various 5
EMC Volume 109 - Various	\$4.00	IFF Various 5
EMC Volume 110 - Various	\$4.00	IFF Various 5
EMC Volume 111 - Various	\$4.00	IFF Various 5
EMC Volume 112 - Various	\$4.00	IFF Various 5
EMC Volume 113 - Various	\$4.00	IFF Various 5
EMC Volume 114 - Various	\$4.00	IFF Various 5
EMC Volume 115 - Various	\$4.00	IFF Various 5
EMC Volume 116 - Various	\$4.00	IFF Various 5
EMC Volume 117 - Various	\$4.00	IFF Various 5
EMC Volume 118 - Various	\$4.00	IFF Various 5
EMC Volume 119 - Various	\$4.00	IFF Various 5
EMC Volume 120 - Various	\$4.00	IFF Various 5

EMC Vol 3	- 2 Disks	- £ 6.00	Pagestream Fonts
for Pagestream format	for		all propriety software
EMC Vol 18	- 5 Disks	- £16.50	60 PDraw Fonts
EMC Vol 19	- 5 Disks	- £16.50	63 PDraw Fonts
EMC Vol 20	- 5 Disks	- £16.50	96 PDraw Fonts
EMC Vol 48	- 5 Disks	- £14.00	Color Fonts
for 4.8 and 16 color fonts for			DrPrint, Seale, Opavision etc.
EMC Vol 49	- 5 Disks	- £14.00	Color Fonts
for 4.8 and 16 color fonts for			DrPrint, Seale, Opavision etc.

- For Pagestream and Wordworth 3 users:
- EMC Vol 2 - 6 Disks - £16.50 - PC ClipArt
game structured ring clipart. Computers, Sirens and lots more!
 - EMC Vol 21 - 6 Disks - £16.50 - PCX ClipArt
Animals, Carbons, Computers, Sports etc.
 - EMC Vol 32 - 6 Disks - £16.50 - IMG ClipArt
Animals, Food, Carbons, Plants and Drinks
 - EMC Vol 33 - 6 Disks - £16.50 - IMG ClipArt
People, XMAS, Buildings, Sports and Transport.

IFF256 format pics that will load directly into any 24 bit or AGA application, such as Display 4.5, Opalvision, ADP, etc. You can also call around for more info. We'll be happy to help. At 2000-440007.

- EMC Volume 88** - 6 Disks - **£16.50 - 258 Cars 1**
 Ferrari, Corvette, Mercedes, Formula 1, Sports Cars and more!
EMC Volume 89 - 6 Disks - **£16.50 - 258 Cars 2**
 Ferrari, Corvette, Mercedes, Formula 1, Sports Cars and more!
EMC Volume 90 - 6 Disks - **£16.50 - 258 Planes 1**
 1st, 2nd, 3rd World Wars
EMC Volume 91 - 6 Disks - **£16.50 - 258 Planes 2**
 1st, 2nd, 3rd World Wars
EMC Volume 92 - 5 Disks - **£14.00 - 258 Space 1**
 The Earth, NASA Space Shuttles, Loss of Planets and more!
EMC Volume 93 - 5 Disks - **£14.00 - 258 Space 2**
 The Earth, NASA Space Shuttles, Loss of Planets and more!
EMC Volume 94 - 5 Disks - **£14.00 - 258 Women**
 1st, 2nd, 3rd World Wars
EMC Volume 95 - 6 Disks - **£14.00 - 258 WildCats**
 1st, 2nd, 3rd World Wars
EMC Volume 96 - 6 Disks - **£16.50 - 258 Horses 1**
 Running Horses, Race Horses and more!
EMC Volume 97 - 6 Disks - **£16.50 - 258 Horses 2**
 Running Horses, Race Horses and more!
EMC Volume 98 - 5 Disks - **£14.00 - 258 Dogs 1**
 Dogs in the snow, Horses on the beach and more Horses!
EMC Volume 99 - 5 Disks - **£14.00 - 258 Dogs 2**
 Dogs in the snow, Horses on the beach and more Horses!
EMC Volume 100 - 6 Disks - **£16.50 - 258 Cats 1**
 1st, 2nd, 3rd World Wars
EMC Volume 101 - 6 Disks - **£16.50 - 258 Cats 2**
 1st, 2nd, 3rd World Wars
EMC Volume 102 - 6 Disks - **£16.50 - 258 WaterLife**
 Many real cute and humorous pictures of Cats and Dogs!
 (Cats, Dogs, Fish, Frogs, Fish, Goldfish and lots more)
EMC Volume 103 - 6 Disks - **£16.50 - 258 Sun & Sea**
 Many real cute and humorous pictures of Cats and Dogs!
EMC Volume 104 - 5 Disks - **£16.50 - 258 Animals 1**
 1st, 2nd, 3rd World Wars
EMC Volume 105 - 6 Disks - **£16.50 - 258 Animals 2**
 1st, 2nd, 3rd World Wars
EMC Volume 106 - 6 Disks - **£16.50 - 258 Animals 3**
 Wolves, Mice, Goats, Kangaroos, Fox Pupae and lots more!
EMC Volume 107 - 6 Disks - **£16.50 - 258 Animals 4**
 Wolves, Mice, Goats, Kangaroos, Fox Pupae and lots more!
EMC Volume 108 - 6 Disks - **£16.50 - 258 Panorama 1**
 1st, 2nd, 3rd World Wars
EMC Volume 109 - 6 Disks - **£16.50 - 258 Panorama 2**
 1st, 2nd, 3rd World Wars
EMC Volume 110 - 6 Disks - **£16.50 - 258 Panorama 3**
 1st, 2nd, 3rd World Wars
EMC Volume 111 - 6 Disks - **£16.50 - 258 The Sun**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 112 - 5 Disks - **£14.00 - 258 The World People**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 113 - 6 Disks - **£16.50 - 258 America**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 114 - 6 Disks - **£16.50 - 258 Castles**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 115 - 6 Disks - **£16.50 - 258 The World**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 116 - 6 Disks - **£16.50 - 258 Birds 1**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 117 - 5 Disks - **£14.00 - 258 Birds 2**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 118 - 5 Disks - **£14.00 - 258 Fantasy 1**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 119 - 6 Disks - **£16.50 - 258 Fantasy 2**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 120 - 6 Disks - **£16.50 - 258 Fantasy 3**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
EMC Volume 121 - 6 Disks - **£16.50 - 258 The Movies**
 Sunrises and Sunsets from Cats to Lions to Dogs and more!
 Starwars, Top Gun, Terminator, Idiots, Korea Kid etc.

EMC Volume 123 - 5 Disks - £14.00 - 256 Readers
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 124 - 5 Disks - £14.00 - 256 Readers P
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 125 - 5 Disks - £14.00 - 256 Girls G
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 126 - 5 Disks - £14.00 - 254 Girls G
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 127 - 5 Disks - £14.00 - 256 Girls G
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 128 - 5 Disks - £14.00 - 256 Girls G
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 129 - 5 Disks - £14.00 - 256 Swim Suits
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 130 - 5 Disks - £14.00 - 256 Bikinis
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 131 - 5 Disks - £14.00 - 256 Beach Girls
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 132 - 5 Disks - £14.00 - 256 Lingerie
A beautiful Women, all shapes and sizes, in Lingerie

EMC Volume 133 - 5 Disks - £14.00 - 256 Strapless Strapless
High quality pictures of the Nudes! 195's - 198's westerners etc.

EMC Volume 134 - 5 Disks - £14.00 - 256 Starlets
High quality pictures of the Nudes! 195's - 198's westerners etc.

EMC Volume 135 - 5 Disks - £14.00 - 256 Starlets
High quality pictures of the Nudes! 195's - 198's westerners etc.

EMC Volume 136 - 5 Disks - £16.50 - 256 Classic Cars
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 137 - 5 Disks - £16.50 - 256 Cars C
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 138 - 5 Disks - £16.50 - 256 Fast Cars F
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 139 - 5 Disks - £16.50 - 256 Racing R
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 140 - 5 Disks - £16.50 - 256 Racing R
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 141 - 5 Disks - £14.00 - 256 Trains T
A beautiful Women dressed in very fine, Blood bathing

EMC Volume 147 - 6 Disks - £16.50 - 256 Jet Fighters
 10000+ Photographs, 738 Exports, Aircraft Carriers and lots more!

- [illegible]

EMC Volume 227	-6 Disks	-E16.50	-256	BorisV 2
EMC Volume 228	-6 Disks	-E16.50	-256	BorisV 3
EMC Volume 229	-6 Disks	-E16.50	-256	BorisV 3
EMC Volume 230	-6 Disks	-E16.50	-256	BorisV 4
EMC Volume 231	-6 Disks	-E16.50	-256	BorisV 5
EMC Volume 232	-6 Disks	-E16.50	-256	BorisV 6
EMC Volume 233	-6 Disks	-E16.50	-256	BorisV 7
EMC Volume 234	-6 Disks	-E16.50	-256	BorisV 8

EMC Volume 236 - 6 Disks - £16.50 - 255 Kelly 2
Excellent artwork by the famous fantasy artist Ken Kelly.

EMC Volume 238 - 6 Disks - £16.50 - 256 SciFi Art 2
Mixed bag of great artwork and pictures with a general SciFi theme

EMC Volume 240 - 6 Disks - £18.50 - 256 MOVIES 2
Excellent pics/artwork from films - OSS, Star Wars, Terminator, "V"
EMC Volume 241 - 6 Disks - £18.50 - 256 D & D

EMC Volume 242 - 6 Disks - £16.50 - 230 Fantasy 3
Loads of good quality general fantasy artwork.

EMC Volume 244 - 6 Disks - £16.50 - 256 White 2
EMC Volume 245 - 6 Disks - £16.50 - 256 White 3

DISCOUNTS! DISCOUNTS! DISCOUNTS!
 Encouragement to give \$1.50 on every EMC volume of

When you buy any 2 EMC volumes you will qualify for a \$3.00 discount. Buy 3 volumes and you get \$4.50 off! Buy 4 volumes and you get

The normal cost would be £30.50. Now it will only cost you £22.50.

ALL WE ASK IS THAT YOU QUOTE "EMC - DISCOUNT" ON ALL ORDERS.

public



sector

Dave Lusick surveys another diverse sackful of PD and shareware offerings

Spring is at last here and everything is alright in the world. An end to the long dark evenings is something in itself, but I reckon people are generally less depressed and more inclined to irrational prolonged periods of good temper at this time of year.

It was, therefore, with a smile on my face that I tore open this month's bundle of fifty bags and spread the contents across the desk. Among them, unable to be squeezed into the spacially-challenged PD pages, were yet more programs whose title could be produced by rearranging the words 'Winner' and 'Lottery.' (Still, only four this month, so things are looking up).

Also in there, and thoroughly worthy of reviews had they not graced these pages but a few issues ago, were new versions of two top-quality products: The definitive Thrust clone, Rokez, and the cheapest and best image processing package around, ImageStudio, which at version 2.0 now supports ARexx and can outpace Image FX. But enough of my drooling. The question on everyone's lips is: Will any of the following join them as PD/shareware classics?

MovieZone #1

Edited by: Philip C Swales
Available from: Philip C Swales

This is the first issue of what, unsurprisingly, turns out to be a disk magazine dedicated to movies. First impressions are good, with

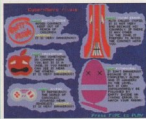


Live near Milton Keynes and want to find a decent cinema? Fear not, because among the MovieZone reviews there could be the answer to your prayers

Cyberman

Written by: Fabio Bizzetti
Available from: Freestyle PD

Here's a novel variation on an old theme. Cyberman is essentially Pacman in 3D, with the action unfolding in full first-person glory. The impressively smooth and colourful graphics combine



Meet some of Cyberman's anomalies

attractive introductory screens giving way to a clear and lengthy index. This high standard is maintained in the readable and generally well written articles, all of which are neatly presented and free from irritating mistakes in spelling and grammar.

As one would expect, a few recent film releases are reviewed, including Forrest Gump, City Slickers 2, IT, and plenty more. But there's a great deal more to this magazine than simple reviews. Entertaining features on multiscreen cinemas, film censorship and TV language cuts, and even quizzes on some classic films.

It is refreshing to find such a professionally produced disk magazine covering an area so well. The only criticism I would have is that many of the articles are perhaps a little brief, although on balance this is made up for by the wealth of varied features present. The editor and contributors have done a marvelous job, and future issues of this diskmag should certainly be worth looking out for.

Zootje

Produced by: Tragedy
Available from: OnLine PD
Disk No. CD28

I know it's pretty racist of me, but I've always found the Belgians a strange bunch. For example, they build motorways with tight bends and steep hills, have two languages



Beavis and Butthead in 'They're not funny' shocker

with authentically bleepy sound effects to produce a beautifully presented game.

Roaming around the maze of dots are a loathsome bunch of computer foes: The Macintosh apple, the joystick, the Atari Full symbol, an Acorn, and an Empty Inside badge. Physical contact with these nasties is to be avoided at all costs. Fortunately, however, there are power pills dotted around the maze which temporarily make them vulnerable. Additionally, it is now possible to jump over the nasties or to turn around halfway along a pathway to flee. Nevertheless, avoiding them isn't always easy.

Cyberman is quite a tricky little chestnut, and also very addictive. Part of the appeal may come from the challenge of trying to relate the 3D action to the conventional 2D maze map in the top right-hand corner of the screen, something which can prove harder than you might think. This is an attractive and polished game featuring engrossing arcade action, and is the sort of game that will entertain everybody.



For the first 30 seconds or so, Zootje actually looks like it might be a fairly normal demo

and consequently two names for most of their cities, and will charge you for using their toilets. Still, I thought, slotting Zootje into the drive, I've probably got the wrong impression.

Fruit Salad

Written by: S Hayne
Available from: Cheethah PD

Typically jolly platform frolics are on offer in Fruit Salad, complete with compulsory garish graphics and tinkly tunes. Basically, the object of the game is to scuttle and leap around a series of screens filled with objects to collect and nasties to avoid. Once the collectables are, erm, collected, the background colours will start to cycle, producing a rather mad psychedelic effect. A large red arrow will also appear, pointing the way to the next screen.

While on paper there doesn't seem to be a lot to Fruit Salad, in practice it presents a fairly tough challenge because after only the first couple of screens, things start to get hard.

Fruit Salad is hardly going to set the world on fire, but it's not a bad effort and there are plenty of far worse platformers about. The game is available from PD libraries but it is shareware, so those who play it are obliged to send the author a fiver. Registered users receive a enhanced version of Fruit Salad.

GAME of the MONTH

Wunching through a maze takes on a whole new dimension in *Cyberman*



Belgians are probably perfectly sensible and normal people. Five minutes later I was surer than ever that Belgians are a peculiar breed.

Zoofer is a demo, and I won't even attempt to guess what the title means in English. It's got decent enough music and graphics but the thing is, I can't understand why anybody would want to put together a two minute sequence featuring a headbanging ostrich.

It's not all ostriches, however - there is a brief interlude featuring the twosome the Radio Times is keen to describe as 'the heavy metal anti-heroes', Beavis and Butt-head. I have to say that in all honesty, the term I would be keen to describe these two characters could not possibly be printed in a family magazine, but suffice it to say that the aptly named programmers Tragedy have

got the cut MTV characters to a tee. As a consequence, if you're one of the distressingly large number of people who wander around mindlessly mumbbling 'Huh huh, that's like cool, and stuff' then you'll be in heaven.

More sane people might be impressed by the animation and crisp sound samples but will probably be eager to get back to the ostrich, and they won't be disappointed. After something of a repeat performance, our lone ostrich makes way for a looping animation of many things running along while the credits scroll up the screen.

At the end of the day, it's quite well done and I'm sure it's very nice if you are into this sort of thing. Be warned though: don't expect to understand why on earth anybody would produce such peculiar 'entertainment.'

Dead Of Night

Produced by: Treclision
Available from: Freestyle PD

Despite suffering a little from some minor translation errors, this Italian murder mystery game is a pretty impressive effort. In a manner not entirely dissimilar from Delphine's Cruise For A Corpse, the plot finds several people together in an isolated location - in this instance a mountain chalet - where a murder has taken place. The victim, by the name of Diana, could have been killed by any one of the other eight individuals in residence. A good helping of pointy-clicky



Diana stands at the chalet window, unaware of the fate that is about to befall her, in the brief but impressive introduction to *Dead Of Night*

Your room, from where you commence investigations in *Dead Of Night*



detective work is the order of the day here.

While the majority of the screen area is taken up with a well-drawn depiction of the current location, complete with any occupants, an inventory is also displayed in a strip across the bottom of the screen. When the right mouse button is pressed, an additional strip containing the options Close, Open, Take and Use appears. Actions are accomplished by moving the pointer to one of these options and releasing the button, then left clicking on the

Tiny Toons Clip Art

Produced by: David Hearne
Available from: OnLine PD. Disk No. OF5

This selection of cartoon clip art covers themes and characters as varied as skateboarding ducks and Roadrunner. There are, in total, five coloured screens and 21 black and white screens, each filled with plenty of pictures.



Awwww, look at the cutenessy wootsy rabbits! Screenfuls of similarly twee cartoon characters are on offer on the *Tiny Toons Clip Art* disk

The artwork (or it could be scannerwork, since it doesn't mention anywhere how the disk was produced) is of a high standard throughout.



attractive as they are, might not really prove very useful, but the black and white screens are certainly of sufficient variety and quality for use by keen desktop publishers.

Some of the characters appear to be original, although it has to be said, a fair few are famous cartoon stars, which it must be said raises a few questions about copyright. With this in mind it appears to definitely be a case of 'for personal use only.'

Still, even in this sort of limited role the

pictures could well be worth getting hold of. The coloured screens,



Attractive although slightly useless, the World Cup screen is one of five coloured pictures on the *Tiny Toons* disk

object to perform the action.

Graphics and sound are impressive – particularly the sampled sound effects which accompany many actions. Also, there's always plenty of depth in games of this ilk, so Dead Of Night is a fairly fine game on all counts. Although I haven't yet reached the message telling me that's as far as I can go, this is apparently a demo version. The full money costs US \$10 and is available from the authors.

Magnetic Fields Tanks

Produced by: Magnetic Fields

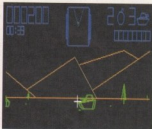
Available from: OnLine PD

Disk No. OG87

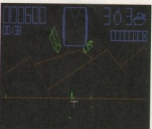
From the title screen logo it appears this is the same Magnetic Fields responsible for the hit Lotus games. This might just raise expectations a little, although it would hardly be fair to expect PD offering Tanks to compare with that classic arcade racing series. Approach MF Tanks as if it were any other PD disk and you'll find it to be a competent and enjoyable blaster.

Controlling your tank via the mouse, the objective is simply to seek out and destroy enemy tanks before they do the same to you. Hitting the left button fires, whereas the right button activates one of your three smart bombs, killing all enemies in the area. The scanner at the top of the screen is an invaluable aid as increasingly large numbers of enemy tanks close in.

The simple line graphics might not look too stunning but they contribute to a fast and smooth game. In fact, while Tanks is a very simplistic affair, it's actually quite entertaining for a while. Admittedly, after a bit it does start to drag, but it is the sort of thing you can whip out every now and again for a quick blast.



It might actually be called Tanks, but smooth action is very much the name of the game here



Imagine your worst enemy was in that exploding tank. Far from provoking aggression, computer games can relieve it

Mega Disk #2

Compiled by: Jonathan Fisher

Available from: Professional PD

Disk No. MG02

Hot on the heels of Mega Disk #1, which featured oodles of tiny top-quality games, comes this selection of utilities. A couple of these programs will already be favourites of Amiga users across the country such as GULarc, which removes a great deal of the tedium from archiving and extracting LHA files. There are also plenty of decent programs that might not be part of everybody's collection.

For instance, ARestore is a file undeletion program, the sort of thing you might not fully appreciate the value of until that special file bites the dust and there's no back-up copy to fall back on. Chopper performs the same function as JSplit, reviewed elsewhere in these pages, with a similarly attractive interface, and Crypt is an excellent file protection program ideal for paranoid comms buffs.

There's also SystemSpeed, a tiny benchmark program, SoftProtect, a way of tricking your machine into



There'll be no more messing around with command lines whenever you want to de-arc an LHA archive thanks to GULarc

thinking a floppy disk is write-protected when it's not, and a whole host of other interesting offerings. And for just £1.75 for a total of 26 programs, Mega Disk 2 is also a very good value.

Slide files up into manageable chunks with JSplit



Flummy Utils #2

Written by: Various

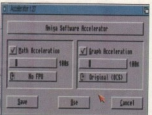
Available from: OnLine PD

Disk No. QU84

A mixed bag of utilities are included on this disk, of which the highlight is probably JSplit. Imagine for a moment that you want to transfer a large file from your friends' hard drive to your own – possibly a picture or a huge archive. The problem is, it's too big to fit on a floppy disk.

JSplit is designed to deal with this sort of situation. It takes a file and basically splits it into parts of a specified size. It can then rejoin them later, perhaps on another machine. It's a simple but good idea and the user-friendly interface makes this an extremely valuable program to have handy.

The descriptively named ILMB2ASCII converts IFF pictures into text files. As well



A software accelerator is included on the Flummy Utilities disk

as possibly being of use to bulletin board operators, this could prove useful for people writing Read-Me documents as, for example, a logo could be incorporated.

Games fans struggling with their favourites will be particularly interested in Frontier Trainer and Skidmarks Edit. These allow various settings to be altered, making the games slightly easier.

Among the best of the rest is Soundbox, a competent if slightly limited sound sample editor and converter. The small amount of documentation provided is in German but the interface is hardly difficult to work with and overall this isn't a bad effort. In conclusion, this is an interesting although scarcely essential compilation of utilities. Still, it might be worth getting hold of it only for JSplit.

Welcome to paradise...

Cheetah PD

29 Green Lane, Middlesbrough,
Cleveland TS5 7SJ

Freestyle PD

108 Woodside Way, Short Heath,
Willenhall, West Midlands WV11 5NH
(Tel: 01922 710985)

OnLine PD

1 The Cloisters, Halsall Lane, Formby,
Liverpool L37 3PX
(Tel: 01704 834335)

Philip C Swales

28 Campbell Road, Hartlepool,
Cleveland TS25 3BB
(MovieZone costs £1.40)

Professional PD

28a Woodland Rise West, Sunway
Park, Sheringham, Norfolk NR26 8PF

Next Day **£5.00**

2-3 Days **£2.50** Saturday **£10.00**

Deliveries are subject to stock availability

Allow up to 7 days for cheques to clear

POWER

TELEPHONE **01234 273000**

POWER COMPUTING LTD

44a/b Stanley St. Bedford MK41 7RW

Tel **01234 273000** Fax **01234 352207**



NEW
A1200

A4000



Keyboard
is extra

TOWER CASES

The A1200 Tower comes complete with 3 x 5.25" drive bays, 5 x 3.5" drive bays, real time clock, 5 x Zorro slots, 4 x PC slots and a keyboard interface.

The A4000 Tower comes complete with 6 x 5.25" drive bays, 5 x 3.5" drive bays, real time clock, 7 x Zorro slots and 5 x PC slots.

Both Towers are easy to install.

TOWER A1200 £499

TOWER A4000 £429

EXTENDED KEYBOARD .. £29.95

PSU 230watt £99.95

PSU 250watt (available 3/95) .. £129.95

VIDEO DAC 18-BIT

Video DAC 18-bit is a graphics card which allows the Amiga to display 262,144 colours simultaneously. The software can display images or animations created and saved with any other 24-bit program.

Video DAC 18-bit plugs externally into the RGB connector with thru port capabilities, allowing the use of digitizers such as Videon, or a genlock recording with your VCR any image you created in 262,144 colours.

Video DAC 18-bit is able to split the screen and display images/animations at different resolutions or colours at the same time.

Medium Res: 320 x 256 PAL
320 x 200 NTSC
High Res: 320 x 512 PAL
320 x 400 NTSC
OverScan: 384 x 576 PAL
334 x 482 NTSC
Max Res: 768 x 576 PAL
668 x 482 NTSC

All resolutions display 262,144 colours

The free bundled software saves your images in the following formats: IFF, IFF24, RGB and Anim, plus a series of dithering modes to enhance the overall quality of the images.

VIDEO DAC £39.95

HISOFT PRODUCTS

SQUIRREL SCSI INTERFACE Connect SCSI peripherals **£59.95**

AURA 12/16-bit direct-to-disk sampler A6000/1200 **£79.95**

MEGALOSOUND 8-bit direct-to-disk sampler, all Amiga's **£29.95**

VIDEOMASTER AGA Realtime video with sound + stills A6000/1200 **£59.95**

VIDEOMASTER AGA RGB VideoMaster AGA plus ColourMaster **£99.95**

VIDEOMASTER Realtime video with sound + stills A500/A500+ **£52.95**

VIDEOMASTER RGB VideoMaster plus ColourMaster A500/A500+ **£89.95**

COLOURMASTER RGB splitter for VideoMaster **£52.95**

PROMIDI INTERFACE Amiga Midi interface **£19.95**

PICASSO II

Picasso II is a 24-bit graphics card offering true retargetable graphics on any Zorro based Amiga. Picasso resolutions are available from the standard ScreenModes program, all useable by OS friendly programs. The new Chunky option offers incredible speed with a 256 Workbench which is many times faster than AGA! All screens are stored in fast RAM, removing 2MB Chip RAM limitations. PicassoMode allows the creation of custom screens quickly and simply. Picasso II comes with TVPaint Junior and drivers for ImageFX, AdPro, ImageMaster, Real 3D and GIF; IFF, JPEG and MPEG viewers. Also included is the MainActor animation program.

PICASSO II £299.95 WITH TV PAINT 2.0 £329.95

PABLO Video Encoder .. £129.95

CHIPS/SPARES

512 x 32 72pin Simm .. £79.95

1 x 32 72pin Simm £149.95

1 x 8 30pin Simm £34.95

4 x 8 30pin Simm £149.95

1 x 8 GVP Simm £159.95

1 x 4 Static Column A3000 £50

1 x 4 DIP £50

256 x 4 DIP £5

1 x 1 DIP £5

CIA £12

GARY £19

PAULA £19

DENISE £19

SUPER DENISE £25

KEYBOARD IC £12

FAT AGNUS 1MB £19

FAT AGNUS 2MB £29

PRINTER CABLE £6

RS232 CABLE £6

SCSI EXTERNAL £15

ACEEX MODEMS

Aceex Fax Modems feature: Full Haynes compatibility, error detection + correction, modem cable and manual included, NComm Telecommunications software, Auto dial, Auto answer and leased line support.

ACEEX v32 BIS 14,400 bps £169

ACEEX v32 BIS FastFax 28,800 bps £229

TRAPFAX Fax Modem Software .. £49

INC. PC CABLES SOFTWARE



Not BT
Approved

GENLOCKS/DIGITIZERS



GRAPHIC SYSTEMS

Microgen genlock allows you to overlay professional looking graphics onto your home-made movies. Microgen comes complete with timing software and hardware controlled fades.

MICROGEN VHS Genlock .. £179.95

MICROGEN VHS Genlock .. £99.95

Videon 3.0 unlocks the Amiga's graphic potential. Digitize and display all 4096 colours in high resolution mode. Digitize in the stunning 29,971 colours mode. Digitize in 24-bit, directly from a VCR. Video Camera, LaserDisc, etc.

VIDEON 3.0 £139.95

Maxigen 2 is a very high quality genlock for over-laying graphics onto VHS or SVHS. Full hardware fades, colour composition controls and excellent keying quality.

MAGIXEN 2 Genlock £299.95



TANDEM CD-DE

This card allows you to connect a CD-ROM drive to your Amiga 2000/3000/4000, Syquest 3.5" and IDE HD's. Complete with cables, software and manual. ROM 2.04 or above.

TANDEM CD-DE CARD £69

OCTOGEN SCSI-2

SCSI-2 controller card for the Amiga 1500/4000 Upgradable to 8MB of RAM.

OCTOGEN 2008 £129

VGA ADAPTOR £15

All products have a 12 month warranty unless otherwise specified
Trade and Educational orders welcome - Worldwide distribution available

All prices include VAT. Specifications and prices are subject to change without notice. All trademarks are acknowledged. All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available free of charge on request.

Anyone interested in 3D modelling has, at some point, seen a model so well made it makes them stop and admire the creator's handiwork. Whether it be dinosaurs, animated human faces, or cars with smooth, flowing lines, there are plenty of examples around that make you think "how did they do that?"

Often, the answer is that they used a 3D digitiser to 'scan' a physical object and import its vital statistics to a ray tracing package, where the model is tidied up before textures and other effects are added. Indeed, much of the drudge work in modelling can be done by electronic sidekicks if you have the sort of production budgets enjoyed by Industrial Light and Magic.

In high-end digitisers used by movie companies, a scanning laser beam builds up a picture of an object's surface in minute detail before passing the data to a Silicon Graphics machine for interpretation. The 3D artist can build a model in plastic or any other substance, or have it built by the traditional model makers who brought us the Star Wars designs, then digitise it to cut out most of the time-consuming job of translating the model to computer graphics.

PRICE DROP

For a long time now, small companies and enthusiasts have been unable to use this sort of technology, but a growing number of American manufacturers are releasing smaller, less expensive digitisers which are now coming down in price – enough for them to be a realistic option. One such unit is the Immersion Personal Digitiser which, though still not cheap, is a powerful tool for any modeller.

Laser scanning would be far too expensive, so the personal digitiser makes use of a jointed arm (much like a robot arm) with a stylus on the end. This sits on a bread-board-sized base and is connected to the Amiga via a control box and serial cable.

Build quality is as good as you'd expect from a device costing this much. The arm itself is made of tough, thick plastic with a solid brass stylus, and the base board is half an inch thick with rubber feet to stop it sliding around. To avoid any plug difficulties on either side of the Atlantic, the control box uses a standard kettle lead connection, and all necessary cabling

Three rough models created using the digitiser. Note that the human face uses more samples than the other two, and is therefore much more accurate



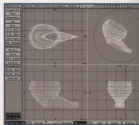
Digitising

(including a custom serial cable) is supplied.

The unit's Vertisketch software is installed in no time and uses ARexx macros to enable the digitiser to be controlled directly from Lightwave's Modeller. There are several control macros, but the most important – Get Point – simply passes a position request to the digitiser's control unit which replies with a three dimensional co-ordinate. A point is then created on screen to correspond to the arm's position when the macro was invoked.

Hardly any delay is involved in the process, so digitising a long series of points is a simple matter of moving the stylus to a new location with one hand and hitting the relevant function key with the other. The manual suggests using F10 for the Get Points macro, but you can set this system up any way you like.

Several macros are supplied to ensure agreement between the arm and Lightwave's internal 3D world. Set Origin, for example, can be used to select any point within the arm's reach and treat that point as Modeller's equivalent of co-ordinate 0,0,0, and the Set Orientation macro ensures that your digitising table is oriented in the same way as the



Even relatively simple shapes, like this pipe bowl, can be digitised faster than you could model them from scratch

Modeller environment. The latter becomes very important because you have an object which is too big or awkward to digitise in one piece. By creating a simple triangle Modeller and aligning it with another that you create using the digitiser, users can ensure that the centre of the digitiser's universe always in the same Lightwave position.

With this common frame of reference, it is much easier to ensure that two parts of a larger object can be glued together again once they've been digitised.

I say much easier, but the process still is what you'd call a walk in the park. Probably the biggest limitation of digitisers such as this one is that they have problems with large, odd-shaped objects.

At full stretch, the tip of the stylus will reach about 55cm from the base of the arm, but when you have to loop the arm up and over an object, this reach comes down to about 30cm or less.

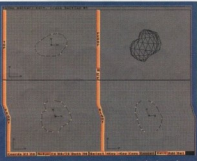
For objects such as a thigh bone (used in one of the pre-supplied examples), this means digitising in two or more sections and resulting hassles when the finished model is glued together in Lightwave.

For smaller objects, the arm is easily capable of digitising a complete object, and

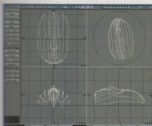
Good for your bones

Why not just use splines, or the Forms editor in Imagine? I mean, it's not easy to create organic shapes, but it can be done. Why spend money on a digitiser? Apart from obvious benefits in terms of cutting design and modelling time, 3D digitisers make it much easier to create a complete model with one continuous skin. Until Amiga packages utilise the 'smart skin' techniques found in some Silicon Graphics software, even fairly simple objects such as a human head are difficult to produce without bolting two or more objects together.

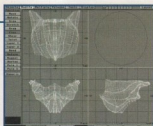
When you make a model out of two or more parts the join will usually show, and there's nothing more realism-killing than a dirty great line where, for example, the shoulder joins the arm. Putting bones into an object like this will produce decent animated effects, but with one continuous object the effect is far more convincing.



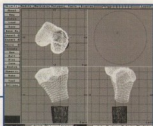
Using Imagine's Forms editor to create organic shapes is one answer, but it can be a very time-consuming process



Digitising a face mask is easy for the Immersion digitiser, but tricky for the user. This one doesn't have enough sample splines for a detailed model



When having a go at objects such as this cat head, projections like the ears can make life more difficult



The supplied macros include several to help with alignment, but it's still very tricky when digitising an object in two parts, then joining it

g with depth

*Stevie Kennedy looks at
Immersion Personal Digitiser
and finds an expensive
short-cut to modelling heaven*

accuracy is impressive. When the stylus is held to the subject's surface at a reasonable angle, errors are in the order of about half a millimetre. It's only when you're really stretching to reach a difficult spot with the stylus that points can start to fly around a little.

If the angle between the stylus and the object is less than about 45 degrees, your digitised points sometimes appear in unpredictable places, though this can be rectified with a quick move operation. Keep the arm within its more comfortable limits and it hardly ever misses the target.

The arm uses sensors at each joint similar to those used in robotics, and these sensors need only keep a very careful eye on the angle at which the arm is being rotated. With this information, and knowledge of the arm's physical dimensions, working out the three dimensional position of the stylus tip is a relatively simple maths puzzle.

TRUE SIZE

The firmware on board the control box uses real world measurements, so if you are digitising a model of a Spitfire which is only 15cm long you'll have to scale it up to its proper virtual size later on. This should be seen as an advantage rather than a disadvantage, though, as it ensures the hardware side of the equation always knows what it's doing and, more importantly, where.

Once all lines have been digitised, you should be able to use Modeler's Skin feature to create a continuous surface across the splines, or the Patch option if you want more control - though this is a trickier method. The finished model's quality and accuracy are affected more by the user's skill at judging where to take sample points and how many samples to take, rather than the accuracy of the arm.

This is the tricky bit, and requires a fair

amount of patience and practice. The use of plasticine (again, a small amount of this is supplied) or tape to stick a subject firmly to the digitising table is highly recommended, and any time spent marking off the grid and thinking about the best way to digitise each object pays great dividends.

Be warned that you'll need a steady hand to get the most from Immersion - the arm moves very freely on its joints and can't be positioned 'hands off'. There's an optional foot pedal which can be used to leave both hands free when sampling points, but I found that stomping on this usually caused my hands to wobble at exactly the wrong moment.

Apart from these considerations, there's very little to worry about when using Immersion, and only those with absolutely no dexterity will have any real problems.

You'd have to be a dedicated and wealthy enthusiast to splash out on a peripheral such

as this, but for many small companies and self-employed 3D artists the Immersion Personal Digitiser is a high quality, accurate tool which would quickly repay the investment through offering increased flexibility and cutting down on modelling time.

It's just a pity we're going to have to send it back.



SYSTEM ESSENTIALS

RED = Essential BLACK = Recommended



Lightwave 3D software

The bottom line

Product: Immersion

Personal Digitiser

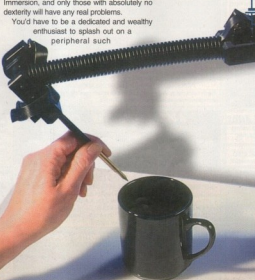
Price: £1,599+VAT

(prices vary according to any software or implements included)

Supplier: Raytech BBS

Phone: 01862 832000

Ease of use	8
Implementation	9
Value for money	8
Overall	8



AMIGA INSIDE

A1200 RAM

New low-cost 32 bit A1200 RAM cards with clock, FPU socket & standard 72 pin simms.

0MB card	£49
1MB card	£55
2MB card	£99
4MB card	£169
8MB card	£299

For FPU see below

A 600 RAM

New low-cost 1MB ram cards for A500. -Simply plugs in trap door!

1MB	£20
1MB with clock	£33

A500 plus RAM

Low-cost 1MB ram cards for A500 plus

1MB	£20
-----	-----

A 500

1/2MB ram card	£15
2MB	£120

VIPER 68030

28MHz 0mb	£119
28MHz 2mb	£189
28MHz 4mb	£249
28MHz 8mb	£359
40MHz 0mb	£189
40MHz 4mb	£349
40MHz 8mb	£419

For FPU see below

F.P.U.

Floating point unit for our A1200 ram cards & Viper boards

28MHz	£25
33MHz	£55
40MHz	£79
50MHz	£110

Simms for GVP1230

1MB £35
4MB £199

This simm is also used in GVP 1230 II, A580 & G-Force

72 pin simms

1MB 72 pin	£27
2MB 72pin	£65
4MB 72pin	£129
8MB 72pin	£269
16MB 72pin	£399
32MB 72pin	£799

This simms 32 BIT used by Amiga 4000, VIPER, Warp Engine, M-TEC, Blizzard, Cobra 28-40 MHz, Amitek, Emplant, Hawk and many more, please phone for more information.

A600 & A1200 HARD DRIVE

Best Time to buy 2.5" hard drive for your A600 & A1200 with our SPECIAL OFFER this MONTH.

80mb	£79
120mb	£130
260mb	£200
340mb	£275

all above drives includes cables & software

3.5" ide Hard Drive for A1200 or A4000 all at LOW! LOW! prices

120mb	£101
270mb	£150
420mb	£155
540mb	£179
730mb	£239
1gig	£399

3.5" drives fit straight in to A4000 and can be fitted into an A1200 with a bit of effort & a cable kit.

A1200 cable kit £10

3.5" SCSI & SCSI 2 Hard Drive all at

SPECIAL OFFER	
120mb	£99
270mb	£169
340mb	£229
540mb	£229
1gig	£429

TANDEM

All new Tandem card for A1500 to A4000 now supports MITSUMI 3 speed & 4 speed CD-ROM

Tandem card	£69
MITSUMI 3 speed	£169
MITSUMI 4 speed	£199

Tandem can also be used as IDE hard drive controller.

SEE ABOVE for hard drives

30 pin simms

1MB 30 pin	£27
4MB 30 pin	£99
16mb 30 pin	£449

Scanner

Power mono scanner	£99
Alfadata 800dpi	£99
Power col scanner	£259
Epson GT6500	£579
Epson GT8000	£675
Epson GT1 9000	£999
Image FX	£99
SPECIAL OFFER	
OCR s/w for above scanner	£35

PRINTERS

CITIZEN	
ABC COL	£159
200 COL	£179
240 COL	£229
HEWLETT PACKARD	
320	£229
520	£249
560	£399
EPSON STYLUS 720 DPI	£449

SQUIRREL

New PCMCIA Slot SCSI 2 interface for Amiga A1200

Squirrel	£69
External SCSI case	£69
External SyQuest case	£69
External CD-ROM case	£69
For SCSI hard drive low price look above	

SyQuest

	Internal	External
105mb	£179	£248
270mb	£285	£359
88mb	£185	£255
200mb	£195	£265
SyQuest cartridge		
44mb		£34
88mb		£39
200mb		£60
270mb		£49
105mb		£42

Alfapower

IDE controller for Amiga A500 & A500 plus with option to upgrade to 8mb ram

Alfapower £95

OKTAGON 4008

SCSI Hard Drive controller for Amiga A1500 to A4000 with option to upgrade to 8mb ram

OKTAGON4008 £129

SEE ABOVE for hard drives

Floppy Drives

External and Internal floppy drives from POWER Computing			
Internals	A500	A1200	A4000
720K	£30.95	£35.95	n/a
1.76K	n/a	£55.95	£55.95
External	A500	A1200	A4000
720K	£39.95	£39.95	£39.95
1.76K	£59.95	£59.95	£59.95

For A600 please phone 1

Blank Disks

	D500	D5H0
10	£3.50	£5.00
50	£15.00	£25.00
100	£145.00	£245.00
500	£280.00	£480.00

DISKS WITH LABELS BRITISH MADE ERROR FREE

MONITORS

Microvitec 1438	£289
Philips 8833MK2	£229
Microvitec 1440	£419

ZIPP RAM

1MB	£35
-----	-----

REPAIR SERVICE

New service centre for most Amiga computers. We offer a quotation service of £10 for which we will examine your computer and report back with an exact quotation price for the repair. If the repair is carried out the £10 is then deducted from your bill.

HOW TO ORDER

When ordering by telephone please quote your credit card number followed by the expiry date and also your full name and address. If paying by cheque please make it payable to Gastainer Technology. In any correspondence please quote a phone number and also a postal code, please allow five working days for cheque clearance.

DELIVERY CHARGES

Small consumables and software items under the value or £50 please add £3.50 P&P. Other items above £50 please add £10 courier service. Offshore and highlands, please call for a quotation. In addition, we offer the following express services: Saturday delivery normal rate plus £10 per box. E&OE prices subject to change without prior notice. All trademarks acknowledged.

All prices include VAT. Prices and specifications are subject to change without notice. E&OE.

Gastainer Technologies

126 Fore Street, Upper Edmonton, London N18 2XA

Tel: 0181-345-6000 Fax: 0181-345-6868

You're undeletable



I used to own an A500 computer with a GVP hard drive. One of my favourite games was Silent Service II, which was installed onto a hard drive partition by the program's own installer program.

After about three months with my A500, I eventually had the opportunity to buy a second hand A1200, which I duly did of course. I then set about transferring my programs on my A500's drive to the A1200's internal IDE drive using Quarterback.

I have now finished Silent Service II and tried to delete it from my hard drive. I have managed to delete all the files in the Silent Service II drawer but when I try to delete the drawer itself, I get the error message 'icon in use.'

I know a little about Workbench and AmigaDOS and realised that there was probably an Assign statement in the user-startup or startup-sequence scripts. However, after browsing through these two files with a fine toothcomb, I can't for the life of me find any Assigns relating to the game. How can I get rid of the damned Silent Service II icon?

G. Whittaker, Sussex



There are a few ways to create Assigns for Workbench, besides having them directly stated in the user-startup or startup-sequence scripts. One way is to have a completely separate script file containing the Assign statements which is called from either the user-startup or startup-sequence by an Execute command. See if you can find any Execute commands and check the files they are calling.

Also, another common method is to have a file in the WBStartup drawer. Anything in here is automatically executed when you boot Workbench, and your game may well have placed a file in there which is creating the Assigns.

Personal plea

There were several things I wanted to buy for my Amiga 1200. Unfortunately, when I was ready for the Personal Font Maker update, I was not able to obtain it as it was no longer available. Perhaps there is someone who has it and no longer has any interest in it? Can you help?

Mr F Fortune, Fife

We failed to turn up a possible source for you Mr Fortune, but there may be someone out there who can help you. So, if you have the item in question and no longer require it, drop us a line and we'll put you in touch with Mr Fortune.

Time for another bout of
problem bashing courtesy of the
extremely helpful ACAS pages

Fast math



I have an unexpanded A1200 which is beginning to seem a little on the slow side since I started playing flight sims. I am now looking to increase the speed at which my A1200 runs and until I can afford a 68030 accelerator board, I was wondering whether I can simply add a floating point unit (FPU) to my A1200's insides to speed things up a little.

Is there a simple FPU upgrade I can buy? I'm quite prepared to do a bit of soldering. Also, why are there no 68040 accelerators around for the A1200?

J. Matthews, Grimsby



For a start, you need to upgrade your memory. Believe it or not, merely adding extra Fast RAM to your A1200 can significantly speed up some software, particularly flight sims. This is because Fast RAM is 32-bit memory independent of Chip RAM and can be accessed very quickly indeed.

It's not possible to simply fit an FPU to your Amiga's insides. Currently, the only way to do so is via a memory upgrade board which features an FPU socket (of which there are many), or through installing a processor upgrade board such as the many 68030 products around.

Be patient, save up your dosh and buy a 68030 upgrade board with FPU slot and 72-pin SIMM slots (preferably two or more). That way you will solve all your A1200's speed and memory problems in one go.

There are no 68040 accelerators because there are problems in keeping these powerful chips cool, and in the extremely small confines of an A1200 there is no room to fit a CPU fan on the 68040. Another problem with fitting a 68040 is that it's big enough without



acas

AMIGA COMPUTING ADVICE SERVICE

having a fan stuck on top of it. So, it's all down to a space and heat problem.

I suppose it wouldn't be too much of a conceptual leap to figure that maybe an external 68040 upgrade board in some sort of casing with a lead connecting it to the A1200's upgrade slot is possible, but no one has done it yet - presumably due to the costs involved. I certainly wouldn't mind a big bad '040 in my little A1200, so if any entrepreneurial boffin types are out there, take heed.

Sim City cockup



I have owned an Amiga 1200 with a Blizzard 1200/4 4Mb fast RAM and GVP 85Mb hard drive, which was installed by the shop I bought it from. The hard drive is split into three partitions: Workbench (5Mb), Work, (40Mb) and Games (40Mb). I also have a Commodore 1942 monitor and a Star LC24-200 colour

Memory expense



I have been shopping around for the best price for 72-pin SIMM modules. I have a DKB 1240 '030 accelerator card which has one 72-pin SIMM socket. Ideally, I want 16Mb as I am keen on computer graphics. Unfortunately, this would mean I would need a single 16Mb SIMM, which is hard to find and is a lot more expensive than even two 8Mb SIMMs.

Why is it that one 16Mb SIMM is more expensive than two 8Mb SIMMs when you are getting the same amount of memory in fewer components? Are we being ripped off?

D. Taylor, Liverpool



16Mb SIMMs are expensive because they use extremely compact memory chips compared to 8Mb SIMMs. Such memory chips are, at the moment, more expensive to produce. As demand increases and production becomes more cost effective, we will no doubt soon see 16Mb prices drop dramatically, and will probably start drooling over even bigger SIMM modules.

Such is life in the fast moving field of computer technology. Just think back to when you thought 1Mb was expensive and opulent before 4Mb and 8Mb SIMMs appeared.



Do you have a problem? Do you sometimes find yourself poised over your Amiga with axe in hand, spouting profanity at the stubborn refusal of your Amiga software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a thorough description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

Any questions?

printer. Last Christmas, my wife bought me Sim City 2000 and after following the install procedure I tried to play the game. The result was my that Amiga crashed, allegedly due to the program not accessing the required libraries (according to a technical guy at Maxis).

That is not my problem. The problem now is that somehow my startup sequence file seems to have been affected and every time I turn on my A1200 I get an AmigaDOS screen. The only way I can get the Workbench screen to appear is to boot with a Workbench floppy disk installed in DFO.

I have tried to find out how to install Workbench onto a hard drive but all the shops inform me that unless I am 'up to speed' with AmigaDOS, I will find it difficult - however, they will do it for me for a small remuneration, typically £16 plus VAT.

What I would like to know is:

1. What is so difficult about installing Workbench onto a hard drive?
2. Why doesn't Workbench have an install program?
3. What is the best book to instruct a novice on Workbench?
4. Having looked at computer languages to learn, I am unable to distinguish between GFA Basic, Easy Amos, and AmigaDOS. Which will be the best one to get into?

D. Hargreaves-Turner, Norwich



I can't imagine why Sim City has messed up your startup-sequence file. Any installation program worth its salt should have made a backup of your startup-sequence file before altering it. Even

FPU failure?



I have an A1200 which is fitted with a 4Mb memory expansion board which also features an FPU socket. I have recently bought an FPU along with VistaPro version 3.

After fitting the FPU to my expansion board, I was looking forward to using the floating point version of the program. Unfortunately, when I run the FPU version of VistaPro, I get the message 'Program failed (error 800 0000B) Wait for disk activity to finish.' What's going on?

R. Stiby, Warwickshire



It seems as if VistaPro isn't finding your FPU. The same thing happens when you try to run VistaPro without any FPU

whatsoever. Check your upgrade board's manual for fitting instructions for the FPU.

Some software will not work when an FPU is detected and to overcome this, many upgrade boards have a 'jumper' (a kind of on-off switch) which allows you to enable or disable the FPU without having to remove it entirely from the board. It may be that this jumper is in the disable position.

Failing that, I'm afraid your upgrade board or FPU may well be damaged. Take your board to the supplier you got the FPU from and ask them to test it with another FPU. This will allow you to check whether the upgrade board or the FPU itself is faulty.

Anorak myth



I want to set the record straight about programmers who are unfairly labelled Anoraks. Everybody seems to think that because you are a programmer, you must be a dull person with no life and few friends.

Well, this is not true. Now that I've got that off my chest, can you recommend a good book on 3D graphics programming? I am keen to create demos and ultimately a game using 3D graphics?

K. Stanley, Birmingham



My definition of an Anorak is someone who's entire social life revolves around their computer, to the exclusion of all else. They are more than likely fashion unconscious, often wearing trainers in conjunction with casual trousers and, even more disturbingly, sporting a tank top.

They wear spectacles which have broken and have been taped in the middle and invariably talk in a rather nasal fashion with a tone of voice akin to Terry Christian of The Word fame.

Unfortunately, Anorak is mistakenly used to describe programmers in general. This may be due to the fact that long ago, when computers were found only in large institutions and took up an entire room, programmers usually had David Bellamy-type beards and did indeed wear tank tops.

They may well have had no social life because programming a computer in those days usually meant flipping switches for each command. A long and tedious process.

Today, however, most programmers are hip, especially those who can produce games with awesome graphics and intros. What would cool films like Terminator be without programmers to create those awesome graphics tools eh? So, not all programmers are Mr Harry Hoptenuse, sum of all the squares - just some of them are.

As for your request for a good book on 3D, you may still be able to get hold of Amiga Real-time 3D Graphics by Andrew Tyler and published by Sigma (ISBN 1-85058-275-0). Ask for it at any good bookstore.

though your startup-sequence is messed up, Workbench should still be resident on your hard drive. The startup-sequence file is actually responsible for loading Workbench, but you can do this manually yourself. Try typing Loadwb. This should set your hard drive into activity, hopefully loading Workbench. Next, type Endcl to close the AmigaDOS screen, revealing Workbench in all its glory.

You should now look in the S: drawer and look for a file that looks like a backup of the startup-sequence, something like startup-sequence.bak or similar. Rename this to startup-sequence and reboot your Amiga - hopefully, this should restore your original setup.

As for your specific questions - well, here we go with the answers:

1. Workbench is really easy to install and does indeed have its own install

script program (which answers question 2). Even though your internal hard drive was already formatted and partitioned when you bought it, you should still have received the Workbench installation disks as well as a disk for your hard drive with the appropriate utilities for formatting and partitioning.

I also find that a 5Mb Workbench partition is way too small. Many programs sometimes install their own files to this system partition during installation, such as libraries, fonts and other system files, so you may soon find programs refusing to install because your Workbench system partition is full. You can get past this problem by using ASSIGN to re-direct some of Workbench's 'system' drawers, such as FONTS: to another partition, but it is a little clumsy and untidy.

3. There are quite a few books on this subject, all of them being pretty good. However, the *Insider Guide* series of publications from Bruce Smith books stand out in my mind.

4. This depends on what type of programs you want to write. GFA Basic is aimed mainly at application programmers. Easy Amos is generally for the games programmer, and I wouldn't recommend AmigaDOS as a programming language.

If you want to write utilities or applications, I would recommend HiSoft Basic from, or HiSoft actually - it's excellent. If it's games you're looking to develop, I suggest you opt for Blitz Basic, which is also very good.

Amiga Frame Grabbing has just taken a Fall... in Price, but definitely not on quality!

NOW WITH NEW VERSION 2.0 SOFTWARE... AND OPTIONAL PCMCIA INTERFACE FOR EVEN BETTER PERFORMANCE, PLUS SECAM SUPPORT (and NTSC due soon)

The revolutionary new ProGrab™ 24RT with Teletext is not only the best way to get crisp colour video images into your Amiga, it actually costs less than any of its rivals. Whilst this real time 24-Bit colour frame grabber/digitiser has slashed the price of image grabbing on the Amiga, it hasn't been at the expense of quality. Indeed, ProGrab™ has been bestowed the Amiga Format Gold Award and received many rave reviews for its ease of use and excellent quality results.

With ProGrab™ you needn't be an expert in Amiga Video Technology either. Simple 3 stage operation ensures the right results Real Time, after time.

STAGE 1...

Select any video source with composite output. This could be your camcorder, TV with SCART output, satellite receiver, domestic VCR/player or standard TV signal passing through your VCR/player... the choice is yours.

STAGE 2...

Using the ProGrab™ software, select an image you wish to capture in the on screen preview window (because the hardware grabs a frame in real time, there's no need for a still frame facility on the source device) and, grab! ProGrab™ even includes a Teletext viewing/capturing facility from either TV or satellite source devices. Once grabbed, simply download the image to your Amiga for full screen viewing.

STAGE 3...

Use the saved image in your favourite Amiga word processing, desktop publishing or graphics software packages.

**ProGRAB™
24RT**

ProGrab™ really does make it that simple!

Even better performance using ProGrab™ Version 2.0 upgraded software.

- Support for Virtual Memory on all hard drive systems Amiga (without the need to fit an MMU). Allowing use of the highest resolutions - even with smaller memory Amigas in low memory situations, requiring only 1Mb of hard drive space.
 - Additional 'teletext' - with terrestrial TV signals as well as satellite
 - A larger preview window option with double the resolution and 4 times the area of the previous version
 - Composite PAL, and now SECAM (French TV systems) video inputs with NTSC compatibility due to be released soon.
- FREE with all new ProGrab™ orders and available to all existing users as a software upgrade.**



Grab images with your camcorder.



Take a signal from a TV with SCART output.

Use a satellite receiver as your output device.

Grab TV or video pictures from your VCR's video output.

For just £129.95

ProGrab™ is supplied with everything you'll need.

- **ProGrab™ 24RT Digitiser** with power & input signals
- **ProGrab™ 24RT Software**
- **Parallel Connecting Cable**
- **Main Power Supply Unit**

ProGrab™ accessories can extend performance even more for the serious/professional user.

Available accessories include...

- **Optional PCMCIA interface only £29.95 for A600/A1200s** for even faster operation.
- **Faster Downloading Times** (up to FIVE times quicker)
- **Improved animation speeds** of up to 11fps (monoc) and 3.5fps (colour)
- **New sound sampling and animation capabilities** (separate sound sampler required)
- **Save animations direct to your Amiga's hard drive**
- **Optional SVHS Connection Lead only £4.95** (Only necessary if your output device doesn't have a standard phono composite video out socket)

To get **your** hands on ProGrab™, call our sales line on...

01 773 836781

...or Post/FAX your requirements on the order form provided.



harwood computers
the UK's favourite Amiga Dealer

Gordon Harwood Computers Limited,
New Street, Atherton, Derbyshire DE55 7BP.
Tel. 01 773 836781 Facsimile: 01 773 831609

Mr/Ms/Miss/Ms	Initials:	Surname:
Address:		
County (Country)		
Daytime Phone		Postcode:
Evening Phone:		
Please rush me... ProGrab Frame Grabber @ £129.95 inc. p&dp £..... For a software upgrade @ £4.95		
Optional PCMCIA Interface @ £29.95 inc. p&dp £..... inc. p&dp please tick here <input type="checkbox"/>		
Optional SVHS Connector @ £4.95 inc. p&dp £..... Card holder's signature:		
Optional FAST Courier Service Delivery £ 6.95		
(Overseas Customers - Please Call for Prices etc.)		TOTAL £.....
Card No:	Issue No./Switch Only:	Dept: BCO
Expiry Date:		
Cheque/Bank Draft/Postal Order for £..... payable to Gordon Harwood Computers Limited..		

Just what you need. Another Internet article. More boring comms talk. Obscure stuff about IP addresses, baud rates and WWW sites. You'd probably rather drink a quart of paint. But in case you aren't fed up with the whole prospect of having to wade through a few more pages of coverage on the superinfobahn, l'autoroute d'informatique, or the information superhighway, here is the article for the Amiga net newbie.

If you've never used the net before, or have been struggling along with AmigaNOS, too scared to venture into the wild waters of AmiTCP, then read on MacDuff. The first thing to bear in mind about this article is we are going to be discussing the Internet with relevance to one particular company, Demon Internet Services, who featured on last month's CoverDisk giveaway.

Demon don't officially support AmiTCP yet, but do unofficially provide a lot of help for people trying to get to grips with it. There is already an installer for AmiTCP on Demon's FTP site, as detailed in one of the boxouts on the following pages, so you shouldn't have to do much faffing about to get it to work from scratch.

Having said that, AmiTCP does need some tweaking to get the most from it, and you will want to search out some of your own tools to replace some of those that come with it.

BARE ESSENTIALS

This article is not going to try to explain how to use the Internet, or how to get files from it, but you will need several files from Demon to be able to follow this article through to its conclusion. These files are: AmiTCP-DISr10.lha, R10-Update1.lha, and AmiDisUtils.lha. They can all be found on Demon's ftp server in the pub/amiga/amitcp-installer directory.

The first of these files is the actual Demon installer for AmiTCP. This works really well and you shouldn't have any problems installing it. Before you dive back onto the net with your new-found AmiTCP-ness, you really ought to unpack both of the other two files as they contain newer versions of stuff in the main archive.

Now, let's have a look at all the stuff you have just installed. In your AmiTCP directory you should find a directory called bin, one called db and one called usr. There will also be several other directories, but these three

Inside the

are the most important. The directory called bin is so-called because it should contain binaries or programs, and if we look inside we find it does.

This is the nexus of operations for AmiTCP, where everything starts from. Make sure the following items in your bin directory have the 's' protect bit set:

- Link – this is a script to let you get online.
- netstat – an ARexx program giving information about your connection. Not immediately important.
- nntpttransfer – very important. This is the script that gets news for you from Demon.
- postnews – again, very important. This script lets you write news articles or follow up other people's articles.
- startnet – this script must be executed before you can do anything else. You might have chosen for it to be included in your user-startup when you installed AmiTCP.
- stopnet – why would you want to?
- SynClock – this script synchronises your Amiga's clock with another machines over the net. Especially useful to people who don't have a clock on their machines and want to download news (as we shall see later).
- talkrequest.rx – not immediately important, this script lets you set up an AmiTCP talk session.
- telnet – this script lets you use telnet.
- tin – this is your newsreader script and is very important.

Demon don't officially support AmiTCP yet, but do unofficially provide a lot of help for people trying to get to grips with it

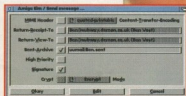
The db directory contains only two scripts



This is a brilliant tool. I wonder who wrote it?



Here I am informing demon of the latest version of AmiTCPHelper



And this is the requester that appears once I have finished editing my mail

Internet

*Just when you thought it was safe
to look in a computer magazine
again, up pops another 'net article.
Frank Nord investigates*

Buttons for DOpus

Once you are a confirmed netter, you might want to put some net-related buttons in your DOpus config. One that springs to mind is a button for the Amine! index. You'll have to make sure you always put it in the same place, like Text:Index, or something similar, but you can make a button which just needs a command to 'Read Text:Index' and Robert is your father's brother.

You can also set up buttons for uuencoding and decoding, although not for compress (well, I haven't yet figured a way of doing it - if you have then let me know.) For uuencoding you will need

an 'AmigaDOS' command like this:

```
(count & 00 64)
```

for uuencoding you need:

```
(count & 16)
```

and for uuencoding with LHA decompression you can put:

```
(count & 16)
```

Remember to make sure that the flags for output window, no filename quotes and cd source are ticked for all of these. You might also want to put a button in to allow you quick and easy access to your AmITCP directory, scandir AmITCP: for instance.

We are initially interested in - dialscript and NewsStamp. You can edit your dialscript to change the number of retries you wish to perform when trying to connect, your modem settings, and what number your modem will dial.

The NewsStamp script merely contains the exact date and time you last downloaded news. This is extremely important. If you go away for a couple of days, or go on holiday, make sure you check this script before you get back on the net - if you don't you could be looking at several thousands of articles to be downloaded for news and an enormous phone bill. The way the script reads goes like this:

```
news.demon.co.uk 950309 102014
```

Your news server, year-month-day, hour-min-sec

On the other hand, the usr directory is a real can o' worms. There are files galore in here that we might want to change. For starters you should see directories named: lib, mail, news, spool, and also one named after your username, in my case Ben. Let's

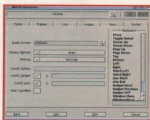
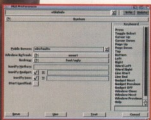
go into that directory first of all. In it you should find a directory called .tin and several files all starting with . - .newsrc, .signature, etc. Come back out and have a look in lib. This will contain an aliases file, a Config file and a newsgroup file, among others. The aliases file is for working with Mail and lets you just type someone's name rather than their entire e-mail address.

VARIABLES

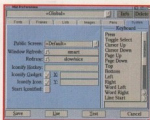
Config is where all your environment variables are set; what your username is, what your host is, what timezone you are in, etc. Lastly, but by no means least, there is the newsgroups file. This sets what newsgroups rntpttransfer goes looking for when you link up. The number at the end of each line is the amount of days before the articles in that group will be able to be trimmed, so don't set it too high otherwise your hard drive will soon fill up. Because I am usually on every day, I set it for one day for most groups.

Come back out of lib into the usr directory. The mail directory you should see is where any mail addressed to you will go, the news directory is where all your unbatched news articles will go, and the spool directory is where any mail or articles you send go

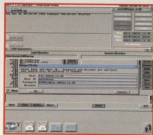
One of the nice things about MUI is that you can set how all your MUI-based applications look. They can look like this...



...like this...



...or even like this



Here we go again, connecting to Demon's ftp server. If you haven't downloaded Gui-FTP yet, see how nice it is compared to ncftp?

until they can be sent.

As a rule, you shouldn't need to investigate these directories in your everyday use of AmiTCP. The only time you might want to visit the Spool directory is if you have written a piece of mail or news you think you shouldn't send. For every piece of mail you will find three similarly-named files. You must delete all three otherwise your send-mail daemon will get confused.

Now it's time to get online. The first thing to do is actually connect to Demon. By now you should have installed AmiTCP from the installer, setting your IP address, password, host name and modem settings, etc. You should also have copied the later versions of some of the files from the LHA archives I suggested previously. If you haven't done this because you haven't been able to use FTP, it doesn't matter – we will do it now.

In preparation for full-on, shell-based, techie-type Internet access (we'll deal with the easier stuff later), you should edit your shell-startup script. This can be found in `$:` and you should add the following line to the end of it:

```
path amitcp:bin sysexec add
```

This will prevent you `cd`'ing to the AmiTCP directory all the time because it will make AmigaDOS automatically search those directories for any commands you might type. Next, open a Shell window and only type the following command if you don't have Startnet in your user-startup script:

```
startnet
```

Easy so far. Now we want to connect, so

Don't despair if your mail goes astray at first or you can't post articles to newsgroups. It happens to everyone. Try to send mail to the technical guys at Demon, succinctly explaining your config and problems and I have no doubt they will be able to at least help you on your way to finding a solution, if not giving you the fix there and then.

FTP and Mail are without doubt the most important (legitimate) uses for the Internet, but if that isn't enough you can try Mosaic which gives you access to the World Wide Web – make sure your modem goes at least 14.4k for this as it can be very time-consuming. Even more time-consuming can be IRC or Internet Relay Chat, a sort of global 6991 chatline.

As far as netiquette is concerned, try to be polite on the Internet. If you aren't very good at spelling, there are going to be people who pedantically pick on your every point of grammar if they can't think of a good counter for

The dial window will show what is happening as you try to connect. If you get an engaged tone, then the dialscript will retry for as many attempts as you have set

make sure your modem is switched on and ready to roll. Type:

```
link up
```

Two windows should now appear on your Workbench screen, one claiming to be 'AmiTCP Log' and the other 'Dialing...'. The dial window will show what is happening as you try to connect. If you get an engaged tone, then the dialscript will retry for as many attempts as you have set. If the modem seems to have connected, but the dialscript times out, you have two choices. You can either reboot your machine (pretty drastic and not very nice to have to do if you are seriously multitasking) or wait until the dialscript has run through all its iterations and then type link down.

However, this probably won't happen. What will probably happen is you will connect to Demon, your 'Dialing...' window will disappear and the 'AmiTCP Log' window will say that Mailkick has been started. Mailkick is the program that sends any mail you have written. You are now on the net, officially.

Right, we are now going to download heaps of files. You don't have to download all of these programs, indeed you don't actually have to download any of them – they just make life a lot easier, and in some cases, more interesting. Here's my list of the best ones to get, and why:

Very important

Gui-FTP.lha: amitcp/utlis – 40Kb. Much easier than using `ncftp`, this gives you a file-manager-type window for downloading and uploading files from ftp sites and takes care of logging on, etc.

uuxl20.lha: utlis/arc – 14Kb. You need this if you want to send files in mail, or decode people's news articles, etc.

compress.lzh: utlis/arc – 56Kb. If you see files that are labelled filename.Z, they are compressed. Use this program to decompress them. Especially useful for INDEX files.

Fairly important

mul2usr.lha: aminet/dev/gui – 678Kb. Magic User Interface. This is needed for a lot of programs most importantly, in this

context, AMosaic.

Mosaic.1.2.AmiTCP.lha: amitcp/extras – 194Kb. The only World Wide Web browser available for the Amiga at the moment. There is a newer, beta version at the AMosaic home page. Needs MUI.

AMHotlist1.50.lha: amitcp/extras – 15Kb. Hotlist for AMosaic, also needs MUI to work.

plink21.lha: amitcp/utlis – 33Kb. Plink is a replacement script for linking up and has many extra options.

Not necessary but handy

AutoSig12.lha: amitcp/utlis – 30Kb. Adds random signatures to your news postings.

SynCro1.3.lha: amitcp/utlis – 8Kb. A system clock synchroniser.

To get these files we are going to have to use ftp or file transfer protocol. I'm not going to explain what file transfer protocol actually is, it's beyond the scope of this article and there are numerous books on the Internet so you should find literature galore on it. My recommendations are Ed Kral's *The Whole Internet*, which is available direct from Demon, or any of the FAQs you find online.

You should still have your shell window open, so type:

```
ncftp ftp.demon.co.uk
```

into it. `ncftp` is the nearest thing to a user-friendly, keyboard-based ftp client on the Amiga, but I still suggest one of the first things you get is `Gui-FTP` in the list above. You should end up with an `'ftp>'` prompt and some text saying welcome to Demon's ftp server. You should then `'cd'`, just like normal, to the pub/amiga directory from where you can `cd` to the directories listed above for the files you want to download.

FTP uses a command called `get` to download the files and Unix (which is what nearly all ftp servers are running as an operating system) is case-dependent, so you will have to get the exact spelling for your files. An exact situation would look like this:

```
Workbench> ncftp  
ftp.demon.co.uk
```

Welcome to Demon Internet's ftp archive.
Guest login ok, access restrictions apply.
Logged into database.
demon.co.uk 1.5.6
(September 20, 1993).
Amiga version 1.2
(May 3 1994)

```
ncftp> pub/amiga/ncftp  
Res: Jul 23 09:03:00 GMT 1994
```

For Demon users to install AMiTCP, please download the `AmiTCP-DIS1.0` archive from the installer directory. Other people are welcome to download it, but the installer

Other fun stuff

is designed specifically for use with Demon Internet Services. Other users may still find this useful, as it contains a complete Mail, News, FTP, Telnet, Gopher and so on installation. Not to be installed over existing AmiTCP setups.

Wed Jan 12 12:58:43 GMT 1994

Please upload AmiTCP files into the directory /pub/amiga/amitcp/incoming. Files must be accompanied by a 'readme' or 'desc' or 'real' or else they will be erased. This file should contain an upload name (e-mail address) and a single line description of the file, as well as any additional descriptive information you wish to include.

Please e-Mail details of uploads to oliver@demon.net.

Tue Jan 11 18:47:33 GMT 1994

Please see the file README for details about AmiTCP
PLEASE note that Demon Internet do not officially support AmiTCP [yet]

```
dtsbase.demon.co.uk:/pub/amiga/amitcp
ncftpget Gui-FTP.lha
```

```
Gui-FTP.lha: No such file or directory.
```

```
dtsbase.demon.co.uk:/pub/amiga/amitcp ncftpget
utils
```

```
dtsbase.demon.co.uk:/pub/amiga/amitcp/utlils
ncftpget Gui-FTP.lha Gui-FTP.lha: *****
Gui-FTP.lha: 50916 bytes received in 46.08 seconds, 1.08 k/s.
```

```
dtsbase.demon.co.uk:/pub/amiga/amitcp/utlils
ncftpget ncftpquit
```

```
Workbench>
```

As you can see, I got my download wrong on my first attempt, but I knew I hadn't gone into the right directory so I just CD'd into utlils and repeated my instruction to 'get'. If you aren't sure exactly where you are, you can type 'pwd' which will allow your current directory, or 'ls' to list that directory's contents.

The file you just 'got' will be wherever you started ncftp from, so in my case it is in 'Workbench'. Unpack this file and install it and we will have more ftp fun. Gui-FTP gives you the opportunity to leave the keyboard for a button-based ftp interface. Now go and get some of the other files I have mentioned in the list above - you should find it fairly easy.

MUI is the only hard one you'll need to get. The current version isn't actually on ftp.demon.co.uk, but is available on the Amnet. What's the Amnet? It's a collection of files copied to various ftp servers around the world. Our nearest one is at the

Once you have got used to fiddling around with ftp, here are some more files you might like to get:

Mailmarker.lha: aminet/comm/mail - 12K. This little commodity watches for new mail and tells you when you have some. It can watch as many mailboxes as you like.

MUIEmail.lha: aminet/comm/mail - 39K. MUI-based email program. Nice and quick to use.

MUIBuilder21.lha: aminet/dev/gui - 679K. Lets you build interfaces for MUI programs and can generate code for a number of different compilers including Amiga E.

PGPAmi23a.4.lha: pub/amiga/utlils/crypt - 235Kb. If you want your email to be extremely private, then use PGP, which is a military-grade encryption

program. This file can be found at ftp.demon.co.uk.

AmigaElm-v5.lha: aminet/comm/mail - 352K. The latest version of Elm. It can now automatically encrypt your mails if you are using

PGP. tin123.lha: aminet/comm/news - 181K. Updated version of Tin. Warning! Don't use the postnews command that comes with this version, stick with the postnews that came with AmiTCP (it should be 87 bytes in size).

grapevine-1.33.lha: pub/amiga/amitcp/extras - 243Kb. IRC or Internet Relay Chat client. Run your phonebills up even faster than 0891 numbers. This is from ftp.demon.co.uk.

Imperial College in London, next to the Science Museum. It's address (and I can assure you, you will be typing this one in a lot) is 'src.doc.ic.ac.uk'.

If you just want to get MUI right now, that's fine, but a good idea would be to download the INDEX file in the aminet directory. This is a complete listing of all files available on Amnet and you can use Dopus to search through it for files you want to get. Also, there is normally a RECENT file which details programs uploaded to Amnet in the last seven days. If you want to really be up-to-date. The INDEX file gets updated weekly.

If you have already downloaded compress, you can download the INDEX.Z file which should be much smaller. To decompress it, make a copy of it in RAM, open a shell window and cd to ram; then type:

```
compress -d Index
```

I know I didn't put the 'Z' on the end, compress doesn't need or want it. You will then find that your INDEX.Z file has disappeared, to be replaced by a fully-formatted INDEX file which is plain old ASCII text. You can now browse through all the files on the Amnet without having to be online, pick the items you want, get on and retrieve them, and get off again in the shortest possible time.

Next is mail and news. They go hand-in-hand because the articles you send to newsgroups are treated just like normal mail at your end of the Internet connection. Sending mail couldn't be easier. Just load the program 'Mail' in your bin directory and hit the mail button. By default, Mail will use Ed for you to write mail with, but you can change it to another text editor. Most Amiga users on the Internet tend to use Cygnus Ed or Turboedit, but you can use any non-resident text editor you like.

The file you need to edit to change editor is AmiTCP/usr/lib/Config, but this is available from Mail, so you don't have to go searching for it. When you send mail make sure you get the address right - unlike the

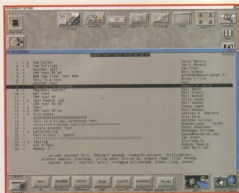
post office the Internet is very unforgiving for wrong mail addresses, even down to the case of the letters. Once you have got used to Mail, you might like to try Elm which is also available on Demon's ftp server and is, I think, much better.

News, on the other hand, isn't quite so

The ultimate address book providing instant access across the entire planet.

There are literally hundreds of thousands of individual places and related info just waiting to be browsed





A typical example of Tin traveling through just one of the endless supply of news groups just gagging for subscribers

easy to deal with. For a start, you have to actually get it. To do this you should type 'nntptransfer' in your open shell window when you are online. You will get one of two responses for this, either that Demon's newserver is too busy and you should try again later, or that you are connected to it.

By default you will only download news for the demon newsgroups dealing with the Amiga. If you want to get stuff other than this, you will need to edit your `AmiTCP:usr/lib/newsgroups` file to include the groups you wish to subscribe to. If you don't know what any of the groups are called, you will need to download the ACTIVE list from Demon's ftp server. This contains all the newsgroups available through Demon.

If you want to subscribe to a whole hierarchy of news, for instance the `comp.sys.amiga` hierarchy, you can put an asterisk as a wildcard as follows:

```
comp.sys.amiga * comp.sys.amiga.* *
```

This will subscribe to the newsgroups `comp.sys.amiga` and any subordinate ones such as `comp.sys.amiga.graphics`, `comp.sys.amiga.hardware`, and `comp.sys.amiga.marketplace`, etc. without you having to type them all in by hand.

Once you have edited this file to your satisfaction and run `nntptransfer` successfully, it is time for you to start reading the news you have downloaded. To do this you should run the Tin script in your bin directory. This should open a console window

which will probably ask you if you want to subscribe to something (the name of the first newsgroup you entered in your newsgroups file). Hit the 'Y' key for each question to subscribe to those newsgroups.

You should then get a window with a list of the newsgroups you have subscribed to, with numbers by their left-hand side. These numbers represent the number of articles in each group. To enter a group and start reading you use the cursor keys to move up and down, and the right arrow key to enter. Then you will be at article level, so use the up and down cursor keys to move through the articles you have to read, and the return key to read one. If there is more text than will fit in the window, use the down cursor key to get to the next bit, and keep using it because that will move you to the next article in the thread once you have finished with the current one.

TWO-SIDED STORY

A thread is a bit like a conversation in a newsgroup. One person starts it off, then another replies and so on. Moving through the thread ensures you get both sides of the story. You can come out of a thread by hitting the left arrow key. If you have subscribed to a binaries newsgroup you are going to want to join together several articles, save them as one piece and uudecode them.

Tin can do this easily. If you have four articles that are numbered [0/3], [1/3], [2/3] and [3/3] in the subject line (or title), you can ignore the one that says [0/3] - that's just a description of the rest of the articles. For the others, make sure the cursor is on the [1/3] article and hit the 'Y' key for 'tag'. This will move the cursor down a line and put a little number 1 next to the title of the [1/3] article.

If the [2/3] article is next you can hit the 'Y' key again and proceed onto the [3/3] article. If not, position the cursor on the [2/3] article and hit it. Once you have all three with the numbers 1, 2 and 3 respectively by their titles, you can hit the 's' key for 'save'. You will then be asked what you want to save, so you should press the shift key down and hit the 'Y' key again for tagged articles.

You will then be asked for a filename for the files. If they are a split uuencoded file you can just type 'temp' as a filename, as the individual files are unimportant. If the files themselves are important you can give them a descriptive name and Tin will automatically append a -1, -2, etc. And if these

articles are uuencoded, Tin will let you uuencode them by choosing 'u' from the next set of options.

If you have chosen to uuencode the files, Tin will eventually ask you if you want to delete post-processed files, to which you will be able to happily answer yes. The files you have saved will appear in your `AmiTCP:usr/username/news` directory.

If you have read an article you want to reply to, you have two choices. You can choose to reply by e-mail to the author (by hitting 'r' on the keyboard while reading the article), or you can follow up to the newsgroup (by hitting 'f' while reading the article). This will bring up your text editor containing all the text that was in the article (which can, and should in some cases, be deleted so you don't waste space) to which you can reply.

Once you have finished typing, you should save and exit, and Tin will check your article and let you either go back and edit it, forget it altogether or post it. When you have finished reading your news, you can quit Tin by repeatedly hitting the left arrow key until the Tin window disappears.

You might also, at this juncture, want to run Trinnnews in your bin directory. I've put Trinnnews into my tin script so that it asks me whether or not I want to trim my news articles every time I leave Tin, as follows:

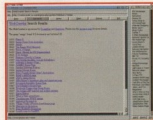
```
ask "Do you want to Trim News now (y/N)? If
want trinnnews else end!"
```

Put these lines in before the end of the script, but after the line that starts `tin.exe`.

There is so much more to discuss but I'm running out of space here, so you'll have to explore mailing lists, batch ftp, ping, finger, telnet and much more by yourselves. Have fun and don't get too frustrated.

Finally, I'm just going to take a well-deserved opportunity to plug my little contribution to making AmiTCP easier to use. It's called AmiTCPHelper and gives you a button-based interface for connecting to the Internet and using ftp and mail, etc. It also gives you menu items to let you edit the various config files I have mentioned in the course of this article.

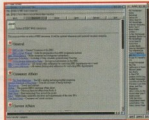
I would also like to thank all those people out there in net land who have helped me to the point where I could write this article. I'm not going to name them here (I don't want to inflate their egos too much), but they know who they are, and they'll be the ones helping you out too.



WebCrawler has to be one of the most important URLs for anyone running Amosave



Amiga Computing
MAY 1995



Everybody's getting in on the act. 'Browsing the Beeb, it's not natural I tell you...'



Where, when and how, it's all up there in one form or another

QUALITY PERIPHERALS FOR THE AMIGA



Designed to bring you high quality and performance at affordable prices, Amitek peripherals offer outstanding value-for-money. They are built to ensure easy fitting and trouble free operation - making them a pleasure to use. Amitek products are also thoroughly tested and very reliable, so reliable that we are pleased to offer a full two year warranty on most of the Amitek products detailed here.

RAM UPGRADE & MATRIS ACCESSORY OPTIONS FOR THE AMIGA 1200

2 YEAR WARRANTY

No. 10, 15, 20 & 25 megabyte RAM modules with Floating Point Unit

2 YEAR WARRANTY

BUILT-IN BATTERY BACKED CLOCK

INSTALLATION OF A HANK RAM BOARD INCREASES A1200 SPEED BY UP TO 3x

- Plugs straight into A1200 trapdoor - No soldering required
- Upgrades FAST RAM based to 1, 2, 4 or 8 M
- Uses industry standard sockets for easy options
- Optional Floating Point Unit - 1500 or 4000 P.C.C. 80803 co-processor
- Comprehensive manual with illustrations
- Works with all A1200 and A1200HD computers
- Does not invalidate your 2 year warranty
- 2 year warranty

AMITEK HANK RAM UPGRADE BOARDS

1MB	2MB	4MB	8MB
£99	£129	£189	£329

OPTIONAL FLOATING POINT UNITS

33MHz PLCC FPU + CRYSAL	£59
40MHz PLCC FPU + CRYSAL	£99

MAMBA MODULATOR FOR ALL AMIGAS

2 YEAR WARRANTY

The Amitek Mamba External Modulator makes an ideal replacement modulator for all Amiga owners. Everything needed is supplied. Like all Amitek peripherals, it comes with as easy as follow manual.

£34



1Mb SONY 3 1/2" DELUXE FLOPPY DRIVE FOR ALL AMIGA COMPUTERS

2 YEAR WARRANTY

SONY 3 1/2" 1Mb DELUXE FLOPPY DRIVE

SONY MECHANISM

TOP RATED 90%

Amitek's new disk drive combines an elegant design, high build quality and smooth performance in a very attractive package. Highly recommended.

disabled, allowing some busy copy operations to run.

DELUXE FEATURES

The Amitek drive has many deluxe features not included in other drives - check out the competition!

ANTI-CLICK

This feature stops your drive making whirs and clicks when the drive is empty and searching for a disk.

ANTI-VIRUS

This swiftable mode stops track 0 viruses infecting the disk while in the drive. Unlike many other drive which have virus killers, this mode can be

	ANTI-CLICK	ANTI-VIRUS	ROBUST STEEL CASE
AMITEK	✓	✓	✓
CULMAN	✓	✓	✓
ZAPP	✓	✓	✓

- High Quality 3 1/2" SONY MECHANISM
- STRONG METAL CASING
- BUILT-IN ANTI-CLICK FEATURE
- SWITCHABLE ANTI-VIRUS MODE
- ENABLE/DISABLE TAP
- 75ms ACCESS TIME
- DASHY CHAINABLE VIA TURBO PORT
- LOW POWER USAGE
- EXTERNAL PSU NOT Req'd



VIDEO GENLOCK FOR ALL AMIGA COMPUTERS

2 YEAR WARRANTY

SONY 3 1/2" 1Mb DELUXE FLOPPY DRIVE

SONY MECHANISM

TOP RATED 90%

disabled, allowing some busy copy operations to run.

DELUXE FEATURES

The Amitek drive has many deluxe features not included in other drives - check out the competition!

ANTI-CLICK

This feature stops your drive making whirs and clicks when the drive is empty and searching for a disk.

ANTI-VIRUS

This swiftable mode stops track 0 viruses infecting the disk while in the drive. Unlike many other drive which have virus killers, this mode can be

- High Quality Graphics And Video Mixing Desk
- FREE SCALE HT100 Program Disk
- Add Titles And Special Effects To Videos
- Ideal For Home And Semi-Professional Users
- Supports All Standard Amiga & AGA Graphics
- Input And Output Composite Video Signals
- Switches Between Video Only, Computer Only And Mixed Graphics
- Hardware Fade Between Graphic And Video
- RGB Thru - Saving The Genlock From Being Unplugged When Not In Use
- Optional Chroma Key Unit Available Sept '95
- Comprehensive 16-Page Manual Plus Full Colour Sleeve

FREE!

SCALE HT100

HOME VIDEO TITLING PROGRAM

£49

GENLOCK

£99

FREE DELIVERY

RAM UPGRADES

AMITEK FOR A500/A600/A1200 - 2 YR WARRANTY

CODE	DESCRIPTION	INC VAT
RAM 0505	A500 - 512K (No Clock)	£20
RAM 0510	A500 - 512K (With Clock)	£25
RAM 0520	A500PLUS - 1Mb RAM	£30
RAM 0530	A500 - 1Mb (No Clock)	£30
RAM 0510	A500 - 1Mb (With Clock)	£40

POWER SUPPLY

AMITEK FOR A500/A600/A1200 - 1 YR WARRANTY

This power supply is an excellent replacement unit which can deliver 10 Amps on 12V and 4.5 Amps on 5V. More than enough power for any fully expanded Amiga!

Price only Amitek Power Supply Unit: £29 inc vat

LOADER 1Mb INTERNAL FLOPPY DRIVES

AMITEK FOR AMIGA 500/500plus & AMIGA 600/1200

These internal Amitek Loader replacement drives are ideal for users who wish to replace their existing internal drive.

The packs feature a high quality internal 1Mb 3 1/2" drive mechanism for Amiga 500/500plus or Amiga 600/1200. All you need to fit your drive is included, plus easy to follow fitting instructions and 12 months warranty.

A500/A500+ INTERNAL DRIVE	£34
A600/A1200 INTERNAL DRIVE	£44

THE SILICA SERVICE

Before you decide WHERE to buy, suggest your computer WHERE to buy. We'll provide all the extra help, advice and useful information you may need now and in the future. Visit one of our stores, or return this coupon now and begin to experience the "Silica Service".

SILICA

STONES NATIONAL

- ESTABLISHED 17 YEARS: We have a proven track record in professional computer sales.
- PART OF A GROWING TEAM: With over 300 staff, we are solid and reliable.
- EXPERIENCED STAFF: All fully trained in Customer Care.
- TECHNICAL SUPPORT/REPAIRS: FREE help and advice from a team of experts.
- A FULL PRODUCT RANGE: All of your computer requirements from one supplier.
- WE PRICE MATCH: We will always price match any local high street within a mile radius on a "Same Product - Same Price" basis.
- FREE CATALOGUES: FREE!
- FINANCE: We accept most major credit cards, cash, cheque or monthly plans (up to 24 months).
- VOLUME DISCOUNTS AVAILABLE: Business, Education and Government.
- MAIL ORDER: FREE DELIVERY (UK mainland) on orders over £100 net. Small administration charge (£2.50) will be added on orders over £100 net.
- 21 STORIES MATCHING: *We store any selected range of products on display in the store in the UK.

MAIL ORDER 0181-309 1111

PLUS TECHNICAL AND HOME OFFICE

CITY	ADDRESS	PHONE
BREXIT	Debenhams - 100, Market Place	0117-829 1821
CARLISLE	Debenhams - 100, Market Place	01223 341578
CHELMSFORD	Debenhams - 100, High Street	01245 355511
CROYDON	Debenhams - 100, High Street	0181-688 4455
GLASGOW	Debenhams - 100, High Street	0141-271 9999
GUILDFORD	Debenhams - 100, High Street	01483 391366
HARLOW	Debenhams - 100, High Street	0181-427 0200
HULL	Debenhams - 100, High Street	0482 325151
POWELL	Debenhams - 100, High Street	01473 221213
LONDON	Debenhams - 100, High Street	0171-588 3080
LUTON	Debenhams - 100, High Street	01582 212101
MANCHESTER	Debenhams - 100, High Street	0161 452 8888
PLYMOUTH	Debenhams - 100, High Street	01752 295955
RENFORD	Debenhams - 100, High Street	01793 768888
SHEFFIELD	Debenhams - 100, High Street	0114 255 8811
SHEFFIELD	Debenhams - 100, High Street	0114 255 8811
SIOUPO	Debenhams - 100, High Street	0181-382 8811
SOUTHAMPTON	Debenhams - 100, High Street	01703 223888
SOUTHERN	Debenhams - 100, High Street	01782 482424
THURROCK	Debenhams - 100, High Street	01708 363587

INFORMATION ON AMITEK PRODUCTS

Mr/Ms/Ms/Ms Initials:

Surname:

Company or name:

Address:

Postcode:

Tel (Home):

Tel (Work):

Which computer(s), if any, do you own?

£1.00
per disk

Software Expressions

Established 1990

85p
per disk for
25 or more

Introducing some of the best public domain & shareware software. These are high-quality non-copyrighted disks at a fraction of commercial prices

All disks are compatible for
A500/A500+/A600/A1200, except (N)
which indicates not compatible for 1200

BUSINESS SOFTWARE

8001. A-Gene (1 meg) Trace your ancestors
8005. Database Master Comprehensive AMOS database
8034. Ami Quiz Best accounts package around
8136. Ambrose Prof Excellent database
8137. 6000 Business Letters Pre-written script for business correspondence
8140. Text Engine Excellent word processor
8152. PC Text Enables IBM & PC programs
8153. File-a-lex All it sounds
8154. OED Begins word processor
8165. A-graph Creates bar graphs
8175. Text plus VERSION 4 Creates word processor
8178. 2 Disks Analitic ACC (2 Disks) Best spreadsheet ever
8232. Check Book Account Keep tabs on your expenditure
8237. Stock Analyst Analyzes the share market
8240. Little Office Word Processor, Database & Spreadsheet
8242. Budgets 1.34 Accounts Manager

EDUCATIONAL

- (N.B. This includes some games)
8203. Education 1 King German
8162. The Bible (4 disks) (N) The King James version
8164. World Dictionary Creates maps of the world
8180. GCSE Maths Syllabus taught disk
8185. Astronomy Calculates positions of planets
8194. Total Concepts Learn about Commanders Compagnis
8212. Book Talk Advice on Commanders Compagnis
8239. Junks DTP Desktop Publishing for Kids
8234. Colour The Alphabet Educational spelling game
8237. The Highway Code All you need to know
8237. Junior Maths Education for Kids
8203. Electronic Train Set (1 meg) Construct own train set
8243. Learn and Play 1 Good for the kids, backward maths, etc.
8244. Learn & Play 2 Move fun for the kids
8279. Treasure Hunt Great Kids game
8386. Wharfedale Quiz Good general knowledge quiz
8192. Storyland 2 (N) Create a children's adventure
8361. Japanese dictionary (2 disks) Second introductory tutorial
8362. States of Europe Information on this continent. Good
8269. Communicate Learn how to use sign language

CREATIVE

- C112. Slide Show Creator Create your own slideshows
C130. Label Designer Various label printers
C142. Super Fonts Lots of Super Fonts
C180. Deluxe Paint Tutor Enhance your knowledge of this
C184. Turbo-ster Sub-titles video animations
C186. S-Movie Video text editor
C187. Magnetic pages Create a disk magazine
C190. Shadow disk maker Create your own demo
C191. Beatrix Potter Clip-art program
C198. Clip-art Valentines and wedding
C199. Clip-art For New Year, Easter & Remembrance
C206. ABC Adventure Creator (N) Create your own adventure games
C208. Labels Labels
C231. Audio Animation Studio Create Cartoons
C236. Hunt Form Solve crosswords & anagrams
C238. Farm Form Variations of farms available
C251. Assassins Graphic utilities compilation. Enhance your Amiga
C256. Print studio Multi purpose printer utility
C258. Garden designer Create your own garden excellent graphics
C261. X-Rat Drum sampling & Drum machine

Blank disks

10 for £4.99

Mouse Mats

Deluxe Mouse Mats £2.75 each

CATALOGUE DISKS

75p each

Details of over 8000 disks in our library updated regularly

POSTAGE

UK orders : 75p
Europe : £1.50
World : £3.00

PRICES

PD...£1.00 per disk
90p each for 10 to 24
85p each for 25 or more
75p each for 50 or more

Send cheque/postal order made payable to :

SOFTWARE EXPRESSIONS

Dept. AMC, 18 Maple Road, Horfield, Bristol BS7 8RH

Credit Card orders only

Tel 01179 425987 (10am-4pm Mon to Fri)

MISCELLANEOUS UTILITIES

- M174. Capone Back Work out your own crime index
M204. Race Rider (N) For horse racing information
M210. Pools Pool Version 2 Work out your winnings
M211. Training Log Check your Amiga Speed
M223. Engineers Kit Keeping it
M243. D-Seed Crossword-come with two crosswords
M244. LogicPro V2.0 Uncover quiz facilities
M245. Baby Kick V1.1 Learn D-Seed for A1200
M251. Power Electrod Circuit design drawing program
M252. Swindlers Winner Work out winning lines
M257. Power Copiers (N) Eight of the best PC copiers review
M292. Excellent Virus Killers Kills all the latest viruses
M296. Cap the Lat National lottery help
M299. Tale to Green Excellent job-scorer

DEMOS & RAVE

0058. Enterprise moving disk Personal animation
0275. City of Dreams Pretty shots of talented pros
0149. The Run (1 meg) T. Richter's car-chase animation. Good
0186. Star Trek Animations Action, if USS Enterprise
0117. Star Trek Animations Agathon no 17 more like above. Good
0280. Jesus on a Y' (2 disks) (N) Excellent rave music
0282. How to spin a cat Amusing demo
0287. Calendar Girls Selection
0317. Rave Vision Rave music & Graphics
0313. Tachno Warrior More of the same
0315. New Fingers (2 disks) Good. Sequel to State of Art
0319. Artist Louis (N) Brilliant!
M192. Rave Length 3 Best Rave Songs

MUSIC

- M084. Phik Froid The Wall remix
M102. No Limits (2 Disks) Quality music compilation
M205. Waffles Music catch tunes
M200. Waffles Saturday Night mix
U244. Sound Tracker Samples (4 Disks) 100's of sounds for sampling
U245. Sound Tracker Samples (4 Disks) Different samples for music making
U062. Music Samples Drums & Synthesizers etc.

ADVENTURE GAMES

- A005. All New Star Trek (2 disks, 2 disks) USS Enterprise classic. Best use
A007. American Star Trek (2 disks) (N) Jim Barnes' graphic adventure
A014. Adventure Solutions (2 disks) Loads of hints of commercial games
A019. Treasure Diner (2 disks) Difficult adventure game
A055. Free Kingdom (2 disks) Truly adventure game. Good
A071. Space Rescue Guide Spacequest through Terra
A072. Neighbour Adventure (2 disks) Ring Paul Robinson to see
A073. Wizard Wars Graphics Adventure
A145. Iron Gals (2 disks) Graphics Adventure
A250. Starline Excellent Adventure Games
A328. Mikko World Gids Really good platform game

ARCADE GAMES

- A100. Breakout Classic ball & ball game
A111. Brizzard Horizontal shoot-em-up. High quality
A033. Mayhem Brilliant shoot-em-up
A100. Mayhem Similar to Pacman
A157. Mayhem Difficult puzzle game
A171. Top Secret Quality platform game
A176. White Knight NEW Excellent shoot-em-up game
A180. Trick Attack (N) World War 2 Simulation
A217. Jaggedheist Find the flags. Very addictive
A218. White Knight 14 excellent games
A215. Battlemaster Huntchuck game
A225. Adrenaline Family Quiz Quiz on UK TV programme
A243. Tervis Excellent Tetris clone
A247. Quiz Master Quiz game which includes Tetris
A255. Amos Games 5 Games including Glassback

3 Games including Enigma

- A306. Gosh Very similar to Enigma
A306. Gosh Find the Secret
A310. Jollygon (2 disks) Space shoot-em-up
A327. Tetris Pro Tetris game with exceptional variants
A328. Project Buzz Bar V. Good really converted game
A334. Crazy Sea 3 Popular platform game
A338. Project Buzz Bar Excellent isometric game
A342. Depth Charge Submarine game
A341. Earth Invader The best space invader game
A350. Softline Assault Shoot-em-up game
A441. Assassins 218 Cheaper Attack. Road 66, Gamma 5
A442. Assassins 218 Age of Rock. Commando Road, Hearts
A483. Assassins 218 Summer 2000. Black Dawn
A404. Assassins 217 Mangled Reminders. Macc and Cubik

SIMULATIONS

- Sim071. Return to Earth (1 meg) Space adventure
Sim022. Starline (1.1 meg) Recommended. 5 games including Mario
Sim009. Wheel of Fortune TV Quiz, computerised
Sim024. Napoleonic Wars High-quality simulation
Sim035. Battle of Britain Defend the nation
Sim043. Card Shop Well presented card games
Sim017. Act of War Excellent strategy game
Sim018. Rovers! Game Cosmic
Sim020. Sub Attack (N) Also includes a bonus
Sim024. Strategic Games 3 excellent games
Sim032. Micro Market Stock exchange game
Sim071. Lile Well-paced racing game
Sim010. Island Excellent board-game. Similar to Monopoly
Sim044. Diplomacy (N) Classic, similar to Risk
Sim045. War (N) Top-quality 4-bit strategy

SPORT

- Sp178. Amica Color Overall
Sp179. Grand Prix Simulator Excellent
Sp254. Starball Management game of US football. Top sport
Sp263. Soccer Cards Simplistic league-based game
Sp265. Top of The League Addictive football management game
Sp300. Strike Ball Amos written baseball type game
Sp307. 18th Hole (2 disks) Excellent golfing game
Sp325. Master Men Olympics (2 disks) Excellent game for disks as reviewed in Amiga Computing
Sp337. Super League Manager 2 Updated soccer management game
Sp377. Road To Hell Well-paced racing game
Sp375. Wrestling (2 disks, W603 3 updates) Good fun graphics
Sp376. Unbeatable Soccer Good football game
Sp411. Stewards enquiry Horse-racing game

A1200 ONLY

1225. Silencing Nights Compilation of A1200 utilities
1265. Partridge 20 meg of graphics on one disk
1266. No point of sale Slimming French demo
1269. State Of Ark Terminus quality demo
1290. Roving Mad High quality music video
1291. Lullal Ext Slimming demo
1294. A44 Seminals (5 disks) 85 256 color pictures use with EPW etc
1295. Blackout II 300 color over music
1301. Rotor Excellent Vector film demo
1305. Lolita A1200 sideload
1310. Nigh Mayest AGA Koolha (3 disks)
1321. AGA Koolha (3 disks) Excellent palette game
1322. Eiger Trees Tetris clone
1323. I Ching Brilliant chess game
1339. AGA Mad Me 2 player Street Fighter game
1357. Mad Hydran Platform game
1373. Killing Lizard Quality testing game. Many variants
1381. Ezer Ben Zvi A1200 Pacman version
1414. Motorola Invaders (2 disks) Brilliant space invaders

OUR TOP TEN

BESTSELLERS

1. Superleague Manager
2. Essential Virus Killers
3. Cop the Lot
4. Road to Hell
5. Little Office
6. Act of War
7. Print Studio
8. Text Engine
9. Project Buzz Bar
10. Rave Vision

All 10 for £8.50 inclusive



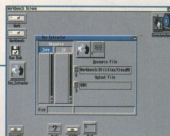
The CrossMac Commando allows the user to optionally translate Mac text to or from the Amiga



VHex lets you view files or memory in either hexadecimal or plain ASCII format



The Finder Manager is a database program which lets you maintain filetype information for use by the Mac Finder system



Using this utility, information from Mac resource files can be viewed or extracted

Share and share alike

If there's one thing that computers excel at, it's in creating human frustration levels to otherwise unheard of heights when trying to get them to share information with ease.

Of course, there are lots of expensive hardware solutions to making these uncooperative beasts talk to one another, such as modems and network cards, but when it comes to the seemingly simple act of transferring the odd file via storage devices such as floppy disks, everything collapses into an archaic realm of incompatibility.

Things aren't hopeless however, after all, the Amiga is now on relatively good speaking terms with MSDOS PCs, being quite capable of reading and writing PC floppy disks, thus making the transfer of files quite easy between these two computers.

But, hiding away in its own little world, doing its own little thing in its own little way is

the Macintosh computer. Apple's little babies have always been a breed apart and it's when the average Amiga owner attempts to try and transfer files between these computers that they encounter an unscalable wall with the words "No trespassing. Apple employees only."

This is mainly due to the fact that the Macintosh file system is quite complex internally, and rightly so. This internal complexity is required to provide the end user with what is generally believed to be the most powerful, yet easy-to-use graphical user interface.

INSPIRING

Just look at all the window and icon-driven operating systems in use now, such as Windows on the PC and even the Amiga's Workbench, and you can see where their designers got their inspiration from.

There is a sneaky way to circumvent this

A software utility which allows your Amiga to read and write Mac disks with no hardware in sight.

Hard to believe? Then read on

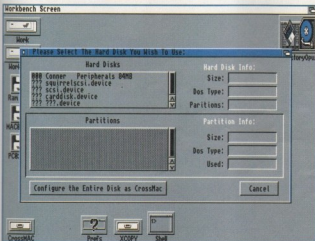
will though. Utilities are available for the Mac which enable it to read PC formatted disks. So, armed with the fact that an Amiga can format a PC disk, courtesy of the PC0: device driver found in the DOSDrivers drawer within the Devs drawer on most Amigas, a working, but potentially lengthy and arduous detour can be found around this wall.

The problem is that in the somewhat questionable wisdom of the MSDOS operating system developers, they decided that filenames need never be more than eight characters long with a three letter extender, usually denoting filetype.

This creates a problem when copying files between the Amiga and the Mac. You see, the Amiga can safely handle 25 character filenames while the Mac tumbles along nicely using up to 31. So, you can imagine the renaming session you will have to go through to get those filenames down to the eight character PC limit once on the PC disk.

PROBLEMS, PROBLEMS

Of course, you could just let the filenames be chopped off at the eighth character automatically when they are stored on the PC disk, but this has its problems. What, for instance, happens when you want to transfer 300 sequentially named animation files called FLYINGLOG001, FLYINGLOG002 and so on? I'll tell you what - chopping each of these down to the poxy PC eight characters gives you the filename FLYINGLO.G00. Which means all 300 files will take on this name and



Any hard drives attached to your Amiga can be configured for use as either a 'real' Mac hard drive or a simulated one

a hell of a lot of 'file already exists' messages will be generated, presenting you with the prospect of renaming the whole lot.

What would be much better is if the Amiga could simply be made to read and write Mac files just like it can with PC files. This usually meant investing in an expensive Mac emulator, like the Emplant. For simple file transfers though, it's ever so expensive.

Well, now there's a simple and, above all, low-cost way to do it. Some clever people at Consultron have come up with a software-only utility to allow your Amiga and a Mac to get on friendly speaking terms.

The name of this wonder of wonders is CrossMac and with it your Amiga to Mac file transfer problems disappear. CrossMac allows your Amiga to format, read and write Mac-format floppy and hard disks with ease.

Installation is simply a matter of running the installer script and once installed it works very well indeed, considering the complex way a Mac stores files on a disk. There isn't even the need for a chunky interface when copying files from an AmigaDOS drive to a Mac drive, thanks to the fact that CrossMac fully integrates itself into the Amiga's operating system.

Much the same way as you get a PC: device driver, which when loaded displays a disk icon on Workbench for any PC disks in your Amiga drive, CrossMac provides device drivers called MAC0, MAC1 and so on. Copying files from an AmigaDOS disk to a Mac disk is then simply a matter of dragging the file icon to the Mac disk and vice versa.

ADDED CONCERNS

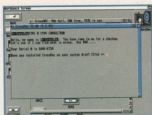
There are a couple of things to bear in mind when using the CLI or third-party file utilities such as Directory Opus. CrossMac makes extensive use of the Comment field for an Amiga file in order to store important information.

When dragging files for copying via Workbench, this field is automatically included in the copying process. When using CLI though, you have to specify this explicitly using the COM option. File utilities usually have a 'Clone comment' option, so check your manual on how to set up your software to take this step.

There are also some neat file transfer facilities available when your files are traversing the Amiga to Mac road, such as the ability to recognise MacBinary files, providing transparent conversion into the correct type. Also available is a filetype database feature that automatically embeds the correct filetype and creator information for any data being copied from your Amiga to a Mac disk.

CrossMac certainly delivers the goods. It is especially useful for we humble Amiga Computing writers here at IDG Media. All the editorial and artwork for our magazines are laid out using Macintosh computers. There is thus a constant need to transfer both text files and picture files from Amigas to give to our sub and art editors, and I have found that CrossMac is ideal for efficient trouble-free transfers.

So if you find yourself wanting a low-cost, efficient and, above all, trouble-free method of transferring files between your Amiga and a Mac, Consultron's CrossMac is certainly the bees knees.



Should you find that CrossMac isn't working as it should, the Dr CrossMac diagnostic program should shed some light on your dilemma

thereby allowing the Mac operating system to fully recognise the file.

Probably the most common type of file which will be transferred between Mac and Amigas will be ASCII text files. CrossMac allows for intermediate text translation during the file copying process. This simple text translation feature converts some of the non-standard, or international, ASCII text characters.

This is activated by simply adding the `] character to the end of any file which is being read or written, for example:`

```
copy Mac2:filename.txt to Mac1:filename.txt
```

CrossMac also allows Amiga owners access to Mac-format hard disks and CD-ROMs. Two main types of Mac hard drive are supported. Type 1 is termed 'Real' and is a hard drive which has been formatted and partitioned with the Mac file system, either by a Mac computer or configured so that CrossMac may format it.

This is especially useful when using removable media hard drives such as the Syquest range, which utilise high capacity 'cartridges' which can be brought to another Mac for data exchange.

The second type of Mac hard disk is termed Simulated. This is essentially a Mac hard disk stored on an AmigaDOS partition. Such a simulated hard disk takes the form of a file which is a complete 'image' of a Mac hard disk. This is generally only useful if you plan to share your existing AmigaDOS drive as a boot partition for hardware such as Emplant.

A third type of high capacity disk is also available when wishing to read Mac formatted CD-ROMs.

To create or access the above drives types, CrossMac provides two utilities, 'ConfigDisk.CrossMac' for setting up hard drives and 'ConfigDisk_CDROM' for accessing CD-ROMs. I have to admit to being somewhat sceptical of CrossMac being able to provide an Amiga to Mac file transfer capability which would remain transparent, as if simply using copying between standard AmigaDOS disks, but that is exactly what you get. If you have an Amiga with a 1.4MB floppy drive that is.

You see, if your main activity will be transferring files via floppy disk, CrossMac only works without hardware when it is dealing with high density 1.44MB disk drives. For those with low density drives, like those found in all A500s, A600s and A1200s - in



As you can see, there are plenty of support programs and utilities to help make your Amiga to Mac file transfers easy and painless

other words the Amiga majority - the Emplant Mac emulator and its File Transfer utility, or Amax drives (not available in the UK to my knowledge), is required.

Boo hoo, I hear all you non high-density owners crying, that's no use to me then is it? Well, not all is doom and gloom. You see we just happen to have been fooling with a neat bit of kit called Squirrel SCSI, a SCSI host adapter from HiSoft which lets you connect up to seven SCSI devices to your A600 or A1200 via the PCMCIA slot.

So I decided to check whether CrossMac would happily co-operate with the Squirrel when accessing Mac-format hard drives and CD-ROMs. And guess what? It did so admirably.

One particular scenario involved a Mac-only CD-ROM which contained hundreds and hundreds of high resolution 24-bit pictures. Armed with my Squirrel, I connected the CD-ROM drive to it, inserted the Mac picture CD-ROM into the drive and ran CrossMac's Config_CDROM utility. This duly took me through a few simple procedures to create a mountable that allowed me to access the Mac CD-ROM using a drive icon on the Workbench to click on.

I then copied lots of the example pictures from the CD-ROM onto my Amiga hard drive, simply by dragging them from the Mac CD-ROM window into my open AmigaDOS partition window. I then fired up ADPro to view them without any hiccup whatsoever.

SYSTEM ESSENTIALS

RED = Essential BLACK = Recommended

Workbench 2.0 or higher

The bottom line

Product: CrossMac
Supplier: Hi Soft
Price: £99.95
Tel: 01525 718 181

Ease of use	9
Implementation	9
Value for money	9
Overall	9

This wonder of wonders is CrossMac and with it your Amiga to Mac file transfer problems disappear. CrossMac allows your Amiga to format, read and write Mac-format floppy and hard disks with ease

Ask the experts

OPTONICA



£29.95

INFONEXUS **NEW!**

InfoNexus is a sophisticated file management system with integrated multimedia and network support. An ideal replacement for both workbench and CLI users InfoNexus features a full on line help system. As well as having the ability to move, copy, delete, rename files, InfoNexus allows you to view/hear/launch just about any file. InfoNexus is simply the best File/Data manager on the market today!



£29.95

DATANEXUS **NEW!**

DataNexus is a very powerful and configurable, yet easy to use, flat file database. Its integral multimedia support for images, samples, text, music, animations, amiga guides, CDXL motion video, program & script launches make it ideal for just about any data storage and retrieval project. Full visual print layout and mail merge make DataNexus a must for your data.



£350.00

SIMPATICA 2+ VTL

Simpatica allows Amiga and 24 bit image sequences to be rendered to video tape frame by frame producing the same results as products costing over ten times as much, ie, smooth video playback at 25 frames per second. Simpatica has been on sale, and improving, for over four years so you are guaranteed a reliable product. Supplied with both hardware and the bonus program Video TimeLapse, there is no better choice for video professionals.



£749.95



INTERPLAY

Interplay is a unique product for the Amiga. It allows you to produce CD32 applications to the very highest commercial standard and was written specifically for the CD32 so no other Amiga authoring system comes close. Interplay was used to produce the three highly acclaimed titles below.



£4.99

PANDORA'S CD

Pandora's CD shows you just what can be achieved with multimedia on CD. An all original promotional title containing something for everyone, from educational productions to point of information, picture, texture, clipart and sound libraries; a jukebox, children's games and a sampler of Insight Technology. Simply a must for anyone with a Commodore CD system!



£39.95

INSIGHT:TECHNOLOGY

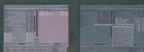
INSIGHT:Technology, lavishly produced by Optonica and published by Commodore, gives a fascinating look at modern technology with pictures, animations, photos, video, narration, text, music and sound effects, over 260 topics in all from the ball point pen to the space shuttle.



£39.95

INSIGHT:DINOSAURS

INSIGHT:Dinosaurs is the second in the INSIGHT series, a lavishly produced, highly acclaimed title, rich in multimedia. Produced in association with the Natural History Museum, London, one of the world's leading Dinosaur centres of excellence, you can be assured that Dinosaurs is both technically correct and produced to the most exacting standards. Also features: DinoPaint, DinoQuiz and DinoPuzzle. INSIGHT:Dinosaurs has had the best reviews of any CD32/CDTV reference title so far (lowest mark 88%), see for yourself why.



ALL AMIGAS 1 MEG RAM MIN



ALL AMIGAS 1 MEG RAM MIN



ALL AMIGAS 2 MEG RAM MIN
50% AMIGA USER INT MAGAZINE



ALL AMIGAS 4 MEG RAM + HARD DISK MIN : 8-16 MEG REC
90% AMIGA USER INT MAGAZINE
93% CDTV USER GROUP NEWS



CD32 - CDTV - A570

87% AMIGA FORMAT MAGAZINE
88% AMIGA USER INTERNATIONAL MAGAZINE



CD32 - CDTV - A570
87% AMIGA FORMAT
91% CU AMIGA



CD32 - CDTV - A570

92% FORMAT GOLD AWARD
91% CU AMIGA TOP RATED
96% CDTV USER GROUP NEWS
90% COMPUTER SHOPPER

When buying your new Amiga, part of the package is a one year on-site maintenance contract. When this runs out, those with money can renew it or take out an extended warranty from a third-party company. However, Joe Public is often left high and dry, especially when his five-year old workhorse A500 gives up and decides to take early retirement. Repairing a faulty, ageing Amiga, or one just past its warranty via a recognised Commodore dealer can be a costly business, with a lot of time spent fault finding.

Frequently, the problem, albeit time-consuming to detect, can be quite simple. Naturally, this creates a niche for diagnostic software and hardware, so the cause of the problem can be discovered by the owner, in preference to paying an engineer to tackle the problem. Often, after running the diagnostics, the user may be surprised to find that the problem can be corrected quite simply by himself, without the need to involve a third party.

Evidently the advantages of these diagnostics are quite clear. It allows the user to assess the problem with their computer before taking steps to correct the fault. In black and white, this is a very nice idea but there are many different types of diagnostic kit that do varying things, and even more different types of problems to deal with.

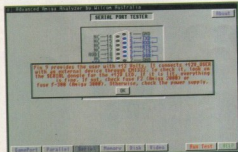
DOUBLE DIAGNOSIS

Software for diagnosing different problems can be roughly categorised into two types. The first of these deals with physical hardware problems which may occur from damage to the computer caused by the user. The second deals with the general set up of the computer, i.e. if the system seems to be behaving correctly, with all the add-on devices functioning normally.

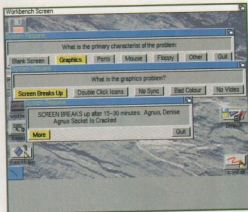
Daily use of an Amiga can involve the plugging-in and unplugging of expansions, a lot of turning on and off, and many disconnections. Inevitably, there will come an event when something goes wrong, because of a user mistake. The computer error may manifest itself in many ways, for example printing may not work, or the keyboard misbehaves.

Diagnosing the fault can often involve examining the symptoms to find the cause, as many problems will have a

The Advanced Amiga Analyser can be seen here, explaining the function and schematic routing of one of the pins of the serial port, after clicking on it



Home help



ECS Diagnostics finds the causes of common problems by asking questions until a final diagnosis is made

common route. One piece of software that carries out this job is called ECS Diagnostics, which is shareware, by Charles Clayton. Although it offers no real diagnostic functions and will not detect a fault on your computer, it will serve as an aid to determining what the problem has been caused by.

The process is simple, and is almost like a flow-chart. First it determines the area of the problem, and then the particulars. The program will then offer an explanation to what it thinks is the culprit,

based upon the information you entered. For example, the problem may be related to the mouse, and the problem with the mouse may be because the right mouse button doesn't work. ECS Diagnostics will then tell you that the problem is with the Paula Chip.

ENHANCEMENTS

Although this software functions very well for the purpose it was intended, there is much room for enhancement. If it gave reasons for how the error was caused, or

Hardware tests

Printers, modems and other peripherals failing to work are usually a result of damage to the ports on the rear of the computer. Advanced Amiga Analyser by Wilcom offers the ability to test for these problems.

The kit comprises of four 'D' type connectors, with LEDs protruding from the plastic casing, and a disk containing the software. The idea behind the hardware/software combination is to allow testing of all the functions of the I/O ports.

The normal procedure for testing is to have the Serial, parallel and gameport 'dongle' connected to each of the corresponding ports. When the computer is turned on, the LEDs will light up to show whether the power pins on each port are supplying a current. The software is loaded to display a diagram of the I/O port about to be tested. All the information about the port is displayed on the screen, with the description of each pin labelled.

One click with the mouse on a particular pin on the diagram will reveal more information about its use. By clicking on pin 1 of gameport 1, the program will tell you that it has four uses; for a digital joystick it is up, on a mouse it is the vertical pulse and so on. Information related to system schematics is also given, so having detected a fault with the particular pin, the problem can be localised.

On the same information window, the program states that pin 1 of gameport 1 is buffered through 74LS157 chip (U2, pin 11) and into the 6832 Denise chip (U201). Presumably, upon an error, either of these could be replaced.

One interesting feature of the diagram of the I/O ports is that whenever there is a sig-

Tired of the niggling fault with your Amiga? Don't want to pay costly repair bills when the problem may be trivial? Wilf Rees investigates diagnostics, a possible answer to your problems

how it may be corrected, it may have more use as a guide to rectifying faults than a simple information tool.

Throughout the PD market there are many different programs that boast the ability to diagnose a fault with an Amiga. Unfortunately, some of these fall short of their claims. The most popular format for diagnostic software is a compilation of separate utilities, each testing a different function of the Amiga.

Engineers Kit is an example of this. It contains 20 different utilities for testing the Amiga's innards and the tests range from displaying a pretty HAM picture to benchmarking the computer. The disk includes A500/A2000 SysTest, which checks all Amiga functions, from sprite handling to the audio channels, in a diagnostic fashion. As this is Commodore's recognised

testing software, it appears on most compilations under different guises.

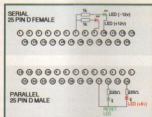
Although SysTest seems to analyse what appear to be rather crucial parts of your Amiga, the information it returns is particularly useless if there is an error. The results of each test are given by either a pass or a fail. If, for example, there is an error in the sprite testing, there is no additional information to explain the significance or origin of this error. The same applies to any sub-test of SysTest; a pass or fail is given



This illustration shows what the 'dongle' should look like when finished. Note the LEDs protruding through the plastic casing



SCSI Tester will seek out any errors on a SCSI interface, and reports back into a log file. Here the program has displayed a requester showing information about the drive and interface



Here are the wiring diagrams for the serial and parallel port dongles

nal travelling through any of the pins, say from a mouse movement or button depression, the comparative pin is illuminated on the screen, depicting its function.

While any of the 'dongles' are attached to the computer, the test on the corresponding I/O port may be carried out. These tests carry out multiple data transfers over all of the appropriate pins, verifying they are working correctly. As each test on the ports is carried out, the process can be seen visually by the illumination of the pins on the screen. Like the gameport diagram, detailed information about the schematic routing of any of the pins on the port is available at the click of a button.

If an error occurs during the testing, an elaborate explanation is given to amend the problem. For example, one error that occurred during testing was: 'DTR is not transmitting proper signal. Check the trace from serial pin 20 to CIA-B pin 9. Note that it passes through the 1488 (U304), pins 11, 12 and 13 and EMI325. If the trace is OK, replace these, if the problem persists, replace CIA-B (U301, odd).

Obviously, undertaking a task such as this is not for the faint-hearted, but in comparison to most of the other diagnostic software reviewed, at least, it offers some information on how to repair a fault. If you are experienced with electronics and willing to carry out repairs yourself, an Amiga Schematics guide would be necessary to locate the troublesome parts.

The software also facilitates disk and memory checking functions, which both seem to work adequately, with enough on-line information to explain any fault.

DIY diagnostics

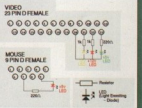
If you do not wish to splash out on the Advanced Amiga Analyser, you can test the output voltages with a meter, or make your own dongles with incorporated LEDs. The process is simple.

Using a volt meter, place the negative probe on pin 7 of the serial port. Touch pin 9 and then pin 10. If all is OK they should read -12v and +12v respectively. Next, you will need to take readings from the parallel port, using pin number 17 as a ground. Test the voltages on pins 14 and 16. Pin 14 should read +5 volts and pin 16 should read +5 volts a few seconds after boot up, as this is the line to let peripherals know the Amiga has been reset.

The test for the video port uses pin 20 as a ground. Testing pin 23 should give a +5v reading and both pin 21 and 22 will give -12v and +12v respectively. Finally, both gameports use pin number 7 as a ground. Probe pin number 8 to give a +5v reading on the meter.

If you are a master of soldering and intricate work, the push-on dongles may be the answer to testing your Amiga. For a full set of four dongles you will need four 1 Kilo ohm resistors, and 4 220 ohm resistors, plus three green LEDs, three red and one yellow. These components are mounted inside the plastic cases of 'D' type connectors, and four of these, including the connectors themselves, will be needed: 1 x 25 pin male, 1 x 25 pin female, 1 x 23 pin female and 1 x 9 pin female.

The LEDs can simply be pushed through holes drilled in the plastic casing. Follow the wiring diagrams for construction of the parts. Once constructed, these dongles can be used to test the power lines from each of the ports. Be careful not to plug-in and unplug these while the computer is switched on. All of the components for the dongles can be found at any good electrical/computer parts store. May all your diagnosis be good ones!



without further information offered.

The other utilities in the compilation are typically offerings for testing your Amiga. You can load the workbench 1.3 clock program if you wish which will display the correct time if everything is working okay. The keyboard, disk and joystick tests are perhaps the most useful of the three, but are not really necessary to determine that something does not work with any of these devices.

In general, this is one of the better diagnostic compilations, offering a higher degree of stability than its competitors — although the usefulness of some of the tests is somewhat dubious. It is also doubtful that this compilation can be called a 'diagnosis' disk, as most of the utilities will tell you there is a problem with the part tested, but give no further information on how to deal with it.

For example, there is no information explaining the fault on your computer if the double-buffered, pretty rotating cube test does not work. Maybe it is your disk-drive having an allergy to blue polygons!

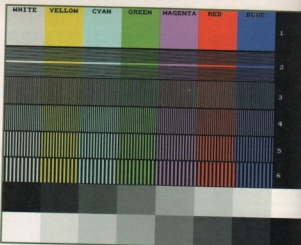
TESTING, TESTING

System Exerciser from PD Soft is an alternative shareware offering, with tests available for both the disk drive and the memory. Although both tests seem to function well, with errors detected properly, the presentation is quite poor, and the disk test program actually appears on the Engineer's Kit disk!

Amiga System Checkers Toolbox is an alternative compilation from Ground Zero and contains some interesting programs for testing your system. The package includes Amiga Intuition Based Benchmarks (AIBB V3) which helps give you a better idea what your Amiga is all about. If this is not enough, version 3.24 of Sysinfo is also included to divulge further information on your machine.

Apart from these two utilities, the rest seem rather mundane and thrown together in comparison, including a keyboard matrix tester and Clock Doctor (which will not even see a clock even though there is one there!) There is also a joystick tester and various other system utilities and monitors. As per

The usefulness of the hi-res test-card on the Engineers Kit disk is somewhat dubious. What does it mean if the magenta turns out lime green?



usual, the rather user-unfriendly A500/A2000 SysTest program is bundled in.

For those of you who own SCSI hard disks, and are having problems with them, a program to look at is SCSI Tester V2.0, by John Yeager. SCSI Tester will carry out a physical test of every sector on your hard drive, the SCSI bus in general. It is useful for determining problems with the SCSI cabling and SCSI device driver code, and faults present with the SCSI bus and any hard drives on it.

INVESTIGATING

SCSI Tester V2.0 is a well-presented program, with an easy-to-use point and click interface. All you have to do is choose which SCSI device driver the program is to investigate. The drive you choose to examine is selected by choosing the appropriate values of SCSI ID, Board and LUN. The program then scans the SCSI bus and all the sectors of the chosen hard disk. All the results are displayed in a log file, which contains information on all the bad sectors found and additional information about the specifications of the SCSI Hardware.

Using Sysinfo and other system performance monitors is useful if you own an accelerator or hard disk. By comparing your machine's benchmarks against others, it is possible to see what can be altered on your system to reach optimum performance. For example, you may have a SCSI hard drive

attached to your system, but Sysinfo says it is not transferring data as fast as it could be. To rectify this you could make sure the SCSI disconnect/reconnect is enabled.

If the controller is a GVP product, you may require the DMA bus hold feature of the gvp SCSI device to be turned on — you have a higher performance hard disk attached. Sysinfo will also tell you if the instruction and data caches are switched on, or if the system ROM has been copied to 32-bit memory to speed-up access.

One of the pretty test pictures taken from Virus-Free PD's Engineers Kit Disk



Suppliers

ECS Diagnostics:

17 bit software
Tel: 01924 366982; (disk no. 3347)

Engineers Kit:

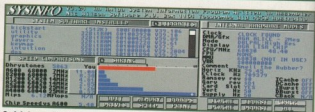
17 bit software; (disk no. 2576)

System Exerciser:

PD Soft
Tel: 01702 466933; (disk no. U30)

Advanced Amiga Analyser:

Grapevine
Tel: 0101 914 357 2424;
Price: £49.95



Sysinfo is a useful tool for seeing how smoothly your system is running and checking performance, so you can carry out some fine tuning

Subscribe to the top value

Subscribing to **Amiga Computing** is the only way to ensure your invaluable Amiga guide each and every month, as well as reaping a whole host of benefits linked with our latest subscription offer.

Save money and receive a gift!

Your subscription saves you over 13% on the cover price and safeguards you against any future cover price rises. You also have the choice of one of these great gifts, which we'll send you as soon as you return the subscription form.

Save
£29.99

K240

Gremlin's outer space strategy game gives you control over a whole galaxy of mining planets, where you can create and destroy worlds at the touch of a button.



Amiga Next Steps & Amiga A1200 Insider Guide books

Save over **£29**

A special two-book package including the essential Next Steps guide for all users who have mastered the basics, plus the definitive guide to Workbench and AmigaDOS on the A1200, packed with expert tutorials.



Two extra issues plus a smart Amiga Computing magazine binder

Save
£15.93



Save over
£30

UFO

Microprose's huge strategy game, UFO, puts you in the hot seats as the world comes under attack by an alien invasion. ● Add £3 to the price of subscription.



Save
£34.99

Heimdall II

The follow-up to the classic Viking adventure from Core Design takes you again into Nordic landscape in this arcade adventure and can be yours, absolutely free, when you subscribe.



guide for your Amiga!

The worry free solution

Taking out a subscription means you no longer have to make that monthly dash down to the newsagents, only to find you've missed the last copy of **Amiga Computing**. Each issue is reserved especially for you and delivered to your door, free of charge.

The easy option

Subscribing is made even easier by continuous quarterly direct debit. Not only can you forget about the subscription ever lapsing and the thought of missing an issue, but you can also spread the cost with a small payment each quarter.



SUBSCRIPTION HOTLINE
for card orders

Tel: 051-357 1275 Fax: 051-357 2813



Amiga Computing subscription order form

Choose either a yearly (13 issues) or a quarterly subscription

● I would like the following yearly subscription:

New	Renewal		
<input type="checkbox"/> 9665	<input type="checkbox"/> 9666	UK	£44.99
<input type="checkbox"/> 9666	<input type="checkbox"/> 9669	EU	£69.99
<input type="checkbox"/> 9667	<input type="checkbox"/> 9670	World	£84.99
		Canada/USA *	\$98

● I wish to pay by:

- ☐ Cheque/Eurocheque/Postal Order payable to IDG Media
☐ Credit Card (Visa/Access/Mastercard/Eurocard/Connect) Expiry Date /

Card No

● Tick which free gift/special offer you want (not available to world subscribers)

- 9576 ☐ Two free issues and a magazine binder
 9596 ☐ K240
 9598 ☐ Amiga Next Steps & Amiga 1200 Insider Guide Books
 9600 ☐ Heimdall II
 9597 ☐ UFO (Add £3 to the cost of your subscription)

If you are paying by direct debit please pay additional amounts by cheque or credit card.

* Canada & USA subscribers send to: Europress (North America), Unit 14, Blyssham Drive, Woodstock, Ontario, N74 1P1, Canada. Tel: 519-539-0200. Fax: 519-539-9725

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

- I would like a UK quarterly direct debit ongoing subscription
 9671 ☐ £10.99 per quarter (Complete the form below)

Quarterly Direct Debit Instruction

AUTHORITY TO YOUR BANK/BUILDING SOCIETY TO PAY DIRECT DEBITS

Name of bank/building society

Address

Postcode

Name of account

Your account no.

Sort code

Signature(s)

Date

FOR OFFICE USE ONLY

Originator's Identification No. **851412**

Ref No.

Your instructions to the bank/building society:

I instruct you to pay Direct Debits from my account at the request of IDG Media. The amounts are variable and may be debited on various dates. No acknowledgement required. I understand that IDG Media 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.

● Deliver my magazine to:

Name (Mr/Mrs/Miss/Ms)

Address

Postcode

Daytime phone no.

Send this form to: **Database Direct, FREEPOST, South Wirral L65 3EB.** (No stamp needed if posted in UK.)

Your subscription will commence from the earliest possible issue

ALTERNATIVE SOFTWARE'S

AMIGA
£25.99

IBM PC 3½"
£25.99

IBM PC CD ROM
£29.99

**"THIS WILL
DELIGHT
FOOTBALL
FANS
EVERYWHERE!"**

**"THE LATEST
SEASON STATS.
TRACKSUIT
MANAGER
WILL PUT YOU
INTO THE
HEART OF THE
ACTION."**



What the press said about Tracksuit Manager....."The best ever football managerial game ever in the history of the world, no messing, very impressive." • "T.S.M. is one of the best games I have ever played." • "I am amazed at this one, someday all footy games will be made this way." • "T.S.M. is the most playable game of its genre, one of the most fun, compelling exciting and addictive games I've ever played!" • "Wow! Now here's Tracksuit Manager 2 - and it's better still - in fact it's the BEST!"

- LOADS AND LOADS OF FEATURES, HERE'S JUST A FEW!
- ALL ENGLISH LEAGUE AND CUP COMPETITIONS
- ALL THE MAIN EUROPEAN CUP COMPETITIONS
- UP TO DATE PLAYER LISTINGS
- VERY EASY ACCESS TO ALL INFORMATION
- COMPETE AGAINST YOUR FRIENDS TO SEE WHO CAN WIN THE CUP OR BE LEAGUE CHAMPIONS
- CREATE YOUR OWN SQUAD OF PLAYERS FROM THE UP TO DATE LISTINGS
- USE YOUR SCOUTS AND YOUTH SCOUTS TO SEARCH FOR NEW TALENT IN ENGLAND AND AROUND EUROPE
- TRANSFER LIST OR FINE PLAYERS FOR MISCONDUCT OR POOR PLAY
- KEEP AN EYE ON THE JOB NEWS FOR VACANCIES AT BETTER CLUBS
- ARRANGE PRE-SEASON FRIENDLIES TO GAUGE THE STRENGTH OF YOUR SQUAD BEFORE THE SEASON STARTS
- SIGN A PLAYER ON LOAN OR LOAN A PLAYER TO ANOTHER CLUB
- EXCITING IN GAME COMMENTARY

NAME: _____

ADMP-55

1997-1998

11

FORMAT:COMPUTER:

TITLE

If after FIRST trying your local computer software retailer, you still have any difficulty obtaining our products then please send a cheque or postal order payable to Alternative Software for price plus £6.95 P&H (mainland) with the completed form in original format & computer, to the address stated, or telephone our CREDIT CARD HOTLINE (open 10am to 5pm Mon. to Fri.) 01977 760761.

ALTERNATIVE SOFTWARE LIMITED, Department TSM, Units 5-7 Baileygate Industrial Estate, Pontefract, West Yorkshire, WF8 2LN. Facsimile: 01977 796243
This product is not endorsed by any football authority, official team or player.

Although there's been a number of video tutorial companies playing their wares to the Amiga world over the years, it must be said the overall standard has been pretty poor. Having said that, there is one very notable example, namely Desktop Images, a company from across the pond who've made their name via a range of highly acclaimed Lightwave and Toaster-specific tutorials.

When it comes to professionalism, presentation and overall quality, Desktop Images quite literally set a standard others rarely match. The question is, will that tradition continue with their latest efforts?

Instant expertise

Studio 16 pro Audio for Video

Amidst the graphical euphoria that sometimes appears to completely engulf the Amiga, its success in the sound department often gets overlooked.

At the forefront of this success has been the SunRize Industries AD1012 and AD516 direct-to-disk sampling systems. It's no exaggeration to place both alongside the very best on any computer platform. As a result, Desktop Images have wisely set out to complement this amazing hardware with a tutorial video hosted by a professional Studio 16 demonstrator and a three time Emmy Award winning dialogue editor. Basically, the video is designed to offer all the insider knowledge needed to master the techniques required for pro-quality video post production.

In the first section, our anchor man and professional demonstrator, Tony Shannon, takes you through a step-by-step guide to adding a complete sound track to a movie trailer.

During the demo Tony adds sound effects, lip synchs vocals from the original rushes and narration, as well as a stereo musical backing track. After adding and synchronising samples, Tony moves on to the mix down process,



detailing all the necessary skills needed to link tracks for automated fades and pans.

In short, after Tony's excellent introduction - which takes up roughly 3/4 of the tape - you should be well versed in the Timeline Cuelist, Digital Waveform Editor, Automated

Product:
Studio 16 Pro Audio
for Video
Product:
Pro Flying Logo
Techniques
Supplier:
Premier Vision
Price:
£38.95 each
Tel:
0171 721 7050



*This month the spotlight falls on
the very latest in video tuition
for Lightwave and Studio 16*

Mixer, Sample List and of course the Recorder. To put the icing, or rather the marketing on the cake, Tony's efforts are followed by a rather brief, but nevertheless informative overview by David Scharf.

During Mr Scharf's section you're taken through a basic tutorial on adding ambient sound and removing unwanted elements in the original rushes. In short, useful but not exactly inspiring stuff.

However, overall, and primarily thanks to Tony Shannon, the tape does offer some excellent advice and tricks of the trade. I've been running Studio 16 for quite some time and would still be happy to cough-up the necessary cash for this kind of essential information. Highly recommended.

Pro Flying Logo Techniques

As mentioned earlier, Lightwave and Toaster tutorials are what Desktop Images are best known for, and in an attempt to build on their existing success they've now targeted a specific, and often lucrative area for many commercial animators.

Flying logos may lack the glamour of Babylon5 or RoboCop but they're nevertheless the bread and butter that keep many an animator in business. As a result, who better to take you through the finer points than the maestro of the flying logo Mr Tony Stutterheim.

During Tony's inside guide you're shown some interesting tips on how to make more effective use of the cameras within layout. However, the video's real strength has to be Tony's explanation on how to create the kind of effects that make the difference between enthusiasts and professionals, while avoiding the sort of mistakes and production methods that can put hours,

if not days on the job. As well as layout hints, Tony also offers some essential tips for making the most of modeller when creating actual logos and adding bevels. However it's back in layout where most of the real points are scored, with the most valuable information being how to produce streak effects, the use of null objects and the creation of the ubiquitous moving sheen effect.

Being an experienced Lightwave user, I must admit to being slightly disappointed with the overall content, as the majority of the tape will almost certainly run over familiar ground for anyone who's been using Lightwave regularly.

Having said that, there are real pearls in among the more obvious examples - with the most notable being the aforementioned moving sheen effect. Like most, I've had a bash at this effect and met with less

than favourable results. Fortunately, Tony does have an easy solution which I guarantee will leave many animators slapping their foreheads in a 'why didn't I think of that' manner.

Like it's counterpart, the tape concludes with a separate section, during Tony's closing address attention turns, rather ironically, to WaveMaker.

If you're a regular reader you may recall that WaveMaker is a standalone Lightwave add-on, designed by Tony, in conjunction with Axiom software. For those who are unfamiliar with the product, WaveMaker is a highly automated flying logo generator. The irony is that WaveMaker largely negates the need for any practical modelling and design skills when it comes to quality flying logo animation.

Admittedly, WaveMaker couldn't replicate the techniques covered in the tape, but after Tony's guided tour it's very tempting to put your new found



knowledge aside and simply invest in a copy of WaveMaker.

Obviously, there's been some serious horse trading when it comes to content. Still, it must be said the overall package does deliver the goods, especially for those who are either new to Lightwave or make their money exclusively from corporate and commercial animation.

It might seem odd that a developer's tool like CanDo should be reviewed by a non-programmer like me, as opposed to, say, Phil South or Paul Overaa, both of whom have had a lot of good advice to give over the years when it comes to programming. But the thing is, that's what CanDo is all about. It gives people like me the ability to create standalone tools which can be given to anyone. Okay, it might not be as fast as a creation in C or Assembler, but hey, who cares? I haven't had to sit down and wade through heaps of technical jargon or Commodore ROM kernel manuals just to put a window on an Amiga screen.

CanDo should need no introduction to regular readers of Amiga Computing as an earlier version of it was given away on the January cover disk. If you played around with it you now know that CanDo is an application developer that lets you build fairly complex programs without needing to know how to code.

SCRIPTING

All you need is a basic understanding of scripting very similar to AmigaDOS to create Amos-type, custom screen programs, or window-based, Workbench-bound tools. Well-known programs that have been made with CanDo include ProControl, the ADPro batch processor, and Sparks, an add-on for Lightwave.

So what does this new version offer by way of enhancements? Firstly, the interface has, once again, been redesigned. As shown in the pictures on these pages, instead of there being a static button bar there is now a dynamic list of options that can be changed to suit your tastes. If, for instance, you never program anything that needs a joystick, you can either remove the joystick option from the list, or simply move it to the end.

This main layer is not the only thing that has been changed – most of the individual requesters for these tools have been rearranged and are now, for the most part, more sensibly arranged. The main purpose of this re-design seems to be an attempt to make CanDo look more professional; rather than using chunky buttons designed to

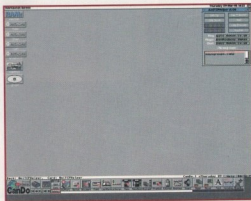


Travel around an endless city courtesy of CanDo's amazing one-way system



Someone once told me that the national lottery was a load of balls...

You can with



CanDo's main interface is glorious technicolour

Standalone stuff

As from version 3, CanDo no longer supports true standalone programs without the user paying extra. If you want to create a public domain or shareware program whose registration fee is going to be less than \$50, you are entitled to distribute the CanDo library with your program. This is a similar idea to MUI-based programs where a MUImaster library is required before you can use the program. A 200k overhead might seem excessive if you are only using one MUI application, but when you have four or five running on your machine, all using the same library, it no longer seems such a sacrifice.

The other advantage is that you don't have to incorporate everything into your program itself – the library takes care of all those functions – so your program size is small and easy to download. Users writing kiosk POI systems or full-on commercial applications are required to pay for a runtime or special licence version of CanDo.

appeal to those who still run their Amiga's on a TV. CanDo 3's interface is a strictly hi-res affair, even going as far as to support RTG graphics cards like Picasso. But this attempt to appear more professional is only partially successful.

Although CanDo is now firmly oriented towards 2.x and 3.x development, it does not take advantage of all the added facilities offered by these versions of the Workbench. As an example, although the cycle gadget provided by CanDo looks and behaves like a normal AmigaDOS cycle gadget, the fact that programs like CycleToMenu won't work with CanDo-generated cycle gadgets is a bit of a give-away.

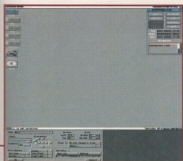
One of my main problems with earlier versions of CanDo was the lack of a decent script editor. This has still not been addressed in version 3, which still has an editor that can only cut, copy and paste complete lines which first have to be

marked (two operations instead of one). My main wish for future versions of CanDo would be a user-definable, external text editor, with the button bar in the CanDo editor attached as a separate program running on the same screen.

As it stands at the moment, I am having to run Turbotext in the background to type in my text and then switch back and forth between Turbotext and CanDo to use the function tools. This is a real waste of my time.

FIRST AID

The old-style help has been replaced by a large AmigaGuide document detailing all commands and functions, accessible by simply double-clicking on the word in question. However, with this leap towards standardisation, one of the more useful facets of CanDo's online help has been lost: that of being able to insert the correct command



Editing buttons in your interface needsn't be a pain, thanks to super button editor.



CanDo's not-too-hot script editor in action

CanDo

Ben Vost discovers whether or not the new version of CanDo lives up to its past reputation

template back into your script once you had thoroughly researched your topic.

Hence the arrival of the Lexicon Assistant. This lets you use wildcards to set limits on which of CanDo's 448 commands and functions you wish to sort through, and clicking on the two buttons at the bottom of the window will either bring the AmigaGuide help document back up or insert the command into your script — usually with a helping line giving options for that command which is commented out of the script so it can do no harm.

As I didn't get a look at version 2 (or 2.5) of CanDo, I'm not really in a position to say whether the manual has changed since then, but it certainly has changed since the last version I own (which is 1.5). No more the spiralbound glossy manual. Now we have a ring binder containing 634 pages packed with closely-typed information, along with a separate Tutorials manual. It

might just be me, but I found it really difficult to find what I was looking for in the manual as it seemed to be based on the AmigaGuide document.

If you just look up a topic in the index, say Documents, it will refer you to a single page, not the several I was expecting. This page will contain an overview of the Document tool and give you page numbers to refer to for each command relevant to documents in CanDo. In my opinion, my old version 1 manual dealt with this in a much better fashion, grouping all the document commands together alphabetically before moving onto another topic.

The manual that comes with CanDo 3 has an overview for each topic near the start of the manual and then an alphabetically-sorted section of every single command — all 448 of them. This means that if you aren't exactly sure what you

CanDo is an application developer that lets you build fairly complex programs without needing to know how to code. All you need is a basic understanding of scripting

Script editor tools

This is a list of all the tools available every time you enter the script editor. Most of them are there to save you from having to type in endless commands to achieve an effect, and will automatically enter code into your script.

ARexx — this tool looks for any ARexx ports currently open and lets you talk to them.

Bookmark — this is where you click to add a bookmark to the list.

BrushAnim — this tool lets you load, show and edit the path of a brushanim. The results are entered into your script.

Buffer — lets you work with all the buffers in your application.

Card — lets you insert various commands to do with the cards in your deck.

Coordinate — this puts a cross hair on your interface and when you click, enters the co-ordinates into your script.

CoordinateBox — this works the same way, only you draw out a box. The top left-hand corner co-ordinates are entered with the distances to the opposite corner into your script.

Dos — this lets you run external Amiga programs from within your CanDo application.

Effects,Brush — this adds transitional effects to brushes you are showing in your program.

Effects,Palette — this adds transitions to palette changes in your program.

FileRequester — this brings up a file requester in which you can choose a file. This filename and its path are then inserted into your script.

Layout — lets you flow text around your interface.

Librarian — this lets you build up a library of code modules that you might want to use in other areas of your program, or even in other programs entirely.

Objects — this tool lets you insert code into your script dealing with the objects (buttons, fields, documents, etc.) in your program.

Paint — this is a simple drawing program that lets you draw into your interface. CanDo then converts what you have drawn into code and inserts it into your script.

Picture — this brings up a file requester to let you choose a picture to show.

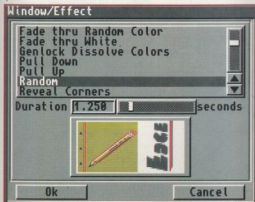
Routines — this behaves in the same way as the main toolbar version with the added benefit that you can directly insert the name of the routine into your script.

Sound — this tool lets you set the volume, channel and filename of a sound to be played.

SoundSequence — this is an expanded version of the above command allowing you to play modules or sequences of individual sounds.

Text — lets you print text into your interface.

Variable Browser — this brings up a list of all the variables in your program and their contents so you can insert them into your script.



Clicking on the picture at the bottom of this window demonstrates the effect highlighted in the above box

New features

There are many updated functions and commands as well as new ones in this version of CanDo. Below are just a few examples.

Improved

Border Requester; Font Requester; Config CanDo; Document Object Tool; Field Object Tool; Menu Object Tool; Proportional Object Tool; Timer Object Tool; Screen Definition; Window Editor; Window Options.

New

Editor Tools: ARexx Buffers; Brush Effects; Palette Effects; Librarian Objects: Variable Browser.
Object Tools: Align Object; BufferManager; LastScript Print; Text VariableManager.
Script Editor: Calculator; Help Menu (now uses AmigaGuide); Lexicon Assistant.

need to know, you have to look in two separate places before you are guided to the right area. This might not be a problem in a 40-page manual (you could probably flip to the right page anyway, with practice), but in this monster it is quite a nuisance.

The resemblance of the manual to the accompanying on-line help is further reinforced by the fact that the entry for a command in the manual is exactly matched by that in the on-line documentation. There are no added examples or explanations which is a great shame as it can be quite frustrating to have to search through all that documentation, only to find that the explanation you were looking for isn't there — only a command template. I think my solution is going to be to get some dividers for my manual to at least make my searching easier.

BETTER BY DESIGN

The Tutorial manual is much improved over the rather simple examples provided with CanDo 1.5. There are complete script breakdowns, and the features demonstrated are, for the most part, a little more interesting and useful than showing a picture of a rabbit and a porcupine. They skip over certain features, but I think that in all my years of trying software tutorials I have never found one that explained absolutely everything, and I'm aware that other people might have different priorities.

One of the other features that was sorely

lacking in my previous version of CanDo was support for system file requesters, confirmation requesters, and so on. In my old copy of CanDo, if I wanted to have a file requester for my programs I would actually have to make a separate "deck" (which is what CanDo calls the programs it creates) that contained the file requester I would have to write myself, then call that deck up from my original program.

Well, now CanDo supports calls for ASL requesters and allows you to use the command AskForResponse, which puts a standard AmigaDOS requester on the screen, of the "Are you sure you want to quit?" variety. These requesters are proper AmigaDOS ones and can have their choices selected with the left Amiga-V or -B keyboard combinations. If you are using ARQ then these requesters do pop up in the middle of the screen.

CanDo 3 now has a special effects feature which can be used for transitions between brushes, palettes or pictures, much like that which comes with Scala, and which takes exactly as long as you want them to — no matter whether you are using them on a humble A500 or the fastest A4000 going. In addition to its already good brushanim support, this feature will guarantee fans who want to further jazz up their presentations.

TUTORIALS

CanDo's brushanim support is amply demonstrated in two of the tutorial scripts provided. One is one of those practically ubiquitous lottery number picker programs, but this one is really nice as you can see by the picture on the previous page. The balls with the numbers on are actually all from one brushanim which shows a ball with the numbers from 1 to 100 on it.

CanDo then simply sets the brushanim to whichever frame is required to show the correct number. Simple and effective. The other tutorial is an interactive drive-through of an endless city, created by having brushanim for moving straight ahead, turning left and right and doing a U-turn.

But I don't want to cast too much of a downer on CanDo. It is probably the only way I am ever going to be able to produce a standalone program which could be run by anyone. It is an incredibly powerful program which can be used for things from the simplest button-based toolbar, through databases and spreadsheets to multimedia applications.



Editor tools

CanDo's complete set of editors include:

Align Object — lets you neatly arrange the elements in your program on a grid basis.

ARexx — this tool is for defining a script that will occur when your program receives a message through its ARexx port.

Bookmark — this comes in very handy when you have a lot of scripts. In the script editor, one of the first buttons down the right-hand side is the Bookmark button. Clicking on this makes CanDo take a note of the script you are editing.

BrushAnim — this is for editing the BrushAnims that are going to be used by your program. It isn't used as a drawing package.

BufferManager — brings up a requester showing all current buffers and their contents and lets you play around with them.

Button — one of the most used tools. This lets you create buttons of all shapes, colours and sizes, which can be dragged, single-clicked or double-clicked on.

ConfigCanDo — basically CanDo Prefs. It lets you edit various aspects of the CanDo interface to suit your tastes.

Disk — this tool is for the creation of scripts when a disk is inserted into a drive or removed.

Document — Lets you incorporate a list view or scrolling text box in your program.

Field — this one lets you create text or numeric fields for your program.

GamePort — lets you determine what joystick or mouse actions do in your program.

KeyInput — lets you set keyboard-controlled events in your program.

LastMark — this jumps you straight to the last Bookmark you set, without having to use the Bookmark tool.

LastScript — this jumps you straight to the last script you edited.

Menu — this tool lets you create menus for your program which can be standard text-based ones, or contain images.

MenuRender — lets you perform a script before the menus are created for a program.

ObjectLayer — this lets you rearrange the relative depth of your buttons, fields, etc.

Print — this will print out your complete deck or parts of it, as you like.

Proportional — lets you create proportional gadgets (sliders) for your application.

RightMousebutton — you can attach scripts to a right mouse button event with this tool.

Routines — CanDo lets you have routines that are independent from the normal scripts and this tool lets you access them directly.

Sound — this lets you attach scripts to sounds played in your application.

SuperDuper — A tool to make copies of buttons, fields, etc.

SuperMove — this tool lets you move one or more objects around your interface using an x,y offset.

Text — this tool is for placing text into your program.

VariableManager — this brings up a list of the variables in your program and lets you manipulate them.

A familiar interface, but under the skin it's all change for the all-new CanDo





CRAZY DISK PRICES!! GUARANTEED

GREY-TRONICS LTD

LOWEST PRICES

BEST SERVICE

RAPID DELIVERY

SALES FREE CALL 0500 737 800

SALES HELPLINE 081 686 9973 / 081 781 1551

DISKS DISKS DISKS

100% CERTIFIED ERROR FREE

	Grade A+	Grade B
50 3.5" DS/DD	£15.99	£15.49 + 100 cap lockable box... Add £4.00
100 3.5" DS/DD	£24.99	£24.49 + 100 cap lockable box... Add £4.00
150 3.5" DS/DD	£38.99	£38.49 + 2 x 100 lockable box... Add £8.00
200 3.5" DS/DD	£48.99	£47.99 + 2 x 100 lockable box... Add £8.00
300 3.5" DS/DD	£73.99	£69.00 + 3 x 100 lockable box... Add £12.00
400 3.5" DS/DD	£98.99	£92.00 + 4 x 100 lockable box... Add £16.00
500 3.5" DS/DD	£123.99	£110.00 + 5 x 100 lockable box... Add £17.50
1000 3.5" DS/DD	£229.99	£205.00 + 10 x 100 lockable box... Add £30.00

FREE LABELS + FREE DELIVERY BY PARCEL FORCE

+ LOCKABLE BOXES

AMIGA CD32

7 Games Pack - Free delivery



£194.99

5X1 Modular Expansion	£187.99
Keyboard for CD32	£36.99
Disk Drive for CD32	£48.99
CD32 to Amiga 1200 interface	£34.99
CD32 to Start	£11.99
Competition Pro Pad	£15.99
Commodore Original Pad	£8.99
CD32 Lens Cleaner	£9.99
CD32 HiFi Lead	£11.99

Add £2.00 p.p.h. for insurance

1.5" DRIVE LOCKABLE BOXES

50 Capacity	£4.05
100 Capacity	£4.99

Add

3.5" STANDALONE BOXES

100 Cap drawer	£9.99
80 Cap Box Boxes	£9.99

AMIGA 1200 PACKS

AMIGA 600 PACKS

CALL FOR LOWEST PRICES

SMART BUY

* **STARTER PACK £14.99** For: 10 Disks, Mouse Mat, Microswitch Joystick, 50 Cap Storage box, Disk cleaner

* **Games for A1200 USERS ONLY WHILE STOCKS LAST**

SYNDICATE	£4.99	PHILIP FANTASIES	£4.99
CHASIS ENGINE	£3.99	NICK FALDO'S GOLF	£8.99

All above 4 games £17.99

ACCESSORIES

3.5" Disk head Cleaner	£1.99
Belong Mouse Mat	£1.99
1000 Labels	£6.99
Amiga Disk Drives (Commodore/Amiga/Zappa)	£54.99
Manufacture Mouse Amiga/Amiga	£12.50
Universal Printer Sheet	£4.99

Add £2.00 P&H DELIVERY

TOP QUALITY RIBBONS

	Black	Colour
Panasonic KXP1124/1123/1180/1080	8.50	13.00
Panasonic 2120/2180/2135	8.15	4.00
Citizen 1200/240/724	N/A	2.70
Citizen Swift 70/200	N/A	2.70
Star LC15/20	N/A	2.95
Star LC200	N/A	3.50
Star LC2410/24200	N/A	3.50
Epson LX400/LX500	N/A	N/A

Add £2 for Delivery

ZAPPO SMART STOR HARD DISK

Provides games and data portability to A500/A1200.

260Mb	£209.99	540Mb	£309.99
-------	---------	-------	---------

AMITEK HAWK RAM BOARD

2Mb Ram	£127	Alternative	£120
4Mb Ram	£187	Alternative	£180

Call for GVP A1230-B 40MHz & 50MHz Accelerators.

AMIGA CD32 TO A1200 WITH 6 GAMES

Brat Football - Alien Invaders - IT Challenge - Quak - Project X
£199.99

AMIGA CABLES

Amiga to TV Scart	£10.99
Amiga to Sony TV	£10.99
Amiga to Amiga	£10.99
Modulator overlong lead 23M/23F	£1.99
Joystick Extension Lead 10ft	£5.99
Joystick Splitters	£5.99
Automatic Mouse/joystick cable	£13.99
Printer Lead	£4.00
Python 1M Joystick	£8.75
Maverick 1M Joystick	£10.99

DUST COVERS

Amiga 1200/500/500P/600	£4.00
Commodore/Philips monitors	£4.00
Star/Citizen/Panasonic Printers	£4.00

INKJET CARTRIDGES & REFILLS

HP Deskjet Black Dual Capacity Cartridge	£22.99
HP Deskjet Black Dual Capacity Refill	£15.99
HP Deskjet 500C/560C Colour Cartridges	£25.99
HP Deskjet 500C/560C Colour Refills	£16.99
Canon BJ 10/200 Black Ink Cartridges	£16.99
Canon BJ 10/200 Black Ink Refill	£9.99

Add £2 for Delivery

PRINTERS

PANASONIC 2135

24 PIN COLOUR

£159.99

All printers free lead & delivery



Panasonic 2135 24 pin Colour inc. sheet feeder £199.99

Panasonic 2023 24 pin mono free sheet feeder £189.99

Panasonic 1150 9 pin mono £119.99

Panasonic KXP 4400 Laser Quality £375.99

Canon BJ105X ink jet £179.99

Canon BJ4000 ink jet £229.99

Canon BJ4000 ink jet £374.99

Citizen ABC 24 pin colour £149.99

Citizen Swift 200 24 pin colour £179.99

Citizen Swift 240 24 pin colour £214.99

Citizen Project B inkjet colour £259.99

Hewlett Packard 320 colour inkjet £249.99

Hewlett Packard 520 inkjet £249.99

Hewlett Packard 560 colour inkjet £249.99

Star LC100 9 pin colour inc. sheet feed £124.99

Star LC240 24 pin colour inc. sheet feed £169.99

Add £12.50 for Word Processor or Ribbon's dust cover, printer stand, 500 A4 paper when purchased with printer

MONITORS

Philips 8833/8

£215

As long as stocks last

Micronitec 1438

(Free speakers) £294.99

Philips 8833/8 £215.00

Sharp TV/Monitor £169.99

SPECIAL OFFER

HOW TO FIND US



ALL PRICES INCLUDE VAT & DELIVERY (unless otherwise stated). Delivery within 3 days (UK MAINLAND ONLY)

ADD £8.00 FOR NEXT DAY DELIVERY. CALL OR SEND CHEQUES/POSTAL ORDERS TO:

GREY-TRONICS LTD, UNIT 1015 WHITGIFT CENTRE, CROYDON, SURREY CRO 1UU

SALES HELPLINE: 081-686 9973 Mail order prices only FAX: 081-686 9974

All offers subject to availability. ESOE Prices/Pack details may change without notice.

Please allow 6 working days for cheques to clear.

UK & INTERNATIONAL DELIVERY SERVICES - (BFO ORDERS WELCOME + SURCHARGE)



LAND

AIR

SEA

You know, I've tried a few database programs in my time, but very few of them ever seem to attain that fine line balance between ease of use and power. Mostly you have one end of the scale tipped to one side at the detriment of the other. Too easy to use and they often seem to lack any real power. Too powerful and they become overly cryptic with masses of commands and features hidden away within an ominously imposing and large manual, that has a page count that would make the encyclopaedia Britannica blush.

Yes, there are very few which can claim to maintain their footing between these two extremes. Twist 2, from the ever prolific HiSoft, is one of them, however.

Versatility is one of Twist 2's strengths, allowing you to organise information easily and quickly and to manipulate it using some extremely powerful functions and features. Any project from a simple card-file-type address book or a complete, integrated sales system with relations between many other database files are easily achieved using Twist 2.

Creating and using a database generally consists of creating fields containing specific data which is collected into records and then organised into forms. The user can then access, search and generally process this organised data in many weird and wonderful ways using various functions and features built into the database.

A quick scan of the reference section of the Twist 2 manual is evidence enough to realise you have a comprehensive and powerful suite of functions and features at your fingertips. Thanks to the AFXex interface, those requiring even more power can turn their hand to this programming tool to create



Frequently-used report processes can be saved out to disk for quick and easy access

Looking good

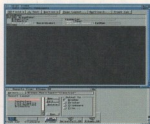
Presentation of your data is an important factor in how easy to read and informative your records look. Twist 2 allows you to easily create the look of your database via the Form editor. Using the mouse, simply click and drag the various form objects into position, sizing them to your requirements.

These form objects include database Fields, Text for adding informative descriptions on the form, Box, which allows you to provide a visual indication of grouped items, Image, to enable you to display icons on the form and, more interestingly, File objects.

File objects are quite a powerful feature within Twist 2 and allow you to use external files thanks to Workbench's Datatypes feature. Such external files can include IFF pictures, sound samples and any other filetype supported by the Datatype.

Some of these form objects can also have attributes such as colour, allowing you to create a visually informative and even aesthetically-pleasing database.

Twist and



Using the report editor, you can design the way in which your data is formatted in a report file

even more features and functions. The basic building block of a database is its fields, which are specific data elements of a specific data type. Twist 2 has four main types of data which are text, numbers (integer or floating point) or a calendar date.

The mark of a quality database program is in what functions and processes can be applied to these fields. Twist 2's real power stems from its comprehensive array of functions which include statistical, boolean, geometric, text string and conditional functions – more than enough for most applications.

CALCULATIONS

You can assign a mathematical process to fields to automatically calculate figures. For example, say your database has a floating point field called Value which holds the price of a certain product excluding VAT. However, you want to be able to include VAT should the need arise. Therefore, you assign a field called VAT to be a floating point number which can either hold the number 0, for no VAT or 17.5 for the current rate.

You would thus edit the Value field to contain the expression $(Total * (VAT / 100)) + Total$, which will give the full price including any VAT if present. Although a somewhat simple example, the range of functions and possible expressions is almost unlimited.

Other field functions that can be applied include validation, which ensures the correct data is being entered. An example of this would be the VAT field. Obviously, the only values valid here are either 0 or 17.5.

To ensure the operator cannot enter any incorrect figures, this field could be validated using the expression $VAT = 0 \text{ || } VAT = 17.5$. In English, this expression is essentially saying that the VAT field can only have the number 0 OR (expressed as the || characters) 17.5 in it, and anything else is just not on!

Thankfully, for those who are currently scratching their heads at the above expression, there is a complete reference section in

the Twist 2 manual which describes all the various symbols and mathematical operators. If, after reading this, I can get the gist of it, anybody can.

There are also five attributes which Twist 2 can assign to a field. These are Not editable (pretty self explanatory), Required – which means the field must have data entered into it, Fixed – meaning once data has been entered, no further calculation or validation will be performed – Zero – if empty, forces a field to a zero value if no data is present – and the last attribute, File, brings up a pop-up list which displays three settings, Fixed length, Compressed and Virtual. These are very useful when your database starts to attain mammoth proportions.

When you save your database, every field and record is saved to disk. The default setting is Fixed length, which means all parts of every record in the database, whether all characters are used or not, are saved to disk. If you have quite large text fields, the size of the database can rapidly become extreme, taking up copious amounts of valuable disk space.

This problem can be avoided by the use of the Compressed option. If a field is set to compressed it is not stored in the main database file but in a second file which contains all the other compressed fields that happen to be present within the database. The obvious drawback, of course, is that the information takes a little longer to retrieve because Twist 2 can't immediately find it in the database file.

The final setting is Virtual, and no, Twist 2 doesn't come with a VR headset. The Virtual setting stores nothing at all in the database file; instead the content of the field is computed every time the record is used from the calculation attached to the field.

Fields can also be Indexed, which means all values for a field are contained in a separate file and can be set to either ascending



A great example of just what you can achieve using Twist 2. This is a database for the Amnest CD-ROM, complete with built-in file extractor

Shout

*Darren Evans gets in a whirl over
Twist 2, one of the best relational
database applications for the Amiga*



This is where you design the layout of your records including the ability to have graphics, buttons and boxes to give it that professional look

or descending order. Once you have all your fields created, it's time to start entering your data. Twist 2 can display your fields in one of two ways, as a record form or list. A record form will display one record at a time whereas as a list will display multiple records on one screen row, with the columns defining the fields.

Buttons at the top of the screen allow you to select whether you wish to Query (or search) the database as well as add, edit or delete records. Two arrow buttons allow you to browse through records one at a time, or you can use the arrow keys on your Amiga's keyboard.

GOOD RELATIONS

Twist 2 is a relational database which means you can build relations into your database forms. Simpler databases are generally termed 'flat-file', which means their forms simply consist of the fields within the one database file. Using Twist 2 you can create fields whose contents can be found in another database file. This provides for a more powerful and highly efficient database structure.

Relational databases are extremely useful in areas such as a sales system, where you may have various departments or people handling areas such as stock, orders and customers. They allow you to create relational fields within records and these fields get their information from separate database files.

It's quite possible to have all the information to hand in just one big database file, but this would obviously be overly complex to create, would make searching unnecessarily slow and would probably be very cumbersome to maintain. It would be much easier to have separate database files which could be integrated into each other, and this is exactly what relational databases allow.

A good example of this would be for a mail

order firm who regularly send out promotional leaflets on their stock. Obviously, such a firm would have separate departments dealing with stock control and ordering, as well as customer details.

It is decided that a promotional leaflet is to be produced detailing a new range of software for the Amiga and this leaflet is to be sent off to their customers. The firm also deal in PC and Macintosh software so they will not want to target these customers for the promotional run. Using Twist 2's relational features, a separate database dedicated to producing the required information for the promotional run could be created.

REQUIREMENTS

This database would allow the user to search the stock database for machine-specific software and search the customer database for households with the required computers, thereby producing the required data for the promotional leaflet. Such versatility and efficiency would be difficult to achieve using a simple flat-file database.

Because of the demands on the Amiga this little powerhouse of a database provides, such as support for datatypes, it will only work on Amigas with Workbench 2 or above. Although you can probably coax Twist 2 to run on a 1Mb floppy-based system, you won't be able to do much with it. Hence, a hard disk and memory upgrade are highly recommended if you are to get the best from it.

Twist 2 is powerful, fast, easy to use and the most versatile database application available for your Amiga. If you are intent on injecting some kind of organisation into your life, look no further.



SYSTEM ESSENTIALS
RED = Essential BLACK = Recommended

2.0+
Workbench

3 Mb
RAM

The bottom line

Product: Twist 2

Supplier: HiSoft

Price: £99.95

Phone: 01525 718181

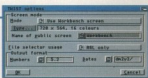
Ease of use	10
Implementation	10
Value for money	9
Overall	10

Hidden away in the masses of features which Twist 2 provides is a useful mailmerge feature

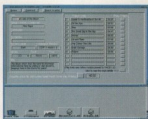


You can create your own database and report file icons for quick and easy access from the main screen

Twist 2 can be configured to use any available screen modes as well as custom or standard file requests



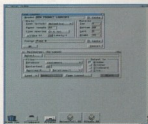
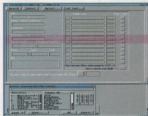
Once you have created your fields and designed the layout of your record forms, it's time to enter some useful data



Your database can be displayed in two ways. Either one record at a time or as an entire list of records



When it comes to querying your database (a fancy way of saying search), you can use simple text searches or powerful expressional searches



EMPLANT

*586DXsm Emulation Module

The new 586DX emulation module offers a high speed 586DX (FPU, MMU, and new instruction set) emulation with complete low-level architecture support, giving you the ability to run DOS, OS/2, NT, Windows 3.x, and even Chicago! There is support for MDA, CGA, EGA, VGA, SVGA video modes (dependent on hardware, AGA or a video graphics card is required for VGA/SVGA), sound, joysticks, floppy drives, hard drives, extended memory, and more!



Macintosh® Emulation Module

The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC ILCI. An A4000 is equivalent to a Quadra 900. Support for up to 16 colours is provided for non-AGA machines. A4000 owners can use a full 256 colours. Up to 24 bit (16 million+) colours is supported using third party video boards. Built in multiple file transfer allows for quick and easy transfers between the Amiga and MAC emulation. Support for AmigaDOS devices, Scanners, CD ROM, MIDI, SyQuest removable drives, Printers, Modems etc. Full stereo sound is supported too! Requires Macintosh ROMs (not supplied).

The possibilities with a multi-platform machine are endless. Now you can take advantage of a whole host of great software previously unavailable, and use them to complement each other. By upgrading your Amiga (extra memory, faster processor, etc) you instantly upgrade your emulation too! All major graphics cards are supported for improved video performance such as: CyberGraphics, Picasso II, EGS-Spectrum, VIVID-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina 32, Piccolo, PiccoloSD64, EGS110/24, and OpalVision!

Blittersoft are the exclusive European distributors for Emulation Unlimited. We provide a full technical support service, as well as software upgrades to all official UK boards. Check before you buy.

EMPLANT BASIC	£249.95
EMPLANT OPTION A (AppleTalk ports)	£299.95
EMPLANT OPTION B (SCSI)	£299.95
EMPLANT DELUXE	£349.95
*586DXsm MODULE	£119.95

PICASSO II

PICASSO II is the leading graphics card on the Amiga. It offers unrivalled support and reprogrammable graphics on any Zorro based Amiga. Workbench emulation offers 256 colours, even on non-AGA machines (Requires OS3.1) at resolutions up to 1600x1280. Supports HiColour (16 bit) and True Colour (24 bit) graphics - 16 million colours!



There is no longer a Chip RAM limitation and screen configuration is provided through PicassoMode, which allows the creation of custom screens quickly and simply.

PABLO is the new Video Encoder option for Picasso II, expanding it with two additional video ports, one standard Composite Sync Signal, and one S-VHS (Y-C) compatible port. All PAL compatible video devices can be plugged into Pablo, such as a colour TV or a video recorder. Pablo has 150kHz overload protection and is supplied with cables/adapters. Animation examples and a 24 bit animation player.

PICASSO II 2MB	£299.95
PABLO VIDEO ENCODER	£129.95

OS 3.1



Many of the latest software requires the latest operating system. Now you can upgrade to KickStart 3.1 for virtually any Amiga. Non-AGA machines can deliver a 256 colour Workbench with OS3.1 and Picasso II.

OS3.1 FOR AMIGA 500 OR 2000	£84.95
OS3.1 FOR AMIGA 1200, 3000 OR 4000	£94.95

Please specify machine. Also note that version 3.5 motherboard owners will be able to use. We strongly recommend that a professional computer repair/upgrade company undertake fitting. We cannot exchange any damaged or incorrectly fitted components.

ARIADNE

Ever wanted to set up a network but been afraid of the complexity involved? Now there is a simple but effective solution for any Zorro based Amiga. In addition, Ariadne has two extra parallel ports and includes Commodore industry standard software solution ENVIOY. Ariadne offers 10Base-2 (Thin ethernet, coax cable) and 10Base-T (Twisted pair, western jacket). Socket for a boot ROM. SANA-II compatible driver for ethernet and parallel port, 32KB cache to support the CPU and full manuals.

You can hook up additional Amiga's to the parallel ports with Liana.

ARIADNE	£199.95
---------	---------

LIANA

Liana is the ideal solution for a quick, easy yet efficient connection between two Amiga's. Simply plug the special cable into the parallel port, install the software and you are ready to go. Now you can share hard drives etc. without on a small budget. The software supplied is ENVIOY.

LIANA	£59.95
-------	--------

PICCOLO SD64

The Piccolo SD64 graphics board is a state of the art Zorro III/III (auto-sensing) graphics card with a built in Amiga video pass-through and expansion port for forthcoming modules (such as video encoder).

Using the latest 64 bit Alpine graphics processor, 64 bit blitter and fast Zorro III interface, incredible 24 bit speeds are achieved.

Piccolo SD64 comes with the latest EGS system and 24-bit paint package as well as loaders/savers for many common packages and a slideshow program. A full Workbench emulation is also part of the package.

The board is available as a 2Mb or 4Mb system, with no chip RAM limitations.

The maximum pixel clock is 110 MHz and use definable resolutions to 1600x1280 are achievable.

The 2Mb board can display a maximum of 800x600 in full 24 bit colour, whilst the 4Mb board can display 1024x768 (interlace).

PICCOLO SD64 2MB	£299.95
PICCOLO SD64 4MB	£349.95

WE HAVE MOVED.

We can now arrange demonstration of any product at our new premises. All demonstrations by appointment only so please call first.

CYBERSTORM

CyberStorm is a fully modular system offering huge increases in power and expansion capabilities. This design allows processor upgrades from the base 40MHz 040 system to the world beating 50MHz 060! With additional upgrades such as the SCSI-II and the I/O module, CyberStorm offers unequalled possibilities. The CyberStorm carrier board inserts into the 200 pin Amiga fast slot, and has ports for the CPU, Memory and I/O modules. The CPU module is prepared for clock speeds to 80MHz, with active cooling and an extra expansion port for future modules (ie DSP board). The CyberStorm memory board can carry 4 SIMMs using standard 72 pin modules, single or double sided and either 4.8, 16 or 32Mb (Max 128Mb). Data transmission of >50Mb/sec is achieved. The CyberStorm I/O module consists of a Fast SCSI-II interface with up to 7Mb/s Asynchronous, 10Mb/s Synchronous transfers and Active bus terminations, 10Mb/s Ethernet controller (10BaseT) with SANA driver and BNC/DSUB 15 connectors and high speed 2MBaud RS232 Serial Interface. The CyberStorm SCSI module has the same specification as the SCSI interface on the I/O module.

CyberStorm 040 40 MHz No proc.	£449.95
CyberStorm 040 40 MHz	£729.95
CyberStorm 060 50 MHz	£899.95
CyberStorm 23 SCSI module	£149.95
CyberStorm I/O module	£349.95
CyberStorm upgrade 040 to 060	£399.95
CyberVision 2Mb	£299.95
CyberVision 4Mb	£399.95

The CyberVision64 graphics card comprises of a 64 bit graphics processor and Blitter with 32 bit Zorro III bus interface. It is available in 2Mb or 4Mb versions (using common memory modules), offering up to 1600x1200 interlaced, 1280x1024 non-interlaced and 135MHz video bandwidth. Planar-to-Chunky pixel conversion is performed by on board hardware, some 6-8 faster than typical software solutions and accelerating Workbench emulation. Support for druggable and virtual screens, expandable bus for future cards (video, JPEG, MPEG...) and Amiga video pass-through.

The CyberStorm 060 and CyberVision64 should be available by the end of March. We have back-ordered - Reserve your unit NOW!



PhotoWorX & FolioWorX

PhotoWorX software to read PhotoCd format, save, image process etc.	£49.95
FolioWorX player for PhotoCd and Portfolio CD's, both Amiga and CD32 versions (specify)	£39.95



Blittersoft

6 Drakes Mews, Crownhill,
Milton Keynes. MK8 0ER

01908 261466	Orders Only
01908 261477	Technical & Queries
01908 261488	Facsimile
01908 261499	BBS (24 Hour)

Order by Access/Vista/Delta/Switch or Postal order/Check

Prices and specifications may change without notice. All prices include VAT. All trade marks acknowledged. It is advisable to telephone to confirm pricing/availability on any product. TRADE INQUIRES WELCOME. E&OE also please! @ cix.compulink.co.uk

Aminet is the Amiga-specific side to the Internet. Some bright spark out there decided that all the best shareware programs, graphics, sounds, samples and the other mass of material just sitting there in cyberspace deserved an official release as a set of four CDs at a very reasonable price. It has to be said, the end result is rather impressive.

Aminet Set 1 is the culmination of this idea, coming in a satisfyingly chunky box with four silver discs sitting inconspicuously in their slots. Amiga delights bursting from each groove. For people worried about value for money, there's no need to – for the hungry, leech greedy user, there are four megabytes of data here to be pillaged, abused and used. With 12,500 separate archives, you're not going to be bored with this for quite some time.

So what exactly is the whole collection made up of? That's an impossible question to answer in one page – there's that much on offer. Paint programs, sound modules, ray-traced graphics, spreadsheets, stereogram creators, 3D objects, icon replacements, animbrushes, games (both shareware and commercial demos), drivers for hardware, communications progs such as envoy network software, SaarAG and Fish disks, development software and more and more and more. Plus, there are charts of the most popular downloads so you can access the good stuff immediately – there's something here for everyone.

SEARCHING

This amount of files may sound daunting to plunder through, but the compilers have also come up with an excellent system for finding out exactly what you want. On each disk is a full index for both the particular CD in your drive and a global index listing everything on the four discs.

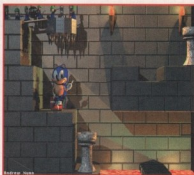
To make things even simpler, there is a local and global search system where you enter a key word such as Imagine and the computer subsequently hunts through the catalogue quickly, presenting you with a run-down of any files that are connected. On one side, there's an archived file and on the other is a description of that particular file.

With some compilation discs you may well get a huge amount of data to surf through, but there's invariably hair pulling as the right viewers need to be set up and assigns fiddled with to make many of the programs work. And here is another strength of the Aminet discs.

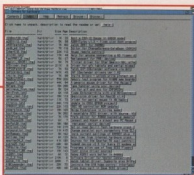
The system has been set up so various viewers and other facilities that aid in the

Makes sense

Another enticing aspect of this collection is that once you've spent the cash, it's going to be cheaper in the long term than downloading all the stuff from the Internet. No enflamed phone bills, dodgy phone lines or slow loading because of spooling large amounts of graphics for viewing. Indeed, this collection makes perfect economic sense at only £29.99.



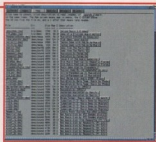
The collection's versatility is apparent. View Imagine-created artwork or...



...hunt down a hardware driver you've always needed

The world on a disc

Run the search mode using a key word and an index is listed with all the relevant files



Adam Phillips reviews Aminet Set 1, the CD collection so utterly packed with goodies you may never need another CD-ROM again

running, listening and viewing of files are already in position. In most cases, when you select the file you want a menu appears offering to either run/show the file there and then or extract it to RAM.

More often than not the system works surprisingly well and quickly. Run an animation, flick across to a game and then extract a file into RAM that can be used in Imagine as an object – this kind of versatility is satisfying and relatively hassle free, leaving you to enjoy the goods on offer. It has to be said, though, that there are times when things don't go to plan – the computer crashes or the file you have selected consistently fails to load up or extract.

In fairness to the collection, a substantial part of this data is shareware and public domain, so there has to be a certain amount of leeway granted to the compilers for any small glitches – PD and shareware material doesn't receive the file testing that most commercial software gets, so expect some oversights, mistakes or bugs. In some cases, using a file manager such as Directory Opus can help sort any cumbersome files. If you

only have a slight interest in the Amiga and want to find out all about its ins, outs and capabilities, you can't go far wrong with this. The Aminet Collection is one of the most impressive packages I've had the fortune to come across, and I look forward to giving the next selection a glowing review if the makers can keep this standard up. Highly recommended.

The bottom line

Product: The Aminet Set 1
Price: £29.99
Supplier: 17 bit Software
Tel: 01924 366982

Ease of use 9
Implementation 9
Value for money 10
Overall 9

THIS MONTH IN **AMIGA ACTION**



SUPER SKIDMARKS
Reviewed!



MANCHESTER UNITED: THE DOUBLE
Reviewed!



SUPER STREET FIGHTER 2
Previewed!



PLUS
A GREAT BIG PICTURE OF
A HUGE BROWN HORSE

On sale 13 April. For a few weeks.

It's a well known fact that assembler code, even when reasonably well documented, is rarely easy to understand unless you have a good idea of what the code is supposed to be doing in the first place. Needless to say, this makes many of the tricks used by assembly language coders look far more difficult than they really are. A typical case in point is the job of making an Amiga display 'smooth scroll' and since it seemed to me this would be an area many of you would be interested in, I've chosen to devote some time to just this subject.

In fact, over the next two instalments I'll be modifying and extending the 680x0 code provided last month in order to produce a demo that vertically smooth scrolls an Intuition screen. Before explaining how this type of smooth scrolling is actually done, however, let me kill off one false trail.

Those of you who have the Amiga's graphics library documentation may have seen that there is a library routine called ScrollVPort() that can be used to produce display scrolling effects. The plain truth is that while, in theory, this routine could conceivably be used to produce smooth scrolls, the results obtained by using this function are just not good enough.

The autodocs themselves mention that the ScrollVPort() function is slow and can produce visible 'hashing' of the display. So, if ScrollVPort() can't be used, is there an alternative course of action available to us? The answer here is very definitely yes, but in order to appreciate it it's necessary to be clear in your mind how Amiga displays are generated.

All displays are created by allocating blocks of memory called 'bitplanes,' in which each 'bit' represents a pixel position on the display. Normal displays will contain a number of separate bitplanes and by taking the appropriate pixel bit from each bitplane, the Amiga's display hardware is able to generate a colour register number.

Values stored in each colour register

Nothing but an old smoothy!

assembler language

Part 10

Smooth scrolling is one of the most useful tricks an aspiring 680x0 Amiga coder can learn about. This month Paul Queraa starts explaining how it is done using assembly language

determine the actual colours seen on the screen, and it's because a screen's colour register number range depends on the number of bitplanes being used that the colours available with different screen types varies. A one bitplane screen can only have two colours (corresponding to any single bit in the bitplane, being either a 0 or a 1), two bitplane screens can have four colours (each bit from each bitplane is combined to produce one of four values 00, 01, 10, or 11) and so on.

MEMORY

Although display bitplanes have to be stored in chip memory (because they need to be accessible to the custom chips) they do not have fixed positions as such. In fact, when a screen is opened the bitplanes will be allocated in any convenient area of chip memory available.

Needless to say this means the graphics system needs to have some way of identifying the position of these bitplanes and the structure used is called a BitMap. This structure can be found in the graphics/gfx.i include file and you'll notice from the description below that it contains space for

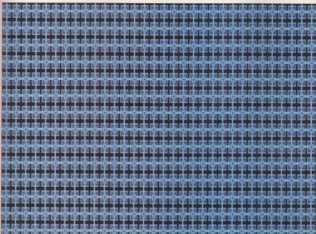
up to eight bitplane pointers:

```
STRUCTURE BitMap_0
WORD   bm_BytesPerRow
WORD   bm_Lines
BYTE   bm_Flags
BYTE   bm_Depth
WORD   bm_Pad
STRUCT   bm_Planes, 8*4 ;pointers to
         the bitplanes
LABEL   bm_SizeOf
```

Because the BitMap's bitplane pointers define the memory locations used to produce the display that appears on your monitor, you might expect that, by arranging for a display's bitplane pointers to be increased by an amount which corresponds to the pixel-width of the screen, it would be possible to shift the display memory downwards by one line.

Similarly, by decreasing those pointers by the same amount the display might be expected to shift upwards one line. Although very close to the truth, this doesn't work because a part of the story is still missing. While the BitMap structure certainly defines the initial display memory being used, the Amiga's graphics coprocessor (the 'Copper') which handles the display generation doesn't actually collect its bitplane information from this source. Instead it uses copies of the bitplane pointers that have been embedded into a series of instructions called a 'copper list'.

Once Intuition has opened a screen and generated these copper instructions, the bitplane pointers held in the BitMap structure's are essentially redundant as far as the display generation process is concerned. The important bitplane pointer



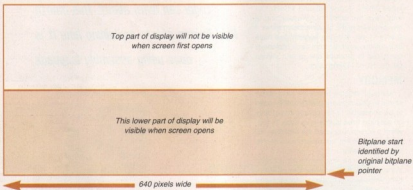
Some simple smooth scroll routines in action

values are those in the hardware copper list, so if bitplane pointer adjustment needs to be done quickly, this is the place to do it. In short we need to search this list, find the instructions which set up the bitplane pointers at the start of each display frame, and alter these.

To avoid visible display disturbance, it's obvious that such adjustments need to be made at times when the Copper is not trying to read the bitplane addresses itself. The secret here lies in realising that the Copper re-initialisation occurs as part of the house-keeping that goes on during vertical blanking intervals. A number of options are available but I'll discuss these when I deal with the scroll code itself.

As you increase (or decrease) a screen's bitplane pointers, the effect will be to bring new bitplane memory into the visible display area. If, therefore, you set up a normal sized screen, the result of any bitplane pointer adjustment will be to move the memory area being used for the real display

Figure 1: Only the lower part of each bitplane will be visible when the screen first opens.



```
CALLIST  ViewAddress,_IntuitionBase      d0,a0      copy to an address register
        move.l      move.l              v_L0FCprList(a0),a0
        move.l      cpr_start(a0),a0      start of list now in a0

        .search      cpr.w              #a0,(a0)      look at instruction
        beq.s        found a0 instruction found a0 instruction
        add.l        add.l              #4,a0          move to next instruction
        bra.s         .search           and keep searching

        .searchend    add.l              #2,a0          move to 2nd instruction word
        move.l      move.l              a0,copperlist_p and save pointer
```

Listing 1: The copper list searching code in all its glory!

outside the memory holding valid screen graphics information. This usually means that rubbish gets displayed on the screen, so the secret is to create an oversized display-memory area so that you only ever scroll within the bounds of whatever valid graphics data you've set up.

CREATIONS

As far as screen and window creation is concerned, very few changes are needed to last month's code. The screen's title and

title bar will be removed by setting an SA_Quit tag to true and, because a display window is needed that is free from any of Intuition's system gadgets, I am going to turn the window into one of the 'invisible' borderless backdrop variety.

To implement these latter changes I set the WA_Borderless and WA_Backdrop tags to true, add false WA_DepthGadget and WA_CloseGadget tags, and modify the window's title and drag bar tags. All these tags are defined in the system headers but, as usual, I'll be defining my own versions so that those of you without the official includes can still assemble the code. The end result is that you'll find these changed tag definitions incorporated into the window's tag list:

```
dr.l WA_Borderless, FALSE
dr.l WA_Title, NULL
dr.l WA_Borderless, TRUE
dr.l WA_Backdrop, TRUE
dr.l WA_DepthGadget, FALSE
dr.l WA_CloseGadget, FALSE
```

Screen and window sizes also have to be changed and here I have, somewhat arbitrarily, chosen to use a high-res 640 pixel wide screen with a height of 600 lines. The resulting arrangement of the screen's bitplanes in memory, relative to what you as a viewer would see on your monitor, is shown in Figure 1.

Searching the hardware copper list

Within the screen data that Intuition sets up there is a pointer to a View structure and the first thing we need to do is get the address of this using Intuition's ViewAddress() function. The result comes back in d0 and can be used immediately, because within the View structure there is a field called v_L0FCprList. This points to a cprlist structure which provides a pointer to the copper list the hardware actually executes. The end result is that we identify the start of the required hardware list using this sort of code:

```
CALLIST  ViewAddress,_IntuitionBase      d0,a0      copy to an address register
        move.l      move.l              v_L0FCprList(a0),a0
        move.l      cpr_start(a0),a0      pointer to start of
        list now in a0
```

Once we've got to this stage a loop needs to be used to locate the appropriate bitplane instructions. Copper instructions consist of two 16-bit words where the first word specifies the instruction type and the second specifies a data item. The instruction we need to locate is the first of a series of

'move' instructions that copy bitplane pointer values into the Amiga's bitplane hardware registers.

As the hardware registers can only hold 16-bit values it actually requires a pair of registers, and therefore two separate copper instructions, to store a full 32-bit memory pointer. It just so happens that the first pair of high and low bitplane registers set up in Intuition-created copper lists are those of the lowest numbered bitplane, conventionally known as bitplane 1.

The corresponding registers, called BPL1PTH and BPL1PTL, have absolute addresses of \$00e0 and \$00e2 above the custom chips base address, so what we need is a search loop which moves through a hardware copper list two words at a time, comparing the first word of each instruction until it finds one which starts with \$e0:

```
.search      cpr.w              #a0,(a0)      look at instruction
             beq.s              found a0 instruction found a0 instruction
             add.l              #4,a0          move to next instruction
             bra.s              .search           and keep searching
```

When the loop terminates, the first bitplane oriented copper instruction has been found, so just add two to it so that a0 is pointing to the second word (the data word) of the instruction, and then you can store the result for future use:

```
.searchend    add.l              #2,a0          move to 2nd instruction
word          move.l              a0,copperlist_p and save
pointer
```

If we put all these ideas together we end up with the code shown in Listing 1. Don't worry if some of the ideas seem like magic to start with – just concentrate on understanding the basis of what we're doing. The important thing is that this code fragment enables us to find out the whereabouts of the instructions which set up those bitplane addresses in the copper list Intuition places. The only bad news from your point of view is that you now have to wait until next month's instalment to see how we make use of this information!

THE EPIC SENSATION



CHES & TUTOR

A complete chess program with integrated tutor and (includes sound). Order code: JTS-2



DISK EXPANDER

Doubles the available space on your hard drive. Order code: SPES-2



WB3 BACKDROPS

A great selection of superb, fairly pictures to place in the background of your Workbench. Over 6 that personal touch. Order code: WB3B-2



COPY THAT FLOPPY

A set of the most powerful disk copying tools available on the Amiga. Order code: CPYS-2



LUCKY DIP CDROM

A mixed bag of Mindart, Exotic, Objectix, SFX, GFA tools, Demos, Games and code more. A bargain at just £5 + 11P&P. Order: COLDING



BANSHEE

State of the art 4 disk vertical scrolling shoot 'em up with superb sound & graphics, and unbelievable playability. Rated over 90% in most magazines. Only available when purchased with at least two other titles. Order code: BANS-1



IMAGINE HINTS & TIPS

Imagine Hints, Tips, and tutorials is the perfect companion for Imagine users. Includes a 40 page book plus a free companion disk. Order code: HTTS-1



PLAY CLASSIC SPECTRUM GAMES ON YOUR AMIGA

Play classic spectrum games on your Amiga. This pack includes over 30 All time classic Spectrum games. Order code: SPES-3



GRAPHICS CONVERTER

The complete graphics manipulation package for Workbench 2 & 3 machines. Order code: GFC-2



LOTTERY WINNER PRO.

Lottery Winner Professional attempts to predict the National Lottery draw with as little as just a few months data. Every week you input the winning numbers and Lottery winner will predict the following weeks numbers. (OPTIONAL FULL LICENCED VERSION) Order: LWPS-1



ARCADE CLASSICS 2

5 All time classic arcade games. Pacman, Frogger, Asteroids, Space Invaders, Compuzo, Missile Command, Q-Bert, & Omega Race. Code: AFCS-2



HARD DISK TOOLS

An essential purchase for hard disk users. Includes HD Backup, Status, and more. Order code: HDT-2



CATALOG SYSTEM

The complete cataloging system for Disks, games, CD's, videos etc. Code: CTGS-3



WORD FINDER PRO.

This is the most powerful Word search / Cross word order available. Over 50,000 word dictionary, and you can add your own. Order code: WFP-2



STARTEK TNG

A superb new Workbench enhancer kit that turns your Workbench into a virtual bridge (ENGAGE). Includes virtual tools, and images. Order code: TNGS-2



MAGIC EYE CONSTRUCTION

Create your own fascinating Magic eye images on your own computer, supplied complete with viewer and exporter. Great fun for all the family. Order code: HDS-2



**FREE BOX OF TEN TDK DISKS
WITH EVERY PURCHASE OVER £25.00**

Victoria Centre,
138 Victoria Rd,
Swindon, Wilts.
SN1 3BU, UK

Main Order Hotline.
01793 490988

Order Hotline.
01793 514188

PRIORITY ORDER FORM

Name _____

Address _____

Amiga Model _____

Payment Method _____

Credit card number _____

Exp date _____

ALL TITLES ARE COMPATIBLE WITH ALL AMIGA'S UNLESS STATED.

ORDER VALUE

Please send me...

Total goods value

Postage & Packing

Amount enclosed

£

£

£

OVERSEAS ORDERS

Overseas orders only welcome, but there is a minimum order of 3 titles, and please add £1.00 per item.

COLLECTING YOUR ORDER
You are welcome to collect your order from any time between 9:30am - 5:30pm Monday - Saturday.

ORDERING BY POST
Simply send us your order, listing the items you require, the total cost, and your name & address with payment either by cheque or Postal Order.

ORDERING OVER THE PHONE
Call any time between 9:30 & 5:30 Monday - Saturday with your Credit card details and the items you would like to order.

POSTAGE & PACKING
UK & Mainland: add a total of just 10p Overseas: Please add £1.00 per title.

LICENCED SOFTWARE

Most titles advertised here are licensed exclusively to us, and so are not available from other software outlets.

CONDITIONS OF SALE
Goods are not sold on a trial basis. E&OE. Your statutory rights are not affected.

TECHNICAL SUPPORT
With a dedicated Technical support line we offer 30 days free technical support to all our customers on all our software titles.

SATISFACTION GUARANTEED
Which ensures that over 90% of orders are processed with no returns. And with over 60,000 satisfied customers you can be sure of a good service and fast delivery.

PRODUCT KNOWLEDGE
A full time knowledgeable staff to assist you.

RELEASE THE POWER AN **AMIGA** COMPUTING

THERE ARE NO PRICE CHANGES DUE TO CURRENT MEMORY SHORTAGES. THESE ARE TODAY'S PRICES AVAILABLE TODAY!

ALL MEMORY BOARDS COME COMPLETE WITH FREE DISK INCLUDING MEMORY TEST SOFTWARE.



A MEMORY UPGRADE WILL UNLOCK THE FULL POTENTIAL OF YOUR AMIGA AND ALLOW YOU TO DISCOVER NEW HORIZONS YOU NEVER NEW EXISTED!



BRING YOUR AMIGA TO US FOR ON-THE-SPOT FREE INSTALLATION

Save on the P&P. Pick up your upgrade and save on delivery charges. What's more, bring your computer with you and we will fit your memory upgrade and test it for free! Personal callers are very welcome but please phone before visiting to confirm the item you want is in stock. We have disabled access.

THANKS TO THE HUGE BUYING POWER OF AMIGA COMPUTING WE CAN GIVE OUR READERS THE CHEAPEST HIGH QUALITY AMIGA UPGRADES AND OTHER ESSENTIAL ACCESSORIES FOR YOUR AMIGA.

MOUSE



£7.99

A superb replacement Amiga mouse.

This Compo mouse is a major enhancement because it uses micro switches for the buttons. Our mouse also has a much higher resolution - 280 dots per inch which means you need much less desk space and you get a much finer control.

12 GOOD REASONS TO BUY FROM AMIGA COMPUTING

All the products offered have been carefully selected by us as being the best in their class. But top quality does not mean top price. Thanks to our huge buying power, we can deliver to our readers the best products at the best prices.

1. All memory boards are populated with memory.
2. All memory boards are individually tested.
3. Support from a top engineer is just a phone call away.
4. All memory upgrades are simple to fit, trap door upgrades - no soldering and no need to open your Amiga's case.
5. No minimum order and no credit card surcharges.
6. Memory upgrades carry a five year warranty.
7. 28 day no-quibble money back

guarantee.

8. We are here until 8pm every day during the week.
9. 24 hour order hotline.
10. Because we only sell a few items, your order will normally be supplied straight from our stocks.
11. Your credit or debit card will not be processed if the item you order is not in stock.
12. Experienced sales staff are on hand for when you order or if you need advice before placing an order.

TURBO DELIVERY

NEXT DAY DESPATCH
AVAILABLE FOR ORDERS
PLACED BY TELEPHONE
ONLY.
POSTAGE AND PACKING
FOR TURBO DESPATCH
IS £5

OF YOUR AMIGA WITH MEMORY UPGRADE!

AMIGA A500



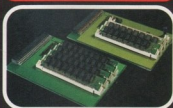
Upgrade to 1Mb

£12.99

Upgrade inc. Clock

£17.99

AMIGA A500+



Upgrade to 1.5Mb

£13.99

Upgrade to 2Mb

£20.99

AMIGA A600



Upgrade to 2Mb

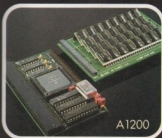
£22.99

Upgrade inc. Clock

£27.99

AMIGA A1200

Our A1200 upgrades come complete with clock and optional 25Mhz maths coprocessor. They fit in the trap door and feature full 32bit Fast Ram.



A1200

Upgrade to 4Mb

£129.00

Upgrade inc. Math

£154.00

Upgrade to 6Mb

£189.00

Upgrade inc. Math

£214.00

ORDER HOTLINE

01487 773582

Lines are manned from Monday to Friday 10am to 8pm and on Saturday 10am to 4pm.

If you call outside these hours you can place an order by answer phone - just give the information on the order form in the order it appears. You might find it easier to complete the order form before calling so that you can read directly from it.

Please allow 28 days for delivery from when we receive your order. For non receipt of goods phone 01487 773582 Monday to Friday between 10am and 4pm.

COMPO

AMIGA COMPUTING SPECIAL OFFERS

COMPO SOFTWARE LTD.

UNIT 3, GREEN FARM, ABBOTTS RIPTON,
HUNTINGDON, CAMBS PE17 2PF

PRIORITY ORDER FORM

Order by telephone by calling 01487 773582 Mon to Fri 10am to 8pm / Sat 10am to 4pm.

1. ORDER ITEMS (✓)

- ☐ Mouse £7.99
☐ A500 upgrade to 1Mb £12.99
☐ A500 upgrade to 1Mb inc. clock £17.99
☐ A500+ upgrade to 1.5Mb £13.99
☐ A500+ upgrade to 2Mb £20.99
☐ A600 upgrade to 2Mb £22.99
☐ A600 upgrade to 2Mb inc. clock £27.99
☐ A1200 upgrade to 4Mb £129.00
☐ A1200 upgrade to 4Mb (Copro) £154.00
☐ A1200 upgrade to 6Mb £189.00
☐ A1200 upgrade to 6Mb (Copro) £214.00
☐ A1200 CoProcessor only £27.00

TOTAL GOODS VALUE

P&P (1 Item = £2.00
2 or more Items = £3.00)

TOTAL ORDER VALUE

Cheques Payable to Compo Software

Please send to: Amiga Computing Special Offers,
Compo Software Ltd, Unit 3, Green Farm,
Abbots Ripton, Huntingdon, Cambs PE17 2PF

2. DELIVERY DETAILS

Delivery Address

Postcode

3. CUSTOMER DETAILS

Name

[This should be the name written on the Cheque or Credit Card if payment by this method.]

Telephone No: ()

4. PAYMENT DETAILS (✓)

Credit Card

☐
(✓) ☐ ☐ ☐ ☐ ☐

Card

Number

Switch Issue No

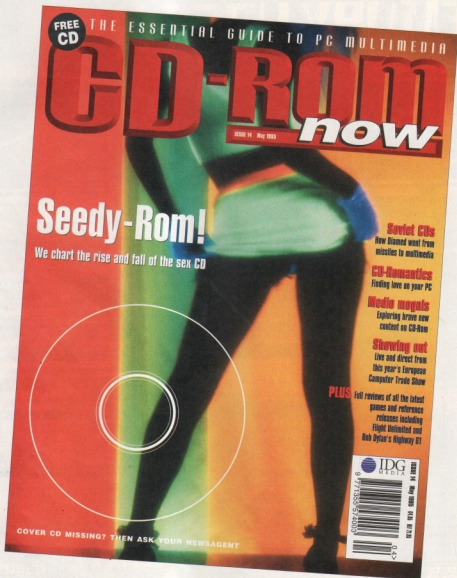
Expiry Date

Signature

Cheque (4) ☐ Postal Order (4) ☐

Cheques Payable to Compo Software

CD-Rom Now reveals all!



Reading CD-Rom Now can be very revealing. Fascinating reviews of all the latest technological advances, up-to-the-minute news, a gigantic games section, exciting edutainment insights, a dynamic demo filled disc, plus the most comprehensive buyers guide available. If it's CD we've got it covered.

NEED WE SAY MORE? BUY IT NOW!

On Sale 8th May

Off to the races



This 100 frame animation would take over 21 hours to render on the A4000 and a Cobra would race through it in only 2.2 hours, but without a batch option, overnight rendering would waste at least six hours of precious time

Stevie Kennedy tries Cobra RHP and gives his Amiga a taste of the world's fastest microprocessor

We all know that 3D ray tracing demands powerful processors, and many Amiga owners would kill for a 68040 to make Imagine, Real 3D or Lightwave really buzz. However, in the big bad world of commercial rendering, even the Amiga's fastest chip is a non-starter.

When a production company needs several minutes of broadcast quality graphics in a hurry, only the Silicon Graphics machines have been able to produce the sort of speeds required. The Raptor (reviewed in our December '94 issue) changed that and gave the Amiga world some big guns of its own, and now Cobra AXP brings top-end professional performance tantalisingly closer.

You'll still pay about £7,000 for the privilege, but with Cobra you get 64Mb RAM, a 1Gb hard drive, and the DEC Alpha processor running at a whopping 275MHz. All this in a neat tower system complete with 14 inch multisync monitor, keyboard, mouse, and Windows NT.

Windows? Yup, 'fraid so. Cobra runs the DEC Alpha version of Microsoft's networking front-end and uses its ethernet card to talk to the Amiga. By running a PC version of Lightwave's core rendering engine through an emulated MS-Dos window, Cobra is able to work in partnership with the Amiga, even though running under an alien environment.

The Amiga side needs only a copy of Lightwave, NewTek's Screamer Net software, and a suitable ethernet card. With

the network connections made, the user runs Lightwave then uses the Screamer Net panel in Layout to initialise the Cobra, send data to it, and collect the rendered images it sends back.

TECHNICAL HITCHES

It sounds easy, and when everything is up and running it is, but getting to this stage can be a minor nightmare. To be fair, we were testing with a beta copy of the Screamer Net software and an alpha test copy of the Lightwave engine on the Cobra side, and we didn't have the benefit of an automatic installation routine you'd find in a finished product. When the quirks are

The sample textures example scene renders in 17 minutes 50 seconds on an A4000, and only 1 minute 41 seconds on the Cobra. That's a 94% per cent speed increase!



ironed out, there's no reason to believe that the Cobra won't function as a virtual plug-in-and-go machine, but for the moment the user is faced with a lot of messing around with host names and IP numbers before the ethernet side of things is happy. With full release versions of the software, Screamer Net in particular, users will hopefully find that this part of the initial setup procedure is taken care of behind the scenes.

Once operating, the link between the two machines works very reliably and it's possible to mess the system around without confusing the network. Worry-free hands-off reliability is important when you might want to leave the machine rendering overnight, though this kind of operation does expose a few damning weaknesses in the Screamer Net software.

The scenes which make up a complete 3D animation don't all have to take hours and hours to render, not even with the Alpha chip, but Screamer Net is mostly manually operated and has no facility for batch processing. This means that if a large scene is set to render overnight it might take only a few hours, after which the Cobra and Amiga are sitting idle and using

Alpha processor

When the Digital Equipment Corporation (DEC) began work on its 64-bit Risc chips a few years ago, they were only the latest in a long line of companies who had trodden the reduced instruction set path. By 1992, however, the DEC Alpha had been recognised by the Guinness Book of Records as the world's fastest microprocessor, and it gets faster all the time.

Full 64-bit from start to finish, the chip is capable of up to two CPU instructions per clock cycle, giving the Cobra a maximum theoretical performance of 550 millions of instructions per second (Mips) compared to the A4000's 18 Mips. What's more, because DEC had just dropped development on their failed Prism processor, they decided the next family of chips would have a 25-year development life, which means the current chips could end up running at over 1000 Mips.

up electricity for no good reason.

To set up a scene for use with Screamer Net, the user loads it as usual in Layout, then brings up the network panel using the SN button found in later versions of Lightwave. He or she then has to go through a ridiculous sequence of initialising the Alpha chip (fair enough), clicking on buttons to send the scene, object, and image data to the Cobra, another to tell it to load the scene, and a final button to start rendering.

PREFERRED ASPECTS

Separate buttons are available to send just the object, image or scene data across in case changes have been made to one of these since the scene was last sent to Cobra, but though this is useful, a batch render option would have been much more welcome. With the machinery and software at your disposal when using Lightwave on the Cobra, it's very frustrating not to be able to give the beast a long list of scenes and tell it not to bother you until it has finished them. ARexx scripts could be used to automate things, so why didn't NewTek take this option?

A second complaint is the amount of time the Cobra chip sits idle, even during rendering, while the data is passed between the two machines and written to disk on the Amiga. For some reason, the Screamer Net programmers have made it possible to link up to huge machines with super-fast chips, massive hard drives, and

1. The Screamer Net process begins with a click on the Init button, which instructs the Amiga to search for available processors on the ethernet connection

2. Next, the user uses this bank of buttons to send a scene and its objects and images to the Cobra. This takes less than a minute for most scenes

3. The final panel is used to load the scene into the Cobra's remote copy of the Lightwave rendering engine, plus buttons to begin rendering or shut Screamer Net down

4. Any available processors up to a maximum of eight will be shown in this window and their status is indicated. Screamer Net can use more than one type of

The control panel

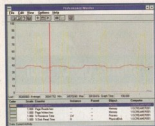
processor in two or three networked machines

5. The individual buttons for sending image and object files are useful when you are experimenting with a scene, and change just a couple of things before rendering again

6. Frame advance can be set to manual or automatic in Lightwave, but the independent setting is useful when you have multiple processors, as they will all work away on their own frames, thus reducing waiting periods



A performance monitor running on the Cobra under Windows NT gives a graphical display of the amount of time the Alpha chip is forced to sit around and wait. The yellow line shows processor activity, which drops to zero for long periods between rendering



Keeping up with the big boys

In full operation the Cobra is about 20 times faster than the 68040-based A4000, though some of the performance is squandered by the networking software. Our 62 seconds example was based on actual rendering time. Once the PC and Amiga Lightwave programs had finished shuffling data around and writing it to disk, this became 111 seconds per frame, a 79 per cent slowdown.

Don't get me wrong – Cobra is one mean piece of equipment which at the £7,000 price mark blows Raptor out of the water and leaves all other desktop power stations for dead (it eats Pentiums for breakfast), but the fact that it could be a lot faster with more

codies of RAM, and then make use of all this hardware only 50 per cent of the time.

For example, the standard Space Fighters scene from the Lightwave samples takes between 44 and 70 seconds per frame when rendered on a 68040 at medium resolution and no anti-aliasing. The Cobra is often slower.

Yes, slower. Data can be passed across ethernet connections at megabytes per second, but Lightwave takes 40 seconds or more to grab the rendered data from the Cobra and write it to disk, during which time the Alpha chip is doing absolutely nothing.

STAGE FRIGHT

Lightwave has always been a bit slow off the mark when it goes into the 'integrating pixels' and 'writing RGB data to disk' stages, but as there's a version of the core rendering engine on the Cobra and an awful lot of spare space on its hard drive and in its 64Mb RAM, you'd think someone

would have thought it a good idea to press this excess capacity into service.

Rendering the frames mentioned above on the Cobra takes between three and five seconds (jings!), which makes it all the more frustrating when the rest of the process makes this up to 45 seconds per frame. Until the basic operation of Screamer Net and Lightwave are changed to make more use of the Alpha chip, the system as it stands is surprisingly inefficient.

With more complex frames which require proper ray tracing or more intensive calculations, the efficiency of the system improves, but there's always at least 30 seconds per frame lost, and when you render 300 or more this adds up very quickly. Having said that, when you watch a frame which would take the A4000 18 minutes churned out in only 62 seconds by the Cobra, it's difficult not to step back in awe.

AC

The bottom line

Product: Cobra 275AXP
Supplier: Camera Inc
Price £7,000 approx
Phone: 0101 714 707 5051

Ease of use 8
Implementation 6
Value for money 9
Overall 8

SYSTEM

Your essential guide to Amiga gaming

Cleared for take off

Here at last, the state of the art sim gets the full System flight test

Under the system spotlight

TFX	108
It's Cricket	112
Ruffian	114
Whizz	115
Super Skidmarks 2	116
Championship Manager Italia	120
Angst	121

SYSTEM ANALYSIS

104 Beat The System

Want to impress your friends at Shadow Fighter? Look no further with our hints and tips

106 Brutal Paws of Fury

A close look at the furry fracas in the pipeline from Gametek

122 Baldies

Shiny pates abound in a fun strategy game designed by Creative Edge

124 Lost Eden

System searches out paradise, coming soon on the CD32

Bureau 13

Gametek are busily working on the Amiga version of Bureau 13. It's a high-tech adventure based on the paper role-playing-game by Richard Tucholka. The scenario takes place around a highly classified government agency whose aim is to wipe out all forms of paranormal and supernatural phenomena. You can choose your team from the six available such as The Hacker, an expert in computers, biophysics and weapons or The Vampire, with superhuman powers and the ability to morph into mist. The puzzles vary depending on your team.



Atmospheric adventures in Bureau 13

Howzat!

There are cricket games galore at the moment, especially with Team 17 working on their latest project, Final Over, Arcade Sports Cricket. The game is the follow-up to Arcade Pool and King Pin and continues their Arcade sports series. At another bargain price of £12.99, it promises that 'while being the most comprehensive game of its ilk, it still remains easy to play and forever entertaining.'

It also boasts intricately designed and animated sprites who throw, run,



Aaah, look at the little sprites - Final Over looks like it will be a very fun game

catch, bowl and even celebrate. All the players have different abilities such as individual bowling skills, strength and

system online

Summer is coming and the Amiga games scene is positively blooming. This month, Tina Hackett takes a look at what's happening at Team 17 and Arcane.

Lap it up

There is a racing game on the horizon from Black Legend/Kellion Software called Leading Lap. It is a polygon racer that has you competing in illegal road races. As you race through the city you'll have to avoid all the other traffic and obstacles that get in your way. It also employs a 'fairness' system so if you're very good the computer keeps up to your pace, but if you're failing miserably the cars are put back to your level and lap.

Also from Kellion is a rather bizarre puzzler game that revolves around Ants - strange but true!



Illegal road racing in Leading Lap

A novel twist to the usual puzzlers

Arcane's games

The Amiga market looks set to be bombarded with some top quality software over the coming months, thanks to Kent based company, Arcane.

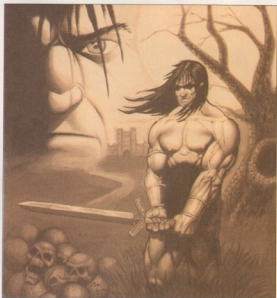
A release is imminent of their very stylish race-'em-up Turbo Trax and work has already started on the AGA version. A pinball game is also in progress at the moment and boasts an impressive list of stats and features. Due for release in September, this game will have an optional split-screen view in multi-ball allowing you to see all balls at one time, a high-low-res toggle, triple layered tables and a larger LED dot matrix scroll panel.

It also promises to be very authentic with left/right/up nudge, realistic ball motion and collision. Other features will include up to four flippers on each table, three balls running at full speed, drop-targets, kick backs and new ideas such as whirlpools, magnets, flip-up ramps and spinners outtholes. The game will have over 1000 frames of LED animation per table, animated balls including light-sourcing and larger tables - 320x640 all in 256 colours.

They also have an arcade/adventure coming soon based around Robert E. Howard's Hyboria Chronicles. Called Conan the Conqueror, the story follows on from Conan the Destroyer. You play Conan and find yourself locked underground in a dungeon and it is your quest to get the throne back from the evil wizard Xaltotuen.

It will be viewed from an isometric point and already looks as if it will have some very impressive graphics. It's being coded by Monoceros Design of Finland and looks set for a June release.

It is also rumoured that Arcane are working on a Thunderhawk-style helicopter flight sim and we'll be bringing you more news and previews on these developments as they happen.

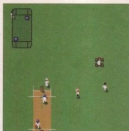


Conan the Conqueror will be a highly atmospheric title with top quality graphics

pace. There are many predefined teams including county and national – and if these don't suit then you can create your own. Realistic sound effects and a detailed scoreboard will add authenticity.

Martyn Brown, Creative Director for Team 17 stated: "The emphasis is firmly on delivering a completely playable, fun simulation in the mould of our other arcade sports series titles. Final Over certainly has plenty of amusing animations and all the features that cricket fans demand."

Final Over is due out for AGA Amigas and on CD32 very soon.



All the players will have different attributes

Thalion's beat-'em-up

Thalion have a beat-'em-up in progress and as yet it hasn't got a name, but things are already looking pretty good at this stage. It's more than a match to be CD32-only and is a first effort from programmer, Kwok Man.

There will be 32 fighters in all and each will have their own (and easy to find) special moves. As well as these, there will be Super Moves which can be carried out once your character has pulled off a particular combination.

Another feature to be included is the Seesaw Fight where instead of having two energy bars, there is only one split into two colours.

When you hit your opponent his colour goes down and yours goes up, but if he hits you it goes back to the middle. This is a fairer system and means matches could last for ages for two equally-matched opponents. A tag team mode will also be included.

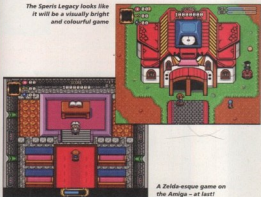
The Speris Legacy

There's always been a bit of a gap in the Amiga market as far as Zelda-style games go. That is until now. Binary Emotions are working on a game called The Speris Legacy which will be in much the same vein. This comes at a welcome time for Team 17, who are producing the game, their earlier plans to release a similar title on the Amiga, called Witchwood, have been shelved.

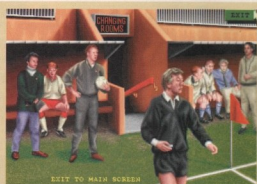
You play Cho and have just inherited the throne of Speris off your chum Kale (who has just been murdered by his evil brother who wanted the throne for himself). Gallus (his bother) is now after your blood and you, being an all round good guy, vow to crush Gallus and restore order. You then have to wander around the land, solving the puzzles and talking to the other characters.

From what we've seen from the screenshots it will be a very nice looking game, with brightly coloured graphics. The adventure will take you over many locations including Sharma City – a place reserved for Royalty – Cow Tree Island – an island inhabited by intelligent but mad people and where the cows do your business from trees (oh, very nice!) – and Makiah, Garden of O'Talia. Look forward to The Speris Legacy early this Summer.

The Speris Legacy looks like it will be a visually bright and colourful game



A Zelda-esque game on the Amiga – at last!



Graphics look like they will be very appealing

First Impressions

Impressions, the people behind those rather serious strategy games, have gone for a change in direction with their latest venture, Ultimate Soccer Manager. Although there are always plenty of management games around, Impressions believe this one is going to be different as they have explored three new angles. These are match view, development of the ground and stadium, and the seedier side to the game!

The programmers all felt that with some previous management games, the actions of the manager, such as changing the formation mid-match, didn't really affect the game. They've rectified this with an over head match view system which shows how effective your tactics are and how your changes are affecting the game.

The stadium development will also be more detailed, with a full business option. The aim is to make your ground as profitable as possible with club shops, bars, fast food outlets, training ground and effective access to the ground. You will also be responsible for setting club merchandising prices as well as the gate prices. Ultimate Soccer Manager will show your empire growing from your basic ground to a first class stadium.

USM has a totally new aspect to it with its dirty tricks elements and will give you the opportunity to play underhand! You can rig matches, offer bungs to other managers to get the player you want, and bet against your own team winning – be warned though, you do run the risk of an investigation by the FA.

Other features will include a Talent Scout Option, Press Conferences, Sponsorship and advertising, and Bank Loans. Publishing is by Daze and USM should be available very soon.



Ultimate Soccer Manager explores the seedier side of the game

SYSTEM Selections

With all the new releases available, you're probably wondering which ones to spend your hard-earned cash on. Well, just take a look below.....

Shadow Fighter

As far as beat-'em-ups go on the Amiga I've been more than pleasantly surprised by Shadow Fighter. It could go from strength to strength after the release of the AGA version and finally take the beat-'em-up crown away from games like Body Blows and Mortal Kombat. Shadow Fighter is, quite simply, thumping good fun.



The all New World of Lemmings



Anyone who played the original game and liked it will love to get their hands on a copy of Pygnosis' latest offering. It's what you might call a conglomeration of old and new. The old being the original and incredibly addictive gaming concept, the new being the advances in graphics and sound. These two elements combined make for a rip-roaring, action-packed 90-level puzzler that just gets better and better the more you play.

Skeleton Krew

This is my first musical highlight of 1995 and it's all thanks to Core Design who have obviously got the intelligence to use someone who is skilled at creating original pieces of high quality music that belong in the '90's and not the '80's. The graphics are very impressive and it's obvious they've been created by someone with a love for science fiction films and comic books.



Extractors CD32-Rom



Extractors is graced with some of the best graphics I've ever seen for this type of game and is packed to the brim with more addictive gameplay than you can possibly cope with. There are literally thousands of hours of play contained within the game. Fans of Diggers will no doubt be interested in Extractors, but I hope Millennium gain a few more fans through this release and people don't ignore it this time around.

All Terrain Racing

On the balance of things it beats its predecessors because of a greater long-term incentive. The rewards of winning the money, then spending it to soup up my motor filled me with a boyish flush of satisfaction - and that's the sort of thing to keep a player going. It's got the looks, the features and the speed to take the chequered flag. Go forth and spend your money.



The scores on the doors

A guide to how our revolutionary scoring system works...

We're sure many of you are now familiar with our new scoring system, but for those reading Amiga Computing for the first time and those who might have forgotten exactly how it works, here is our guide to the System scoring, err system.

In our opinion, review scores have lost their context as a percentage; some products receiving scores which were only a few percentage short of being the "perfect" game, when in truth they were only marginally above average.

OK, so the scores might seem unnaturally low at first, but that's only because other scoring systems tend to be on the high side and perhaps not as comprehensive or honest as they could be.

In the long run you'll receive a more concise and reader-orientated review that's geared towards the consumer.

0-20 This is given to the lowest of the low

21-30 An all-round poor game that may have a single saving grace

31-40 Just below the average, perhaps let down by a few indiscretions.

41-55 Games of this score are roughly average with 50 being a perfectly average score.

56-66 This is an above average game and is worth buying. For this reason it would be awarded the BRONZE award.



67-77 A game of high quality that you as a reviewer would have no reservation in recommending. Anything of this ilk would be awarded the SILVER award.

78-89 A brilliant title. Definitely worth buying and almost the definitive of its kind. This type of game would receive the GOLD award.



90-100 The best in its genre. This benchmark title receives the PLATINUM title.





Moves selector

Just to make our lives easier, I've devised this handy table. Simply find the special move you wish to perform, read the corresponding letter next to it and then look up the joystick move on the table. Easy!

Letter	Manoeuvre
A	Forward, down/forward, down + fire
B	Backward, down/forward, down + fire
C	Down, down/forward, forward + fire
D	Down, down/back, back + fire
E	Down/forward, down, down/back, back + fire
F	Rapid fire
G	Back, forward + fire
H	Down, up + fire
I	Jump, down/back + fire

00000

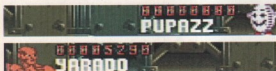
beat the system

You are such lucky people. Courtesy of gremlin, we give you a fantastic guide to the various kicks, punches and special manoeuvres contained within this superb, all-conquering beat-'em-up

Last resort?

If you're having major problems with Gremlin's superb beat-'em-up, you can do the dirty deed and use these type-in cheats

Cheat	What exactly does it do?
TEREKAKKU	Gives you unlimited credits
PAPAPONZIPOPO	Allows you to fight as Puppaz
MBARIVIDISCAFFARIMBARI	Allows you to fight as Shadow Fighter
EBBRAVOSECCU	Stays at start of each round and opponents will lose all their energy



Name: Slamdunk

Nation: Denmark

Special moves: Jumping B-ball - C; Spinning fire kick - H; Speed attack - G; Spinning fire B-ball - D; Head spring kick - B



Name: Soria

Nation: Belgium

Special moves: Spinning roundhouse - D; Flying kick - G; Double drop kick - J



Name: Fakir

Nation: Pakistan

Special moves: Genie hurricane - D; Mystery fire - C; Teleport - E; Magic carpet - A



Name: Kury

Nation: Tibet

Special moves: Power smash fist - D; Body drop - C; Rock roll - G; Spinning fire hand - E



Name: Yarado

Nation: Mexico

Special moves: Electric speed - E; Spirit power - D; Electric body - F; Electric splash - J; Spinning arms - G



Name: Okura

Nation: Japan

Special moves: Electric sword - F; Spinning blade - C; Thunder power - J; Steel sword - A; Teleport - A



Name: Electra

Nation: Denmark

Special moves: Electric body - F; Power launch - C; Earth power energy - E; Electric boomerang - D; Double kick - H; Spinning jump - G



Name: Yurgen

Nation: Germany

Special moves: Gun fire - D; Power fist - C; Earthquake fist - A



Name: Cody

Nation: USA

Special moves: Kuto kick - A; Fast punch - F; Flying power kick - G; Kuto fireball - D



Name: Salvador

Nation: Spain

Special moves: Spinning powerball - C; Turning flip kick - H; Flash panther - G



ow Fighter

Name: Toni

Nation: Italy

Special moves: Burning uppercut - A; Spinning fire - E; Flame kick - B; Massive uppercut - H



Name: Lee Chen

Nation: China

Special moves: Fire hand spring - H; Fist of Falling sun - C; Fire fist - D; Fury kick - F; Falling nunchaku - A



Name: Marx

Nation: Unknown

Special moves: Fire hands - A; Cutting claws - C; Rolling claw clash - G; Tiger pounce attack - D; Falling angel - I



Name: Top-Knot

Nation: Thailand

Special moves: Fast fire somersault - D; Spinning kick - A; Power combination - E; Speed elbow smash - G; Hangmans uppercut - H



Name: Toshio

Nation: Japan

Special moves: Fireball - D; Speed dragon - E; Dragon uppercut - H; Dragon kick - C; Circle of fire - A



Name: Khrome

Nation: Unknown

Special moves: Liquid silver attack - D; Melting body - E



Name: Puppaz

Nation: Taiwan

Special applications: Bowling Ball; Buzzing Saw; Electric Fence Force; Flame Thrower; Jack in the Box Punch; Head Bomb



Name: Shadow

Nation: Unknown

Special Moves: Unknown





The eight characters will all have a variety of different fighting moves



Backdrops look very detailed and there are many different settings



Some of the moves are typical of beat-'em-ups but they still remain in a cartoon style

system preview



Meet the Frank Bruno of beat-'em-ups, but with a difference. It's Brutal Paws of Fury and it's cuter than fluffy bunny pie. Tina Hackett investigates

So you think all beat-'em-ups are nothing more than gratuitous blood and gore? Do bloodied torsos make your stomach churn? Fear not because Gametek have an alternative you could even invite the Vicar around to play. Called Brutal Paws of Fury, it's still a beat-'em-up, but with a difference. Forget ferocious characters that would rip your head off as soon as they look at you, and clean up the entrails and the headless corpses – there is a new fighting game taking to the ring. Already available on the consoles, Brutal Paws of Fury is almost ready to hit the Amiga and could well steel the hearts of many.

The premise behind it is a little unusual: it's a 'cartoon' martial arts game and certainly promises to be original. There are lots of cute creatures all aiming to beat each other up (in the nicest possible way, of course!) to decide who is worthy of wearing the Belt of Heaven – an award which brings great honour.

This contest is judged by the Dai Llama, who every four years goes on a quest to find the world's greatest warriors. The fighters are all invited to his peaceful island to compete against each other and are judged not only on their martial arts skills but also how much of the 'warrior spirit' they possess. The winner can then claim the coveted Belt of Heaven. Now I say cartoon

because, like cartoons, it uses the same comical violence. For example, included in this game is a feature similar to when Jerry hits Tom with a frying pan and stars appear over his head – it's that kind of humour. Other 'cartoonist techniques' will include face pulls, having heads knocked back at obscure angles, and

rubber bodies. Cartoon capers replace the normal gratuitous violence and Gametek are hoping the game will help appease the anti-violence lobby who are complaining about the violence in games.

The characters are also cartoon like. There are eight characters in all and each are different animals such as Kung Fu Bunny, Leon the Lion, Tai Cheetah and Karate Croc. They all have special traits – both strengths and weaknesses which are bound to make them rather

endearing. As Gametek say: "Players will benefit more from identifying with Kung-Fu Bunny and his quiet wisdom than from the blood-thirsty characters in current 'beat-'em-ups' which are a cause of concern to many parents."

Brutal Paws of Fury will incorporate a clever learning element. Unlike most beat-'em-ups, you are not automatically given all the moves. As you beat two opponents, the Dai Llama reveals a new move. A 30-second countdown then begins and you are shown how to configure your joystick. You then have two tries in which to attempt the move. As in real martial arts, you must try and qualify for higher belts and the more advanced belt you get, the more moves you can do.

There are many different moves for all of the characters and you can play all of the competitors, so the game promises to last. Moves will include some of the typical beat-'em-up ideas such as aerial kicks, but it is still all very cartoon oriented. Combined with these are some very unusual moves. Leo the Lion, for example, is a rock star character who has a guitar move – as he plays his guitar the screen shakes and damages his opponent.

TAUNTING

There will also be a feature called Taunt Moves which has two uses: It will add a nice humorous touch but will also work as a way of replenishing your life meter – so now, even if you only have the tiniest bit of energy left, you can turn away from your opponent, taunt them and boost your energy back a bit, giving you a second chance to win the fight. This is different to other beat-'em-ups where you'd be tempted to give up if you only had a little energy left. An instant replay system will allow you to watch each fight frame by frame, at many different speeds – therefore you can learn from your mistakes or brag about a round well fought. To keep the game competitive there is a tournament system which allows up to eight players to



Not a drop of blood spilled anywhere! It should appease all those who've been concerned over violent beat-'em-ups



The nature of the game should still keep the competitive spirit - either against friends or the computer



The cartoon animation promises to provide humour



The characters may look cuddly but they still pack a punch



Leo the Lion performs his special guitar move



Brutal Paws of Fury promises to be visually stunning



As you progress you will learn more fight moves

Paws of

compete in a single tournament or you can play in teams to try and defeat each other.

Level Passwords and a Save game Option will make life easier as well because not only does it store levels but it also remembers belt grade, moves learnt, the number of victories and losses and even the player's name so each password can be individualised.

As you can see from the screenshots, the game is going to be an absolute visual treat. The backdrops are detailed with varied settings, from jungles to beaches. The actual characters look good as well and

are cute enough to appear in any cartoon. A great deal of attention to detail will make all the characters charming.

See? No blood, no gore. Brutal Paws of Fury is going to be so squeaky clean you could take it home to meet your parents. Gameplay promise to keep the fundamental excitement of more traditional beat-'em-ups, but gone is the controversial excessive violence so it should have widespread appeal and make this genre more accessible for a wider audience.

Brutal Paws of Fury will be available early in May priced £29.99 for both the disk and CD32 version.

Meet some of the characters

Kung Fu Bunny

Motto: To know fear is courage

A kind and considerate character who gains great pleasure from seeing how he has helped someone succeed

Some moves: Double Flash Kick, Dance of Death

Tai Cheetah

Motto: To teach someone is to be responsible for them

He is devoted to those close to him but cold towards enemies and he lacks the self-motivation to excel

Some moves: Fire Kick, Fire Punch

Leon the Lion

Motto: I have only one judge, the world

Leon never forgets a debt and will always even up the score.

Some moves: Roar, Lightening Fury

Ivan Bear

Motto: You can rest when you're dead

A down-to-earth character who stands for no nonsense and believes any problem can be overcome by a bit of common sense

Some moves: Penjat Silat Mind Throw, Big Belly



Kung Fu Bunny



Tai Cheetah



Leon the Lion



Ivan Bear

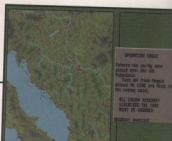
The good old flight sim. A genre almost as old as home computing itself, this type of game always attracted a hardcore fan base. There were, and still are, people who relish the opportunity to immerse themselves in completely authentic flying experiences – people to whom accuracy is more important than appearance.

An equally large number of game players, however, found the whole genre deadily dull. Ground details were bland and unconvincing. There was no sensation of motion, and so-called dogfights often boiled down to electronic combat with specks on the horizon. Then

INTRODUCTION

TFX came along to make the sceptics sit up and think again. Developed originally for the PC, it featured convincing ground terrain, fluffy 3D clouds, satisfying explosions and gorgeous, state-of-the-art airborne technology. In short, here was a sim that looked exciting.

Now, Digital Image Design have unveiled TFX for the Amiga. Possibly the most demanding piece of software your machine has ever had to cope with, we test fly the state-of-the-art sim to see if the conversion was worth the wait.



Mission details are given in atmospheric briefing scenes

PLAYABILITY

TFX stands for Tactical Fighter Experiment, a fact which should remind prospective buyers that this is not just a flashy visual feast, but rather a very serious simulation.

There are three hi-tech planes to choose from: The Eurofighter 2000, the Lockheed F-22 or the F-117 Stealth Fighter. Each one handles differently and possesses different armament capabilities.

Several varying modes allow for different levels of action and involvement. To start with, the arcade mode is a bit of nonsense fun that sets the player off right in the middle of the action. The plain object here is to compete for kills against the clock and work your way up the hi-score board.

In preparation for more serious challenges, ten training missions must be successfully completed. This should give players a good introduction to mastering the navigation and weapon systems.

Once players prove themselves to be up to the job, they can take on the role of pilot flying for the United Nations in a large variety of missions. Alternatively, they may wish to test their skills against all the different flying conditions in the simulator mode.

Combat is realistic yet exciting. You'll find it very difficult, for example, to bring anything down with a chain gun, but tracking MiGs with the right missile isn't too tough.

The copy we had did still have some bugs, most of which were minor. One of the worst was the Chinook helicopters – the models had been imported incorrectly, leaving them distorted in design. DID are aware of these flaws so hopefully they will be swiftly corrected.

TFX is highly configurable, so it's possible to mess with various options during flight. For example, players can alter how strictly the laws of physics are applied to their aircraft.

Similarly, adjustments can be made to the level of G-force effects the pilot will suffer. Set it to maximum and some players will find it too restrictive – any manoeuvre seems to have the pilot blacking out and breathing heavily.



Taking a sideways look at the night-life before I get down to serious business



Action at the break of dawn: The F22 swoops over a city



It's not all fun in the sun – TFX features a whole range of climates, including this all too familiar gloom



The F22 evading incoming missiles – remembering to lift the undercarriage would have helped

SOUPED-UP SIM

Having read how demanding TFX is as a piece of software, you may be wondering what the minimum amount of kit is to get it running properly.

The bottom line is that it can be played on a basic A1200 – just about – but you will have to turn down the detail to its minimum setting, which means missing out on some of the finer touches. Having said that, it still looks better than the opposition in most respects.

If you've got an accelerator things start to get more impressive, and the more fast RAM available the better. There's also an FPU version, so if you're lucky enough to have an accelerator fitted with a maths co-processor you should be set up for a pretty stunning experience.

Whatever your machine's specifications are, however, one thing must be stressed if you want to enjoy playing the game: it needs an analogue joystick. While there is an option to use a digital joystick or keyboard, this seriously undermines the smoothness of control, especially when flying the planes at high speed. For whatever reason, the digital controllers can't keep up with the graphics.



GRAPHICS

Forget the empty, flat landscapes and the basic block-like shapes used by some flight sims to represent enemy units, TFX was designed to inspire and awe, and the words 'if looks could kill' have never seemed so apt.

From the moment the player starts the engines up, there are significant differences between the look of this game and the standard sim fare. The skies in TFX have pace and depth, and once airborne, the player has a panoramic view of patchwork fields or detailed cities passing beneath them. It is a far cry from the blue sky, yellow desert simplicity of some flying games.

Missions can take place in a range of conditions including day, night and dawn flights, and players may encounter cloud cover or even storm weather accompanied by sheet lightning.

The visual realism gives each mission a different flavour. Night-time bombing doesn't just mean flying with a blacked-out screen – the sky in TFX has a faint, gradated luminescence, while on the

ground, cities are represented by convincing clusters of light.

Cross over enemy gun installations and the air is filled by streams of rising light as tracer bullets track onto your aircraft. At times it can be breathtakingly atmospheric.

Stormy conditions are gloomy and grey, with the most convincing clouds seen in any game I've played yet.

As you pass into them the view outside the window gradually mist before becoming completely obscured.

Explosions, special effects and fancy camera views are offered as a satisfying reward for honing those flying skills. Physical danger is represented by more than a flashing warning light in the cockpit, as AA guns pump the skies full of clouds of shrapnel.

It may not be politically correct, but the kill is what a game like this is ultimately about. It's rewarding, therefore, that explosions are impressive and that it's easy to view any victim going down. Players can launch missiles and watch them streak off leaving a trail behind,



TFX

It's the flight sim Amiga owners have been waiting for, but is the excitement justified? Gareth Lofthouse locks on target



Attacking ships with the cannon is not very sensible

Publisher: Ocean
Developers: OJD
Disks: 6
Price: £29.99
Genre: Flight Sim
HD install: Yes
Control System: Joystick
Supports: A1200, A4000
Recommended: 68020, Analogue joystick

then they can change to the missile's view to watch it close in on the enemy.

When it comes to different views in general, TFX is better equipped than any rival as far as impressing your mates is concerned. One mode allows you to look in any direction from the cockpit (as opposed to the usual left, right and behind view), but the best is the fly-by shot which brings your fighter swooping impressively towards the camera.

Cockpit detail is high, with all necessary indicators being visible from the normal cockpit view. There are three screens on which a huge range of information displays can be selected, so the purists should feel well catered for.

The important thing to realise, unfortunately, is that TFX can only be seen in its full glory if played on a fast, powerful machine, because basic A1200 users will find the screen update too slow with the game detail turned up high.

Most players will probably be able to play TFX with medium detail. This means going without a few frills, such as emblems on a fighter's tailwing, but on the whole TFX still looks highly impressive.

93%



You get your very own Stealth bomber to snoop about in after sun-down



Desert strike: The Eurofighter 2000 takes off in the Lebanon

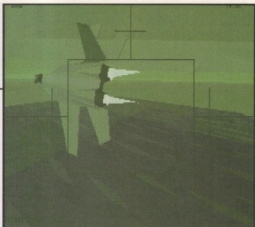
FLASHBACK

For a long time, Microprose were the developers the sim fanatics put their faith in. One of the first game makers to introduce combat missions into the genre, their product's playability was always strong, even when the graphics were rather dull.

Featuring a stealth bomber as one of its planes, TFX bears comparison with Microprose's F117-A. Accuracy levels seem to be pretty much the same, but when it comes to the graphics department the Microprose game is old, and it looks it.

The closest rival technically to TFX has got to be Tornador. Featuring some stunning graphics, unprecedented accuracy and involving campaigns, it remains a very impressive game.

TFX surpasses its predecessor in most respects, however, simply because it combines even more detailed graphics while making improvements on the running speed. In short, DID have produced the best Amiga sim ever.



An enemy about to bite the bullet as my missile locks in for the kill

Try before you buy

As has been mentioned elsewhere in the review, minor bugs cropped up here and there, but generally they were no great cause for concern.

More worrying is the fact that our copy of TFX did not seem stable running on a basic A1200, thanks to regular crashing in the middle of a game. DID are aware of the problems and have made assurances that any problems will be resolved before the product hits the streets. The cautious among you, however, may like to see it up and running before you splash any cash.



Missions are given more authenticity with a few extra details such as news reports



'Take on the missions - fight for peace.' Flying for the UN gives TFX a small twist on the usual SIM theme



Another humiliating meeting with a typically sour-faced colonel - I must stop trashing planes

SOUND

Let's start with the bad point - the music. Imagine you've just bought the ultimate flight simulator boasting an unprecedented level of realism and excitement, and you're looking with anticipation at the introductory screens in preparation for the experience of Tactical Fighter Experiment.

In come the martial drum sounds sim games use to get you keyed up for the mission. So far so good, but as you prepare to arm your fighter with the latest deadly hardware, things on the music front start to go ludicrously wrong. Enter the noodling tinny noise of a theme played on a 1983 Casio.

Not that this matters one iota, but it made me laugh. Otherwise, the game's audio is proficiently handled, with plenty of varied effects to flesh out the atmosphere for the game.

A number of voices pipe up with information for the pilot during the game, including the girl with the home counties accent at take-off ('engines on!') and the redneck yank who, when you shoot a plane down, tastefully jeers 'toasted bogey!'

Bay doors, the brakes and landing gears all make a satisfying hydraulic groan when activated - small touches maybe, but ones which make the game that bit more convincing.

84%

OPINION

90%

TFX was originally designed with the fastest, megabuck PCs in mind, so there were understandable doubts as to whether a conversion was worthwhile for the much cheaper, and in some respects less powerful A1200.

So now that it's finally here, what's the verdict? DID have pushed the Amiga to the limit in an attempt to bring us the best flight sim ever. They have undoubtedly done an excellent job, but whether or not TFX is for you will depend on a number of factors. Firstly, the basic A1200 cannot

show the game off at anywhere near its best - a point worth considering if you're only interested in those gorgeous graphics. Even so, with minimum detail it still looks good and the real sim fan will find plenty of depth and accuracy in the actual gameplay to occupy many an early morning.

The more powerful your Amiga is, however, the more impressive TFX becomes, and at its best it really can be quite stunning. With a suitably accelerated machine, this game has the visual flair and excitement to attract fans usually put off by the Sim-designers' fetish for complexity.

It's a shame that only the select few will be able

to play the game in its best form, but DID can't be blamed for pushing the Amiga's capabilities to the limit. An outstanding sim in its own rights, there's a lot to recommend it to owners of lower-powered machines.

Problems aside, this game beats its closest rival both in detail and in speed. TFX is the best sim on the Amiga of all time, and that's a fact unlikely to change in a long, long time



BRIAN FOWLER

Commodore
AMIGA

Computers Ltd

11 North Street, EXETER, DEVON, EX4 3QS

We're Backing Amiga!

Amiga 1200, CD³² and A4000

are in extremely short supply. Phone for latest news, prices and availability.

We have available now memory expansions, accelerators, hard disks (SCSI and IDE), disk drives, multi-isos, printers (impact, inkjet, laser), printer and monitor shares. Talk to us, we know the answers!

Imagine a drive which is almost as fast as a hard drive, but which takes disks similar to a floppy drive ...

Imagine filling this hard drive, and then simply replacing the cartridge and instantly having another 105 or even 270 Megabytes of storage available ...

Imagine saving your work to cartridge, and being able to read the data on any similarly equipped Amiga, PC or MAC ...

Now you're thinking SyQuest

From
£199.95

Contact us if you want an Emplant board or a new mouse or the latest DTP software or a second joypad for your CD32 or a PARNET cable or a CD full of fonts or one full of clip art or CDPD 4 or the latest AMINET CD or a CD32 keyboard adapter or a SCSI controller or a VLAB digitiser or Flowcharting software or anything AMIGA!!!

Turn your 4000/030 into a 4000/040 for only £399.95

Turn your 4000 into a 4000 Tower! - Phone for details. (Also available for 1500/2000, 3000 and 1200!)

Can't see what you want? Just ring (0392) 499 755 --- we have lots more than we can show here!

How To Order

By Post

Send your Cheque/Postal order to the address above. Clearly state your name, address, telephone number and the product(s) you require. Prices can change so please phone to confirm price and availability. Please allow seven working days for your cheque to clear.

By Phone

For an even faster service telephone our sales hot line and quote your credit or debit card number. Friendly and expert buying advice is available at all times.

(01392) 499 755

Prices Correct At Time Of Going To Press.
E&OE. Please Phone To Confirm Latest Prices.

10/02/00

brian.fowler@cfc.compulink.co.uk

compuserve 100072,1536

CD32 Expansion Modules

Add Memory, Floppy Drives, Hard Drives, Keyboard, Printer --- turn your CD32 into a real Amiga!

Great Value at £199.95

Studio II

The Ultimate Utility for Amiga Printing
Now In Stock at only £49.95

Retina BLT Z3
Superb 24 bit
video card
4MB version
Only £449.95

Other Cards
available ...
Piccolo,
Picasso, EGS
--- you name it!

Vlab YUVor
VLAB Motion.
Superb value
for money

Philips 17"
MultiScan
Monitor.
Excellent value
at just £599.00

CD32 Connection Kit MarkII
Network to any Amiga or PC

With SERNET - "Just Click and Go"

Only £34.99

Upgrade from Connection Kit
Mark I available --- Only £16.99

Hard Drives

Fujitsu 528MB IDE	£235.00
Fujitsu 528MB SCSI 1/2	£250.00
Fast IBM 1000MB SCSI2	£500.00
Larger Drives	EPOA

SCSI Controllers

GVP 4008	£129.00	DKB 4091	£299.00
----------	---------	----------	---------

SCSI CD DRIVES

NEC £179.95	SONY £179.95
Nakamichi 7 CD Drive £349.95	
... and lots lots more ...	

External SCSI cases with PSU available from £69.95.

SCSI Towers from £99.95

We stock most SCSI cables, and can manufacture custom cables to your requirements here in Devon.

Fax Modems
complete with
software. Join
the Comms
revolution!

From £189.95

(BT Approved)
Very Fast
28800bps
modems now
available.

Fax us
on
(01392)
423480

Compare Our Prices! We don't charge extra for Credit Cards or Standard Delivery. What You See Is What You Pay!!!

Monday - Saturday 9.30am-5.30pm

01392 499 755



All Prices Shown Include VAT. Standard Delivery Is Free. No Hidden Extras.

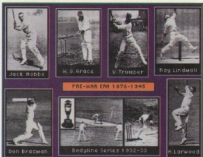
T

INTRODUCTION

he game of cricket – what could be nicer on a warm summer's afternoon than pottering along to the local pavilion to watch the village team or maybe even partaking in a game yourself?

It's a nice image, but being in good old England we don't get many warm summer's afternoons so what better way to enjoy the sport than from the comfort of your armchair in front of the monitor.

This in mind, it is perhaps rather surprising that there haven't been many computer cricket games. In fact the only good one that springs to mind is Audiogenic's Graham Gouch. But this could all be set to change. Team 17 are working on their more arcadey Final Over cricket game and now we also have Grandlam's latest contribution. But will it really bowl you over?



The memorabilia in the introduction is a nice touch and will appeal to all true cricket fans

It's Cricket

GRAPHICS

I must say I was slightly confused by the graphics for It's Cricket – I mean, when I saw the batting or bowling screens I was impressed. They are nicely set out, the sprites are large and well-animated and the stadium is detailed. But (and this is a big but) when the fielding screen came up it looked absolutely abysmal. The sprites are tiny and very basic and took me back to graphics from about ten years ago! It just looked very strange – like two different games.

At the beginning, not surprisingly, are the title sequences, which show a



selection of digitised pictures containing cricket memorabilia. This is a very nice touch that cricket fans are bound to love. The pictures are used throughout the game to select your players and they give the game a more human touch rather than having to choose from a lot of facts and figures. You can also put in your own images by using a paint package.

The different animated sequences that appear throughout the game work well, such as Umpire decisions, and there's even a rather strange but realistic animation of a duck for, you guessed it, no runs scored.

60%

Aah, the crack of leather on willow. No, it's not the latest scandal involving a Tory minister. It's Cricket – literally. Tina Hackett is your umpire



The fielding part of the game is far too random and very fiddly



There are a nice range of animations and the digitised pictures work well

SOUND

The introduction for the game is a loud dancey tune, but what is really impressive on the sonics front though is the speech samples. These have been taken from match commentary so you get things like "It's in the air" or "He's out." and these phrases fit in with the action and give an authentic feel. The crowd effects work well too with cheers, boos and the like going off when appropriate, all helping to create a good international cricket atmosphere.

70%

OPINION

42%

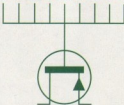
Overall this game just didn't work in the playability stakes. The bowling aspect is okay, as is the batting, but the fielding is absolutely dreadful. Once the batsman has hit the ball you then get an overhead view of the rest of the field. If you're on the bowling side you have to pick a fielder, move him to where the ball is probably going to land and then he will throw the ball back. This is very fiddly and tedious and it's more a case of guesswork than actual skill.

The bowling isn't too bad – you get to pick whether you want to bowl the ball around or over the wicket and then you can choose whether you want spin or not. Pace or spin bowling is determined by the player's attribute in the Player's Profile. This works well enough but after a while

would become rather repetitive. The batting part is quite nice though – once you've remembered which controls do what. There are 12 moves available and you press the joystick once, twice or three times followed by up, down, left or right depending on the shot you want. This method allows for some really nice moves to be executed.

The game has its good points, such as having plenty of player stats which should go down well with the real cricket buffs, and it is also expandable for future add-ons. However, despite some nice graphics, a great cricketing atmosphere and some cleverly-used speech samples, the fielding aspect lets the whole thing down. A shame.

Publisher: Creative
Developer: Highland Software
Disks: 3
Price: £29.99
Genre: Sports
Hard Disk Install: Yes
Control System: Mouse/Joystick
Supports: All Languages (100% win)
Recommend: 100% awards



FREE!

MULTIMEDIA CD-ROM

NO PURCHASE NECESSARY

FOR ANY AMIGA

To celebrate our 2nd successful year in business we're giving away
10,000 free Multimedia CD-ROM disks.

EPIC Software

MULTIMEDIA MANIA CD-ROM

Includes

500 top quality fonts,
1500 of the best clipart images,
200 music modules,
500 instruments,
over 200 soundfx,
100 Video backdrops,
200 textures,
200 3D objects,
100 AGA images,
200 colour clip fonts,
Animations,
graphics tools and lots more

ORDER CODE: CDMMM60

**WORTH
£19.99**

01793 422355

LINES OPEN 6 DAYS A WEEK 9.30AM - 5.30PM

There is a non-refundable £6.00 shipping and admin charge to residents in the UK and £9.00 P&P for foreign orders. Please have your credit card ready. Access, Visa, Mastercard & Eurocard accepted. Fax your order on 01793 514187. Send cheques to: Epic Marketing, PO Box 637, Swindon SN1 3DN. Offer limited to the first 10,000 customers, and only one CD per customer applies. If you wish to collect, you can exchange this advert for your free CD from Epic in Swindon. This offer is run separate from any other offer we are currently running. An up to date CD-ROM list will be sent with your free CD. Please allow 14 days for delivery E&OE

P

INTRODUCTION

Platformers are regular cannon fodder in the laser-mounted sights of cynical reviewers. Constant complaints of the genre being dead and ready for burial are levelled at the software houses – yet the platform phenomena keeps rolling onwards.

This particular reviewer doesn't actually have a problem with a game style that has been round for the last 14 years or so as long as it's done well. Take a look at Flashback on the Amiga or Donkey Kong Country on the SNES and it's obvious there's still life in the genre yet – it just takes a little time, imagination and a fresh

pair of eyes to see the possibilities of increasing the genre's potential.

Enter Ruffian then, the latest recruit to the platforming ranks. Set in a jungle, you take on the unfortunate role of Ruffian, a cross between Tarzan, Mowgli from the Jungle Book and Sid the Sexist. The mission is to set free a certain amount of pixies caught up in carnivorous plants dotted over the scrolling landscape of each level. The player achieves this by spitting plant seeds to liberate the little fellas and also take out the various creatures that festoon the climbable vegetation.

Once done, race to the exit to move onto the next level. Dotted all over the place are jewels, gold cups, potions and spells that can be used to progress further into the game. And that's pretty much it.

Another platformer graces the Amiga. Adam Phillips goes

GRAPHICS

While effective, Ruffian's visual presentation is of a decidedly average quality. The main character, Ruffian, while 'packed with character', is not exactly the most satisfying of sprites to see leaping from platform to platform. Like all jump-'em-ups these days, he too has his own little routines when left standing still for too long – the most memorable one being a full-on moonie.

The other creatures that infest the forest are again average, with not much in the way of character. The gorillas are especially badly drawn and walk round as if they have a corn cob stuck in a particularly sensitive orifice. Another annoyance is that some of the platforms and enemies can sometimes blend all too easily into the background. While adding to the challenge, it can also lay on the frustration in large thick wads as you fall for the fourth time down a level and have to work your way round again.

While the multi-directional scrolling is of a high quality, the lack of any parallax scrolling and the PD-ish look of the whole game really doesn't make one ache to get further into it on a search for graphical delights, but just to turn the computer off.

40%

SOUND

The various effects that make up the atmospheric soundtrack of Ruffian are probably the game's strongest asset. The jungle noise of crickets clicking in the background is complimented by the screeches and calls of unseen animals. While it's all rather clichéd, it works well.

The most novel and perhaps gross sound effect is the guttural noises of Ruffian as he fires a healthful glob of flem-covered, bullet-like seeds at anything that moves. Charming...

45%

Ruffian



Leap and dash through the multi-scrolling levels in the search of pixies



On finding the little suckers, spit a seed to free them from captivity



One of the end-of-level-type bosses that must be destroyed to reach previously inaccessible areas

OPINION

40%

At first, it's easy to pass this game off without so much as a second glance. Unfortunately, for the reviewer, on second, third, fourth and fifth intense gazes at the screen, it doesn't really get any better. Ruffian can be best described as a game that uncomfortably lands somewhere between PD and a fully-fledged commercial release.

On its good side, there are a couple of novel elements. Firstly there's the spitting of seeds which requires aiming Ruffian's head with the left and right keys and then releasing the fire button to send the seed hurtling on its way to its destination. Then, having to shoot the pixies to release them can involve bouncing said seeds off walls to reach them – a nice idea.

The game tries to imitate instead of establish its own

platforming identity. On your travels, power-ups are available which increase firepower, make your jumps higher and give other initially tempting bonuses such as a magic carpet. End-of-level-like bonuses have to be destroyed to reach particular points but unfortunately, all these usually enticing elements, which probably sounded good on paper, seem rather half-hearted and simply fail to capture the adrenaline or imagination of the player.

The game is certainly a challenge with its time limits and tough goings on through the large areas of each level, but the whole experience leaves you with an empty feeling of having seen and done this all before. Not a platformer I can recommend, unfortunately – perhaps those cynical reviewers were right after all.

Publisher: Grand Slam
Developer: After Dark
Bites: 3
Price: 10A
Genre: Platformer
Hard Disk Variables: No
Control: Joystick
Supports: 640K/640/1280
Recommended: 800K upwards



Amiga platformers have always been rather hit and miss when it comes to quality in comparison to their console counterparts. People have said good things about games like Zool or Superfrog, but good as they were, I found them to be pale reflections of the best Sega and Nintendo rivals.

INTRODUCTION

Now this jaded genre has a newcomer designed by Flair Software. Featuring a rabbit remarkably similar to the one in Disney's Alice in Wonderland, Whizz is slightly unusual in that it's an isometric adventure - in other words, a platformer in 3D.

The story behind Whizz is simple, you'll be surprised to hear. Our rapidly rotating rabbit is being chased by his adversary Ratty in a balloon around the mystical world, leading to adventures set on levels like the Green Grassed Castle or the South Sea Beaches.

Disembarking from his aerial transport, Whizz sets off on each level in a race against time, frantically seeking a variety of collectables needed to complete his mission. If the sands of time run out before he succeeds, however, Ratty will catch him up and finish him off.



Whizz has to race through each land, because his arch enemy is always in pursuit



The beginning sets the tone with Lewis Carroll-style visuals

**Flair Software are back
hoping their latest game
will inject some new life
into the platform genre.
Gareth Lofthouse takes
Whizz for a whirl**



Whizz

SOUND

Sadly this game's soundtrack is more likely to irritate than give Whizz appeal. It's the sort of sonic sewage we've been listening to on computer games since the mid-'80s, and frankly I'd rather play with the sound turned off than suffer it all over again.

If old ideas are going to get rehased, developers should at least attempt to perfect them. To me, the humdrum nature of the sound effects in Whizz give it away as a half-hearted affair.



Our rabbit spins to shatter the ice door

GRAPHICS

Whirl is hardly going to turn heads as far as its looks go, but it's not too bad. The isometric view is an unusual touch in this type of game, the main character is likeable enough, and the general effect is cheerfully colourful.

Details have been added to give Whizz a dream-like appearance. For example, the first level appears to be set high up in the sky, with the ocean visible miles below the action. Then there's the Indoor World of Gamesville, a bizarre land of puzzles featuring giant cards that again would look perfectly at home in a

Lewis Carroll adventure. Unfortunately there are a fair few drawbacks as well. The monsters are at best unimpressive and at worst ineptly designed - the bouncing tubes, for example, shouldn't really have made it off the drawing board.

There are various features to visually reward the player. Hopping onto some buttons will launch bonus scoring rockets, doors shatter when approached using the correct device, and as in the Nintendo Mario series, there are power-up mushrooms to be consumed. Why these platform programmers are fixated by magic mushrooms I couldn't say.

54%



Publisher: Flair Software

Developer: Flair Software

Disk: 2

Price: £25.99

Genre: Platform

Hard Disk Install: Why bother

Control: Joystick

Supports: 81200

Recommended: 68020

OPINION

40%

Okay, I'm a bit tired of platformers, so the likelihood of me being stunned into silent awe by Whizz was rather unlikely. Nevertheless, I was hoping for some entertaining puzzles and a few fresh twists on an old idea.

Whizz does feature the odd interesting innovation, but unfortunately they are not successfully pulled off. Take the isometric view, for example. This device has worked well in a lot of games since Knightlore on the Spectrum, but try to zip round in Whizz and things get frustrating. The problem is that Whizz is about a race against time, and the traditional Sonic Hedgehog view seems better suited to that sort of challenge.

The way players are supposed to spin the rabbit into enemies to kill them is another example of either a singular lack of imagination or effort on the developer's part. Added to that is the fact that it's tough from the outset and you have to go right back to the level's beginning - factors which won't help to win new friends for the genre.

For those who've had enough of the usual platform fare to last a lifetime, my advice is to give Whizz a wide berth. Then again, my advice for those who do like the genre is to give it a miss in the hope that something half professional might come along.

N

INTRODUCTION

New Zealand company, Acid Software, are really building a reputation for top-quality software at the moment. Just a few months ago they released the superb *Guardian*, a 3D isometric shoot-'em-up, then followed *Roadkill*, a stunning overhead racer.

This time they are once again concentrating their efforts on another racer – one that has a hard act to follow if it wants to live up to the reputation of its predecessor. Yes, it's the sequel to their highly acclaimed race-'em-up, *Skidmarks* and has many new features. There are new cars, caravan towing and new tracks a-plenty, but with all the current racers around can it still stand up to the competition?

FLASHBACK

Fun race-'em-ups are undergoing a bit of a revival of late. We've had *Team 17's* ATR which scored a healthy 89 per cent, and was packed with playability thanks to being able to win money to soup up your car. ATR also had some very nice looking, varied tracks with tunnels and oil slicks on the road, and although there were only three cars they all handled significantly different. However, in *Skidmarks 2* it actually feels more competitive and the rough and tumble approach works well as you all scramble to the finish.

Skidmarks 2 will also have to watch its back from the new competition, *Arcane's* racer *Turbo Trax*, which also looks very promising.

Another fun racer that springs to mind is *Micro Machines* – the tabletop matchbox car game that had you racing around school desks and kitchen tables. Although *Skidmarks 2* is set in 'proper' surroundings, it does remind me of *Micro machines* in it's chaotic, fun and cutesy approach.

This time round, *Skids' 2* has a lot of advantages over its rivals with its many options, multi-player features and many screen modes. It also has millions of cars to choose from – where else can you race cows towing caravans?



The cars look robust and as though they will stand up to the rough and tumble gameplay



Yes, it's cows towing caravans – you can see why they're called Acid Software



And we're off – get ready to burn rubber. Oh no, boy racer mode setting in again



All the different backdrops look good and are varied



There are some very windy tracks and you'll have to think about where you're going

Super

Publisher: Gallopall

Developer: Acid Software

Disks: 7

Price: £29.99

Genre: Racer

Hard disk install: Yes

Control system: Joystick/Keyboard

Supports: All Amigas (1MB+)

Recommended: 68000 upwards

GRAPHICS

The original *Skidmarks* was never the most graphically high-tech of racing games but was definitely one of the most appealing. It gave the genre a whole new slant with a real fun, almost cute, look to it with its miniature matchbox-type cars. *Skidmarks 2* has kept this same approach and made it even better.

As stated before, there are the vehicles from the original plus others, including the option to race some cows and tow caravans! This all looks terrific and adds a very humorous touch. The different cars are all fantastic, from the VWs to the Midget, and there is even the option to change their colours

from the blues and greens to a fluorescent tone.

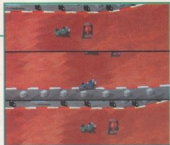
There are many more tracks included this time with a variety of different settings. There's an icy terrain, a desert, and a Grand Prix circuit among others, and each works really well with bright colourful backdrops and plenty of detail. Miniature spectators fit in with the cute style, and other additions such as signs and advertising hoardings look good.

A lot of the graphics have been designed with the gameplay in mind, for example, textured tracks and ramps have been included to provide a more challenging race, but they also look good – especially when the cars leap up into the air over the bumps!

75%



Okay, last again I know. It wasn't my fault, it's the joystick, err, I wasn't ready, they've cheated etc.



Triple-screen mode and it's time to grab some friends for a mad dash around the track



Some of the tracks have bumps or ramps to provide variety

Skidmarks 2

Tina Hackett dons her helmet and leathers and gears up to review the sequel to Skidmarks. Damon Hill eat you heart out!



There's a quick round of Pong to keep you occupied while the game loads - but the interface isn't exactly user-friendly



PLAYABILITY

Playability is what Super Skidmarks is all about. It's a pure race-'em-up, there's no doubt about that, and whereas other racing games penalise you for bumping into other cars, this one actively encourages it! You burn off from the starting line in true 'boy racer' style, nudge other cars into the barriers, skilfully steer around the bends and negotiate the ramps. And what great fun it is too!

Unfortunately, there isn't a feature where you can collect bonuses or win money to upgrade your car which would have provided more longevity to the one-player games. However, the Championship mode does compensate in some way as it provides some kind of long-term objective and gives more of a purpose to the proceedings.

Where the game really shines, though, is through the multi-player mode. Extra players can make use of Keyboard controls or the joystick adaptor and it's definitely worthwhile dragging a few friends into the proceedings to experience all the thrills and spills.

There are plenty of different tracks available now to test even the most experienced racer. Twelve new ones have been included, plus the game is compatible with the original 12. Each has a variety of challenges from the simple figure of eight tracks to complex, windy courses with hairpin bends and ramps or bumps you will need to leap over in true rally style. A lot of the tracks have arrows showing you where to go but it still takes a lot of practice to learn where you are going, how to master the corners and the like.

Control of the game is either via the keyboard or the joystick. The accelerator on the joystick is implemented by pushing forward or by pressing fire, and the keyboard controls are either through the arrow or control keys. Both work equally well and a lot is down to which you think is easier.

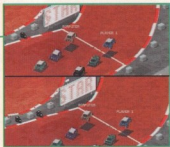
Skids 2 caters for both the experts and those new to the game because you can change how the car handles. For example, as well as the usual Classic you can choose Slippery which makes the car totally difficult to handle, or Pedal Car which gives you a chance to practice - and if you haven't played it before you're going to need it!

The trick is to treat the vehicles like Rally cars and try to slide them round the tracks rather than steer them around. And it's recommended you don't take your finger off the accelerator button!

Oh and while you wait for the disks to load you can have a game of Pong - a nice, novel touch that saves you sitting around doing nothing.



Ouch! Caravan towing over the bumps!



The different screen modes are a great idea



The dinky spectators fit in with the fun feel of the game

OPTIONAL EXTRAS

Super Skidmarks 2 has plenty of extra features this time, including the ability to customise your own vehicles. By using Imagine 2 you can render your cars and add them to the game.

Acid Software are going to be releasing their SkidMarks Racer magazine for fans of the game which will inform players of new tracks and upgrades. It will also run competitions such as designing trackside details and a car modelling competition. A GrandPrix registration section will let readers contact each other to organise race meetings and through a BBS, schedule playoffs. The game is hard disk installable but Acid feel that because of Piracy problems they have not yet made the track disks installable. However, they are hoping that with the first issue of their magazine they will be including a Track Disk Install utility.

The multi-player aspect of the game is brilliant and the game supports four joystick adapters which connect two extra joysticks via the parallel port – the manual even contains instructions on how to build such a device.

Skidmarks 2 also has improved comms support for local and remote linking, so if you have a Modem you can link to other players and race over the phone lines.

Another nice addition is the different screen modes available. There's Hi (on an AGA machine) and Lo-Res (low gives you a large, closer view of the cars) or if two or three players are taking part then the screen splits either two or three ways. A Shared screen mode is also available for four-player team racing.

AGA owners can also race up to eight cars at once and if your machine has more than 1Mb of memory, you will be able to race more than one type of car in one race and listen to the option screen music. Talking of sound, it is also possible to replace audio samples in the sfx drawer with your own.

SOUND

The game starts with a loud rock tune which gets you in the mood for some serious racing. It's not the kind of tune you'd like to sit and listen to but it does fit in with the feel of the game.

In the actual game itself you do get some very good authentic racing noises. You are given a countdown beep before each race, your engine roars into life, there's a dash of bumpers as the cars fight for pole position and tyres screech as you spin around the next

bend. This all conjures up the competitive racing spirit in you and has you tearing round the circuits like a thing possessed.

A quirky addition is the horn – you can activate this by pulling back on the joystick or left and right keys together. This is great when you are right behind someone and you can let rip with the horn before sneakily overtaking them on the inside.

Music kicks in again on the options screens and it's adequate enough and fits in, but as I say, you won't want to listen to it for long.

70%



Those with more memory will be able to race different cars against each other

OPINION

89%

This is one hell of a race-'em-up it has to be said. Okay, so it just relies on the racing part and has no bonuses or upgrades to strive for, but it's great fun, especially when you have two or more players. It works really well in bringing out the competitive edge in you and with all the different tracks it provides a challenge. The many different championships add variety too.

The extra cars you get this time round are a great aspect. Some are just there for novelty value, such as the cows, but with a light-hearted game such as this it

comes across really well. The VWs and Minis look good too – they're cute and fanatics of these vehicles will love having the opportunity to race around in their favourite cars.

Caravan towing is more than just a novelty too because it is very tricky trying to race around the tracks with these cumbersome vehicles strapped to the back.

Graphics are not particularly advanced but they look colourful and fun, which definitely fits in with the feel of the game. The options screens could do with some work on them though – they didn't look particularly good and were fiddly to operate. It didn't look exactly polished and I would like to have seen something more user-friendly and a bit more

attractive to look at. There were a few minor glitches and bugs along the way but I can't say they happened all that often or were particularly noticeable – they certainly don't detract from what is a thoroughly enjoyable game.

This is one of the most playable and fun race-'em-ups around and with the vast amount of new features added it's certainly worth a look, even if you have the original.

AMIGA
GOLD
AWARD

Domark's Championship Manager was highly acclaimed by both the press and public alike and now it's been released to contain one of the most exciting leagues in the world - Italy. Championship Manager Italia '95 has full details on players in Serie A and Serie B and contains all the major domestic and European competitions.

INTRODUCTION



Select your requirements for a new player

Publisher: Domark
Developer: InteleX
Disks: 1 (2 blank needed)
Price: £24.99
Genre: Sports/management
Hard disk install: Yes
Control: Mouse
Supports: All Amigas (1MB+)
Recommended: 68000 upwards

Championship Manager Italia '95

Italy - pasta, ice-cream, the Leaning Tower of Pisa. Oh yeah and football, exciting football! Domark have taken their Championship Management game and given it an Italian flavour. Tina Hackett has a taste of the action

GRAPHICS

Graphics are mainly table-based, so it is essential these are clearly set-out. Fortunately, Championship Manager

has always been nicely presented with plenty of bright, colourful screens and an easy-to-access icon system. There's a background screen, showing a footballer, which can be changed, along with the background colour - it's really just a novelty aspect but does add some variety. The match is viewed with a series of bars showing the performance of each team's defence, midfield and attack, and gives a running commentary. This doesn't look as good as some of the matches in other games but it still keeps the essential excitement.

Championship Manager won't blow you away with super high-tech visuals but as management games have never really been under too close a scrutiny with regards to graphics anyway, as long as they work well enough it doesn't matter too much. The emphasis in the game is on good old-fashioned playability, but then again it may look slightly dated against the latest Premier Manager.

50%

PLAYABILITY

There's a great deal to get to grips with in Championship Manager. It is a very in-depth simulation but is still a great deal of fun and remains as addictive as hell! There are plenty of up-to-date stats available to ensure you pick a winning team.

You can send your scout to look for new players and give specific instructions on the type of player you want and you have all the other tasks to keep an eye on too, whether it be player fitness or arranging friendlies.

As this is the Italian version you get to play in the Italian League which simulates Serie A and Serie B. In Serie A, 18 teams play each other twice (home and away). Serie B has 20 teams, who again play each other twice. You also get to play in the Italian Cup

(La Coppa Italia). This starts with 32 teams with two from Serie A, 20 from Serie B and 10 from Serie C. The second round takes the 16 winners of the first round plus 16 from Serie A until it gets down to two for the final. You can also take part in the European Cup, the UEFA cup, the Cup Winners' Cup and the Anglo-Italian Cup, so there's absolutely loads to keep you occupied.

One thing to remember about this Italian game is that the playing style varies enormously. Teams in Serie A and Serie B have a more continental style, with a far more tactical element such as testing each other's strengths and weaknesses, and it leaves you with the dilemma of whether to bring your knowledge of English football into the game or adopt their style - so even experts have a new challenge!

85%



There are a wealth of stats on players to help you to choose a good squad



The match day finally arrives - watch how your team shapes up

OPINION

70%

Okay, the game is still basically the original Championship Manager, so it keeps the great addictive playability of the first, but if you've played its predecessor to death then whether you buy it or not will depend on how much you want to have a version with the Italian League. Saying that though, it will provide a new challenge and it's great to see a different slant on the genre rather than just the English League.

There's going to be a great deal of competition around soon for football management games and although this isn't as modern or stacked full of new ideas, it sticks to its routes and remains as playable as ever. This is still one of the most realistic and stats-packed management games around, and if you've not experienced the joys of this title before or you want to try your hand at the Italian League, it's definitely worth giving this a try.



Beads of sweat roll down your body, trepidation delays each step you take, and terror grips your heart in its icy grasp. Killer droids and beasts of voracious appetite stalk the cramped, dimly lit corridors of this desolate cargo freighter; the invasion force of an alien race committed to the extermination of humanity. Strewn through

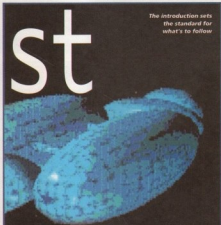
INTRODUCTION

the dark halls is evidence of the beasts' passage; corpses litter the grated deck and the sweet smell of blood is strong in the air."

This is how *Angst* is introduced in the manual – now why do I feel an anticlimax coming on?

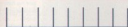
Angst

The introduction sets the standard for what's to follow



Canadian software developers Rave may be new, but they show high ambitions. Gareth Lofthouse finds out if they can pull it off

Publisher: Rave Software
Developer: Rave Software
Buds: 0
Price: £29.95
Genre: Adventure
Hard Disk Install: N/A
Control: Joystick, Mouse
Supports: Any Amiga, 1.5MB+
Recommended: 68020



Medkits are one of the few items I've managed to find after an eternity of room searching



Straight into the action on the first level with an attack from the randomly appearing pod

OPINION

26%

Visually unimpressive games can sometimes conceal gameplay of a surprisingly high calibre – just look at Tetris, for example. Sadly, there's no redemption for *Angst* in this department either.

Fighting aliens in claustrophobic corridors could be great, but there's zero skill involved and the whole experience is completely unconvincing. Add to that the tragic nature of the graphics and you should get a picture of how unsatisfying it all is.

There are supposed to be puzzle levels included as a break from the action, but my only experience of this was wandering around empty corridors, opening door after door and finding the odd key pass. I daresay there's more to it later on, but I think I did well to persevere for a couple of hours.

Unbelievably, *Angst* won't work with a 1Mb Amiga because the program requires another 512k of RAM to run. Other peculiarities include the fact that it can multitask, the benefits of which are unclear to me.

This game has been previewed elsewhere as some

kind of Doom variant, but you only have to look at the screen shots to see how ridiculous that comparison is. If anything, it's more like the ancient Dungeon Master, only with inferior graphics and gameplay.

I'm sorry to stick the boot in on a game that has probably taken a lot of work, but it should not have been put out as a full priced commercial release. *Angst* means anxiety – presumably for the makers, because this game's about as exciting as a walk in a multi-storey car park.

SOUND

This is a bit better. True, the gunfire is thoroughly unsatisfying, but at least there's some sampled speech and the doorways open with a suitable noise. When you're being attacked by the pods there's a passable electric sizzling and the dinosaur monsters let loose a strangled roar when killed.

However, you needn't expect any in-game music to increase the tension as you wander from dead end to dead end.

36%

GRAPHICS

Set on a spaceship designed using Lightwave and featuring aliens developed in Imagine, the graphics for *Angst* could have benefited from two of the Amiga's finest creative packages.

Why then, does it look only slightly more colourful than your average database program? Why are those Lightwave-rendered walls generally so blank and featureless?

There are only five critters (sic) to fight within the game, and the ones I've seen are none too impressive. The first level features the pathetic pods with pincers, while later there are dinosaur monsters that could make the creatures in *Deathmask* look threatening.

Considering the lack of detail in the game, you'd think you could at least view the action through a decent sized window, but in *Angst*, three quarters of the screen is taken up by the



A body on the third deck – perhaps they died of boredom

control panel. There's not much excuse for this, because some of the icons there are just space wasters.

A lot of time is spent wandering around mazes, so the inclusion of a mapping device is a perfectly good idea. Unfortunately, this is so tiny as to be almost useless. It also updates very slowly, a problem Rave software say arises from the 'primitive radio wave technology' your character is using – hands up who's convinced.

30%



Breeding Baldies will mean your energy bar gets replenished more rapidly – but beware, overpopulation can be a problem



Heigh-ho, heigh-ho, it's off to work we go! The Baldies manufacturing weapons of mass destruction



Traps and perils abound – you can even drown Baldies in the sea



Selecting the hand icon will allow players to pick up and place the Baldies with point and click ease



Just some of those pleasant little inventions you can tinker with – traps, mines and firehead bombs will give you a good start

system analysis



The follicly challenged are about to get some overdue recognition as heroes in Gametek's new arcade strategy offering. Gareth Lofthouse looks forward to a game that's going to be cute but cruel



Life is tough when you've got no hair – here one Baldy disappears into a hole left by a plant pit trap, while two others are victims of the spring

they'll inevitably encounter. Needless to say, however, the opposition is not going to take it lying down.

The game is controlled from a god-like position. To get started players will have to build houses for their Baldies and then find the right balance between collecting, inventing and breeding – yes, that's right, breeding, because no matter how unsavoury the act of baldy procreation may be, the bigger the tribe the more you'll be able to accomplish.

Our press release warns that this game is not to be compared to Lemmings or Settlers, but Baldies is going to appeal to fans of strategy games with arcade front-ends. There are also similarities to old favourites like Populous, Sim City and particularly Megalomania, but thankfully Creative Edge have injected large amounts of creativity and humour to give the title an original flavour.

Though Baldies will be a strategy game, the designers have concentrated their efforts on making it easy to control and get in to. In fact, any task that took more than two clicks on the mouse was abandoned in order to make sure the game was quick and easy to play.

There are going to be a number of different types of Baldy to control, ranging from workers and soldiers to scientists and giants. Each will have their own characteristics – some will have a nap when they're bored, while others will take shelter under trees when it rains.

Many actions taken by the player will be rewarded graphically. Drop a firehead bomb on your enemy, for example, and they'll run screaming and waving their arms in a torturous blaze of flame. It all sounds very pleasant.

A huge range of weird and wonderful inventions have been included in the game, though in the interests of playability they're introduced a few at a time as you progress



The attention to detail is obviously highly impressive, with different types of Baldies exhibiting different characteristics

This month seems to be one of extremes, with the ultra detailed sim accuracy of TFX at one end of the pole and the pure adrenaline-kicking action of Skidmarks at the other. Both are excellent, but it has to be said that the first can seem so serious as to be po-faced, while the other is fun but hardly involving enough to tie you up gaming for days on end.

Fortunately, gameplayers looking for fun and a small dose of mental stimulation won't have to hold their breath for too long. Developed by newcomers Creative Edge, Baldies is shaping up well to enter the exclusive top drawer reserved for classic games like Populous and Lemmings.

The Baldies may look completely harmless, but beneath their placid exterior it turns out they're a right old bunch of vicious, conniving creatures. The graphics are sweet and bright, but this game is about nothing short of tribal warfare.

Players will lead a band of Baldies through quirkily-themed worlds, their object being to collect materials, strategically invent devices and kill off the enemy tribes



A number of tribes get together, but it's hardly happy families - just look at the devastated buildings



Baldies in the foreground have a minor altercation, while a mine further back will lead to some gory visuals



Though this is a strategic game with a lot of depth, the makers have tried to make it as simple to control as possible. Here the hand icon is used to pick up and move members of your team

Baldies

from level to level. Mines and fox traps are some of the first ones players will use, and they come in a variety of sizes to inflict varying levels of destruction.

If it's as good as it sounds at this stage, Baldies could be one of the few gaming experiences that will actually have you laughing. Mad inventions like exploding cows can be dropped on enemy houses or left on timers so that they blow up in fields. As you might expect, the consequences for any nearby Baldies will be gory.

CURIOUSER AND CURIOUSER

Cars will later become available, allowing players to mow down the enemy, while helicopters will take the murderous heroes to the air. Stranger still is the rabbit invention: Drop one of these on your house and you'll increase the Baldies rate of breeding.

By dabbling about on each level, players will begin to pick up strategies, and the more cruel and cunning the better. One tactic is to place a foxtrap outside your enemy's doorway, then drop a skunk on top of the house. This will have the effect of stinking the Baldies out, and of course as they come charging through

the door there'll be yet another unpleasant fate awaiting them.

Players have to think strategically about how they extend their houses as well. Building a garage, for example, will allow your scientist to invent the car, and if you want that helicopter then you'll have to erect a castle.

A lot of additional touches have been added for the sake of pure entertainment. There are Baldies who will snatch fish as they leap out of the sea, while a rather more seedy slaphead can be caught urinating on-screen.

Players will have the opportunity to vent their malice over a variety of themed levels, many of which have already been designed. Creative Edge haven't yet decided which ones are going to appear in the final game, but you might find an Antarctic land in which Baldies can die of exposure or a hell level featuring demonic housing.

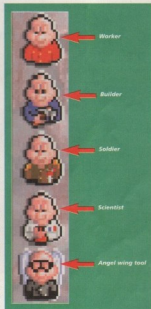
Naturally, you can go up against computer-controlled tribes, but the option to link Amigas and challenge a friend promises an extra level of enjoyment. In fact, it's this factor that makes it reminiscent of an ancient Spectrum game called Spy Versus Spy. Like Baldies, the object of this game was to spring traps on your friends, allowing you to savour their expressions as their character helplessly exploded, got squashed or frazzled. Bringing this type of sadistic appeal into the Populous genre should give Baldies added originality and an addictive buzz.

How well the game turns out remains to be seen, but it's encouraging to see the amount of effort gone into designing Baldies for playability. It's often said that the best games have simple rules while offering a challenge with depth. This is equally true for computer games, and with the strategy element combined with an arcade-style method of controlling, the game sounds very promising.

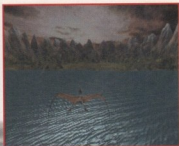
Forget suicidal rodents - the Lemmings series hasn't progressed much since it's first incarnation anyway. We'll be giving this game the definitive Amiga Computing assessment as soon as possible, but as it stands Baldies could give Gametek another winner and make Creative Edge a name to remember.



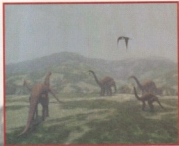
Houses must be built before inventing can begin - I've managed to reach the castle stage already



Baldies can grow up to enter five different professions, from workers and soldiers to the more eccentric scientists



Every attention to detail has gone into making the sets as realistic as possible



Some of the larger dinosaurs convey their size well and their sheer enormity comes across

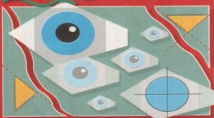


The animation of the creatures makes them very lifelike

00000

system preview

Lost



Would you Adam and Eve it?

Tina Hackett didn't when she took a look at

Cryo's gorgeous new adventure concept,

coming to a CD32 near you soon

PC CD-ROM owners have been somewhat spoiled of late, having a wealth of quality adventure titles to choose from, while the humble CD32 owner had to merely look on and drool. But all that is set to change because there's an adventure coming your way soon that is going to take the CD32 by storm. Okay, admittedly it was out on the PC CD-ROM first, but a version for the CD32 is well under way and if it stays true to its predecessor (which we're promised it will – if not better!) we could be about to witness a whole new era for the machine that has been perceived by some as the underdog.

Containing 3D rendered graphics and full speech throughout, *Lost Eden* looks to be something totally different to anything done on the CD32 before. Development is by Cryo – the French team behind KGB and the CD version of Frank Herbert's *Dune*.

The actual concept is quite unusual for an adventure and takes place in a time when dinosaurs and humans roam the earth. But the dinosaurs fall into two types: The non-violent vegetarians and the blood thirsty predator types like the Tyrannosaurs. Moork Rex is the Tyrannosaurs leader and wants to destroy the human race so that he can rule the whole planet. Humans hide out in caves but they still fair badly against the aggressive attacks.

One town, however, staves off the invasions. This is

the Citadel and is the first fortified place of mankind. Built by Priam the Builder, this fortification has protected the Priam dynasty from the Tyrannosaurs and you, as Adam, must discover the secret of the Citadel because you will soon have to succeed your father, Priam the Conqueror. Gameplay focuses on wandering around the environment, picking up clues and

solving the puzzles. These promise to be fairly straightforward and logical rather than those frustratingly obscure puzzles found in some adventures.

There will be a vast amount of different locations to explore on your quest. These vary from the dark and dingy caves with crumbling skeletons to vast expanses of lush countryside. The screenshots (PC CD-ROM) shown on these pages will probably give you some idea as to how visually stunning the game will be, but you really have to see the game in action to fully appreciate how good the graphics look. Every attention to detail has been paid and will really make a difference to the whole presentation. The atmosphere comes across very

strongly and with each of the settings you will feel as if you are actually there.

The characters are rich and vividly portrayed too. Each has a wide range of mannerisms and features that create their personalities and backgrounds well. The animations are very smooth and life-like, especially with the dinosaurs who move realistically – well, as far as we know! For example, the bigger dinosaurs actually look heavy and cumbersome.

ENHANCEMENTS

The music will enhance the game considerably and each environment will contain different sound effects to reflect the atmosphere. As you walk around, the dramatic changes in sound will work well in transporting you from each location.

In the past, even some good adventure games have fallen into the trap of being too fiddly to control. *Lost Eden* will resolve this by using an intelligent cursor system. You have your normal on-screen icon and as you move it around the picture it will change according to the appropriate action. For instance, if there is another character there you can move the cursor over them and it will turn to a 'talk' icon. This will make life easier, rather than having to click on the person and then go to a separate panel to find the talk icon.



All the settings, both indoors and out, will be packed with atmosphere



The text at the bottom reinforces the speech



As you walk around the locations you will need to look carefully for important clues

Eden

Another useful feature will be the map system which will allow you to move from one place to the other simply by clicking on the area you want to go to. The icon also lets you move around freely and turns to an arrow to show you where you can travel, and if you've come to the end of a section it becomes a stop symbol - this will save precious time.

What will really make Lost Eden stand out on the CD32 though is the full speech system throughout. As you meet with each character they will talk to you and impart vital clues. All the characters will have their own voices with appropriate accents, and their tone of voice will match what they are saying - not

like in some speech adventures where the characters mumble on in monotone! The actual things they say will be useful too and not there for the sake of it. If you've heard the information before you can skip it, but if you miss anything the information is backed up by text underneath.

Obviously, until we've played the final version we can't comment on how the actual gameplay will shape up, but it's fair to predict that with the fantastic graphics, full speech and an intriguing plot already implemented, it has plenty of ingredients to ensure one hell of a title.

Lost Eden will be released in the very near future, so look out



The backdrops are absolutely stunning and highly detailed



There's no doubt that the game will be visually striking

Team talk

The team behind Lost Eden are Cryo Interactive Entertainment. Established in January 1992, they now have a network of 110 programmers, graphic artists, designers and musicians. Cryo has a wide range of different ventures and as well as developing for many platforms, from the 3DO to the SNES, Cryo also have connections with film production through its parent company, Compagnie des Images.

In 1993 Cryo embarked upon a joint venture with ID3D, a computer graphics company, and Publicis, an advertising agency. The company concentrates on the production of digital images for feature films, advertising and multimedia. Sony Music, L'Oreal, Esselte, France Animation and Canal+ are among their clients.

Cryo have interests in film and television and are developing a feature film with Canal+ and a TV series using high-end computer graphics with Gaumont Television. The company also has connections with Dark Horse Comics, the number four comic book publisher in the USA.





Theme Park can be played in three ways, whether you want a complex business sim or just the basic elements



The game looks spectacular and everything has been well animated

00000 system essentials

It's re-release time again. This month Tina Hackett prepares to fly with **Guardian A1200** and explores all the fun of the fair with Electronic Art's Theme park for the CD32

Publisher: Electronic Arts
Developer: Bullfrog
Disks: N/A
Price: £29.99
Genre: Business simulation
Hard disk install: N/A
Control System: Joypad
Supports: CD32
Recommended: CD32

improved. Another thing to note is the use of a CD controller rather than a keyboard/mouse, but this is slightly more fiddly. However, this is still a highly recommended re-release for CD32 owners and for a light-hearted, but in-depth business sim, you couldn't go far wrong with Theme Park.

90%

Guardian A1200

Publisher: Bullfrog
Developer: Acid Software
Disks: 2
Price: £25.99
Genre: 3D shoot-'em-up
Hard Disk Install: Yes
Control System: Mouse/Joypad
Supports: A1200
Recommended: 68020

This fast-paced shoot-'em-up was a huge success on the CD32 and thankfully it's now been converted to the A1200, so those lucky enough to own one can enjoy one of the finest 3D blasters on the Amiga.

Guardian is set in the future in a shrinking universe only a few light years in diameter. Different life forms are battling for the last resources and it is your job as a 'Guardian' to protect the remaining human species. In theory the objectives sound fairly simple but as always, the reality is far different. You have a nice big spacecraft, armed to the teeth with weapons, and with it you must destroy the Dronoids - alien craft armed with Trillium bombs. You track them down with your scanners and choose whether to



Guardian really looks smooth even when the screen becomes chaotic

launch smart bombs or tracking missiles.

As this was originally a CD32 game, control is either via a Control Pad or a combination of keyboard and mouse. This is a little strange at first but still works exceptionally well, giving you full control over your spaceship. You can perform backflips which allow you to get enemies in your sight, and with the enemies following different patterns of attack things get very challenging.

The 3D polygon graphics still look good and the action is incredibly smooth. Sound-wise it isn't bad, especially with explosions, bangs and engine roars going off left, right and centre - you really do get the satisfying blast-'em-up feel of the game.

The gameplay is fast and frantic and as you progress things become very chaotic - it gets the adrenaline pumping, making it an excellent example of its genre. A1200 owners should thank their lucky stars that this is now available and if pure blast-'em-ups are for you, then I'd say this is an essential buy.

82%

AMIGA

GUIDE

Leading the way in Amiga advice, the definitive guide is back to keep enthusiasts fully informed

System Medical

129

Frank Nord takes a look at how configuration can make your life and that of the computer a little more bearable

Amiga 3D

133

Stevie Kennedy shows you how to make realistic models without the use of a 3D digitiser

Amos

135

Phil South rests his brain for a month and lets an avid Amos fan take all the credit with his two useful programs

ARexx

137

Do you understand what all your file names and codes mean? If not, Paul Overaa guides you through a perfect system

Comms

139

Enjoy all the forthcoming movies on the Internet before they are released over here.

Video

141

Get rid of those nasty jagged edges by anti-aliasing your work. Gary Whiteley reveals all

Music

143

As promised, Paul Overaa reviews Steinberg's Pro 24 Amiga sequencer - it's better late than never

Publishing

145

Origami! No we haven't gone mad. Frank Nord shows you how to make those cards and brochures through the art of DTP paper folding

ONLINE PD
FREE 2 DISK CATALOGUE LISTING 9000+ PD TITLES

TEL: 01704 834335
 Assassins Game Disk 1-226
 Fred Fish 1-1000

OR SEND S.A.E.
 Phone for
 Special Pack details

75P
 Per Disk

For every 10 Disks ordered choose 1 FREE

**Online PD, Dept. AC,
 1 The Cloisters, Malpas Lane, Formby, Liverpool, L37 3PX.**

MasterCard Amex Visa Discover

ERS - POSTAGE & PACKING ADD £2.00

Tidying up

Amiga Medical Part 4



All of you, I hope, have some sort of directory and file utility running on your Amiga, and some of you may even have Directory Opus, a program that simply cries out for configuration, the topic of this month's medical.

To make best use of DOpus you should try to give as much space as possible to the directory windows; use a small font for the buttons and title bars, run in a higher resolution, that sort of thing. Then finally, and most importantly, do some surgery on those buttons.

One of the first things I changed when I got my copy of DOpus was the fact that although

you could copy files to the destination directory by dragging and dropping them, you unpacked LHA archives by doing the same thing. Uhhuh. No. LHA is a distinct file type, so it is really easy to set up a command for DOpus to use if you double-click on it. Make the Click-M-Click function into copy, the same as it is for normal files, and make extract a double-click function.

Following this, let's play around with those Copy, Copy As, Move, Move As buttons. I like the simplicity that single key shortcuts give, whereby if you want to copy something you hit the 'c' key. Why not duplicate this in DOpus and go further - make Copy As 'shift C', and Move V and Move As 'shift V'. OK,

Organisation is the name of the game as Frank Nord gets Directory Opus running to his satisfaction

you've still got Delete to assign to a keyboard shortcut - you could use 'x' to carry the analogy further - but there is a key just crying out to be used as a shortcut for this command: the 'Del' key.

Okay, now we're rolling. There are actually filetypes set up for more file types than DOpus actually has commands for in the default configuration, so let's make use of some of those. If you own a copy of GPFax, you can get DOpus to show all your FAX files - you can also get DOpus to show 24-bit pictures on a non-24-bit system by assigning the jpeg and ilbm 24-bit filetypes to a viewer like Viewtek.

VIEWING

There's now a utility you could run from DOpus to view Imagine and Lightwave objects in a window so you can pick out all your 3D models. If you are lucky enough to own a 24-bit display card of some description, you can set up filetypes to show 24-bit and jpeg ed pictures on that, along with 24-bit animation formats like AVI or MPEG - provided your card has software that supports those file formats.

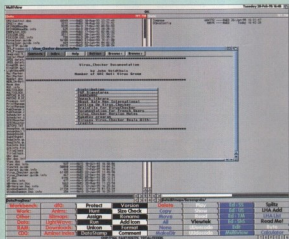
Another thing I don't like about DOpus is its drivelt buttons. If you re-read the list in the ConfigDopus program, they lose all their

shortcuts. So I never bother to use it, except for those first six buttons. If I want to get easy access to an assign, say, or a drive that might not be on my system all the time, like a CD-ROM or ParNet, I make a normal button for it. This has the added advantage that you can have two complementary drives in the same place, accessed by clicking either the left or right mouse button. For instance, I now have a button that has Downloads: on one side and Uploads: on the other. You can do the same. If you are running DOpus on a Workbench 3.x machine, what about viewing AmigaGuide documents on the same screen? Make a button for this, or create a filetype to recognise AmigaGuide documents as opposed to plain ASCII text files. (Have a look at some AmigaGuide documents, they always contain the word 'database' at the start, so you can use the 'Match' command to check for this). Then specify an AmigDOS command to view the AmigaGuide documents:

```
type:util:lib:multitool (D) PUBLISH  
"DOPUS.1"
```

When you double-click on one of these documents, the Multitool window will appear on your DOpus screen instead of the Workbench.

One more thing. Are you still opening up a shell window and typing: ed S:startup-sequence. Make a button in DOpus that lets you edit all those script files without having to enter their names by hand. In addition to Startup-sequence and user-script, you might also consider adding Ed-startup. If you use Ed a lot, Shell-startup, if you use the shell a lot, and if you run Parnet quite often, what about an 'Edit Net Sys/startup-sequence' button. If you want to run other programs from within DOpus, like Multitool, make sure you have the Asynchronous flag switched on, so you don't have to wait until you've finished reading that document, or whatever, before you can get on and copy some files.



Look no Workbench, ma! An asynchronous operation to boot, he said in a smug voice

Acronym alert - part two: G-P

GUI: Graphical User Interface. A visually-oriented system allowing you to tell a computer what to do by using visual symbols rather than typing in commands.

HAM: Hold And Modify. An Amiga graphics mode that allows all the 4096 colours in an ECS-based Amiga's palette to be displayed on screen at once.

IDE: Integrated Drive Electronics. The other popular hard drive standard. IDE drives don't tend to be as fast as SCSI ones and due to limitations within the IDE spec, can't go up to sizes as large as SCSI.

IFF: Interchange File Format. Although people refer to pictures on the Amiga as being IFF, this is not strictly true. IFF is a standard developed by Commodore for creating file formats that can be used with any machine and any file type.

Thus Amiga pictures are actually in the ilbm (q.v.) format, IFF

sound samples are in the BSVX format, etc.

ILBM: Interleaved BitMap. The Amiga IFF picture file format.

JPEG: Joint Photographic Expert Group. The now famous interpretive image format which can make still 24-bit images as small as 1/100th of their original size. See also MPEG.

MMU: Memory Management Unit. For a 68020 the MMU is a separate chip called the 68B51. In a full 68030 (not 68EC030) or 68040, the MMU is inside the main chip.

MPEG: Motion Picture Expert Group. A new standard required for animations. MPEGs are like a single JPEG image followed by a stream of delta images (delta images only store the changes between the previous frame and the current frame) interspersed with further JPEG images to act as checkpoints.

PCMCIA: Personal Computer Memory Card International Association.

Europress

Europress Software is Britain's leading producer of educational & productivity programs for the Amiga.

Pictured here is the full range of packages currently available – home learning programs for under-fives upwards to the top-selling suite of home/business tools.

All designed to make the fullest use of the power of your Amiga.



Fun School 3 (under 5s)£19.99



Fun School 3 (5-7)£19.99



Fun School 3 (over 7s)£19.99



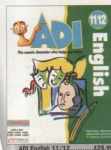
Fun School Maths£25.99



Fun School 4 Paint & Create£25.99



Fun School 4 Spelling£25.99



ADI English 11/12£25.99



ADI English 12/13£25.99



ADI English 13/14£25.99



ADI Maths 12/13£25.99



ADI Maths 13/14£25.99



ADI Maths 11/12£25.99

mini Office

Wordprocessor
Spreadsheet
Database
Graphics
Disk Utilities



£59.99

Mini Office

AMC 5/95

*The perfect all-in package
for your home or business
saving you £30*



Mini Office
Full package
Save £30
Only £29.99
RRP £59.99

mini Office Order form

Mini Office at the bargain price of £29.99 (including VAT and p&p) – saving £30 off RRP

Name (Mr/Mrs/Ms/Miss) _____

Address _____

Postcode _____ Daytime phone _____

I wish to pay by:

- ☐ Cheque/postal order payable to IDG Media
- ☐ Credit card

Card No. [] [] [] [] [] [] [] [] [] [] Expiry Date [] / []

Please allow 28 days for delivery while stocks last

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

mini Office is a powerful and flexible integrated package capable of performing a vast array of home and office business tasks. Its five modules include:

- A professional **WORDPROCESSOR** with powerful graphics capabilities and a 50,000 word spellchecker.
- A supremely friendly **DISC UTILITIES** program to make using your mini Office Amiga as painless a task as possible.
- Incredible **GRAPHICS** with graphs and charts available to brighten up your presentations and make your month-by-month financial situation as easy to appreciate as possible.
- Plus the versatile **database** and **spreadsheet** you have from last month's CoverDisk. The database is simple to use and can deal with anything from address book functions to club membership lists and business records. The spreadsheet is flexible with more than 50 functions, simplifying complex domestic monthly budgets or commercial cash flow forecasts.

This is another great *Amiga Computing* special offer; the entire mini Office package for just £29.99 – amazing! Complete the order form now and send it with your payment to mini Office Offer, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

A500, A500+, A600, A1000, A1200, A1500, A2000, A3000, A4000 Compatible with Workbench 1.3



Terms and conditions for a trial offer of a Standard Dial Up account with Demon Internet Ltd.

The account

Standard Dial Up normally costs £12.50 to join and £10 per month – prices exclude VAT. All accounts are renewed automatically on an annual basis and you are joining our service on an ongoing basis. Those people for their accounts annually receive a VAT invoice and those wishing to pay monthly may do so but should note that we do not issue VAT receipts for monthly applicants.

The offer

Up to 45-days free use on an account. This is a fully working account with no restrictions. In return, we simply ask you to provide a method of payment (see below) which we will use should you not cancel your account. If you cancel during the trial period you will have paid nothing. If you do not cancel, we will automatically cash or collect your money. You may indicate on the voucher the date from which you would like your account to begin. Note that if you join before or on the 15th of any month, you will get the rest of that month free. If you join on the 16th or later in any month you will also get the following month free.

The Acetabulum

Duplicates/photocopies are not allowed. Incomplete or illegible vouchers may be destroyed.

Enclosed with the voucher must be a post dated cheque for £155.68 for a year's connection, or credit card details indicating that you wish to pay monthly.

Should you decide to keep your account, as we hope you will, you will be charged the joining fee and the first month's fees. Note that you will have enjoyed a charge free period regardless. All payments are due in advance of using any service.

Cancellation

You may cancel in writing at any time. If you cancel during the trial period you will have paid nothing. If you cancel later on and pay monthly, your account will close at the end of that month. If you pay annually we will refund the number of whole months outstanding on your account. We can only refund using the same method by which you pay.

Name: _____

Address: _____

Tele. No. _____ Account start date _____

We require three nodenames of your choice to choose from should a duplicate exist within our system. We will confirm which of the three nodenames have been chosen for your account.

Nodename 1: _____

Nodename 2: _____

Nodename 3: _____

Credit card details

Access/Visa

Expires /

Send your completed voucher to:

Demon Internet Ltd
Gateway House
322 Regents Park Road
Finchley, London, N3 2QQ

0181-371 1234 (Sales - London)
0131-552 0344 (Sales - Edinburgh)
0181-371 1010 (HelpLine)
0181-371 1150 (Fax)
0181-371 1000 (Switchboard)
e-mail internet@daemon.net

Amiga 3D Part 2



Getting the picture

Stevie Kennedy examines a simple way to make realistic models as quickly as possible and without the aid of an expensive 3D digitiser

Whether you nor I could count the number of times the 3D modelling beginner will finish a complex object that has taken many hours of work, then scratch his or her head and say "I know, it doesn't look quite right." The problem is usually one of overall proportion and shape, and even a very carefully constructed model can be ruined by subtle inaccuracies.

Keeping a model in tune with the real world object or design you've based it on is a lot easier than you might think, and as long as you have a hand scanner or digitiser you should never have to resort to guesswork. Unless you have a photographic memory and artistic skills to match, designing an object off the top of your head only works with completely fictitious shapes such as spaceships.

Even in this area, though, starting with a set of blueprints is preferable to jumping in with both feet. Creating plans for an object in advance is the best way to decide exactly what shape it will take, how complex it needs to be, and whether it looks any good to begin with.

If you draw these blueprints on paper, they can be scanned in, and if you create them in DPaint just save them to disk as an IFF. Plans for real-world objects can be scanned from photographs or grabbed from video using one of the many low-cost video grabbers such as VLab or Vidi Amiga, and once on disk they can be used as a cheat's shortcut to accurate modelling.

We'll look at Imagine 3.0 and Lightwave for examples of how this can be done, but the technique used by both programs is very similar. On Lightwave, use Layout to load the various scans, grabs or drawings you've created, then go to the display options panel in modeller to set the background image on the X, Y, or Z axes.

Imagine users can select a backdrop image from the View menu and it will appear in whichever of the three views was last active.



Digitised images aren't always easy to see on a backdrop, but DPaint can be used to clean them up if need be

Of the two packages, Imagine works with backdrops more accurately because it automatically retains pixel aspect ratios, but Lightwave users can edit the image's dimensions to compensate if the picture comes in looking a little stretched.

For an example, I've used an American jeep modelled in Lightwave, though the same process could easily be used in Imagine. First, a search through my old videos produced a tape of A Bridge Too Far, which is ideal because there are zillions of jeeps in the movie.

GRAB AND SAVE

Next, VLab was used to grab a skipload of images from some of the jeep-laden scenes, the images then saved to hard drive as basic 16-colour greyscale IFFs. After all, you don't need to bother with huge 24-bit scans and grabs if all you want is an outline to follow. Some of the grabs were taken with tracing in mind, and I took care to capture frames when the camera was looking directly at a jeep's front or side views.

Other images were taken with jeeps in different positions, distances from the camera, and so on to be used as reference.



The finished model benefits because it is accurate enough for the right effect without having to be perfect

The whole grabbing process took about 30 minutes, leaving me with a much better idea of what a jeep looked like, and some very useful images.

You'd get much the same result with one



Imagine users can use the backdrop option on the latest versions of the program, if you want to use this, you'll need the upgrade

of those illustrated books that always end up in remainder bins or bargain bookshops. Find one with lots of pictures of the sort of vehicles or aircraft you want to model, then keep it by your side and scan in any side-on images for direct tracing.

Not found in remainder bins, but worth their price to any modeller, are the James series of reference works. These, in common with the Observer series, usually have a photograph and side, front, and top elevations shown in wireframe. They might have been designed for 3D modellers, and just one book can contain outlines for dozens of aircraft, ships, or vehicles.

Plastic model kits are another source of good blueprints, and they have the bonus that you can build the model to keep as a 3D reference. With a cheap greyscale hand scanner, you'll have as accurate a template as you can wish for in only a few minutes.

Whatever your chosen method, capturing and using good images of the object you are trying to model makes for the best start in any project. If something doesn't look quite right, your finished image or animation can be ruined by something as simple as the wheels looking a bit too large - hardly the result you want after all that modelling and rendering.

Rotoscoping is easy

The games industry have made 'roto-scoping' into a buzzword and given the technique a high-tech image it doesn't deserve. It is one of the most basic cheating methods you'll ever see, and anyone with a digitiser can do it with ease.

Just take a video tape of a person doing whatever it is you want to recreate on screen - walking, running, jumping, kicking a ball, serving in tennis, and so on - then grab a number of frames from the complete action sequence. These can then be used as backdrops to ensure your human model is put into the correct postures at the correct time, and

your finished animation will look as lifelike as Flashback ever did.

If you have a hand scanner but no digitiser, you can look in libraries for books that include sequenced images of people or animals in action (try the photography and natural history sections), or just pause your VCR at the same points you'd normally grab a frame and trace a matchstick outline of the position of the person's limbs. Use these as a guide or scan in your matchstick drawings and use them as IFF backdrops.

Accuracy is always worth the effort.

Presented in association with AMIGA COMPUTING, ST FORMAT
and enthusiastically supported by GASTEINER

IF IT'S 1995 THAT MUST MEAN ANOTHER BREATHTAKING

ATARI AND AMIGA SPOTLIGHT SHOW!

THE ONLY PLACE TO BE...

SPOTLIGHT '95 SHOW

★ **GREAT SHOW OFFERS** ★
**OVER 30 EXHIBITORS INCLUDING
AMIGA COMPUTING AND ST FORMAT**

**SEE, TRY AND BUY FROM A WIDE RANGE OF THE LATEST AND BEST
PRODUCTS AND SERVICES FROM AMIGA AND ATARI
MANUFACTURERS, DEALERS AND DISTRIBUTORS**

"NOW IN ITS THIRD GREAT YEAR AND GROWING FAST"

PLACE: NOVOTEL HOTEL, HAMMERSMITH, LONDON.

DATE: 10th & 11th JUNE 1995

TIME: 10AM TO 6PM

TICKETS: £5.00 CHILDREN UNDER 5 FREE

For advanced booking phone Gasteiner on 0181-345-6000 or Fax on 0181 345 6868

This month's programs were sent by BL Gaunt - I wish people would send their first names, it's much more personal. Actually, they are called procedures or PROCs, as that's what they are, and as such they can be bolted onto any program. The PROCs are Shadowtext and Typewriter, the latter being a better version of the program included with Amos Pro. Both programs work in Amos Pro and Amos 1.3.

To start off we'll look at the Typewriter PROC. The code is good because it makes a noise if there is a letter to type, and if there is a space it remains silent. The sample provided is the sound of a typewriter key, which could, of course, be replaced by the sound of a computer keyboard if you want to be a bit more modern. The font could also be changed to make it a useful special effect for science fiction films. The proper usage of the PROC is:

```
TYPEWRITER,3,7,181
```

where X,Y equals the location on the screen, S is the speed the text is typed at, and TS is a string of text to be typed.

First off the initialise screen line is:

```
Screen Open 0,640,256,8,lines
```

and then a sample bank is set:

```
See Bank 3
```

This refers to the sample of a typewriter key being hit, which you must load into bank 3 by hand before you start coding - it will then be saved with the program. Finally, before we get into the routine you turn off all the screen junk:

```
Flash Off : Paper 0 : Cars Off : Hide : Cls 0
```

Bas Relief
is
easy with
AMOS

Shadowtext by B.L.G.

AMOS-Pro where your dreams come true.

Lurking in the shadows

This is an interesting routine, nicely coded and you could expand on it in a number of ways. For example, create a white drop shadow with no letters (a very trendy text effect) by making the colour of the letters the same as your background, and making the colour of the shadow white or at least a lighter tone of the same colour. Another idea would be to make two shadows, one brighter and one darker than the text, and make the text the same colour as the background. Then offset the lighter colour up and left of the text, and the darker colour to the right and below the text. This will give you a nice bas relief effect.

Text effects are cheap in processing time and easy to create, as long as you are creative with the way you display them. You can also animate the effects with a bit of judicious coding - for example, you could fade up the bas relief effect to make it look as though the text is emerging from the surface. I'd be interested to see any effects like this that you come up with.

Remake, remodel

This now means we are starting with a clean sheet of paper.

The text to be typed is fed into the procedure, as are the other attributes:

```
TYPEWRITER,10,8,"Wow! Typewriter effect  
with sound too!"  
TYPEWRITER,12,4,"How we seek to be going  
places. No more need to wear a dead chicken."  
Clear Key : Wait Key : Edit
```

The clear and wait are included to make sure the finished text can be seen before the program ends.

The procedure itself is very simple:

```
Procedure TYPEWRITER,1,3,AS1
```

Firstly, set up the length of the text in your string in characters using the LEN function:

```
For B=0 To Len(AS1)
```

Then using the RIGHT\$ function, grab the first character in the string:

```
If B=0 Then AS1=RIGHT$(AS1,Len(AS1)-1)
```

Check for spaces in the text, and if any are found you don't play the sound:

```
TEST=ASC(LEFT$(AS1,1))  
If TEST=32 Then See Play 1,1
```

Next use Locate and print string to the screen:

```
Locate X,Y : Print LEFT$(AS1,1)  
Cls X
```

using the Inc command to move along to the next letter. Finally, insert a small wait command to delay the characters as they type onto the screen:

```
Wait 1  
Next B  
End Proc
```

And that's it. Quick and easy, and a rather good effect. If I was using it for a film effect, I'd add a random element to the pauses between frames, just a little, to simulate the way people type.

Now I'll move on to Shadowtext. This creates drop shadows on the text on screen, and it's a nice routine which adds a little bit of pizzazz to game programs and any sort of multimedia. The proper usage of the PROC is:

```
SHADOWTEXT X,Y,SC,TC,TS
```

where X,Y = Text position, SC = Shadow colour, TC = Text colour, and of course TS=your text string.

Firstly, set up the usual suspects:

```
Screen Open 0,320,256,4,lines  
Flash Off  
Cars Off : Hide On : Cls 0 : Wait 100
```

to set up the screen. Then we can feed the data to the PROC:

```
SHADOWTEXT(TS,100,1,2,"Shadowtext by B.L.G")  
SHADOWTEXT(10,130,1,2,"AMOS-Pro where your  
dreams come true")  
Clear Key : Wait Key : Edit
```

This is the same ending as before, with a clear and wait so you can see the effect. Now we define the PROC:

```
Procedure SHADOWTEXT,X,Y,SC,TC,TS
```

The first thing we do in the PROC is to enable JAM! mode via the Gr Writing command:

```
Gr Writing 0
```

Next we set up a loop:

```
For A=0 To 1  
Inc SC  
If A=1
```

By changing the values of X and Y you can increase the depth and direction of the shadow:

```
X=X+3 : Y=Y-3 : Inc TC
```

The end/If and the Text command end the loop and print the text to the screen:

```
End If  
Text X,Y,TS  
Next A  
End Proc
```

and it returns for more, if there is more. If not it ends the PROC, returning you to the main program.

AMOS



Phil South
turns his
attention to a
contribution
sent in by an
avid Amos fan

Write stuff

If you have an Amos question, or a routine you'd like to share with the world, then please write to Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP. Please send routines on an Amiga disk with notes on how the program works on paper. Make the routines short (use these routines as a guide) and reasonably independent of any graphics and sound support files, although I will make provision for these if necessary.

ONLY £1.25 all-new mag of the top telly show!

Issue 4 April Edition £1.25



Movies games Videos

OUT
NOW

More stars!

WIN!

Six times your weight in videos! Freddy Krueger's jacket! Shawshank Redemption and Andre gear! And loads more!

POSTERS

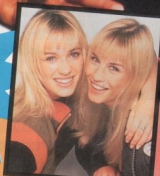


Make My Day!

massive
babe special!
Babe-licious, babe-lightful and babe-lovely!

Phew!

Those 2 Girls kick off the all-new MGTV - join them for a rollercoaster ride through the world of entertainment!



I'll be back on page 16 of this rather splendid mag. See the review of True Lies on video. Be amazed at the quality of the words and, in fact, the pictures too!

Wow!

INSIDE: MGTV's Very own Oscar winners for last year, How to make a blockbusting movie, Interview with Kryten (Red Dwarf) and Dennis Hopper (Speed)

For example, an ARExx statement which reads:

is, in my mind, much preferred to something like:

With function names I capitalise the first letter of each part of the function name – `CalculateAverage()`, `GetResponse()` and so on. `ARexx` itself doesn't care about the capitalisation (function names are all treated as upper case anyway) but the above mentioned arrangement does seem to aid readability.

Above all make sure the name tells you something about what the function does – it may seem all very clever at the time to create a function called `HaveANiceDay()` but six months later it's likely to be you who's sitting there wondering what on earth it does!

Arrex variables are effectively 'typeless' so you don't need to declare variables as holding numbers, strings and so on. Despite this, I believe it is actually very useful to be able to imply something about the type of data held in a variable from its name.

You may have noticed that I often add a `$` suffix to `Alfred` variables which are specifically used to hold text strings. I might, for example, use `name$` and `address$` to collect name and address strings from a user. If, on the other hand, I knew that the user input was going to be a number then I'd use variable names like `value`, `age`, `x`, or `n`.

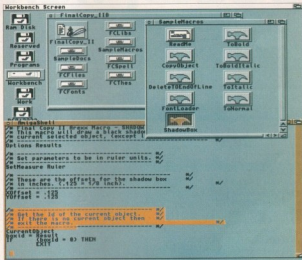
I should point out that in this case these 'pseudo type' arrangements are not a common ARexx convention and internally, ARexx cares little about the types of values placed into a variable. Nevertheless the convention has served me well and it is one I recommend.

With some advanced applications it is also occasionally useful to adopt additional conventions. Prefixing global variables with the character `g_` and suffixing pointer variables

AREXX



If you have trouble understanding ARxx code you've written months or years ago, these guide lines from Paul Overaa could make your coding life easier



A little extra care when writing Allert scripts can produce dividends in the long run!

using `_p` can help tell you something about the data stored in the variable.

Another 'rule of thumb' concerns avoiding the use of absolute constants within the bulk of your program code. Unfortunately, *Altex* doesn't provide much direct help in this area but 'pseudo constant' values can still be set up simply by loading values into variables (which are subsequently never changed). My preference is to use uppercase names for constant values like this:

王克勤、王克勤：《“竹山”与“竹山”》。

By getting into the habit of placing such

definitions near the start of a program, you will always know where to look for them. The separation also makes the values easy to change and because symbolic names rather than the underlying definitions themselves are used, the program automatically becomes easier to understand.

This 'trick' is especially useful when dealing with control character sequences (this of course was what last month's instalment was all about) but the ideas can also be applied in other areas as well. There is, for instance, a good case, particularly with larger scripts, for eliminating explicit test messages from the bulk of your code. If, for example, you set up this initial error message definition:

```
WRONG_VALUE = 'sorry this value is not
              correct'
```

then within the main sections of the program the appropriate error message can be displayed using:

say WRONG_VALUE

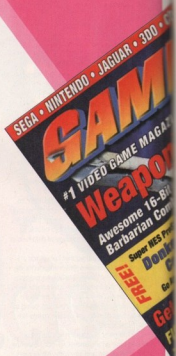
Equally important is the fact that the message, which may actually get used in a number of different code areas of the script, is now defined in a single place. This ensures that any changes to the initial definition results in those modifications automatically being used throughout the program!

All ARexx programs have to start with a comment line so there's a good chance there will, at least, be a program name at the start of your scripts. But why stop there - additional comments can make a world of difference to understanding a program.

Don't make the mistake, incidentally, of thinking that comments are just for the benefit of other users and that you understand your code well enough not to need additional remarks. You may understand your code when you write it, but it's amazing how code tricks, which seemed perfectly obvious at the time they were written, appear to lose their 'inherent obviousness' as time goes on.

You should not get carried away to the point where you impose unreasonable numbers of restrictions on either yourself or anyone else who has to read your code. The aim is to adopt a set of coding guidelines which help and are easily usable, and luckily, for the most part at least, all that's needed is common-sense coupled to a consistent methodical approach!

only one magazine can fill this space...



America's Premier Video Game Magazine
IS COMING SOON

People who don't use comms are often mystified by what you can get on the Internet and why you should want to use it. The common comment is that you must be into computers to want to use one, or need to connect them to use the Internet. Both comments are true in one sense, but nonsense in another.

You don't have to like computers to use them for fun and you don't have to know how a game works to enjoy playing it. By the same token, if you are into something like films, which I am, then you still have something on the Internet. Delphi and CompuServe which is going to help you with your interest.

For a start there's the big daddy of them all, the Cardiff Movie Database. This is a place where you can find out almost anything you want to know about movies. You can do a word search for a film title, actor, actress, director or cinematographer, or indeed any number of film screen. Not only that – once you have an item on the screen, you can click on the names and get a list of the other films that person was involved in.

This is an invaluable cross referencing tool, even if you aren't Barry Norman for perhaps you are, and if you are then why shouldn't you be? If you're just into films then this is better than hundreds of film books crammed together.

What's more, if the entry for a film isn't in there and you eventually find out what it is, you can put it in, thereby expanding the database. Every time you log into it there will be more and more titles for you to read, and the information is being up to date.

I typed in Hal Hartley, a US film maker who makes quirky low-budget films, and I got all of his



Hooray for Hollywood

films up including the one which was on Channel 4 a few weeks ago, Simple Men, plus Amateur, which is currently on release as we speak and playing to packed houses all over the country.

To use the Cardiff Movie Database, simply set your Web browser to the URL:

<http://www.cn.cf.ac.uk/Movies/>

and you're in. If you like films you have got to add this to your menu of favourite places.

I've mentioned the Babylon 5 Lurker's Guide before, but I'll skim that again in case anyone wasn't paying attention. The series has just started again on UK TV, so if you're a fan of this series you can get the definitive on-line guide to the show by setting your browser to:

<http://www.hyperion.com/lurk/lurker.html>

allowing you access to the files on the series, pictures from the FTP site and profiles on all the actors. If you've ever been watching the program and thought 'who is that under all that make-up, the voice is familiar,' then this is the place to find out.

For example, Andreas Katsulas, who plays Ambassador G'kar, also plays the one armed

baddy in the recent Harrison Ford version of The Fugitive, and he is also the Romulan Tarslak in Star Trek: The Next Generation.

On the Delphi Internet system you can see the X-Files stuff as I've said before, but you can also go to the

Hollywood OnLine pages which contain the excellent publicity photos and animations from new films released in the US. This often means you can see a picture from a new film long before it ever premieres over here.

Also, you can download AVI files from the system, playable on PC. What good is that to me you may ask? Well, not too much unless you use the MainActor animation processor program, which means you can translate the program from an AVI into an Anim file. The pictures and sound samples are in GIF or JPEG format, and the

sounds are in WAV format, easily convertible into Amiga sounds using sound converters like Sound Exchange – which is available on CD.

At the moment I'm busy downloading some files from Stargate, a film I've just seen, and now I have one of the best scenes from the selection sitting on my Workbench.

The Hollywood OnLine pages are also to be found on CompuServe, if you can afford to download them that is. I know the costs for CompuServe have gone down in recent months, but it's still one of the most expensive ways to get on-line. They do have a number of other movie resources but you mainly get Celebrity Pictures which can be accessed by typing: GO ARCHIVE and go to Library 4, Film TV Stage and Radio.

COMMS



Phil South looks at the way you can preview upcoming movies on the Net before they even come out

Contact point

If you have any 885s you'd like to tell me about, or there's anything you'd like to find on the Internet but can't, please feel free to ask me. You can reach me by e-mail at these locations:

Internet	phil@snouty.demon.co.uk
CDI	snouty
The Direct Connection	snouty
CompuServe	100102,1500
Delphi	snouty@delphi.com

or by post: Phil South, Comms Section, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP.

Back in the late 1980s, when I was using an Amiga 1000, I got tired of the jagged-edged images DPaint was producing and decided there must be a way to make things better looking. After all, expensive TV graphics machines could make nice-looking text and images, so why couldn't my costly A1000 be coaxed into doing similar things?

I'd read about something called anti-aliasing in the professional TV broadcasting and graphics journals of the time and decided this was what I needed. Unfortunately, none of the Amiga software then available was able to do automatic anti-aliasing, so I had to devise my own, hand-crafted, techniques.

My research indicated that anti-aliasing is a method used to smooth out the jagged appearance produced, where the edges of contrasting coloured pixels clash – a good example being the visibly stepped edges of a white diagonal on a black background. Such blackness didn't look professional enough for me, so I started adding intermediate colours by hand in order to smooth out the jaggies.

As mentioned in last month's column, I work almost exclusively in Hi-res interface – something which often pushed my A1000 (expanded to 2Mb) to its limits. Even so, I persevered using carefully chosen 16-colour palettes which would allow me to design static texts and logos, while still being able to provide the intermediate colours necessary for anti-aliasing.

Of course AGA and graphics card owners won't have such restrictive palette problems, but there are still plenty of Amiga owners who don't have that luxury. To them I say that if you do some judicious planning, there's lots you Amiga can do without needing a huge palette range.

Anti-aliasing works by fooling the eye into seeing a smooth graduation between strongly contrasting colours. Often just a single, carefully-chosen intermediate colour will suffice, though better results will be obtained using two or three colours which blend successfully between the colours to be anti-aliased.

However, anti-aliasing at low resolutions will not be as successful because it is much easier to see the larger pixels, so the intermediary pixels won't be as misleading to the eye and the illusion (for that is what anti-aliasing is) is unlikely to be convincing.

Worth it in the end

Experimentation with anti-aliasing settings will usually pay dividends and you'll find that you can often increase your rendering speeds, so achieving better throughput without significant quality loss. Of course, you could always splash out a few thousand on a blindingly fast accelerator or perhaps a Raptor (for Lightwave), but most of us don't have this kind of money to throw around, so any increase in speed while keeping quality levels up is going to be viewed as a happy compromise.

So get out your paint or 3D program, experiment with anti-aliasing and then honestly ask yourself if you could ever go back to those unsightly jaggies ever again!

A smoother finish all round



Anti-aliasing smooths out the jagged edges of bitmapped graphics by applying intermediate tones to graduate between two strongly contrasting colours. A normal bitmapped font is shown at the top, with its anti-aliased equivalent underneath.

The hardest part is knowing where to place the intermediate colours to the best effect, but as usual practice makes perfect. Don't think that only images with restricted palettes will benefit from anti-aliasing – even 24-bit images look better with non-jagged edges as they appear to more closely resemble what we see in the real world. In the end it's all down to looks, and if it looks right, it is right.

Nowadays, all good 2D and 3D graphics programs offer some form of anti-aliasing, whether automatic or through manual operations such as smoothing. However, if you're using text in a 2D program there could be a better way – make anti-aliased versions of fonts by using either Zen's AntiA to turn Compugraphic and Amiga bitmap fonts into multicoloured Colorfonts, or A2A (available from Alternative Images) to turn Type 1 Postscript fonts into Amiga Colorfonts.

CALCULATIONS

Programs such as AntiA and A2A, as well as 2D paint and 3D rendering programs use calculations to determine the optimum intermediary colours, so take much of the hard work out of anti-aliasing.

If you're applying anti-aliasing by hand to a 2D animated sequence such as a flying logo, there's little point in cleaning up every frame, as each stay

on screen for so little time that the eye won't be able to tell whether they have the jaggies or not. Fixing up any frames where the logo remains static for any period of time will suffice.

Of course, there isn't always a need for anti-aliasing, and in the long run it really depends on what you (or your clients) are happy with. If you produce 3D images and animations you are probably already aware how much extra time can be added to your rendering by turning on any anti-aliasing options.

If you use Imagine there's often no need to turn the anti-aliasing settings all the way up to maximum unless you require perfect stills, especially when producing sequences for animation. With Lightwave it is usually acceptable to stick to the Low anti-aliasing setting and often quite permissible to reduce the level of Adaptive Sampling from its default setting of 8 to 48, 68 or even more.

Contact

Gary Whiteley can be e-mailed at drog@box.computik.co.uk. He also has a book on Amiga DTV available – 'Amiga Desktop Video' from Future Publishing.



Gary Whiteley turns his attention to explaining anti-aliasing, making your images better looking

Link Two Amiga Computers Flexi Link/Software

- * Access other computers hard drive/floppy drives.
- * Use CLI commands
- * Use normal utilities across link.
- * Full software Autoconfiguration.
- * Menu driven software.
- * Works in full multitasking environment.
- * Link library - for developers.
- * Includes parallel cable.
- * Includes easy to follow manual.

At an Amazing price of £49.95 including postage + package.
Make cheques/Postal orders made payable to Mr Sturgess.
1 Oakcroft Close, St. Leonards Park Gloucester, GL4 9NU

RADAR PD

Public Domain
from 57p
a disk

10,000 disks available - 7 days a week
Utilities, Music Utilities, Anims, Music, Demos, FF,
Scope, Jam, Games, Assassins and so much more
2 Catalogue disks for £1.00 inc P&P
Refundable on first order

Cheques/P.O.s to:
69 LONDON ROAD
BENFLEET
ESSEX SS7 5TG

Prices: 1-20 = 70p
21-50 = 64p, 50+ = 57p

TEL 01268 565564



FAST AMIGA REPAIRS FAULTY TROUBLESOME COMPUTER??

SEND OR DELIVER TO THE EXPERTS FOR FAST RELIABLE REPAIR OF YOUR BELOVED AMIGA 500

ONLY £44.00 inc.*

FREE GIFT WITH EVERY
REPAIR
PLEASE TICK BOX

DRIVE OR KEYBOARD REPLACEMENT + £10

BARGAIN HARDWARE
Fixed £5/100 Mb.....Call

WE ALSO REPAIR
TO COMPONENT LEVEL
A600, 1200, 1500,
2000, 3000 + 4000
★ FREE QUOTATION ★

MOUSE MAT.....
MOUSE HOLDER.....
DISK CLEANING KIT.....
ADD £5 REPLACE MOUSE.....
ADD £5 JOYSTICK SEGA STYLE.....

EXCHANGE SERVICE
MODULATORS.....£19.50
PSU.....£19.50
DISK DRIVES.....£25.50
KEYBOARDS.....£25.50

* COLLECTION AVAILABLE ANYWHERE IN THE UK.

144 TANNER STREET, TOWER BRIDGE, LONDON SE1 2HG. TEL: 071 252 3553

HiQ Limited

Tel +44 (0)81 909 2092 Fax +44 (0)81 909 3885



!! A1200 Hard Drive Sale !!

HiQ are offering Bare Hard Drives at unbeatable prices in 2.5" and 3.5" IDE and SCSI.
Please call for latest prices on these and other drives by phone or fax.

420mb - £159.95

A1200 Cable Pack £20, A1200 200w Power and Cable Pack £70, P&P £6

!!! Free fitting for all personal callers !!!



Powerstation Features:-

1. 200 Watt Power supply for SCSI drives and Amiga A1200/A4000 computers.
2. Up to 5 SCSI drives bays.
3. Built in stereo amplified speakers with external output and volume, bass, treble and balance controls.
4. Good looking and strong construction.
5. Ideal monitor stand and cable tidy.
6. Holds CDROM, Superdisk and any other SCSI or SCSI 2 drive units.

Available from stock for only £129.95 + P&P

CDROM Option

Powerstation + Dual Speed CDROM + Superdisk
Only £329.95 + P&P

Need Zero Start? Sorry, but we may have a better idea. Just give us a call!



All Prices include Vat

HiQ Ltd, 176 Kenton Lane, Harrow, Middx, HA3 8SU.

Fax +44 (0)81 909 3885

Tel +44 (0)81 909 2092



Amiga Computing
MAY 1995

A little over five years ago Steinberg released a version of their Pro 24 sequencer for the Amiga. Despite the fact that the Amiga was badly in need of additional good quality music software, Pro 24 Amiga failed to have the same impact of the Atari ST version.

This was little or nothing to do with the software itself, but simply a reflection that relatively few people were using Amigas for sequencing at that time. In recent years, interest in Amiga MIDI sequencing has grown considerably and, since many of you will have missed this sequencer first time around, I thought some up-to-date details of the Steinberg offering might be useful.

Pro 24 Amiga is actually a re-write, rather than a direct port, of the original Atari ST program. It is supplied on a single disk and, as expected, comes with a 'Steinberg key' - i.e. a dongle - that must be present in the second joystick port at all times. The manual is very well written and has good introductory and tutorial material, but the best news is that despite some fairly detailed accounts in later chapters, the manual has been kept to a reasonable size so it doesn't take forever and a day to read.

The top half of the main Pro 24 Amiga display contains the track indicators, track selection, record pointer icons and the activity bars for each of the 24 tracks. Needless to say, the set of tape-transport controls of Pro 24 Amiga look much the same as those found on other sequencers, with each track having a set of playback parameters that determine whether data is transposed, quantized, delayed, filtered or muted.

As well as a tape mode there is a sequence mode which allows you to create links for repeating sections and so on. A 'master track', quite separate from the 24 normal tracks, is also available and is used for storing tempo changes, time signatures and other global characteristics.

Losing its way

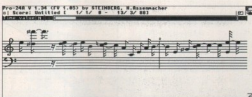
Although there is almost nothing that cannot be done with this sequencer, I'd be less than honest if I didn't mention that I think the package is now showing its age. Amiga software, like that of all other machines, has moved forward a long way in five years.

There's no doubt at all that Steinberg's Pro 24 Amiga sequencer is extremely powerful, and would clearly be ideal for any user that has had previous experience with Pro 24 on the Atari ST. For everyone else though I'm not so sure, and I suspect that what is really needed is a revamp to bring the package up-to-date.



Pro 24 Amiga's main display

Blast from the past



Score display of track data



The Pro 24's drum map editor is particularly useful

As with most 'heavyweight' sequencers, there are simply far too many facilities to be able to mention them all. Pro 24 Amiga supports internal and external clocks, MIDI and SMPTE, and offers a range of metronome/count-in facilities including the sending of user-definable MIDI notes.

When editing, a track survey window lets you see a visual picture of the data present, while a track content display provides detailed event-by-event info. Location markers make it possible to mark out specific areas of a sequence and, in conjunction with the editing facilities, this forms an easy-to-use yet powerful arrangement.

RIGHT TRACK

A 'subtrack mode' enables incoming data to be split and redirected to specific tracks and of course all the usual things like channel reassignment on output, automatic punch-in and punch-out etc. are provided.

Pro 24 Amiga, like its original ST counterpart, has its own grid-style drum editor, provides some comprehensive Sysm facilities, supports MIDI file load/save options and (surprisingly) can even handle SMUS format. There are also plenty of nice touches like a score editor, alternate channel echo

effects, and powerful logical edit facilities which allow all sorts of event translation operations to be carried out.

It's possible to split multi-channel tracks and redirect the data to alternative tracks on a channel-by-channel basis. You can also remove 'empties' and doubles (duplicate MIDI events which you sometimes get when combining sequences), and there's a whole range of cut/expand, pattern split, track mixing, tempo change and step-input options in addition to the usual types of copy/move/delete block-oriented edit facilities. There's even a 'Mid-Monitor' window which provides details of MIDI events as they arrive.

MUSIC



Paul Oueras takes that promised look at Steinberg's Pro 24 Amiga sequencer

SYSTEM ESSENTIALS

RED = Essential BLACK = Recommended

1 Mb

RAM

The bottom line

Product: Pro 24 Amiga
Price: £239 inc VAT
Supplier: Harman Audio
Tel: 0181 207 5050

Ease of use	8
Implementation	7
Value for money	6
Overall	7

Origami? In a DTP column? Well, only in the loosest sense of the word. I'm talking about folded paper — two-fold and three-fold brochures, greetings cards, paper aeroplanes and so on. They might seem like tough tasks when you first look at them, but they can actually be quite easy and a lot of fun to do. The only thing they really rely on is the ability to rotate graphics and text. So your PageStream, ProPage, Wordworth 3.1 and Final Writer will be fine, but things like PageSetter or KindtWords aren't suitable.

The very first thing to bear in mind is that you can't do this solely on the computer [well, not unless you have a brain the size of a planet]. So get out a spare piece of A4 and have a good look at it.

What sort of printer do you have? If it's one that relies on tractor or friction feed you know you won't be able to print on the bottom inch or so of the paper. If it's a laser, you won't be able to print right up to the side edges. Know the limitations you are stuck with and don't jump straight into your design without considering these elements of space.

MEASUREMENTS

The next thing you will have to do is get your ruler out. Fold the paper so that it resembles the final shape you want, whether it be the complex folds of a paper aeroplane or simply folded into quarters for a birthday card. Then measure where the crease marks are.

The best way of assuring accuracy is to draw your fold lines in your DTP package and then adjust them numerically, rather than by eye. For lines at an angle, you might find it easier to use a protractor to calculate the angle from the edge of the page and enter it this way, instead of trying to fix start and end points in space.

Once you have marked up your page with lines, you are then ready to proceed onto the design side of things. As a birthday card is the simplest example, we will have a look at that first. Your page should be divided into four quarters. Looking at the piece of paper you have folded you will see you need to use the top left hand corner for the inside of the card and the bottom right-hand corner for the cover.

The inside of the card has to be upside-down, so your best bet is to create your greeting in that section of the page (the right way up), and once you are satisfied that it fits, looks nice, and is going to print, you can then select all the items in the section, and group them together if

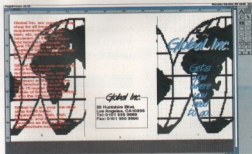
Falling into place

The illustrations on this page show the two pages I have done in PageStream 2.2 for this sort of brochure. The quality of the globe seems shoddy, but as it is an EPS graphic it will print okay. This type of three-fold brochure takes a lot more thought, and in this instance was achieved using three copies of the clip, one on sections three, four and five, and one on section one — moved so this section had the middle of the graphic in it. The remainder of the graphic falls off the right-hand side of the page and also covers section six.

The last clip is used on section two, again with the middle part of the graphic over it, and the left-hand portion of the graphic has fallen off the left-hand side of the page and the other third is covering section six. This is why I have covered the whole of section six with a white borderless box to cover up the overlapping images.

Play around with these concepts and try your hand at the paper aeroplane idea. The techniques I have explained might prove more problematic with one of the word publisher programs, but with a bit of ingenuity, you should be able to cope.

Turning Japanese



This is the outside of our three-fold brochure (sections two, six and one)

necessary, before rotating the whole bunch through 180 degrees. A three-fold brochure is somewhat more difficult to plan as you will almost certainly want to print on both sides of the paper. You will need two pages, both divided into three in the same places (if you have a master page facility in the program you are using, I would suggest you use that).

Then you will need to decide which flap will show on the outside, whether you want a

continuation of a graphic from one half of the brochure to the other, and if you are going to need to print on the back of the middle section. For ease of use, you will probably find it less confusing to sketch out your idea onto your sheet of A4 first and number the sections from one to six. Repeat this numbering in your DTP program — you can always get rid of them once the design is complete.

Imagine a three-fold brochure folded up in front of you. The section you can see first (the first flap) is called section one, the next flap is section two, then the three spread sections are three, four and five, leaving the middle panel on the back of the brochure as section six.

One of the nicest examples of continuity in a three-fold brochure is where there is a picture on the cover (section 1) which, when opened, reveals the same picture on the second flap, but perhaps with some more text on it (section 2), which also continues onto the inside of the first section (section 3). When you open the second flap, the entire inside of the brochure is revealed to show the complete picture.



Frank Nord takes a look at the intricacies of DTP origami

LOW
PRICES

IDE/SCSI 2.5"/3.5" HD

Our high quality 2.5"/3.5" IDE/SCSI hard drives come with a one year warranty. The 2.5" HD's come with cable & manual.

80MB 2.5" IDE	£109
120MB 2.5" IDE	£139
170MB 2.5" IDE	£179
260MB 2.5" IDE	£219
350MB 2.5" IDE	£299
525MB 2.5" IDE	£589
735MB 2.5" IDE	£759
270MB 3.5" IDE/SCSI	£199
350MB 3.5" IDE/SCSI	£239
540MB 3.5" IDE/SCSI	£279
1GB 3.5" IDE/SCSI	£599
2GB 3.5" IDE/SCSI	£999

OVERDRIVE HD



External PCMCIA HD allows you fit a 3.5" IDE hard drive and included in the pack is the installation software which allows you to configure the drive to your own needs.

OVERDRIVE BARE	£99
OVERDRIVE 360MB	£259

M-TEC HD

LOW
PRICES



The AT-500 IDE external hard drive for the A500 comes complete with an internal ROM socket so you can switch between a 2.04 and 1.3 ROM without having to open your Amiga casing.

AT-500 BARE	£99
AT-500 360MB	£259

SYQUEST DRIVES

Removable storage systems from Syquest.

3.5" 105MB SCSI INTERNAL	£279
3.5" 270MB SCSI INTERNAL	£449
EXTERNAL CASING	£99
105MB SYQUEST CARTRIDGE	£55
270MB SYQUEST CARTRIDGE	£79

OPTICAL DRIVE



The award winning 128MB Power Optical

128MB OPTICAL INTERNAL	£639
230MB OPTICAL INTERNAL	£799
128MB OPTICAL DISK	£29
230MB OPTICAL DISK	£39
SCSI CONTROLLER CARD	£129

VIDEO BACKUP 3.0

This innovative product allows you to backup your software onto a VHS cassette, so you can store up to 520MB on one four hour tape. Version 3.0 has new backup modes for Amiga's with a 68020 or higher CPU, a new user interface that also runs on the Workbench screen, a two times speed improvement over v1.5, data compression over three times faster than v1.5 and also able to watch television on your 1084s monitor.

VIDEO BACKUP SCART	£65
VIDEO BACKUP PHONO	£60
UPGRADE TO V3.0	£20

DISK EXPANDER

Disk Expander includes the following features:

- Can add up to 50% to your hard drive capacity
- Fast compression and decompression
- Works with all drives including SCSI, IDE, Floppies and even the RAM disk
- Reliable in tests, no data corruption
- Flexible and expandable as new compression libraries are developed
- Once installed the program is transparent to the user
- Works on any Amiga with any Kickstart

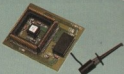
DISK EXPANDER	£25
---------------------	-----

FLOPPY EXPANDER

Floppy Expander allows you to fit about 1.5MB on a standard floppy drive and an amazing 3MB when used in conjunction with the XL Drive 1.76MB. This is achieved by compressing data 30 - 70% of its original size, which all of this happens automatically.

FLOPPY EXPANDER	£10
-----------------------	-----

MEGACHIP RAM



Increase your Amiga 500/2000 chip RAM to a total of 2MB. MegaChip does this by using its own 1MB of RAM and drawing extra memory from any other RAM you have installed in your Amiga. No soldering required.

MEGACHIP RAM	£159
--------------------	------

RAM UPGRADES



We manufacture a vast range of memory cards for all the Amiga range of computers.

512K RAM WITH CLOCK	£24
512K RAM WITHOUT CLOCK	£19
A600 1MB RAM	£34
A500+ 1MB RAM	£29

A500 2MB RAM



A 2MB RAM board for the A500 which fits in the trap door slot.

A500 2MB RAM	£90
--------------------	-----

WORKBENCH 3.1

Release 2.1/3.1, inc. 2.1/3.1 software and user guides.

2.1 ENHANCER SOFTWARE	£49
ROM SHARE DEVICE	£19
2.05 ROM CHIP	£25
3.1 A500/A2000	£85
3.1 A3000/A4000	£95

SPECIAL OFFER

2.05 ROM, DISK & MANUAL	£59
-------------------------------	-----

POWER SCANNER 4

24-bit



The award winning Power Scanner includes the following features:

- Scan in 24-bit (16.7 million colours) at upto 200DPI (all Amigas, not just AGA)*
- Scan in 256 greyscales at up to 400DPI (all Amigas not just AGA)
- Full control of scanner mode from s/w*
- Thru' port for printer connection
- Full supports AGA chipset
- Save images in a variety of formats
- Display HAM8/24-bit images on a non-AGA Amiga (via image conversion)
- Full editing facilities
- Many image processing functions inc. brightness, colour, contrast, relief, scale
- Add colour to black and white images and even convert them to 24-bit
- Compatible with all Amigas

System Requirements

2.04 ROM or above, Minimum 1MB
Recommended 2MB or above

*Only available on Colour PowerScanner 4

POWERSCAN 4 B/W	£99
POWERSCAN 4 COLOUR ...	£199
OCR (when purchased with scanner) ...	£20
OCR SOFTWARE	£49
POWERSCAN 4 S/W ONLY	£20
PC INTERFACE + COLOUR S/W	£49
PC INTERFACE + B/WHITE S/W	£39

WARP ENGINE

The high speed 040 board you install directly into the CPU slot, not a Zorro III slot!

WARP ENGINE BARE	£699
WARP ENGINE 28MHZ	£799
WARP ENGINE 33MHZ	£899
WARP ENGINE 40MHZ	£1099

POWER SUPPLIES

Replacement PSU's for GVP external HD and Overdrive.

POWER SUPPLY	£39.95
--------------------	--------

Beware of external hard drives that use power from the Amiga external floppy port.

EPSON GT-6500



The Epson GT-6500 24-bit colour A4 flatbed scanner has output resolutions up to 1200DPI in 16.7 million colours, greyscale and line art. The GT-6500 comes with software, cables and manual.

GT-6500 POWERSCAN	£599
GT-6500 IMAGE FX	£689
DOCUMENT FEEDER	£399

EPSON STYLUS

720 DPI



The Epson Stylus colour inkjet prints up to 16 million colours with a maximum resolution of 720DPI. Complete with Studio II software (£49.95 Studio II only).

SPECIAL OFFER

Epson Stylus Inkjet, Data Cable	
10 Sheets of 720DPI Paper	
10 Sheets of 320DPI Paper	
Studio II Software	£489

EPSON LQ-300 24-PIN	£189
LQ-300 COLOUR KIT	£39

A500 68020



Full 68020 processor with MMU
Works with all A500's, A500+
Optional 68881/68882 (PLCC or PGA)
Up to 4MB FAST RAM
Fully auto-configuring
Supports Motorola cache system
Supports Kickstart remapping
Disable jumper

Not Compatible with GVP Hard drive

68020 A500 BARE	£99
68020 A500 4MB	£239

POWER

TELEPHONE 01234 273000

PHONE ORDERS: We accept most major credit cards and are happy to help you with any queries.

POST: Ordering by cheque/PO please make them payable to Power Computing Ltd and specify which delivery is required.

WARRANTY: All Power products come with a 12 month warranty unless otherwise specified.

SUPPORT: Help is on hand with a full Technical Backup service which is provided for Power Customers.

PRICES: All prices listed are for month of publication only, please call to confirm prices before ordering.

EXPORT: Most items are available at Tax Free Prices to non-EC residents. Call to confirm prices. BFPD orders welcome.

When ordering from other Power adverts please use this order form

Name

Address

PostCode

Telephone

System Owned

Description

Total Amount (inc. delivery) £

Credit Card No.

Expiry Date

Signature

Delivery ☐ 2-3 Days £250 ☐ Next Day £5 ☐ Sat £10

Minimum Delivery £250

Allow up to 7 days for cheques to clear



POWER COMPUTING LTD

44a/b Stanley St. Bedford MK41 7RW

Tel 01234 273000 Fax 01234 352207

Trade and Educational orders welcome - Worldwide distribution available
All prices include VAT. Specifications and prices are subject to change without notice. All trademarks are acknowledged.
All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available free of charge on request.



NICE ONE SQUIRREL!

Amiga Format 93% CU Amiga 94%
Amiga Shopper 95% JAM "The best piece of hardware I've ever bought for my A1200 ... well done, HiSoft!"

As you can see, the Amiga press has gone nuts over our new Squirrel SCSI interface for the A600/A1200. In case you've missed these reviews, the Squirrel SCSI is a plug-and-play add-on that allows you to connect up to 7 SCSI peripherals to your Amiga. Just think of it, CD-ROM, Hard Drive, Scanner, DAT, Optical, SyQuest, Tape Streamer - all on-line at the same time! No wonder we named it after that famous storage-hungry animal! To go with Squirrel, here are some great value devices...

SCSI CD-ROM Drives



SuperDouble - int £129, ext £149
SuperTriple - int £189, ext £249

Not all CD-ROM drives are the same. Our SuperDouble and SuperTriple drives are fast, modern devices supporting all the SCSI features that you'll need, based on quality units from the world's leading manufacturers of CD-ROM, Sony & Toshiba. Both drives are cased in extremely stylish enclosures with all SCSI connectors and offer fast access times, stereo headphone sockets with volume control, phono line output, PhotoCD™ multi-session support, CD32 emulation (with the Squirrel SCSI interface), CD-DA compatibility with the convenience of tray-loaded action. The SuperDouble™ CD-ROM drive offers 360Kb/sec transfer while the SuperTriple™ attains 510Kb/sec, both far faster than any competitive drive for the Amiga. **90% Amiga Format**

These are the drives we use for developing and testing the Squirrel hardware and software - need we say more?

Squirrel Storage Systems



All our Squirrel Storage Systems come either bare (int - ready for installation internally within a suitably-equipped Amiga or other computer) or fully-cased (ext) with integral power supply, SCSI input, SCSI ID selector and audio out (for CD-ROM). The cases we supply are high quality, shielded, snap-together enclosures, each with 40W power supply - the back panel of the 5.25" case is shown above. These SCSI enclosures are available at **£69.95** each (please specify 3.5" or 5.25" when ordering).

The neat Squirrel SCSI interface is shown on the right. The unit simply plugs into the PCMCIA slot, comes complete with all the software you need together with a cable which terminates in a 50-way Amphenol plug to attach to your SCSI device.



the Squirrel SCSI interface

SyQuest Drives



88Mb - int £269, ext £329
270Mb - int £419, ext £479

Introducing removable SCSI drives for your Amiga. Based on reliable, proven SyQuest™ mechanisms, these 88Mb and 270Mb units offer transportable, compact, high performance and, above all, expandable storage for all your computing needs. SyQuest is the world leader in this technology across computer platforms which means that you can transfer work between Amiga, Macintosh™ and PC, with ease. We recommend the CrossDOS and CrossMac software packages to simplify portability - call for pricing. Our drive prices include 1 free cartridge.

Twist 2

Twist 2 is the new, trendy, relational database for all Amigas. Twist's range of power features such as its integrated forms designer, its varied & multi-level querying, its N:1 N:N & N:M relations coupled with its un-cluttered, well-designed user interface make it ideal for both the first-time and the seasoned database user.

Twist 2 is the only database you will ever need - a product that expands to meet your requirements as they grow. So, before you buy another database, why not take a look at the Twist demo disk?



The latest of our highly acclaimed sound samplers for the A600/A1200. Aura offers high performance 1216 bit quality with direct-to-disk sampling plus a host of software features. Ordered 5.04 up compatible.
96% Amiga Shopper 90% AUI

SCSI Hard Drives



270Mb £169, **540Mb** £239
720Mb £279, **1Gb** £479
 Add £60 for external units



Hard drives are becoming more and more affordable and we can now offer some tremendous prices on a range of superb quality, Quantum drives in a range of capacities.

These drives offer fast seek times (14ms @ 270Mb, 11ms @ 540/730Mb, 9ms @ 1Gb), large caches and high speed data transfer rates (15Mb/sec with Squirrel). All units can be supplied for you to fit in your own case or pre-installed in one of our professional Squirrel Storage Cases. The Squirrel does not auto-boot external hard disks but you can do this from floppy or from internal IDE hard disk.

We can supply all leads, terminators etc. Please feel free to discuss your exact requirements with our friendly technical staff.



Professional game development is made easy with the new GameSmith Development System. Over 3 years in the making, GDS gives you the low level power to create the masterpiece of your dreams in a single, easy-to-use, comprehensive environment, using C or assembler. Comes complete with junior versions of Dice C and Devpac 3. **90% AUI 92% CU Amiga**

Termite



Afraid of becoming a hedgehog on the Information Super Highway? Don't worry. Termite is so easy to use that even a first time user will feel at home. Yet it has all the power and flexibility to satisfy the most seasoned modern warrior! Termite is packed with features and comes with its superb Button Bar already set up for instant access to CIX and many BBS's. **88% Amiga Computing 95% AUI 88% CU Amiga**

Ordering Information

All HiSoft products (see the complete list below) should be available through your favourite Amiga dealer. If you have difficulty in obtaining any title you can order directly from HiSoft - just call us free on 0500 223660, armed with your credit or debit card; we will normally despatch within 4 working days, or for an extra £6, by guaranteed next day delivery (for goods in stock). Alternatively, you can send us a cheque or postal order. All prices include VAT. Export orders: call or fax to confirm pricing and postage costs. © 1995 HiSoft. E&OE. HiSoft products for your Amiga: Squirrel SCSI interface - £69.95, Squirrel Storage Systems - as above, Aura 1216 bit sampler - £99.95, Megastore 8 bit sampler - £34.95, ProMedia interface - £24.95, HiSoft Devpac 3.14 - £79.95, HiSoft BASIC 2 - £79.95, HighSpeed Pascal - £39.95, Gamesmith - £39.95, Termite - £39.95, Twist 2 database - £99.95, Maxon Magic - £29.95, Upper Disk Tools - £14.95, VistaLite inc MakePath/TerraForm - £39.95 and much more. **Coming soon: DiskMagic (disk tools) and Cinema4D.**



The Old School, Greenfield
 Bedford MK45 5DE UK
 Tel: +44 (0) 1525 718181
 Fax: +44 (0) 1525 713716