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**May 1995**

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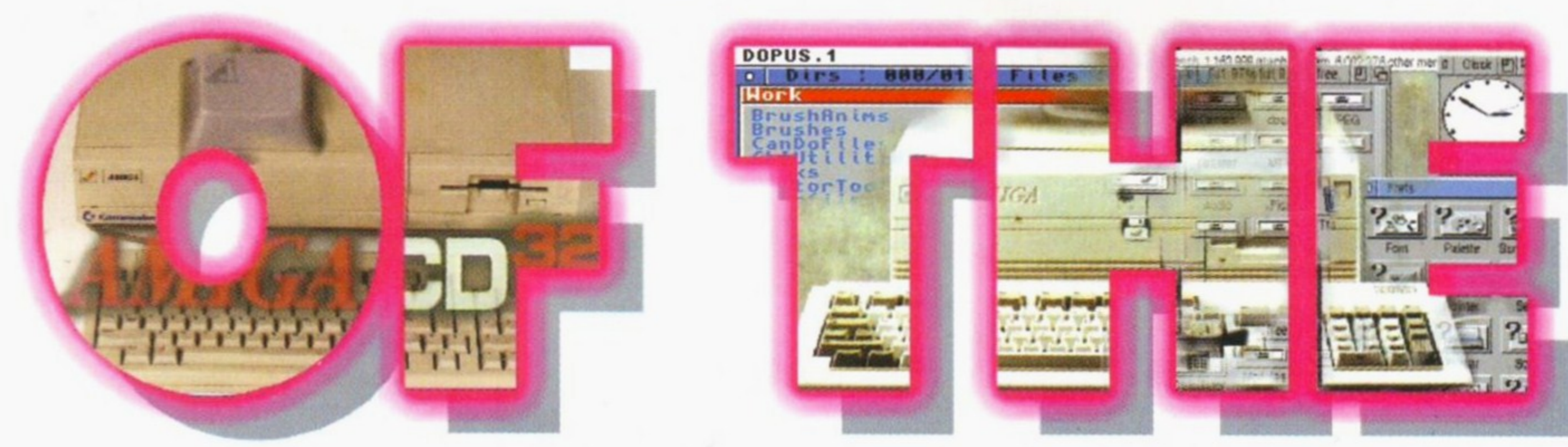
SpaceJest - Fascinating adventure. ThinkaMania - Luscious memory teaser. Sneech - Updated Worms extravaganza from Paul Burkey. Frontier Guide - The all encompassing Player's Guide to Elite 2.

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**AUI reveals the real story of the computer that changed the world!**

**StereoCad Pro, Broadcaster Elite, Shablaam! Loader 500, My Money and more!**

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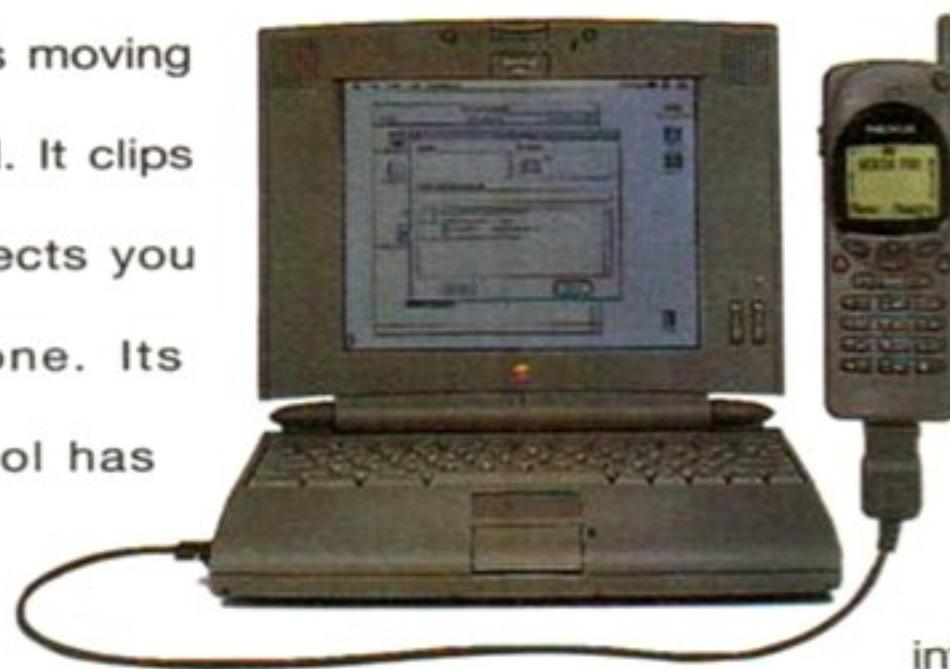


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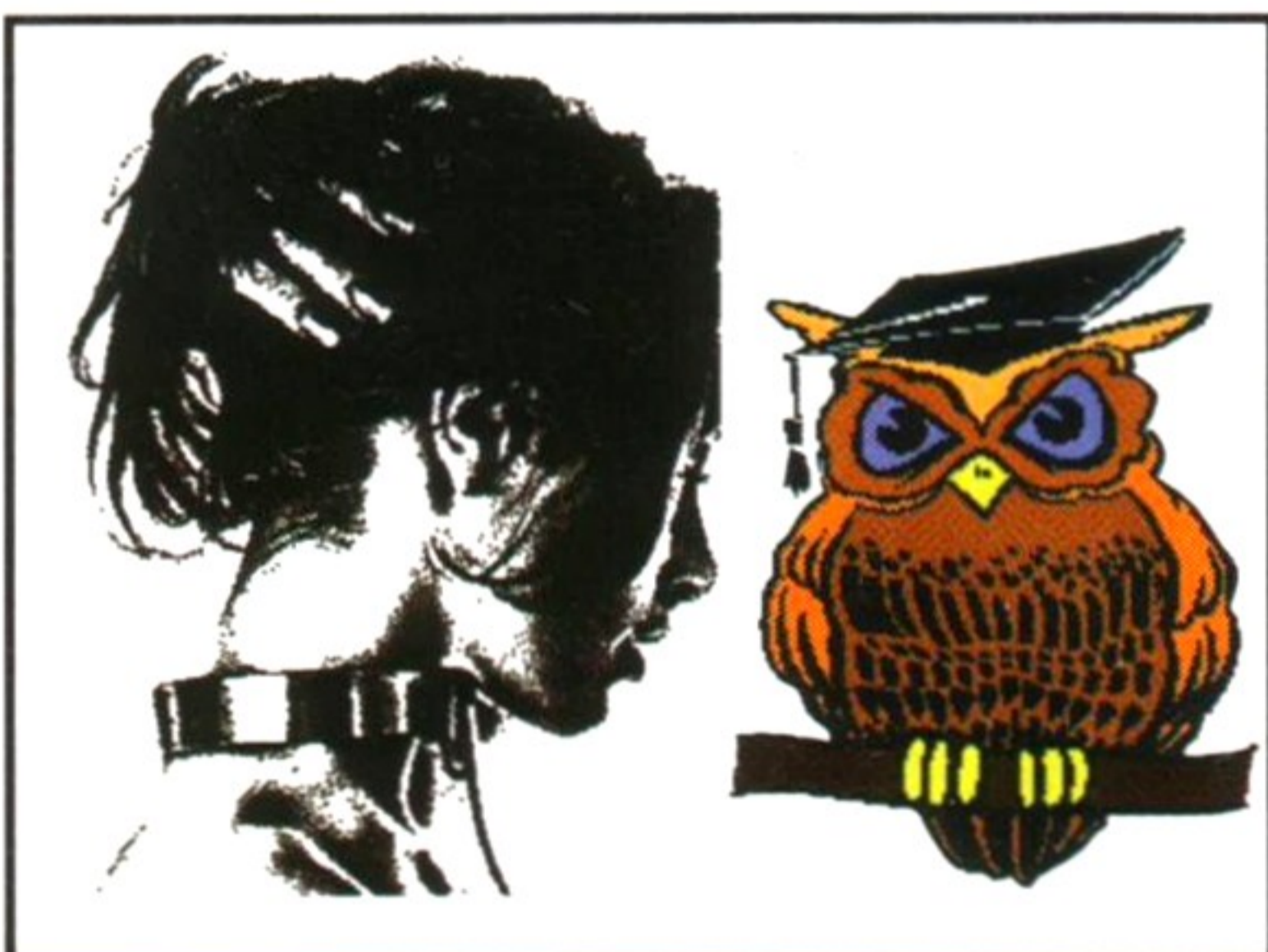
#### CONSTANT FACTORS

##### 5 The Amiga Dimension

Managing Editor Antony Jacobson comments on how the Amiga decade has radically changed lives and points out that there is an urgent need for the Amiga to come back quickly.

##### 8 SuperDisks No.57 and No.58

It's a world first, folks - again! We've crammed more than ever before onto our SuperDisks this month. The extraordinary new archiving program we've used to do it is free on this disk. In addition, there's a whole disk of amazingly high quality utilities, a disk of bitmap fonts and another of saucy clip art. Some light relief appears in the form of an Asteroids clone, Xenex, and three other complete games.



Lots of pics like these crammed onto one disk.

##### 16 NewsFile

The tenacious terriers of the computer news hound world, Anthony Mael and Martin Witton, have been globally sniffing away in their hunt this month for all the juiciest items, enough to satisfy anyone's hunger to know what going on.

##### 70 Online - The Internet Column

World Wide Web may sound like Spiderman's fanclub but it's actually an interactive multimedia Internet. *AUI's* intrepid Gary Fenton invites you into the online parlour.

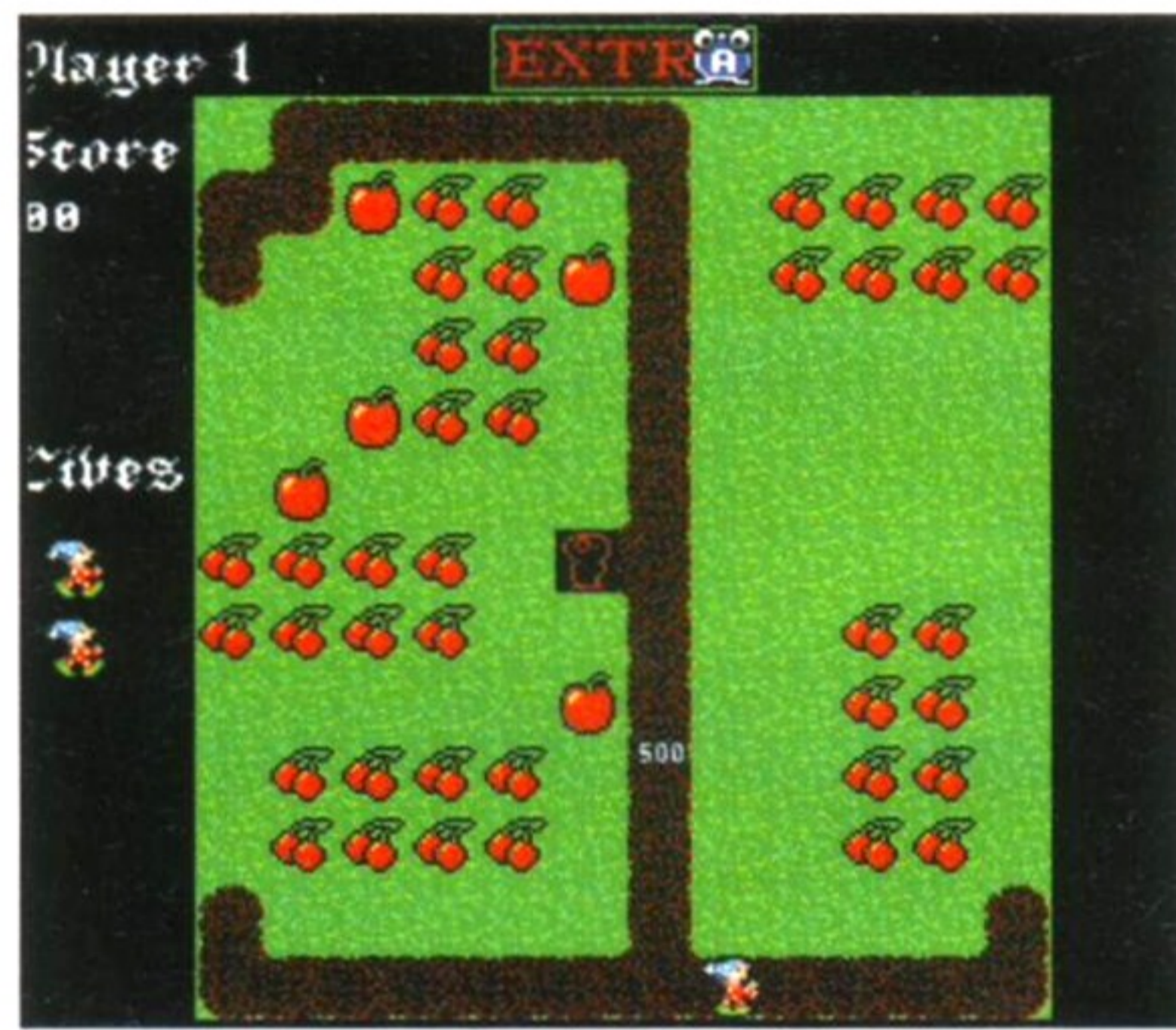
Cover illustration by Gary Fenton

##### 87 Amiga Answers

The omniscient Andy Eskelson gives you a chance to learn from those brave or desperate enough to admit they don't know. It's your turn next.

##### 94 The PD Stakeout

They're changing the guard at Buckingham Palace. Gideon Overhead went down with Alice. They were back in time for tea and PD. "For this month's lot I'll give you 5p", said Alice.



##### 104 Write to Reply

Bud Vennos includes a favour from an industry benefactor to bring you a guide to installing your own hard drive. But his temper with those whom he thinks deserve a tongue-lashing hasn't improved.

##### 113 Opinion

Another astute industry insider comes up with some provocative ideas. It's Wil Mobberley on turning the Amiga into a Lego-like modular system.

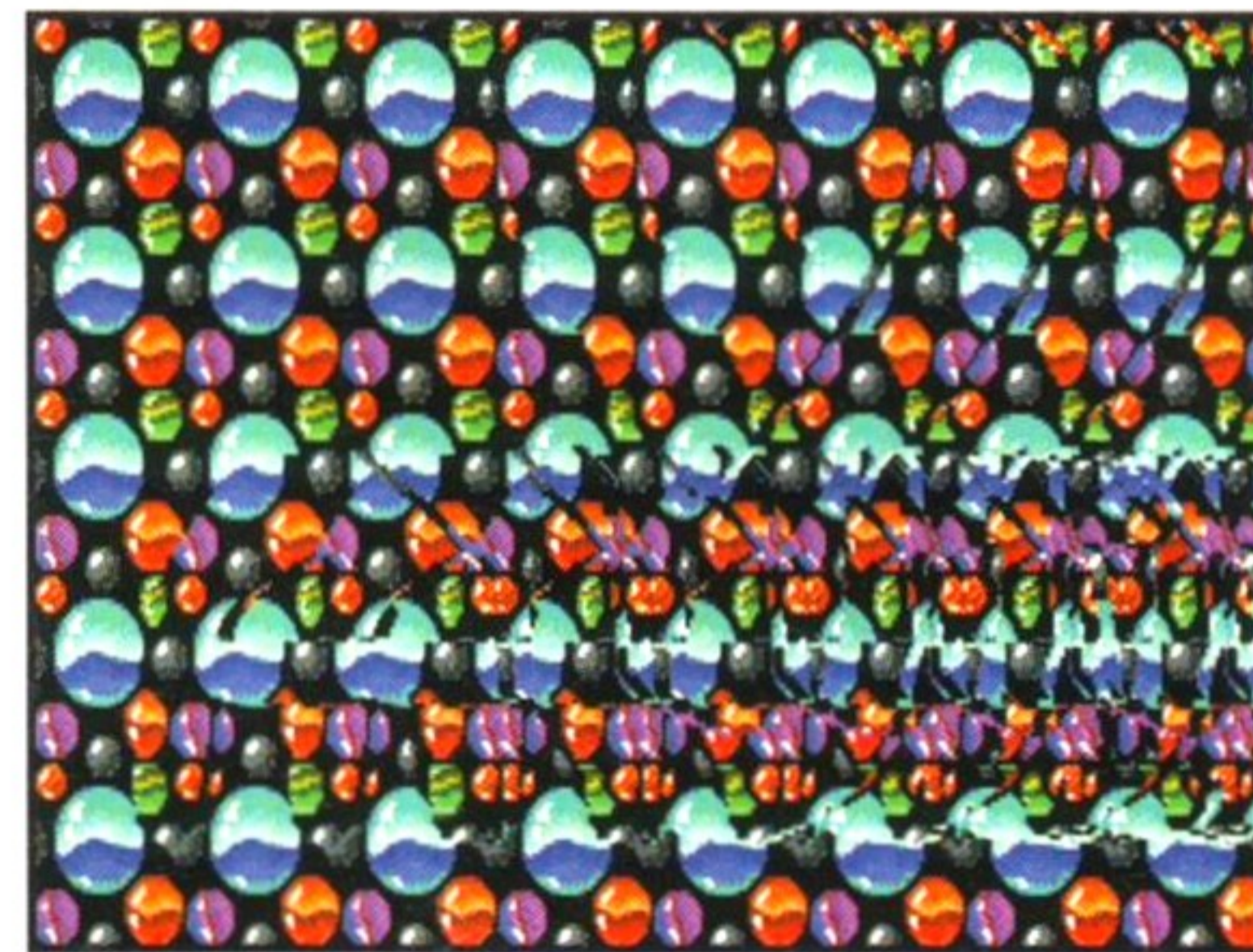
#### TEST DRIVE

##### 28 Genlock Update

Merge your Amiga's vast graphical power with the humble home video. *AUI's* artistic hot shot Gary Fenton checks out some genlock options.

##### 32 StereoCAD Pro

Rumour has it that eye doctors invented stereograms to create more patients for themselves. Dr Mark Blackham brings you a way of creating the crazy images on the Amiga.



##### 33 Broadcaster Elite

When it's time to roll the credits on your video production, you'll need a video titler. Gary Fenton snaps the clap-board on a new package that does the business - show business, that is.

##### 34 FX2000 Analog Joystick

Make your flight simulations soar with this new analog joystick, or is it a marital aid? Mark Blackham takes it home to find out!

##### 36 My Money

"It's your money and I'll do what I want with it", cries Mark Blackham as he tries out a new way of managing personal finances.

##### 38 CD Round-Up

PD packed on a CD? Is this what we bought a CD-ROM drive for? Gary Fenton investigates the latest offerings.

##### 40 Epson EPL-5600 Laser Printer

Gideon Overhead steps away from the printing press, wipes the ink from his hands and the sweat from his brow, and tests one of these top notch laser printer gizmos.

##### 41 Amitek Loader 500

Has your A500 internal floppy drive gone on the blink? Wielding the screwdriver David Taylor test drives a replacement drive.

##### 41 Mamba Modulator

When your modulator stops modulating, this piece of kit can take over the essential job of placing the Amiga output on a TV screen. David Taylor tunes in.

##### 44 Football Statistician

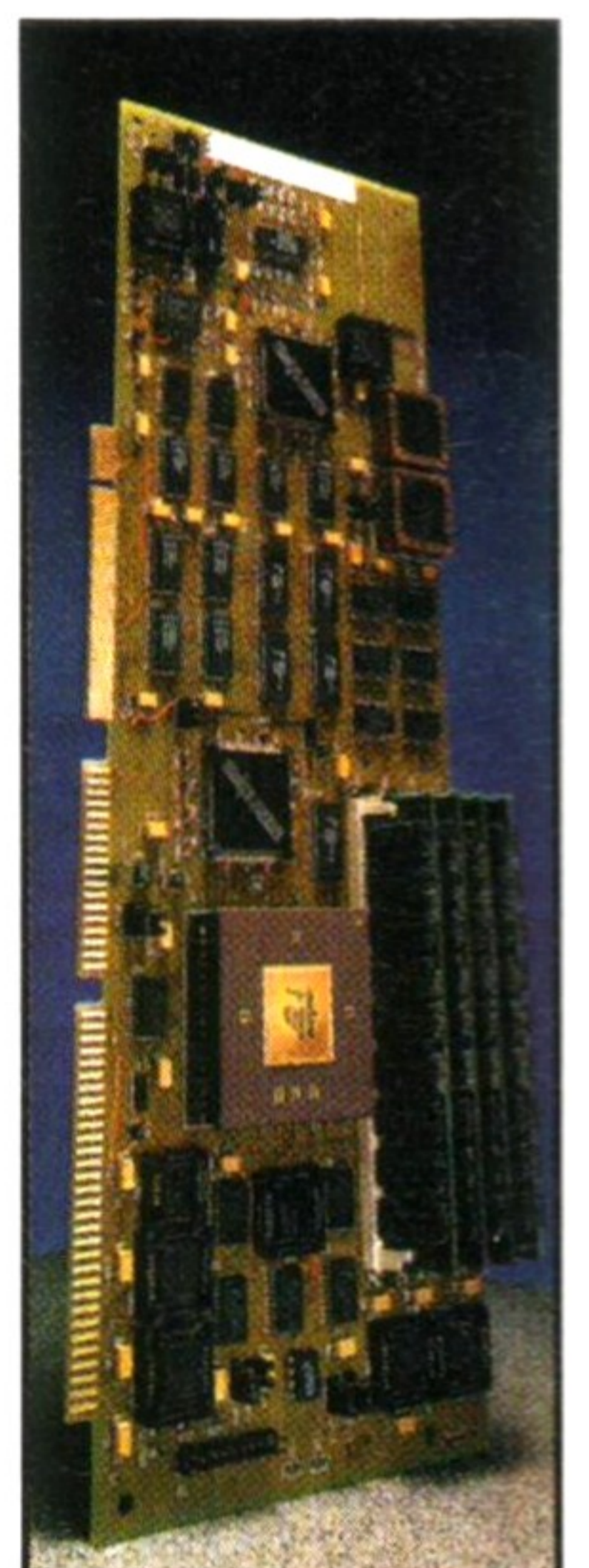
Do you know Ryan Giggs' statistics better than those of Pamela Anderson? This could be the software for you. Mark Blackham test drives to help you make up your own league tables and monitor the performance of your favourite team.

##### 46 Amiga Prolog Preview

They say everyone has at least one piece of software in them, or is that a book? Highly programmed Paul Overaa gets a sneak preview the new programming language, Prolog.

##### 48 Shablaam!

If you're serious about advancing in the professional computer graphics world, you'd better take a gander with Conal Wenn at this nippy and cost-effective rendering card.



##### 49 Monument Titler

Part 2? Yes, after a scream of pain from Hartmut Schumacher we found the gremlins had bitten off the end of the first review so here is the missing bite!

##### 54 Octamed 6

Mark Blackham brings you an *AUI* exclusive sneak preview of Octamed's next advance toward world domination.

## USER PORT

### 50 Rack 'em, Pack 'em

**AUI** leads the world in cramming useful utilities and games onto its coverdisks. David Taylor and LZH inventor, Jonathan Forbes, explain how it all happens.

### 72 A MIDI studio to call your own - Part II

Now you've set up your home music studio, what do you do with it? Mark Blackham explains the ins and outs of MIDI sequencing.

### 76 Deluxe Trickery

Wil Mobberley explains how to create broadcast quality images out of your Amiga that would put the BBC to shame.

## MENTOR

### 84 Programming Tips

A double-page spread of juicy coding coverage from Paul Overaa, who gives you inside tips on dealing in exec. signals.

## ENTERTAINMENT NOW

**78** OK. Let's stop with the serious stuff and indulge ourselves for a moment or ten. David Taylor and Mark Blackham test All Terrain Racing, Akira, Sink or Swim, Skeleton Crew, Flink, DragonStone, and some classics re-released as budget titles - B17, Team Yankee and Elite Plus. There's also news on Brutal Amiga, Baldies, Final Over Frontier: First Encounters, and Alien Breed 3D.

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### 111 AUI Reader Enquiry Service

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### 112 Advertisers' Index

Well, it's obvious what this is, isn't it? Find the advertisers you need here.

### 114 Next Month

We save you the worry by telling you now what you'll get in the next issue of **AUI**.

### 55 10 Years of the Amiga

**AUI Special Report Part 1**



It's hard to believe. The Amiga has been with us for ten years. Time passes so quickly when you're having fun. Mike Nelson leads the **AUI** team delving into the memories and the archives to bring you a nostalgic, tear-jerking look back at the good, the bad and horribly ugly of the computer we all love. Have your handkerchiefs ready for this first part of the definitive account of how ten years of history happened to us all.

## ...And What They Used

Commodore's Amiga A3000, A2000, A500, Citizen's Swift 240C, Canon's BH-20 Bubblejet, Consultron's CrossDOS, Electronic Art's Deluxe Paint IV, Gold Disk's Professional Page, GVP's A530 Turbo, Toshiba's IDE drive, Supra's V32 Fax Modem, Datel's Action Replay MKIII, ASDG's Art Department Professional, Epson's GT-6500 and 9000 colour flatbed scanners, Readysoft's AMAX, OpalTech's Opalvision, Innova-tronic's Directory Opus, JCL's ColourPic Plus and Cabaret, John Veldthuis' VirusChecker, JVC's HR-D980 Video Recorder, Micro-System's Scribble!, Macro Systems VLAB, 32bit RAM from First Choice Computers, Discovery Software's Grabbit Almathera's Photogenics

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# The Amiga Dimension

This is the ninth year of the Amiga Dimension. I suppose you could, if you take the life of the Amiga, say it is the tenth or even the eleventh year. The fact that as we go to press we have still no positive news that the Amiga will survive to its 11th (or 12th!) should not make us tremble too much. The fate of the Amiga has been in the balance before.

When I first started writing the Amiga Dimension all those years ago, very few people believed that the Amiga would make it. And that was especially true of those in the UK software business who were besotted by the 8 bit machines or were most Atari ST supporters.

That the Amiga did not only survive but prosper was evidence not of the perspicacity of the experts but of the appreciation of a wide public for the sheer quality of the computer. Despite - or because of - the extra price the Commodore always demanded for the Amiga over the rival ST, millions who became convinced that quality counted forced the UK and European software houses to migrate to the Amiga. But that was then and this is now..

The problems today are not though more or less serious than in the first struggling months and years of the Amiga, they are different. Then the Amiga had a technological lead of which the public only slowly became aware. Now, while it still has an almost unequalled operating system and some well-regarded add-ons, the mass market of potential users is heading for the PC. And the PC today is no Atari ST. It is becoming a superior, higher priced product with a growing wave of support like the Amiga all those years ago.

That does not mean that the Amiga cannot carve out a sizable and profitable chunk of what is going to be a huge market. Bill Gates of Microsoft has predicted not that there will a computer in every home but that there will be one - or more - in every room and in each car, and one for each train and plane passenger. There is still a tremendous opportunity for a computer as powerful and user friendly as the Amiga to find a substantial following.

However, time is passing and technology advancing. While any regular reader will by now know that I don't regard gamesplaying as the prime purpose of Amiga owning, there are warning signs that the games companies are no longer putting the Amiga on their development plans.

Several have told us that the Amiga games they are currently developing and releasing are the last. Developers of serious Amiga products are being pushed towards the same decision too.

No-one, at least no-one who wants the Amiga to continue, which certainly includes the management buy out team of Amiga International, is likely to be holding up the return of the Amiga deliberately. But it is now urgent that the negotiations be concluded and the development of the Amiga and the products for it be restarted.

What needs to be done is to drive home to the Liquidators in the Bahamas and in other countries that every day that passes makes the survival of the Amiga less probable and the price that they can extract for the remains of CBM diminishes.

There are many encouraging signs now that a breakthrough for computing is coming with the increasing sales of CD-ROM drives and CD-ROMs themselves. For the first time it looks as if whole families will be involved in computing and not just games being played on a computer in the son's bedroom with Dad perhaps working on one in the study.

Even with recent PC advances, the Amiga is incomparably better as a family machine. It is also far more suitable for video and other graphic work. It offers potential that the PC public may have to wait until the next generation after the Pentium to achieve. But significantly, Intel is reported in this month's NewsFile as announcing the P6, which is the generation beyond the Pentium.

While doubtless those who would rescue the Amiga want the best terms they can reach to give them ideal conditions for relaunching the computer, now they and the Liquidators should realise that unless the Amiga is very, very quickly back as a genuine challenger to the PC, it may too late.

There have been, over the Amiga's ten years, millions of us who have been and are loyal to the Amiga. The letters **AUI** gets show that again and again. But those who are delaying the decisions that will bring the Amiga back to life are now endangering its survival. Not a happy prospect on a tenth birthday.

But the Amiga can survive and it could become a major factor in the coming computer boom. However if that is to happen, it must start to happen very soon indeed.

Antony Jacobson  
Managing Editor

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 BLONDE BEAUTIES +Y  
 BO DEREK +Y  
 BODYSHOP 4 AGA (2) Y  
 BODYSHOP 5 AGA (2) Y  
 BODYSHOP 6 AGA (2) Y  
 CELEBRITY SPECIALS (5) +Y  
 CHER +Y  
 CINDY CRAWFORD (2) +Y  
 ERIKA AGA Y  
 FENNTASTIC 1 +Y  
 FENNTASTIC 3 +Y  
 FENNTASTIC 6 +Y  
 FIT CHIX AGA (2) Y  
 FIT CHIX 2 AGA (2) Y  
 FIT CHIX 3 AGA (2) Y  
 GIRLS OF SPORT +Y  
 GIRLS ON FILM +Y  
 INSIDE SPORTS (2) +Y  
 KATHY LLOYD +Y  
 KYLIE (2) +Y  
 MADONNA (3) +Y  
 MANGA +Y  
 MARIA WHITTAKER +Y  
 RED DWARF +Y  
 SABRINA +Y  
 SHARON STONE +Y  
 SCREAM QUEENS (2) +Y  
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# AMIGA

## User

### INTERNATIONAL

**Hello, good evening and welcome to this month's mind-blowing SuperDisks. Employing an advanced archiving system, some five megabytes of stunning data have been crammed onto these disks. David Taylor introduces the goodies.**

#### Instructions

Although the SuperDisks use state-of-the-art systems to store the programs, we think there couldn't be an easier disk for you to use. Simply boot SuperDisk No.57 for any of the disks and let the disk itself prepare the procedure. When the installation screen pops up, choose the disk a-f and press "return".

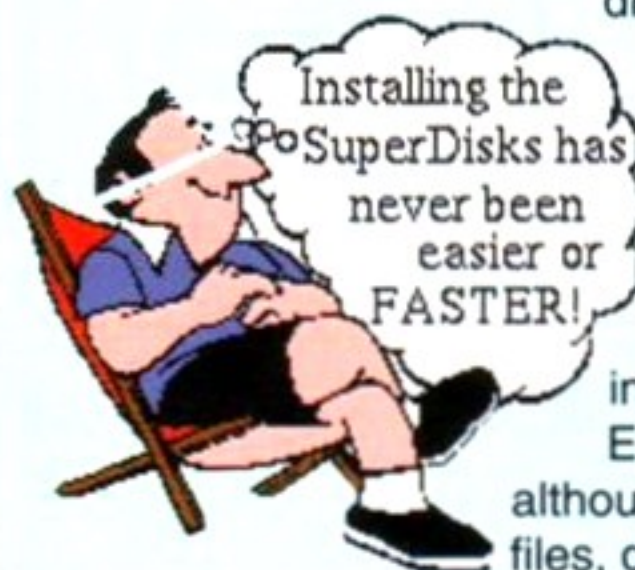
You'll need six spare disks - any disk other than this month's SuperDisks will do. The SuperDisks will format the disks for you, if necessary. When a disk change is required, the screen will flash and a bleep will alert you to the fact.

The Great Games Disks will autoboot and the Top Utilities disks can be accessed from WorkBench.

Expert users should note that this month's SuperDisks not only use diskspare, allowing SuperDisk No.58 to carry 959K, but also utilise the new and stunning lzx archiver, faster and more efficient than lha.

For information about these, see the Expert Users' section and the interview with LZX's creator, Jonathan Forbeson page 50 in this *AUI*.

Each disk takes around five minutes to install, although some may take longer if there are a lot of files, depending on the speed of your Amiga.

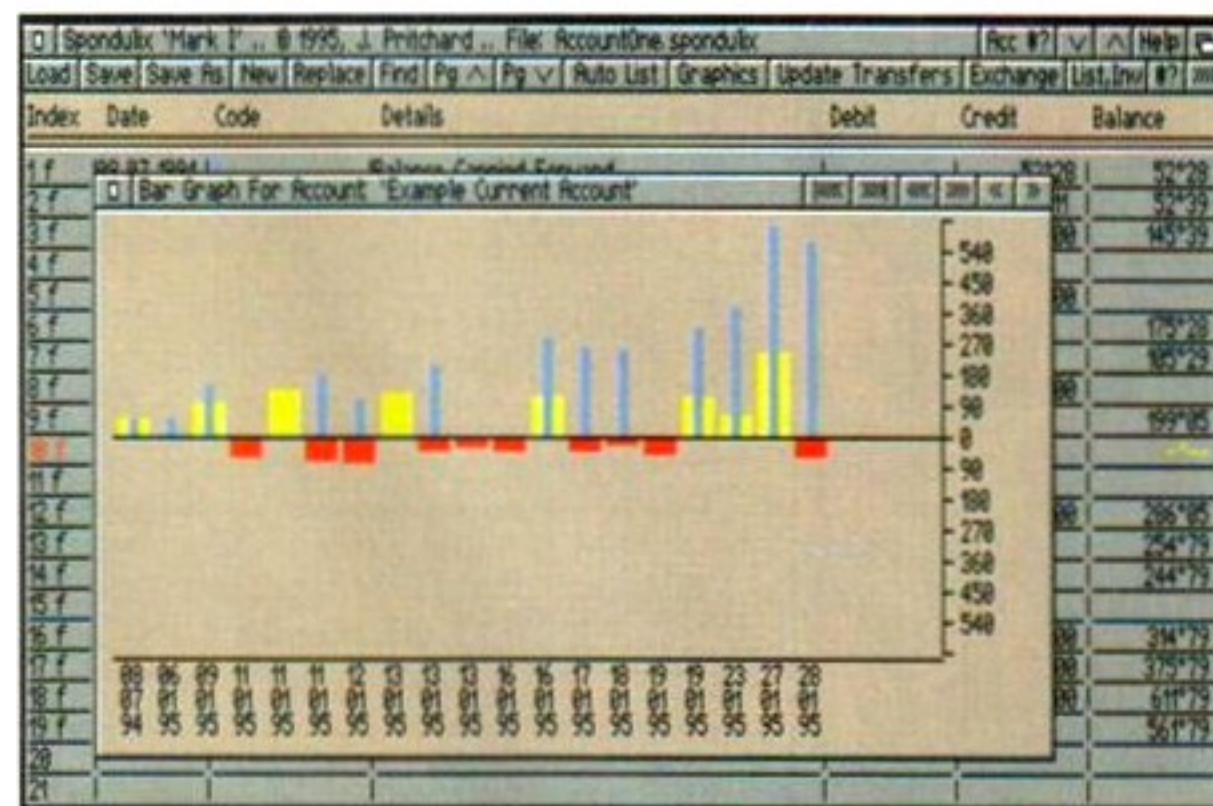


#### AUIMAY95a

**The Top Utilities Disk No.1**

#### Spondulix Mark 1

Are you rolling in money? Don't know what to do with that nasty cash? Or are you like the rest of us, scraping around for bus fare? If you fall into the latter category, Jack Pritchard, author of the



So that's the scores on the doors.

Jack Pritchard has created an enhanced version of the program for you, available from £10, which not only offers more, but also comes with the registered version of EpochMaster and other goodies. See the docs for details of this very good value offer.

#### LZX

popular Epoch Master, may have the answer. Spondulix Mark 1 has been written exclusively for Amiga User International and has been tailored to fit the feedback on earlier programs. Because of this, Spondulix is one of the most powerful and yet easy to use finance programs ever.

Enter your account details and then enter the transactions and transfers for each account. The program will automatically sort the transactions into date order. So, if a cheque clears later, you can simply add it on the end and it will then be sorted into the correct order with all the account recalculated around it. Transfers, such as standing orders, can be set to be debited or credited on a regular basis - a gift for Amiga owners with battery backed up clocks.

The accounts can be saved and loaded at a later date at your convenience. In addition, Spondulix will represent your accounts in a graph for you. There is also a reminder facility and the doc file doubles as an online help file.

If you copy the files to different directories on your hard drive, you need to alter the preferences so that Spondulix can find the doc file.

Spondulix can be run by double clicking on its own icon (show all files), instead of by iconx, but because of the OS, you will then need to set the preferences to find the doc file.

Judging from the letters *AUI* receives, you are constantly amazed by the amount we pack onto our disks. How do we do it? It's possible thanks to innovations such as LZX. LZX is a new generation of archiver. In the Amiga world, lha has become the norm for archiving, producing great results, but taking some time to pack data. LZX not only packs with 10%+ more efficiency than lha, it also does it faster.

The command line interface is very similar to lha in input: lzx\_68000ec x ram:archive.lzx ram:. There is a guide to the whole structure in this directory, load it from Multiview or AmigaGuide, depending on your system (note that there are no icons in this directory).

There are three versions of LZX, optimized for use on different processors (note that the 68000 version is the one used by the coverdisk and is therefore packed with StoneCracker (SuperDisk No.47). This slows its operation slightly and you should unpack it if you install it to your system.

See the interview with LZX's creator for more details and a review of this stunning new archiver.

The archives on this month's SuperDisks would have required 150K more space had we used lha, which gives you some idea of the power it supplies.

| Index | Date       | Code          | Details                 | Debit | Credit | Balance |
|-------|------------|---------------|-------------------------|-------|--------|---------|
| 1 f   | 08.07.1994 |               | Balance Carried Forward |       | 52*28  | 52*28   |
| 2 f   | 08.01.1995 |               | Net Interest To 5 Jan   | 8*11  |        | 52*39   |
| 3 f   | 08.01.1995 |               | Sundries                |       | 93*00  | 145*39  |
| 4 f   | 11.01.1995 |               | Cash Machine            | 58*00 |        |         |
| 5 f   | 11.01.1995 |               | Sundries                |       | 135*00 |         |
| 6 f   | 11.01.1995 |               | Supermarket             | 55*11 |        | 175*28  |
| 7 f   | 12.01.1995 |               | New Handrobe            | 69*99 |        | 185*29  |
| 8 f   | 13.01.1995 |               | Sundries                |       | 124*00 |         |
| 9 f   | 13.01.1995 |               | Supermarket             | 38*24 |        | 199*05  |
| 10 f  | 13.01.1995 | Cheque 000321 | (KOFF) Simon Terrance   | 23*00 |        |         |
| 11 f  | 15.01.1995 |               | Cash Machine            | 38*00 |        |         |
| 12 f  | 15.01.1995 |               | Sundries                |       | 117*00 | 286*05  |
| 13 f  | 17.01.1995 |               | Safeway                 | 31*26 |        | 254*79  |
| 14 f  | 18.01.1995 |               | Cheque returned         | 10*00 |        | 244*79  |
| 15 f  | 19.01.1995 |               | Cash Machine            | 48*00 |        |         |
| 16 f  | 19.01.1995 |               | Sundries                |       | 180*00 | 314*79  |
| 17 f  | 23.01.1995 |               | Sundries                |       | 61*00  | 375*79  |
| 18 f  | 27.01.1995 |               | Sundries                |       | 236*00 | 611*79  |
| 19 f  | 28.01.1995 |               | Cash Machine            | 58*00 |        | 561*79  |
| 20    |            |               |                         |       |        |         |
| 21    |            |               |                         |       |        |         |

A friendly way to keep your accounts in order.



# SuperDisks No. 57 & No. 58

## Lottery

We don't know about you but we've not won a sausage on the lottery yet. Not surprising as none of the prizes are meat produce, you might say. Still, some of the money might be handy. This program will pick your numbers for you. That way it will be totally random and you might improve your chances. Maybe.

## Default Screen

Lots of programs will open on public screens, such as WorkBench, but what if you don't want them to open there? You might want Protex on Directory Opus's screen. A command can be invoked to set the default screen, making all future programs open there.

## Get Input

If you're a regular Shell user, it can't have escaped you that the ask command is somewhat lacking. Get Input is designed to supply that missing power, even allowing you to set variables, so that a password system can be set. Very powerful and very clever.

## Flash

If you're using scripts, it may be that you want to alert the user to a requirement or to an error in their use. Flash will simply flash the screen to do this for you. The bonus is in the small size of the command - only 224 bytes!

## Siren

Sometimes flashing the screen isn't enough. Siren will also emit a siren sound to alert the user. It is used on this month's SuperDisks to alert you to disk changes requirements. The plus of this command is that there are no external library requirements - Siren is all you need.

## Programming Tips Files

This directory contains the executable files and source code for this month's Programming Tips article.

## SuperDisk Scripts

As ever, the scripts that control the disks are supplied here for you to use as you will. They are for expert users

who need to know locations of files and which files need duplicating. They are also useful as examples of LZX usage.

## AUIMAY95b

### The Top Utilities Disk No.2

## Book Corner

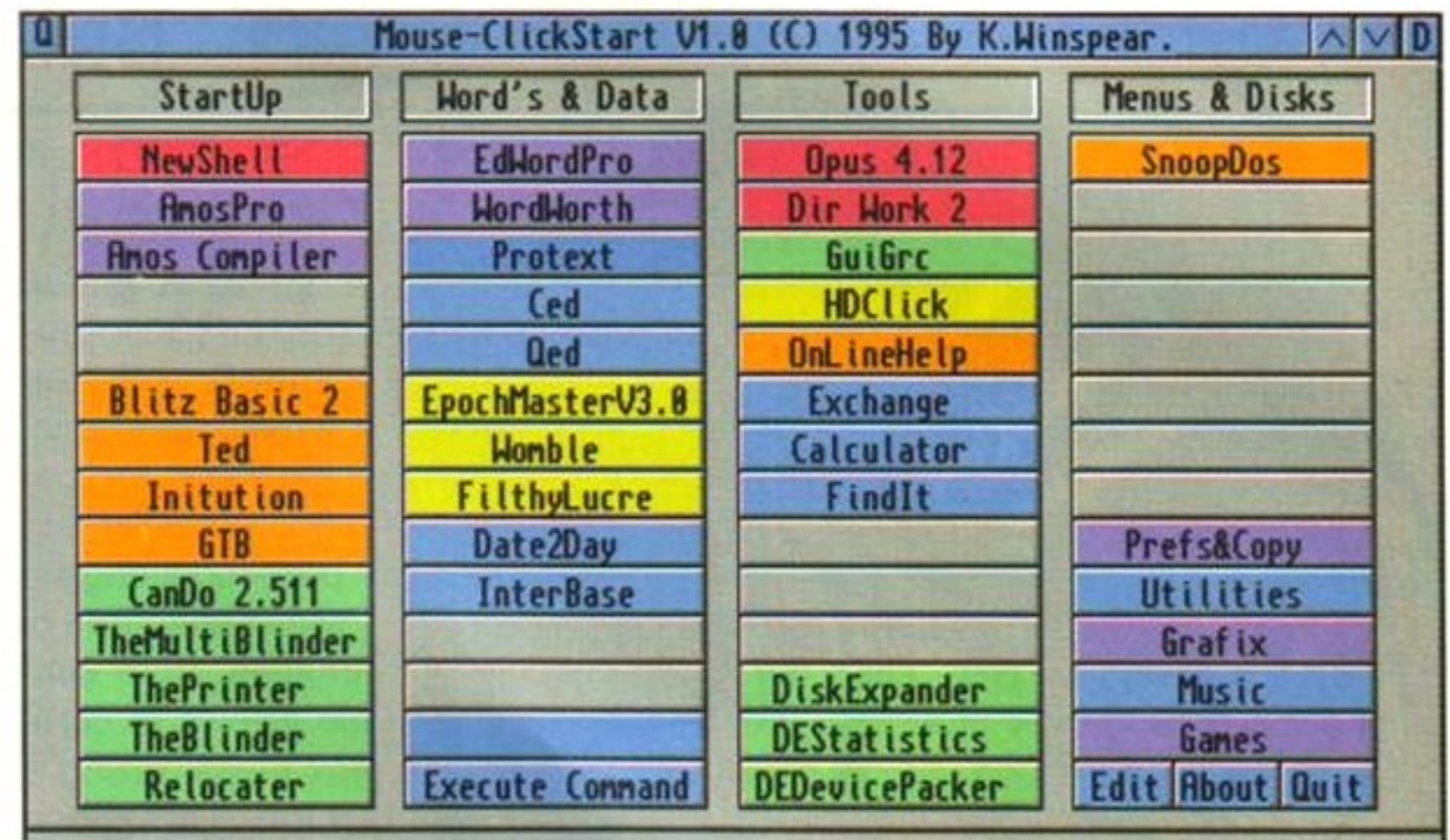
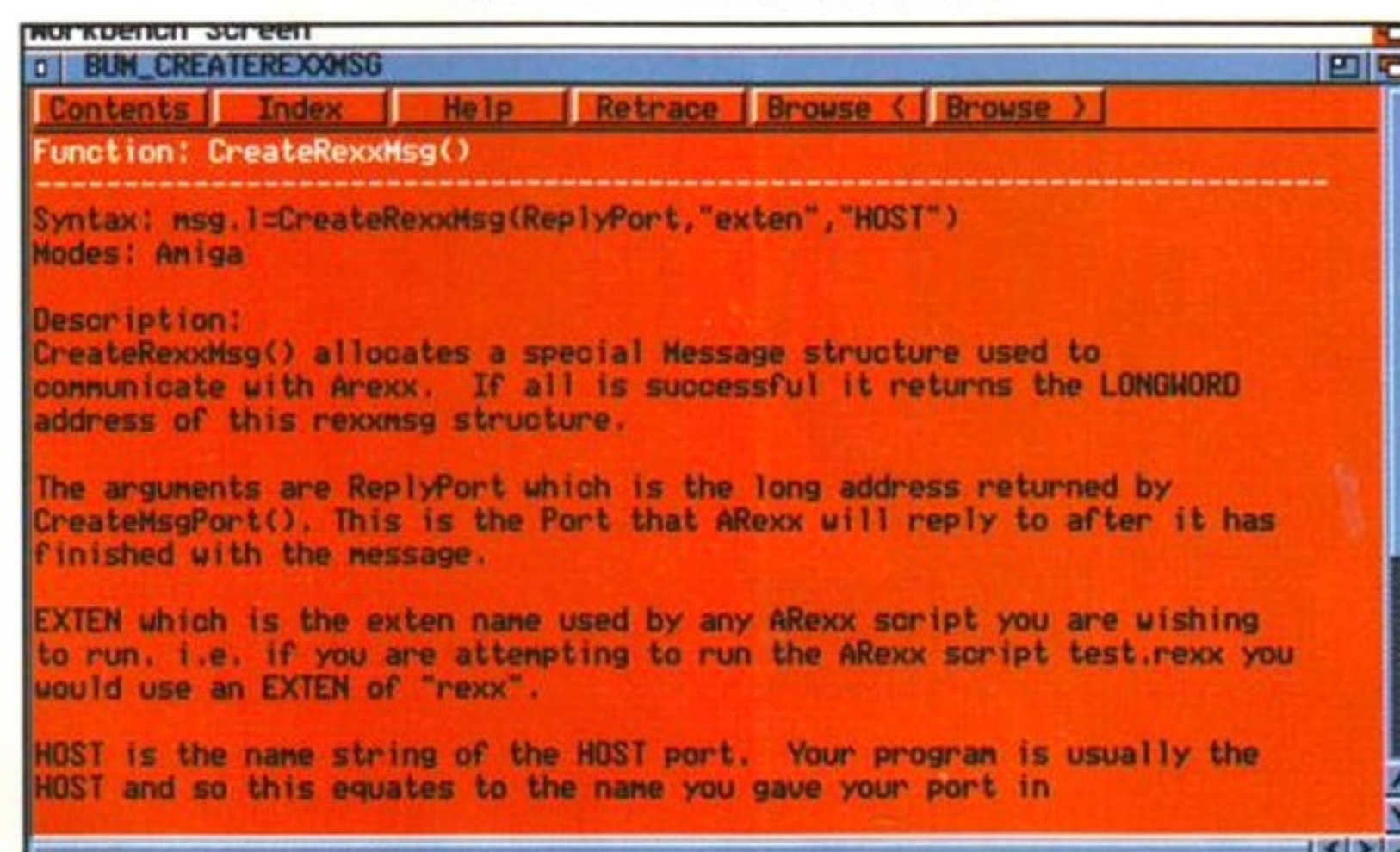
This month's book corner is a hypertext guide to the PD commands that complement the popular programming language, Blitz Basic 2. This language has provided high power to both beginners and experts, and some cracking programs like the brilliant Zombie Apocalypse 2 have been produced.

Now they'll be no more flicking through manuals to try and find that elusive command. Simply load this guide and point and click your way through to better programming. The icon is set for 'multiview' for WB2. If you use WB3, change the default tool of the icon information to 'amigaguide'.

## MCS

How do you fancy a nice new control system for your programs? MCS can be installed and configured so that all your favourite programs are entered onto various menus and can be accessed at the click of a button, instead of searching through directories and sub-directories to find them.

Life can be Blitz with this online manual.



An attractive and fun way to enhance your programs.

## Drag'n'Drop

If you have a lot of samples or pictures or text, then this program could be invaluable. Set the preferences of the program for each of your favourite programs for ASCII, samples and pictures (among others). You can then drop the icons of any number of filetypes onto the Drag'n'Drop icon and it will recognise it and launch an appropriate program.

The advantage is that it analyses each file, so if you've not added file extensions and don't know if it's a JPEG or IFF, Drag'n'Drop will work it out anyway, saving you from loading the wrong program. Another agreeable feature is the output window that sits on WorkBench and keeps you informed.

## CacheFont

If you have plenty of fonts (and you have now - take a look at AUIMAY95d!), you'll notice how some programs, such as DPaint, insist on re-reading the fonts directory. This takes up a great deal of time and is very frustrating. This directory can fix this problem.

There are two commands here - makefontlist and cachefont. Makefontlist will compile a list of the fonts in your font directory (so ensure any assigns are set up if necessary for it to be certain it knows where your fonts are stored). CacheFont will then do exactly that and DPaint can now simply pop up the font list instantly.

Thanks to Adam Dawes for thinking up, creating and passing on this wonderful utility.

## NiceFont

How can you tell what all the fonts on the Essential Fonts disk are like? NiceFont will show you an example of any font and any size you have. It will display both bitmap (such as those on AUIMAY95d) and CompuGraphic fonts.

## AutoAppMenu

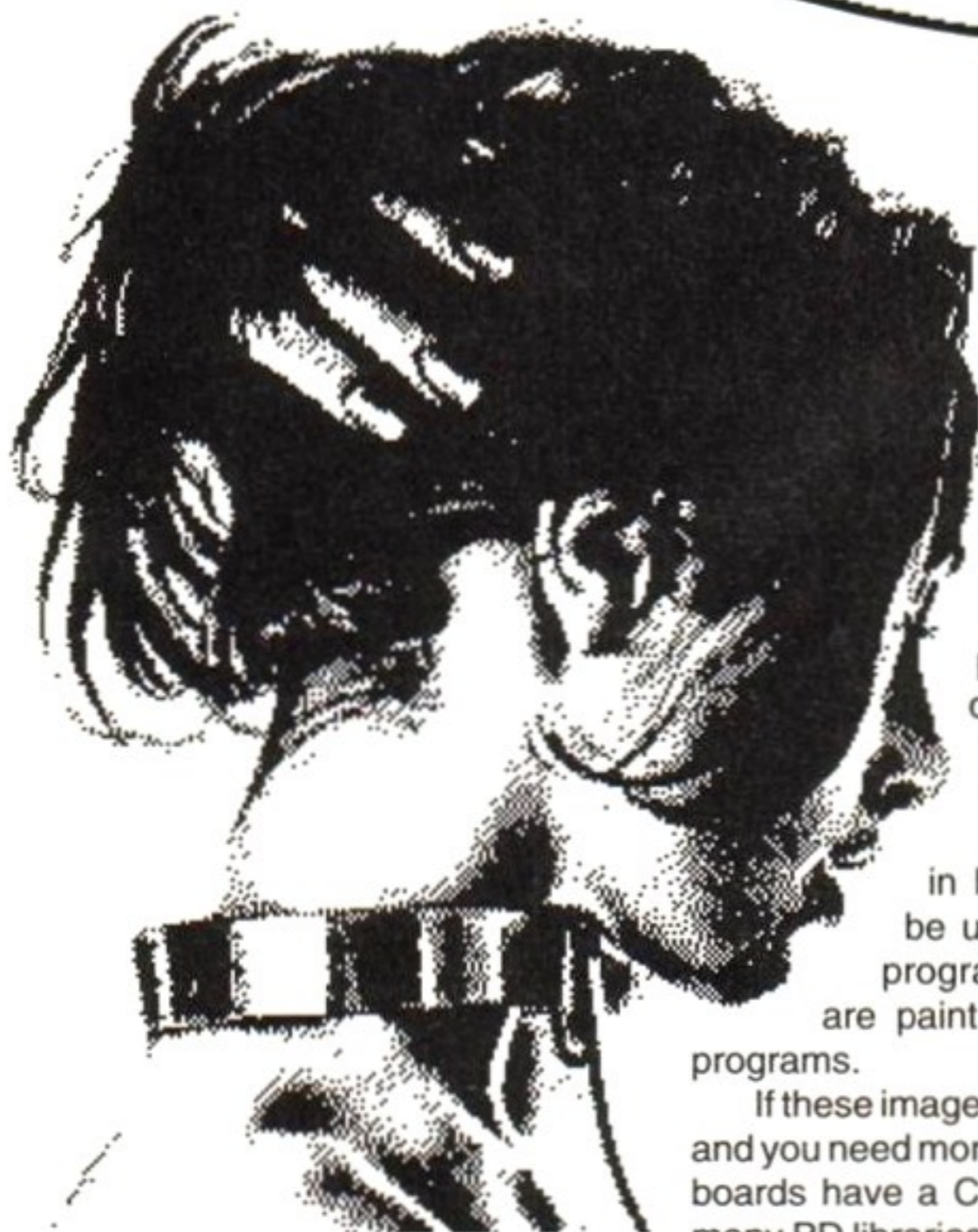
Wouldn't it be pleasant if you could keep your Workbench clear and not have to root through directories to get programs? Wouldn't it be even more delightful if you could add your programs to the Workbench menus. You can. There are several programs to help you do this but this one is very small indeed and does the job well.

continued overleaf

## AUIMAY95c

### The Essential Clipart Disk

This Clipart is totally amazing!!!  
And it's all here on AUIMAY95c.  
Brilliant!



This disk contains a small selection (only 130+ images!) of the wealth available. It's ideal for beginners and experts, covering the whole spectrum of images, from simple arrows to complex tanks, taking a quick stop at cartoon art and nipping in for a bite with borders.

All the images are in IFF format and can be used in most Amiga programs, whether they are paint packages or DTP programs.

If these images whet your appetite and you need more, then most bulletin boards have a Clipart section as do many PD libraries. Try SelectaFont or Weird Science for expert help.

Personally I am to art what John Major is to successful government. So what do you do when you need to produce graphics? You do exactly what the professionals do. No, believe it or not, they don't draw everything they use. After all, it would be a waste of time re-drawing obvious images.

What they do is take advantage of the thousands of Public Domain Clipart images. These are generally black and white images, ranging from the very simple to the very complex. This way, when they need to drop in a quick drawing, they can without using up their own time. Then, if colour needs adding, just use the fill option in a paint program.



## AUIMAY95d

### The Essential Fonts Disk No.1

In addition to the Clipart this month, we've treated you to over seventy bitmap fonts. These fonts can be used in most Amiga programs, from DPaint through to mundane old WorkBench. Most word Processors and DTP packages can also use them.

You can use 'NiceFont' on AUIMAY95b to view the fonts or alternatively copy the fonts to your font directory on your hard drive or make an assign (assign fonts: AUIMAY95d add) - see last month's ToolBox article for more help with the assign command - so that your system will allow you to access the fonts directly from a program.

You can manually choose the path in a program but making the assign should be easier. You should also be aware that several of the fonts are in sub-directories on the disk: large, small, unusual and video to be precise (add other assigns, such as: as-

sign fonts: AUIMAY95d:video add).

The small number of fonts supplied with your Amiga may well be starving your creativity in both art and WP operations. These seventy should be a welcome start, but should you want more, take a look on BBSs or contact a PD library or the font experts, SelectaFont.

Next Month's SuperDisk will contain the Essential Fonts Disk No.2, with some CompuGraphic fonts for higher end software.

continued overleaf

Here's one font and another,  
one more,

YET ANOTHER, this one too,  
not forgetting this little one as well,

OR THIS ONE OF COURSE

and many, many, many, many, many, many, many, many, many more!!!!!!

Some examples of the fonts on offer.

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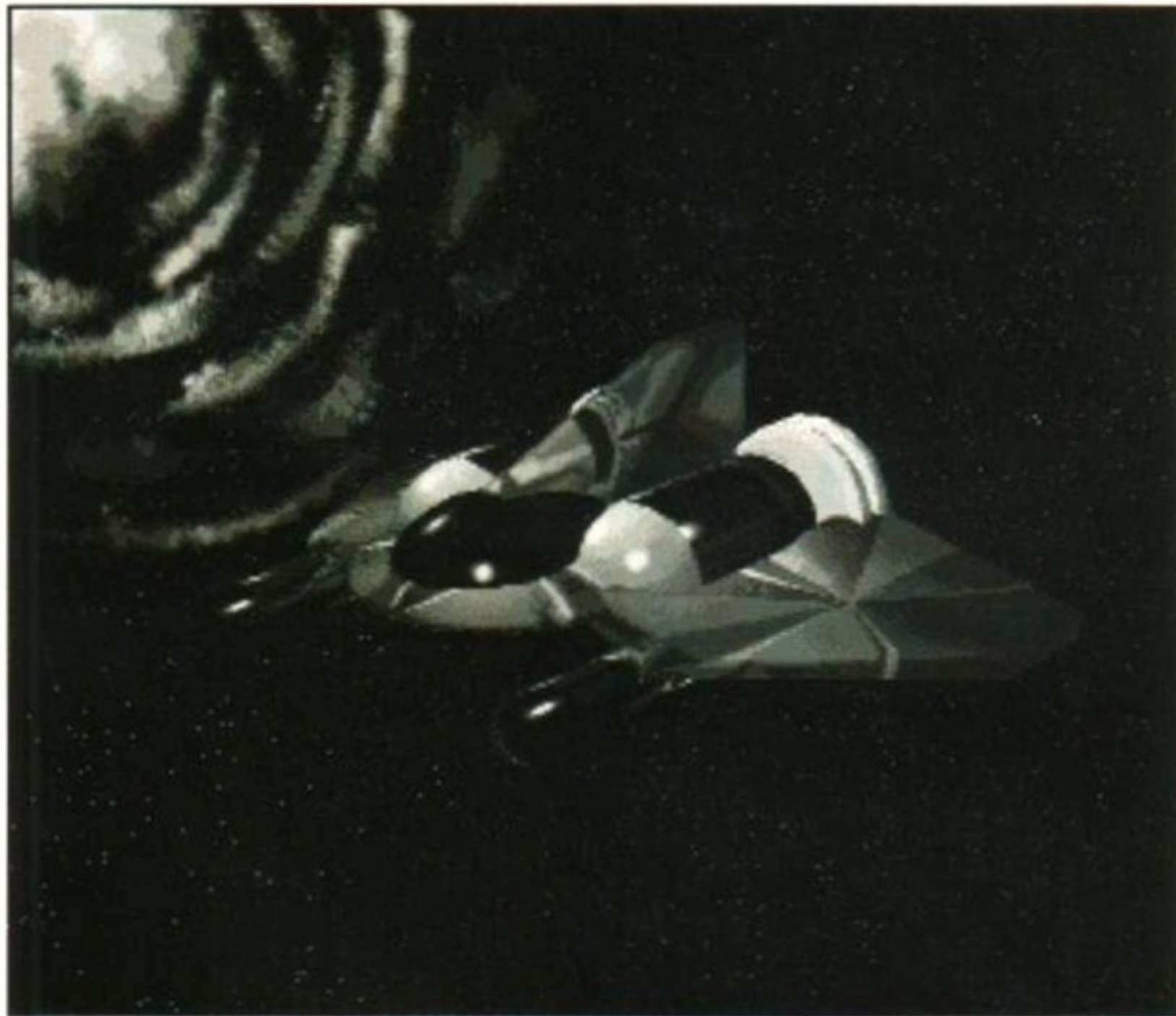
## AUIMAY95e

### The Great Games Disk No.1

#### Xenex

Every famous game format has been done to death in the Public Domain but each area has one gem that shines out. For Galaxians, it has to be either Deluxe Galaga (whose author is now reportedly working on a 'Deluxe Donkey Kong') or Insectoids from Outer Space (on last month's SuperDisks).

Xenex is a strong contender for this honour in the realm of Asteroids



High quality, top speed action from Mark Sheekey.

clones. Supplied to us by Speedy PD, with the knowledge of the author, Mark Sheekey, we all owe a debt of gratitude to both for their levels of excellence.

Xenex takes Asteroids into the nineties. As with the original game, you control your space ship by rotating it and moving forwards in whichever direction you are pointing. In addition there are a choice of space ships, one or two players and end of level guardians with which to contend.

Power ups become available as you'd expect and the whole riot is enormous fun. If you are running the game on a one meg Amiga, ensure you disable any external drives before booting the disk, for memory purposes.



It's second from the left at the top, I think.

of cards from earlier goes. This game can be played by one or two players and has superb graphics and amusing sound effects. It's guaranteed to drive you to distraction.

#### SpaceJest

There's nothing quite like a good adventure game to get you involved. This text adventure is certainly that. You take over after crashing on a planet, with nothing but your cunning to help. Soon enough you'll be up to you neck in trouble and finding out all sorts of things. You can save your position if you want to take a break but that's not likely, because once you start, you'll be hooked. One word of advice, make sure you have the right keys for the doors and you'll find things easier.

Go for the kill as soon as you can for extra points.

## AUIMAY95f

### The Great Games Disk No.2

Last but by no means least, this disk contains a selection of games for you.

#### ThinkaMania

Everyone remembers the memory game played with sets of cards. If you don't, you probably won't be any good at this memory game! You must choose two cards and attempt to ensure they match, trying to remember the position

#### Sneech

Paul Berkey's back again. After his recent success with Peg It! (SuperDisk No.54), he's now set Merseyside and now all **AUI** readers alight with his latest creation. Based on the classic Worms game, multiple players compete trying to destroy the other players within time periods, while also extending themselves by picking up pills.

This is a very snazzy update to an addictive game. You can have computer opponents and control your players with either joystick port and the keyboard.

This game is a great hit in the **AUI** office, as was Peg It!, and we think you'll soon be hooked too.

#### Frontier Guide

Lastly but worth a special mention, there is the Player's Guide to Frontier: Elite 2. As we mentioned last month in the letters pages, it was submitted by Laga Hale, who decided that the game might be a little too hard for people to get into. This guide is hypertext, so configure the icon information in WorkBench to your system, either multiview or similar on WB2, or AmigaGuide on WB3.

Once you've loaded the guide, it couldn't be simpler. either work your way through or examine the part you need help with.

You'll soon be blasting through the galaxy with exceptional skill.

Well, that's all folks for this month, but we'll be back again next month with more goodies to satisfy every Amiga user. Until then, may your disk drive never stop spinning.

continued overleaf



Written By Paul Burkey ©1995 Daisy Software



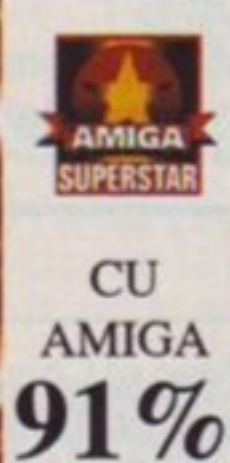
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# DISK INFORMATION

## Expert Users

If you like an easy life, do not attempt the following. Install the disks the easy way. If you are after a challenge, read on...

So, my installation scripts are good enough for you, eh? Well, I'd still suggest you de-archive AUI MAY95a the normal way first. That way you'll have a copy of the scripts, so you can refer to them to find which archives are needed on which disks and you'll also have a copy of lzx, the new archiver.

Once, you've got this, choose the version of lzx that suits your system, 68000, 68020/30, 68040/060. Install it and then de-archive the commands.lzx, from the c: directory on SuperDisk57. That will contain a directory called devs2, in which is the diskspare device, icons and mountlist to enable your system to read diskspare disks. These disks are a special format that read/write 959K to a disk. SuperDisk58 is such a disk. Append the mountlist to your own in your devs drawer - DO NOT simply copy it over your mountlist! Copy the device and the icons to devs and dosdrivers respectively.

Reboot your system and hey presto, you can read 959K and use lzx.

To dearchive the programs, you need to unpack each archive. They are called AUI may95x.lzx and each contains an archive called archive.lzx. The SuperDisk does it this way to avoid the quirk of the copy command, which would use too much memory, and also speeds up the process.

Dearchive these archives. The syntax of lzx is similar to lha, read the guide file or type "lzx\_68000ec" for a quick synopsis. "Lzx\_68000ec -x -a x ram:archive.lzx ram:" is a good example though.

Because of the way the scripts work, certain files are duplicated to save space. Check the scripts to see which disks require these files and also note that some of the files need the "-a" option set to retain the file attributes.

These scripts did take an enormous amount of work, because five Megs do not fit onto two disks easily! I'd therefore advise you only use this method if you are truly competent with the Amiga OS. Make sure you understand what diskspare is and does - ideally you should have the whole archive from AUI January 1995.

In short, don't come crying to us if you mess up! The installation procedure is as simple as it could be - you decide to spurn it at your own risk!

There you go. Good Luck!

Nobody said life would be easy.

**Remember: Always work on copies of your WorkBench disks.**

## NO SUPERDISK?

Consult your Newsagent! Explain that you know that AUI SuperDisks are irresistible, but that you need them. Seriously though, we cannot be responsible for what happens at the end of a very long chain of different organisations, especially those outside of the country. So what we propose is simple: If you live in

the UK, consult your newsagent as usual. If you are outside the UK, then we'll try our best to help you get the advantages of the SuperDisks. If you don't receive them on the cover, then send us £1 in sterling (International Money Order, etc) to cover postage, etc and we'll get this month's disk to you ASAP. Okay?

## FAULTY DISK?

In the VERY unlikely event that you do have a problem, turn off your Amiga and wait 30 seconds, then boot it again with SuperDisk No.57. Ensure that you follow the instructions to the letter. If you have only 1 Meg, then you may find a problem with memory fragmentation if you don't install the disks in numerical order. Just switch off to allow the memory to reset and then start again.

If this doesn't help, then it sounds like you could have a disk with a read/write error on it, caused in duplication. It's very rare but it can happen. Don't worry! A replacement disk can be obtained easily by sending the faulty disk to:

**AUI Faulty Disks**

Unit 3, Hampton Road Industrial Estate, Tetbury, Glos. GO8 8LD  
Don't forget to include your name and full postal address in block capitals.

## A Plea

We have gone to every effort to make the SuperDisk easy to use and to ensure that all the programs work on as many systems as possible.

We regret that we cannot take any telephone calls concerning SuperDisk problems. They are just too time consuming and then we wouldn't have time to put the next SuperDisk together for you.

If you do have a problem, try the docs again and refer to your manual, should you need to move any libraries or assign any programs. If you are truly stuck, please write to Amiga Answers.

## BBSs

Thanks to Simon Gardner of Burning Chrome BBS on 01428 727060. Much Gratitude to Jimbob, the supportive Sysop of the excellent Waltons' Mountain BBS, on 0181 891 5730. Faulty Towers shouldn't be omitted, available on 01235 535113. If you want to be truly international, then check out the splendid American BBS Smorgasboard, on 205 745 3989.

## Readers' Contributions

AUI's SuperDisks are crammed with the cream of Amiga crop. Many of the programs are created especially for us and released into the Public Domain through us. It's you the reader that makes it possible for AUI to continue to share top quality software with tens of thousands of avid Amiga users.

If you've got a masterpiece that you think can cut it with the best, send it to: SuperDisk Contributions, Amiga User International Magazine, Fourth Floor, Building 3, 203 Eversholt Street, London, NW1 1BW.

It's best for us if you don't use Powerpacker, because we use lha to archive, which is far more efficient. It will also help if you tell us which libraries or fonts your program requires, keeping them to a minimum if possible. So, if you're sending an AMOS program for example, try to avoid the need to have the AMOS library separately. These guidelines make life jolly for everyone.

Happy compiling!

## Shareware

Just a brief reminder that some of the programs on our Coverdisk are Shareware. This means that you can try them out, but if you regularly use them you should send a registration fee to the author. Registration fees are between £5 and £20 and sometimes the author will send you the latest version in return. You can send an International Money Order, or preferably a cheque but many authors don't accept cheques if they are outside the UK. If you want to risk sending cash in a registered post, it's up to you. We wouldn't advise it but it's your money...

Note that some of the authors don't want anything more than a postcard from you so they can see how far their programs have travelled. So, why not make their day. After all, they made yours.

## Compatibility

These SuperDisks are WorkBench 2 and above only and require one Meg of Chip RAM or more. We deem this to be the minimum spec Amiga used nowadays. That doesn't mean that we aren't aware of users with 1.3 Amigas. The reason is simply that most new programs, certainly those developed by PD programmers, require WorkBench 2 and because it allows us to give about a further 300-400K of data. Getting over four Megs onto two disks isn't possible with OFS disks and decrunching them would require more floppy disks on your part. WorkBench 2 gives much more than a new WorkBench disk, it powers up your Amiga, radically renovating your Operating System. The only option for 1.3 users is to upgrade. The cost is negligible (c.£20), and is more than worth it for the wealth of new programs on offer and for the money you'll save on floppy disks!

All the programs on these disks work on an A1200 and most on an Amiga 500+. The best way to check is to read the docs and try the game. Should you require additional libraries for the program, they should be enclosed in the program directory and you need to copy them to your libs:DIRECTORY ON YOUR WorkBench disk.

Read your WorkBench manual for instructions on doing this.

Should it all go horribly wrong, please WRITE to Amiga Answers at the address shown in the Answers section. DO NOT RING! We cannot answer queries over the 'phone. Sorry.

## Documentation

All the plain documents can be read simply by double clicking on their icons. The text will scroll, use the mouse to control it and press Escape to quit. If the docs are in AmigaGuide format, you'll need a computer that can read AmigaGuide files in order to read them without all the nodes showing.

The docs can also be loaded into any WP that reads ASCII, which is just about all of them.



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**Compiled and edited by  
 Anthony Mael and Martin Witton.  
 Additional material: Gary Fenton**



The OpalVision Roaster chip in action.

# OpalVision Modules Update

Remember OpalVision from Australia and then California? That's the 24 bit graphics card AUI was the first to review two and a half years ago in the October 1992 issue. A suite of add-on modules were promised back then which still haven't materialised - except for a pre-production model in Hertfordshire, England.

White Knight Technology were proud to show **AUI** their pre-production video processor module for OpalVision which includes the much hyped Roaster chip. This add-on hardware allows you to perform an unlimited number of real time digital video effects (DVEs). We saw live video explode, shatter like glass, rotate in 3D, rip, and countless other effects. The hardware will also grab and store frames into either of its 24 bit framebuffers. Other features which were we demonstrated to us were chroma and luma keying.

The software interface for the video processor module bears an uncanny resemblance to NewTek's Video Toaster Switcher software. However, unlike the Toaster's DVEs, OpalVision lets you edit and

create brand new effects from scratch. Using a very attractive GUI (which reminds me of LightWave's interface!) you can move a wireframe representation of the video image around in 3D space and create smooth spline paths for it to follow.



OpalVision's Switcher interface.

Whole sections of the screen can break away and rotate individually from other pieces. It also maps live video

into 3D shapes. Admittedly it can only do cubes at the moment, but I was told by OpalVision distributor, Centaur's John Sievers, that it will be able to map several live video sources onto a spinning sphere in real time. Currently it can't warp or bend the video or even real time morphing as promised way back in 1992. Another main feature we were told about back then is real time anti-aliasing of fonts on to live video which the pre-production unit can't manage yet.

Amiga animations can be incorporated into wipes. These animations are keyed over live video as the wipe between video sources occur. Other types of wipe use alpha channel animations to create soft transparent edges on the video. Creativity seems endless because new wipes can be generated in Amiga paint programs and other graphic packages.

At the moment the hardware only has one video input. This will be expanded with the Video Suite which has 9 video and 10 audio inputs. Our favourite feature of the processor module was a real time rescalable picture in picture window on Workbench. You can zoom into the live video picture and pan around very smoothly using the mouse!

**For more information on Opalvision and the modules, contact White Knight Technology on 01920 822321.**





New effects for VLab Motion, like "shadow" shown here.

## Vlab Motion Upgrade

The affordable non-linear digital editing system from Macro System, Vlab Motion, has a new software upgrade. MovieShop 2.1 and an extras disk now feature many new plug-in effects modules.

The list of new effects include shadow (automatically adds a drop shadow on composed video clips), circle wipe, line art (hand drawn charcoal effect), control (RGB, brightness, contrast, saturation and gamma balancing), flashlight (pulsing light), import (import image files to the timeline), import alpha (import alpha files), false colour (weird colour effect), and bars (multi shift wipes).

Also included is a new macro for LightWave owners. It automatically renders your scene and passes the frames on to MovieShop which builds them into an animation.

Contact your dealer about upgrades or Macro System directly on ++49 2302 80391. Friedrich-Ebert-Strasse 85, 58454 Witten, Germany.

## How many in your house?

According to GfK Marketing Services Ltd, more than 3000 households every day acquired a computer during 1994. The research shows that at the end of September 1994, 3.3 million households in Great Britain - one in seven - owned at least one computer. A total of 1,191,000 homes had acquired a computer during the previous twelve months. This equates to approximately 23,000 homes per week, or around 3,250 per day.

GfK's quarterly 'Computers in the Home' survey also shows that an increasing proportion of the new machines bought for home use are top-of-the-range multimedia machines, equipped with CD-ROM drives. These accounted for 32 per cent of sales in the six months to September 1994. But that proportion is expected to increase considerably over coming months.

# Intel's P6

Intel have unveiled the P6, "a new generation of microprocessors." With more than twice the processing power of the Pentium, the P6 has, Intel claims, the potential of accelerating Intel's product development cycle. Within two or three years, Intel say, the P6 could enable low cost home and office computers to handle multimedia applications such as speech recognition, full motion video conferencing and image processing. The P6 incorporates 5,500,000 transistors and can process instructions at the rate of at least 200m per second. This new chip may not come as particularly good news for home PC buyers who have recently

bought PCs with Pentium on board, only to find that they could be not only faulty but also outdated.

A recent comment on CiX is worth repeating. As no doubt you are aware, Intel gave their Pentium chip that name though it was originally code named P5. Of course, the Pentium should have been called the 586 as it was the follow up to the 386 and 486. Why didn't they call it the 586? Allegedly they added the necessary 100 to 486 on the first Pentium produced. The result the brilliant Pentium gave? 585.99983605. Ah well, we all make mistakes don't we? Especially if the chip we are using has a bug...

## CD ROM drives sales to soar

Sales of CD ROM drives are set to reach 30 million units per year by the end of the century.

BIS Strategic Decisions, a research firm, has reported that 9.6 million drives were sold last year, generating sales of over \$2.4 billion. The company has said that there is a projected growth of 21% per annum, worth about \$6.2 billion by the year 2000.

# No More Accolades

Warner Interactive Entertainment (WIE) has taken over the European sales and distribution rights to the Accolade catalogue, swallowing up the once powerful games software company.

A letter from Accolade to all their suppliers stressed that they have not gone into receivership and that all liabilities would be met. The chairman of Accolade said that as part of their new strategy and direction, Accolade "is now positioned for strong future production and marketing throughout the world." Oh really?

That must be why most of Accolade's employees, including the smart and luscious Claire Bowen, the erstwhile Accolade marketing manager, got the order of the boot from WIE. (The Editor claims that the notorious Jacobson curse should not be blamed. It is at least a couple of years since curvaceous Claire failed to turn up to a lunch with the Ed. But we would advise other incautious marketing persons anyway to beware of such a similar discourtesy...)

Accolade may be no more but it's clear that AUI sets the fashion these days. Where do you think that Time Warner Interactive have chosen to make their new home? In the building right next door to AUI. probably our presence put the rents up too...

## Quote of the Month

From an interview with David Pleasance

"Do you think Commodore's problems have been brought about more by internal mistakes than by outside pressures from competitors, or vice versa?"

DP: "Totally internal. The company was run by a professional sales prevention officer."

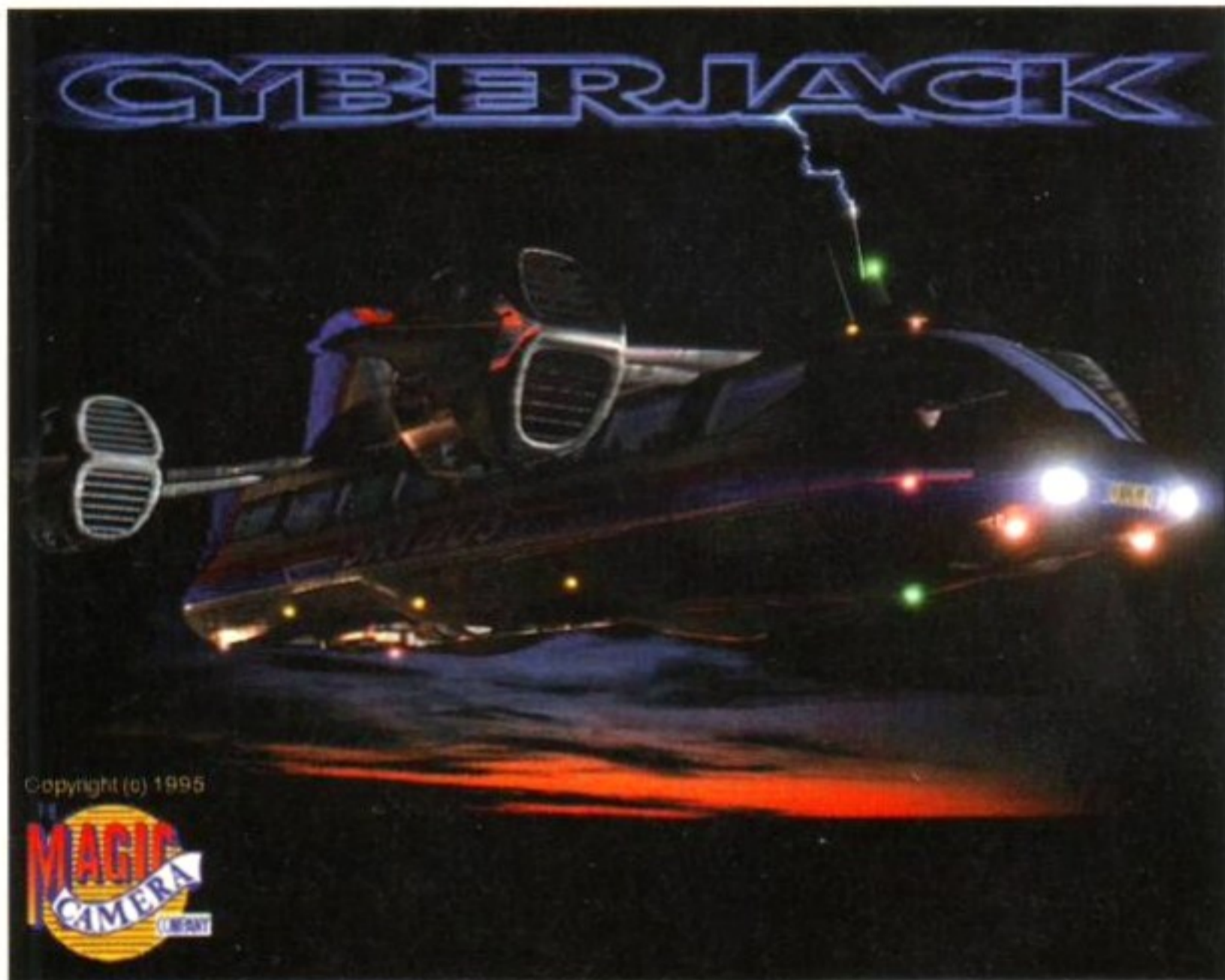
Try and sum up Commodore's problems in one sentence"

DP: "Total mismanagement of company assets plus diversification away from core business".

Does that give you the impression that David Pleasance, who as an eleven year plus employee of Commodore and now joint leader of the management buy out team should know what he is talking about, does not think that CBM's crash was entirely unavoidable?

**"A professional sales prevention officer"**

A great and really quotable phrase that, don't you think?



The Magic Camera Company's awesome SkyBus from the forthcoming film, Cyberjack.

## Amiga Movie and TV Star!

Watch out for some excellent special effects in two new TV series now showing on Sky One in the UK. Space Precinct is a futuristic cop show from the brilliant mind of Gerry Anderson of Thunderbirds fame. It's a live action show with more special effects than any other TV show ever. Some effects were created with Amigas running LightWave, although most were done on SGIs.

Another great series running on Sky One is Robocop, the TV series. A lot of the special effects were generated in LightWave including some vehicles and other less obvious objects which you probably won't recognise as computer graphics.

An up-coming sci-fi movie due for release later in the year is Cyberjack. Some of the graphics started life in LightWave, such as the SkyBus with 15,000 polygons. The graphics are created by The Magic Camera Company in the UK who also did the graphics for Space Precinct.

## CD-ROM Objects

Almathera are releasing a CD-ROM which, they say, is entirely focused on 3D objects for the Amiga and also works for the PC. All objects, say Almathera, are ready to run on the Imagine, Lightwave and Real-3D. The Lightwave Collection from 24-bit Club Scotland is claimed to be an exclusive and if you register with the club you will receive a discount on a book they are publishing.

Also included are dedicated animations for Retina and OpalVision cards, a selection of EGS utilities and rendered textures in a variety of formats. Price hasn't been set yet but it's expected to be under £25 Kickstart 2.0 or above is recommended for the Amiga version.

**Contact: Almathera, Southerton House, Boundary Business Court, 92-94 Church Road, Mitcham, Surrey. CR4 3TD. Tel: 0181 687 0040.**

## Big boys in the 'net

Microsoft is working with Sony to develop products for the Internet. In the first project with the Japanese company, Microsoft plan to work on the hardware and software to deliver video entertainment which viewers can control. Opening the Gates to another billion dollar profit?

## Not Down in Black and White

Seikosha have taken what they think is a huge leap into the colourful world of printing. They have launched an inkjet, the SpeedJet 360, that they believe will carve out a tasty slice of the burgeoning SOHO colour market. The Speedjet 360 has a 51 nozzle/3 colour print head as standard plus a "long life" print head for monochrome printing as an option too. The Speedjet chugs away at 3 pages a minute with a graphics resolution of 300 x 300 DPI. It comes with five fonts which can be used in various ways and can print out both as landscape and portrait shape. It has a sheet feeder as standard and will even do the bane of home printing, envelopes, if you feed them through manually.

Seikosha told *AUI* that they consider that the 300 x 300 DPI will give users a quality comparable to laser printing. The price for this colourful marvel? RRP £279.00.

**Contact: Seikosha (UK) Limited  
Unit 14, Poyle 14, Newlands Drive,  
Colnbrook, Slough, Berks  
SL3 0DX Tel: 0753 685873**

## Scroller price drop

Scroller2, Alternative Image's scrolling and titling system for the Amiga, an early version of which appeared on the very first *AUI* cover-disk, has been reduced in price from £80.00 to £30.00. The decrease stems from two main factors, according to Alternative Image.

The programmer of Scroller2, Tim Moore has moved on to other products including TAOS a parallel processing operating system, which is currently being used in the development of the Spyfish arcade game. Also, according to Alternative Image, the ongoing and unresolved Commodore saga has resulted in the creative presentations company having no further plans for Amiga software development.

After five years of development, these two factors effectively rule out any further versions of Scroller2, they say. Pity, it's a very agreeable and user friendly program.

**Contact: Alternative Image,  
6 Lothair Road, Leicester LE2  
7QB. Tel: 0116 244 0041.**

## Carts Before the Hearse

How the mighty are fallen... Cartridges? What cartridges? That might be the cry as right through the home entertainment side of computing the cartridges are being dumped as fast as anyone can manage it. The shops are simply not buying them - probably because the kids aren't either.

A sign of these parlous cartridgian times is that the once all-conquering Sega are putting their £7 million London headquarters up for sale. They are shifting their warehouse to the Midlands and looking around for humbler and cheaper quarters.

Another indicator that all is not well in the toy side of computing is the fall in the shares of US Gold's parent company, CentreGold. The shares, now quoted on the Stock Exchange, have halved in value recently after they announced an unpleasant little loss for the last six months of £3.8 million. That's a lot of unsold cartridges, don't you think?

Yet another company that had risen on the cartridge boom has slid downward too. The Future Zone chain of shops lost £2.3 million and the value of their shares plunged to a paltry 8p. They are hunting around for a cash injection to shore up the business until times get better.

The reason for all this nasty financial stuff is the fall off of sales for Sega and Nintendo machines which as little more than toys suffer the fate of depending on kids' fashions which can be as variable as the weather in England in March.

It's also possibly true that many companies are either too slow in reacting to market changes or follow fashion blindly themselves. The Editor of *AUI*, when some ten years ago involved in the founding of this very magazine, was told by extremely important people in the software business including one from one of the companies mentioned here, to forget the Amiga, 8 bit machines were the future...Someone said that those who forget the past are condemned to repeat it. He might have commented too that those who bet their future on kids' fashions are likely to be too slow to keep up with them.



# 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 £189  
**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, 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?

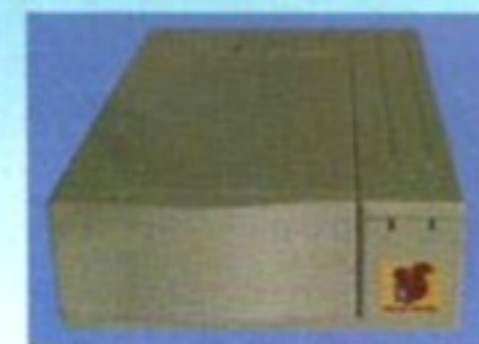
## SyQuest Drives



**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.

## SCSI Hard Drives



**270Mb** £169, **540Mb** £239  
**730Mb** £279, **1Gb** £479  
 Add £60 for external units

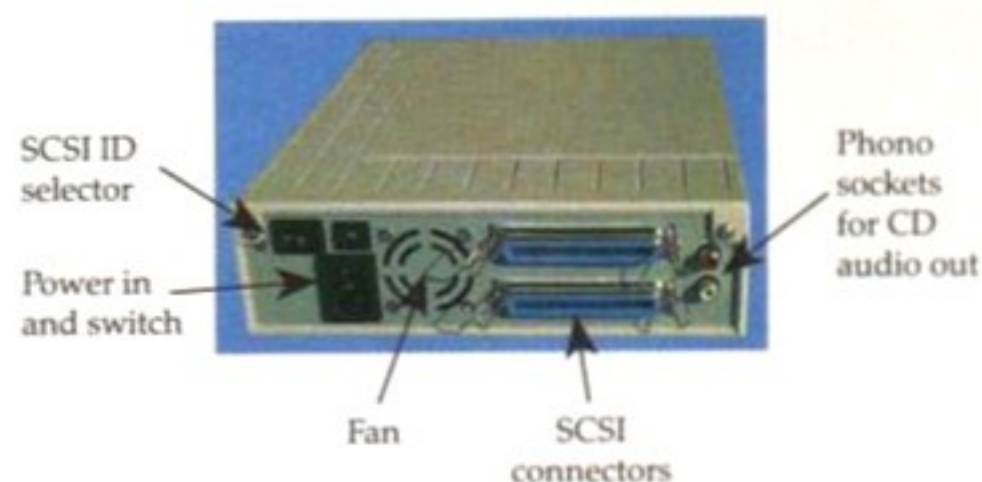


Hard drives are becoming more and more affordable and we can now offer some tremendous prices on a range of superb quality, Quantum drives in a range of capacities.

These drives offer fast seek times (14ms @ 270Mb, 11ms @ 540/730Mb, 9ms @ 1Gb), large caches and high speed data transfer rates (1.5Mb/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.*

## 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 in/out, 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 first SCSI device.



the Squirrel SCSI interface

## Twist 2

Twist 2 is the new, friendly, 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 1: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?



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 modem warrior!

Termite is packed with features and comes with its superb Button Bar already set up for instant access to CIX and many BBSs. **88% Amiga Computing 95% AUI 88% CU Amiga**

The latest of our highly acclaimed sound samplers for the A600/A1200, Aura offers high performance 12/16 bit quality with direct-to-disk sampling plus a host of software features. Octamed 5.04 up compatible.  
**96% Amiga Shopper 90% AUI**

## 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 orders. 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 12/16 bit sampler - £99.95, Megalosound 8 bit sampler - £34.95, ProMidi interface - £24.95, HiSoft Devpac 3.14 - £79.95, HiSoft BASIC 2 - £79.95, HighSpeed Pascal - £99.95, Gamesmith - £99.95, 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.**



# HiSoft SYSTEMS

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

# New Amiga OS?

A group of fanatical Amiga lovers have been reported as planning to write a new Amiga operating system based upon AmigaDOS. The working name is AmigOS and it is believed to be a global effort among many programmers on the Internet.

The group are basing development on the idea that the Amiga's OS is the most striking feature of the Amiga today. However, other platforms have much greater processing power available to them but a inadequate OS compared to the Amiga. The collaborators intend to rewrite the OS with new features, at first to run on the Amiga and later to run on other platforms, such as PCs and DEC Alphas.

Planned features include proper memory and task protection so one failed program won't crash the whole system. Virtual memory is to be part of the OS; it will include PC Windows emulation on Workbench, and "Managers" to handle screens and audio which will make Amiga software platform independent. Managers will evaluate the needs of the software currently running and transparently provide it with whatever the hardware can achieve. AmigOS is planned to be backwardly compatible with old software.

Some Amiga industry pundits have frowned upon the project, partly because it's not an official Amiga OS backed by Amiga International, the management buy out team, or previous Commodore engineers. Watch this space for further developments, if any, on this interesting but uncertain project.



# See the film, play the game

Active Distribution is cashing in "on Stargate fever" - is there any? - with the release of the "Secrets of Stargate" CD-ROM chasing the opening of the film. The CDROM details the making of the epic in which Stargate stars Kurt Russell and James Spader are involved in a sci-fi adventure about the building of the Pyramids.

The CD is claimed to contain about an hour's worth of video from the film (almost half the length of the movie itself) and includes interviews with the stars, detail on the Pyramids and information on how the special effects were created. It also has a game included - though not one likely to impress keen game players.

Acclaim have also entered the Stargate market with Game Gear and Game Boy platform games, as well as MegaDrive and SNES versions.

If you consider that Acclaim are stooping pretty low with those machines, we may have been deceived

but we thought we caught a quick sight of the Acclaim logo as we surfed the TV channels and swished past the fateful world championship boxing match between Nigel Benn and Gerald McClelland that ended with the latter suffering a collapse caused by a clot of blood on the brain due to the battering he received at the none-too-gentle gloves of his opponent.

Computer bloody violence may be only simulated but bad enough, however, to see a computer games company which caters very much to the sub-teenagers sponsoring real live violence is, to coin a phrase, stooping even lower.

Perhaps we were mistaken and it was a different Acclaim. We hope so. McClelland, at the time of writing this, is still in a coma and in a critical condition. Boxing is not just pretend danger and damage, Acclaim might care to remember, if they were the sponsors. It's the real, life threatening thing.

## Five inches and certainly not floppy!

Market researchers are reporting that there are now more CD drives in use than 5 1/4" floppies. A good thing too, as we heard of a man who complained to the Micro Anvika store in London's Tottenham Court Road that he couldn't get his floppy disks to work. He was told he should stop folding his old 5.25" disks in half and stuffing them into the 3 1/2" slot, a procedure he had thought was the way to solve his problem. He was, of course, a PC user



Z88: Connect the Amiga to a Z88.

## Z88-Amiga Connection

Readers inspired by our review of the Z88 in the April issue are now eagerly seeking software and cables to connect it with an Amiga. The cavalry has arrived in the form of Sector Software. For £25 they will supply you with a unique serial connection cable and AZLINK software. The former connects your serial port and the Z88's mouse-like port, and the latter is loaded

onto the Amiga, allowing you to back-up and swap files or use the Z88 as an extension of the Amiga. We've used it here in the AUI office, and it's a very capable package.

**Contact: Sector Software,  
39 Wray Cres, Leyland,  
Lancashire, PR5 3NH.  
Tel: 0772 452 414**

## Where do you play with yours?

A market research company has reported: "Nintendo is looking at ways of attracting new users but wants to entice different users into the existing retail outlets rather than broaden where Game Boy is sold". Oh really?

Less profound findings in the report are that 43% of users admit to playing Game Boy in bed, 31% of men like to play on the loo, while 15% of women prefer playing in the bath. Maybe that will give Nintendo an indicator of where to target their marketing strategy!

(Could the expression "Game Boy" be a euphemism for something else?)



## 5 Gig juke box

Almathera is expanding the range for CD ROM with the Nakamichi 7 discs CD ROM changer. The external box is, say Almathera, no higher than the A4000 and the width of a conventional CD ROM drive but will take 7 discs set up in seven mountlist entries giving you CD0 to CD6 on your machine.

The drive switches the disc automatically and gives nearly 5Gb of data in one go. The SCSI/SCSI2 interface requires a SCSI card that can support multiple LUNs and standard SCSI direct.

The standard disc compatibility

besides CD ROM is CD-DA, CD-ROM XA and PhotoCD. The data transfer is sustained double speed 300KB/s and 2800 KB/s with an average access time of 380ms.

A headphone socket in front and two RCA-type phone jacks on the back provide the audio outputs.

Price: £345 inc. VAT  
**Contact: Almathera,  
Southerton House,  
Boundary Business Court,  
92-94 Church Road,  
Mitcham,  
Surrey. CR4 3TD.  
Tel: 0181 687 0040.**



# Jetsetting Label

Avery has launched a range of inkjet labels created, they say, specifically for colour inkjet printers. The new labels have been designed for brightening up and individualising mailshots with colour or adding the final touch for a presentation or file. The labels come in 14, 16 and 21 labels per sheet with special 8 per sheet size designed for parcel labelling. Each pack of 25 sheets retails at £19.95 and carries a money back guarantee. The new range is packaged in a

Eurofolio which, say Avery, can be reused for filing or presentation of paperwork. The Avery Inkjet Label formats are templated into the majority of word processing packages as well as Avery's own software package Label Pro.

**Contact: Avery Office Label, Gardner Road, Maidenhead, Berkshire. SL6 7PU.**

**Tel: 01628 764000. (Recognise the address? It's where the still surviving CBM UK lives too!)**

# Camden plays around

If you live in the north London borough of Camden, you may be interested to know how your Council tax is being spent. Council staff have apparently become deeply interested in new technology, investing more of their time in the potential of virtual reality urban connotations than solving the actual problems of the borough.

So interested were staff in technology that they allegedly spent more time than they should with their computers. The only trouble was in this dedication to

technology that they appeared - shock! horror! - to be playing computer games. (Surely, Mr Wapp of Environmental Control, that isn't Monkey Island on your screen!... On no, Director of Social Services, Pish, it's a new style spreadsheet of out of hours noise pollution!)

Now Council officials have offered an amnesty to staff who play computer games at work after the repeated warnings about the unauthorised use of software. Either they come clean about their virtual habits or face disciplinary action.

# Fake 3DOs at large

Customs officials were tipped off that pirated versions of the Demolition Man game on 3DO were being shipped. This tip-off resulted in the 3DO software being seized at Heathrow Airport. Sightings of cracked 3DO software were first reported a year ago in the US which were on their way to pirate disks in the UK. Blobby 14, the 14th edition of a series of compilation CD ROMS holding pirated software carries 3DO titles as well as OS/2 Warp and the PC CD ROM Heretic. (What no Amiga?) Bob Faber, 3DO's MD seems unconcerned. In fact the company sees this first instance of piracy as a sign that 3DO has come of age! But we thought one of the main advantages of CD-ROM over floppies was that piracy wouldn't happen? Oh well, another illusion bites the dust.



# MO Drive



Fujitsu have released the M2512A - EXT magneto-optical disk drive as a second generation MO drive which has a storage capacity of 230Mb per media.

We have just received and are now using one and we should be reviewing it in the next issue of AUI.

**Contact: Fujitsu Europe Ltd, 2, Longwalk Road, Stockley Park, Uxbridge, Middlesex UB11 1AB. Tel: 081 573 4444.**

# Data protection

An up-to-date reference book for people who process personal information on computer is now available free of charge from the Office of the Data Protection Registrar. A new series of the Data Protection Guidelines, last revised in March 1992, has been issued explaining the implications of the Data Protection Act 1984 and how it should be applied in practice.

The Data Protection Act 1984 requires that, with few exceptions, any organisation holding or processing personal data on computer must register with the Data Protection Registrar. Once registered, they must comply with eight rules of good information handling practice contained within the Act which state among other things,

that personal information should be accurate, not excessive, held for only as long as necessary, and kept securely. The Guidelines recognise the many developments in information technology which have taken place since the Act was passed in 1984 and also take into account rulings independent of the Act. A particular area where previous advice has now been expanded concerns the obligation to ensure that personal information is always 'fairly obtained'.

**Contact: Information Services Department, Office of the Data Protection Registrar, Wycliffe House, Water Lane, Wilmslow, Cheshire SK9 5AF. Tel: 01625 535777.**

# Romeo, Romeo - wilt thou interact with me?

The BBC, Harper Collins and Attica have also not been overlooking the potential of the Bard either. They have released the CD ROM version of Romeo and Juliet. Featuring extracts from classic BBC productions, the complete Alexander text of the play, along with the audio version, sections on language, themes and character. The educational package is priced at £75.00 while the consumer package at £49.00 apparently offers 'a fascinating introduction to Shakespeare that is both fun and educational'.

**Contact: BBC Educational Publishing, 0181 752 5335.**

# “Rumbelows is closed”

The chain of stores that was controlled by Woolworth's parent company Kingfisher has copped out of the competitive high street electronics trade. Rumbelows had made a loss of some £12 million and the Woolies company cried enough and shut down the 200 plus store chain. We've seen queues outside the shuttered shops of people hopeful of picking up bargains as prices were slashed to get rid of the stock.

Less than pleased by the whole affair is Atari whose plodding Jaguar was dumped by the dying Rumbelows at a measly £99. Not a price to delight the other dealers stuck with the slow

selling machine at an RRP around £199. However, perhaps as a response to the Rumbellian debacle, it now seems that the Jaguar will be on sale around the country at £149.

Rumbelows, you may remember, last year played a role in the distribution of **AUI** disks in exchanging them for Amiga CD! disc No.2 for those who didn't want to keep what now might turn out to be collectors pieces. With prices of machines such as the Jaguar falling like the proverbial stone, the successors to CBM had better get their skates on before the whole market, like Rumbelows, folds up its tents and steals away.

## Bottoms up

A single by Kenny Everett 'won' the award for the worst single ever, but there is now a challenger for the serious bad taste prize. What is it? None other than the karaoke version of Shakespeare. Yes now on CD ROM, Karaoke Macbeth and Karaoke Midsummer Night's Dream has been released by Beaufort Publications, and offer aspiring thespians the opportunity to overact or overreact. Not so much a dream, more like a nightmare! It's on PC, of course.

## Techno-what?

In an interesting survey contrast to an earlier news item which reported on the number of new computers being purchased in the UK, Key Note tells us that hi tech is still going over some of our heads.

In a survey by Gallup for the report, just 18% of over 1000 people questioned said that they considered themselves to be a competent computer user, while well over a third (37%) said they rarely if ever use a computer.

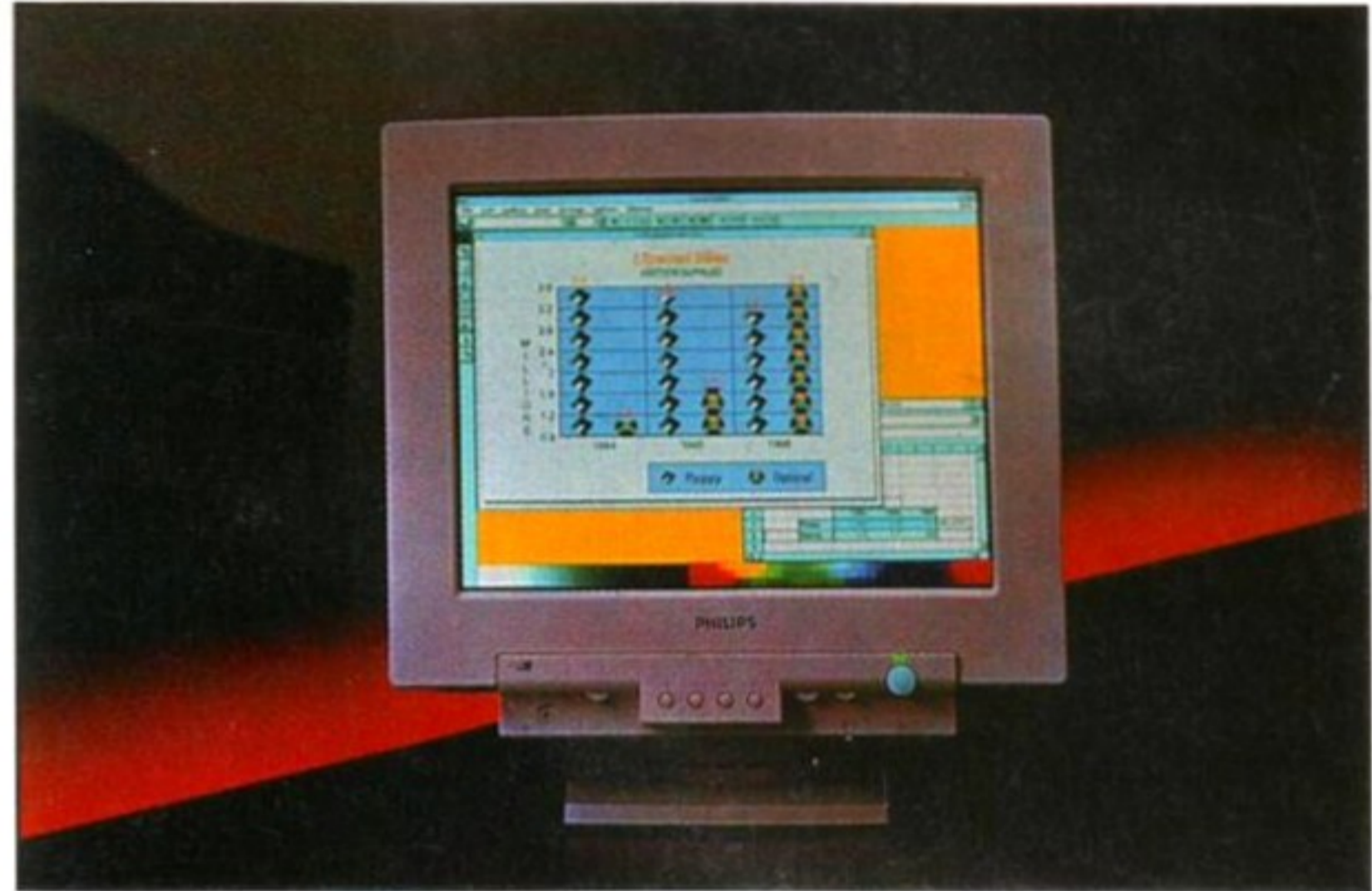
Just 19% though that the price of computers made them an affordable

proposition for the small business or the average family. Under a quarter (24%) said they used a computer for business reasons, 20% said that they used a computer to play games and 15% said that they used a computer for educational purposes. Only 11% said that they made a conscious effort to keep up to date with developments in computer technology. Only 6% said they used electronic mail.

If they had asked **AUI** readers, doubtless the percentages would have been substantially higher - except maybe in the games playing area.

## TOEING THE LINE

Toys 'R Us are somewhat miffed to find that an adult video firm has released a toe fetish title - *Toes R Us!* billed as "sucking horny". The toy firm doesn't see anything funny in the play on words. But Janus, the Soho based retailer who stock the video, said the film had been passed by the censors and can't imagine why the toy store has a problem with it. (Perhaps it will prompt Toys 'R Us to think about their name. Don't you just hate toys and Toy Shops who deliberately misinform children with spelling?)



Bigger and better, one of the new generation of monitors.

## Stereo Audio Monitor

Philips is encouraging multimedia users to upgrade to 17" screens with the launch of a mid price 17" autoscans colour monitor. The 17B features On Screen Display control functions as well as built-in audio speakers. The Philips 17B is part of a new generation of Philips monitors to feature On Screen Display (OSD). Via the digital controls, the OSD provides the user with easy management of a

wide range of adjustments including trapezoid, tilt rotation, colour and power saving say Philips. Stereo audio is built into the 17B which eliminates the need for separate speakers. This, Philips believes, may appeal to CD ROM and multimedia users who need a large screen monitor in a limited space.

The 17B is priced at £849.00.

Contact: Philips Business Electronics Tel: 0181 689 4444.

## Penguin's Crucible

Arthur Miller's world-renowned play, the Crucible, has been chosen for Penguin Books' first CD ROM. Besides having the full text of the play, maps, illustrations and various original documents have been included courtesy of the Arthur Miller Center for American Studies. The Crucible CD ROM will be supported by Penguin's new Internet site to enable teachers and students to post messages about their approaches to using the CD ROM in the classroom.

## Still Supporting The Amiga

Silica have launched an Amiga dedicated catalogue containing offers and new products. The 8 page free leaflet confirms, they say, Silica's commitment to the computers and contains information on each product with detailed specifications, performance information and photographs. Included in this catalogue is the launch of the Fusion Video Genlock from Amitek at £99.00 - reviewed in this **AUI** - and the Picasso II for £299.00. New products include the Sensible World of Soccer, New World of Lemmings and Skidmarks 2.

It's pleasant to see that some of the companies who have made money out of the Amiga are still loyal to it. Though it must be said that the catalogue doesn't seem quite so bulky as those Silica have brought out in the past. Bigger next year?

Contact: Silica, 1-4 The Mews, Hatherley Road, Sidcup, Kent DA14 4DX. Tel: 0181 309 1111.



Still products galore from Silica.

# AT&T joins ELSPA



**A**T&T, the global computer and communications company, has become an associate member of ELSPA, the trade body for the leisure software industry, following a successful operation by the ELSPA Crime Unit which uncovered extensive telephone calling card fraud.

The operation, which led to two arrests in the US and one in the UK, began when ELSPA investigators discovered a cache of over 50,000 stolen AT&T calling card numbers on the Living Chaos computer bulletin board. ("Living Chaos" We love that name. It describes our lives exactly!)

The investigators were searching the Northumbria-based bulletin board for pirated leisure software as part of the Crime Unit's war against software piracy.

Similar to credit cards, calling cards have personal identification numbers which enable legitimate users to make overseas phone calls on account. If stolen however, unauthorised users may be able to make free phone calls.

We hope they're not too hard on them though. Anyone who calls anything "Living Chaos" has our sympathy - and empathy.

## The Rise and Rise of CD

**T**he inexorable rise of the CD continues unabated. An earlier item in this NewsFile reported that it had overtaken the old 5 1/4 inch format. That was in the serious computing area. Now figures reported by Gallup show the gains the format is making in the entertainment field.

CDs which had only 2.6% of the games market in December 1993 had risen by December 1994 to nearly 10% and are gaining ground each month. One of the companies that has realised the potential, Electronic Arts, jumped from 1.6% the year before to 19% in the

last month of the year.

Sega, the one-time top seller, had a crashing fall from over 36% to below 9%. Unsurprisingly the Amiga CD 32 in the same period slipped down from 20.4% to 7.5%.

In floppies, the Amiga was the best selling brand though its share went down from around 60% to 52% but it still outsold the PC. Though it's likely that the trend for the PC is rising while, sadly in the present situation, the Amiga's must be declining.

What's the betting that by December 1995, the CD will be topping everything?

### ELSPA puts the boot in

**A** car boot dealer was imprisoned recently following an investigation by ELSPA into pirated software.

Darren Hewitt of Colchester was charged with eight offences of selling copies of computer games at Ardleigh Car Boot Fair. ELSPA officials also visited Hewitt's home and purchased eight titles by Electronic Arts and US Gold. As the money changed hands, police entered with a search warrant and confiscated all of Hewitt's equipment and software. It was the second time Hewitt had been prosecuted, last time Trading Standards officers caught Hewitt at another car boot sale. On that occasion he was fined £130. Some people never learn, do they?

## VESA? VESA?

**Y**ou may have read in those proliferating ads for PCs about them being 'Vesa' compatible. What, we heard you cry, was this 'VESA'? To help you, dear reader (and us too in case anyone asked!) we went and found out.

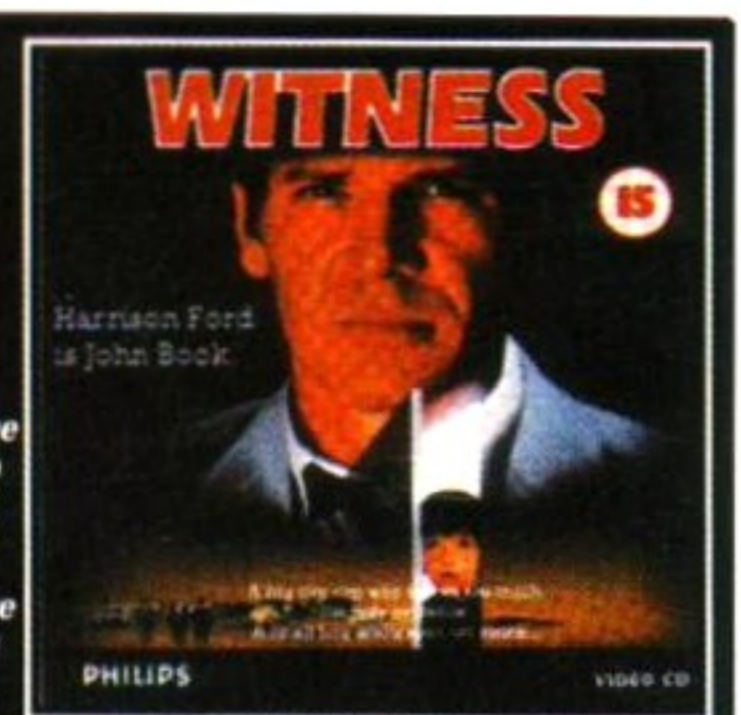
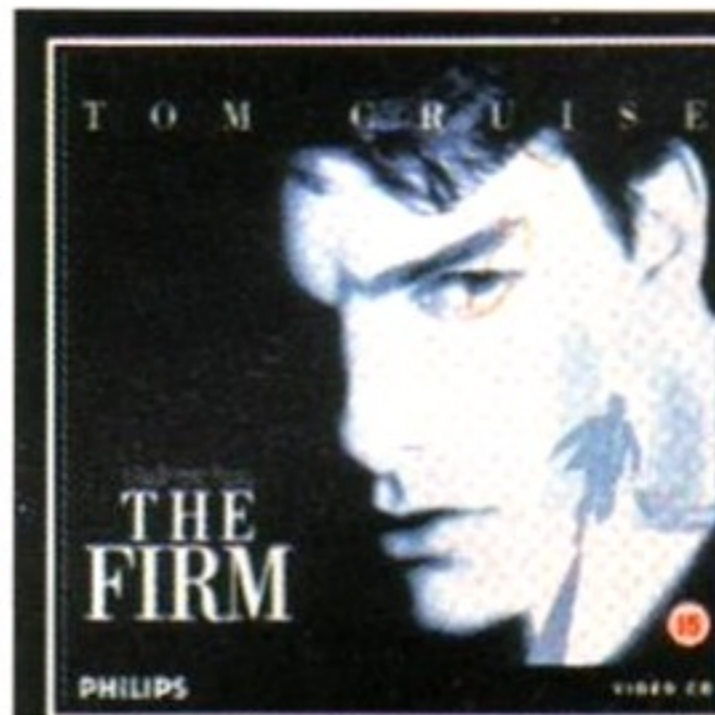
The new industry standard VESA Media channel is a dedicated real time multimedia highway which has been specified as a modular, scalable, low cost replacement for the outmoded VGA feature connector. The VM Channel standardised digital video interface pushes multiple uncompressed video streams around a system, regardless of its resolution or refresh rate. It minimises system components to reduce complexity and cost, it is technology, device and bus independent - which means it can run on anything compatible. It's also intended to make systems easily upgradable or interchangeable via a simple ribbon connector.

So now you know! Watch out for it because it's becoming standard for virtually all multimedia computers.

## LYNX GOES CHEEP!

**J**aguar's Atari may be going for a song at Rumbelows but bargains can be found in other places too such as in the mail order catalogue of Special Reserve. The price of Atari's other big success, the Lynx, has been dropped from the list price of £49.99 to just £29.99 with a free copy of Batman Returns thrown in! Lynx was once priced at £129, which must make early buyers sick when they see the hand-held cost slip through their fingers. Not literally, of course. It's very sad when you think that the Lynx, as we have pointed out before, was developed by the ex-Amiga team of RJ Mical and Dale Luck, now graduated to the 3DO. Which may have been the reason that many people found the Lynx bore a surprising similarity in some ways to the machine we use and love and which isn't for sale at £29 yet and we hope never will be. If you want a hand-held which is really cheap, contact Special Reserve who say they have plenty of Lynx software too at under £9.

## Sony v Philips Video Wars



War on the video CD front as more movies are released on CD.

## Intel Gets into Overdrive

**N**ot content with threatening the world with the next big thing in microprocessor technology, the P6, Intel has launched its first Pentium Overdrive chip while at the same time dropping the price of existing Pentium chips in a bid to boost sales.

The Pentium OverDrive is a snap-in chip that upgrades the Intel 50MHz SX2, DX2 and 25MHz 486 chips to run at 66MHz. At £299, the chip gives, according to Intel, a performance boost of up to 200%. The price of the DX4 OverDrive range, with a cut of £200 on the 100MHz upgrade comes down to £249.00.

World domination, and nothing less, seems to be the motto these days of companies in the PC field. If it ain't Gates, it's Intel...

**S**ony has declined to join forces with its rivals in the production of a new generation of multimedia discs preferring to opt for the competitive spirit even though it may mean a standards war. Last time Sony took this path was when it pitted its Betamax for videos against Matsushita's VHS format. And we know who won that one. Sony also tried to gain a share of the CD market with Mini Disc and even

though it has had some limited success, there are still no signs of us all swapping our full-size CDs for Mini discs as yet. This time the war will be waged over rival technical formats for digital video discs. These compact discs are expected to replace pre-recorded video tapes as the predominant form of packaged video entertainment within the next few years. Can't these people ever work together sensibly?



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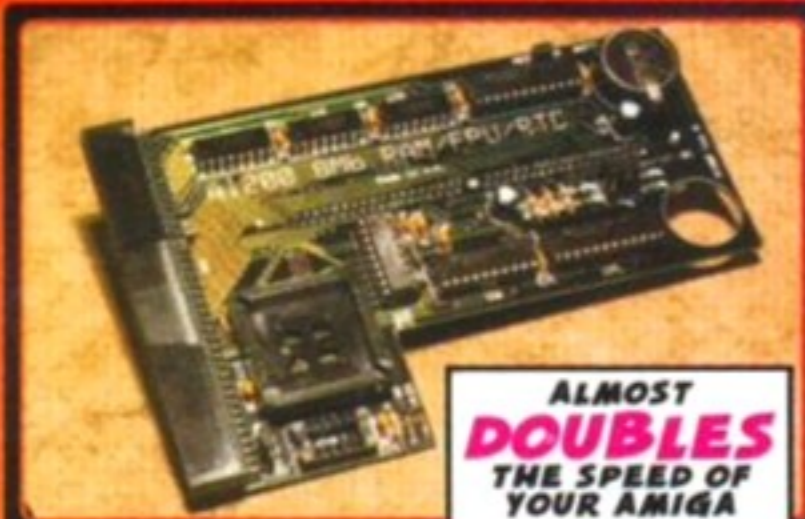
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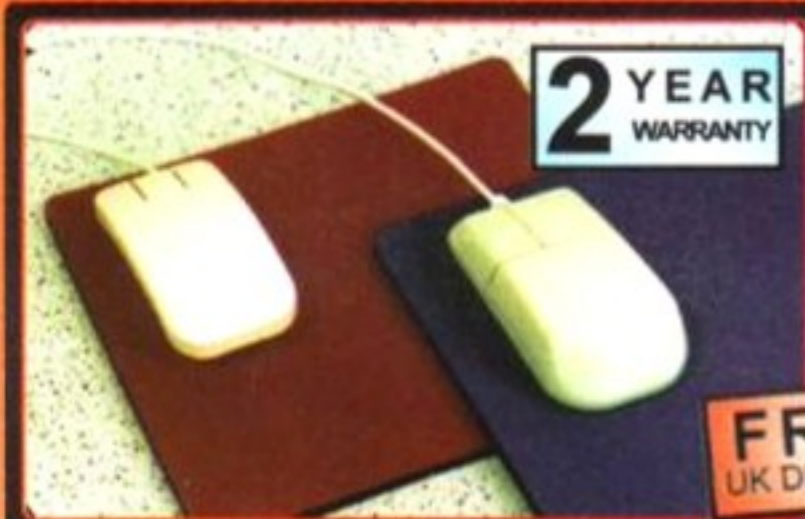
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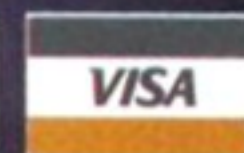
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## Beat the National Ripoff

**J**ust Lotto, at £19.99, is for gullible PC users aiming to predict the National Lottery numbers! We all have our methods but as far as we know there has been no research to verify the success rate of any system in this Government sponsored rip off...

Just Lotto is said to be based on mathematical theory and analysis of previous winning combinations, it detects patterns and tries to predict

the winning numbers.

For individual or syndicate use, the program attempts to help punters to plan and manage complex number combinations. Each week you can enter the winning numbers and Just Lotto uses the Link Number theory "to fine tune your entry". On the other hand you could try family birthday dates, or ages. House numbers? They don't work either.

## ENABLING DISABLED PEOPLE

**T**he European Commission is funding research into devices which would provide people who have had amputations with cybernetic limbs that could be directly controlled by the brain. That may be futuristic but already people with disabilities are being helped through the use of technology. For instance, the increasing availability of computer networks, such as the Internet, has opened up new sources of information and communication. A bulletin board designed specifically for disabled people has recently been launched by Ken Davies, a self taught computer expert, for the British Computer Society's Disability Group.

Another development has helped George Halliday, the area manager for GEC for the north-east to retain his job. Having lost the ability to speak through motor neurone disease, he uses a notebook computer, a speech synthe-

sizer and software called EZ keys, a word prediction package. There is room for improvement in the package, he feels. For a start he would prefer an English accent, especially if it were in his native Tyneside brogue, rather than the American voice of 'Perfect Paul'!

The man who is said to be the most brilliant alive, Stephen (Brief History of Time) Hawking, also has motor neurone disease, and is dependent on the same technology as used by George Halliday.

Perhaps one of the most encouraging aspects of the developments in technology is its increasing use by disabled people. And as old age catches up, inevitably, with all of us, we may all become more and more grateful for the creative use of the magic micro-processor to replace our failing faculties. (No, dear Editor, this is, of course, not in any way a reference to you!)

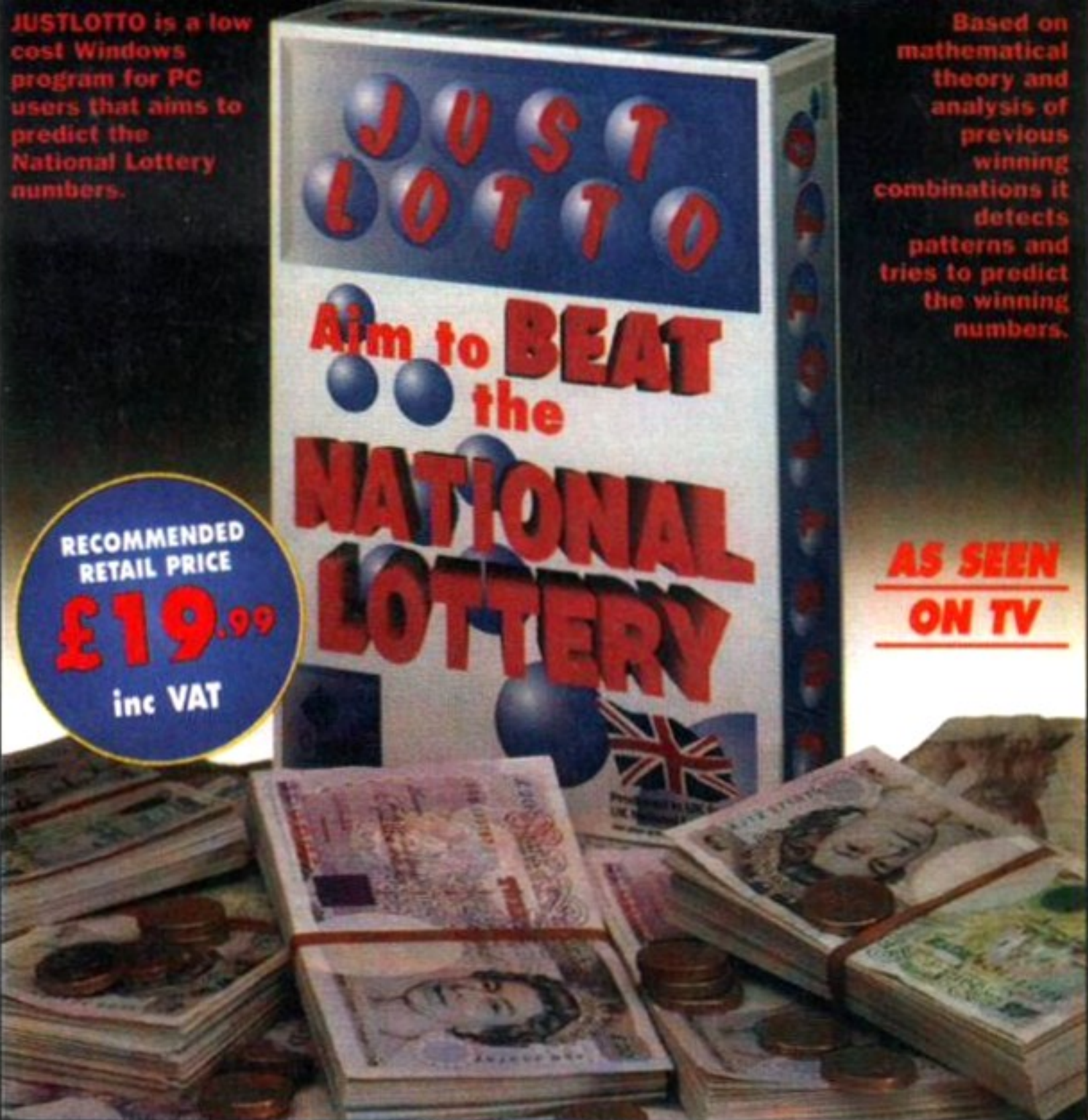
## TOTAL PROBLEMS

**T**otal Computer Supplies and WTS Electronics, two companies active for some considerable time in the Amiga market, have been investigated by the Bedfordshire Police Fraud Squad over alleged claims that they have not supplied goods which customers had ordered and paid. Most of the complaints, according to the Fraud Squad, relate to failure to supply Amiga computers, among other products. **AUI** was told that customers asking for their money back after prolonged periods waiting for their order had been unable to get refunds. Those who believe they have problems with Total Computer Supplies or WTS Electronics are asked by the Fraud Squad to contact them on 01234-842 660.

Total have told **AUI** that there have been problems in obtaining enough Amigas to satisfy orders and that they had informed potential customers of the possibility of considerable delay.

Until further notice, **AUI** will not be accepting advertising from either company.

**JUSTLOTTO** is a low cost Windows program for PC users that aims to predict the National Lottery numbers.



Lottery? Your numbers up...

## Quad Speeds Down : ALL SQUARE

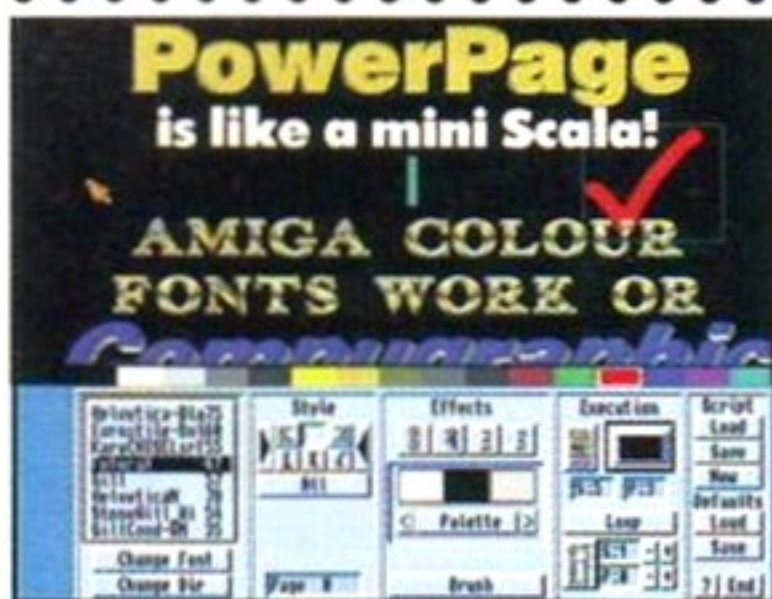
**T**he price of top of the range enhanced IDE CD-ROM drives has come down to £130 with the launch of the internal quad speed IDE drive from NEC. The quad speed drive, say NEC, uses an EIDE (Enhanced Integrated Drive Electronics) connection. NEC is offering a special introductory package comprising the NEC 4X IDE drive and a copy of Microsoft's Encarta 95 for £199.00.

The new product is aimed, say NEC, at the SOHO and home user market as a definitive solution for all CD ROM requirements. The advantage of a quad speed CD ROM drive is that it enables the smooth running of audio and video CD applications and complex multimedia packages.

It is reported that CBM - or what's left of it - and their ex-MD have buried the hatchet - and not in each others' backs. Commodore Business Machines (UK) Ltd and Steve Franklin, who was Managing Director of Commodore UK from May 1987 to July 1992, have agreed to withdraw their claims against each other with neither party admitting liability. It was a considerable sadness that CBM accused Franklin of all sorts of heinous corporate crimes after he left and it's taken years for everyone to let the whole thing drop.

Steve Franklin commented that he was happy enough to forget the whole thing and anyway there wasn't much point in going on with it as even if he had won, with Commodore's present state, there wasn't anything for him to get.

Still it's a good thing that common sense and goodwill has prevailed and nobody from both sides who have served the Amiga community well has suffered.



**I**n last month's April issue we reviewed an impressive titling package called Power Titrer on page 36. The contact name and address given on the page was incorrect so we apologise for

## Power Titrer Update

that slip up. The real publishers of Power Titrer are ClassX Development who also are also responsible X-DVE which was reviewed in the same issue.

ClassX Development can be reached on ++39 586 749206. Via Francesca 463, 56030 Montecatini (PI), Italy. We were originally told the retail price was £40, but they have now suggested an increased UK retail price of £65 plus VAT. Their other product, the excellent X-DVE, retails for £118 plus VAT.



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SAU5

It's comforting to know that although no new Amigas have rolled off the production line for a full year now, third party manufacturers are continuing to support and develop for the Amiga which still receives so much respect from its users. You would have thought that if a company goes down the drain its products would soon become abandoned by everyone as they move on to new pastures. Not so for the Amiga as we clench our fists and think of all the wonderful things this friendly breed of machine can do, and its achievements going back a whole decade.

## King of the Heap

Even now, ten years down the line, the Amiga is still the only home computer that can be plugged directly into a TV or VCR and produce high resolution true colour graphics for such a cheap price. Take the A1200 which costs around £300 for example. The colour composite output on the back will let you record your own pictures, animations and titles onto video tape without having to lash out on extra hardware. To do this on an equivalent PC you'll have to spend at least three times the price of the A1200 for a suitable system.

## Why Genlock?

So why would anyone need a genlock? A600 and A1200 owners are lucky because they can output in colour

straight to VCRs. Other Amigas need a PAL encoder of sorts to be able to do the same. Amiga genlocks have a built-in PAL encoder, plus the actual genlock circuits and a keyer.

The main task of a genlock is to synchronise two video sources together - so they "tick" at the same time. Amiga genlocks incorporate a PAL encoder and a keyer as well providing extra features for users. The keyer removes a particular colour from the Amiga display making it transparent so live video will show through underneath as a second layer. Generally, the first colour of the Amiga's current palette is used as the key colour.

## Lola L1500 £172

### Lola Marketing

Lola have a good reputation for making very affordable genlocks, ideal for the beginner, like the Minigen for around £50. Then there's the Minigen Professional which we reviewed in September 1994 in the *AUI* Video Special. It seems that my main criticisms of the latter model have been addressed by Lola in their new product which looked promising from the second I opened the box.

The L1500 has been built with Lola's new 1452-01 custom genlock chip. This, they claim, is a revolutionary device providing features exclusively found in expensive broadcast



A plethora of Genlocks this month for the best low price video production computer.

# Genlock Update

**We all know the Amiga is the best low price computer for video production. Gary Fenton test drives three new genlocks.**



Amitek have been busy this month with a genlock and other Amiga products.

equipment at a fraction of the cost. Features of this new chip include an enhanced horizontal system which ensures stable

Amiga graphics at all times, even when no video signal is present. It can also lock to non standard signals, like the output of a VCR when in fast forward or rewind.

That's on the inside of the box but what of the outside? Dual faders provide mixing between Amiga graphics and video, and keyed graphics and video, while the second fader fades the picture to black. Three buttons

provide frame interval switching between keyed, Amiga, and video sources. LEDs within the buttons light up to let you know which one is active and a LED at the top of the unit indicates an external video source.

Two BNC connectors on the back are for a composite video input and output. BNC connectors are used in professional environments because these connectors don't just limply plug in to the sockets but with a twist they lock securely in to place to ensure they never come loose.

Since most domestic equipment use phono connectors instead, two BNC to phono adaptors are gener-



## Aren't You Glad?

PCs and Apples Mac don't run to PAL TV specifications, so scan rate converting hardware has to be brought in for their VGA type video displays to be converted to PAL video. After that cost you have to add genlocking and keying hardware to superimpose graphics on top of video.

That's one reason why the Amiga is still better, plus the Amiga natively works in overscan and interlace resolutions and can play some animations back at 50 fields per second - a requirement for broadcastable video. Then there's the software which con-

sists of some incredible tools for video effects, captions and animations.

But I don't need to convince you about the Amiga's abilities and relationship with video since you already have an Amiga yourself, you must know.

By the way, you don't have to own a camcorder to make the most of video production because impressive visuals and sound can be created on the Amiga without requiring live video from a camera. However, if you have a VCR then a video digitiser would be a beneficial buy for those with creative blood.

though the colour, design, and controls were different.

The single main feature which separates these two units is the absence of a fade to black slider which the Lola model has. Instead, a single slider sits on the far right of the genlock which mixes in and out Amiga and keyed Amiga graphics with the video source.

Three round buttons rest horizontally on the face of the genlock which have corresponding LEDs above to show which button is active. These buttons "cut" between Amiga only, keyed, and video sources. The video is pumped in through the back using a phono composite connector, not a BNC one as found on the Lola model. There's a matching output connector for connecting to VCRs, and a RGB through for wiring up to RGB monitors. A chroma key output socket mimics the Lola model for connection to, this time, an optional Amitek chroma-key unit.

As a bonus, Scala Home Titler has been thrown in to complete the package. This cut down version of Scala lets you add graphics, text, and wipes to your video productions.

## Quality

Picture quality was near enough the same as the Lola L1500 although on my A1200 the Amiga graphics jittered horizontally every 10 or so seconds when a video source was present. Silica assure me that Fusions currently shipping don't have this problem anymore with 1200s. Keying quality is good with no washed or ghosted edges to the graphics.

The buttons, I have to say, don't feel as comfortable as the Lola's, probably because they're slightly smaller and look less attractive. The single slider runs smoothly up and down as the graphics neatly mix with the video picture.

## Conclusion

I think we can all conclude that the picture quality and everything else is the same as the Lola L1500, apart

from the few discrepancies I mentioned. My closing comments are directed at Amitek's design which is rather humdrum, finished in a rough textured, almost Amiga cream white paint job.

Overall, the Fusion is cheap (okay, I'll use the word affordable if you like) and does its job well providing good quality results for first time buyers.

## Rendale 9402 £299 Marcam

There hasn't been a new consumer genlock from Marcam for years, so it's very agreeable to see them come out with a brand new product. The 9402 is a YC device which requires a S-VHS type video source from a Hi8 camcorder, S-VHS camcorder or VCR, laserdisc, or anything else you may have which has YC outputs.

Video supplied as YC comes split in to two main parts: luminance (brightness) and chrominance (colour). Because these two elements are carried separately along S-VHS type cables and also processed separately, the resulting picture is of a much higher resolution and quality than normal composite video. Colour is also considerably cleaner and doesn't "wash" or bleed as much as composite video.

The 9402 uses new technology to make the most of the high bandwidth available from YC video incorporating buffer amplifiers which, Marcam claim, have a bandwidth of over 100Mhz resulting in the total reduction of chroma beat patterns on the edges of keyed graphics.

## Features

There are two YC connectors on the back, one for input and one for output. I'm surprised that Marcam didn't include any composite connectors as well in case their customers want to use composite video at some point. However, I am told Marcam can provide a £50 add-on which will give composite connections if required. →

ously (but more so conveniently) provided with the genlock. A screwdriver also comes with so you have no excuse for not securing the RGB video cable to the Amiga and genlock with the screws fitted within the connectors.

An RGB through connector on the back lets you plug in your RGB monitor so you can see a sharp Amiga display at all times, even if you're not using the device for genlocking. The sixth and final connector is for Lola's optional chroma key unit which overlays live video on top of Amiga graphics (like weathermen (or women) on maps).

## Quality

The composite picture is indeed very good with a stable and clean look, providing you supply a good video source to start with. I have no complaints whatsoever about the picture quality.

Unlike previous Lola models, the buttons are of excellent quality which each requires the same amount of pressure to activate and work with every time - there's no halfway point, they are either on or off - giving a very confident, solid impression. The same goes for the sliders which are extremely

smooth and run along the grooves steadily in a predictable fashion. The resulting fades and mixes are impressively performed and are both consistent and clean.

The aesthetic finish to the hardware is a great improvement on the Minigen Professional. Gone is the cheap amateur appearance and in comes the cool professional look which I'd welcome with open arms along side my setup.

## Conclusion

A professional feel and high levels of performance from a neat, compact genlock. Lola appear to have brushed down their suits and put on their ties! I'm positively impressed by this one and have no reservations in recommending this to rookies or even virtuosos looking for better features and quality than perhaps their old genlock provides. Well done, Lola. A jubilant product and a winner for you and your customers.

## Amitek Fusion £99 Silica

I was surprised to find that after opening the box the Fusion looked remarkably similar to the Lola genlock even

## RGB Through

All three models have RGB through connectors allowing you to view the Amiga display on an RGB monitor. I have both a Sony TV with a SCART RGB input and a Commodore 1960 multisync monitor. None of these genlocks managed to output the Amiga's display via the RGB through connector to my Sony TV. All I achieved was a black screen. The strange thing is that none of the genlocks I reviewed last September had this problem, including a GVP G-Lock which I regularly use. However, employing the 1960 monitor instead worked with all three genlocks.

A helpful Pete from Marcam explained this was due to my SCART cable being wired up differently. Some genlocks don't carry power through to the RGB connector which is required by some variations of SCART wiring. A minor correction to my SCART cable would put it right.

## Genlock Update CONTINUED

The only other sockets on the back include RGB through, a power input, and a thick red 60cm cable which plugs in to the Amiga's RGB port. An external power supply is supplied with the genlock.

Five buttons on the front select the video mode. There's Amiga only, video only, keyed using colour 0, and two other key modes. These other key modes use all colours between 0 and 15 below a certain brightness level as a key colours. Finally there's the dial which fades Amiga graphics in and out. I find using a slider easier to control than a dial and I know professionals do too, otherwise £50,000 mixing desks would have dials instead of sliders for mixing!

## Quality

As you'd expect, this Marcam product produces excellent results in the quality department. Keying is very sharp and the picture quality remains as crisp as the original without colour bleeding and chroma beat patterns you get with composite genlocks. (Tip: if you set your RGB levels too high on the Amiga some colours will bleed, as it would with any other genlock. PAL video can't tolerate high colour saturation that RGB monitors can handle.)

## RATINGS

**L1500 £172.00**

|             |      |
|-------------|------|
| FEATURES    | 80%  |
| PERFORMANCE | 90%  |
| LOOKS       | 90%  |
| FEEL        | 100% |
| PICTURE     | 80%  |
| QUALITY     | 70%  |

**Overall Rating 85%**

## RATINGS

**Fusion £99.00**

|             |      |
|-------------|------|
| FEATURES    | 70%  |
| PERFORMANCE | 80%  |
| LOOKS       | 70%  |
| FEEL        | 80%  |
| PICTURE     | 80%  |
| QUALITY     | 100% |

**Overall Rating 80%**

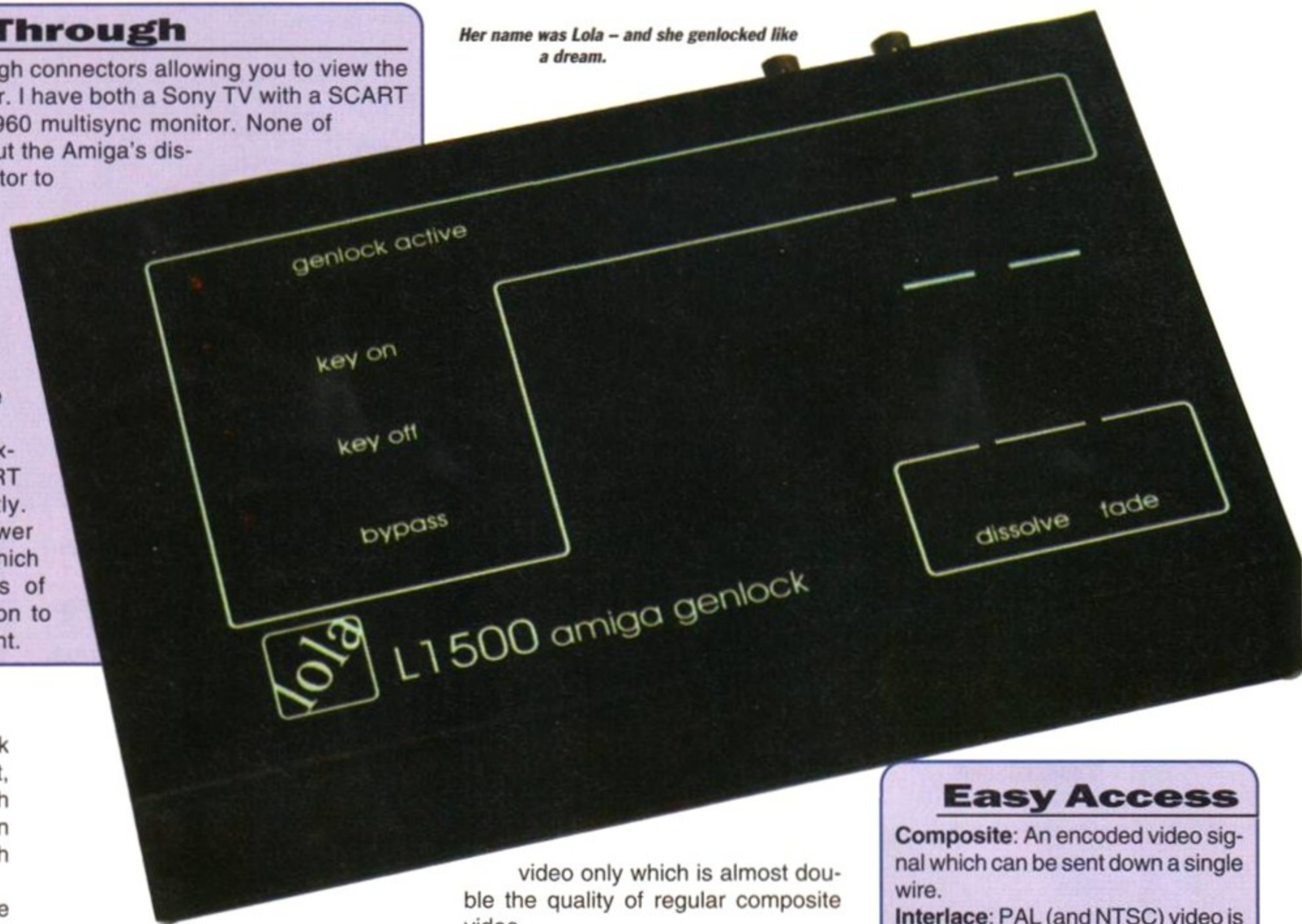
## RATINGS

**Rendale £299.00**

|             |      |
|-------------|------|
| FEATURES    | 70%  |
| PERFORMANCE | 100% |
| LOOKS       | 60%  |
| FEEL        | 70%  |
| PICTURE     | 100% |
| QUALITY     | 80%  |

**Overall Rating 80%**

Her name was Lola – and she genlocked like a dream.



## Conclusion

This is another good quality product which was designed specifically for S-VHS and Hi8 users who purely require maximum video quality for their productions. It's slightly more expensive compared to the feature packed G-Lock, but putting that aside, the YC video quality makes up for this which is easily the best in the price range. The case could have been designed with a more contemporary style (it looks 1970's!), but serious YC users will appreciate this product just the way it is as a splendid genlock, keyer and YC encoder.

## Ratings

All of the genlocks performed well and the ratings here serve as a comparison between each model. The only exception is the picture quality rating for the Rendale genlock. It can't be compared to the other two on the same grounds since it outputs YC

video only which is almost double the quality of regular composite video.

The ratings under the rather dubious heading of "feel" refer to the feedback and impression you get from the controls. I think this is an important factor which can add to the satisfaction of using a genlock. **AUI**

## Contacts

**Product: Lola L1500**  
**Contact: Lola Marketing Ltd,**  
 57 St Mary's Road,  
 Market Harborough,  
 Leics, Le16 7DS.  
 Tel: 01858 433501

**Product: Amitek Fusion**  
**Contact: Silica,**  
 Silica House,  
 Hatherley Road, Sidcup,  
 Kent, DA14 4DX.  
 Tel: 0181 390 1111

**Product: Rendale 9402**  
**Contact: Marcam Ltd,**  
 62 Tenter Road, Moulton Park,  
 Northampton, NN3 6AX.  
 Tel: 01604 790466

## Easy Access

**Composite:** An encoded video signal which can be sent down a single wire.

**Interlace:** PAL (and NTSC) video is interlaced. This is where two half pictures (called fields) make up a single full picture (called a frame). One half picture is made up of odd lines and the other of even lines. PAL video runs at 25 full frames per second.

**Key:** Just like cutting a hole through paper, unwanted areas of a picture can be discarded and replaced with a different picture. A bit like a key hole effect.

**Overscan:** Television uses overscan video which means the actual picture is roughly 10% bigger than the TV screen. This ensures that the picture fills the screen of every make and model of TV. The Amiga handles this in hardware.

**PAL:** Phased Alternate Line. This is the TV video standard used in the UK, most of Europe, Australia, and a few other parts in the world.

**RGB:** Red, Green, and Blue. The basic components that make up a video picture. RGB sources video provide the highest possible quality. NB: Domestic VCRs cannot record RGB video.

**SCART:** A European standard 21 pin connector for connecting together AV equipment. Two way composite video, RGB, and two way stereo audio can be carried down a single cable (made up of up to 21 wires.)

**VCR:** Video Cassette Recorder. Probably a VHS machine in your house, or S-VHS if you're a lucky one!

# NEW GENLOCK FROM RENDALE

your video input. Various extra modes are offered, including two keyhole modes.

Buy this new genlock directly from the manufacturers, at a price of only £299 including VAT and delivery.

## COME TO RENDALE, GET THE BEST.

Contact: Marcam Ltd., 62 Tenter Road Moulton Park,  
Northampton NN3 6AX.

Tel: 01604 790466 Fax: 01604 647403

Quote CU Amiga.

At last, the new Super-VHS genlock from Rendale is available. The Super-9402 is a true S-VHS genlock, offering high quality output, together with other features. It offers the ability to fade Amiga graphics in and out, and also to cross fade between Amiga graphics and

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Now here's something I prepared earlier.

Other reviewers of Stereo CAD have fallen too readily into the clichés surrounding the Stereogram phenomenon. They're the poster or framed pictures which look like a jumbled of vivid colours, but turn into '3D' images when stared at.

Many people fail to see the images and there has been a lot of criticism that no matter how magical they may appear, they are essentially useless.

I put down any failure to see the images to a straight-jacketed mind. As for their worth - they are pointless but my concept of 'pointless' may be your life's work. In any case, they are fascinating. In today's facile culture, that makes them successful.

Importantly though, the mathematics and concept used to portray multi-dimensional images is being investigated for more practical uses such as motion video.

# Stereo CAD

Stereo CAD lets you make your own stereograms. With the AMOS-written software it's surprisingly easy to create these eerie pictures. You can build basic objects like tubes and balls, or import an IFF image, and turn them

**Mark Blackham sees stars..**  
**in 3D, test driving a new**  
**graphics program.**

create images which seem to exist "in front of the screen". These perform like holograms and are more readily seen by the eye. Tricks to view the images are given in the manual.

## Conclusion

There is no doubt that Stereo CAD does the job of converting images to stereograms extremely well. The results are crisp and easily recognised.

However, over time, I found that the niggly quirks of the programming were not outweighed by the results. It's too easy to lose interest.

Stereo CAD would be well worth the trouble and the short term mild amusement if it were less expensive but if you are really keen you might want to consider the competition. **AUI**



The user interface - quirky or downright stupid?

into stereoscopic pictures.

The simple objects work brilliantly but imported images may not turn out as you hope. With the latter, it's best to stick to side view 'silhouetted' images. For reasons I could not fathom, some IFFs caused Stereo CAD to cough once and crash. It would also refuse to load files which had names longer than the narrow file selection window, which is just plain sloppy. In addition, the file saving/loading requesters are little sods to fathom out, especially the

file naming system. Put one step wrong in your attempts to work it out and the program crashes or switches back to Workbench.

## Commercial?

This type of problem, along with Stereo CAD's user-unfriendly interface, is more often associated with PD programs. Stereo CAD is a firmly commercial product but does feel like some PD which might need a little spit and polish.

The manual is of a better quality

but still manages to lose the reader by failing to simplify the operation. Nevertheless, it isn't too hard to work out the basic principles yourself through the traditional try it and see method.

## Clever

An interesting aspect of Stereo CAD is that you learn how these stereograms are made. In converting your image the program adjusts a page of colourful stars. As the process takes place you watch the stars distort and your image appear within them. It's damn clever.

I'm not sure why the programmer has chosen a garish star shape screen as the default in which to place images. The commercial stereograms are normally composed from a mash of wavy lines. You can't get those but you can choose from a good selection including 'marbles' (pictured here), donald, 'hot' and 'cold'. Your creations can be saved and loaded into an art package for printing (you can't print from within Stereo CAD - which is a bad omission). The images look best on the computer screen, on which it's also easier to get a reflection at which to gaze.

The reflection is a necessary aid for viewing stereograms placed "behind the screen". The other option is to

## RATINGS

### Stereo CAD

|                 |     |
|-----------------|-----|
| FEATURES        | 78% |
| PERFORMANCE     | 88% |
| DOCUMENTATION   | 70% |
| EASE OF USE     | 67% |
| VALUE FOR MONEY | 70% |

**Overall Rating 70%**

## INFO

Price: £29.95  
Contact: JCA Europe  
30a School Road.  
Tilehurst, Reading RG3 5AN  
Tel: 01734 452 416



# Broadcaster Elite

It was three years ago when I revealed in *AUI* a new digital editing system which was in development. A year later the Digital Broadcaster 32 was finally released, and just recently its successor, the Broadcaster Elite. The adverts and press information claim it to be a broadcast quality non-linear digital editing system. That's a bold claim and one to which I paid particular attention.

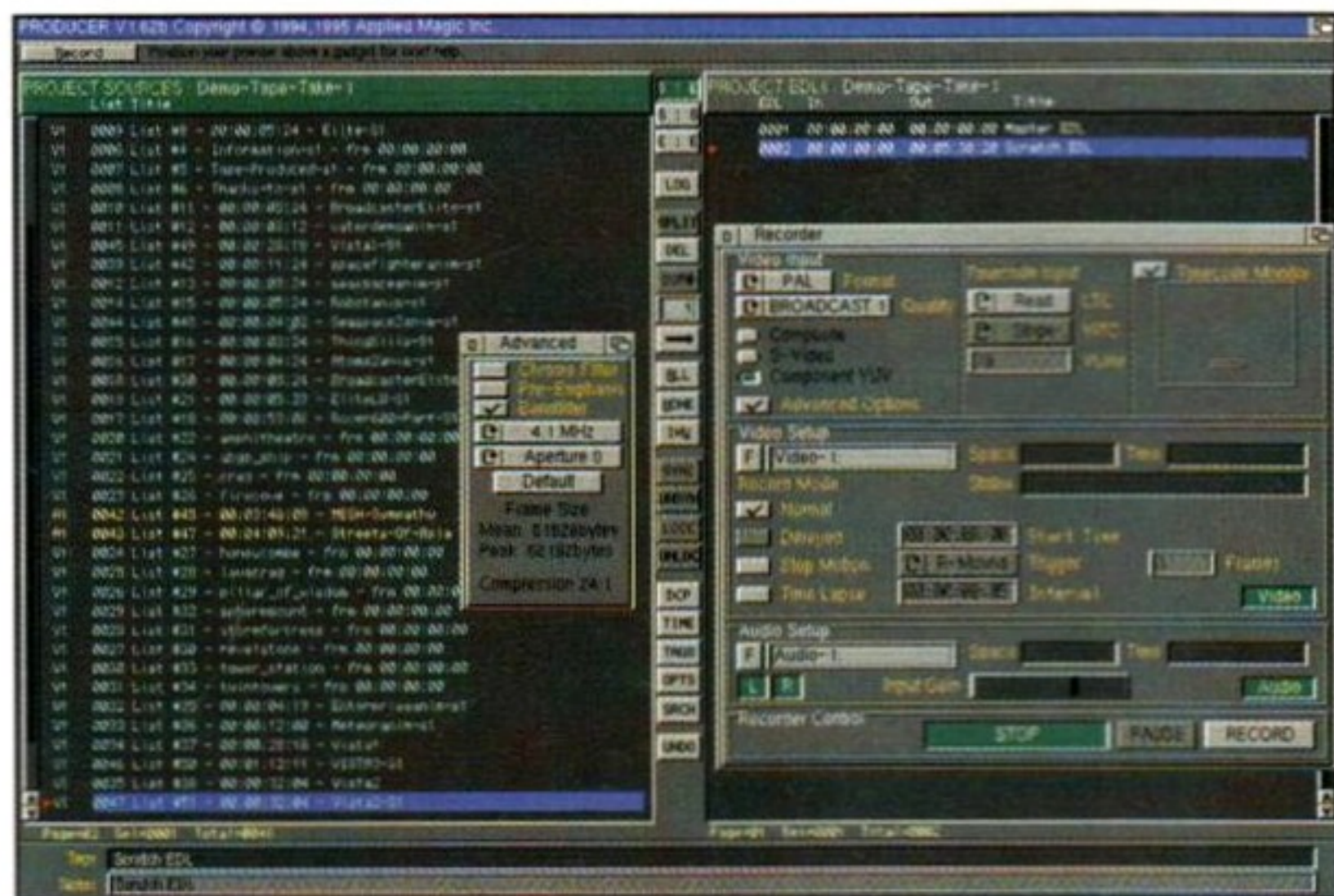
The Broadcaster Elite is a Zorro III card for the Amiga 4000, which is supplied with an external box housing various input and output connectors, such as composite, YC, and of course YUV for connecting to high end Betacam equipment. For editing accuracy and reference, it reads and writes LTC and VITC industry timecodes.

The system is designed to grab 50 fields per second (25 full frames) in real time from a video source. The video is stored on a SCSI II hard disk for fast data transfer rates and optimum video quality. It works at a resolution of 720x576 and complies with the CCIR601 standard which is the industry's broadcast requirement. Once the video footage has been grabbed it's up to the user to edit the material. This is done by creating an edit decision list, or EDL for short.

## Editing

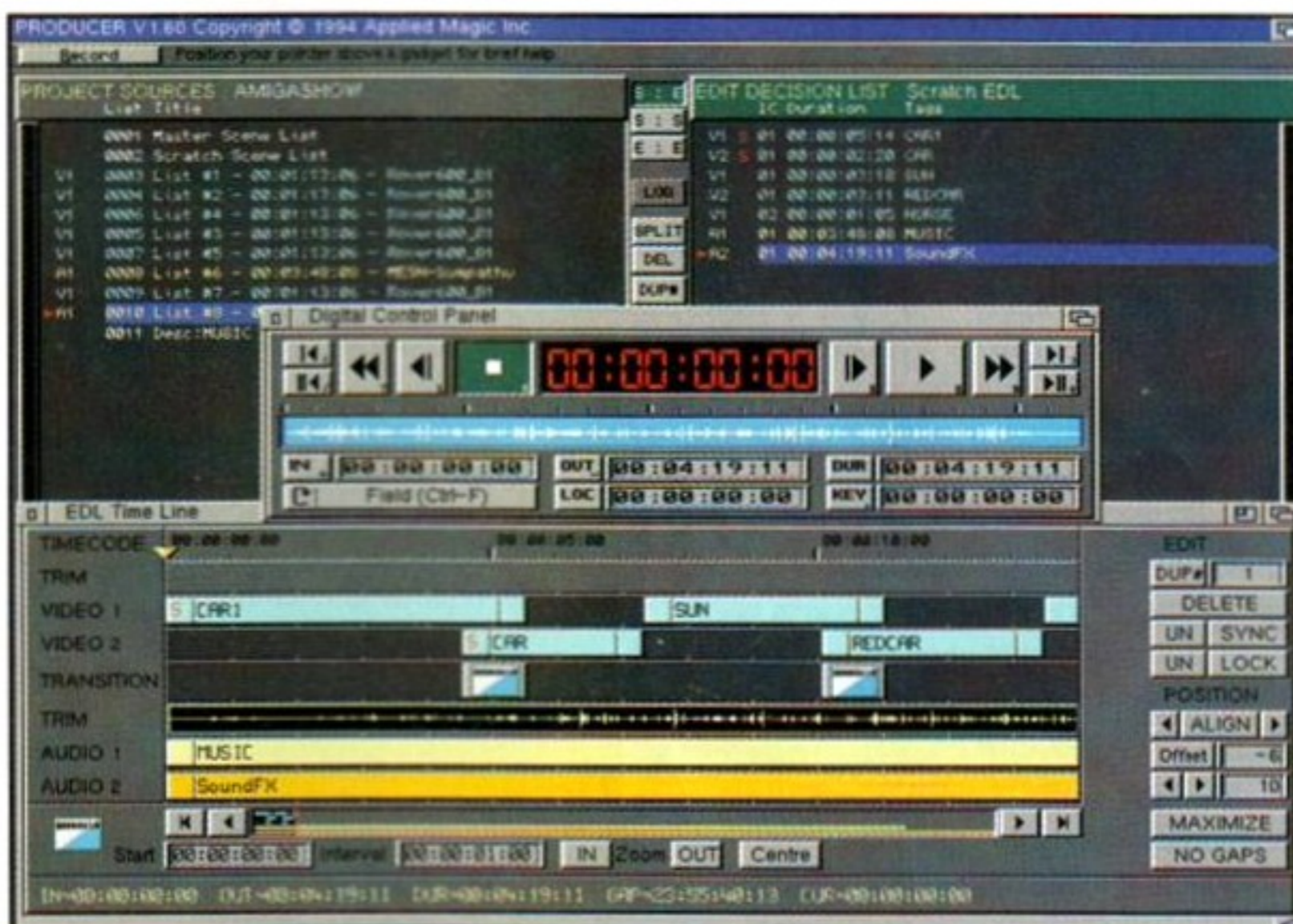
The editing software is fairly sophisticated, comprehensive with a well designed interface, and advances further with every update. The video footage is viewed on a second PAL monitor and controlled by clicking on transport buttons on the interface. However, there are keyboard controls which I prefer because I can generally work faster on a keyboard.

As you play, forward, or rewind through the video footage, it's displayed



Preparing to grab some component video.

**True broadcast quality digital editing comes at a price but on the Amiga you'll find it a little less costly than the alternatives. Gary Fenton test drives some dream hardware.**



The EDL, transport controls, and timeline windows of the Broadcaster Elite's editing software called "Producer".

on the PAL monitor in real time. Because this form of editing is random access and not linear, any point in the video can be accessed and displayed within milliseconds.

The hardware doesn't support audio recording but the software does. You can use the Sunrize 16 bit audio card to grab sound in real time simultaneously with the video. Audio editing is very basic and you can't perform any fancy tricks just yet, or even simple fades!

The good news is that a new Austrian audio card called Amadeus (which can handle 16 tracks) will be fully supported as soon as it's launched shortly.

Speaking of tricks, the editing software unfortunately doesn't do many internally. It's limited to basic dissolves, wipes, and slides. More impressive special effects and image processing must be done externally by another program, like ADPro for example. This is kind of disappointing but will hopefully be addressed in future upgrades.

This product is aimed at people who want to do what expensive editing equipment does but for a lot less money. On-line editing is achieved with the Broadcaster Elite because of its unquestionable video quality and editing controls. However, it seems impossible to edit, say, two hours of rushes (raw video footage) into a single broadcast quality program on this system without buying an unrealistic amount of storage space.

As a guide, it records approximately five minutes of broadcast quality video per gigabyte, or 7 to 8 minutes at SVHS quality. This means 2 hours of Betacam SP quality video will need over 20 gigabytes of storage!

This wouldn't be so bad if it could control external video decks and automatically grab timecoded sections

from the rushes - but it can't just yet! An add-on to control external decks is a few months away and will radically improve the functionality of the system.

Bearing this in mind, it's currently a perfect system for off-line editing because hours of low quality video can be grabbed for editing and the EDL can be exported for on-line editing on a conventional edit suite. But this seems to defeat the purpose of the Broadcaster Elite. I can only see this system being used at the moment to its full potential for editing short programs, like promos, trailers, adverts, presentations, combining computer graphics, and so on.

## Quality

The quality of video from the Broadcaster Elite is indeed excellent, the best I've seen out of all the Amiga based digital video systems, and certainly acceptable as Betacam equivalent material for broadcasting. The system can additionally play back computer animation, much like PAR but the Broadcaster allows animation to be easily and rapidly edited.

Compared to VLab Motion, the quality of the Broadcaster is far, far superior but the software lacks the possibilities of Vlab Motion's unlimited track timeline and its wealth of special effects.

The two markets for which these products are intended are very different but that doesn't mean the Broadcaster can't learn a thing or two from Vlab Motion. If you are in the market for professional editing hardware then do make sure you check out the Broadcaster Elite. The UK distributors have an excellent demo room and are only too pleased to show you what their impressive setup can achieve. **AUI**

## RATINGS

| Broadcaster Elite         |     |
|---------------------------|-----|
| FEATURES                  | 80% |
| PERFORMANCE               | 96% |
| EASE OF USE               | 90% |
| VALUE FOR MONEY           | 90% |
| <b>Overall Rating 89%</b> |     |

## INFO

Price: £4098 + VAT  
 Typical systems from scratch start at £11,000  
 Contact: White Knight Technology  
 PO Box 38  
 Ware, Herts SG11 1TX  
 Tel: 01920 822321  
 Fax: 01920 822302

# FX2000

## Analog Joystick



The FX2000 - an awesome addition to your home cockpit.

The land speeds silently under your wings. The target looms large in your sights. Suddenly the flak barrage has gone quiet. The wind and engine whistle together. Your hand is steady on the joystick - keeping the plane determinedly on its course. Your thumb, damp inside the leather flight glove, caresses the top missile release button. The HUD pings urgently. Target in range. Sensors locked on. Fire now! Muscles flex smoothly with years of highly trained control, despite the adrenaline which pumps through your nerves. Your thumb calmly, purposefully, depresses the fire button. The missiles kick forward from the plane, leaving behind a trail of flame.

You watch dispassionately as they scythe through the air and slam into the target, wreaking the devastation which was your mission to create.

A quick check of the radar reveals no nearby enemy fighter aircraft. You pull back on the joystick and arc the plane away from the scene, heading back home.

Sweat pouring from your forehead you turn as your Mum enters the room - "Your dinner's getting cold!"

The new FX2000 analog joystick is an essential piece of kit to complete that flight simulation. It's big, bold,

**Mark Blackham fondles a stick that is the right size and shape for that special target he wants to reach.**

moulded with succulently sexy and powerful curves and equipped with some handy technological gizmos.

First, a few words about the analog method. It is a more intricate control technique that allows the computer to sense degrees of movement. Joysticks generally use microswitches to obtain a simple ON / OFF registering method. That means, for example, the

degree of turn in an aircraft banking manoeuvre will increase as you move the joystick sideways.

Now for the FX2000. Unfortunately they've created what looks like a new fangled marital aid, so don't let anyone prudish within sight while you waggle it desperately in your lap.

You may find it easier to stand the monstrosity on your desktop anyway. The sucker feet grip very firmly, and don't give away much movement.

The handle grip, moulded to fit the contours of a hand seems a little on the large side, especially for younger players.

It is topped by a realistic looking green fire button, with another fire button mounted trigger-style at the front.

On the very tip is a small white catch for switching in and out of autofire mode. A panel at the rear of the joystick opens to give access to selector

switches for choosing which fire button will be Autofire-enabled. Also behind the panel is a sliding switch to reverse the roles of the fire buttons. Generally software allows only one fire

button, so this switch allows you to choose which one it will be.

### Throttle Control

A very useful asset is a throttle control mounted at the front of the joystick. A lot of flight simulations require a second joystick, or keyboard control, of the aircraft's speed. This wheel-action controller doesn't look as if it is well-placed, but it turns out to be quite comfortable to rest your spare hand at the base with fingers manipulating the speed.

Calibration of analog joysticks is usually necessary to allow the software to register the position of the main points, including the centre, of the joystick. After much use the joystick may begin to lose its centre-point. Underneath the FX2000 base are two slider controls for subtly altering the centre-point. Very handy.

### Downside

Now, the downside to the FX2000 is that it is a PC-orientated joystick. Suncom, the suppliers provide it with a simple Amiga adaptor cable, so that problem is fixed. Suncom only guarantee that the cable converts their joysticks to Amigas running software under the Microprose Amiga Analog Driver Standard.

It is also a little disconcerting constantly to read in the manual references to the PC and PC games such as Microsoft Flight Simulator.



The rear panel gives access to all kinds of extra options.

Before you buy it, make sure your favourite flight simulators actually work with analogue joysticks - many don't.

I tested the joystick on the superb Tornado, and it worked like a dream. The old favourite, Interceptor, didn't work. Neither did B17.

### Conclusion

If you want that flight simulation to really take off in the reality stakes, invest in the FX2000.

"Bzzzt. Tango, alpha, charlie. You are clear for take-off. Bzzzt. Kick one for us boys!" **AUI**

## RATINGS

### FX2000 Analog Joystick

|                           |            |
|---------------------------|------------|
| <b>FEATURES</b>           | <b>96%</b> |
| <b>PERFORMANCE</b>        | <b>95%</b> |
| <b>DOCUMENTATION</b>      | <b>84%</b> |
| <b>EASE OF USE</b>        | <b>87%</b> |
| <b>VALUE FOR MONEY</b>    | <b>88%</b> |
| <b>Overall Rating 91%</b> |            |

## INFO

Price: £24.99  
 Contact: Suncom Technologies  
 6 Mercian Close Industrial Estate  
 Watermoor End, Cirencester GL7 1 LT  
 Tel: 01285 642211

**Unfortunately they've created what looks like a new fangled marital aid, so don't let anyone prudish within sight while you waggle it desperately in your lap.**



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From the very first moment you pick up the FX2000 joystick for IBM and compatibles, you know you are holding something very special. With its unique pistol grip, angled forward, and adjustable for left and right handed players it allows hours of comfortable play.

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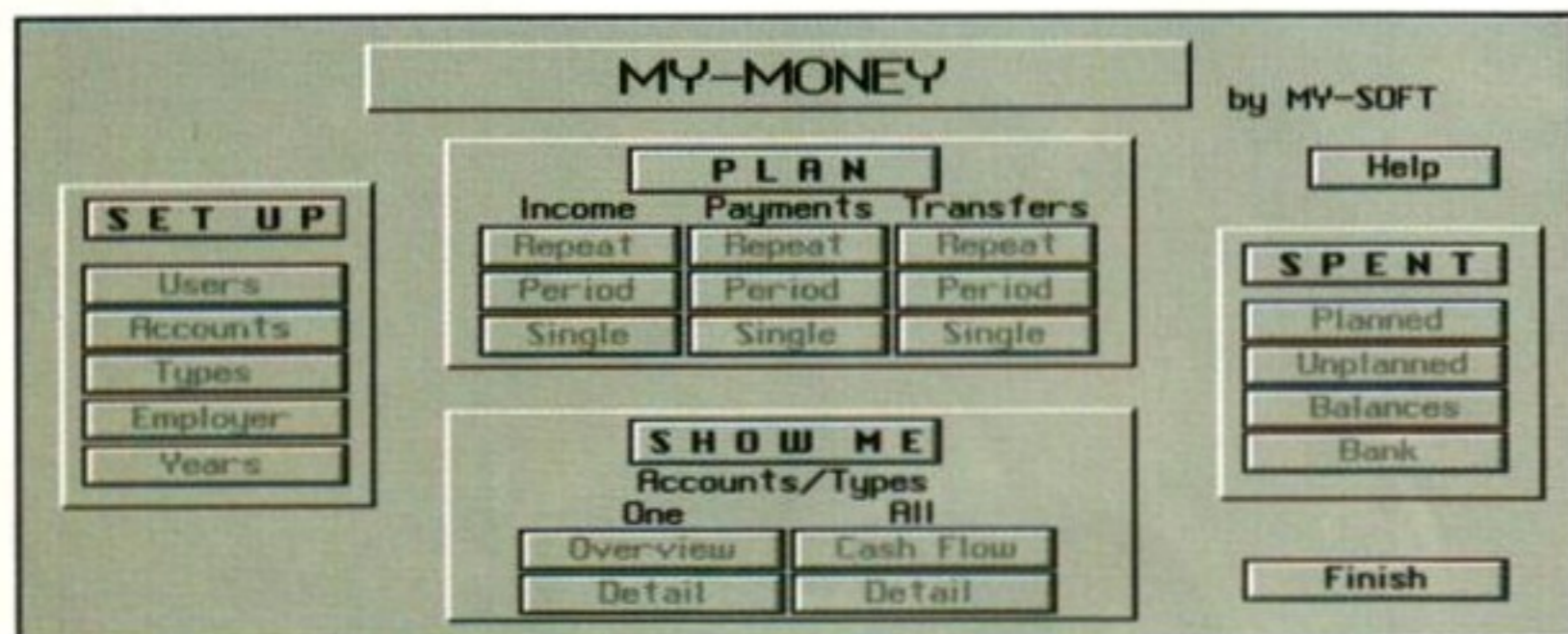
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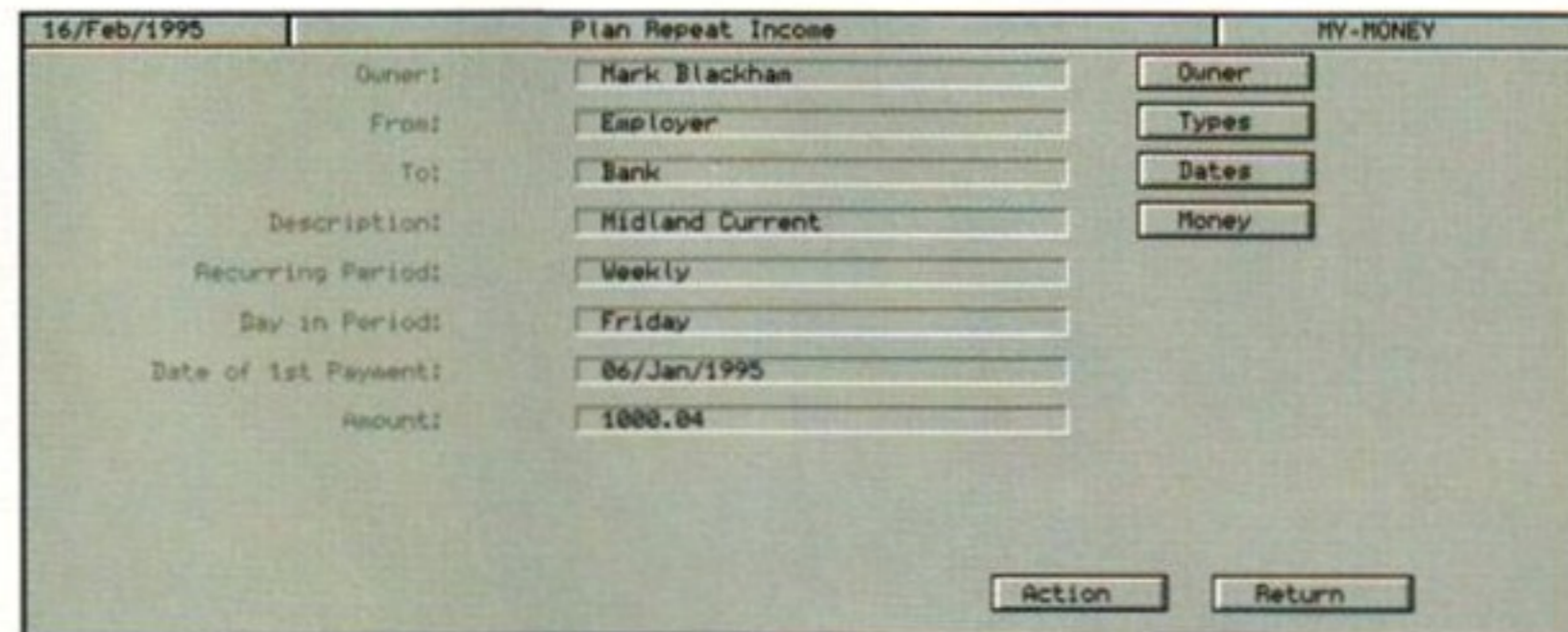
# MY-MONEY

**Test driving a new package, Mark Blackham finds that there is money to be made out of helping you to keep track of your cash.**

My-Soft say that My-Money is "the first of a planned suite of five programs to help home users plan and control many of the necessary home chores". This suite of programs will work together, sharing common data, to make a complete home management system. That is a laudable aim and My-Money is a reasonable start from which they will, no-doubt, improve. This suite, My-Soft say, will also have a common "Look and Feel". Brilliant idea, similar to the Digita range or Softwood software but no good if the "look and feel" is as poor as My-Money. Take the mouse pointer for ex-



The main menu screen - passport to your accounts.



Setting up a repeat income transaction into my cheque account.

Home or office management software may not attract the publicity blitz and glamour of a new game but it is the lifeblood of any computer platform.

The success of Easy Ledgers - a super-powerful business management system - has shown that demand exists for serious Amiga software of this kind. Further signs of the trend can be found in Digita re-releasing their Home Office package and a new version of the favourite Money Matters. There is obviously money to be made out of software that helps people monitor their money.

So it was not surprising to see My-Money arrive on my desk. The surprising fact was that, despite it looking like a first commercial effort, it turned out to work very well. Much of the current accounting software takes a "reconciliation" approach. That means you set up your accounts and regular transactions and enter single transactions as they occur. You can look back over your progress and reconcile the money flow with your bank statements.

This process only has a point in England and few other places, since we cannot trust our banks to issue accurate statements or generally do the right thing.

What we all really need is some help with forward planning. For example, given your current spending and saving levels, how will you be faring in one year? What about if you start monthly repayments on an interest-free purchase. How will that affect your future money flow?

My-Money has been set-up with answering these types of questions in mind.

Establishing your accounts couldn't be easier. There is a huge "SET-UP" panel on the main menu which just cries out to be used.

Using it isn't that easy. My first attempts simply to enter the name of a new bank account were met by a blank refusal to change.

**There is a huge "SET-UP" panel on the main menu which just cries out to be used.**

Reloading the program helped its attitude slightly, and My-Money accepted my user name and names of new accounts.

That small glitch was indicative of what I'd call "forgetful programming". The author/s simply forgot to add important little things, like escape options and bug fixes.

The lack of opportunity to escape from choices you inadvertently make leads to all sorts of entered data which you then have to delete. This problem is exacerbated when people are first exploring and learning how to use the program. That is precisely the time

when they make their mind up on whether they like it or not.

## Performance

I cannot fault My-Money for its performance - it does what it does very well. The core engine for monitoring your accounts and analysing future account performance is, as far as I can tell, perfect.

The implementation leaves a lot to be desired. Glitches and absent user-friendly features makes using the program a hassle. Many of us hate numbers and counting, and that's why we want money management software. We aren't about to use software that makes dealing with our money a chore. Congratulations to My-Soft for attempting a solid manual but lack of writing skills lets them down. The ideas were there. A personal approach and realistic tutorials try to get the point across but its an uneasy read. Nowhere is the program succinctly introduced and its approach simply summed up.

Strangely enough the title sums up the whole program. It's written in clunky capital letters. That shows a naivety, clumsiness and lack of style that pervades the whole program.

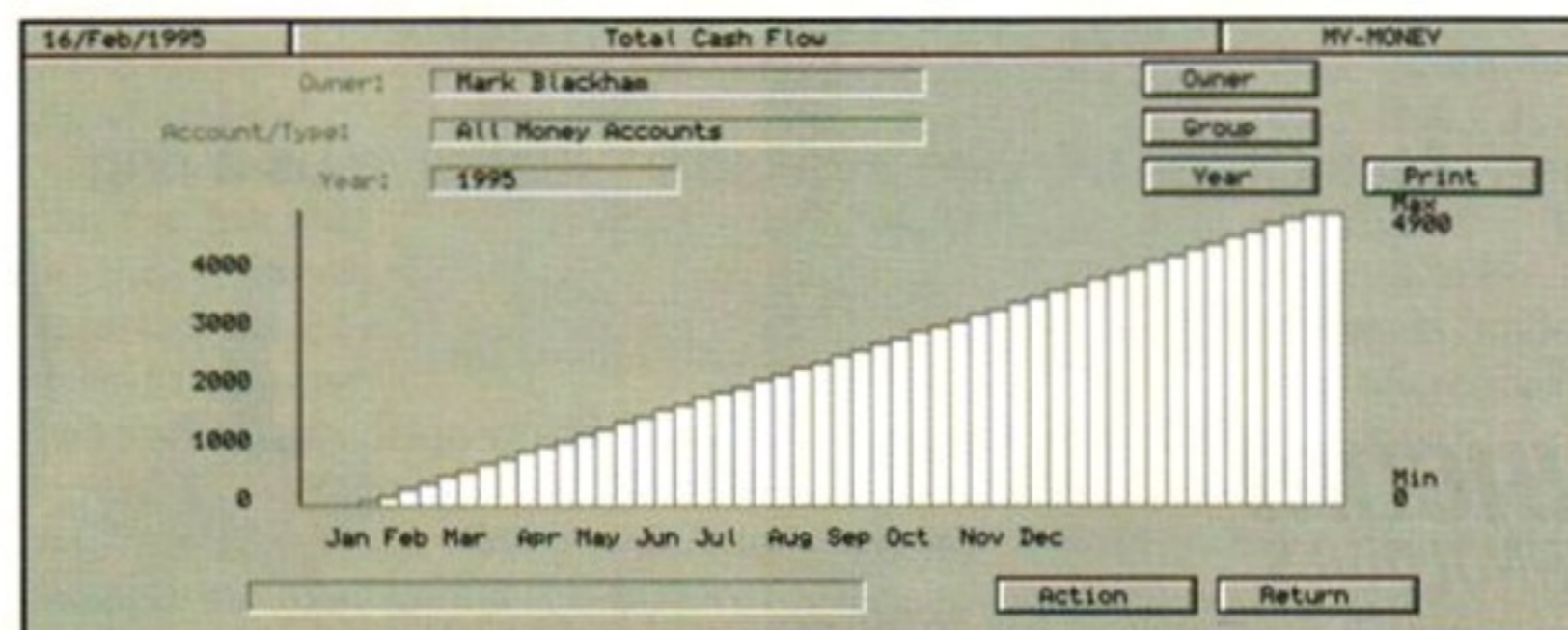
ample. It's in the shape of a double "M" - an obvious touch, but frustrating since the only bit that works for mouse clicks is the upper left hand point of the M. This is old-style programming.

## Conclusion

While there are plenty of PD alternatives, the only real commercial competition at this level is the archaic Home Office from Digita. My-Money wins hands-down.

The (far) superior alternatives, such as Money Matters, are probably more than most people will need to manage, monitor and analyse their home accounts. My-Money wins on its simplicity.

If My-Soft want to keep the current price point, they ought to improve the interface and approach. Alternatively, if they were to knock a few pounds off the price, My-Money would look like a very good investment. **AUI**



Looking at my projected income for the coming year. Ouch!

## RATINGS

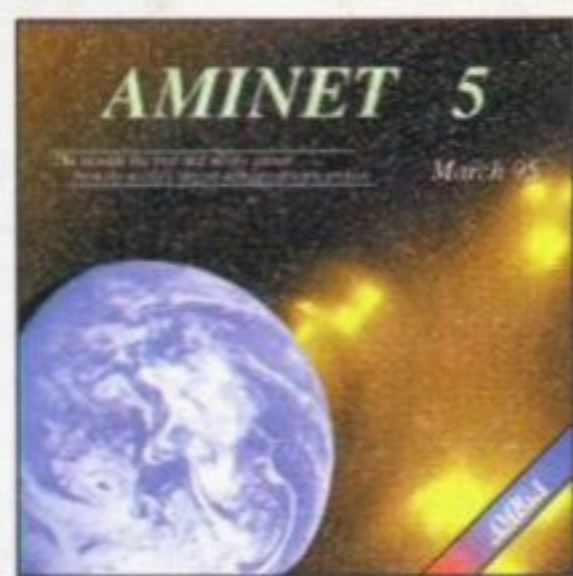
### My-Money

|                 |     |
|-----------------|-----|
| FEATURES        | 72% |
| PERFORMANCE     | 67% |
| DOCUMENTATION   | 74% |
| EASE OF USE     | 65% |
| VALUE FOR MONEY | 62% |

**Overall Rating 67%**

## INFO

Price: £24.99  
 MY-SOFT  
 71 Springfield Ave.  
 Whitehaven  
 Cumbria  
 CA28 6TT



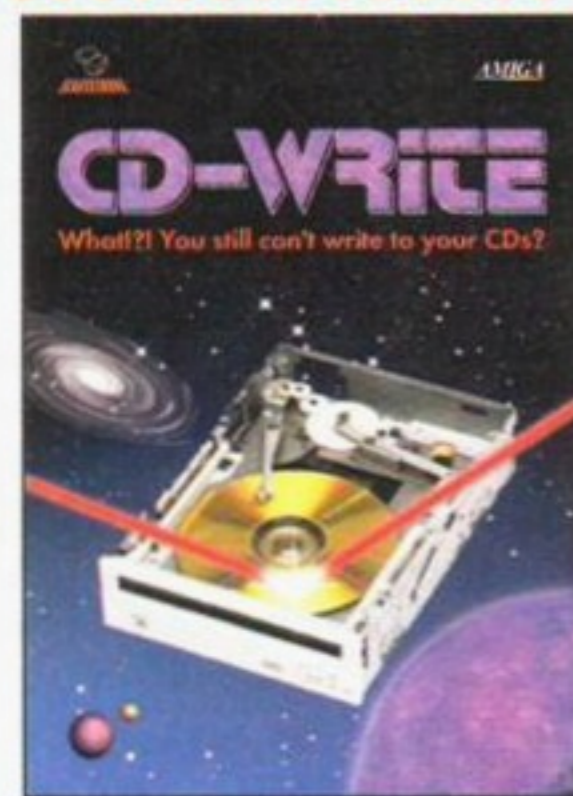
## Aminet 5

Aminet CD 5, dated March 1995, consists of approximately 1,1 gigabytes of software in 3600 archives. Since the release of Aminet CD 4 more than 448 MB new software has appeared, since the release of the Aminet Set 1 214 MB new software has appeared. The current edition has a special focus on games, more than 1000 games from Aminet were included. User friendly access software make the Aminet CD 5 a pleasure to use. £12.95



## Aminet Set 1

Aminet is the world's largest collection of freely distributable Amiga software. Up to 10,000 users access the vast archives every day and countless programmers publish directly via Aminet. Until recently access to Aminet was restricted to international network users. With Aminet Set 1, consisting of 4 CDs, the complete archive is published the first time. This CD-ROM-collection, which is dated January 1995, offers an almost inexhaustible reservoir of top-value Shareware. A wide variety of programs is included: Applications, Games, Demos, Pictures, Mods, Animations, Developer-Material, ... It contains approximately 4 gigabytes of software in 12,500 archives and you will enjoy the comfortable user-interface. £29.95



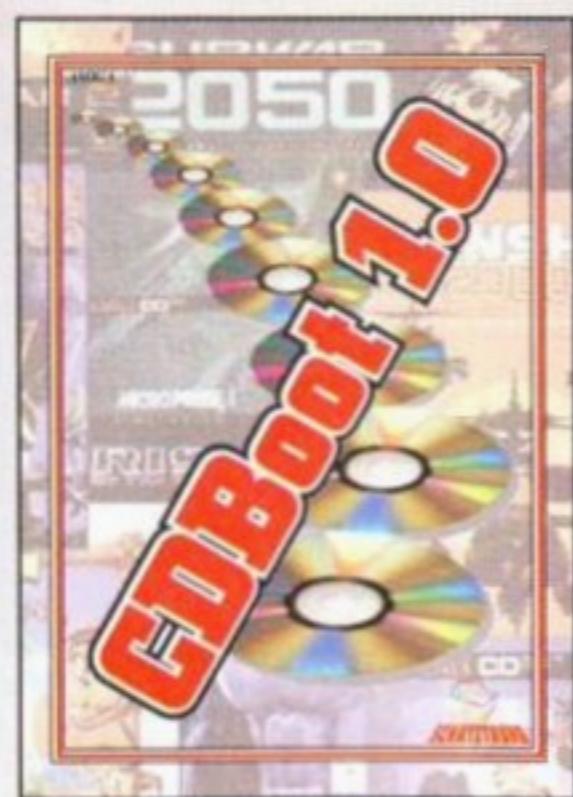
## CD-Write

What?!? You still can't write to your CDs? CD-ROMs have long been an essential part of Amiga computing. Many users already own a CD-ROM drive, and the number of software packages available on CD is increasing steadily. Until now, though, it was not possible to write to CDs. We have solved this problem with our new revolutionary product: Ralph Babel and Stefan Ossowski's Schatztruhe are proud to present what can be considered a marvel of technology: CD-Write enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete, and modify data on your CDs. This product will take you into a new era, and you will be able to utilize CD-ROM technology to its fullest. £44.95



## FreshFish 8

The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every...



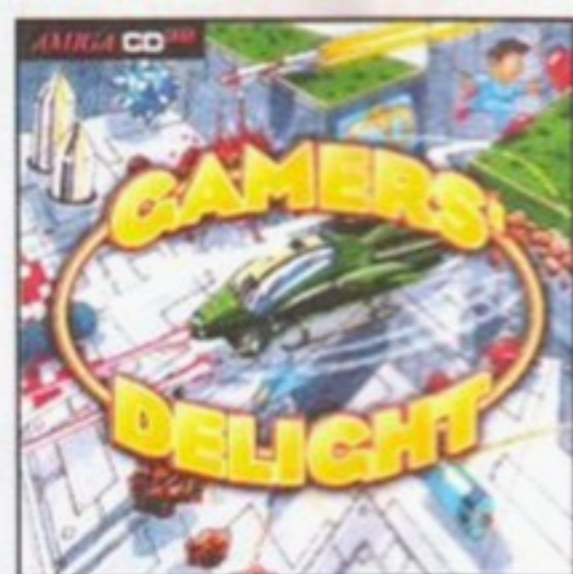
## CDBoot 1.0

CDBoot is a fantastic new product that enables you to use almost any CD32 games on an A1200 or A4000 (with AT- or SCSI-CD-ROM drive and any filesystem). You can create a configuration file for each CD, containing information on the Joypad emulation. You can also save the highscore of each CD32 game. The usage and installation of CDBoot is very easy, also for beginners, due to the excellent English manual. Since the compatibility is very high, you can use 98% of CD32 games currently available. CDBoot is an excellent software solution for all Amiga-Freaks, who would like to enter the world of CD32 games! £34.95



## FreshFonts II

The FreshFonts II CD-ROM contains 632 megabytes of fonts for almost any computer system. Most of the fonts are freely distributable, except for the Thienen fonts, which are exclusive on this CD. Each of these fonts is included in four different formats: DMF, Agfa Intellifont, Adobe and TrueType. There are 231 font families on this CD (each containing up to 8 different styles). They are classified in seven categories: Deco (63 families), Non-Latin (33 families), Pictures (16 families), Sans Serif (29 families), Script (36 families), Serif (36 families), Thienen (19 families). £19.95



## Gamers' Delight

This CD contains 40 games for the Commodore Amiga from differing categories: Action, Jump & Run, Card Games, Puzzles, Strategy Games - a whole range of computer entertainment awaits! Gamers' Delight will hold you captivated for hours and guarantees long-lasting pleasure. All games are commercial versions - no public domain & no demos! This CD can be run on any Amiga with CD-ROM drive, CDTV or Amiga CD32 Console with 1 MB free memory and Joystick/Joypad. £29.95



## GoldFish 2

Volume 2 of the GoldFish series contains a selection of software, animations, pictures and other material released on FreshFish CD-ROM's between October 1993 and November 1994, with most of the material updated to the latest available versions. All material is included in both archived (BBS-ready) and unarchived (ready-to-run) forms...



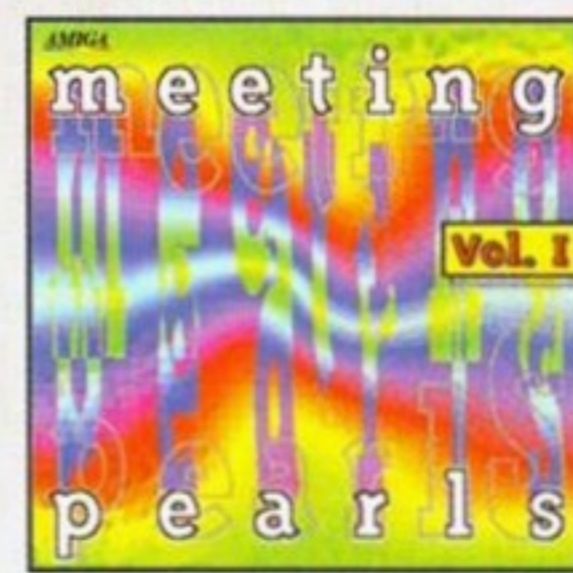
## LIGHT ROM

The LIGHT ROM CD contains almost 650 megabytes of 3D objects, images, image sequences, scene files, surface attributes, bump maps and textures in IFF and TARGA formats, DEMs, and Lightwave related text files. LIGHT ROM is an invaluable resource for Lightwave users, and as a bonus, includes material for Sculpt 3D and Imagine users. £44.95



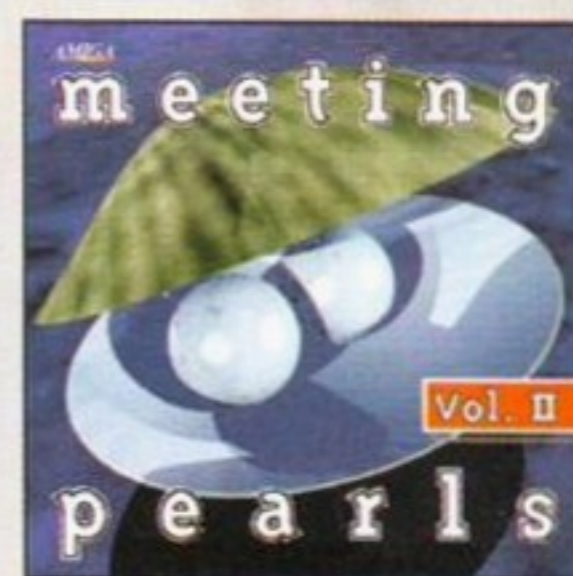
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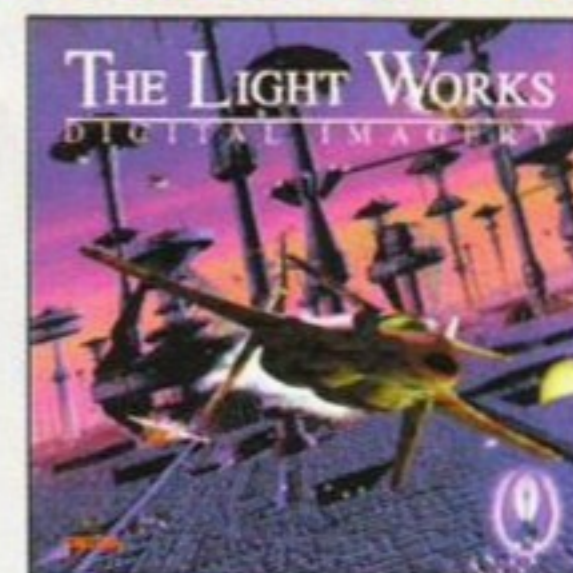
## Meeting Pearls Vol. I

Meeting Pearls is the first CD to be published within the concept of "sharecompilation" and includes ca. 600 MB of top quality freeware. Most programmes are already installed or are easily installable on the hard drive via a comfortable script. The following programmes (amongst many others) are included: PasTex (latest version including 600dpi and Fax fonts), NetBSD (archived), more than 100 top-quality fractals, photographs of many Amiga personalities, several hundred installed programmes, many HTML-pages, CD index lists, FAQs, etc. ... There are many software packages on this CD-ROM that are defined to be shareware. The acquisition of this CD does not include any fees or donations that might be necessary. We ask you to send the requested amount (see respective documentation) to the particular author if you use these packages frequently. £9.95



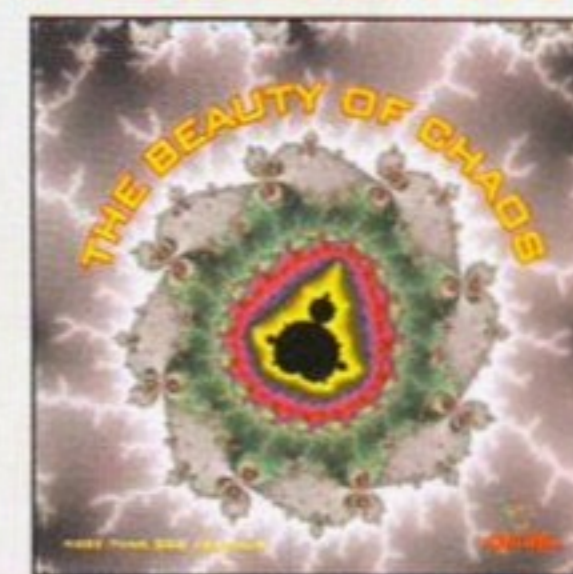
## Meeting Pearls Vol. II

The Meeting Pearls Volume II contains 650 MB of the finest FD software via a special user interface, which has been created to allow you to find the program of your choice with ease. The contents: 35 MB of selected html-pages - 50 MB graphics programs and data - 15 MB games - 10 MB from "The Party '94" - 13 MB disk, hard disk - CD-ROM and SCSI tools - 19 MB various other tools - 11 MB educational software - 25 MB terminal programs - 25 MB animations, mainly from Eric Schwarz - 40 MB developer tools (e.g. pre-installed compiler (DICE, Oberon, Modula), Commodore-Includes, GUI-Tools) - 9 MB music programs - 10 MB midi programs - 27 MB pictures - 60 MB texts, FAQs, CD contents files, etc. - 40 MB linux for Amiga - 100 MB TeX installation (PasTex incl. 600 dpi and Fax fonts) - 38 MB movie data base - 50 MB archives for Psion - 18 MB modules - 50 MB NetBSD for Amiga, ... £9.95



## The Light Works

Raytracing - A fascinating area of the computer graphics. Pictures from the computer, perfectly rendered, fascinate people all over the world. The Amiga was the first computer to be used for raytracing, and today it is still a leader, with many high quality programs. A real artist of raytracing is Tobias J. Richter from Cologne/Germany, whose detailed objects stun the people. Especially his space ships of famous science fiction films are used to demonstrate the capabilities of a raytracing program. The objects are highly detailed and extremely realistic due to the application of complex surface textures of the models. Until now it was difficult to acquire these objects in order to create ones own scenes or animations. £39.95



## The Beauty Of Chaos

Dive into the fantastic world of the fractal geometry and make a safe journey through the depths of the mandelbrot set. This CD includes: 507 mandelbrot pictures in GIF format (256 colors) in the resolutions 1140x890, 1024x768, 640x480 pixel, 20 selected true color pictures in TIF-format, Graphic viewers for PC, Amiga and Macintosh (packed). £14.95

All products are available in your local Amiga-shop or through national mail-order-companies

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## CD Round Up

**The bountiful and blooming world of Amiga CD software goes under Gary Fenton's microscope as he test drives a handful of the latest CD titles.**

Welcome to another AUI CD Round Up! Before the reviews, I'd like to say how disappointed I am that virtually all the recent Amiga CD titles are no more than a collection of data files, be it pictures, music, or fonts. There are no new application, education, or information titles which are desperately lacking on the Amiga CD scene.

Just look at the huge amount of PC and Mac interactive CDs which are not simply a compilation of files. Where are these titles on the Amiga? Don't get me wrong, I love the Aminet and

### CDBoot 1.0

At last, a CD32 emulator so 1200 and 4000 owners can play CD32 games! It claims to run over 90% of current CD32 titles using most AT and SCSI CD-ROM drives. The CD32 controller is emulated with user-definable keys or joysticks, and high scores that would normally be saved to NVRAM are saved to disk. There's an option to auto-boot from CDs.

Overall, this is a good product if you're dying to play CD32 games but is arguably just a little expensive.

**Price: £35**  
**Rating: 85%**

Fish type CDs that contain buckets of good PD software, but we're missing out on the "interactive multimedia" discs. Well, I feel a lot better now that I've been on my soapbox! On with the show...

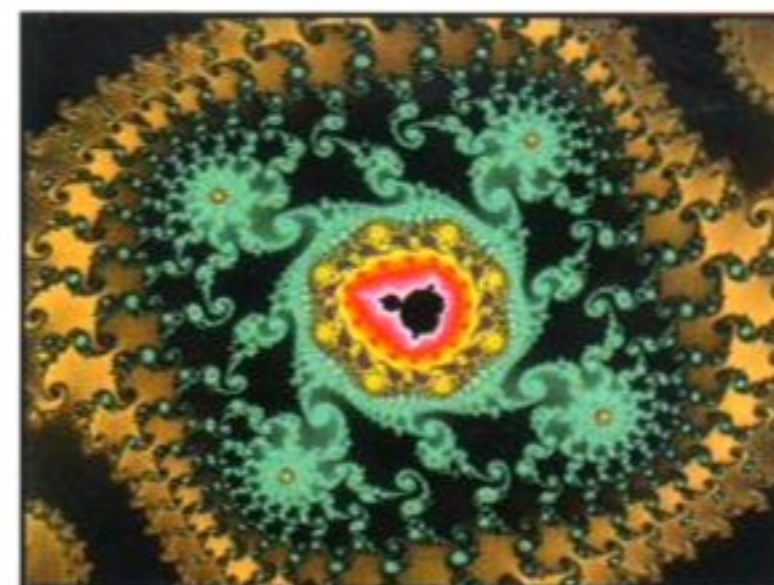


Just one image from the brimful Ultimedia discs.

### Ultimedia I and II

This is a double CD set of images, textures, sounds, animations and multimedia related utilities. The quality of decent image and sound files is impressive but the animations are in FLI and FLC formats, the sound files are in the Wave format, and some of the pictures are GIFs - hardly Amiga formats!

However, there are some very good GIF, FLI and Wave players and



Demomania has an excellent interface to unarchive the demos, if you can figure out the German!

### Demomania I

A collection of 300 Amiga demos with everything from bouncing bobs to colourful copper bars, spinning 3D shapes to rotating bitmaps,

**Price: £15**  
**Rating: 68%**

### Aminet Set 1

This is a massive four disc set containing 4 gigabytes of PD and Shareware software in 12,500 archives. Just about every type of program you can think of is on this disc set including 103Mb of utilities, 134Mb of graphics software, 337Mb of pictures and animations, 336Mb of demos, 160Mb of games, 64Mb of business software, 358Mb of music modules, and so on.

You can wade through the files and unarchive them via the point and click AmigaGuide system, and a search feature will build up a catalogue of files that contain the name or subject you're looking for. This disc set is so impressive and worth every penny. In fact, it's the biggest collection of Amiga software in history - perfect for the Amiga's 10th birthday!

**Price: £35**  
**Rating: 96%**

### Contacts and Prices

The prices on this page are an approximate guide only. You may find cheaper prices by shopping around. Places to look include 17 Bit Software, Weird Science, PD Soft, and T Edward.

Dealers may like to contact GTI, the European distributor of many CDs. Tel: ++49 6171 85934. Fax: ++49 6171 8302.

GTI are based in Germany and take trade orders only.

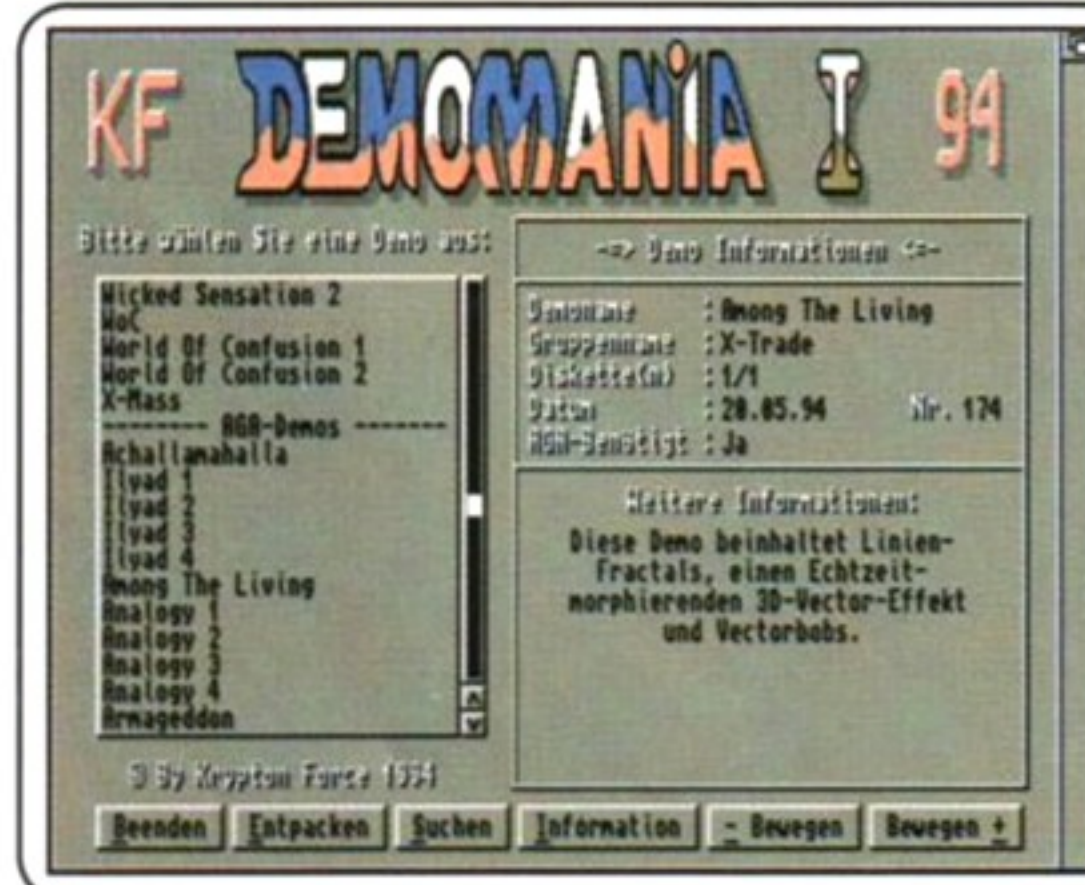
### The Beauty Of Chaos

No, not the AUI office but a collection of spectacular Mandelbrot pictures. There are 507 GIFs in resolutions from 640x480 up to 1140x890 in 256 colours, the same 507 as 320x240 HAM IFF, and 20 true colour TIFFs.

There's an image viewer which displays using Amiga screen modes and most graphics cards for IFF and GIF files but not for the 20 odd TIFFs. It's a good collection if fractals are your cup of tea.

**Price: £15**  
**Rating: 75%**

Beautiful chaos in the form of fractals.



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If you want your printouts to look the best they possibly can, a laser printer is the only answer. However, lasers can be very expensive. The Epson EPL-5600 is not cheap at £1200 but what you get is well designed, crammed with features and works well.

As all Epson's recent printer releases the EPL-5600 looks extremely futuristic and not like a big square box which most other printers resemble. Setting the printer up is quite easy. The first task that needs to be done is the installation of the toner cartridge. This is ultra simple and by far the easiest and quickest I have ever seen. All you do is slide the cartridge in and close the lid. There is a useful option on the LCD display which tells you how much toner you have left.

## Drivers

If you have a PC then there is a special EPL-5600 printer driver included which is well written and works flawlessly. On the Amiga side there is nothing



The wonderful but rather expensive Epson PPL-5600.

# EPSON EPL-5600

included but the Epson emulates the Laser Jet 4 Standard of which there is a driver in the Public Domain.

As well as LJ4 compatibility, the 5600 will also emulate ESC/P2, GL/2, and FX Epson modes but there will be fewer fonts and features available.

PostScript is also an option but only if you have the EpsonScript board installed which costs an extra £279. As well as a parallel, the 5600 also has a serial port. While not as fast, this is useful for some notebook computers which don't have a parallel option.

## Memory

Printing is very quick due to a powerful RISC processor which handles all the complicated calculations that usually slow up laser printers. There are also 2 megs of memory on board which is quite adequate for printing out everyday office letters and other standard material.

If you intend to output gigantic files then the printer memory can be upgraded by simply plugging in standard 72 pin SIMMs. There are two SIMM slots enabling a maximum of 64 Megs to be installed. This means buying two

**Printing is very quick due to a powerful RISC processor which handles all the complicated calculations that usually slow up laser printers.**

32 Meg SIMMs which will cost you a mere £1600. Though the mind boggles at the idea of using that much memory on a printer.

## Printing

The EPL-5600 achieves a respectable 6 pages a minute, and can print true 600 DPI resolution. The results look stunning. BiRITech Resolution Improvement Technology has something to do with this. This is Epson's method of smoothing jagged edges of lines and shapes.

Paper jams always seem to happen when I am around printers but they rarely occurred when I was using the 5600. I only experienced it twice. The first time was when I was printing on a very thick envelope, and the second was printing on some very rough paper. The manual recommends

I do neither, so I guess I was really asking for it!

## Fonts

There are two types of fonts that the 5600 can use: Internal and External. In EPL-5600 mode the printer has 45 internal fonts all of which are scalable. You can also use external fonts. This can be done by either installing extra hardware font cartridges or by using fonts that are already installed on your computer.

## Conclusion

It seems that yet again Epson has come up with another well designed printer which prints perfectly, has plenty of features and is easy to use. Unfortunately this high spec comes at a price, and it may be too darn expensive.

I think this is because it just been released and prices of printers are usually high at this point. Perhaps Epson will see sense and lower the price soon.

Considering you have to pay an extra £628 on top of the £1079 for the

main unit if you want to upgrade the printer to enable PostScript compatibility when you can pick up the excellent DEClaser 1152 for around £500 which has the above features built in, it doesn't seem appealing any more. Granted, the DEC only prints out at 300 DPI and has far less features, but it is a third of the price. You don't need Local talk to use the 5600 with an Amiga, but it is a nice feature to have nonetheless. If you have the cash to spare and want a top quality laser printer then you won't be disappointed with the 5600's performance. But shop around it should be available at a more reasonable price soon. *AUI*

## RATINGS

| Epson EPL-5600  |     |
|-----------------|-----|
| FEATURES        | 95% |
| PERFORMANCE     | 95% |
| DOCUMENTATION   | 90% |
| EASE OF USE     | 90% |
| VALUE FOR MONEY | 60% |

**Overall Rating 83%**

## INFO

Price: £1079 RRP  
 Toner Cartridge (6000 page capacity): £139  
 PostScript Level 2 board: £279  
 Local Talk Board: £349  
 Contact: Epson UK  
 Campus 100, Maylands Avenue  
 Hemel Hempstead, Herts HP2 7TJ  
 Tel: 0800 289622





The Loader 500 is an easy to install replacement drive for inside the A500+ or A600.

## David Taylor takes out the screwdriver to test out an internal drive from Amitek.

was the only difference I found between the instructions and reality. Whether there are slight differences in A500+ designs or if they instructions are correct for the A600, I don't know. There are two legs which are screwed into the drive to hold it up in place.

The instructions give the positioning wrongly, at least for fitting in my A500+. This isn't a problem, as it's obvious where they need to go. Similarly, on the drive I removed, the power cable was at the top and the data cable at the bottom. They are the other way around on the Loader 500. This isn't a real problem as

mediocre competence.

The drive itself tested out fine. It recognised and booted all disks and had no problem with different formats, reading diskspare disks, even stepping to the 81 cylinder, allowing a diskspare disk of 980K to be read.

### Conclusion

Minor quibbles aside, it's hard to fault the drive. Coming with a two year warranty, it's competitive on price and worth it for the added security of the guarantee. If you need a drive, this one is ideal. **AUI**

# Loader 500

The Loader 500 is a replacement drive for the A500+ or A600. It cannot be used with other machines. We tested it also as an internal for the A3000 but it will not work.

Most people are not too happy with opening up their machine at all, so might be tempted to send their Amiga away, should they need to replace the internal drive. I'd suggest that, unless

you can't wire a plug, this isn't necessary. Fitting the Loader was an easy job; referring to the instructions was really only needed when checking the cables were connected the correct way.

To fit the drive, it's simply a matter of opening the computer up, undoing the screws that hold the drive housing and removing the power and data cable. Then, it was slot the new drive in and connect the cables back up. Here

they do fit this way too but it is a little bit more fiddly than the original.

One quick point should be made here. DO NOT tamper with the DIP switches as this will stop the drive recognizing the disk. They must be set correctly. The switches were altered when trying it in the A3000 and I ended up removing the drive to sort them out.

Fitting the drive isn't difficult and shouldn't intimidate anyone with only

## RATINGS

### Loader 500

|                 |      |
|-----------------|------|
| PERFORMANCE     | 100% |
| DOCUMENTATION   | 80%  |
| EASE OF USE     | 90%  |
| VALUE FOR MONEY | 95%  |

Overall Rating 95%

## INFO

Price: £39.00  
Contact: Silica Systems  
Silica House  
Hatherley Road, Sidcup  
Kent DA14 4DX  
Tel: 0181 309 1111

# Mamba



## David Taylor test drives a useful add-on.

You've got to hand it to Amitek, they really have tried hard to make a TV modulator sound sexy. The Mamba simply plugs into the video output of your Amiga and allows you to connect it to a TV or composite monitor.

The sleek black box comes with the necessary cables to link it to a TV but you'll need an extra cable if you want to connect it to a monitor, anything like an audio cable will suffice.

For performance, the output is almost identical to the built-in modulator that comes with the A1200. The results do not rival those of a RGB monitor and the screen is slightly blurred.

The Mamba is a sexy name for a little black box.

So the Mamba is only of use to A4000 users, which is the only new Amiga that doesn't come with a built-in modulator, or for old users who need a replacement.

### Conclusion

The results of the Mamba are all you can expect. You won't find that the picture is perfect but it's as good as it gets. £39 seems a little expensive for a a modulator, but that's the only complaint. **AUI**

## RATINGS

### Mamba Modulator

|                 |      |
|-----------------|------|
| FEATURES        | 100% |
| PERFORMANCE     | 80%  |
| DOCUMENTATION   | 100% |
| EASE OF USE     | 100% |
| VALUE FOR MONEY | 70%  |

Overall Rating 80%

## INFO

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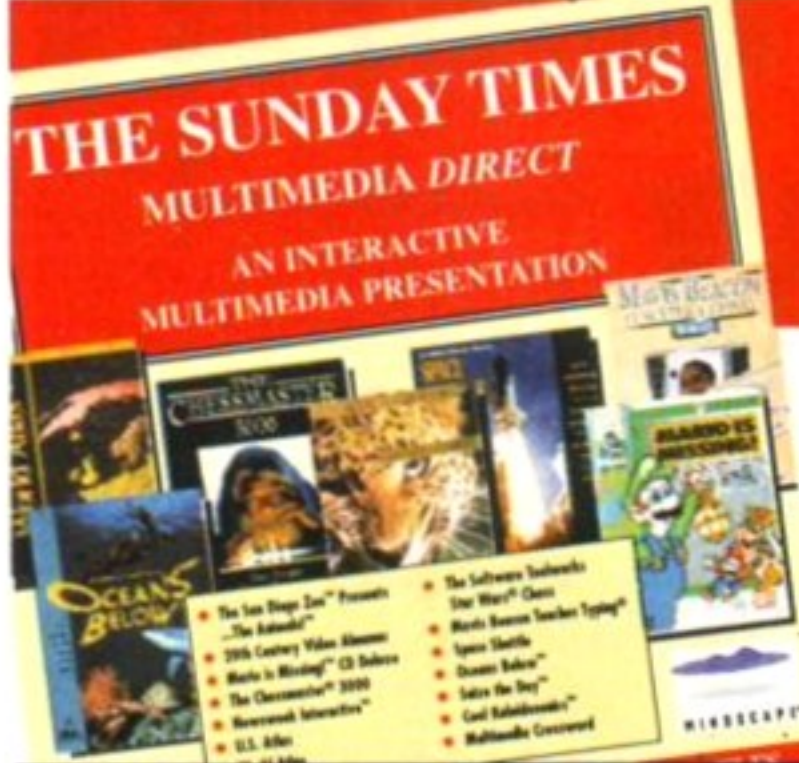
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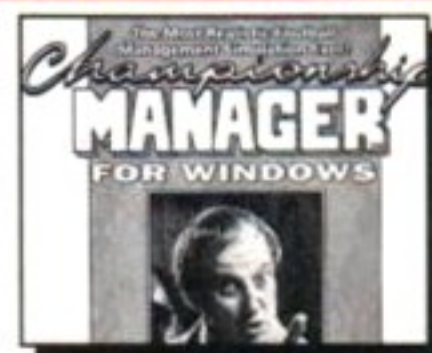
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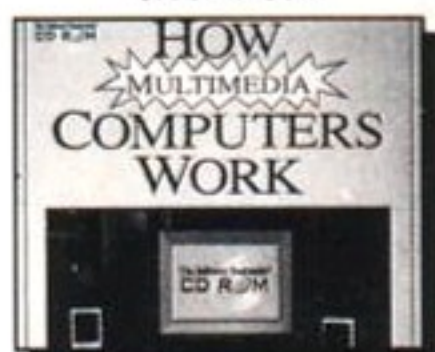
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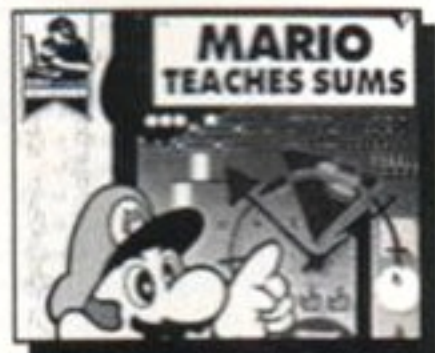
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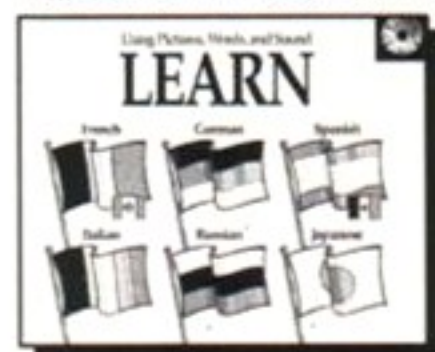
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# FOOTBALL STATISTICIAN PROFESSIONAL



The main menu screen. Stato never had it so good.

**D**o you adore Stato out of TV's Fantasy Football League? Do you dribble with excitement at a league table? Can you recite the vital statistics of key football players while all your mates remember the vital statistics of Drew Barrymore?

If so, there's a new piece of software crafted especially for you. Football Statistician Professional is a straight out statistics compiler for any type of sport league.

It is based on a simple enough operation - you enter the statistics, it remembers them. The process requires you to set up the league, entering team names and any other information you deem important. You then have to submit the results from every game over the league period.

Although tailored for football, it could be used for monitoring any sport which is based on some kind of league competition.

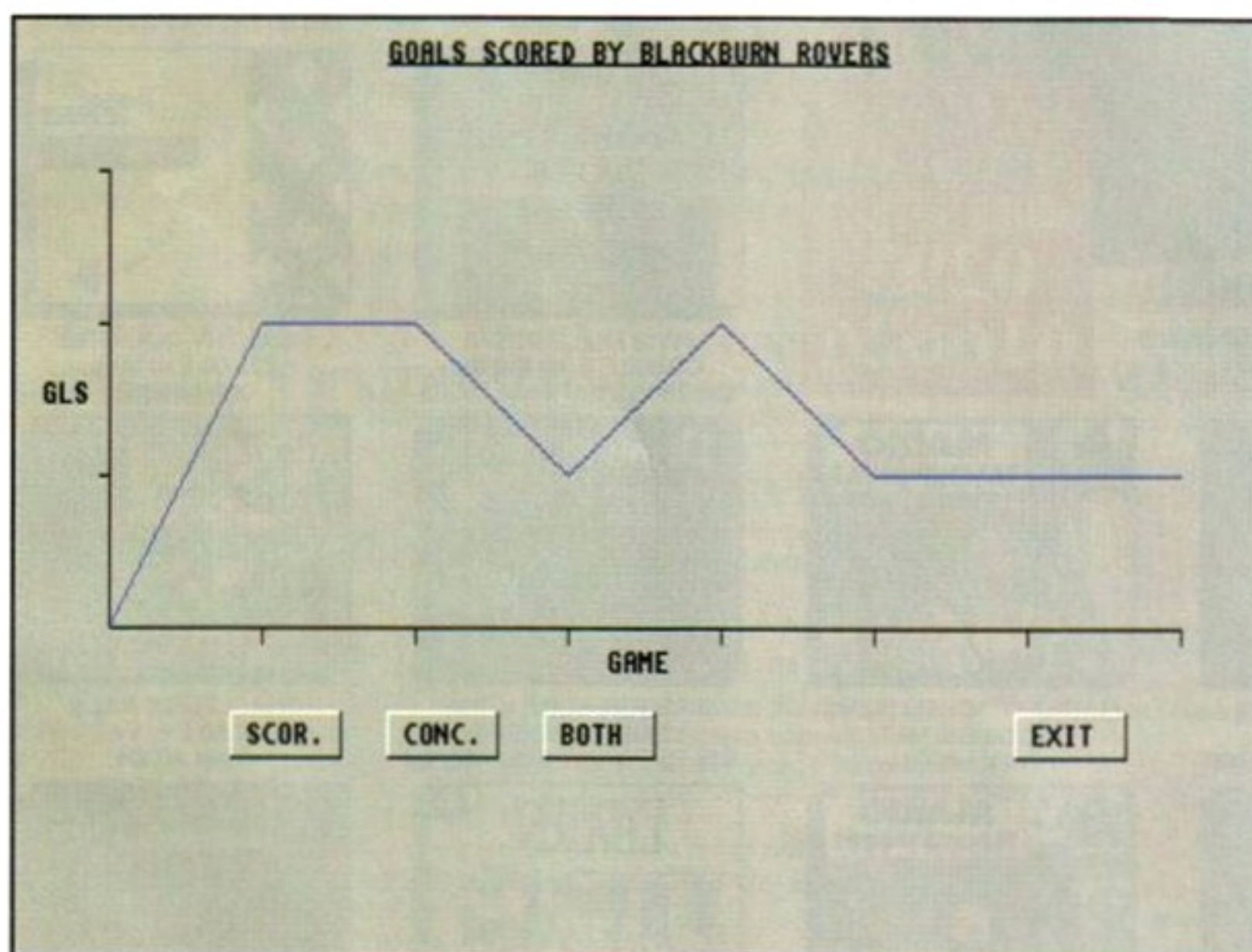
As you would hope, there are more features available. The statistics can be recalled in a number of ways so you can analyse team success.

You can check out performance in games at home and away, the best and worst results and the league fixtures. Understandably, the points system is set up for football but can be altered for the method used by other competitions. If points are deducted for disciplinary reasons, you can alter the points in FSP yourself.

## Option

A handy utility but one which could have been expanded, was the option to present statistics on a bar or line graph showing a team's average goals, points progress, wins/defeats/draws and goals scored and conceded. You can't print these out, which is a shame, but they do offer an intriguing insight into performance.

**Mark Blackham test drives a program for both Chelsea supporters and others who think that the world revolves around who scored what against whom and when.**



It doesn't get much more exciting than this - the goal scoring graph.

Other ways of analysing statistics include tables comparing team performance. This table clarifies the differences between teams and is the basis for the program's own calculations towards performance predictions.

FSP will predict future game results based on past team performance. That makes it a great aid to impress your friends with your psychic powers or to win the pools.

To save itself from being dead wrong, FSP gives a percentage-based likelihood of a win for each team. If the underdog wins, it can be put down to that 1% chance!

The league structure is definable by the user. You can, for example, set

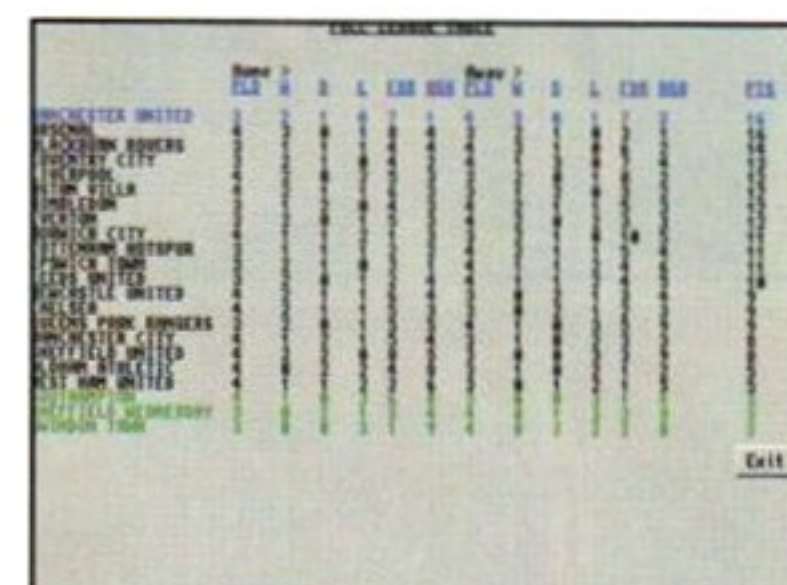
the relegation / promotion zones.

When you start to think about how they could have improved the product, you begin to see that FSP is very lean (how's that for euphemistic).

It would be great to include a section on player statistics, which could include digitised player photos and all their career information. I am surprised that they haven't put in an option to enter the names of goal scorers and even assists. This would enable the monitoring of top team and league scorers.

We're talking about a far more extensive program here but one that surely would be more desirable than the current spartan, however acceptable, version of Football Statistician.

**FSP will predict future game results based on past team performance.**



The league table. Somehow all the action of football has gone missing. Down the pub probably.

## Conclusion

For the fan, this is undoubtedly worthwhile. It's well pitched (weyhey!) at those who'd like to monitor the league but not soak up their waking and sleeping hours entering every smidgen of information such as who cleaned the Chelsea ground toilets.

For the fanatic and obsessive who does want to record facts down to the toilet cleaners, FSP may be unsatisfying. It is hard to fault FSP. It's not original or creative in its presentation but does exactly what it says it will, making result entry and recall extremely easy. The user-interface is well structured and sensible. It looks slick and professional. No fireworks or dancing girls.

This makes FSP the choice for casual to serious fans of any sport who want a simple, no-nonsense approach to recording their favourite league results. **AUI**

## RATINGS

### Football Statistician Professional

|                        |            |
|------------------------|------------|
| <b>FEATURES</b>        | <b>65%</b> |
| <b>PERFORMANCE</b>     | <b>75%</b> |
| <b>DOCUMENTATION</b>   | <b>76%</b> |
| <b>EASE OF USE</b>     | <b>87%</b> |
| <b>VALUE FOR MONEY</b> | <b>81%</b> |

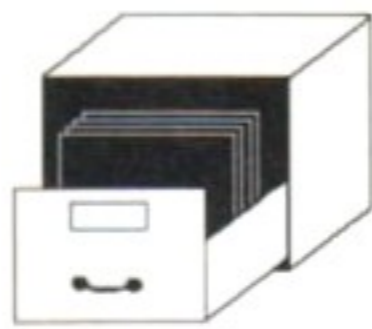
**Overall Rating 72%**

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# GT-PROLOG

**P**rolog is a programming language that is one of the mainstream languages used for artificial intelligence programming, expert system development, and general logic programming. Although Prolog has been around for ages on other machines the Amiga, to date, has not had an English commercial version.

GT-Prolog features a fully incremental compiler and interactive debugger coupled to an 'Amiga-oriented' front end called the ProBench which includes an editor program. One important thing is that the GT-Prolog implementation is based on the so called 'Edinburgh' Prolog syntax. This syntax comes from a Prolog system first created by David Warren, Fernando Pereira and Luis Pereira at the University of Edinburgh. Since then it has been used as the basis of a great many Prolog implementations (on everything from small micro-computers to massive mainframe systems). Edinburgh Prolog has become the defacto standard in Prolog circles and has been adopted as the basis for current international Prolog standardisation efforts.

## **Installation**

GT-Prolog requires 1 meg or more of memory and can be run either directly from floppy or installed on hard disk. As it requires use of the GadTools and ASL libraries the package will only run under Workbench 2.04 or higher. Hard disk installation is very straightforward and just involves copying the release diskette files to an appropriately named directory and then re-adjusting the ProBench icon's default tool to reflect the hard disk location of GT-Prolog's release files.

## **Documentation**

GT-Prolog provides a manual consisting of two parts. Firstly there is a user

## **Paul Overaa has a sneak preview of the new Amiga Prolog programming language.**

manual which, as well as covering installation, use of the ProBench user interface and its integrated text editor and debugger and so on, also includes some tutorial help. Secondly there is a GT-Prolog reference section provided which outlines the lexical and syntactic aspects of the Prolog dialect supported by GT-Prolog and covers things like the GT-Prolog system procedures, use of AmigaDOS I/O streams, console windows, menus and gadgets.

Although relatively well organised the manual, at least in its present form, is still likely to be regarded as quite heavy going by a newcomer to Prolog especially since the manual does not aim to teach you about Prolog itself. To circumvent problems in this area users, at the moment at least, are also provided with the Clocksin and Mellish book 'Programming in Prolog' and this provides a very straightforward introduction to the use of the language.

## **ProBenchInterface**

The core of the ProBench user interface is based around a menu driven editor but although this provides a reasonably useful range of edit options (including various quick-key commands) it doesn't offer things like mouse driven cut and paste editing or multiple file editing

(which nowadays are regarded as standard facilities by many Amiga users).

The editor is however well integrated into the GT-Prolog system in the sense that it not only allows you to open, edit, insert and save files but you can compile, consult and re-consult Prolog database files without leaving the ProBench environment. Having written the set of Prolog statements that constitute your program you can, for example, simply select the 'consult' menu option to have the text processed by the GT-Prolog compiler into a series of clauses that are added to the Prolog database. If you subsequently make any changes to your program then the 'reconsult' option will update the database replacing any modified clauses with their new versions.

There's an inbuilt 'break' mechanism which allows executing programs to be interrupted, modified and subsequently resumed which can greatly simplify the task of program development. The ProBench menu also allows you to access a 'Query' shell

requiring recompilation or relinking and supports the setting of multiple spy points which subsequently cause the execution of a running program to be interrupted when encountered. At each point the user may select from a number of options to continue, fail, modify the set of enabled breakpoints or examine the current state of the program.

The debugger is also integrated into GT-Prolog's standard error handling mechanism which exploits special control predicates catch() and throw(). For those of you interested in the gory details the predicate catch(G,E,R) establishes an exception trap point and then calls G. If G or any of its subgoals invoke

```

- queens(0).
: : [(1, 4), (2, 2), (3, 7), (4, 3), (5, 6), (6, 8), (7, 5), (8, 1)]
: : [(1, 5), (2, 2), (3, 4), (4, 7), (5, 3), (6, 8), (7, 6), (8, 1)]
: : [(1, 3), (2, 5), (3, 2), (4, 8), (5, 6), (6, 4), (7, 7), (8, 1)]
: : [(1, 3), (2, 6), (3, 4), (4, 2), (5, 8), (6, 5), (7, 7), (8, 1)]
: : [(1, 5), (2, 7), (3, 1), (4, 3), (5, 8), (6, 6), (7, 4), (8, 2)]
: : [(1, 4), (2, 6), (3, 8), (4, 3), (5, 1), (6, 7), (7, 5), (8, 2)]
: : [(y/n)]
    
```

*GT-Prolog 'doing the business' with a chess problem that is surprisingly difficult to solve using conventional computer languages.*

throw(F), either directly or as a result of an error, then a copy of F is preserved and control is returned immediately to the trap point (which is removed).

ProBench augments this basic error handling scheme using an easy-to-use Exception requester which allows you to continue as if a goal is successful, continue as if the goal failed, restart ProBench, or enter the Query shell to interrogate the database.

## **Additional Facilities**

Prolog's imperative features, or rather the lack of them, have always been a cause of concern amongst programmers interested in creating practical applications programs (as opposed to users who simply want to experiment with the language). The underlying GT-Prolog engine provides the core GT-Prolog facilities but on top of this GT-Prolog offers a whole range of built-in predicates. These definitions provide convenient facilities to either save

```

Simple solution to the '8-Queens' problem.
Author: Graham Thwaites
Copyright (c) 1993 Grange Technology Limited

queens(Solution):-
  board(Solution),
  place(Solution).

board([(1,Y1), (2,Y2), (3,Y3), (4,Y4), (5,Y5), (6,Y6), (7,Y7), (8,Y8)]):-
  place(1):-1.
  place((X,Y) | Others):-
    place(Others),
    member(Y, [1, 2, 3, 4, 5, 6, 7, 8]),
    unthreatened((X,Y), Others).

unthreatened(, _):-1.
unthreatened(Position, [Head|Tail]):-
  safe(Position, Head),
  unthreatened(Position, Tail).

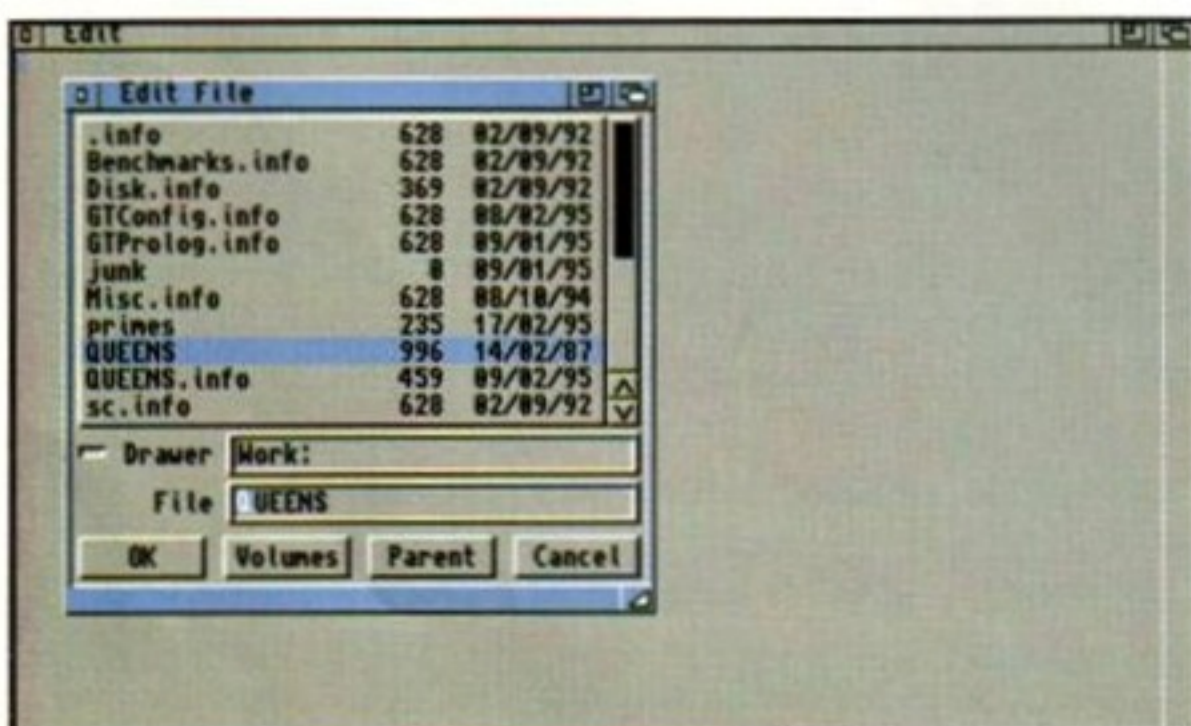
safe((X1,Y), (X2,Y2)):-!,fail.
safe((X1,Y1), (X2,Y2)):-
  X1-X2 = Y1-Y2.
    
```

*Plenty of example Prolog programs will be provided with the GT-Prolog package.*

*The editor does have some up-to-date characteristics such as the use of ASL file requesters.*

which enables users to dynamically interrogate a GT-Prolog database without leaving the ProBench environment as such. The Query shell starts each interaction by displaying its default ?-prompt. The user is then expected to type in a query terminated, in the usual Prolog fashion, by a period.

GT-Prolog's Debugger can be enabled or disabled at any time without



## Prolog - What It's All About

Prolog, in many senses, is a 'conversational' programming language and a typical Prolog session will consist of you carrying on a kind of conversation with your computer. You type in questions and Prolog, by interrogating some database of known facts, will attempt to provide you with some (hopefully) useful answers.

In order for Prolog to be able to do this it does require an appropriate set of information to use. To a large extent this is what Prolog programming is all about - the bulk of most Prolog programs simply consists of declared facts and rules about the objects you are interested in along with details of the important relationships which exist between the various items.

This information has to be entered in a way which is acceptable to Prolog itself and this means that such statements must adhere to Prolog's syntax rules. If, for instance, you wanted to express the fact that John has a daughter called Mary you could write...

```
has_daughter(john,mary).
```

The 'has\_daughter' relationship part of this statement is called the predicate, whereas the items in brackets (john and mary) are known as the arguments. Similarly, if you wanted to express the fact that John has a son called Peter you could write:

```
has_son(john,peter).
```

The full stops at the end of these statements incidentally are important - they are part of Prolog's syntax requirements. Rules are essentially more general statements about objects and their relationships and these often

involve Prolog variables (these use names that start with an uppercase letter).

In their simplest form rules consist of two parts (called the head and the body) connected by an ':'- symbol (representing 'if'). In the above examples we've been dealing with son and daughter relationships but you could, for example, tell Prolog that a relationship 'is the father of' is also implied by these facts by using these two additional rules:

```
is_the_father_of(Father,Child) :- has_daughter(Father,Child)
is_the_father_of(Father,Child) :- has_son(Father,Child)
```

You can go one better than this by using both 'has\_daughter' and 'has\_son' relationships in a single 'or' type rule written like this:

```
is_the_father_of(Father,Child) :-
has_daughter(Father,Child);
has_son(Father,Child)
```

Either way Prolog makes the appropriate connections and if, for example, you then ask who is the father of Mary by entering the query:

```
?- is_the_father_of(X,mary).
```

then Prolog will be able to tell you that John is the father (despite the fact that you didn't explicitly enter this particular fact). Of course Prolog offers much more than this simple example shows. It provides powerful list and structure handling, allows sophisticated recursive definitions to be used and so on.

each programmer from having to create their own definitions or to provide facilities that may not be available in 'pure' Prolog itself. They cover things such as stream oriented I/O control functions, list manipulation, term comparison and manipulation, type checking, window management and so on.

Although much better than the facilities that one used to find on smaller Prolog systems the basic facilities for things like window, menu and gadget attachment and so on are nowhere near as sophisticated as conventional Amiga programmers would nowadays expect. The lack of these 'imperative' features is almost inherent in the nature of Prolog itself and this has in fact long been a problem with almost all Prolog products that have appeared (on almost all machines).

### Foreign Code Interface

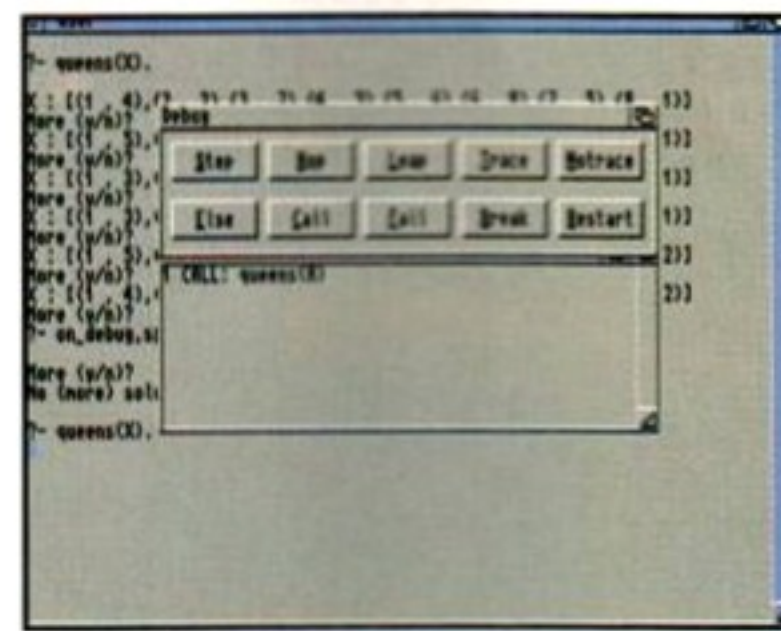
One practical way to solve the limited 'imperative features' issues without damaging the 'purity' of the underlying Prolog engine is of course to provide an interface scheme that allows appropriate parts of applications code to be written in a conventional language whilst allowing Prolog to handle what it does best, ie the logic and database interrogation tasks. With GT-Prolog this is being achieved by using something known as a 'foreign code' interface.

Unfortunately the proposed interface is one of the few remaining areas of coding and documentation still being worked on so I was not able to actually experiment with this. The general purpose of the interface is to provide C and assembler coders with a

set of routines that will allow programmers dynamically to formulate Prolog queries, use the underlying GT-Prolog inference engine, and collect the results obtained.

The important point here is that this should provide programmers with a way of using a Prolog inference engine from conventional C and assembler programs. This type of combined code is something which should excite every practical Amiga coder who has any familiarity with Prolog and it is certainly something which I'm looking forward to seeing.

If, at the very least, these facilities are used just to provide more attractive 'Amiga-style' front ends (using custom screens and windows and so



The debugger may not look much but it is extremely effective in practice.

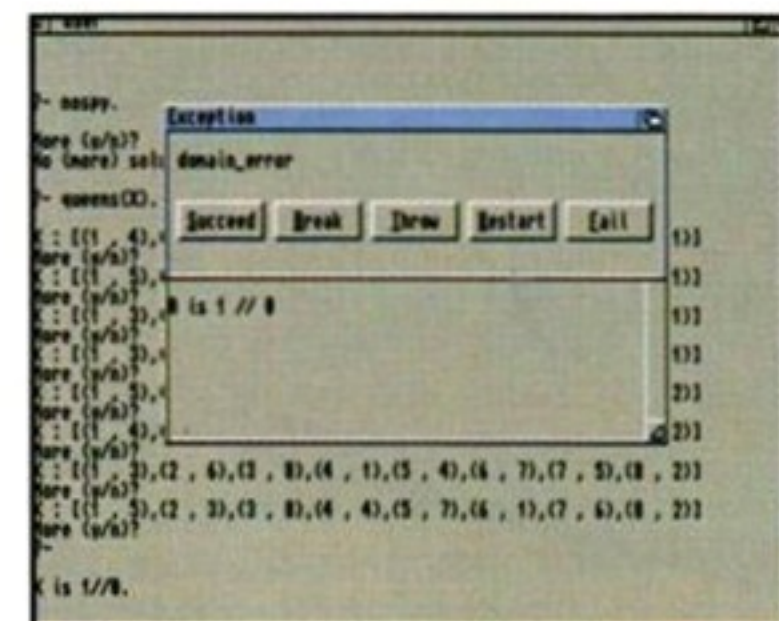
on) they will be very useful. More esoteric uses however could include such things as the development of easy-to-use expert system shells where say C code is used to provide a fully-fledged attractive front end while the underlying Prolog engine handles things like near-natural language processing of queries (converting user queries into the form that Prolog expects for its database interrogation).

OK, I know that in practice this sort of development is not that easy but the appearance of GT-Prolog at least, in theory, is going to make such things possible and that alone is quite an exciting prospect!

### Conclusion

The version of GT-Prolog under test is not the finished version but I've seen enough of the package to be more than satisfied that the underlying GT-Prolog engine is both solid and effective. Underneath the surface the virtual Prolog machine used by GT-Prolog actually provides a range of sophisticated speed up and space saving mechanisms including automatic tail-recursion optimisation, type indexing, automatic garbage collection and value hashing on first arguments to all calls. What all this means, as far as the end-user is concerned, is that the GT-Prolog implementation is both fast and memory efficient.

Certainly from the GT-Prolog engine side of things, which is essentially Amiga independent, it's clear that a lot of work has been put into the product and though it will undoubtedly take some



GT-Prolog can handle program exceptions in a number of ways!

time to get established I believe GT-Prolog deserves to do well. Given that the package has no existing competition on the Amiga it probably will do well.

Any faults or problems? Not as far as the GT-Prolog engine itself is concerned but, bearing in mind that the product is almost ready for release, the existing ProBench front end is clearly still quite primitive and will need to be improved in due course (this will probably happen automatically as the package gains general acceptance).

For a product that is only just about to enter its 'Amiga infancy' such things are neither here nor there. The important point is that a still very usable version of Prolog is about to arrive on the Amiga and that should please a great many serious coders! **AUI**

## RATINGS

### GT-Prolog

|                 |     |
|-----------------|-----|
| FEATURES        | 90% |
| PERFORMANCE     | 90% |
| DOCUMENTATION   | 90% |
| EASE OF USE     | 90% |
| VALUE FOR MONEY | 85% |

**Overall Rating 89%**

## INFO

Price: £89.95  
 Contact: Grange Technology Limited  
 Rosenbank, Stream Road,  
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# Shablaam!

The rapidly advancing world of professional desktop 3D image creation used to be the preserve of those with fat wallets. Now, routes to high performance rendering are becoming very affordable. The process of image creation for all those wow-factor video and picture effects dominating our media, involves creating them in a software package and then translating the rough picture and data into a high resolution final product (rendering). The latter can take an incredibly long time - many computers are left to work on an image overnight or even for days.

Enter the Shablaam - a low cost PC based rendering card for use with the Amiga. OK, not just for use with the Amiga, more for use with Lightwave 3D. Nonetheless, Shablaam will undoubtedly find a place alongside the many Amigas being used by serious hobbyists and professional 3D artists and animation companies creating

## Conal Wenn test drives one of the greased lightning speed monsters that are entering the high level graphics scene.

the PC and Newtek's trustworthy Screamer-Net software (weighing in at a hefty £1400). This, however, would create one of the most cost-effective networked Lightwave rendering solution currently available. Shablaam can also be added to existing Raptor or like-minded Mips -based networks to further increase performance.

At the heart of the card sits a sizable 100Mhz R4600 CPU. Next door are nestled nippy, fan cooled 8 Meg SIMMS totalling 32 Megs of 15 nano-second TrueCache DRAM. This rapid RAM allows the card to perform 1.3 times faster than its nearest rival, the 133Mhz Raptor II. Although currently

renderers like RaptorPlus, have not been designed merely as rendering engines but as stand-alone NT machines. The machine supplied to me by Direction Technology for testing of the Shablaam card also ran Elastic Reality (Mips) and Real3D (Mips) like a dream.

When LightWave is released on the NT, the option will exist for Amiga owners to upgrade across the platform to the NT version and reap benefits of an increased speed renderer (with no Ethernet lag) and a high speed modeller in which very complex models can be created and manipulated with ease.

### LightWave

Lightwave fans who make good use of Sparks and other third party bolt-on products for Lightwave 3D but are considering a new platform are informed by Jon Tindal at Metrographix that the company is working to cater for all the new LightWave platforms.

Rumour has it that ScreamerNet will be bundled free with version 4.0 of LightWave due out late Spring on the Amiga, with PC, SGI, NT Mips and NT Alpha versions. If you currently own V3.5, an upgrade for your existing platform, or across to another system is reported to be £150.00. The full new price will be £995.00.

### Conclusion

Shablaam is a fine product that delivers unprecedented performance for the price. It would also add to a Raptor farm of rendering machines more cost effectively.

Shablaam is therefore a sensible step up for the serious '040 user to another system, and it won't break the bank. In addition, LightWave maysoon be available for the PC. The main downside is the RAM limitation but an expansion board will be available before you become frustrated with only 32Megs.

We are beginning to see 64 bit machines already looked down on as there are promised, out there on the horizon, 128 bit monsters, possibly based on the amazing DEC Alpha chip, that are reputed to make greased

corporate and broadcast video.

The publicity for Shablaam rates the card as eight times faster than the Amiga, a claim necessary to attract the large potential market using Amigas.

Shablaam is a full length VL-Bus PC card which will slot into any 486 or better IBM compatible. This will transform the doddering fool into a fully fledged Windows NT workstation, able to run any Windows NT software as well as CAD/CAM and client/Server applications.

Connecting it to an Amiga will require an Ethernet card in

limited to 32Meg of RAM, piggy-back RAM boards are also planned.

Shablaam shoots straight in at the top level for price and performance of affordable NT rendering computers. The competition include Deskstations's Raptor range, AntiGravProduct's Rendersaurus, Carrera's Cobra AXP275 workstations and Premier Vision's 100-275Mhz DEC Alpha range.

All these machines, with the exception of the dual CPU



*The Gun. This 1536x1024 res picture took 3 hrs and 12 mins to render on a 25Mhz Amiga 4000 '040. Shablaam! spat it back out in only 23 mins and 16 secs!*

lightning look slow. That is as maybe... At the moment Shablaam exists and offers very impressive performance and so should be considered seriously by anyone professionally involved in high level graphics work. **AUI**



*The Shablaam Board. It is available on its own but Direction Technology want you to buy it bundled with a 486 PC and Ethernet card.*

## RATINGS

### Shablaam!

|                           |     |
|---------------------------|-----|
| FEATURES                  | 90% |
| PERFORMANCE               | 96% |
| DOCUMENTATION             | 77% |
| EASE OF USE               | 90% |
| VALUE FOR MONEY           | 90% |
| <b>Overall Rating 90%</b> |     |

## INFO

Price: £3200 ex.VAT for Shablaam, 486PC and Ethernet card.  
 Direction Technology Ltd.  
 1 Riverside Business Centre,  
 Walnut Tree Close,  
 Guildford, Surrey, GU1 4UG  
 Tel: 0483 454400



Selecting a texture is particularly intuitive. The requester doesn't show you just the name of the texture but also what it looks like. This dramatically cuts down the time needed to find the right texture.

Unlike some other titlers, Monument Titrer enables you to change the appearance not only of whole lines or words, but also of individual characters. A character consists of up to four parts (see picture 3): the front side, the

apply. You do this either very intuitively by moving or resizing the object with the mouse or by typing the time data into input fields (see picture 1). Like the contents of the object window, the time line can be scaled (from 5% to 300%).

Monument Titrer offers five different types of wipe effects (see picture), including horizontal and vertical scrolls, and each of these effects can move in different directions. Owners of a Neptun genlock have some additional effects to play with. Before you actually

anti-aliasing. Monument Titrer needs only a few seconds for this. To render the final version of the title, on the other hand, you would choose a HiRes format, 256 colours and anti-aliasing. This takes considerably more time but the results are worth it.

The SSA format ensures that the play-back is smooth and fast. If the title animation should become larger than your Amiga's memory, then Monument Titrer can play it back directly from the hard disk.



In this requester you determine the rendering quality of the titling animation.

# Monument Titrer - Part 2

edge, the shadow, and the pseudo three dimensional extrusion. The attributes of each of these parts can be altered separately. So it is perfectly possible (but not necessarily advisable) for example to create a wooden font that has a golden edge and casts a marble shadow.

You can also place boxes and lines on the page. These graphical elements may have the same attributes as characters. And last but by no means least, you can incorporate pictures (including HAM and 24 bit) in your titles.

All this happens in true what-you-see-is-what-you-get-style, which means you can instantly see the effects of the changes you just made. There are ten magnification levels (from 10% to 200%), so you have no trouble in finding the right magnification, no matter whether you want to scrutinize a detail or whether you want to look at your project as a whole.

## Effects

After you've created your pages of texts and graphics you place them as an object onto the time line. You can define when the pages are to be displayed, for how long, and which fade in and fade out effects the program has to

**There should have been only one part of this test drive by Hartmut Schumacher. The first part appeared in March AUI. Some really malicious gremlins got in somewhere between us and the printers and snipped off the second half of the review. For reasons of space we couldn't get the missing bit in last month but here it is. Our most humble apologies!**



The five basic wipe effects.

select an effect you can preview it. This, again, saves you some time-consuming and frustrating experiments.

All the effects are page orientated which means it is not possible to use different wipes for different parts of a page. This limitation and the relatively small number of effects may seem disappointing. But this isn't really the fault of the program. It is meant to be a video titler, not a full blown effects program. And you can always save

your titles as IFF pictures and process them in a dedicated effects program like Adorage that offers you a full range of spectacular effects.

## Play-back

Before you are able to watch or record a titling animation, Monument Titrer has to render it. You can determine the resolution, the number of colours, and the quality (see picture). So if you just need a preview, you choose a LoRes format with a grey scale palette and no

## Strange Gadget?

To get information to you as fast as possible, this review is based on the German language version of Monument Titrer - as you can probably tell by looking at the pictures. But by the time you read this, the English version should already be available.

## Documentation

The structure of the ninety page manual is sometimes a little strange but the good tutorial, the index and ample illustrations make up for this.

There is also a 70 minute training video with an accompanying disk available. Now don't get me wrong, I'm a big fan of the written word, and for reference purposes there is nothing better than a printed manual (well, ok, an AmigaGuide document is not bad either). But for teaching the basic operations of a program, a video tape is

## Hardware

Monument Titrer needs at least 1 MByte FAST RAM, 3 MByte 3 CHIP RAM, OS 2.0 and a hard disk. The program makes use of the AGA graphics chips if you are lucky enough to own an Amiga 1200 or 4000.

It is possible to use Monument Titrer on Amigas equipped with a humble 68000 processor but if you are in a (semi-) professional situation where time is money or if patience simply isn't your most prominent virtue, then you really need at least a 68020 model.

a very suitable medium. It's the next best thing to having someone explain the program to you. I really would prefer it, though, if the text of the video also existed as a transcript.

At the moment this video is only available in a German language version. Whether there will be an English version depends on the future state of the Amiga market. But since there are already English video tapes for the proDAD products ClariSSA and Adorage, it looks quite promising for the Monument Titrer tape.

## Conclusion

It's programs like Monument Titrer that will help the Amiga survive. The text layout possibilities are little short of excellent. Thanks to the SSA animation format, play-back is fast and smooth. The user interface is as intuitive as they come. The existing wipe effects are of a high quality - if you don't own Adorage, however, then you find yourself longing achingly for more effects. **AUI**

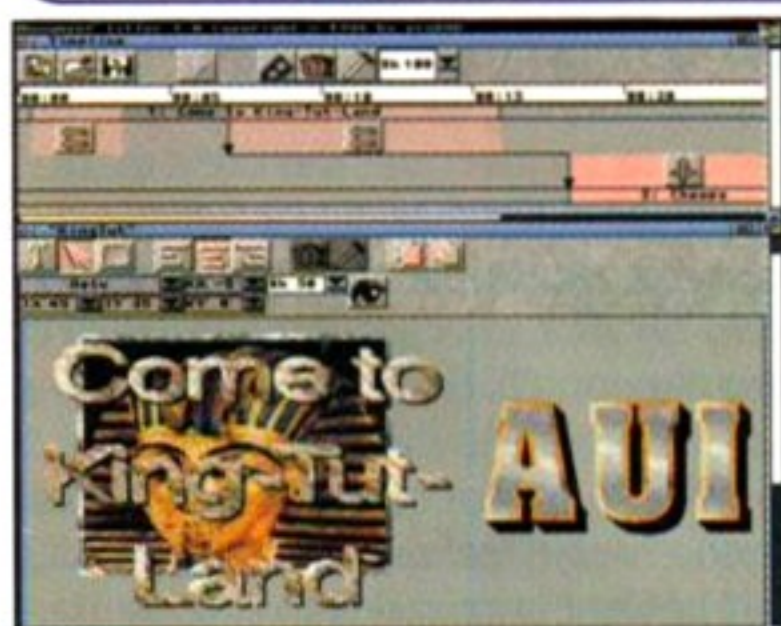
## RATINGS

| Monument Titrer 1.0.18    |     |
|---------------------------|-----|
| FEATURES                  | 92% |
| PERFORMANCE               | 94% |
| DOCUMENTATION             | 85% |
| EASE OF USE               | 96% |
| VALUE FOR MONEY           | 95% |
| <b>Overall Rating 92%</b> |     |

## INFO

Price: About £100.00  
 Contact: Burgess Video Group  
 Unit 6/18 Industrial Estate  
 Brecon, Powys, Wales LD3 8LA  
 Tel: 0874 611 633

In Germany: proDAD  
 Feldelestr. 24  
 D - 78194 Immendingen  
 Tel: +49 (0)7462 69 03



Remember how the Titrer looked? Here's a quick reminder.

# Rack 'em, Pack 'em

**T**here have been many archivers and packers on the Amiga. Because of them, it's possible to store far more on a disk than the standard 878K. They are also essential for transmitting data over modems, so as to save costly on line time.

There are two areas of data compression, one which leaves a file in a state that the computer can use directly and the other which requires the user to unpack the data first. Most packed files (though not all) will have an extension to denote the type: eg. .pp, .dms, .lha.

The first type available is packers (or crunchers), which squeeze executable files down but retain the ability to execute the file. Although computers cannot immediately understand a file that is packed, it can automatically unpack the file as it loads it. These packed files are

## David Taylor investigates the ever decreasing area of data compression!

popular) or StoneCracker (SuperDisk No.47), which is slightly more efficient. These programs have graphical front ends that require the user just to use the mouse.

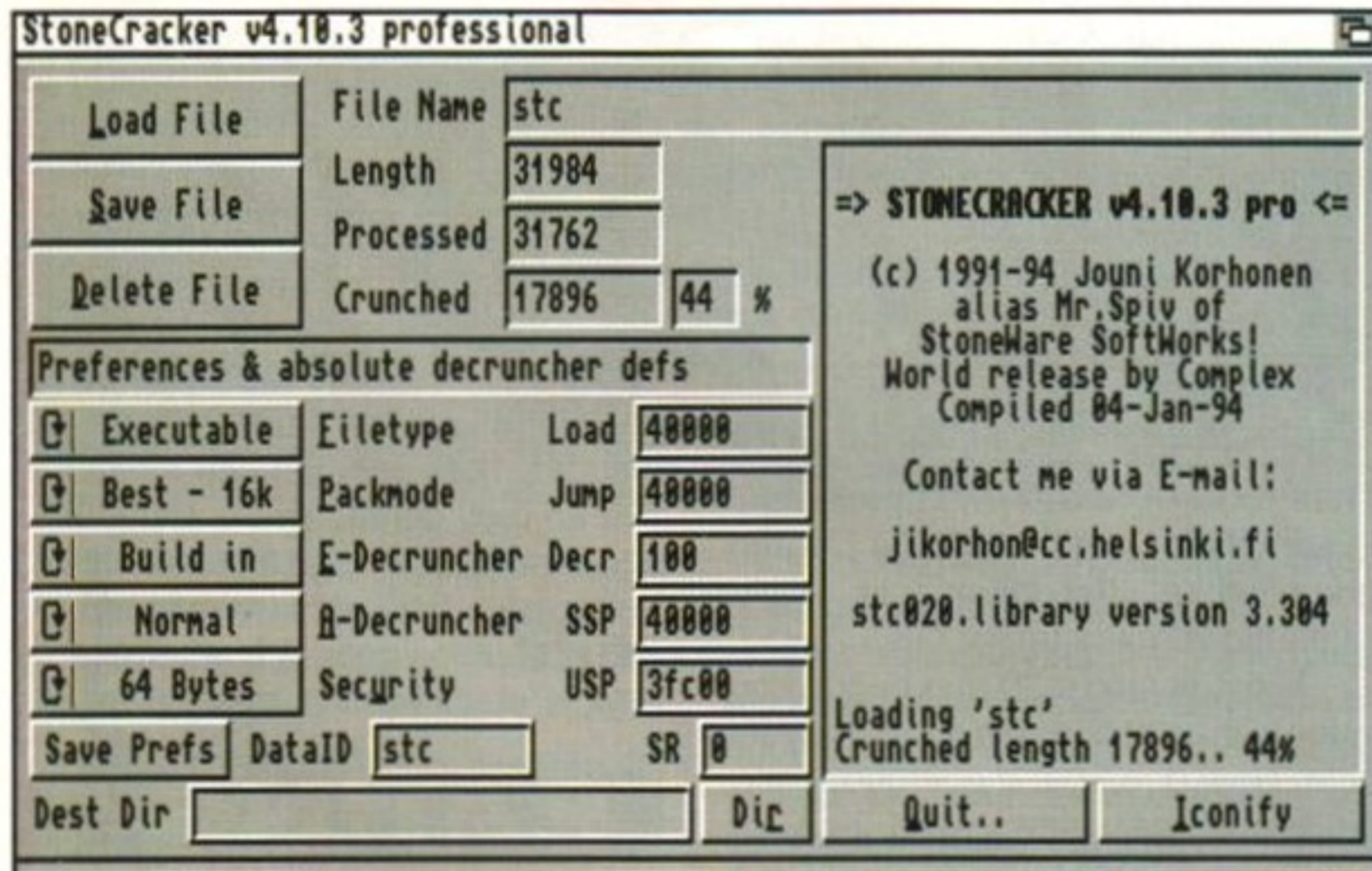
The other way of packing data is to archive it. This data cannot be directly interpreted by the computer and must be de-archived before the computer can use it. This is done by making use of the same archiver that created the packed data and reversing the process, storing the unpacked programs on a new disk. Like packers, there are many different archivers, which implement the idea of archiving data in an assortment of ways.

A popular method is the Disk Masher System (or DMS). This will pack an entire disk, even disks with non-standard bootblocks that normally show as Non-DOS disks. DMS is a CLI command but has many graphical front ends to make its use simpler. One of the best of these is IntuiDMSPro (SuperDisk No.46).

DMS packs each track at a time, which makes it very fast indeed. It produces reasonable results, reducing disks to around half their size. Because of the speed, DMS is used by some magazines and despite its age, has remained popular.

The disadvantages are that only standard Amiga devices (eg. df0:, not ds0: (diskspare disks) or pc0: (MS-DOS PC disks)) can be packed and only whole disks, so if a disk merely contains a few files, the whole disk is packed regardless and those blank tracks are stored too. These will then wipe the disk when they are unpacked. So, even if you have two DMS files, both of which only occupy half a disk, you'll need two disks on which to unpack them.

In addition, DMS will happily write to disks with errors on, which causes problems. The other main disadvantage is that because the whole disk structure is contained in the archive, DMS is capable of spreading virus code.



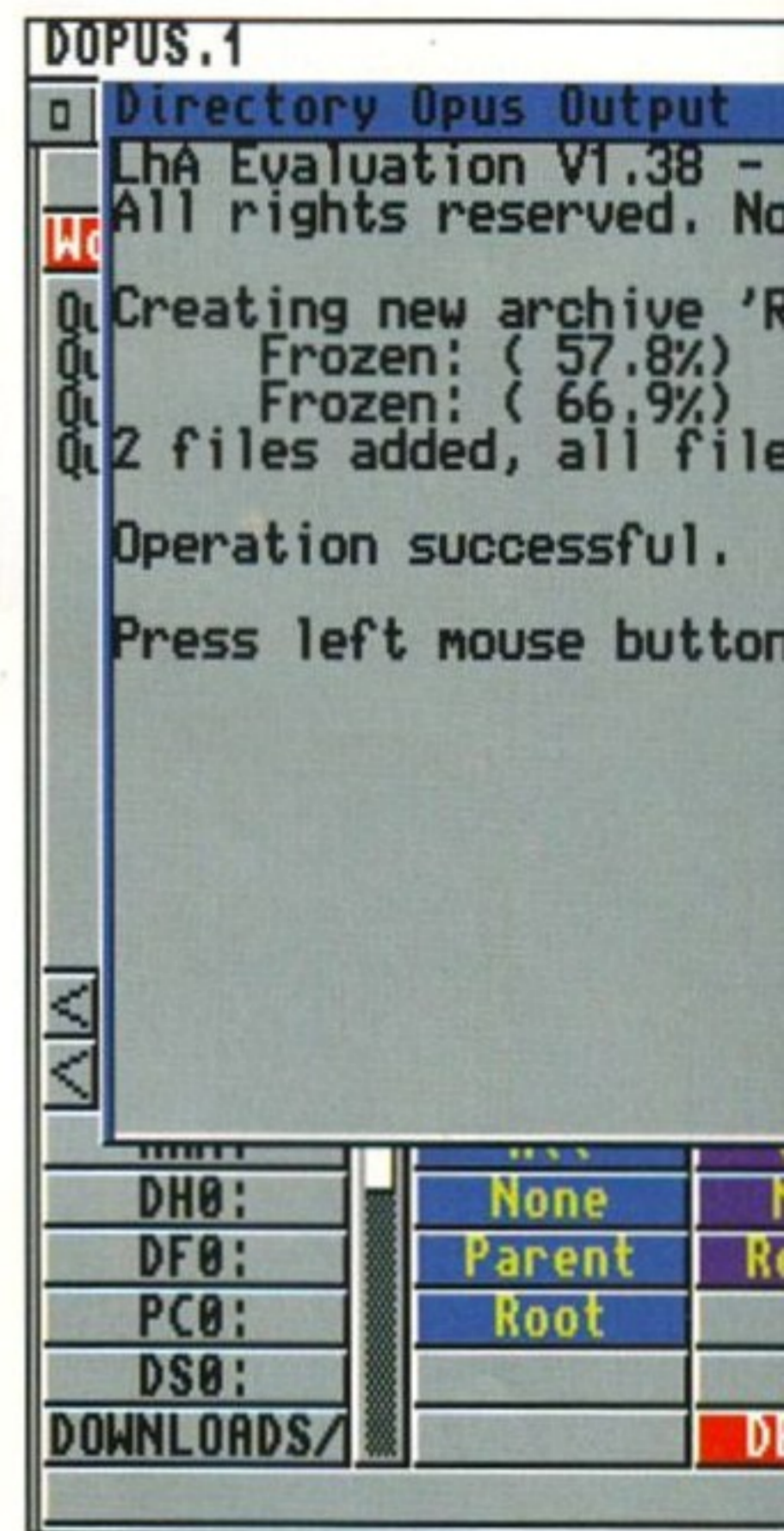
*The most efficient Packer we've seen, on SuperDisk No.47.*

known as self-extracting files. The only difference the user notices is the speed at which a program is executed as they take a moment to unpack. Aside from the time difference, a tell-tale sign that a file has been packed is either the screen or the pointer flashing as the program loads. This decompression of the program occurs every time the file is executed as it is always stored on the disk in the packed format.

This type of programs can also pack files by making use of a library (eg. powerpacker.library). With the library version, which makes a smaller file, that library must be installed in the libs: drawer on the system for it to work. Packers of this kind are PowerPacker (the most



*DMS is fast but isn't very efficient.*



*LHA is the most popular archiver, at the moment.*

## LHA

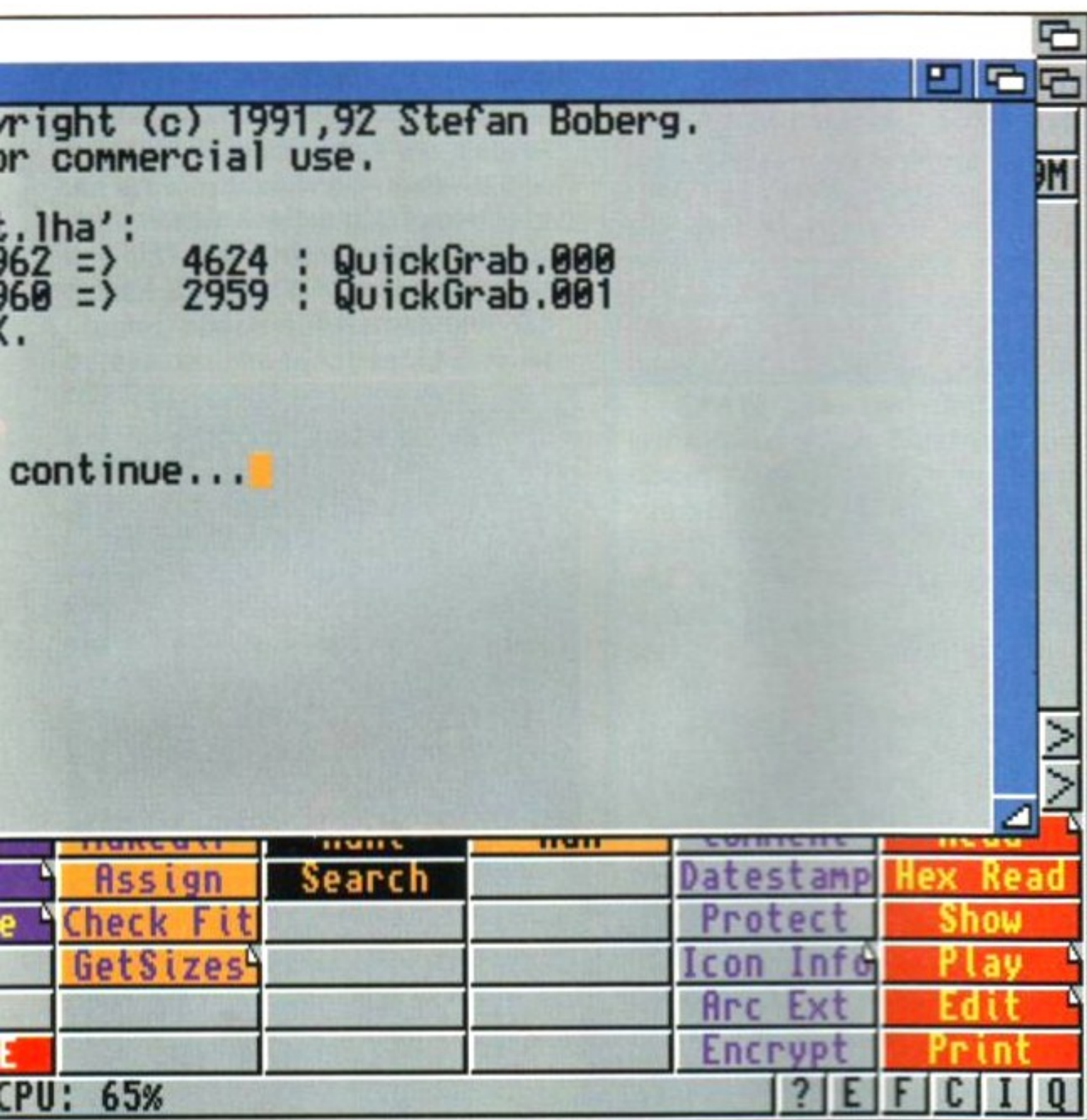
There is then the last type of archiver, of which one, LHA (used to archive the SuperDisks for some time), is the standard. There are many other archivers of this type, such as zoo, but none are as popular or as competent as lha. These archivers approach the storage of data one file at a time, instead of one track at a time as DMS does and so the archives do not contain the disk structure. They just store the files or directories and all data selected in a single archive. The directory trees (ie. the hierarchy of the files - directory/sub-directory/file) can be kept intact.

Like DMS, lha is a CLI command but has some graphical interfaces, such as GUIArc, last on SuperDisk No.42. Lha produces results that can be as stunning as 90% (very rare) but tends to be just over the 50% mark.

It is slower than DMS but this is a sacrifice often deemed worthwhile (not only by AUI, check out the number of lha files on BBS as compared to any other archiver).

Although lha can pack files better than PowerPacker, any packed file will not not archived with a great deal of improvement (0-2%). It is therefore more efficient to ensure that any files

# m and Stack 'em!



the size of a hard drive by 40-50%. Use of this type of system contains a certain amount of risk of loss of data, should it go horribly wrong and is only for the disk-space disadvantaged.

## Packing them in!

Jonathan Forbes is the co-creator of LZX. Here in an exclusive interview he explains how it works.

**AUI:** Can you give us a general idea of how data compression works?  
**JF:** Data compression is achieved by encoding data into fewer bits. This is done by removing redundant information from the data and can be accomplished in many ways.

The most popular methods prevalent on the Amiga are the LZ77 based algorithms (the LZ name comes from the names of the inventors, "Lempel" and "Ziv" and the 77 comes from the date the general algorithm was first devised, 1977).

**AUI:** So data compression has been around for quite some time?

**JF:** Perhaps not everyone was around when ARC and ZOO were both contending compression standards on the Amiga, but many

years ago, these were the only serious compression programs available for the Amiga. Compared with what is available today, these programs were unbelievably slow and offered extremely poor compression, but there was little competition available at that time.

**AUI:** When did data compression as we now know it appear then?

**JF:** The first radical improvement appeared with Lharc0.50 by Paolo Zibetti, an Amiga port of Lharc for MS-DOS by Haruyasu Yoshizaki (Yoshi). While Lharc wasn't fast, it offered significantly better compression than ARC or ZOO and soon became the new standard on the Amiga. The speed issue of Lharc was first addressed by Lhunarc and later by LZ, both written by myself.

About eighteen months after Lharc's debut for MS-DOS, Yoshi released LHA 2.0 for MS-DOS. This used a completely new algorithm, one much faster and much more compressive than the one used in Lharc. The new "LHA" algorithm was incorporated into LZ and became what is still today the compression standard for the Amiga.

About two years after LHA was

that are going to be archived are not already packed. This way, lha can do all the compression and the results will be smaller.

When extracting files, either the whole archive can be unpacked, or individual files can be extracted from the archive. LZX is the new archiver of this ilk.



Stacker-type programs can increase disk space but contain an inherent risk.

For hard drive users, there is also the option of using a Stacker type system. This is a program that sits in the background and compresses and de-compresses everything you write to a specific partition, or in the case of one of the better programs, Artic (SuperDisk No.56), specific directories. Such programs are transparent to the users once set up but at the cost of a little speed can effectively increase

## And there's more!

If you're looking to get the largest amount of data onto a disk that you can - if you're putting together a SuperDisk, for instance - then there's one more way to get extra data on.

Increase the size of the disk. You can do this by buying a High Density drive, which doubles the capacity or you can profit from the advanced formats available in the Public Domain.

Diskspare is one of the most popular (SuperDisk No.49 (reduced archive used each month since then)). It has a device to be placed in the devs: drawer and is far better at formatting disks than the trackdisk.device that the Amiga uses as standard.

Writing 0-79 tracks, which is the norm, diskspare attains 959K on a disk, an 80K improvement on the FFS disk that WorkBench 2 produces - itself over 40K better than the original 837K that a WorkBench 1.3 OFS disk produces. This is the type of disk used as SuperDisks.

Diskspare can also write 0-81 tracks and cram 980K on. This trick is a hack, and although nobody has found an Amiga drive (stress Amiga here as PC drives do have problems with 82 cylinders) that can't read these disks, it is best that everyone tries this on their machines and because of this, it wasn't implemented on the SuperDisks.

A bonus of using these disks is the extra speed at



All this is possible, thanks to using all the options at our disposal.

reading and writing data to these disks, which speed along in comparison to normal Amiga disks.

The disadvantage is that these disks cannot be booted (at least not from a cold boot). The devices need to be mounted within the system. This means that you can use these disks easily but you must ensure that the Amiga has been set to recognise the disks.

The best results can be obtained by making use of every type of compression available. The SuperDisks use a crunched version of LZX, mount and use diskspare, and have the archives packed with LZX. That's how you get 5 Megabytes on two disks.

```

Ram Disk:
Superdisk41:
Workbench:
C:
CLIPS:
DEVS:
dopus:
ENV:
ENVARC:
FONTS:
HELP:
JPEGTMP:
KEYMAPS:
L:
LIBS:
LOCALE:
PRINTERS:
PROTEXT:
REXX:
S:

```

```

Clipboards
ENV
T
test
disk.info
test.info

```

Path:

Path:

|      |        |        |        |        |
|------|--------|--------|--------|--------|
| DF0: | DH0:   | Parent | Add    | View   |
| DF1: | DH1:   | Root   | Ext/Cp | Test   |
| RAM: | WBench | Drives | Move   | Delete |

|      |        |        |     |      |
|------|--------|--------|-----|------|
| DF0: | DH0:   | Parent | Add | View |
| DF1: | DH1:   |        |     |      |
| RAM: | WBench |        |     |      |

GUIArc is a great front end for use with archivers.

## Rack 'em, Pack 'em and Stack 'em!

### CONTINUED

released for MS-DOS, PKZIP version 2 was released. This is the current compression standard for MS-DOS.

**AUI:** How do these compression techniques work?

**JF:** The LZ77 based algorithms encode redundant data by using pointers. For example, the word "compression" occurs a fair amount in this article, so instead of encoding the string "compression", one could simply

generate a code that says "go back 200 characters and copy 11 characters from there". This way only one copy of the word compression is stored in the output data and all further references to it are through pointers.

Almost all popular compression programs for the Amiga, and for MS-DOS use this method.

**AUI:** If they all use the same method, why are there so many dif-



The two minds behind the new archiver, Jonathan Forbes and Toni Pontanen, speak exclusively to AUI.

**AUI:** So we come to LZX. Tell us about the project.

**JF:** The LZX project began in early 1993, at about the time I introduced Tomi Poutanen (the co-author of LZX) to data compression. The intention was to develop a compression program superior to PKZIP version 2, the "leading edge" compression program at the time.

Several ideas were floated, such as using probability-based encoding (predicting the likelihood of one character given the previous characters) or using sophisticated "tree" structures to store and output data.

In all cases the main problem consistently was performance; the algorithms of ever-increasing complexity simply took too much time to perform their compression.

**AUI:** But LZX was created and is better. How?

**JF:** In the end simplicity won out and LZX remained LZ77 based, but its search window is eight times that of LHA. One problem which occurs

PowerPacker 4.0a © Nico François

# PowerPacker PROFESSIONAL

Version 4.0a

File Name:

|               |                                    |           |                                      |                                      |
|---------------|------------------------------------|-----------|--------------------------------------|--------------------------------------|
| File Length:  | <input type="text" value="18640"/> | Chip Mem: | <input type="text" value="1812152"/> | <input type="text" value="1809984"/> |
| (De)Crunched: | <input type="text" value="10280"/> | Fast Mem: | <input type="text" value="2432104"/> | <input type="text" value="1661984"/> |

```

Scanning file 'QuickGrab'...
Loading command file...

Hunk_header (0x03F3)
  3 hunks (0 to 2).
Hunk 0 : Hunk_code (0x03E9)      (17584 bytes)
          Hunk_reloc32 (0x03EC)
Hunk 1 : Hunk_data (0x03EA)     (876 bytes, 196 BSS) CHIP
          Hunk_reloc32 (0x03EC)
Hunk 2 : Hunk_bss (0x03EB)      (4 bytes)

Preprocessing file...
Crunching command file...
Done.
Original length: 18640 bytes.
Crunched length: 10280 bytes.
Gained 45% (8360 bytes) !

```

PowerPacker is very popular but needs to be used correctly.

when one increases the search window size is that it slows down the program dramatically and also increases the memory requirements.

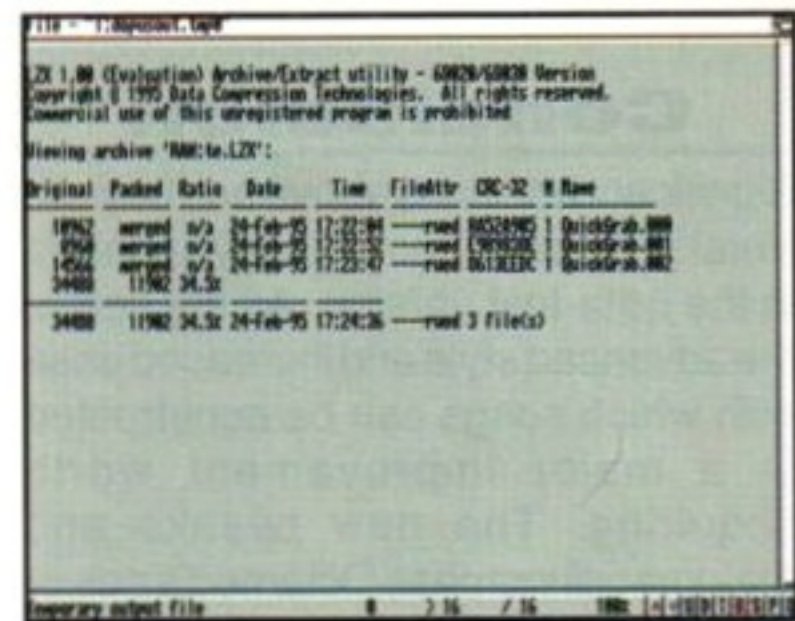
Although LZX searches through up to eight times as much data as LHA, it is faster! This is a testimony to the highly efficient search algorithm which can sift data at high speed that was developed for LZX.

Apart from increasing the search window size, a fairly obvious change by itself, LZX advances the state of the art with brand new compression technology. All other components of the LZ77 algorithm were re-engineered for greater compression and greater speed. Unfortunately, full details on these advances must remain undisclosed for now, due to the rampant plagiarism of compression technology on the MS-DOS platform.

Finally, the file merging feature was added to LZX to enable it to compress data across files (i.e. compress files using data in previous files).

**AUI:** Is LZX the best there is then?

**JF:** While LZX is the sole "64K search window" compressor for the Amiga, two "64K" compressors recently appeared for MS-DOS,



The output window shows the success.

namely "UltraCompressorII" and "RAR", both of which also offer their equivalent of file merging. LZX outperforms both programs in both compression and speed.

**AUI:** What are the plans now?

**JF:** Already there are several LZX developments underway. Both a PC version and a UNIX version are due by mid-1995, with a ZPK LZX library and a full-disk compressor to follow later in the year.

Bug fixes are being made in preparation for LZX 1.01 and it is being improved daily with new features and continues to improve performance-wise as well.

**AUI:** Is LZX the culmination then?

**JF:** Although official development has not yet started on a new compression algorithm for version 2 of LZX, several ideas are being rolled around and may appear sooner than you think.

**AUI:** We look forward to it, but in the meantime, thanks for the answers and the new archiver. **AUI**

## LZX

### David Taylor test drives the latest compression program that is ready to make an impact on the Amiga world.

This review is a foregone conclusion really. **AUI** have already adopted LZX as the new archiver for the SuperDisks. It really remains to explain why.

LZX is not only based on the same algorithm used in LHA, it also retains a great deal of the syntax. This means that users of LHA won't find it hard to get used to at all. The basic commands are the same: a will add files to an archive and x extracts them. The options available are also similar, with the choice of retaining directory structures and file attributes, such as the script bit.

One big plus, used effectively on this month's disks, is the -bi -bo option, standing for buffer input and buffer output. You can adjust the amount of data that LZX reads to the buffer before writing to disk. This is invaluable for users with memory limitations, such as the SuperDisk which is designed for use with 1 Meg machines. LHA has a similar option, but for both input/output, whereas LZX can set them both separately.

Because of the syntax, it's easy not only to use from CLI, but also easy to configure for use with programs like Directory Opus. If you're not used to LHA, then the easy to follow hypertext guide makes light work of it.

There are three compression levels, each being slightly more efficient, but taking more time. In addition, there are three versions which are optimized for use with different processors.

### Conclusion

The results of LZX are excellent. It outperforms LHA by over 10% in terms of compression and in speed, LZX races along, which is why readers will notice the SuperDisks unpack more quickly.

The evaluation copies of all processor speed versions of LZX can be found on this month's AUMAY95a. As mentioned in the SuperDisk pages, the 68000EC version is packed with StoneCracker (SuperDisk No.47). If you want a unpacked version but don't have StoneCracker, contact Scribble PD (see the PD StakeOut for details). I would certainly recommend registering for this program as the registered version performs even better. It is truly fantastic.

More information on LZX's facilities and on archivers in general can be found in the guide to LZX supplied on AUMAY95a.

## RATINGS

### LZX

|                        |             |
|------------------------|-------------|
| <b>FEATURES</b>        | <b>90%</b>  |
| <b>PERFORMANCE</b>     | <b>95%</b>  |
| <b>DOCUMENTATION</b>   | <b>95%</b>  |
| <b>EASE OF USE</b>     | <b>100%</b> |
| <b>SPEED</b>           | <b>98%</b>  |
| <b>VALUE FOR MONEY</b> | <b>100%</b> |

**Overall Rating 97%**

## INFO

Price: (Registration fee) \$20 or equivalent  
 Contact: Data Compression Technologies,  
 383 Lawrence Avenue West, Toronto, Canada M5M 1B9  
 Tel: 416 781 1501 Fax: 416 781 1502  
 E-Mail jonathan.forbes @ canrem.com

### "book1"

(From the Calgary Corpus - text taken from a book)  
 Original size: 419328 bytes

| Program      | Compressed size | Compression time (s) | Decompression time (s) |
|--------------|-----------------|----------------------|------------------------|
| LZX 1.00 -3  | 164398          | 6.82                 | 0.46                   |
| LZX 1.00 -2  | 164720          | 6.57                 | 0.46                   |
| LZX 1.00 -1  | 169260          | 4.84                 | 0.46                   |
| Shrink 1.1   | 169628          | 14.51                | 10.28                  |
| Zip -9       | 172350          | 10.81                | 1.40                   |
| LhA 1.38e -2 | 185998          | 5.63                 | 0.64                   |
| Zoo          | 214944          | 5.51                 | 2.33                   |

### "obj2"

(From the Calgary Corpus - object file)  
 Original size: 246814 bytes

| Program      | Compressed size | Compression time (s) | Decompression time (s) |
|--------------|-----------------|----------------------|------------------------|
| LZX 1.00 -3  | 75063           | 2.90                 | 0.26                   |
| LZX 1.00 -2  | 75775           | 2.40                 | 0.26                   |
| LZX 1.00 -1  | 78347           | 2.09                 | 0.27                   |
| Shrink 1.1   | 79462           | 6.00                 | 5.47                   |
| Zip -9       | 81170           | 8.04                 | 0.72                   |
| LhA 1.38e -2 | 84943           | 3.55                 | 0.32                   |
| Zoo          | 132152          | 3.41                 | 1.40                   |

### "xenomsgs"

(Capture file from a BBS)  
 Original size: 876135 bytes

| Program      | Compressed size | Compression time (s) | Decompression time (s) |
|--------------|-----------------|----------------------|------------------------|
| LZX 1.00 -3  | 212435          | 10.22                | 0.71                   |
| LZX 1.00 -2  | 213617          | 9.15                 | 0.71                   |
| LZX 1.00 -1  | 217227          | 7.48                 | 0.71                   |
| Shrink 1.1   | 224354          | 19.13                | 15.03                  |
| Zip -9       | 241759          | 13.21                | 2.20                   |
| LhA 1.38e -2 | 301480          | 8.65                 | 1.09                   |
| Zoo          | 441081          | 11.39                | 4.83                   |

The results of test compressing a single file.

### "LhA 1.38 Distribution Archive"

Original size: 240262 bytes

| Program      | Compressed size | Compression time (s) | Decompression time (s) |
|--------------|-----------------|----------------------|------------------------|
| LZX 1.00 -3  | 88952           | 3.14                 | 0.31                   |
| LZX 1.00 -2  | 89258           | 2.83                 | 0.31                   |
| LZX 1.00 -1  | 90646           | 2.39                 | 0.31                   |
| Shrink 1.1   | 97294           | 8.29                 | 6.80                   |
| Zip -9       | 99905           | 7.45                 | 0.84                   |
| LhA 1.38e -2 | 102399          | 3.64                 | 0.38                   |

### "SAS/C 6.51 Include Directory"

Original size: 1639236 bytes

| Program      | Compressed size | Compression time (s) | Decompression time (s) |
|--------------|-----------------|----------------------|------------------------|
| LZX 1.00 -3  | 458267          | 24.72                | 2.15                   |
| LZX 1.00 -2  | 461643          | 21.76                | 2.15                   |
| LZX 1.00 -1  | 469943          | 19.36                | 2.16                   |
| LhA 1.38e -2 | 621870          | 23.36                | 3.48                   |
| Shrink 1.1   | 623570          | 49.39                | 50.62                  |
| Zip -9       | 651848          | 26.23                | 6.14                   |

### "SAS/C 6.51 C Directory"

Original size: 1333620 bytes

| Program      | Compressed size | Compression time (s) | Decompression time (s) |
|--------------|-----------------|----------------------|------------------------|
| LZX 1.00 -3  | 624672          | 16.10                | 1.70                   |
| LZX 1.00 -2  | 629746          | 14.33                | 1.72                   |
| LZX 1.00 -1  | 639986          | 12.53                | 1.72                   |
| Shrink 1.1   | 754322          | 46.86                | 53.60                  |
| Zip -9       | 783595          | 31.25                | 5.71                   |
| LhA 1.38e -2 | 791379          | 19.97                | 2.32                   |

On multiple file compression, LZX performs even better.

# OCTAMED 6

**Mark Blackham brings you an exclusive look at the next version of the influential Octamed.**



The Octamed phenomenon just grows and grows. Version 6 is currently in final beta testing stage with industry experts, from where **AUI** brings you this exclusive preview.

Octamed is the undoubted, though much challenged, king of sound tracking on the Amiga platform. The

## New Look

In the software industry much greater importance is now placed on appearances and 'usability' of programmes. Octamed has undergone a radical change of look which makes the interface cleaner and more flexible for the user.

It stills looks and feels like Octamed but has a sharper and slimmer font and style.

The major difference is the windows-based appearance. Rather than cramming every utility onto one screen, the user

them. Despite the new format, the look and feel is pure Octamed. The main windows, such as the instrument list, sample editor and synth editor, are much the same as in version five.

## Aura and Tocatta

Compatibility with the 12-bit Aura sampler, which scored 90% in April 1995 **AUI**, and the Tocatta 16-bit sound card, is a welcome addition. When you use samples you simply tag them as 'Aura' and they will be played through the PCMCIA attachment. Aura allows

## Octamed Pro Soundstudio

Late this year or early 1996, there is intended to be a "knock your socks off" version of Octamed intended for power-users. This will take on all-comers in the music sequencing stakes by upgrading features considerably, including full MIDI file support.

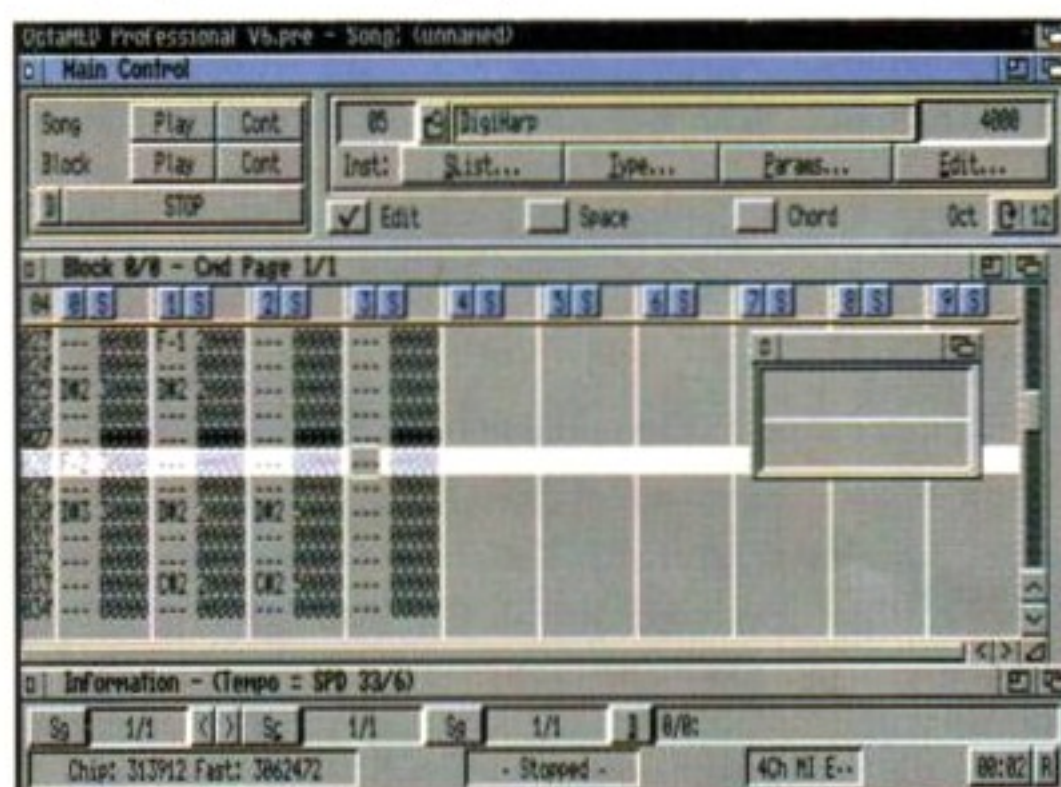
## Upgrading

Fine tuning should have been completed as you read this preview, with release date and price to be set. Registered owners of V6 will be given a "very good upgrade price" for the Soundstudio version expected at year end.

## Conclusion

Significant additions above and beyond Version 5 are not immediately apparent in the beta-test version. All the same, the advanced style and increased ease with which songs can be constructed is a major improvement worth acquiring. The new tweaks and features will increase Octamed's power even further. It's hard to find anything extra which should be included in V6 without widening Octamed's scope to what is promised with the Soundstudio version.

New users are bound to be at-



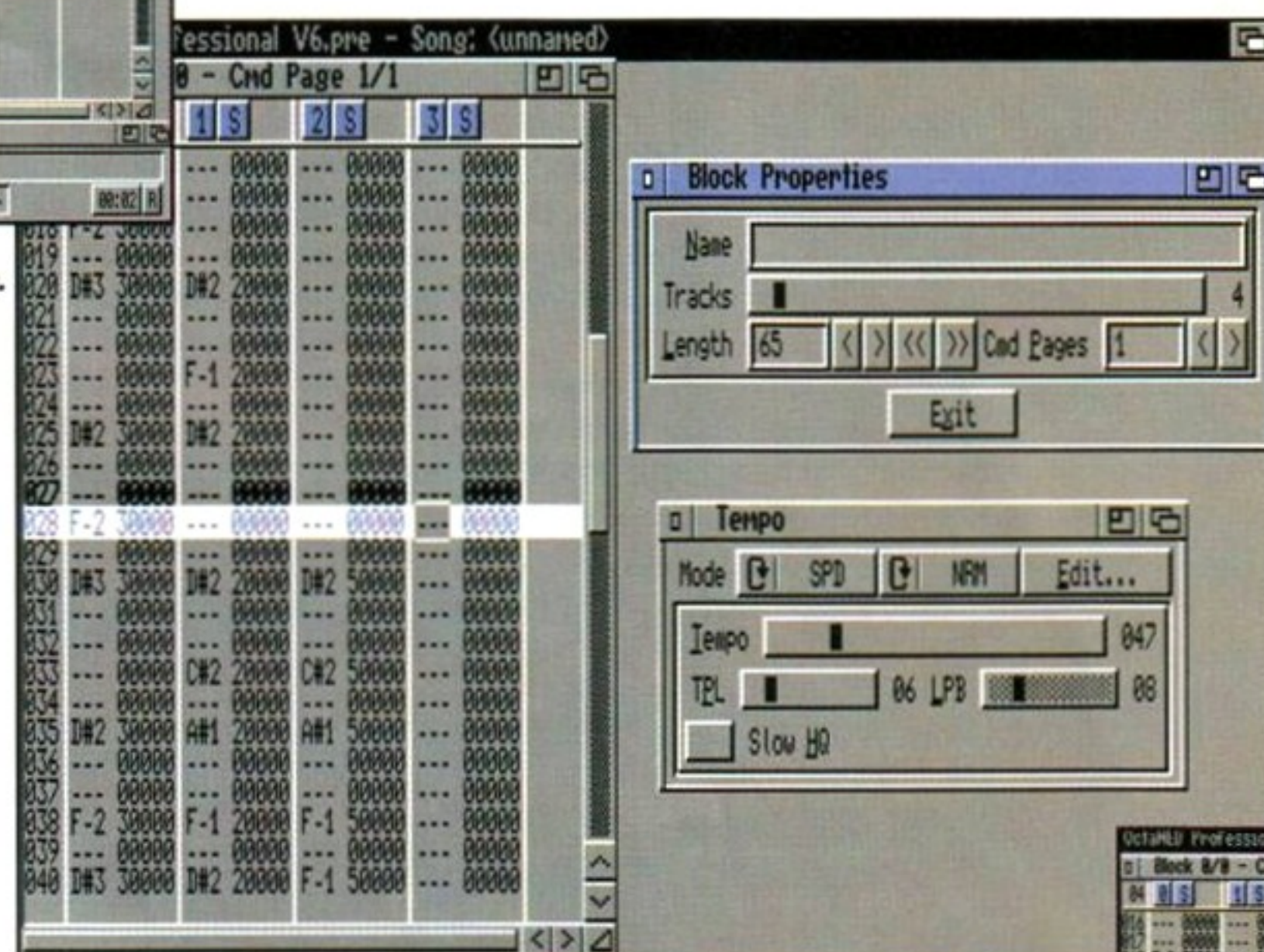
The main work screen. The primary features of Octamed have been split into three different windows.

author, a clever guy called Teijo Kinnunen, ensured it remained at the top by first building a solid core engine, then constantly seeking to improve and add new facilities.

The result was a program which rapidly outgrew its own humble public domain beginnings. It adopted the rather pretentious moniker "Professional" and went commercial. The key to the continued success was that further upgrades ensured Octamed was good value for money. The skills and astuteness which characterised the original programs continued with every new version.

Version 6 is not a radically advanced product, but it is imminently more usable than before.

The interface is much sharper. It supports user fonts and can include annotation text within the composition. On the technical side, MIDI abilities have been impressively improved. 12 bit sounds can be played through the Aura and Tocatta cards, mods can be password encrypted, it's Arexx compatible and there are additional compression routines. The sampler now works in stereo and samples can be taken or converted into new formats. Mod files can also be saved or loaded as SMF MIDI (File type 0).



You can resize the main tracker window to fit in new windows. Here I'm redefining block properties and the tempo to sync up a beat sample.

opens them as windows, movable but not scalable. The move to this design has freed up space for the programmers to present Octamed. Each window is spacious and informative. This concept needs a slight adjustment for the long-time Octamed user, but it quickly becomes a much better way of using the program.

As you move through the various stages of constructing a song, certain applications become more important. Redundant windows can be closed and you can open new ones alongside each other to flick easily between

you to route the Amiga output through its own output, mixing the normal 8-bit samples with Aura's own. As at **AUI** we don't have a Tocatta I couldn't test the connection but couldn't find any reference to it in the software either.

Compatibility with extra hardware - which is the only way Amiga owners can upgrade to better quality sounds without buying a stand-alone 'professional' sampler - is well overdue for any Amiga sequencer.



Loading an instrument is simple enough. The extra window allows you to define the sample type if it isn't standard - such as stereo or Aura sounds.

tracted by the slickly professional interface, style and power. If there are some people out there yet to be impressed by Octamed, this version will do it. **AUI**

# The Computer That Changed Our World



**The Amiga is ten years old. This special report is a retrospective looking over the first decade of this remarkable machine, said by many to be years before its time. It examines the history and the people who created a computer that pre-empted the multimedia revolution with its fantastic graphics, sound and operating system to become, in a modest way, to millions around the world, a legend in its own lifetime.**

**As this Ten Years of the Amiga Supplement is written, Commodore is no more, and the very future of one of the most innovative personal computers ever hangs seemingly in peril. In this special report, Mike Nelson leads the AUI team in investigating the Amiga's origins, its evolution and constant battles to keep it alive. We consider too the industry generated by Commodore's problems at producing software and peripherals.**

**The good, the bad and the plain ugly of the Amiga Decade - it is all here! Ten Years of the Amiga - The story of the computer that changed our world!**

# 10 YEARS OF THE AMIGA

## PART ONE

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# Historical Perspectives

Before re-telling the now famous story of the Amiga's emergence as the most exciting computer of its time (all time?), maybe it's appropriate to set the scene for the benefit of newer readers who were not aware of the situation in the early to mid eighties which preceded the Amiga's unveiling in late 1984 and subsequent launch the following year.

From a personal viewpoint, I started with Commodore computers with the 3.5K VIC-20 (although I had a faulty power supply and Commodore gave out 3K RAM packs as compensation) and graduated to the awesome CBM-64 within two years. For £350 you got a handful of colours, blocky 320 x 200 graphics, 8 sprites and a simple sound generator - all running off a cassette. That is unless you were lucky enough to have £200 for the 1540 series of hard drives which held the princely amount of 170K on a single sided 5 1/4 inch disk. The C-64 was powered by a modified 6502 8-bit processor and represented the state of the art in home computing, subsequently selling over 17 million machines worldwide.

The competition in the UK came mainly from Clive "Not yet a Sir" Sinclair in the shape of the 48K ZX Spectrum, its "dead flesh" keyboard (I can vouch for that) being much reviled until the third party replacements saved the day. In the USA, however, a feud of gargantuan proportions was developing between dedicated owners of the C-

64 and Atari's loyal (if misguided!) band of 400/800 computer users.

The high price of the machines in the UK really gave Commodore a lead but, as we shall see later, this was only the first battle... The war was yet to begin.

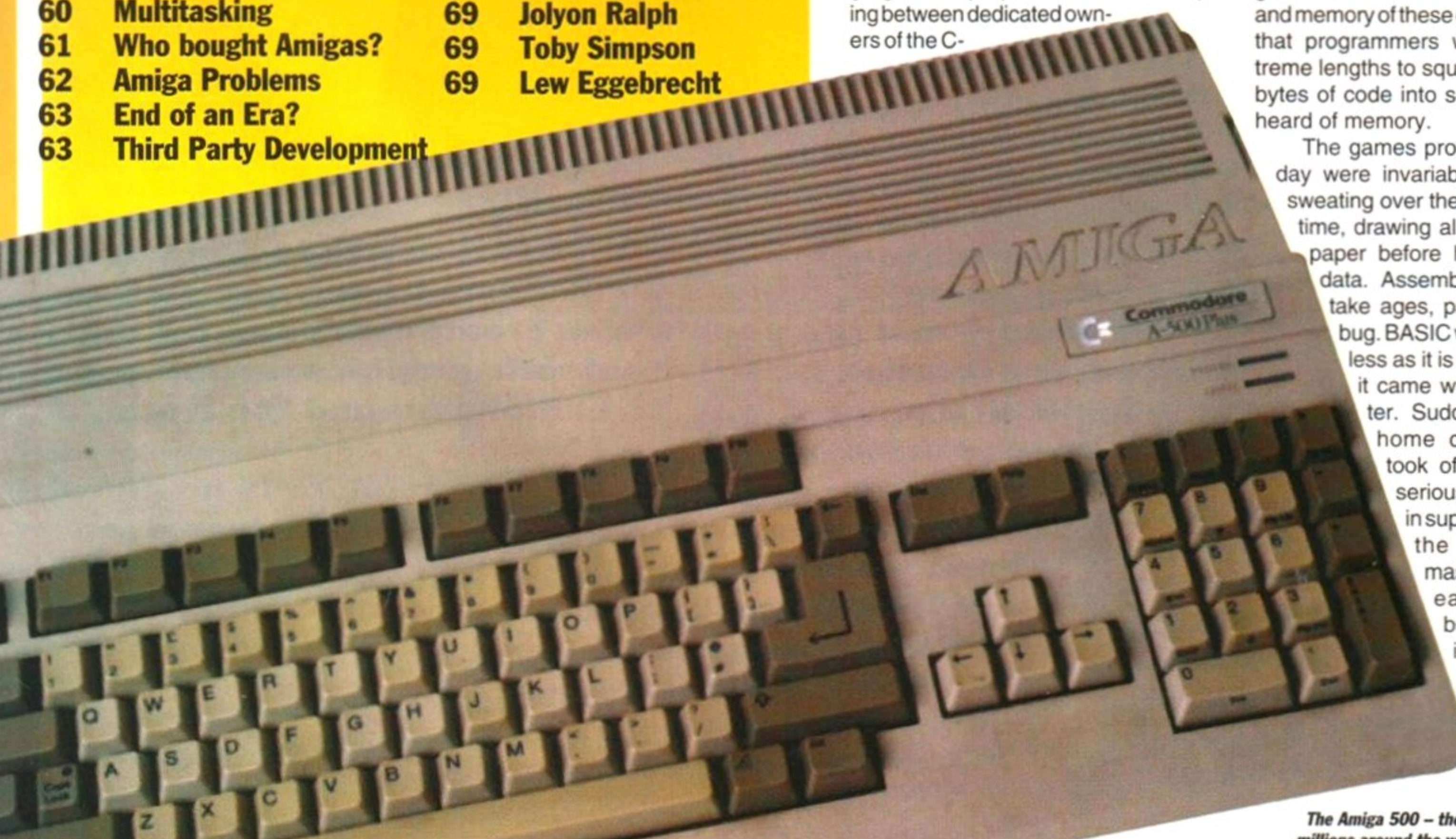
Latterly, Alan Sugar's Amstrad CPC464 was released but lacked the penetration of the C-64 and subsequently the company moved on into the emerging PC market. Acorn's ATOM and BBC Micro proved too expensive for most, despite being very nice machines, though carving out a large slice of the then infant educational market. Other brief flashes in this increasingly large pan included Tandy's Color Computer, the Mattel console, Wales' Dragon 32 (which bore an amazing resemblance to Tandy's machine), the Oric-1 (never made it to Oric-2) and there was the Apple II system knocking around as well.

The whole scene was so different to that of today. Most of the machines were initially sold to people who wanted to program their own software, notably games. The relatively limited power and memory of these computers meant that programmers would go to extreme lengths to squeeze a few more bytes of code into some hitherto unheard of memory.

The games programmers of the day were invariably lone workers, sweating over their keyboards part time, drawing all the graphics on paper before hand coding the data. Assembly coding would take ages, painstaking to debug. BASIC was about as useless as it is today but at least it came with every computer. Suddenly, the whole home computing thing took off and there was serious cash to be made in supplying software to the ever hungrier masses. Queues of eager, anoraked buyers would form in London's Edgware Road when a new computer arrived.

People like Jeff Minter of

*The Amiga 500 - the computer that made millions around the world Amiga users.*





**10 YEARS OF THE AMIGA PART ONE**

# The 1000

Llamasoft became celebrities (still is, really) as they proved just what could be done with a lot of effort in a little space. Games like *Revenge of the Mutant Camels*, *Gridrunner* and *Lazer Zone* became classics - blasting aliens was the order of the day; hammering the hardware to gain every ounce of processing power was vital.

The platform game, so common today, made its debut with classics such as *Manic Miner* (OK, a Speccy conversion) and *Jumpman* (wonderful game from Epyx, anyone remember that?). Looking back at the immense playability of these games, one wonders just how far things have advanced! How many truly innovative new games have appeared in the last few years? Most are variations on a theme. I'm busy reminiscing about the days of *Defender*, *Pacman*, *Choplifter*, *Gorf* and *Galaxions*. Today's charts are crammed with beat 'em ups, footie sims, platform games and complex strategy things that take half a rainforest in manual and four weeks to get past the tutorial. Forget that - gimme a blast like *Galaga* any day.

Adventure games were also a guaranteed winner with the likes of *Infocom* and *Level Nine* software providing the increasingly slick parsers, obscenity filters and the sophisticated (by the standards of the day) graphics of Melbourne House's *The Hobbit*. The larger software houses such as *Activision*, *Epyx*, *US Gold*, and *Mirrorsoft*, *Ocean* and *Domark* then weighed in with a trend of licensing film titles for games. Suddenly games were not being coded by one person but by huge teams of dedicated artists, musicians, playtesters, designers and also at the bottom of the pile, the programmer. Into a world where consoles were as unfashionable as vinyl records was the Amiga born. Not that we didn't see incredible new games, however, but that is a different story.

Commodore were slow to get Amigas out in numbers, and the price down to a believable consumer level. The first on sale Amiga, the A1000, was a tremendous machine but its asking price was initially, in 1985, £1700, and a monitor to match pushed this up further. This allowed Commodore's arch-rivals Atari, run by Commodore ex-boss Jack Tramiel, to gain a foothold in the UK/Europe with their ST range of 16-bit computers. Both Commodore and Atari had the right idea in going down the inevitable 68000 route, and it took Commodore a depressingly familiar while to develop the A500 that was to kick the butt out of the inferior Atari computers. But in doing so, CBM missed a golden opportunity to explore the developing niche of MIDI control, a market the ST grabbed gratefully. This really was the shape of things to come, unfortunately.

## Real Machines

Although the computer games industry was a multi-million pound affair by now, the Amiga's first incar-

nation was ostensibly a business-specification machine. This was directly competing with Commodore's own aging PET series, the first desktop business computers and also the fledgling IBM PC which was starting to gain a foothold that has yet to be even vaguely threatened, despite

the awful PC architecture.

Apple, still smarting from their failed Lisa were launching the Macintosh series. These machines should have been wiped off the face of the Earth by Amiga technology but Commodore dithered and really fouled things up by limiting the expansion options of the A1000. By



The very first Amiga, the ground breaking A1000.

# CHRONOLOGY

- |  |   |
|--|---|
| 1985 A1000 launched. 128K RAM. KickStart loaded from floppy. c.£1700.                      | 1992 A600 launched. A500+ with surface mount technology. No numerical keypad. c.£399.   |
| 1987 A2000 launched. One meg RAM. KickStart on ROM. 5 Zorro II slots + video slot c.£2000. | 1992 A4000/040 launched. AGA chipset. WorkBench 3. 68040 processor.   |
| 1987 A500 launched. 512K RAM. KickStart on ROM. c.£599.                                    | 1992 A1200 launched. 32-bit Amiga. AGA chipset. 68020 processor. Two meg RAM. c.£399.   |
| 1990 A1500 launched. A2000 with 2 3.5 inch disk drives.                                    | 1993 A4000/030 launched. A4000/040, but with a 68030 processor.   |
| 1990 A3000 launched. KickStart 2. 68030 processor. Zorro III slots. c.£3000                | 1993 Amiga CD32 launched. An A1200 with CD drive. Games console with no keyboard (later could be added with SX-1). Workbench 3.1. c.£299. |
| 1991 A500+ launched. Enhanced Chip Set (ECS). One Meg RAM. c.£399.                         |   |
| 1991 CDTV launched. A500. 1.3 OS with CD drive. c.£599.                                    |   |

**The Amiga was arguably the most innovative personal computer of its time.**

falling into the belief that only the PC mattered, Commodore built clones to the detriment of the Amiga and Apple sniggered while going for the high price, high profit specialised market of DTP, at Commodore's woeful attempts to market their machine, stumbling blindly, seemingly unaware of the capabilities of the Amiga and its potential.

**10 YEARS OF THE AMIGA PART ONE**

## What was so special about the Amiga?

As the history of its inception shows, the Amiga was arguably the most innovative personal computer of its time. It had everything - powerful graphics, a fast processor, a natural upgrade path, and most of all, the beginnings of a beautiful operating system. Apple really popularised the graphical user interface, and were genuinely worried by the Amiga's potential. After all, here was a powerful set of graphics chips with the innovative blitter that gave the Amiga a distinct edge in terms of a GUI and also there was stereo sound, 4096-colour graphics and of course that new operating system, more of which later.

My earliest experience with Amigas was hearsay on the grapevine; talking with programmers who had encountered this machine and marvelled at its graphics. "Nothing could be this good", I thought. Until, that is, I saw an A1000 in the flesh at my local computer shop. I simply had to get hold of one - all they needed to do was flip up some of the early HAM pictures generated by the embryonic Digiview digitiser from the equally embryonic NewTek from Topeka, Kansas - and we all know what happened to them.

Then came the string of Commodore demos, recently resurrected to my collection, including the then incredible bouncing ball demo which showed a huge rotating ball bouncing its way around the screen with an eerie echoing crunch as it hit the sides.

There was Robot City, a complete animation of cartoon (ish) quality. Anyone remember the fire hydrant giving the dog a fright? The Amiga was hardly breaking into a sweat doing all this. How then did it work?

### Hardware

The essence of the Amiga's architecture is that the custom chips at its heart do the all the hard work, freeing the

processor to do its own thing. On other computers of the time (and most of today's), the processor had to take care of all the tasks needed to make a program work, including building the display, feeding the sound chips, reading the keyboard and managing the disk drive. The Amiga, using a sophisticated system called direct memory access (DMA), employed dedicated chips to perform these tasks independently of the processor. This allowed loads of colours to be displayed, with sliding screens of different resolutions to appear while another part of the DMA was sending sound samples to the Digital to Analogue converters; the 68000 was a bystander, simply marshalling things via the so-

**Once dedicated Amiga programmers flourished, the A500 took off and eventually pulverised the ST.**

Unfortunately for Commodore, it took the games companies a year or so to get to grips with the advantages of the Amiga and most of the original UK games were straight conversions which added little to the ST version.

Once dedicated Amiga programmers flour-

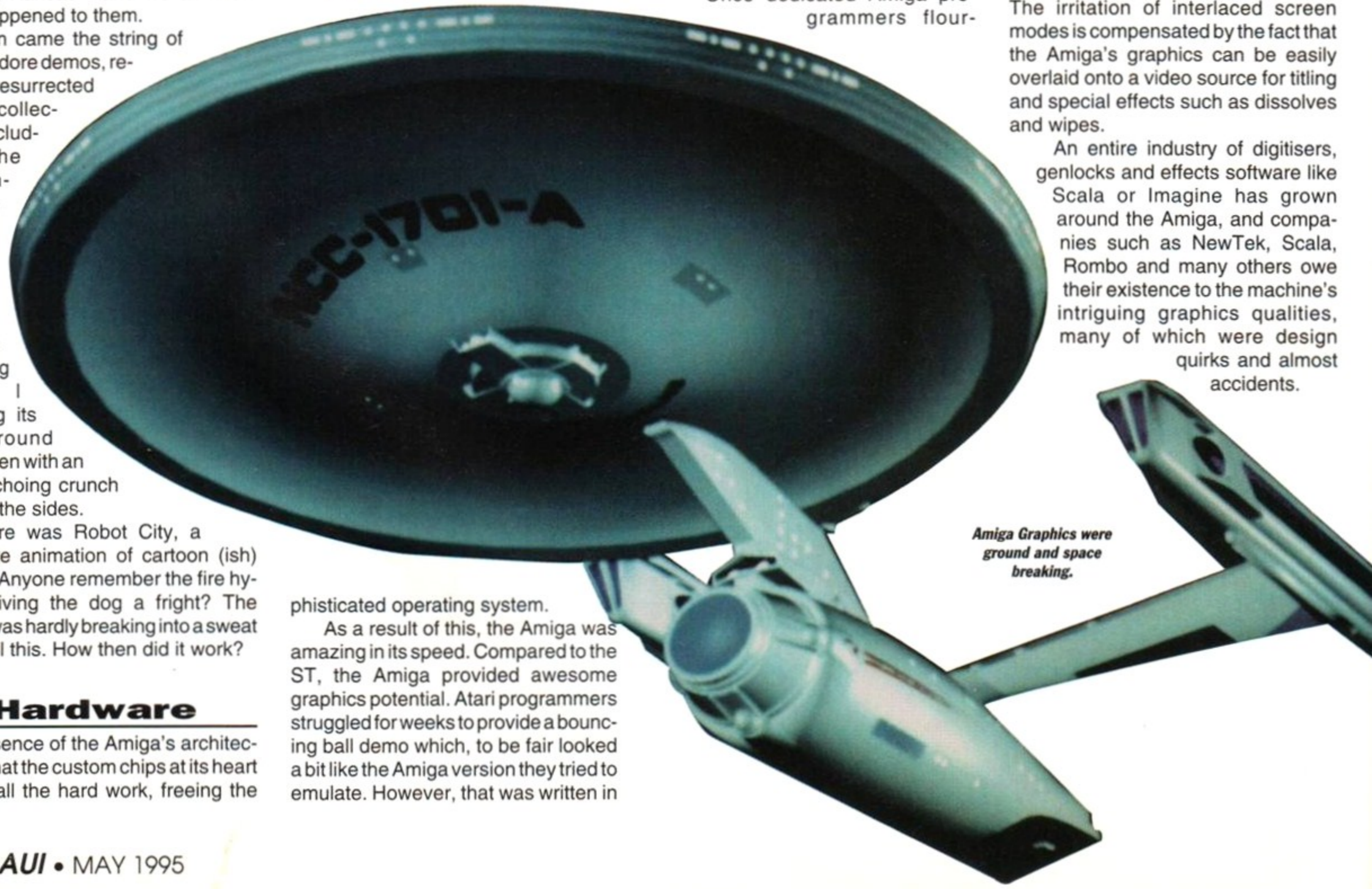
ished, the A500 took off and eventually pulverised the ST. Some of the classic games which shaped the market are discussed elsewhere in the supplement.

If the Amiga has carved a niche for itself, it is in video graphics and 3D rendering. The weird clockspeed of the first series of machines (7.14 MHz) was a direct consequence of the Amiga's internal timing being linked to PAL and NTSC video signals, a fact that may yet save its bacon. No other computer offers this easy integration into the world of television and video, and this was instrumental to the design of the most successful third party product - the Toaster from NewTek. The irritation of interlaced screen modes is compensated by the fact that the Amiga's graphics can be easily overlaid onto a video source for titling and special effects such as dissolves and wipes.

An entire industry of digitisers, genlocks and effects software like Scala or Imagine has grown around the Amiga, and companies such as NewTek, Scala, Rombo and many others owe their existence to the machine's intriguing graphics qualities, many of which were design quirks and almost accidents.



An autographed copy of the Amiga 1000 case with the embossed autographs of those who created the machine.



Amiga Graphics were ground and space breaking.

sophisticated operating system.

As a result of this, the Amiga was amazing in its speed. Compared to the ST, the Amiga provided awesome graphics potential. Atari programmers struggled for weeks to provide a bouncing ball demo which, to be fair looked a bit like the Amiga version they tried to emulate. However, that was written in

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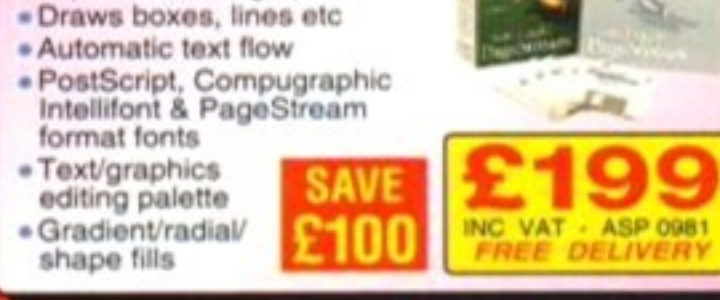
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## Software

**10 YEARS OF THE AMIGA PART ONE**

The Amiga was blessed from its very beginning with a superb operating system which even today stands up very well to its potential rivals. Windows and Messy-Dos, despite being the most popular microcomputer environments are laughable in the context of what the Amiga has provided for years. One shudders to think at the possibilities of the Amiga if Microsoft's development effort had gone into the machine, rather than the constant limitation imposed by Commodore's management regime on the small team of dedicated software engineers at the now defunct CBMHQ in West Chester, Pennsylvania.

The launch of the Amiga, still as wired up breadboard, at the Consumer Electronics Show in 1983 set a standard that will never be equalled; a fully pre-emptive multitasking operating system running in 512K (well, half that originally, but you can't do much on a 256K Amiga, although that is how the first ones were shipped). Nobody has



Inside the first Amiga!

come even close to that specification. Indeed Bill Gates, zillionaire chief at Microsoft is quoted as saying that "Multitasking under 2 Mb is not possible". That was several years after the Amiga was happily multi-tasking in 512K, one quarter of his lower limit. To this day, Windows does NOT properly multitask and System 7 on the Mac is less than perfect, while Windows NT takes at least 8 Mb to even wake up in the morning. Enough said.

the bewildering array of "standards" that exist on other platforms. Amiga users are lucky enough to be able to rely on an IFF picture, animation, sample or music track being compatible with any software, on any model of Amiga - a big bonus in the multimedia applications in which the Amiga excels. Sadly, the IFF standards have not been maintained across all Amiga applications such as 3D rendering or DTP/word processing, partly because of Commodore's troubles.

The other phenomenon that EA gave to the Amiga was Dan Silva's DeluxePaint series. Although this product features in our list of influential software, it is appropriate to mention it in this historical introduction as it is hard to pick a more important program for the Amiga. The number of copies in

existence must be very close to the number of Amigas in circulation - and I don't mean that all of those are legal copies either.

The freedom to draw on Amigas because of DPaint has led to some of the most amazing artwork in the array of PD libraries around the world.

DPaint is almost part of the Amiga - versions for other computers really showed up the advantages of the Amiga more than lists of specifications and clockspeeds. Animation was possible in real time and studios like the mighty Disney used Amigas to train their artists in creating movement; the costs plummeted as the animator could see his work running off the computer rather than using expensive video or film alternatives.

### World Reception

In short, the Amiga represented a monumental leap forwards in terms of technology and also the price/performance ratio was unmatched. The advantages of video graphics were not obvious in the mid-eighties to the blinkered PC world who saw the Amiga as glorified games toy with some interesting characteristics. Business machines did not need colour or sound; high resolution graphics was something to display more text, and not pictures - a GUI was a luxury that most people did not need as they were happier keeping their hands on the keyboard. Memorising hundreds of shortcuts was allegedly a reasonable price to pay for all this!

## Multitasking

**10 YEARS OF THE AMIGA PART ONE**

What is multitasking and why is it so important?

The ability to have several programs all running at once is not a prerequisite for a games machine where the programmer can (and usually does) take over the entire resources of the Amiga. Application software, however, benefits greatly from multitasking. You don't necessarily have to be actively running a program to benefit from multitasking. For instance, say you were writing to a disk that subsequently filled up before the end of your file. The Amiga stops and tells you the disk is full, and you can then pull up your Workbench, delete some extraneous stuff and select "Retry" from the requester and it simply carries on. Try doing that on a PC.

Running simple Workbench games when you're compiling a program is also a nice side effect of multitasking! The "Evolution" section details the important changes that were made to the operating system, including ARexx and the huge leap of 2.0.

So much for the operating system, but what about the applications? In the early days, Commodore had the sense to forge a very fruitful relationship with a relatively obscure games company called Electronic Arts who have since grown to be a multi-million dollar concern. Somewhat ironically given that a

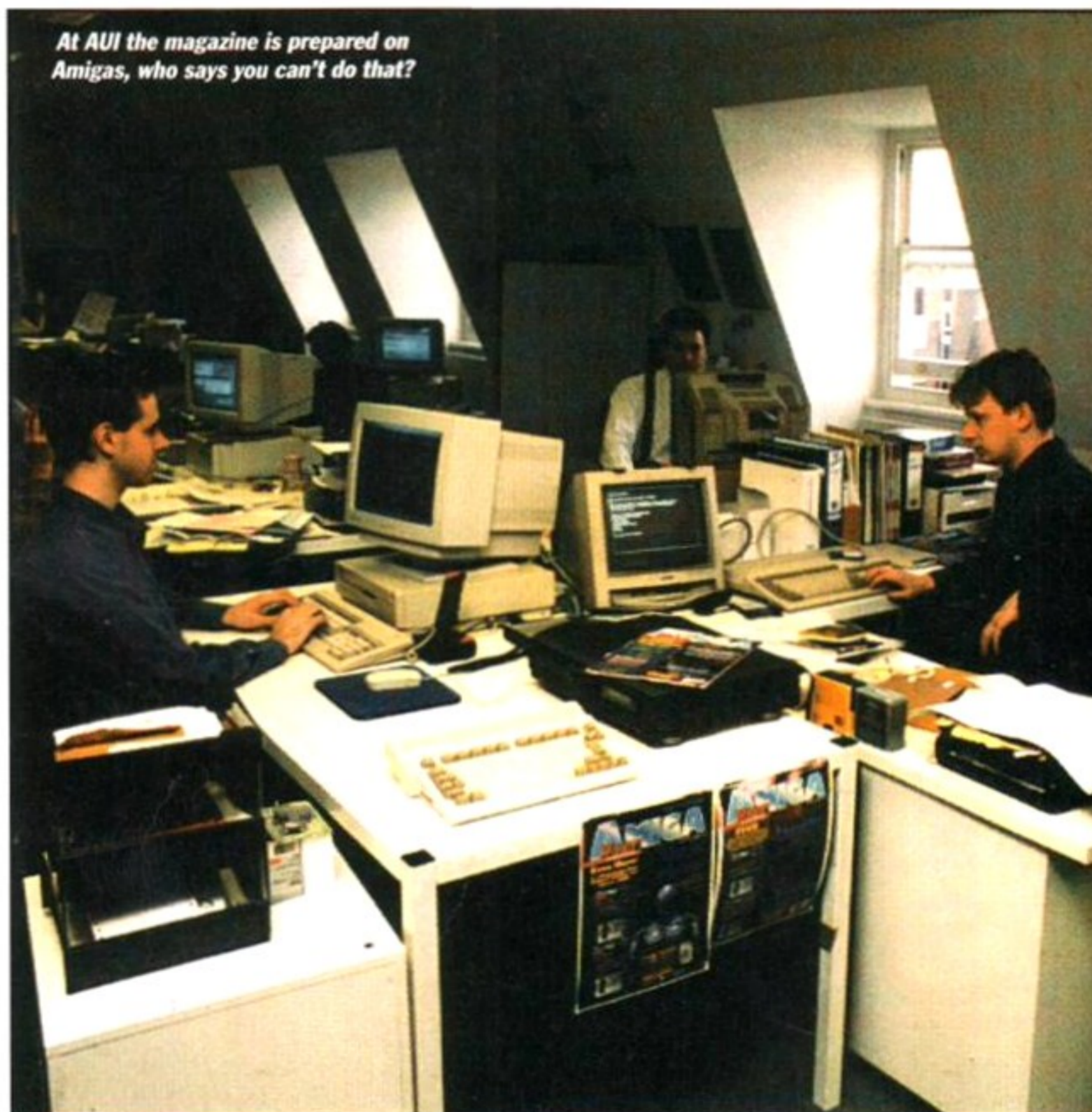
large chunk of that is from Amiga software, they have gone on to produce the competitor 3DO system using the very designers of the Amiga operating system, R.J.Mical and Dale Luck, who had long since been allowed to leave by Commodore.

The early days saw EA and Commodore working together to produce a set of standards called IFF. It's not that 3DO has contributed to Commodore's demise; they needed no real help there but the early days

**The Amiga can run wordprocessors or spreadsheets as well as any PC or Mac (if not better), given the chance.**

saw EA and Commodore working together to produce a set of standards called IFF (Interchange Format File) which even to this day goes unparalleled in other systems.

The mighty advantage this gave the Amiga is exemplified by looking at



Of course, Amiga and Apple Mac users knew this to be a classic case of cognitive dissonance - the PC hardware was incapable of supporting a proper GUI as its graphics potential was so limited. However, until Windows was released, this represented the main bulk of PCs in the world - perhaps 30-40 million machines, and at least ten times the number of Amigas around. We have already alluded to Apple's panics over the Amiga and their joy at cornering the DTP and also music side of the business.

**The Amiga can run wordprocessors or spreadsheets as well as any PC or Mac (if not better), given the chance**

This has remained the state of play to the present time. The Amiga is able to compete favourably with PCs and Macs in terms of performance. The A4000 is perhaps a little too pricey but its main drawback is the lack of recognition among the larger software houses such as Microsoft, providing familiar applications. The Amiga can run wordprocessors or spreadsheets as well as any PC or Mac (if not better), given the chance. But too often it hasn't been given that chance.



## Who bought Amigas?

**M**ost of the early Amiga owners were computer enthusiasts, willing to stick their dosh on the line for something they saw as very special. Showing it off to friends and writing demos became something of a small industry in itself. It was only with the release of the A500 that the machine sold in large quantities, and then it was truly a games machine. The UK really fuelled these sales, supporting the cranky US operation who were not responding at all well to stiff competition from the aforementioned rivals. Part of the success of the Amiga was due to some clever marketing by Commodore UK in putting together packs which provided a few top quality games, DPaint or a Word Processor for around the 400 mark. Literally millions of machines were sold, in Europe especially.

Although the bulk of Commodore's resources were founded in the USA, most of their financial success emanated from this side of the Atlantic. The US fared considerably less well, concentrating on the emerging video graphics applications and over the last three years only the vast sales of a single product, the Video Toaster, have sustained any interest whatsoever in Amigas.

Many third party companies supplying peripherals or software owe their very existence to the Toaster. Even then, most of the Toaster users were virtually unaware that they had an Amiga on their desk. NewTek even felt it necessary to write a control panel for Macs to control the Amiga-based Toaster just to overcome the unbelievable bias against



*A completely unnecessary sexist photo but male Amiga users really got glamour shots going with their machine's photographic talents.*

**Commodore went to great lengths to make sure that hardware revisions didn't cause massive problems of incompatible software.**

the Commodore machine! The release of the new A4000 with its improved graphics chips added new impetus to NewTek's version 2 Toaster, but the recent troubles with Commodore have hit NewTek very hard indeed.

Relatively few people were willing to trust their businesses to Amigas entirely but a reasonable suite of software is available to cover most applications. Gold Disk's Professional Page, Pro Calc and the likes of Pro Write from New Horizons could get the job done, but are no match for the PC/Mac heavyweights costing several times as much, however.

## Amiga Problems

The Amiga was unashamedly radical. Its hardware and software were light years ahead of everyone else's but the early operating system was somewhat flaky. This coupled with some less than ideal programming practices by developers left the Amiga with a tarnished reputation which has yet to be fully repaired. This was not without justification as it took Commodore several years to update and debug the operating system and the familiar Guru meditation numbers were all too common in the beginning.

Commodore went to great lengths to make sure that hardware revisions didn't cause massive problems of incompatible software. One of their best methods seemed to be not upgrading the hardware at all! It took years for the first substantial increases in performance of the custom chips, and the A3000 was the first major advance past toying with the amount of CHIP memory accessible by the custom chips.

The release of the A4000 with its AA chipset was not until 1992, eight years on from the start of the story; eight years in computing terms is a heck of a long time to be effectively standing still. Commodore still had the edge on other manufacturers as the Amiga could move reasonably high resolution images faster and more smoothly than competitors, even if they now had surpassed the numbers of colours available. Too little, too late is the unfortunate story of the Amiga's evolution.

## Support

Initially, a number of important developers supported the Amiga, including

the heavyweight Word Perfect Corporation, Superbase (from Precision in those days) and Lattice, makers of the C compiler. New companies grew to provide the Amiga with the standard applications but somehow they never quite came up to scratch against their competitor versions.

One of the big problems with the A1000 was the interlace one had to endure for the high resolution displays vital to emerging applications. Commodore again failed miserably to act decisively and vital opportunities were

squandered. It took until the A3000 to have a standard "off the shelf" Amiga which could generate a non-interlaced "VGA" signal without the display enhancer of the A2000.

The Amiga market place seemed destined to be small in comparison with the PC world but that made companies very adept at coping with the nuances of the machine. The open ended architecture with a clever "Auto-Config" setup mean that there were no problems adding peripherals to the likes of the slot-based machines, a direct contrast to the PC world which is absolutely fraught with difficulties of incompatible peripherals.

Despite Commodore's best efforts at closing off the A500, people like

CSA from San Diego, ICD and GVP to some extent managed to beef up the power of these machines to include 50 MHz 68030s with buckets of RAM and hard drives.

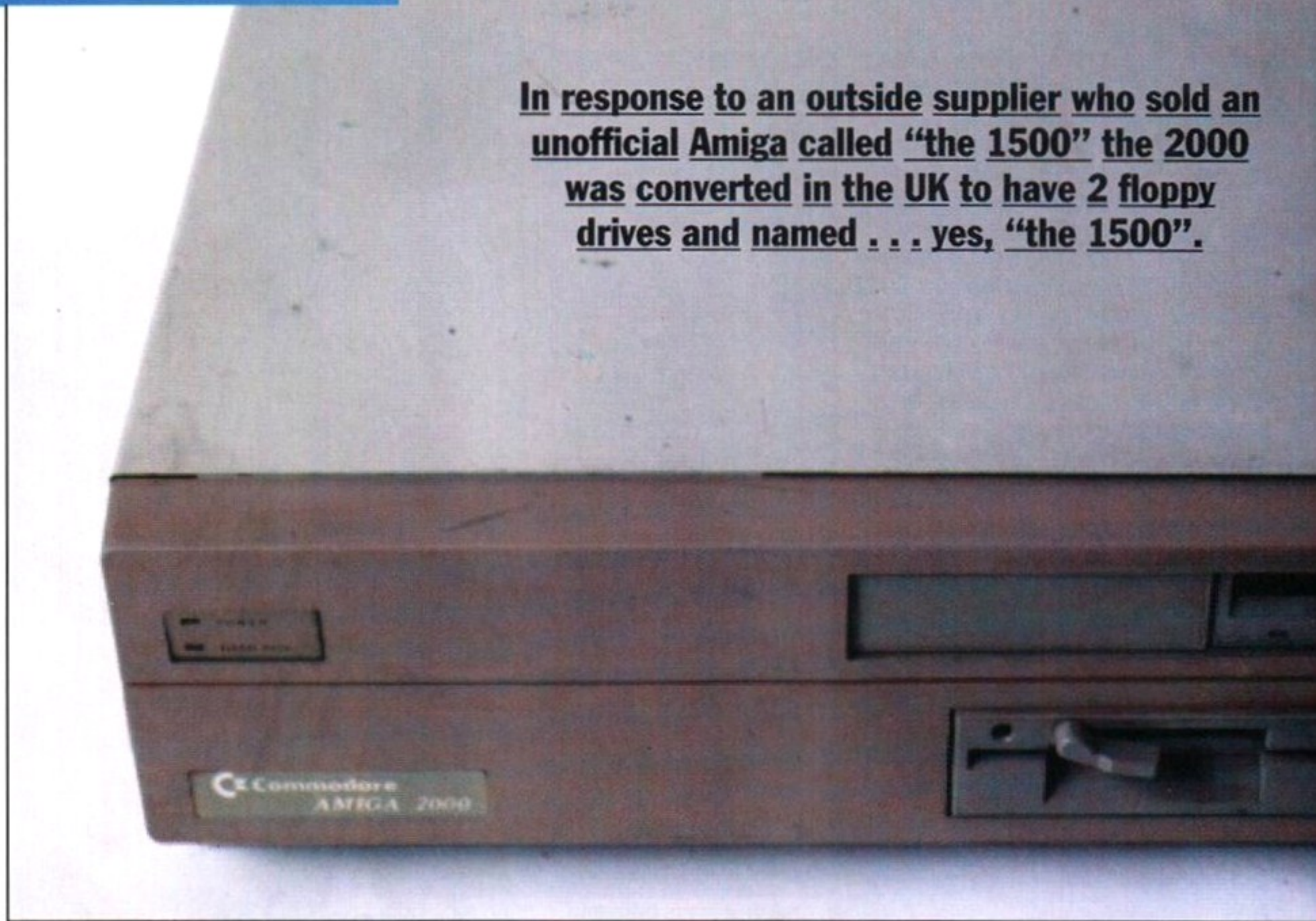
The A600 finally put paid to these and Commodore did learn a lesson, producing the A1200 which one could expand meaningfully without the open heart surgery of removing the 68000. I write using an A1200, 50 MHz CSA 68030 accelerator, 6 Mb of RAM and the machine comfortably outpaces an equivalent 486 PC.

The Video Toaster is the great third party peripheral, and NewTek, for reasons best known to Commodore had precious little input from West Chester with respect to Amiga developments. As the section on the Toaster describes, the hardware is intimately related to the Amiga's internal architecture, so any alterations had great implications for NewTek.

The Amiga 3000 should have been the flagship vehicle for the Toaster but such was the relationship between the two companies that no-one checked that the case of the desktop version could accommodate the bulky Toaster board.

The second generation Toaster, compatible with the A4000 series fared much better with the thawing of the cold war under the influence of the Eggebrecht regime but it is hardly conceivable that other computer manufacturers could cause such havoc.

**In response to an outside supplier who sold an unofficial Amiga called "the 1500" the 2000 was converted in the UK to have 2 floppy drives and named . . . yes, "the 1500".**



*The first big box Amiga. The A2000, a cause of contention between Los Alamos and Germany.*

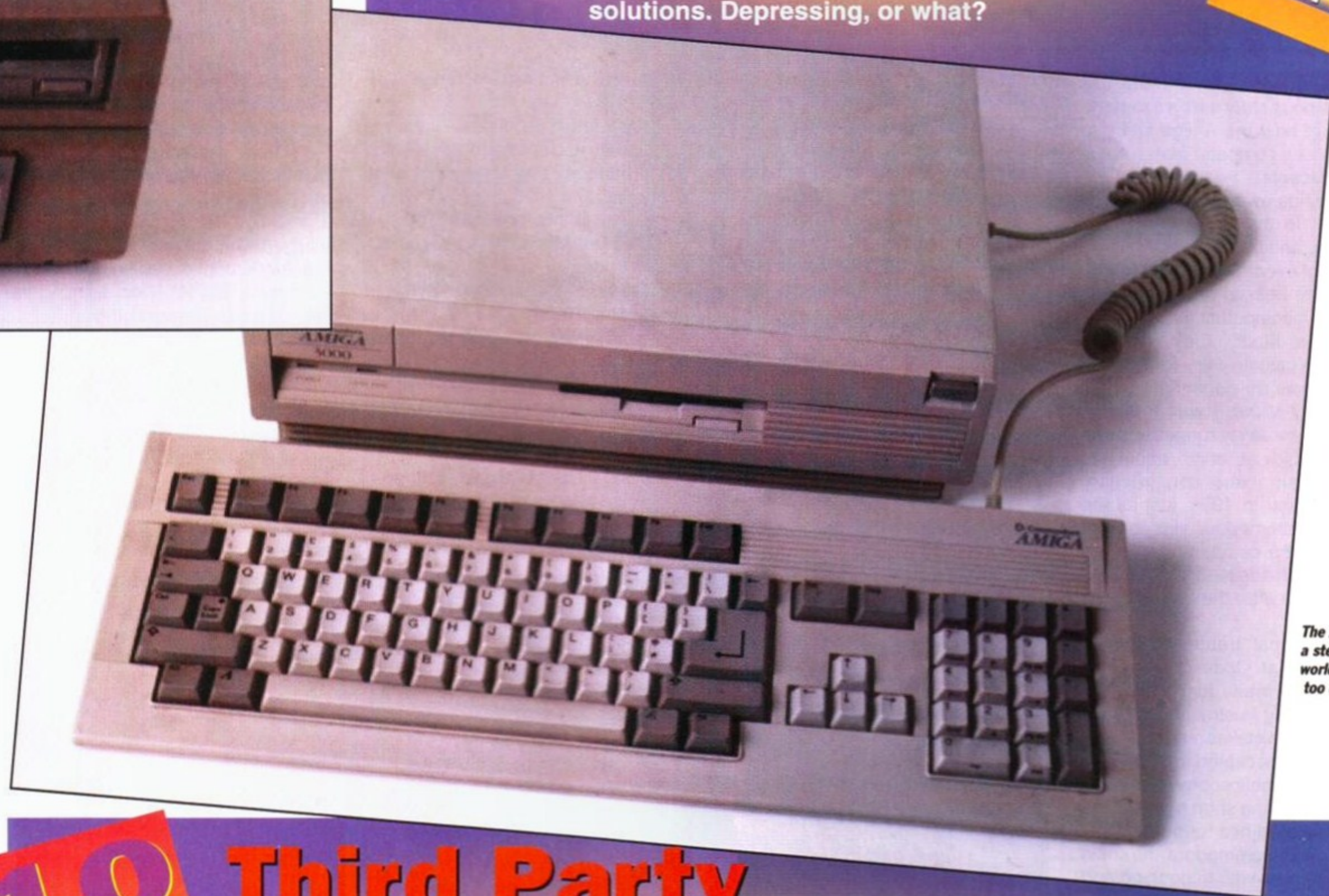


*CDTV. The trouble was it still had the 1.3 OS, when there was already 2.0 available.*

# End of an Era?

Worrying for Amiga users everywhere is the desertion of established software vendors. In the last year, Commodore's decline did not go unnoticed and Gold Disk, purveyors of the fine DTP software Professional Page and other nice products announced their withdrawal from Amiga development in favour of the ballooning multimedia arena of PCs and Macs. ASDG are moving more towards Silicon Graphics for their high end morphing products and Scala have produced the biggest kick in the Amiga's teeth by poaching most of the key engineers from Commodore to work on their PC-based solutions. Depressing, or what?

**10 YEARS OF THE AMIGA PART ONE**



*The A3000 was a step up in the world but it was too expensive?*

# Third Party Development

**10 YEARS OF THE AMIGA PART ONE**

Commodore had ruthless attitudes to peripheral development in that instead of letting other companies make a living building hard drives and such like, they effectively competed with their would-be partners. It was only relatively recently, under the guidance of the shrewd Lew Eggebrecht that Commodore learned

the folly of this (and seemingly even then only as a result of the belt-tightening exercises imposed by the higher echelons of alleged management). Jim Hawkins' comments about the transputer fiasco really say it all. But then, if the company was fighting internally among its various divisions, it is hardly surprising that there were so many disasters.

**10 YEARS OF THE AMIGA PART ONE**

## Amiga Development



We make no apology for re-telling this already famous story as it is a remarkable tale of how the Amiga came to existence as a computer from a set of design concepts.

The Amiga owes much of its radical design to the early Atari home computers, and but for a quite amazing series of events, would have been the ST if the bosses at Atari weren't even more incompetent than those at Commodore. Firstly, their chief designer of the custom chips for the 400/800 series was a visionary guy by the name of Jay Miner. I was fortunate enough to meet Jay two years ago and talked with him at length about the Amiga's design and construction. Sadly, Jay died in 1994, just as the decline of Commodore was looking terminal for the company he helped sustain through a decade, despite leaving them soon after the launch of the A1000.

His personal treatment by the management at Commodore didn't seem to have made him bitter, and even the terribly frustrating and obvious marketing mistakes made by Commodore were accepted by Jay with more resigned philosophy than overt anger. Perhaps the short sightedness of Atari prepared him for the gargantuan failures of Commodore - he could see clearly what was happening and where all the mistakes were being made, but no-one would listen.

### Jay Miner:

"I wanted to do a 68000 machine with them. We had just finished the Atari 800 box and they were not about to spend another umpteen dollars on research for a 16-bit machine and the processor chip itself cost \$100 apiece. RAM was also real expensive and you need twice as much. They couldn't see the writing on the wall and they just said "No", so I quit!"

"I told Dave Morris about some of the ideas I had about designing a games machine that was expandable to a real computer and he thought that was a great idea but didn't tell any of

his investors. I moved to Santa Clara to Hi Toro but the investors weren't too keen so they chose "Amiga" and I didn't like it much - I thought using a Spanish name wasn't such a good move. I was wrong!"

Jay said that they were looking for people not just interested in a job but with a passion for the Amiga (code named Lorraine after the president's

**"Some of those we hired were quite frankly weird. There were guys coming to work in purple tights and pink bunny slippers."**

wife) and the immense potential it offered.

"We worked out a deal whereby I got a salary and some stock and I also got to bring my dog Mitchy into work every day. Dave did reserve the right to go back on that one if anyone else objected but Mitchy was very popular."

"Some of those we hired, were quite frankly weird. There were guys coming to work in purple tights and pink bunny slippers. Dale Luck looked like your average off-the-street homeless hippy with long hair and was pretty laid back. In fact the whole group was pretty laid back. I wasn't about to say anything - I knew talent when I saw it and even Parasseau [the "Evangelist" who spread the word] was a bit weird in a lot of ways. The job gets done and

that's all that matters. I didn't care how solutions came about even if people were working at home.

"There were a lot of various arguments and the way most were sorted out was by hitting each other with the foam baseball bats. They stung a bit if you got hit hard. There was a conflict in the fundamental design philosophy with some like RJ Mical wanting the low cost video game (the investors side, you might say). Others like Dale Luck and Carl Sassenrath wanted the best computer expansion capability for the future. This battle of cost was never ending, being internal; among us as well as with the investors and Commodore.

Carl Sassenrath was brought in to do the operating system and was asked at the interview "What would you like

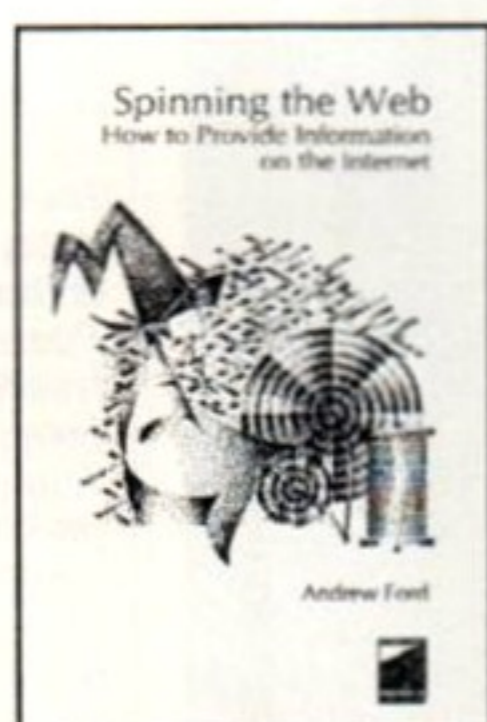


The A4000, flagship of Commodore, high flyer launched with the speedy 040 chip.

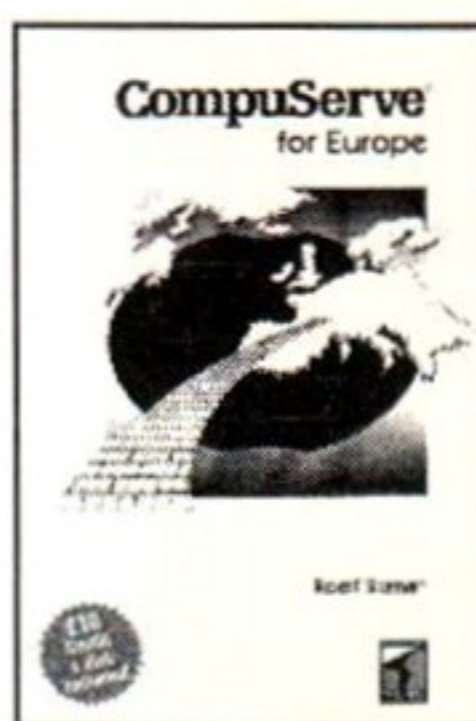


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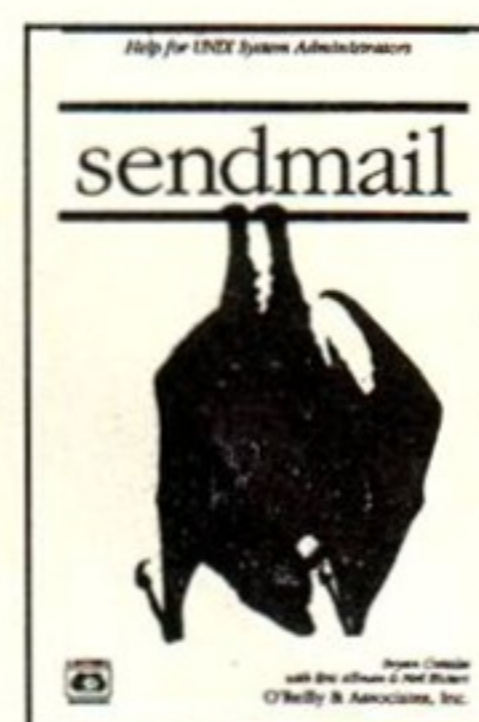
Liu/Managing Internet Information Services  
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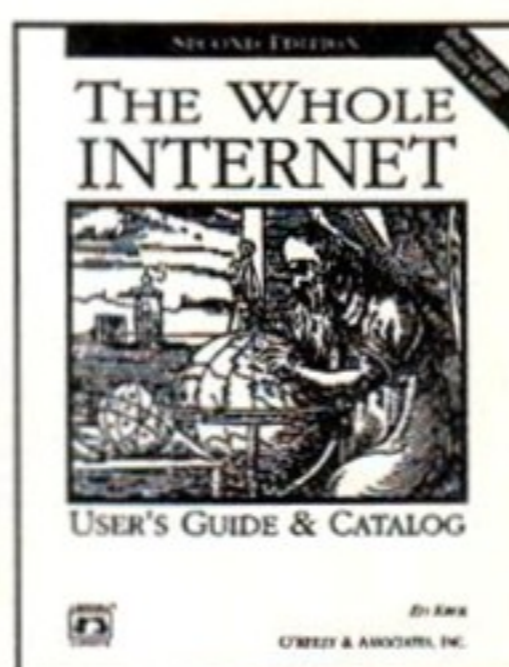
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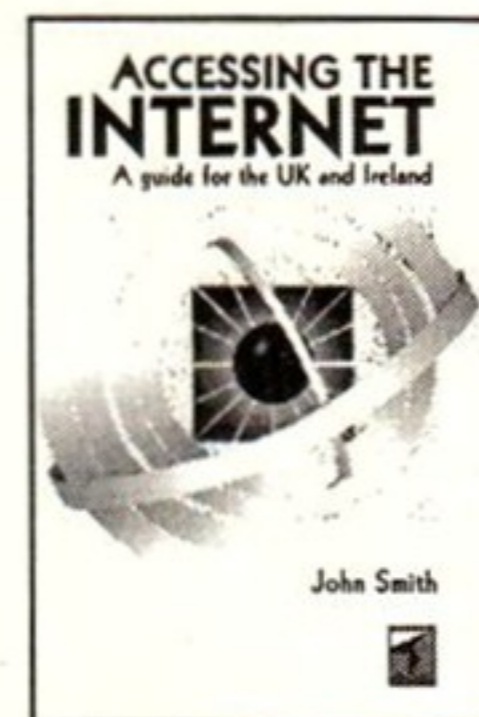
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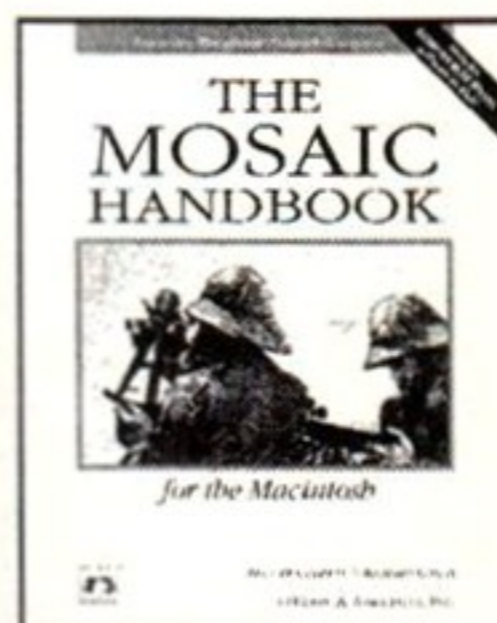
Krol/The Whole Internet Users Guide  
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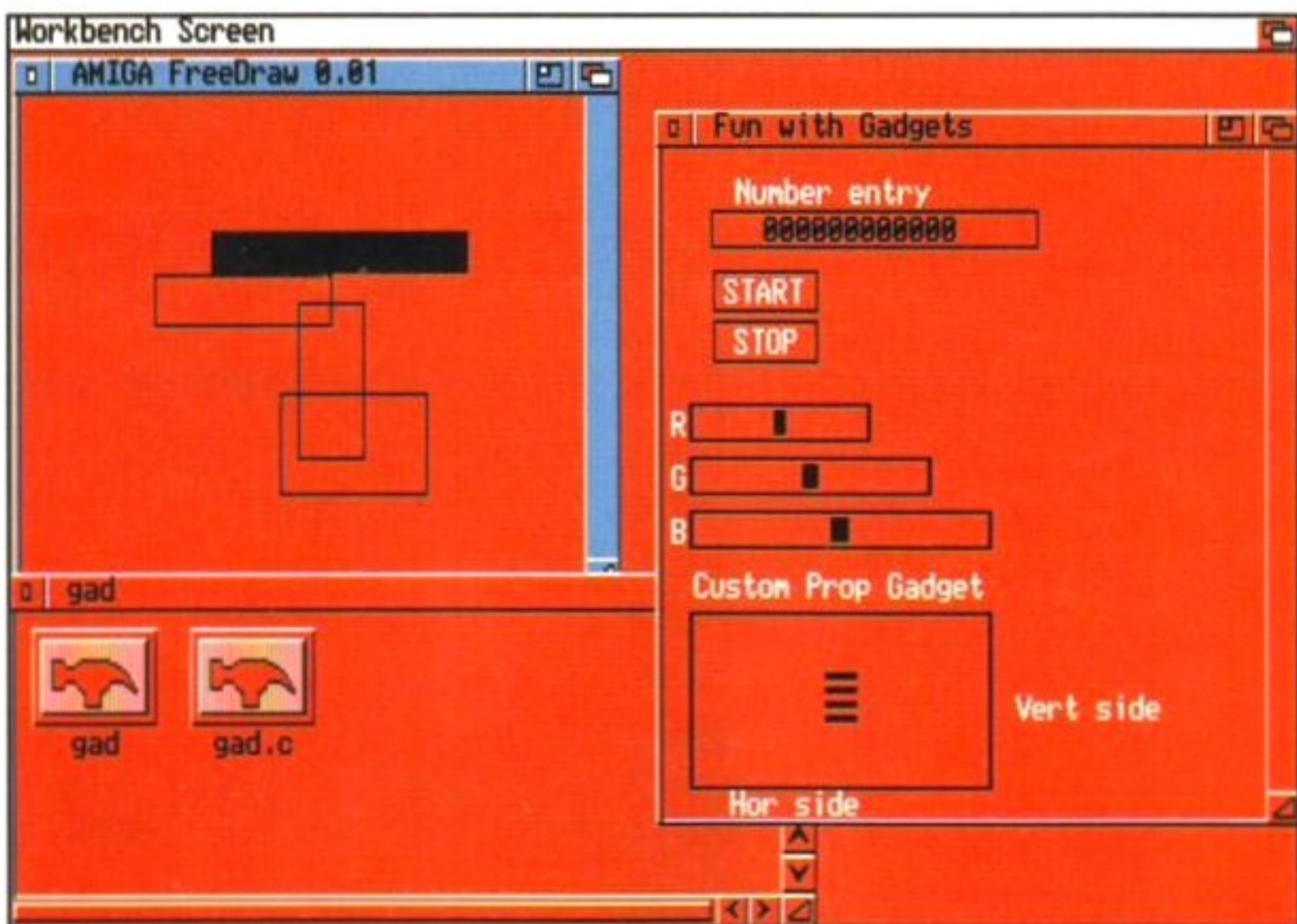
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## 10 YEARS OF THE AMIGA PART ONE CONTINUED



The original 1500 was produced by HiQ - before Commodore even released one.

to design?". He just replied that he wanted to do a multi-tasking operating system, and thus was born the Exec which lies at the very heart of the Amiga. Carl has maintained his close links with Commodore and was instrumental in designing CDTV. Incredible really that they opted for such a sophisticated backdrop for a games machine. Already, strange things were afoot....

"I started thinking about what we wanted to design. Right from the beginning I wanted to do a computer like the A2000 with lots of expansion slots for drives, a keyboard etc. I'd also read a bit about blitters and so I talked with a friend called Ron Nicholson who was also interested in them and he came to join us. We came up with all sorts of functions for the blitter. Line drawing was added much later at the request of Dale Luck, one of our software guys. This was about two weeks before the CES show where the Amiga was unveiled. I told him we can't put that in there as the chips were nearly done and there wasn't enough room. He fiddled about and showed me what registers were needed, so in it went".

"Hold and Modify came from a trip to see flight simulators in action and I had a kind of idea about a primitive type of virtual reality. NTSC on the chip meant you could hold the Hue and change the luminance by only altering four bits. When we changed to RGB I said that wasn't needed any more as it wasn't useful and I asked the chip layout guy to take it off. He came back and said that this would either leave a big hole in the middle of the chip or take a three-month redesign and we couldn't do that. I didn't think anyone would use it. I was wrong again as that has really given the Amiga its edge in terms of the colour palette."

It was Commodore who wanted to leave things as NTSC/PAL output. We wanted to make them RGB but monitors were so expensive in those days - IBM's and Mac's were monochrome. I'd put the converter on the chip and this was a very low cost way of doing things as it saved a lot of parts but by the time Commodore bought us, the bottom had fallen out of the video game market and we were moving

more towards a computer so Commodore agreed to finance RGB as well.

"In 1983 we made a motherboard for the breads to be plugged in, took this to the CES show and we showed some little demos to selected people away from the main floor. At the show itself, they wrote the bouncing ball demo and this blew people away. They couldn't believe that all this wiring was going to be three chips. The booming noise of the ball was Bob Parasseau hitting a foam baseball bat against our garage door. It was sampled on an Apple ][ and the data massaged into Amiga samples. CES was really important to us as we were getting short of money and the response from that show really lifted the team. We were still short of money and several re-mortgages later we managed to keep up with the payroll. It's amazing how much it costs to pay 15 or 20 people!"

Here comes the good bit about how Atari let Jay's design talent slip through their fingers yet again:

"Atari gave us \$500,000 with the stipulation that we had one month to come to a deal with them about the future of the Amiga chipset or pay them back, or they got the rights. This

was a dumb thing to agree to but there was no choice."

They offered \$1 per share but Amiga were hoping for much more than that. The offer was refused and as Atari knew about the troubles of Amiga, they then cut the offer to 85 cents a share. Commodore stepped in at the last minute to scoop the prize from under the noses of their arch rivals and take the Amiga for themselves, shelling out a mere \$4.25 per share and installing the team in the Los Gatos office.

Jay continued the story:

"Tramiel [the president of Atari] was livid when he found out he couldn't get his hands on the chips, as the whole idea of financing us was just to get the chips, not the people designing them, unlike Commodore who needed to keep the team intact. The Atari 400 and 800 [which Jay designed also] series were great computers in their day but you know things move on. When he

## FISH NU

Here's a listing of the contents of the very first Fred Fish disk. Don't the programs sound amazing! This is disk 1 of the famous freely distributable AMIGA software library.

**amigademo** Graphical benchmark for comparing amigas.

*Author: Charlie Heath (MicroSmiths)*  
**amigaterm** Terminal emulation program with xmodem upload/download capability.

*Author: Michael Mounier*

**balls** Simulation of the "kinetic thingy" with balls on strings where only the end balls move (quick, can YOU come up with a better description?). Anyway, cute.

*Author: Perry Kivolowitz*

**colorful** Shows off use of hold-and-modify mode.

*Posted to usenet by Robert Pariseau.*

**dhrystone** Dhrystone benchmark program.

*Author: Reinhold Weicker (Ada version)*

*Rick Richardson (C version)*

**dotty** Source to the "dotty window" demo on the Workbench disk.

*Posted to usenet by Dale Luck.*

**freedraw** A small "paint" type program. Free drawing, boxes, filled boxes, etc.

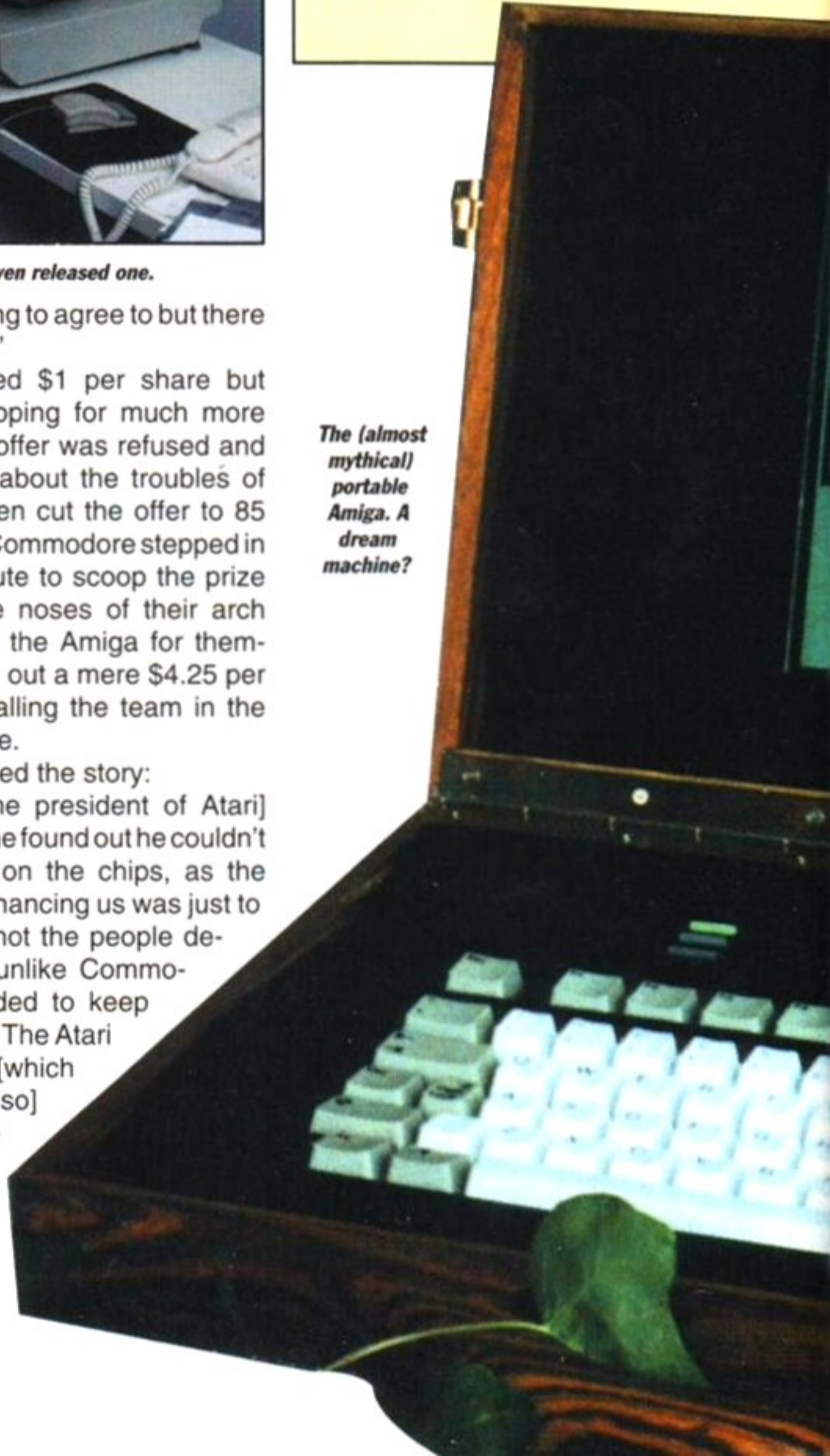
*Author: Rick Ross*

**gad** "Fun with Gadgets". Demonstration program for use of gadgets.

*Author: John Draper (Aka "crunch")*

**gfxmem** Graphical

The (almost mythical) portable Amiga. A dream machine?



## NUMBER 1

memory usage display program. Watch your machine's memory usage! Cute and useful.

Author: Louis Mamakos

**halfbrite** Sample program that demonstrates "Extra-Half-Brite" mode on latter AMIGA's with new VLSI chip. Allows 64 colors in low-res mode, rather than 32.

Posted to usenet by Robert Pariseau.

**hello** Demonstrates creation of a simple window, "hello world".

Posted to usenet by Eric Lavitsky.

**latfp** Shows how to access the Motorola Fast Floating Point library from Lattice C. Also demonstrates the tremendous speedup obtained.

Author: Larry Hildenbrand

**palette** Sample program for designing color palettes.

Author: Charlie Heath

**trackdisk** Demonstrates use of the trackdisk driver. Useful example of "raw" disk read/write.

Author: Rob Peck

**requesters** Sample program and documentation for building and using requesters. John worked REAL hard to dig out all the information in this one!

Author: John Draper (aka "crunch")

**speech** Sample speech demo program. Stripped down version of "speechtoy".

Author: Rob Peck

**speechtoy** Another speech demo program. Cute. You have to see this one. Be sure to click gadget that pops up the face.

didn't get the chipset his only alternative was to design a new computer without the custom chips so he came up with the ST. This wasn't a bad little computer but lacked the power of the Amiga's chipset."

Commodore, however, had their own way of messing things up, perfected over the coming years.

"They wanted a 256K machine as the 512 was too expensive. Back in those days RAM was very pricey but I could see it had to come down. I told them it couldn't be done as we were too close to being finished, it would spoil the architecture, etc, etc. Dave Needle came up with the idea of putting the cartridge on the front which worked. I was in favour of putting sockets on the motherboard so the user could just drop in the chips."

As events turned out, Jay's opinion was vindicated when, on release, it became patently obvious that the machine needed the 512K to do anything meaningful and this was the shipping form in the UK. Commodore's short sightedness cost the world another 6 months without the Amiga, during which time RAM prices fell anyway!

"I spent this time polishing up the software/hardware documentation, renaming registers to be more mean-

ingful. This was actually time well spent in the end."

The development of Intuition and the early Amiga software was all done in house:

"RJ Mical pretty much did it all himself. He was holed up for three weeks and came out once to ask Carl Sassenrath about message ports. That's it, really! He wrote Intuition and went on to do the graphics package, Graphicraft, as no-one else could do it right. Remember the Jarvik 7 heart animation - they actually talked to the guy and got permission to draw it, and the animation was cycling the colour registers. A lot of quite beautiful pseudo-animations were done that way. That's how we did the rotating pattern of the bouncing ball. Other machines couldn't use that system".

The release of the A1000 should have represented the finest hour for Jay Miner and his crew at Amiga. However, instead of looking further forward, Commodore had other ideas.

**"We tried to talk Commodore into building a machine with vertical slots and they eventually came out with the A2000."**

"Once the A1000 was out, we were kind of at a loss. There was so much dealer and developer support necessary that a large proportion of our company went into that. We had 11 or 12 people in that and we wanted to expand but Commodore wouldn't let us, and in fact they made us lay off some people. We tried to talk Commodore into building a machine with vertical slots and they eventually came out with the A2000 but they weren't keen at first".

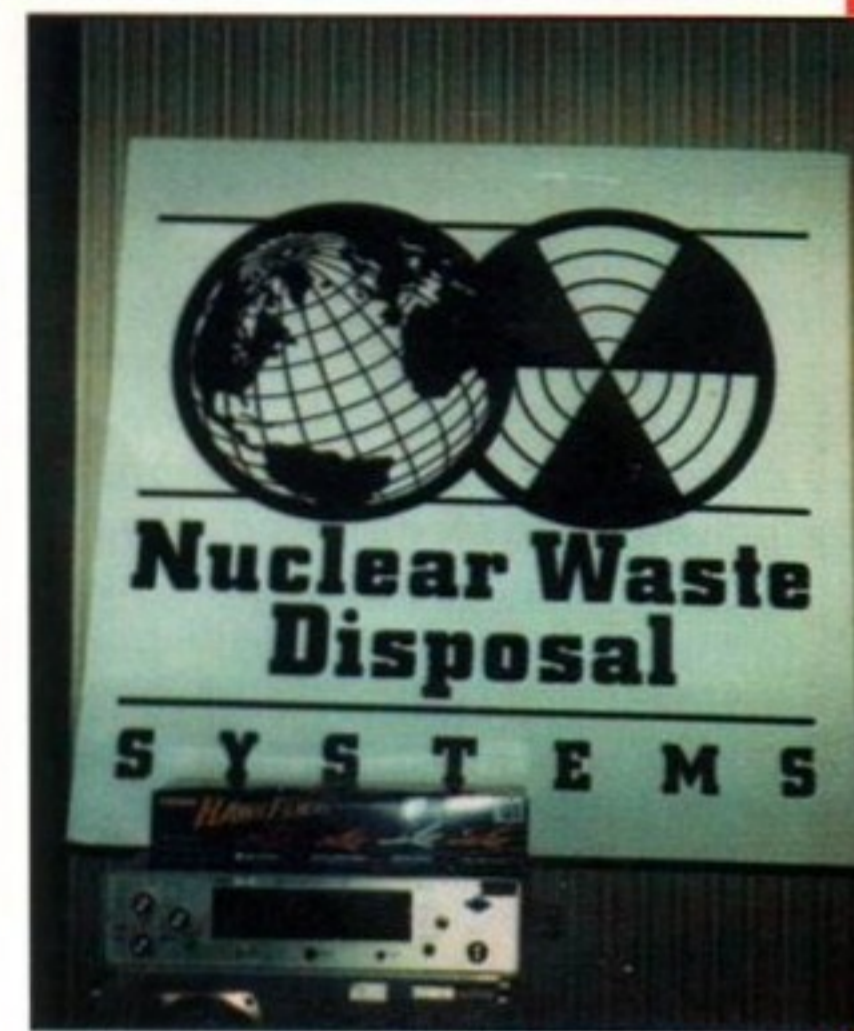
Once the Amiga was released, work at Los Gatos continued but the days for this fine, but maverick, design team were numbered.

"I was really pleased to see Commodore moving in the direction of the A2000 - it was the first Amiga you could really tailor to your own needs and this was one of the reasons for the success of the early Apples. We then wanted to go onto horizontal slots, like the A3000 as that would be easier to cool and shield - there was a design to do it but at that time the A2000 came from Germany so that's the way we went.

We wanted to do the Autoconfiguration for the slots but Commodore weren't keen because it added 50c to the cost, so we had a big battle with

them and did it anyway. Our divisional manager from Commodore was a guy called Rick Geiger. He was pretty good at keeping Commodore off our backs. However, there were others who were good at figuring out what we were up to and saying "No" all the time. Sometimes Rick would protect us and he was trying hard to give Commodore something they wanted badly, MS-DOS compatibility.

"Eventually Sidecar, the hardware emulator, came out from Germany but there were a lot of bugs in the software and the Los Gatos team helped with



Keeping nosy people off the toaster . . .

solving those. They did that before the 2000. It's funny but I never really saw MS-DOS compatibility as being that important for the Amiga. I said at the time to Commodore "Hey, we're different. Try to take advantage of that, not imitate or simulate other people".

We could make our commands more similar to theirs. There's a tendency when you're writing new software to try and be different with names and functions but it isn't really necessary. We could do a better job than MS-DOS, which would have been enough with the Amiga's superior operating system and colour resolution capabilities to take a really big bite out of IBM. Instead they kept promising compatibility and not delivering which is worse."

Given all the hassles with Commodore, one would easily forgive Jay Miner for having harbouring grudges against his old bosses. His philosophical approach, mentioned at the beginning of this section was best illustrated by his own words:

"Yeah, that all really does annoy me. I don't have any financial connections with Commodore any more so I don't get anything out of Amiga sales. Things should have been a lot different. I still feel fatherly towards Amiga, more so than any of the Ataris. What frustrates me the most is that people are missing out on something very special in the Amiga. They tell me about their IBMs and wonderful Macs but they're still missing out".



**10 YEARS OF THE AMIGA**  
PART ONE  
CONTINUED

## We asked some experienced Amiga users what their recollections of the Amiga mean to them:

**"We don't sell computers, we sell dreams."**

### David Pleasence

Joint Managing Director Commodore UK – and leading the proposed management buyout:

Whilst I have been associated with the Amiga from the very beginning, my real involvement began when I took over the running of the consumer division and introduced the concept: "We don't sell computers, we sell dreams."

The first manifestation of this was "The Batman Pack", which elevated the Amiga 500 into "The product everybody wants to own."

We have come a long way since then, with over 2.25 million Amigas sold in the UK alone. I am very proud to be part of what is not just a successful product marketing campaign, but a way of life.

To so many loyal followers: God Bless You All.



David Pleasence, Joint Managing Director Commodore UK – and leading the proposed management buyout.

### David Walker-Morgan

"DJ" off CIX who generally speaks for the masses (at least he says that!):

"What attracted me to the Amiga? It had an architecture dammit..."

Something which used technology, looked good and did neat stuff... (I changed jobs to get my first one you know)"

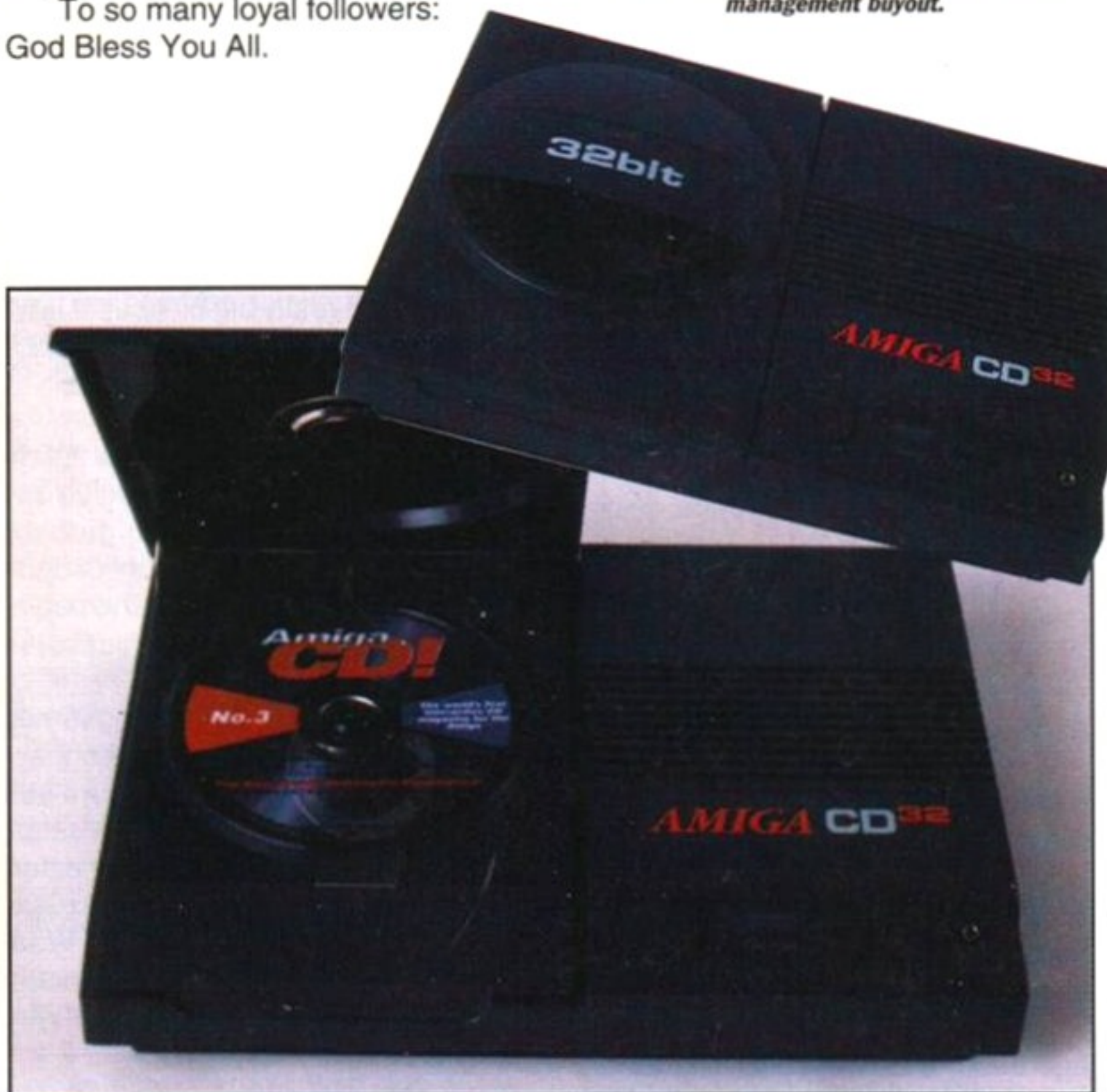
pened. But still, the Amiga came with a sack of white manuals about ten inches thick. Quite a lot of it was wrong - but they'd made a terrific effort to open the channels for good software development. Until management fought back.

The trouble was, in those days you couldn't get any information much beyond what various tight-knit groups (I won't mention the Germans - oh, sod it, the Germans) were prepared to tell you. The UK CBM team, which combined at the top Buddhism and pirhana-like aggression, did its best. Dave Pocock, bless him, sighed and tried to get info from West Chester or West Germany, but basically what you got what was what was in the bag, quite a lot of which was wrong.

But it was very exciting. It was a computer going places in all aspects. It hadn't been relegated by anybody to the realms of Xmas stocking shut-the-kids-up territory. The only game you could get at first was "Mind Walker"



The A600, incredibly popular despite its short shelf life.



Ahead of its time . . . Don't we hope the CD32 won't be the last Amiga?

### Jim Hawkins

Programmer of Asterix and such like:

"You have to remember that the Mac had only just been launched, PCs were still struggling to compete with Apple ][s for volume, and more than 4 colours demanded some heavy-weight kit. I went to the European developers' launch in Eastbourne and saw the beta DeLuxe Paint swirling King Tut's mask about as a brush and I was totally gob-smacked. DPaint got a standing ovation. There was nothing around that could get near it on the graphics. The sound was OK, not really a big deal. I complained to Dale Luck and some others from the design team that at least 12-bit audio would have made this the utter bees' knees - and they said "next revision." On the sound this next revision never hap-

(great game, though). The Amiga was poised to overtake Apple and possibly even IBM. It was like seeing colour TV for the first time (I can remember how exciting that was).

I did a lot of trade shows with the Amiga in its early years. It was mainly of interest to business, education, corporates, the military, designers, artists, most people over sixteen with a job to do.

The problem with the Amiga was then, and has been ever since, that nobody could quite decide what kind of beast it was. It couldn't do rock solid high resolution text like the IBM. Hard disks were no-go until the 2000 came along, and the first 2000 was a cock-up anyway. Nobody had really invented dedicated games systems then, so it wasn't one of those. So it stuttered where it should have roared, brought cheer to the terrified management at



The Amiga 1200, two different bundles, hurry if you can still find them, they sell out fast.

Apple by the massive ineptitude of the marketing approach, and made itself as hard to sell as possible. For many years Commodore used to actually compete against third party developers with hardware. We could have had a Transputer farm running on the Amiga in 1986/7 but for the fact that my company (Sophus) couldn't get vital information from Germany about the Janus library, which wasn't

last-ditch skirmish in the trenches carved out by the console market inevitably failed.

Those first few nights and days in Eastbourne shouted bravery and innovation in 4096 colours. There needs to be a new Eastbourne. Just running Windows is not good enough. There needs to be a leap so inventive and bold that there will be more standing ovations. Right now, it doesn't seem likely.

## Dave Parkinson

Ex-Amiga programmer and still a big fan of the machine, having been forced onto Windows to keep eating:

"Blimey... First encountered the machine in '85 at a private demo given by Gail Wellington in a hotel room at the Commodore Show at the Hammersmith Novotel. Went to the original European Eastbourne DevCon in December '85 (still have the notes) - memories include the

special Amiga Cocktails which turned out to very low in alcohol ("They're 'Amiga' cocktails" someone commented, "very pretty but they don't actually DO anything"), and the demo of DPaint at which the audience stood and cheered. Bought a machine (NTSC A1000) on the special DevCon deal, and took delivery just before Xmas - first files are timestamped 25-Dec-85. Can't remember what our first programs were, but video player control came pretty early. Other memories include John Collins taking the original RKMs (1 set for the whole UK!) round the developers on the back of his bike and us laboriously photocopying the lot...

## Jolyon Ralph of Almathera:

I remember when I first saw the Amiga - it was at a What Micro show in 1986 I think. I saw an Amiga 1000 with a bouncing screen demo - one HAM picture was bouncing up and down to reveal another HAM picture behind it. I was absolutely amazed. It was just totally incomparable to the machines I was used to at the time (Spectrum, BBC, C-64). Not long afterwards my uncle bought an Amiga 1000. I was hooked - Marble Madness, Defender of the Crown, Aegis Sonix (with a version of Michael Jackson's Thriller - which I'd never heard anything like on a computer before). It's only within the last year that PC soundcards have got good enough to beat this!

In May 1987 my uncle told me that Commodore were launching a cheaper version of the Amiga 1000, and at last I could afford one. I paid my money and ordered one! The first time I ever saw an Amiga 500 was when I opened the box to plug it in. It cost me over £500 - and that was with trade discount!

I spent nearly a year in 16-bit shock, despite being a quite good Z80 and Spectrum Basic programmer I didn't even attempt to learn Amiga programming until 1988. It was "hard". My first programming was done through the operating system. I found it couldn't do what I wanted (writing demos and games) so I learnt hardware programming.

It was only later when I needed to do some commercial programming on the Amiga that I bothered to learn the OS, and I now very rarely have to

## Lew Eggebrecht

Ex-chief of engineering - what could have been:

"We were trying to demonstrate credibility and an ability to produce new products. We had goals. I think the fact we had released two new systems and other products inside a year demonstrated that Engineering was not asleep and could produce high quality stuff at a high rate. That's the story I was trying to tell.

AA+ will be a more profitable version of AA with all the things we wished we'd got in but didn't have time. We had a list of all the problems we currently had at the low end. The serial port, we can't read high density floppies, there isn't enough bandwidth to do 72 Hz screens plus there are no chunky pixel modes for rendering. We listed all those and said "OK let's go out and fix them as quickly as we can". So AA+ was an extension, not radically new architecture. We were doing the best that we could, taking advantage of advances in technology, significantly reducing the cost and that was the goal."

resort to any hardware programming.

What attracted me was the leap in technology from 8 bit to 16 bit.

There hasn't been anything since, such a vast technology jump. We're unlikely to see such a machine again, although if we do, I wouldn't be surprised if the Amiga name is involved somewhere..."

## Toby Simpson of Millennium:

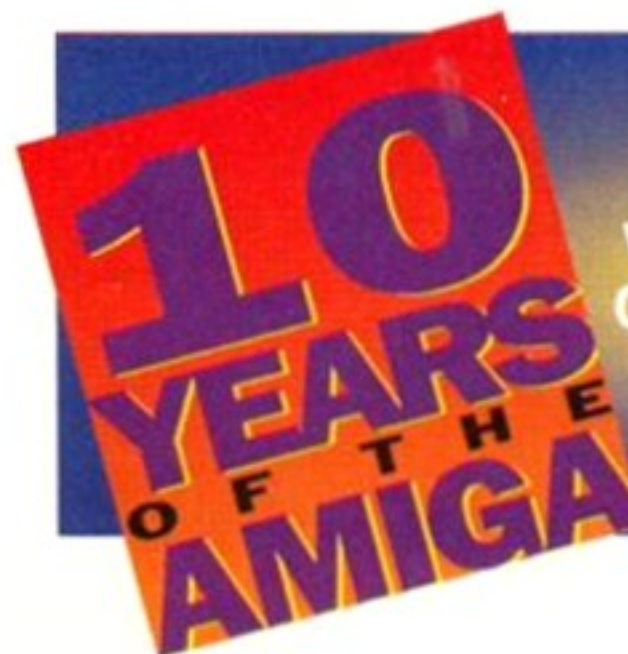
"First memories eh? Goodness. I don't know. Ironically, it was the badly programmed Demos which attracted me to the Amiga. They really showed off what the machine could do. I fell in love with the Multi-Tasking OS which at the time (1988) made everything else look rather silly. The machine seemed to have so much potential at the time, and it looked like a good thing to get to know from a financial point of view. I've done OK out of it, both programming games, and writing. Without it I would not have the position I do now at Millennium. AUI



The late Jay Milner, Father of the Amiga. What would he say about the Amiga today?

documented. Later we learned that CBM Germany were developing a Transputer board. Our project was already dead - the company dissolved - and the CBM Transputer board was never sold.

Senior management at Commodore dithered. Silly wars took place between the Americans and the Germans. Slowly, by default and not design, the Amiga became defined as a games machine with a niche video and multimedia market. Finally, it became, in CD32, totally defined as a games machine. Hailed as the triumph of the UK's world-beating lowest-common-denominator strategy, this



In Part 2, Next month, Carl Sassenrath tells how the software was created. The rise and fall of the CDTV. Industry figures comment on their view of the ten years of the Amiga and much more...

# On Line

**One of the trendiest aspects of the Internet is the World Wide Web which, as Gary Fenton explains, lets you interact with computers all over the planet using a customised GUI.**

**W**ithout a doubt, the World Wide Web, (or WWW, W3, or just Web) is the fastest growing feature of the Internet. It provides you with a colourful graphical interface with buttons to click on, sounds to hear, pictures to see and text to read. Or you can simply call it interactive multimedia if you don't mind hearing that over-hyped up buzz word again.

Like most technological advances, the Web is difficult to imagine if you've never seen it in action. There are thousands of Wide Web sites to visit around the world. Some are created by individuals (students and enthusiasts), others by clubs and groups and more and more by corporate organisations. Like sheep, many companies are following the growing trend and going on-line with their own Web pages

providing information on themselves and their services. Some companies let you buy from them directly over the Internet by clicking on buttons!

## Getting Equipped

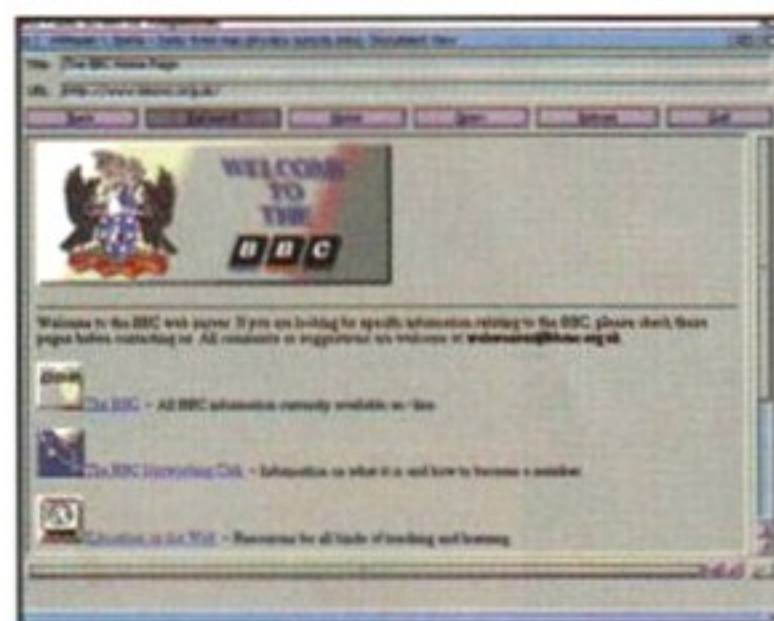
To get on to the Web you'll need a Web browser. While other computers are supported with various well developed browsers, the Amiga has only one called AMosaic. It's a colourful piece of software which requires two main things. Firstly, a direct connection to the Internet as Demon provides, and secondly the Magical User Interface, or MUI for short. MUI is a replacement interface for Amiga programs giving them new gadgets and an overall better look.

The down side is that MUI slows

your machine and AMOSAIC (for some unknown reason) is prone to crashing. This makes it less usable than PC or Mac Web browsers but it's the only way Amiga users can enjoy the pleasures of the WWW. At the moment it doesn't support forms which, like forms you get from the post office or bank, let you input information about yourself and answer questions asked by the Web page. The absence of this feature means you can't request items to be sent to your home address, or order products, or subscribe to areas on the Web which need you to register. The group which programs AMosaic have promised this feature but it may not arrive for a while yet.

## Shopping for AMosaic

AMOSAIC is in the public domain and available from many FTP sites. MUI is



The BBC has its own home page with load of extra info.

available on Aminet. To get the latest version of AMosaic you can FTP (see the March issue) to addresses such as the following:

ftp.max.physics.sunysb.edu/pub/amosaic (Official site for the latest versions)

ftp.wustl.edu/pub/aminet/comm/tcp  
ftp.doc.ic.ac.uk/pub/aminet/comm/tcp

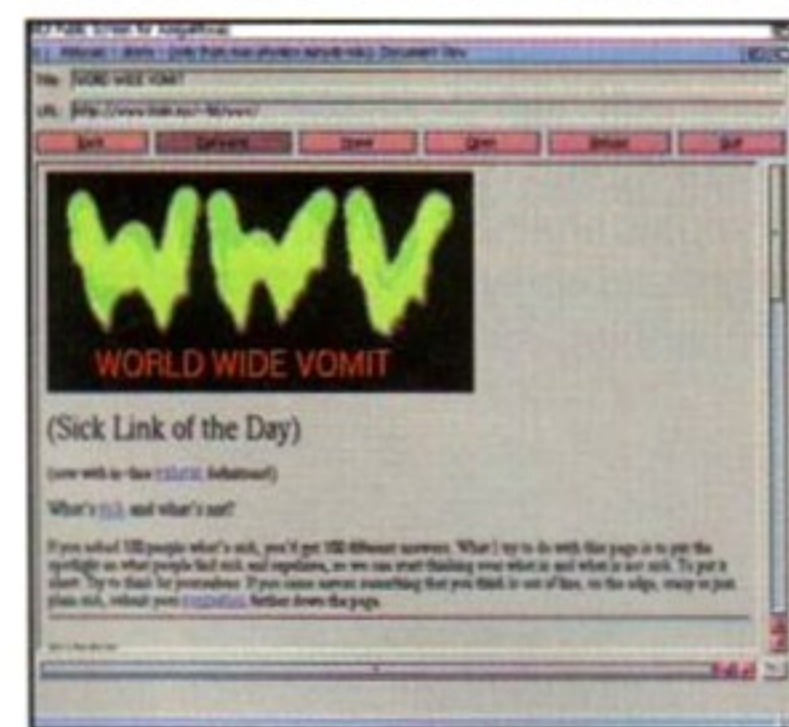
If you are using Commodore's AS225 networking software then you may need to look for a different version of AMosaic in the comm/net directory on Aminet. Aminet calls the relevant file "Mosaic", not "AMosaic", just in case you are listing the directory using a wildcard like "dir Mosaic".

MUI can be obtained from Aminet FTP sites too in the dev/gui directory. A recent version is called mui23usr.lha, but it will have been deleted and replaced with a newer version if one has been uploaded. It's best to get a directory listing by using a wildcard again, like "dir mui\*", or even get a complete directory list as a file by downloading the INDEX file, "get INDEX". Be aware that FTP sites are case sensitive.

## System

### Requirements

The requirements to run AMosaic are AmiTCP or AS225, AmigaDOS 2, but 3 is recommended, MUI version 2 or



Some pages are just sick!

above, and ZGIF datatype for viewing GIF images (Workbench 3 feature only). AMosaic comes with full installation instructions but a little knowledge of AmigaDOS is required if things don't work first time. MUI comes with instructions and an automatic installation script. You'll need a hard disk to use MUI and AMosaic but that goes for using AmiTCP and AS225, as you probably know.

For regular information on AMosaic and to make enquiries, subscribe to the AMosaic mailing list by sending some e-mail to majordomo@insti.physics.sunysb.edu To send a message to the list mail it to amosaic@insti.physics.sunysb.edu.

## Getting Started

It is advisable first to read the MUI documentation so you can learn to customise the colour and screen resolution of AMosaic, after both have been installed.

Whenever you load AMOSAIC you must ensure that your networking software has been started and is running. AMosaic will attempt to connect to a server on the Internet if the Tool Type tells it to do this. I suggest you edit the Tool Type (click on the AMOSAIC icon and select Information from Workbench's Icons menu) and change whatever line is there to this:

# Net News

- Dungeon Network Systems are an Internet provider that caters for the Amiga, based in Suffolk. For information on their services call 01638 711550 and don't forget to tell them you have an Amiga!
- Fans of the UK TV star (?) Mr Blobby may like to check out his very own Usenet newsgroup called alt.mr.blobby.
- The FBI may like to check out a new newsgroup called alt.nuke.the.usa. ;-)
- Trekkers can find gossip on the latest TV series by joining the new newsgroup, alt.tv.star-trek.voyager.
- British law often applies reporting restrictions on cases being heard in court. The recent Rosemary West

committal proceedings had reporting restrictions enforced in the UK. This meant that UK media could not report what happened except for the final decision to commit her for trial accused on multiple murders. But details of the proceedings were leaked back into the UK from abroad via the Internet.

A US lawyer wittily suggested disconnecting the UK from the Internet to prevent this happening again.

The Rosemary West case just shows just how interconnected the world is today and how difficult it is for the authorities to control or even suppress communication the way they used to do.

- 1 term43-030.lha 020 + VERSIONS OF TERM
- 2 DGalaga25.lha DELUXE GALAGA 2.5
- 3 term43-libs.lha XPR AND XEM LIBS
- 4 term43-doc.lha AMIGAGUIDE TERM DOCS
- 5 term43-extras.lha EXTRAS FOR TERM
- 6 term43-main.lha TERM FOR ALL AMIGAS
- 7 xprzmodem.lha XRP ZMODEM PROTOCOL
- 8 term43-roadmap.txt INTRO TO TERM FILES
- 9 term43-locale.lha LOCALE FILES
- 10 ArcsPack-1.lha MAGICWB/AGA BACKDROPS

Created with Photogenics

The latest version of the comms package, Term, dominates the Aminet Top Ten. (Aminet chart 26/2/95. See March AUI for info on Aminet)

file://localhost/mosaic:docs/index.html

This assumes Mosaic has been assigned and the documents that came with AMosaic have been installed in to the mosaic:docs directory.

The Web uses its own hypertext type language which AMosaic interprets into what you see on the screen. When you ask it to connect to

with which you can get started. WWW addresses must always start with the prefix "http://" which indicates to you and the Internet that it's a WWW server you are looking for. HTTP stands for Hyper Text Transfer Protocol. Some FTP sites let you browse through directories and download files using AMosaic. In that case the address can start with "ftp" instead. **AUI**

## AUI On-line

If you have any news, comments, letters, or technical questions, you can contact **AUI** directly using this e-mail address:

amigauser@cix.compulink.co.uk

You can join our amiga\_user conference on CIX, or contact me personally with e-mail:

garygfx@cix.compulink.co.uk or gary@auimag.demon.co.uk

a new Web site it will shake hands and greet the server to which you are connecting (in a metaphorical sense!). Then the Web page will be sent to your computer.

If the menu item "Options/Delay Image Loading" is not selected then all of the images that make up that page will be sent to your computer. This may take some time depending on how graphical the page is, so perhaps it's best to select that item from the Options menu. This will delay downloading any images until you click on the gaps which have been left for them in the page. GIF images take a few seconds to process before they appear after being downloaded.

Text in a different colour normally suggests it's an interactive item, or a button, which will move you to a different page or Web site. To connect to a new Web site, go to the Project menu and select "Open URL". (URL stands for Universal Resource Locator). When a requester pops up, delete whatever is in there and type in a new address.

I've listed lots of addresses here

## Contacts

**Demon's joining fee is £12.50 and there's a monthly charge of £10 (plus VAT). There are no on-line fees apart from the standard BT/Mercury phone charge you'd expect to pay. Demon's voice number is 0181 371 1000 or 1234 for sales.**

**CIX costs £25 to join and there's a minimum monthly charge of £6.25 (plus VAT). You must pay for each minute you're on-line to CIX which is currently 6p peak and 4p off peak, plus your usual phone bill. You can join by calling 0181 390 8446 (voice) or have your credit card ready and join while on-line on 0181 390 1255 (modem).**

## World Wide Web Sites

Here are just a few Web sites to get you going. I've tried most of them so they should be okay.

- <http://www.centrum.is/bjork/> (Bjork - Gideon's favourite!)
- <http://www.demon.co.uk/cyberdyne/cyber.html> (UK jobs)
- <http://web.city.ac.uk/~cb157/pages.html> (Who's who on the Internet)
- <http://www.hyperion.com/lurk/lurker.html> (Babylon 5)
- <http://generations.viacom.com/> (Star Trek)
- <http://www.webcom.com/~gumbo/recipe-page.html> (Creole and Cajun Recipes)
- <http://www-swiss.ai.mit.edu/samantha/travels-with-samantha.html> (On-line book)
- <http://www.cs.cmu.edu:8001/afs/cs.cmu.edu/user/zarf/www/games.html> (List of interactive games on the Web)
- <http://augustus.cssc.washington.edu/personal/bigstar-mosaic/wine.html> (For wine lovers)
- [http://www.bl.physik.tu-muenchen.de/~k2/budo\\_english](http://www.bl.physik.tu-muenchen.de/~k2/budo_english) (Martial Arts)
- <http://lager.geo.brown.edu:8080/virtual-pub/> (Virtual pub for beer drinkers)
- <http://www.digital.com/gnn/wic/humor.02.html> (Light bulb jokes)
- <http://www.crg.cs.nott.ac.uk/ukvrsig/vr-sig.html> (Info on virtual reality)
- <http://catless.ncl.ac.uk/Vegetarian/Guide/index.html> (Helpful info for vegetarians)
- <http://www.digital.com/gnn/wic/humor.04.html> (Shakespearean Insult Service)
- <http://www.cascade.net/darkweb.html> (Links to horror and gothic material)
- <http://www.nvg.unit.no/spectrum/> (Remember the Sinclair Spectrum?)
- <http://sable.ox.ac.uk/~tr95006/sinclairtop.html> (UK Sinclair home page)
- <http://whirligig.ecs.soton.ac.uk/~rps92/speccy/snaps/snapshots.html> (Spectrum games for emulators)
- [http://white.nosc.mil:80/gif\\_images/](http://white.nosc.mil:80/gif_images/) (GIF images)
- <http://www.aztec.co.za/topcar.html> (South African motor racing!)
- <http://www.hials.no/~tkl/www/> (Warning: for broad minded people only)
- <http://www.comlab.ox.ac.uk/archive/ox/guide.html> (Aliens guide to Oxford)
- <http://www.barclaycard.co.uk/barclay.htm> (Barclaycard on the 'net!)
- <http://www.rbgekew.org.uk/> (Royal Botanic Gardens)
- [http://gpu.srv.ualberta.ca/~ybeaudoi/Virtual\\_Railroad/steam.htm](http://gpu.srv.ualberta.ca/~ybeaudoi/Virtual_Railroad/steam.htm) (Steam railways)
- <http://www.netcenter.com/> (Interactive Yellow Pages!)
- <http://www.primus.com/staff/paulp/useless.html> (Satirical guide to the Web)
- <http://www.kodak.com/> (Kodak films and photography)
- <http://info.isoc.org/> (The Internet Society)
- <http://guide.oscars.org> Official guide to the Academy Awards)
- <http://www.futurenet.co.uk/misc/GallupCharts/index.html> (Gallup video and computer games charts)
- <http://www.innovations.co.uk/giftpoint/> (Interactive shopping)
- <http://slashmc.rice.edu/www/html/ceremony/ceremony.html> (Music, New Order)
- <http://hyrax.med.uth.tmc.edu/misc/zoo/zoo.htm> (Jeff Minter's home page)
- <http://www.bbcnc.org.uk> (The BBC Network Club)
- <http://www.demon.co.uk> (Demon's WWW server)
- <http://www.microsoft.com> (Microsoft)
- <http://www.wired.com> (The online part of Wired)
- <http://www.doc.ic.ac.uk> (Imperial College, London)
- <http://www.cityscape.co.uk/cc/> (Net Cafe in Soho, London)
- <http://www.mcc.ac.uk/OtherPages/uk-radio-amateur.html> (Amateur UK radio)
- <http://newproducts.jpl.nasa.gov/s19/s19.html> (Shoemaker-Levy comet, NASA)
- <http://metaverse.com/woodstock/index.html> (Woodstock 94)
- <http://www.nwu.edu/music/gabriel/> (Peter Gabriel's home page)
- <http://www.halcyon.com/rem/index.html> (R.E.M. home page)
- <http://acat.anu.edu.au/contours.html> (Fractal geometry)
- <http://www.cen.uiuc.edu/cgi-bin/ryl> (Recommended - transports you to a Web site at random)
- <http://www.nd.edu/~mmiller/ToyBox/WrittenWord/StevenWright.html> (American comedian)
- <http://www.nlm.nih.gov:82/Item7> (Virtual hospital)
- <http://www.galcit.caltech.edu/~ta/renstimp/> (Ren and Stimpy!)
- <http://www.sgi.com> (Silicon Graphics)
- <http://www.craycos.com> (Cray Computer Corporation)
- <http://www.intel.com/intel.htm> (Intel)
- <http://nearnnet.gnn.com/news/home/news.html> (Global Network News magazine)
- [http://www.ieunet.ie/services/london\\_times.html](http://www.ieunet.ie/services/london_times.html) (The London Times)
- <http://www.stones.com/> (The Rolling Stones)
- <http://www.st.nepean.uws.edu.au/stuff/genx/index.html> (X-Men cartoon page)
- <http://www.compulink.co.uk/libdems/welcome.htm> (The Liberal Democrat's home page)
- <http://www.poptel.org.uk/labour-party/> (The Labour Party's home page)
- <http://fuzine.mt.cs.cmu.edu/mlm/lycos-all.html> (WWW search engine)

## Mark Blackham helps you to create those special sounds that could make you a star.

Last month we described the process of setting up your own Amiga-based MIDI music studio. Judging by the phone calls, it has inspired many to make the step up from fooling around with sound trackers to fooling around with the real thing.

We'll assume that you have acquired the necessary equipment, including a sequencer, and now need to start making music.

Even if you don't yet have a midi interface or a synth, an advanced sequencer can be used with Amiga samples while you wait for your kit to come together.

### Sequencer

The core part of your set-up is the Amiga. You compose the music using a piece of software called a sequencer. Like a sound tracker, which essentially tells a range of samples when to play, a sequencer holds information which tells attached modules like synthesizers when and how to trigger sounds.

A cracking beginner sequencer is

while the more business-like KCS has gradually built up a dedicated clique of serious followers. We are using KCS in this article to demonstrate the basic sequencing principles.

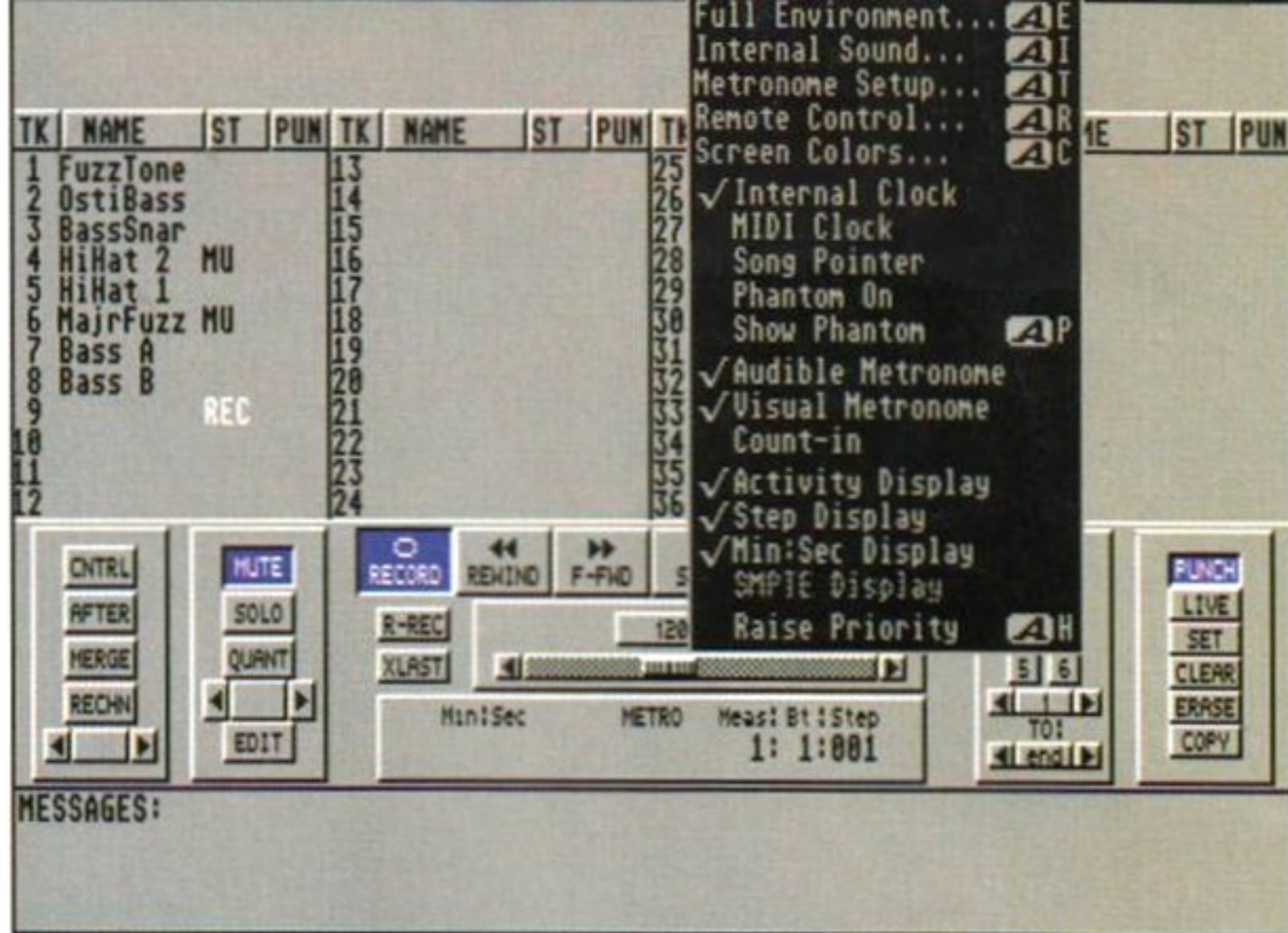
### The Basic Premise.

Remember: A sequencer does not record music. It records the music-generating information. When you hit a note on the keyboard, the sequencer registers information like which note it was, how hard it was hit, how long it continued for and when it stopped. When you play the sequencer it sends that information back to the keyboard, triggering those notes to play in exactly the same manner.

Sequencers are made up of channels. You define the sound assigned to each channel, either an Amiga sample or on your synth modules.

### Setting Up

If you have a multi-timbral keyboard - i.e. more than one channel - assign



The whole 48 channels are on one screen. I have the first eight channels full, and I'm ready to record onto the ninth track. The sequencer is waiting for me to touch the music keyboard to click play, before it starts recording. The environmental controls let me configure the core set up, from the external sync/clock and metronome to the screen colours.

For those needing breathing space and a timing beat, a metronome count-in is available. You can also choose to have the metronome continue to beat through whole recording. Hit record, hear the metronome, get in time and start playing a short and simple bass line. Depending on your sequencer, or the editing mode you're in, you might see the new MIDI data being written onto the screen as you play.

Wind the sequencer back to the start and press play to listen to what you have just played - warts and all. If there are any huge mistakes just clear the channel and try again. Let's lay down another sound over the bass line. Wind the sequencer back to the start and

can send system exclusive messages to your MIDI instruments, telling them which sound to load onto that channel.

You can now set the sequencer running again and practice playing a new line over the bass line you first recorded, which will play through. Once you have an idea for a snazzy counterpoint line, set the sequencer recording and play the new sound.

Continue adding more sounds until you're satisfied with the whole sound. Like a proper mixing desk, all channels can be muted or solo'ed. If you are adding a new layer, you probably don't want every other sound running in the background to confuse you. Mute a few of them to reduce the cacophony. When

# A MIDI STUDIO TO

Sequencer One Plus, from Gadgets. It's simple and straight-forward, yet very powerful. If you are a music virgin then this is the place to pop your cork. Anyone who has the cash, is prepared to read the manual, and usually finds themselves outgrowing low or mid-

sounds to each channel. Set your synth to an external sequencer, set MIDI receive to 'On' and define the channel as instructed in the manual. If you are using a single-channel synth set its mode to Omni ON/Poly (MIDI Mode 1).

To make use of the sounds in your drum machine, set its mode to Omni Off/Poly and its channel to 16. If you aren't getting a good response with this method, you can always set its sync to an external MIDI clock and set up a basic pattern or whole song. When the sequencer starts, it tells the drum machine to start its pattern.

### Your First Recording

Most, if not all, sequencers mimic a standard tape deck - with Record, Play and F-Fast Forward / Rewind buttons. To start recording you press Record, or Play / Space Bar if the Record light is already lit. Some systems, like KCS, can start recording as soon as you hit the first note on your synth keyboard.

choose channel two. If you have set up the synth correctly, the sequencer would have sent a message establishing that it's now using channel two. When you play the keyboard it will now use the sound that was internally set to channel two. You can now change the sound on the synth to a higher pitched guitar or lead synth line. As you become more proficient, you'll learn that sequencers

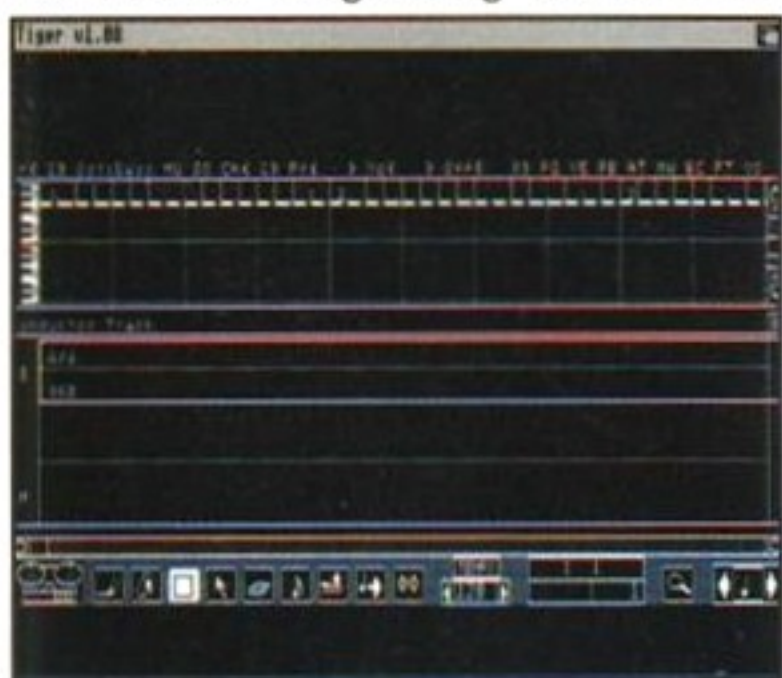
playing that line back it's best to listen to it as part of the whole, then "solo" the channel to check on its finer detail. There may be a slight glitch you miss when hearing the whole piece.

### Editing

If you spot the glitch you can turn to editing mode, when the performance can

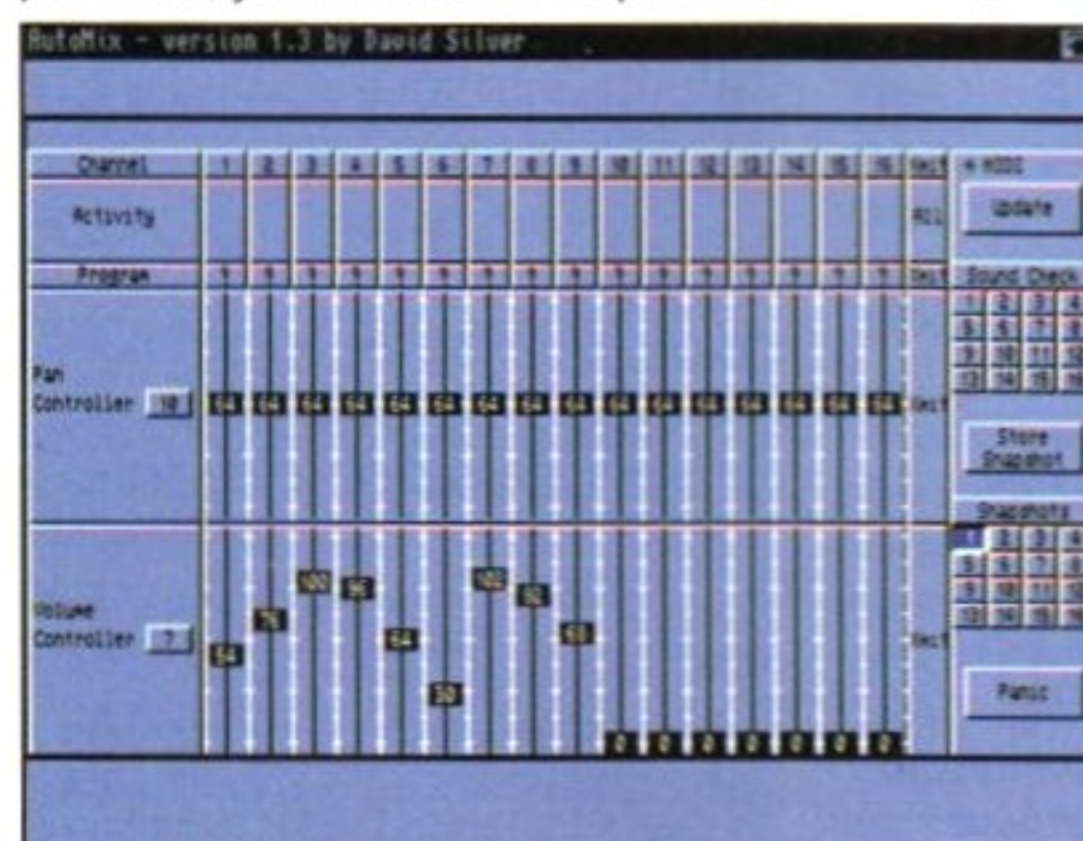
be viewed in a graphic representation similar to, or the same as, music notation. Normally, these notes are able to be clicked and dragged to new positions, or a table of their individual characteristics accessed and adjusted. The other editing form is through a straight list of numerical MIDI information. Lines of data represent each note and its associated MIDI messages. These can be manually adjusted.

If the problem is



The Tiger graphic editing screen. In KCS, the various editing facilities are accessed through additional multi-taking programs as part of Dr T's MPE environment.

range software, will do well by going straight to the top of the sequencing pile. This means either KCS 3.5 or Bars and Pipes. The latter has had a good run of support and promotion,



AutoMix. Not a common option on sequencers. This acts like a real mixing desk, adjusting volume, pan and other features as the song is played.



simply one of timing, then sequencers like KCS allow you to retrospectively adjust the timing - pushing any rogue notes into time. If you are striking problems with those extra-fine 16th note triplets the sequencer can automatically quantise notes as you play. That means any key presses which are out of time are shifted into time. Be careful - misuse of this feature has often led to some

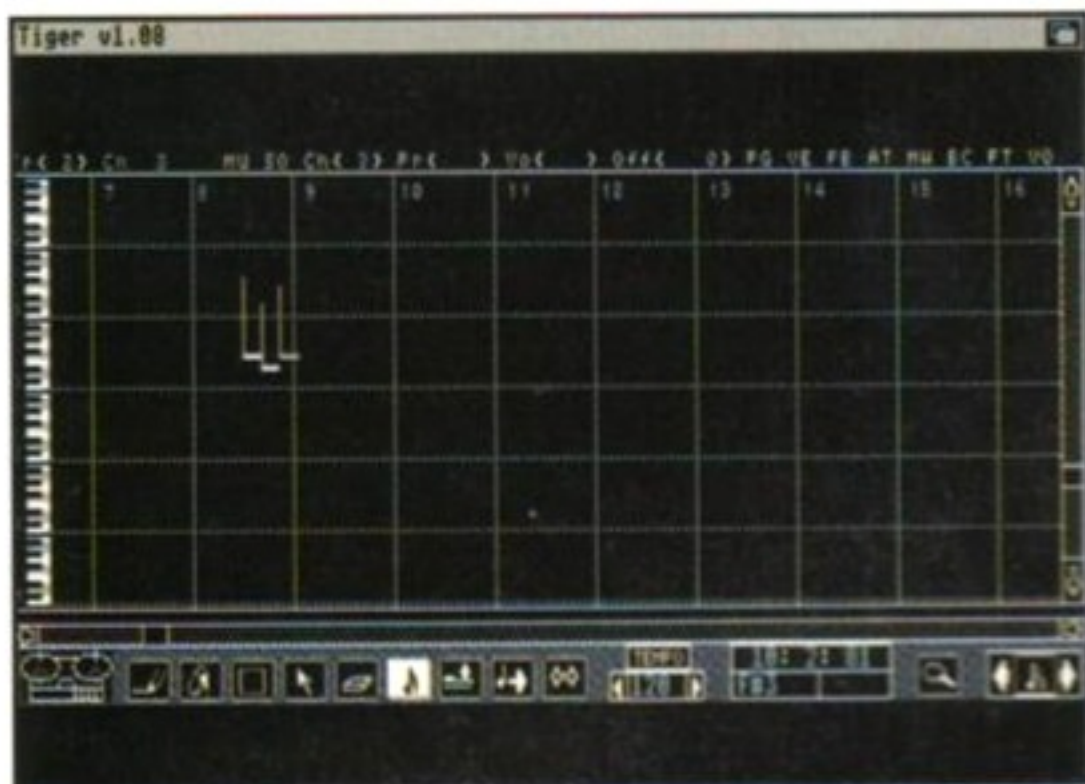
often revitalise a flagging project).

Like working on a word processor, bits of music can be cut and pasted into other parts of the song. This feature takes advantage of the fact that much music, particularly pop, is essentially a sequence of Intro (Chorus theme) / Verse / Chorus / Verse / Chorus / Instrumental / Verse / Chorus / Chorus - or some other slightly different version.

Once you have established the Verse and Chorus, it is simply a matter of copying them and pasting them in the desired sequence. The copy facility is also used in actually constructing those sections. Bass lines will, for example, usually repeat themselves every few measures or less. Rather than going through the whole song playing this line manually, you just play the bars once, then copy and paste to your heart's delight.

## Problems

The majority of problems struck by first-timers lie in setting up the receive and transmit channels of the sequencer and synth. Ensure the channels match each other and correspond with the synth manual. Check the clock, MIDI



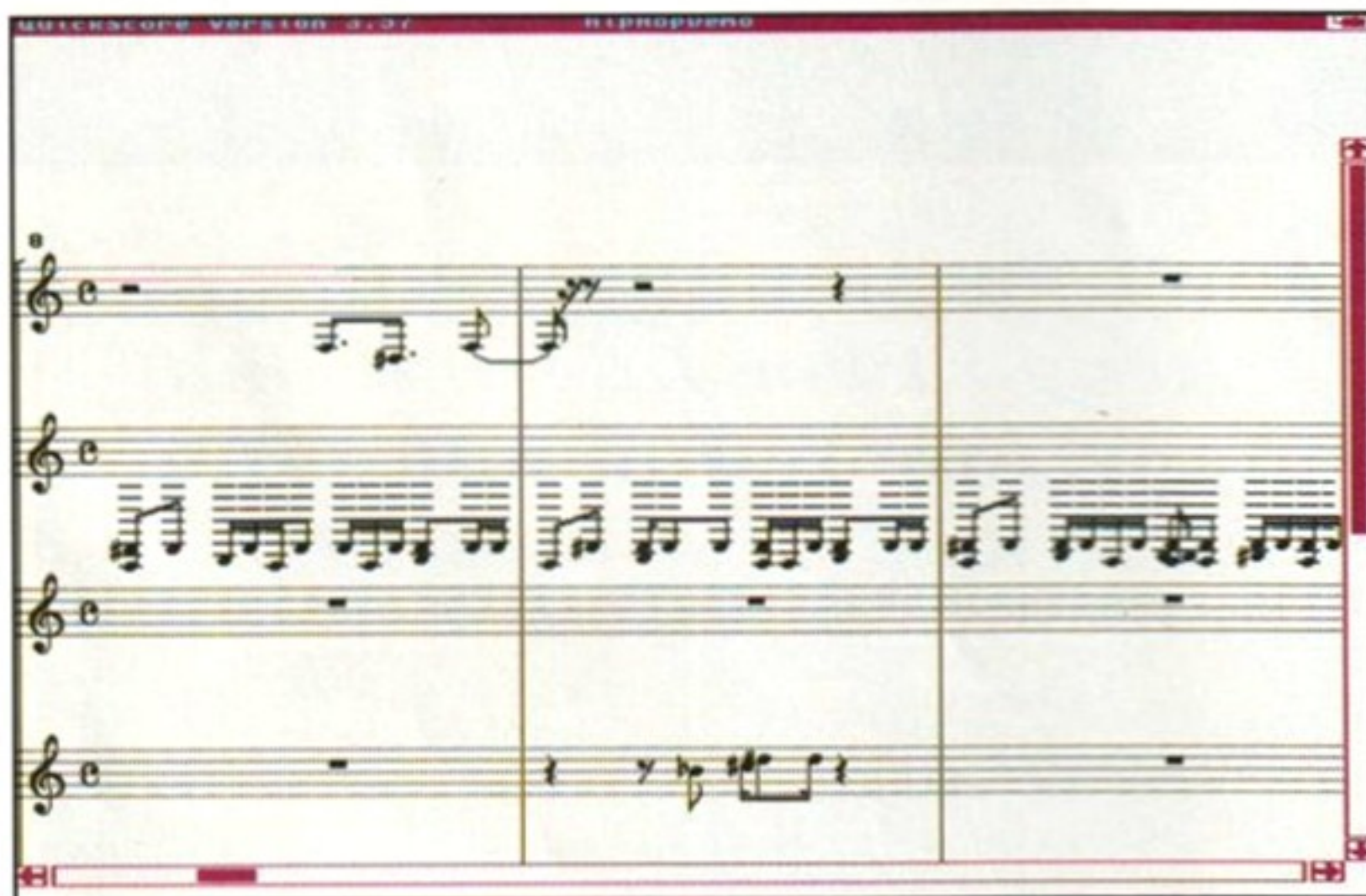
Three notes are ready to be moved about and generally interfered with in the Tiger editing screen. To keep track of the note position, there is a keyboard along the left hand side, and a note/pointer register in a box bottom right. Along the base, icons include a tape deck for recording and running through the sequence, plus icons to change note length, position and so on.

very sterile music (over-precise and almost un-rhythmic), and the Rave / Techno phenomenon (so it isn't necessarily bad!).

Editing modes are useful for shifting around notes or changing features about them - such as the note itself, its timing, and so on. The power of

# CALL YOUR OWN

## Part II

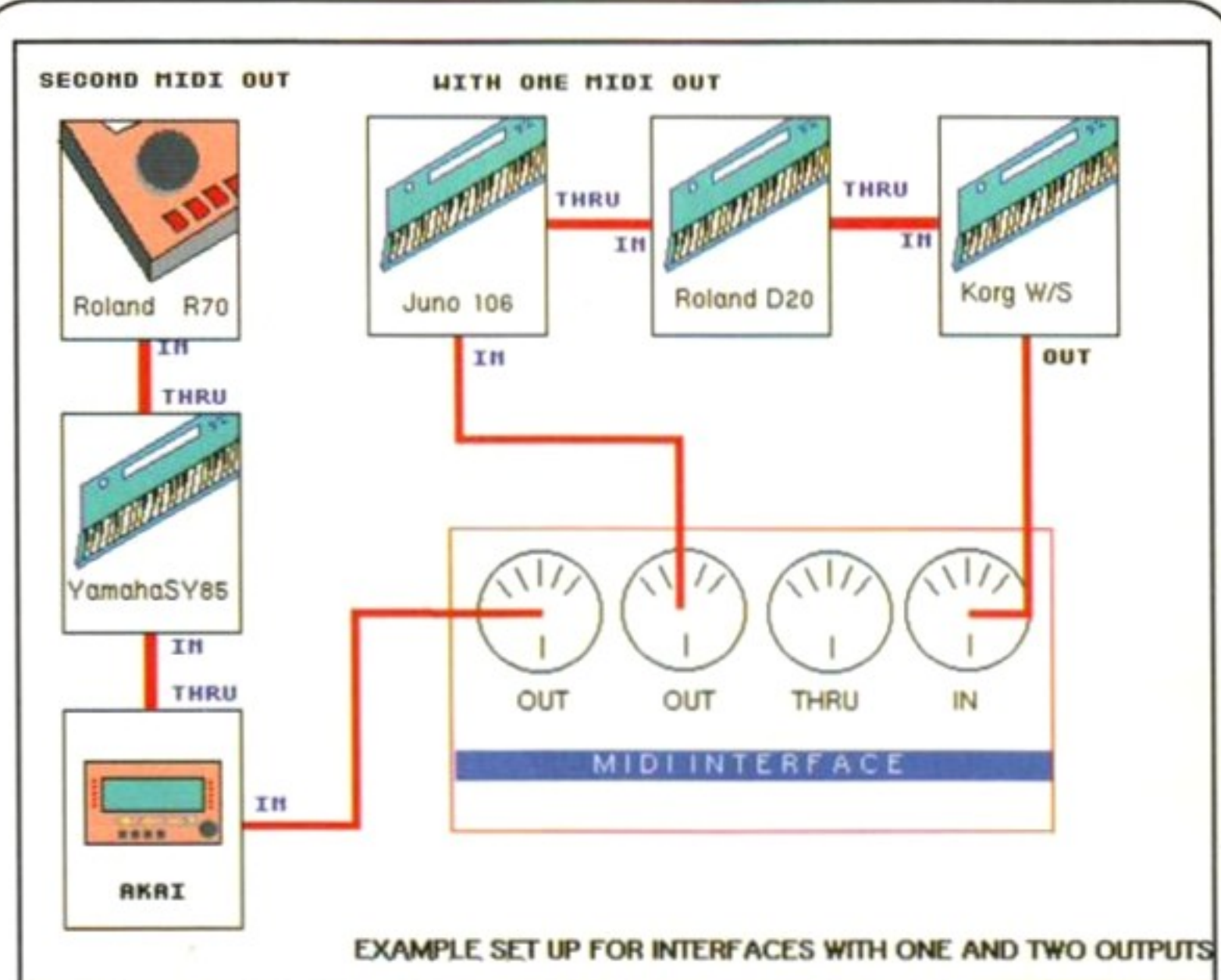


A good feature of KCS is the ability to display and print out your composition in standard music notation. A very useful program for conveying your ideas to other musicians.

sequencers quickly becomes apparent when you realise how fine these adjustments can be. Alternatively you can apply changes to whole tracks. You could, for example, decide to shift a song into another key (which can

merge and Rechannelise options on the sequencer are set correctly.

The other problems arise from not understanding the song writing process. The more flexible the package, the more likely it is that the process is rather



EXAMPLE SET UP FOR INTERFACES WITH ONE AND TWO OUTPUTS

You'll need a midi interface like this excellent one from HiSoft, which features an extra MIDI out port. You need at least one In port, one Out and one Thru.

The Amiga pumps its MIDI information through the out port to the instruments. If you have more than one instrument, you chain others to the first one using their Thru ports.

The MIDI information passes through them, they read what they need, and the information

continues along the chain. If the chain becomes too long, the MIDI data can become garbled and weak. The further an instrument is down the chain, the more likely it is to misread the data. That's why a second MIDI out port is useful if you have more than four or five instruments. You can set up another short chain alongside the other.

The diagram below shows the two alternatives.

inaccessible for a new-comer. Sequencer One Plus and even the super-powerful KCS are so straight forward that reading this feature with the program in front of you will have you recording multi-track masterpieces in no-time.

## Conclusion

Always remember that any sequencer acts like a multi-track recorder. You can record multiple layers of music. Some work by simply defining how you want the notes on each channel to flow through the whole song. The song starts and works through each measure, playing the MIDI information it passes over. More powerful sequencers are structured so you actually record in 'sections', then link these together to form a whole song.

Ultimately, nothing can be more useful than reading the manual. **AUI**

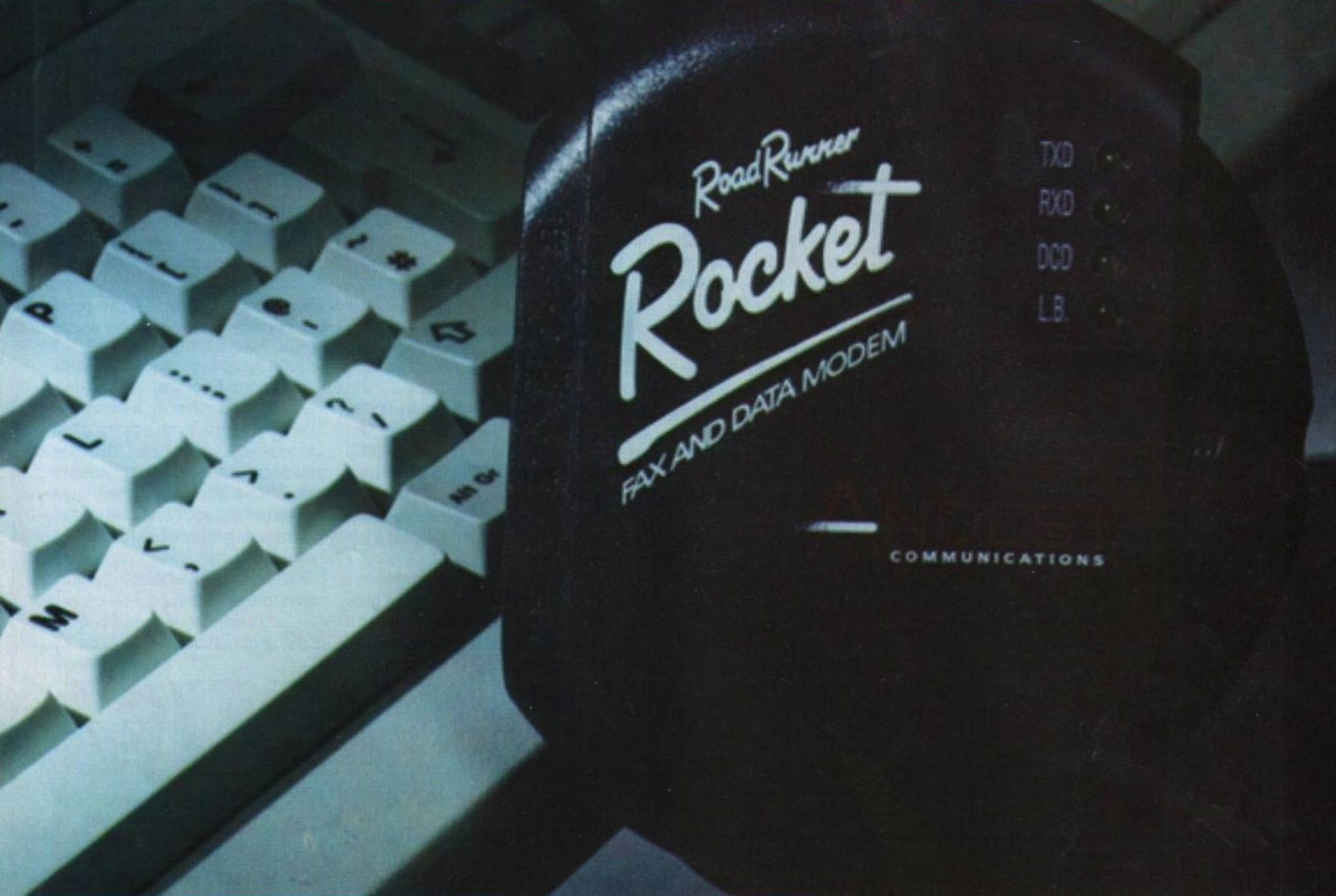
## Contacts

Dr T's Music Software  
Off Planet Media  
1 Hurts Yard,  
Nottm, NG1 6JD  
Tel: 0115-953 1131

Midi Interface  
Hi-Soft  
The Old School, Greenfield  
Bedford, MK45 5AE  
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|---|------------------------|--|------------------------|-----------------------|-------|--------------------|-------|-------------|-------|----------|--|---------------------|---------|--------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|--|--|---------------------|---------|----------------|--|-----------------------------------|--|------------|--|------------|--|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|-------------------------|--|---------------------|---------|------------|---------|---------------------|---------|------------|---------|----------------|--|------------|---------|-------------|--|------------|---------|---------------------|---------|------------|---------|---------------------|---------|------------|---------|---------------------|---------|--|--|---------------------|---------|--|--|----------------------|---------|--|--|
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| 3.5" E/IDE  |                        | 3.5" E/IDE   |                        |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
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| 420MB.....12ms.....   | £179.99                | <b>A1200 OVERDRIVES</b>  |                        |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
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| 730MB.....10ms.....   | £249.99                | 420MB.....   | £249.99                |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
| <b>QUANTUM</b>  |                        | 540MB.....   | £289.99                |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
| 3.5" SCSI 2   |                        | 730MB.....   | £349.99                |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
| 270MB.....12ms.....   | £179.99                | 850MB.....   | £379.99                |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
| 540MB.....12ms.....   | £249.99                | 1-GIG.....   | £479.99                |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
| 730MB.....12ms.....   | £289.99                | The A1200 Overdrive hard drives<br>plug into the PCMCIA port. They<br>are convenient and will not<br>invalidate your CBM warranty.   |                        |                       |       |                    |       |             |       |          |  |                     |         |                    |         |                     |         |                     |         |                     |         |                     |         |                     |         |                     |         |  |  |                     |         |                |  |                                   |  |            |  |            |  |                     |         |                     |         |                     |         |                     |         |                     |         |                         |  |                     |         |            |         |                     |         |            |         |                |  |            |         |             |  |            |         |                     |         |            |         |                     |         |            |         |                     |         |  |  |                     |         |  |  |                      |         |  |  |
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# Deluxe Trickery

**The first in a series on cunning tricks you can do with your paint program. Wil Mobberley conjures them up.**

Unless you're a programmer, chances are that if you bought your Amiga in order to do graphics you don't really want to be delving into the digital gubbins and going technical - and with fine programs like Deluxe Paint AGA, Personal Paint and Brilliance to hand, why should you? You're an artist, not a mathematician, right?

Even so, there are a few tricks worth knowing because they can transform your approach to pixel painting. They're not difficult but boy, do they make a difference! To prove it I'm going to tell you something so blatantly obvious that it took 9 months for it to dawn on me and I'll bet it hasn't occurred to you either! Your Amiga is already capable of displaying broadcast resolution graphics as it stands without any enhancement so long as you use a little trick and accept one simple constraint.

Intrigued? It all comes down to playing the numbers game. A 24 bit display board gives you the choice of 16,777,216 colours which is usually rounded up to the ubiquitous 16.8m. I expect you knew that already but here comes the clever bit.

Although your DPaint or similar program can only display 256 colours at a time, it can choose those 256 from a palette of 16,777,216, hardly broadcast TV resolution but wait a moment! Your humble A1200, straight out of the box, has a trick up its sleeve.

Consider for a moment one of those luscious graphics cards which can display the full 24 bit palette. They do this by offering 256 levels of red, 256 levels of green and 256 levels of blue for each pixel on the screen. Try this on your calculator to find out how many combinations there are: 256 X 256 X 256. There! Recognise that figure? Yes, it's our old friend 16,777,216 again.

Back in AGA land, bring up your paint program's palette-mixing requester. (On DPaint, just right mouse click on the two colour box below the undo button.) There they are, the familiar colour sliders giving a 256 range (actually the high number is 255 but don't forget that computers see 0 as a number too.)

Now move those sliders to, say, 50, 50 and 50. What have you got? That's right - a shade of grey. Now try 167, 167 and 167. A lighter...shade of grey! You'll



Take a look at how anti-aliasing improves your picture quality

find it's always the same. Three zeros give black because there's no red, green or blue at all. If all three guns are on full then you get pure white and whenever the three primary colours are equally represented at whatever level the result is a shade of grey somewhere between the two extremes.

Now comes the \$64,000 question. How many shades of absolutely pure grey can a 24 bit graphics card display? That's right - 256.

But hang on - we know that our humble A1200 can display 256 colours at once so what happens if those colours happen to be a grey scale? The results would be indistinguishable from a broadcast TV so long as it was a TOTALLY monochrome image. Even a £60,000 pro system wouldn't look any better at PAL TV resolution. How could it, at 24 bit?

The first time this dawned on me I couldn't wait to try it. In theory it would mean that the humble Amiga really is capable of producing effects which the producers of Doctor Who back in the Hartnell or Troughton days would have given their right arms for - and don't underestimate the usefulness of monochrome.

## Painting

Before you get too excited and jump to the conclusion that you have the equivalent of a monochrome "Paintbox" sitting on your table at home, however, I have to warn you that things don't quite work that way. I'm showing you a neat display trick but don't think it's the holy grail, OK?

Displaying a beautifully smooth graduated, detailed image is one thing, but painting one with a limited paint program is quite another as I found out when I first tried to put this principle into practice. I raced to my Amiga and fired up DPaint AGA, set the screen resolution to 736 X 566 (full video overscan) and built a grey scale palette by setting the first colour to black and the very last to white and then spreading between the two.



Adding the colour blue as instructed.

I selected the drawing tool, chose white and began to paint expecting to see a monochrome "Paintbox" image. Yuk! What went wrong? Did Commodore con me? Why didn't it look any good? The results still looked like a computer image made out of tiny bits of lego.

Then I remembered anti-aliasing. Turn that on and try that. It's true! What a joy to see the smoothness of those lines, especially if you use the oval tool. Why hadn't I thought of it before? Have a look at demo pic 1 which shows various levels of anti-aliasing and you'll see what I mean. High is best for most things but I tend to use low anti-aliasing for lettering.

## The Catch

There's always a catch, isn't there? Even though the maths make sense there are drawbacks, of course, the most obvious being the speed. An-

## Antialiasing

None

Low

High

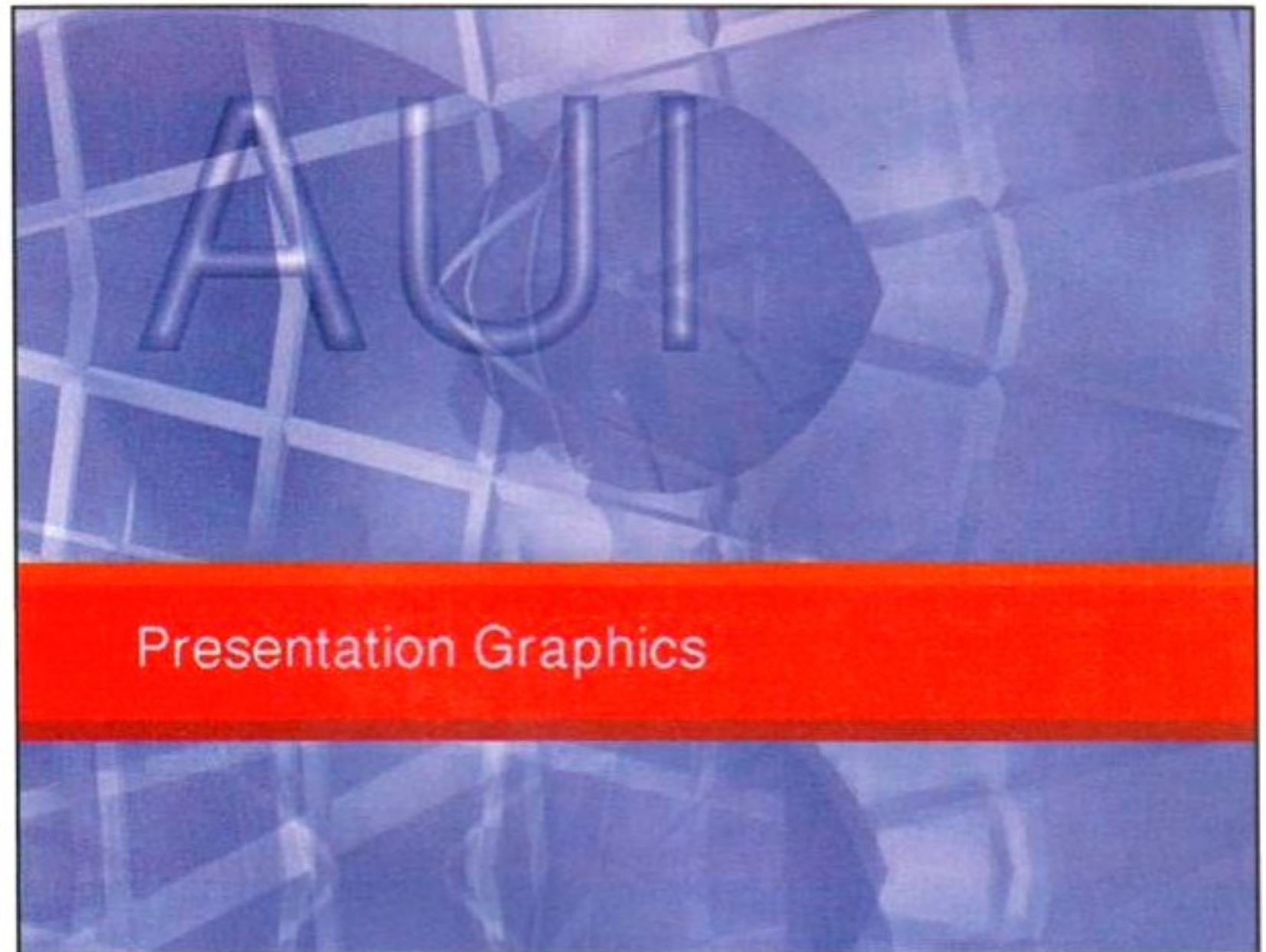
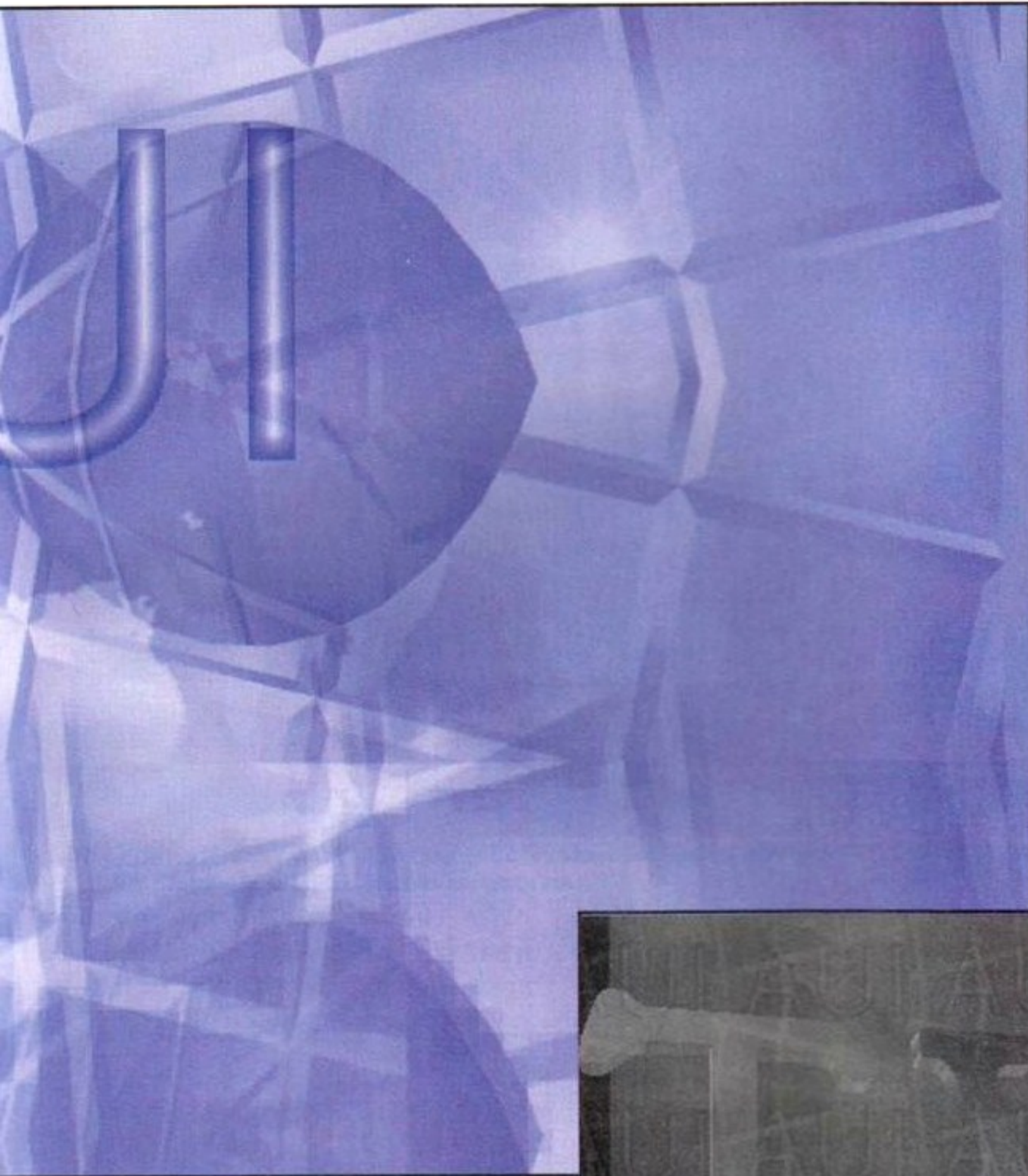
Smooth and transparent, but only grey.

other problem is doing fills. You'll find that they don't work well on a shape that has been anti-aliased but you'll find that it helps to produce an image without anti-aliasing first and then blur the whole thing once you've filled it.

This works best if you load it into an image processing package like ADPro or ImageFX. You could try cutting a vertical single pixel line as a brush and using blend in conjunction with the

## Getting Clever

I'm pleased with the look of my background frame but wouldn't it be nice to have a bit of colour in there just for a little visual impact? Well, you can. Just remember that the way we managed to get such subtlety in the first place was by limiting our palette and doing a spread across the whole of it. Now at the cost of just a teeny weeny bit of



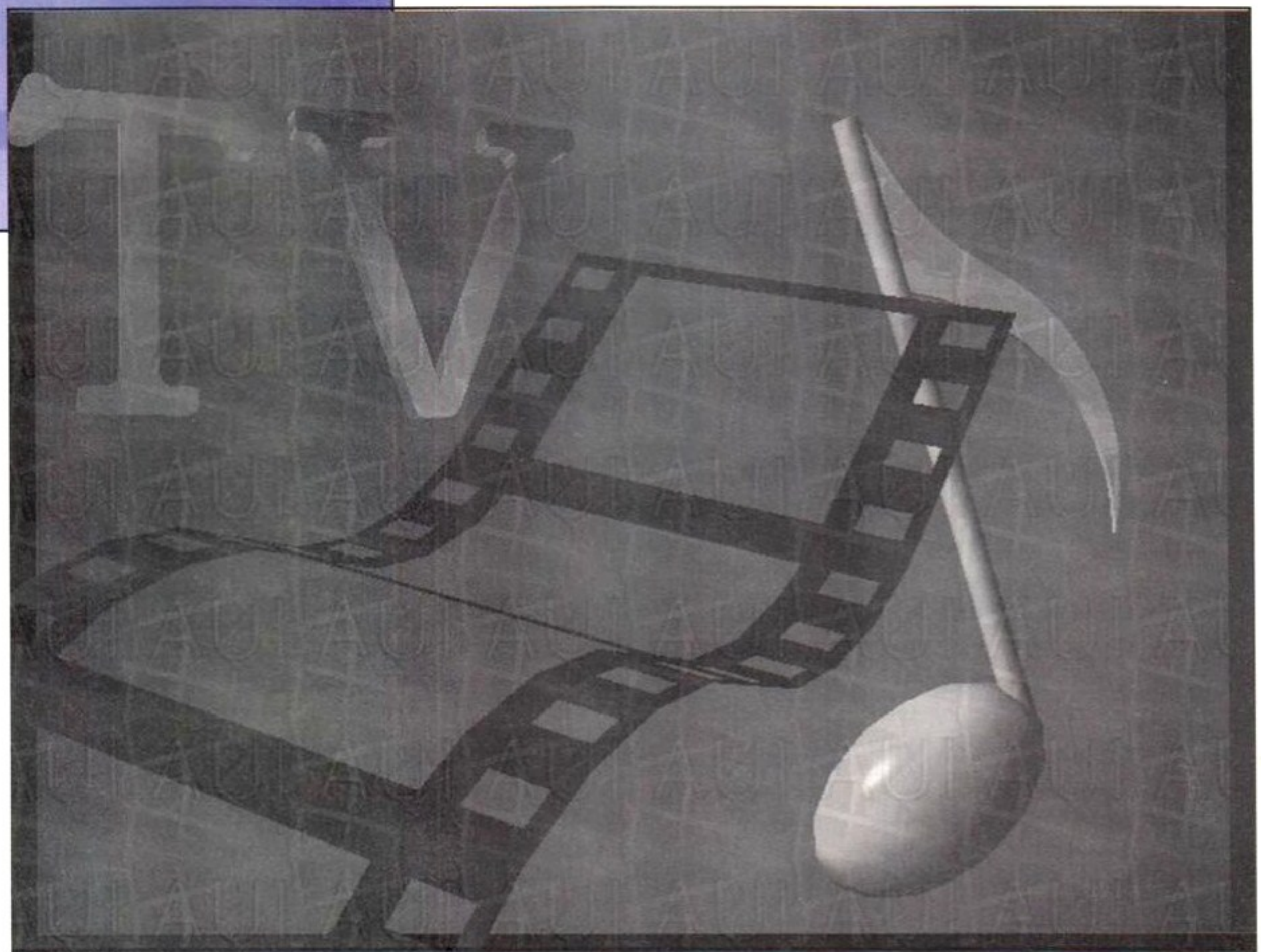
*Spot colours can be added.*

subtlety we can totally transform our image.

Firstly, call up your palette requester and change the middle colour to a medium blue. Now spread from the blue to the black and from the blue to the white. Bingo, our image now looks like demo pic 3. Now call up the palette requester again and change the last 8 colours to a gaudy yellow, as gaudy and as 'orrible as possible. Next, change the colour just before your first yellow to pure white and spread from it to the mid blue somewhere in the middle again.

Remap using your new palette. There's a little trial and error involved but most times you'll find that there's very little difference. Do you see why we chose such gaudy yellows? We wanted to make absolutely sure that the computer didn't use any of the last 8 colours to remap with. Now, happy that those last 8 colours are nowhere to be found in the image you're free to change them and use them for spot colour elements. Have a look at demo pic 4 and you'll see what I mean. Not bad for a few hundred quid computer, eh?

More tricks next time! **AUI**



*256 mono images are broadcast quality.*

straight line tool in DPaint but you'll soon be disillusioned because translucency, smearing, or blending tend to produce a posterised effect. ADPro, on the other hand, will blend two monochrome images together beautifully. The catch is that you need to be working in 24 bit internally even though the final display need only be 256 shades. That's because the internal calculations are made at a much more complex level. 150 Red, 150 Green and 151 Blue for example may not be pure grey but the human eye won't be able to tell that. ADPro will calculate a blend using those kinds of values and then average the pixels for a true monochrome display afterwards. Result, no posterising, just a glorious mix of images.

OK, so much for the drawbacks but just how good can a display look on a humble A1200? Well, take a look at the subtleties of demo pic 2. That looks like a TV image to me.

# All Terrain Racing

Team 17 1 Meg £25.99



The usual race getting ready to start.

“Welcome to the world of arcade style racing, a world of slick, smooth action over six varied terrains and over forty gruelling tracks.” Thus does the manual greet you and it sounds like an attempt to make yet another racing game sound exciting.

But, let's remember that the game is from Team 17 and they've got rather a good pedigree. ATR is a racing game viewed from above, despite the fact that the cars appear from an angle - a bending of the laws of physics for aesthetic reasons, I suppose. Now, for those of you with good memories for such things, you may think, "Hang on! Team 17 released a game called Overdrive last year, which was (wait for it) a racing game viewed from above." Indeed they did, but they do seem to have learnt from that game and improved their ideas of what a game like this should be.

Both games, for reference, are similar in idea to High Octane, the game we included on SuperDisk No.48). ATR takes the basic premise of races and adds layer upon layer of additional features.

Of course, there's the usual option of racing against a number of computer opponents in a standard race on the arcade level. This mode has several variables, firstly in the level of competence of the computer drivers and then in the choice of car and also in the type of terrain. The cars on offer are suited to different courses. So, although there is a general car, ideal for beginners, there's also a jeep for

cross country racing and a sports car for the road tracks.

Each car can be customised with add-ons, or power ups, bought at the beginning from your mediocre stash of cash. Win races and earn more money, which will give you a better car and better chances of winning the races.

Winning the races, tough, is easier said than done, even on the novice level. It's really quite annoying to find your car spinning all over, not being able to make the corners and then see a computer driver in a sports car whip around a country track. Even if you take the lap record that's set for each track (computer opponents don't count for times), you can still end up last.



Customise the car, to give you the edge.

Each terrain has several tracks, which differ in complexity, but there is a general rule that the road tracks are faster than the country ones.

On each race there are several power ups that appear on the track. As the move around, you have to be skillful to collect them and more often than not chasing a power up will make you crash and lose your position.

As you can see this is a pretty nifty combination of choices and actions already. There are also a further two types of game: battle and league. Battle mode has you racing head to head,



The options screen with various tracks available.

either against a friend or the computer. In this mode, the premise is the same, but with weapons! The idea is to use all your skill and firepower to ensure the opponent doesn't make it. Damage mounts up and slows your vehicle down until you simply can't win, which is why it's essential to keep an eye out for power ups to help you out. Because the screen scrolls around the track with the leading player, when playing two players, the losing player will get dragged along to keep up which means that even if you're doing badly, you've still got a chance of winning!

The league game allows you to make up an ongoing competition with friends. These leagues can be saved and loaded again later.

ATR is a polished production, in fact it's the game Overdrive should have been. Although the controls are still not ideal to my mind, where you rotate your car and move forward, as I always find this rather difficult to master. On the other hand, some friends swear by it and love this way of playing.

The graphics are very bright and as good as ever. The sound is yet another creation of Alister Brimble, with different tunes on the options' screen and the game itself. There are also the usual sound effects.

The best game of its



I'm not doing too well and this is the easy level.

type? We've not seen better but do we need another game like this or have we had our fill already? You decide.

| VERDICT   |     |
|-----------|-----|
| Graphics: | 85% |
| Sound:    | 70% |
| Gameplay: | 80% |
| Overall:  | 83% |



Battle mode - two cars fight it out.

# B17 Flying Fortress



Game Controls, Bomber and Crew Options

Griff Rhys-Jones catches a guy nicking a gun from his B17.

Microprose deserve big points for their constant re-release of classic games at budget prices. Re-releases have taken on a new importance in the Amiga market - keeping things bouyant while the platform is rudderless.

Flying Fortress is one of the major hits to return to the shelves in 1995. AUI gave it a massive 94% in late 1993. It is a testament to the programmers but also a signal of how little our use of computing technology has advanced in the past two years, that B17 still looks and feels darn good.

## Leather Jacket

Slip on a leather flying jacket and stick a photo of a loved one close to your heart - we're going on a series of 25 daylight bombing missions during World War Two.

You take full control of the famous Flying Fortress, bristling with .50 calibre machine guns and stacked with ten 500lb bombs.

The pre-mission sessions help set up the World War Two flying flavour. Your crew are shown in photo, which changes as some are injured, killed or transferred to other units. You can name your plane and choose a special piece of nose artwork (although this is a little limited).

Mission briefings are well organised - with 'realistic' mission orders, reconnaissance film of targets and detailed maps showing waypoints.

A preferences screen allows very intricate manipulation of features such as screen detail, the ability of flak and fighter plane opposition and the ease of take off and landing.

The game gives plenty of room for you to adjust upwards the difficulty level and take over an increasing amount of the actual fly-



The Mission Briefing

Some of these brave men might not come back from this mission. Will you?

ing job, as your ability grows.

## Rookie to Ace

When you first take control of the Fortress, the crew, like yourself, are relatively inexperienced. Each successful mission will improve the overall standards, particularly if you actually complete the key assignments like take off, bombing and landing yourself.

The player can choose to take control of any one of the pilot, navigator, radio operator or gunner positions during the mission. Handling this bohemoth by yourself would be an impossible task, so when you are at one position, the computer controlled airmen manage the other positions.

To skip parts you don't like handling, or when the flying to waypoints and targets gets monotonous, two special features come in useful - Rapid Time Advance and Time Skip. The former speeds up time and the later makes time jumps (which are user definable chunks).

## Tracer Lights

A favourite option of mine is to take control of the gunners and leave all other parts of the mission to the computer. The adrenalin pumps faster as the chilling message from the tail gunner pops up on your screen: "Bandits at 7 o'clock".

Microprose All Amigas £16.99

You hit F10 to switch from your current position to the tail gun, and press "M" to take over the twin guns. The dots in the distance rapidly grow into the discernable shape of Messerschmidts. The lines of tracer fire burst from their wings and hurtle towards you. You have traced their flight path with the cross hairs and squeeze the trigger - letting a stream

The programmers made a mistake in requiring players to press "M" to take over from the computer. Movement data from the joystick should automatically switch control over to the player.

## Conclusion

It is a pity that monetary considerations make Microprose choose to simply re-release a good product. It would be nice to see an update that includes AGA compatibility, real speech samples, variation in weather conditions, more missions and a choice to take part in the whole progress of World War Two. Other options could include other battleground scenarios - not just Europe. Although Microprose claim it is 1200 compatible only when run from floppy disk, you can use the installation program to install it on your hard drive, and simply alter the display before booting (using the program accessible by keeping the two mouse keys depressed while you boot).



LAYOUT OF THE B-17

The B17 - take control of any position, from pilot to gunner.

of bullets speed at the closing planes. They twist off to the left and you swing the guns to follow. The gun cannot reach around any further. There's a scream from the top gunner - he's hit and bleeding bad. Quickly hit F8 and switch to the left waist gunner, who is already shooting at the enemy. Take control and let another burst off at the fleeing planes.

| VERDICT   |     |
|-----------|-----|
| Graphics: | 88% |
| Sound:    | 70% |
| Gameplay: | 91% |
| Overall:  | 87% |

# Akira

**ICE CD32 £29.99**

It was only a matter of time before someone bought up the licence to the Manga 'classic' Akira.

In case you've missed the film, the plot is wackier than my great aunt. Starting with boy racers and kids with strange powers, the action explodes off the screen with abandon, literally. A little overlong, it's often a confusing film, and after one of the hero's, Keneda, friends obtains powers like

the children at the beginning, things just get stranger. Giant teddy bears and laser weapons tear the city apart. At the gargantuan ending, the Akira project is unveiled, which doesn't explain too much, lots of things explode and somehow most people survive.

The game is intended to follow much the same lines and has parts of the film cut in, in CDXL format, to separate the levels. I hope these aren't supposed to make the game more comprehensible, because it's all a bit disjointed anyway. In its favour, the game does make quite a good effort to capturing every element and major event in the film.

It starts out with a bike scene viewed from the side. You must race along avoiding the military as they try to capture you. This is all a bit pointless as you do get caught later.



*Not an entirely inspiring start but quite fun.*

From here it becomes a level game, which is very reminiscent of Flashback in style, although lacking the same depth of gameplay. There are also shoot 'em up levels played on hoverbikes and a final level where you face the abomination that your friend has become with only a laser weapon.

Film licences have a very bad reputation and Akira is much better than most, but it is lacking in some departments. The CDXL quality is average and the sound is definitely sub-standard. However, despite the minor problems, there is an addictive quality that has you coming back for more and more and more.. The controls are not the easiest to master and I do think that more could have been done with the game on the whole.

Manga fans will doubtless lap it up, but Akira maybe isn't going to set the whole gaming world alight. There is, after all, nothing in this game that we haven't seen before, even if what is there is of a reasonable standard. But with so many Akira fans just hungry for a game like this, it's surely going to reach hit status up there in the Charts.

## VERDICT

|                  |            |
|------------------|------------|
| <b>Graphics:</b> | <b>75%</b> |
| <b>Sound:</b>    | <b>50%</b> |
| <b>Gameplay:</b> | <b>75%</b> |
| <b>Overall:</b>  | <b>75%</b> |



*Here we go! Let's kick some.*

# Flink

**Psygnosis CD32 £14.99**



*Another day in the life of a Superhero.*

2D, the graphics and sound are excellent. The parallax scrolling that made Psygnosis its name are back and is sexy as ever.

You won't be amazed by the gameplay and the mixing the spells idea that forms part of Flink's arsenal is reminiscent of their earlier Wiz'n'Liz. I liked Flink though, but I did find the controls rather annoying at times. To kill enemies you must pounce on their head and you then jump back a bit as you bounce off, which is a

little annoying if you did this near the edge of a platform. Down you drop and you were the one who was winning!

At this price, Flink should be much appreciated by CD 32 platformers.

## VERDICT

|                 |            |
|-----------------|------------|
| <b>Overall:</b> | <b>85%</b> |
|-----------------|------------|

The lads from Liverpool had been a little quiet recently, but then this game plopped onto the office doormat. It was duly dumped into the CD drive and booted. The game came up with an annoying intro that I couldn't skip, but when I did manage to get into the game I was pleasantly surprised. Although Flink is very much your standard platform game viewed in

# Skeleton Krew

**Core Design £29.99**



*Yet another fine outing from the Core group.*

It's been a long time coming this game. Has it been worth the wait? Hmm, it's certainly been a while since we had a decent shoot 'em up and it's welcome for that reason. A good old fashioned blast can't be rivalled.

You can choose one of three players, all of whom look pretty mean. The format of the game is familiar, but the control method has been designed in a very original way so that you can move around, fire, rotate, and shimmy along all just with a normal joystick.

It isn't an easy game and even the first level is taxing with a guardian that takes quite some stick.

The graphics are of Core's usual

high standard and the music really pumps out. There isn't the variety of gameplay that was promised when the game was in development, but for fans of the stroll along and shoot things game, then Skeleton Krew is as good as many arcade games.

If you do manage to battle your way through to the end, you'll find an annoyingly quick enemy who hides behind a force field and then keeps disappearing. After a lot of lives and a little help from a cheat mode, I managed to dispatch him.

Skeleton Krew is a well executed game that will be much appreciated.



*Up to the rib in sewage, the eyes are all around me.*

## VERDICT

|                 |            |
|-----------------|------------|
| <b>Overall:</b> | <b>82%</b> |
|-----------------|------------|





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SAU5

**Microprose are now going hell for leather in a race against themselves to re-release old games, as with B17 Flying Fortress, most of these classics have stood the test of time.**

# Team Yankee : Tornado

**Microprose All Amigas £14.99**

Your 'Team Yankee' consists of four platoons of modern American tanks, taking on the paper-thin might of 1980's Soviet Union in limited conventional warfare.

Few other games recreate real-time battle pressure like Team Yankee. The sound of explosions will pull you away from the strategy map to the tank view screens to check who is being attacked. You hurriedly turn the turret, searching for the attacker, while your tank bounces and jars under the bombardment. You locate the enemy and fire off some missiles. You miss. Your platoon loses an M-2 Bradley tank. Your missiles are taking time to reload. The tank shudders under the shock waves of more high explosives. Another member of the unit explodes into a flaming wreck. A sharp electronic beep tells you the TOW high range anti-tank missile is loaded. You aim quickly, steadying your nerves, and fire. The shell connects with reinforced steel and the Soviet tank starts smoldering - dead.

Made originally for the Amiga 500, there is no mention of compatibility with newer machines, but I installed it on my A1200 hard drive and it's running fine even without switching the graphics mode. The high degree of 'reality', high drama and pressure soars above the limited graphics and sounds to turn Team Yankee into an exciting game.

## VERDICT

**Overall: 78%**

Flight simulations vary between those that focus on gameplay and those that focus on reality. Tornado is in the later camp. With the time and effort you'll put into mastering this beauty, you might as well have enrolled in the RAF and trained for the real thing.

The publicity claims design input came from real-life Tornado aircrew (probably the guy who made the sandwiches) and BAe. This monster looks and feels as authentic as you'll ever cram onto your Amiga. The reality extends to the dog of a joystick control - which is very jerky and too easy to over-correct.

First timers can jump straight into a plane in mid-flight and skim over the

**Action 16 All Amigas £16.99**

realistic terrain, through valleys and over high hills shrouded in mist.

It won't be long before red warning lights start blinking, the instrumentation starts beeping, the plane starts shuddering, and you are heading rapidly toward the earth. Why? The only way of succeeding with this game is to plough through the detailed and hefty manual. The experience is worth it.



## VERDICT

**Overall: 88%**

# Elite Plus

**Action 16 All Amigas £16.99**

Elite has gone down in computer gaming history. It combines a rough 'space flight' simulation with adventure and a career in running an inter-galactic trading outfit. It belongs to a time when programmer's weren't particularly clever about designing complex games with ease-of-use in mind. If you take your place in the Cobra Mk III starship and blast off without a glance at the manual, you'll

soon be lost, shot down or in pieces. Dedicated players need to fight and pur through the game. Apparently, and I can't swear to this because I thought I had better things to do (I didn't), the game gets very compulsive if you stick with it.

The program is clearly, and sadly, outdated. Put your money aside for Frontier: First Encounters.

## VERDICT

**Overall: 51%**

# Sink or Swim

**Zeppelin Games All Amigas £9.99**

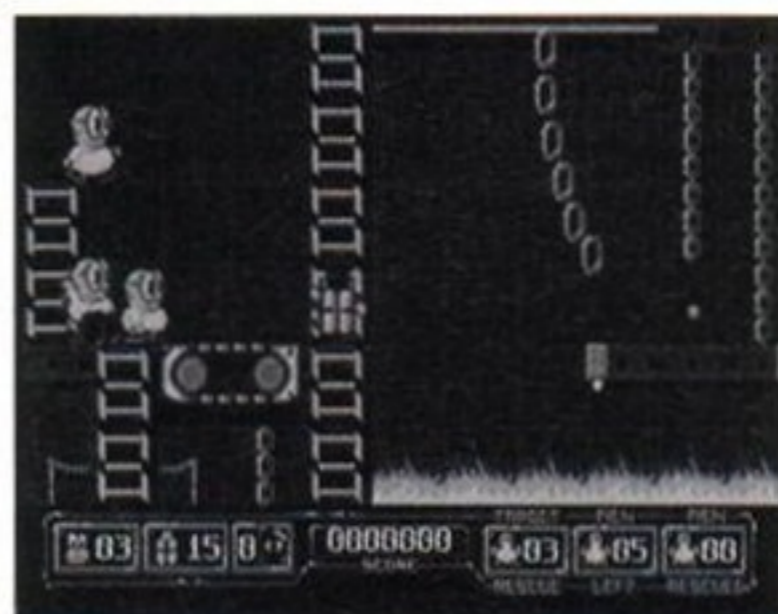


*Kevin could be up to his neck in trouble if he doesn't save these guys.*

This game is a re-release from a few years ago, but it hasn't dated one bit. In fact it puts a lot of today's games to shame. The graphics are bright and colourful and the hero is a great little rotund character, Kevin Codner.

The game takes place on a sinking ship where a group of dim passengers are stuck on each level. And dim is certainly the word, because they can't find there way to the exits at all. Typical sheep, they go as far as they can but can't do anything for themselves, even if that's as simple as pulling a lever.

The game starts easily enough, but after only a few levels, you are up against a pressing time limit as the water level rises an threatens to drown the passengers. You have a limited air supply, but they aren't so lucky. If you



*That fire is very hard to jump.*

can, find the breathing apparatus and smash the glass to release them. In addition, you have an emergency life raft that you can release to save passengers in dire straits. This can save several of the blighters, but it's not a permanent measure and only helps them to the first safe point, which can soon be overrun with water again. As you only have one raft per level, you must use it wisely.

The mixture of platform and puzzle works well and the game is certainly addictive. The sound is not extensive but there is good use of some well chosen samples, such as the manic laugh when your hero ends up getting fried.

Should you have a suitable computer, Sink or Swim will detect the extra memory and make use of it,



*The water's rising and the passengers need some breathing space.*

which cuts down the disk swapping. Unfortunately, it doesn't detect two drives, so if you don't have extra memory, then some disk swapping is needed, but as the game is on two disks, this isn't excessive.

This is one of the better puzzle games around and for the price, it's well worth it. Sure there are other games that look fancier and this isn't the most complex game ever, but if you want light fun and enjoy puzzles, and often find them too involved and too serious, Sink or Swim is just the ticket.

## VERDICT

**Graphics: 78%**

**Sound: 70%**

**Gameplay: 82%**

**Overall: 80%**

# Dragonstone

**Core £29.99 All Amigas**

There has been a long lull since the Hey-days of the faithful Role Playing Game (RPG) genre. Remember Eye of the Beholder and Dungeon Master? Those were the days. Fighting all kinds of fantastical monsters, discovering treasure, defying magic and exploring labyrinths. Heroes these days.... why, they don't know they're born! In the dying years of the eighties decade, graphic adventures became ever more ambitious and more complex. Their fantasy worlds were huge and absorbing. The old games became so ambitious that they overreached themselves and crashed. The concept was taken to its shangrai la, found its nadir, and came back. 'Back' is where Core have gone with their latest RGP - Dragonstone. Note that I don't say backwards. Maybe this is what the genre needs to start again. A cleansing of the spirit. A sweeping away of the rusty armour and dead spells. To do that, programmers will have to use technology to its utmost, reinventing the approach to RGP genre.

Core have essentially stripped it bare - to the bones. You take control of

one lone, armour-clad hero (male). He waddles through a richly rendered forest striking its denizens dead with a swipe of his sword. I like Dragonstone's sword brandishing technique. Hurried hacking and slashing ensures only weak whacks at the foe. Hold your weapon in the air for a moment, mustering your energy, then let it sweep down on what-ever shaped blighter is rushing at you.

The modes of picking up, using and talking with other characters are stilted and not very flexible, but it's the straight-forward nature of the game.

In the final analysis, Dragonstone is boringly simple, but I enjoyed it for a short while.

| VERDICT   |     |
|-----------|-----|
| Graphics: | 74% |
| Sound:    | 60% |
| Gameplay: | 68% |
| Overall:  | 70% |

## Brutal Amiga

Lots of fighting. Enjoy the picturesque landscapes in the seconds before your head is separated from its body.



## Frontier: First Encounters

The sequel to Frontier Elite II is looking superb. Your objective is again to raise money from trading, battle aliens encountered through the galaxies, and generally become a very powerful and rich person (same thing). Gametek claim the aliens are more complex, there's more ships to use, the combat routines are refined and graphics are enhanced.

## Baldies

Imagine the world of Sensible's micro-machine sized people. Imagine they cloned their own version of Kojak. Imagine they banished them to a colony where they rioted. It's a long stretch of a poor imagination, but this is what it would look like.



## Final Over

The micro-machine people have given up playing football, being cannon fodder or cloning baldies, and are now playing cricket. The world's best summer game has been crying out to



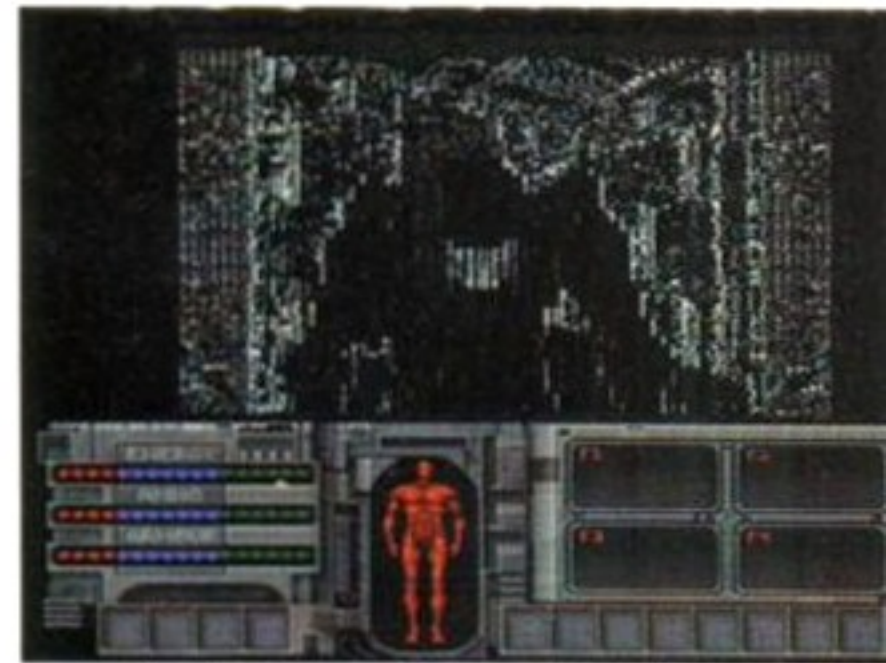
become a darn good computer game. The concept to achieve it seemed blindingly obvious. This could be it. Howzat!



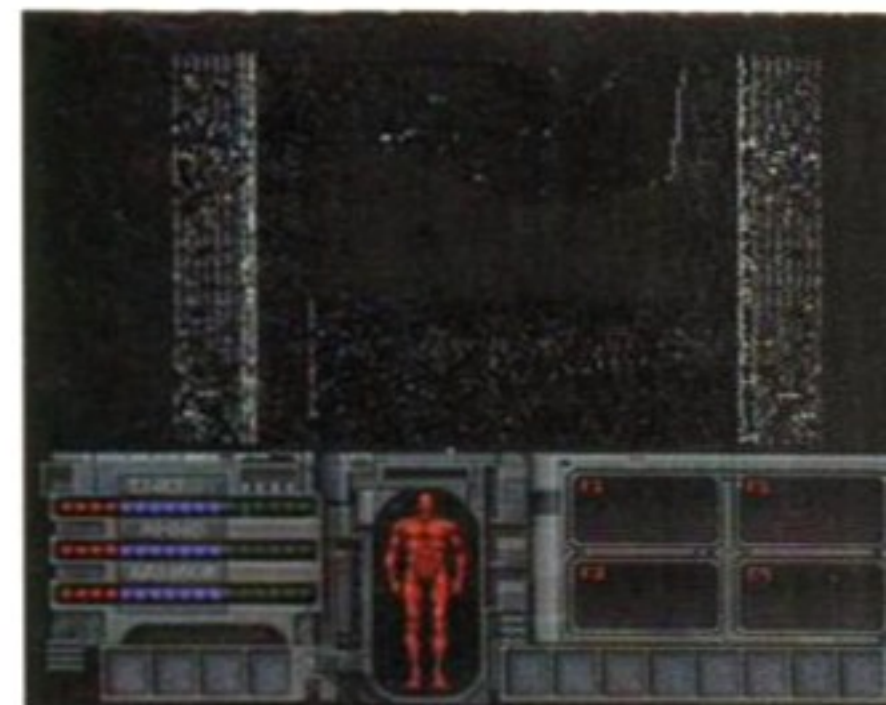
Your first encounter?

## Alien Breed

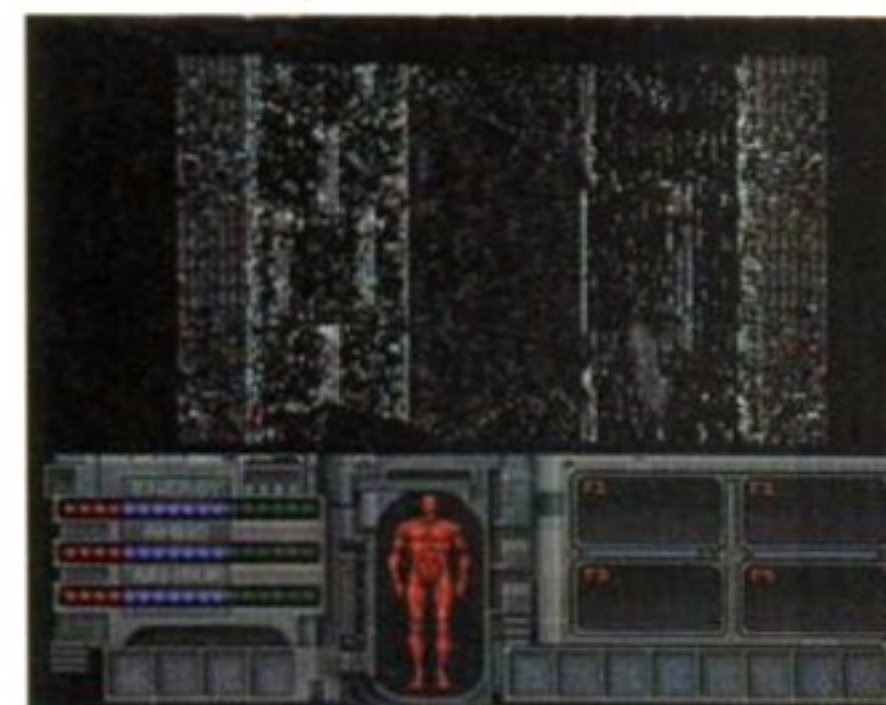
The first-person perspective is again the rage in computer games. It happened in the mid-eighties, but the technology couldn't carry it off. This time we're getting much nearer the pacy and believable three dimensional environment. With the phenomenal success of Alien Breed, it was almost natural that Team 17 put us right smack into the middle of the terror.



This looks like one of those slimey aliens



Escaping from the alien infested base for a breather.



We're doomed... doomed!

# PREVIEW

**A bunch of clever people are working on some cool new games. They had the foresight to tell Amiga User International about them and hand us, in plain brown envelopes, some special advance screen shots.**



# PROGRAMMING TIPS

**T**he Exec task signalling system used on the Amiga is based on the use of sets of signal bits that are stored inside the task structure of each program. For each task Exec allocates space for 32 of these bits (one long word) with the lower 16 bits being used.

Look at the function boxouts which show the Exec functions used to locate a task, set up and release a signal bit, wait for a signal to be set and 'send' a signal to a task. The allocation of user signals is extremely easy to code and one important point is that it is YOU the programmer who decides what the various signal bits are going to mean to your program. You might for instance decide that bit 16 was going to be used as a signal for a program to quit, ie terminate, and so you'd use a #define preprocessor statement to create a suitable definition. When requesting a specific signal bit in this way it's possible to test that the required signal was obtained directly like this:

```
#define QUIT 16

if(AllocSignal(QUIT)==QUIT)

{
/* signal available for use here */
}
```

All allocated signals have to be returned before a program terminates and a FreeSignal() function is available for this purpose. It is used like this:

```
FreeSignal(QUIT);
```

Neither the allocation nor freeing functions need to know which task is involved. This is deliberate - the calls are task specific and it is not possible to use them to allocate or deallocate the signals belonging to another task.

Once a task has allocated a signal bit, other tasks can set this signal by using this Exec Signal() function and again the function is very easy to use. To send the QUIT signal to a task whose Task pointer is contained in the variable

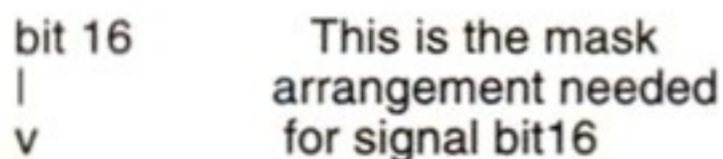
```
Signal(child_task_p,(1L<<QUIT));
```

This function does not use a signal bit number, it employs a long word, ie 32 bit, mask value (see below for explanation).

With the Amiga's multitasking system it's important for programs not to use processor time unless really necessary. One common example of when a program should not use processor time is when it needs to wait for user input, e.g. waiting for a user to hit a gadget or select a menu item. The standard procedure with Amiga programming is to put the program to sleep until such time as something of interest happens and the function which allows this to be done is, for obvious reasons, called Wait().

## Signal Bits And Masks

The important point with the Signal() and Wait() functions are that they use a 32 bit mask value - not an 8 bit signal bit number as used by AllocSignal() and FreeSignal(). The reason is that Signal() and Wait() are designed to work with multiple signals and it is more efficient to provide a mask value rather than a series of bit numbers. The difference between the two representations is easily seen by looking at an example. Let's take the QUIT signal that we defined as bit 16:



```
00000000 00000001 00000000 00000000
```

To convert the signal bit value to a mask we simply left-shift the number 1 an appropriate number of times. In C we use the << operator to achieve bit shifting, so typical code might look like this:

```
#define QUIT 16
mask = 1L << QUIT;
Wait(mask);
```

or simply:

```
#define QUIT 16
```

## Sorry, I Didn't See Your Signal

**Are you giving the right signals? This month's Exec coding tutorial from Paul Overaa will put you on the right track.**

```
Wait(1L<<QUIT);
```

### Communication Mechanics

In order for one task to signal another it needs to know its address and Exec provides a Task search function, called FindTask(), which allows this to be obtained. FindTask() returns zero if it fails and so it is common for coders to combine the tasks name search with a conditional test like this:

```
if(child_task_p=FindTask("some task name"))

{
/* if this is executed then task was found */
}
```

### Putting It Together

The Signal1.c and Signal2.c source code examples provide framework Shell runnable examples that you'll be able to use for further experimenting (they should be compiled to produce examples called Signal1 and Signal2). Signal1 is what you might call the 'main' task and its job is to locate Signal2 and send it some signals. For example purposes it uses a loop to transmit ten 'do something' instructions and then it sends a QUIT signal which tells the program to quit. Signal2 is to all intents and purposes a 'child' process. It allocates its signal bits and then uses a wait loop to watch for the setting of its two allocated signal bits. The loop exits as soon as a QUIT signal is detected but until that time the program executes the instructions provided in the loop code each time a PERFORM signal is received.

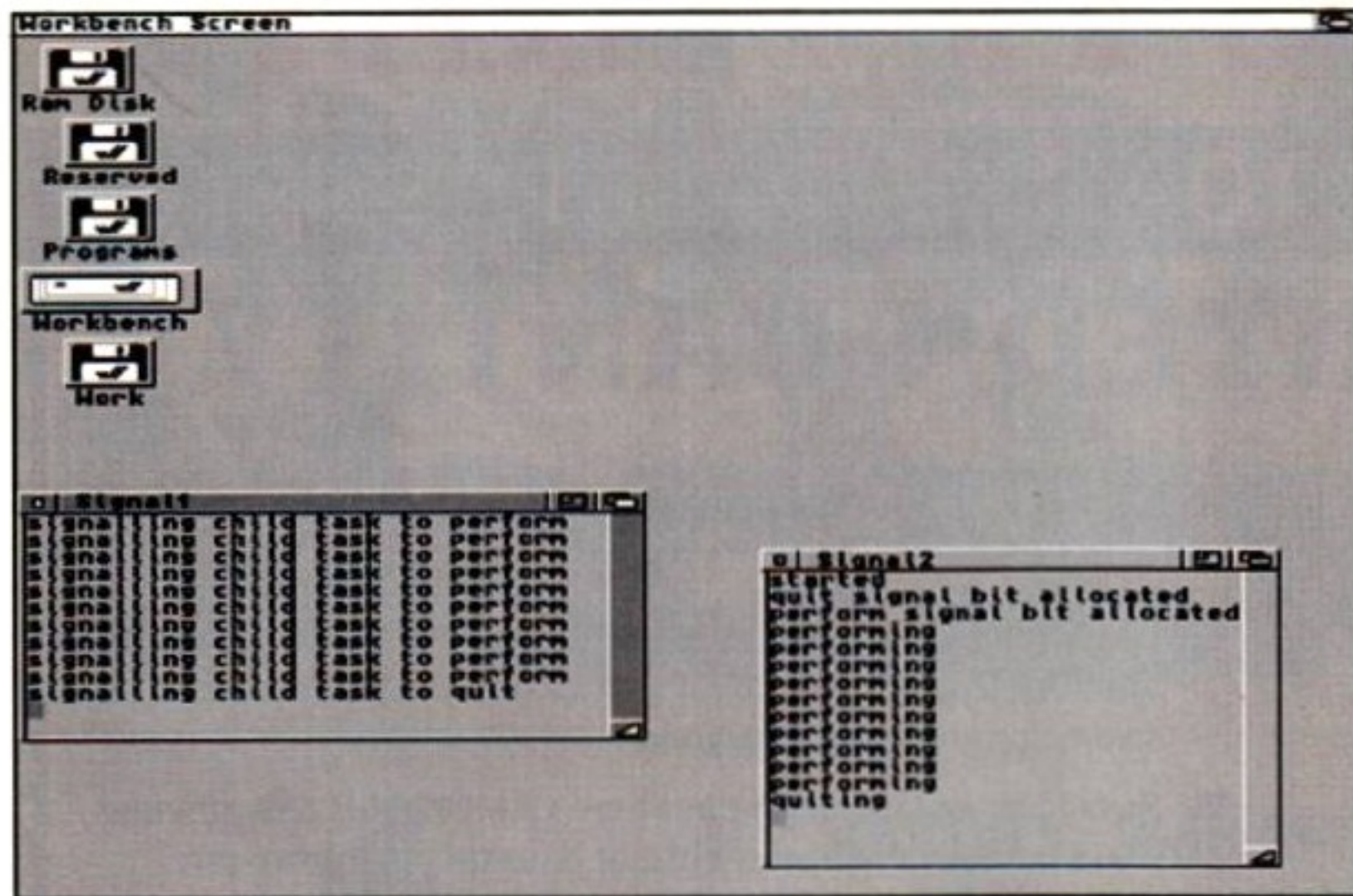
```
/* ===== */
/* Program name: Signal1.c */
/* ----- */
/* some includes... */
#include <stdio.h>
#include <exec/types.h>
#include <proto/all.h>

/* some prototypes... */

/* some defines... */
#define QUIT 16
#define PERFORM 17
/* ----- */

main(int argc, char *argv[])
{
COUNT i;
struct Task *child_task_p;

if(child_task_p=FindTask("Signal2"))
{
for(i=0;i<10;i++)
```



*This is the form of display you'll see as the two programs communicate!*

```

{
printf("signalling child task to perform\n");
Signal(child_task_p,(1L<<PERFORM));
}

printf("signalling child task to quit\n");
Signal(child_task_p,(1L<<QUIT));
}

}

/* ----- */
/* ===== */
/* Program name: Signal2.c - the child process */
/* ----- */

/* some includes... */
#include <stdio.h>
#include <exec/types.h>
#include <proto/all.h>

/* some defines... */
#define QUIT 16
#define PERFORM 17

/* some globals... */

/* ----- */

main(int argc, char *argv[])
{
BOOL exit_flag=FALSE;
ULONG received_signals;
printf("started\n");
if(AllocSignal(QUIT)==QUIT)
{
printf("quit signal bit allocated\n");
if(AllocSignal(PERFORM)==PERFORM)
{

```

```

printf("perform signal bit allocated\n");
while(!exit_flag)
{
received_signals=Wait((1L<<QUIT)|(1L<<PERFORM));
if(received_signals&(1L<<PERFORM))
printf("performing\n");
else exit_flag=TRUE;
}
printf("quitting\n");
FreeSignal(PERFORM);
}

FreeSignal(QUIT);
}

}

/* ----- */
*/

```

Exec FindTask() function:

**Function Name:** FindTask()  
**Description:** Find the address of a task's Task control block  
**Call Format:** task\_p=FindTask(task\_name);  
**C Prototype:** struct Task \* =FindTask(STRPTR);  
**Registers:** FindTask(D0 A1)  
**Arguments:** task\_name - name of task to find or NULL to find yourself  
**Return Value:** pointer to the task structure or NULL if not found

**Function Name:** AllocSignal()  
**Description:** Allocate a signal bit  
**Call Format:** signal\_number=AllocSignal(signal\_number);  
**C Prototype:** BYTE=AllocSignal(BYTE);  
**Registers:** D0=AllocSignal(D0)  
**Arguments:** signal\_number - either a specific signal number or -1 if don't care  
**Return Value:** allocated number for signal or -1 if function fails  
**Notes:** Signals should be deallocated before the task terminates.

**Function Name:** FreeSignal()  
**Description:** Free an allocated signal bit  
**Call Format:** FreeSignal(signal\_number);  
**C Prototype:** void=FreeSignal(BYTE);  
**Registers:** FreeSignal(D0)  
**Arguments:** signal\_number - signal number of signal to free  
**Return Value:** None

**Function Name:** Wait()  
**Description:** Wait for one or more signals  
**Call Format:** signals=Wait(signal\_mask);  
**C Prototype:** ULONG=Wait(ULONG);  
**Registers:** D0=Wait(D0)  
**Arguments:** signal\_mask - 32 bit mask of signals to wait for  
**Return Value:** signals which caused the Wait() to be satisfied  
**Notes:** This is a more generally useful function than WaitPort() because it allows signals from different sources to be combined.

**Function Name:** Signal()  
**Description:** Signal a task  
**Call Format:** Signal(task\_p,signal\_mask);  
**C Prototype:** void=Signal(struct Task \*,ULONG);  
**Registers:** Signal(A0 D0)  
**Arguments:** task\_p - pointer to the task to be signalled  
signal\_mask - signals to be set  
**Return Value:** None  
**Notes:** Tasks can be signalled at any time irrespective of whether they are running, ready to run, or in a wait state. If the task is currently waiting for one of the signals being set it will be made ready to run and a reschedule will occur.

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# The Amiga Answer Machine



**Andy Eskelson, Guru of the mysteries of the Amiga, answers your queries and solves your problems.**

*Why the game has not been converted is easy, the manufacturers obviously feel that it is not a worthwhile commercial venture.*

*The planer chip only helps with the graphics modes. The PC and the Amiga work with completely different processors, and the game would have to be recompiled and heavily tweaked to run on the 68020 processor that the CD32 uses.*

*specialised systems I doubt if the Amiga is represented in this field.*

**OTHER**

Dear AUI,  
I have a CD32 and would like to know if it would be cheaper to link an Amiga to it or buy an SX1 unit and what would the differences be?

Why hasn't the PC CD ROM version of Syndicate been converted to the CD 32 (which can't be that difficult with the planer chip, which correct me if I'm wrong, can be easily converted the ordinary PC, then transferred to my superb machine)?

**Alex Scargill  
Beds**

Dear Alex,  
I'm sure that you can do the sums as well as I can. It is a bit cheaper to use an A1200 rather than the SX1. However the SX1 gives the full integration of the CD ROM into the system, whereas linking a A1200 to the CD32 via a serial link is horribly slow.

That's the main disadvantage. The disadvantage with the SX1 is that it is NOT an A1200, so you have to take the slight risk of compatibility problems. I've not heard of anything major but some users are having problems with memory mapping.

**OTHER**

Dear AUI,  
Are there translators for C to Oberon? Are there C.U.See.Me for Amiga? Are there Oberon clubs in London? Is there point of sale software for Amiga?

**Jairo Mayorca  
Colombia**

Dear Jairo,  
I've not seen to much on Oberon as yet. There are some big efforts being made to get all the required libraries sorted out. I would suggest that you trawl about the Internet especially in AmiNet and see what is released.

I've not seen anything like C.U.see.me for the Amiga, as this is an Internet program that is the place to ask. There are Amiga Mosaic and WWW programs available now.

Oberon clubs? I don't know of any. There are interest groups, one is on CIX and I would expect that a newsgroup exists for development of the system.

What do you mean by point of sale software? POS is normally a hardware device connected to a computer system, or sometimes a stand alone system. Apart from some very

**OTHER**

Dear AUI,  
Cannon Fodder game  
My Grandson (10 years) and I (76 years) cannot get further than disk No 2 (north pole level) which goes on forever. Can't get it to insert disk NO 3 There must be a secret way of doing so. Please help - we both aren't too bright. I've written to manufacturers before but didn't get the courtesy of a reply.

**V. Warren  
Sheffield**

Dear V Warren,  
Amiga Answers is really intended for the more technical queries of the Amiga, and also I'm hopeless when it comes to games! Ask the games gurus if they have any ideas on Cannon Fodder.

Cannon Fodder becomes very difficult around the level I think you're describing (where you start in the middle and have to take out each corner). It is possible with a lot of practice but the next level isn't much easier! If you want an official cheat, then try phoning Virgin and pleading - their number should be on the packaging.

**OTHER**

Dear AUI,  
Current System:- A1500 WB2.04  
GVP series II Hard Drive (120Mb)+  
2Mb

**Answer Types**

|                  |                        |
|------------------|------------------------|
| <b>APPS</b>      | Programs etc]          |
| <b>VIDEO</b>     | Video related problems |
| <b>COMMS</b>     | Communications         |
| <b>PROG</b>      | Programming            |
| <b>OS</b>        | Operating System       |
| <b>PRINT</b>     | Printer Problems       |
| <b>COVERDISK</b> | Cover Disk problems    |
| <b>OTHER</b>     | For Anything Else      |

**KCS Power PC Board**

An upgrade is needed as you can see. The predicament that I am in is the decision of which path of upgrade I am to take.

On the one hand:

I could get a G-Force 030 40 Mhz with 4Mb and 68882 FPU but no MMU for virtual memory with either EGS Spectrum or Picasso II (the better of the two isn't known to me either).

Or on the other hand I could get a A4000 030 and switch my existing hardware into it. My interests lie in 3D modelling and general graphics. Isn't the first option better graphically but what about a fully 32 bit machine?

My question is simply (or not) which will be the best setup. Please help as I will soon be tearing the rest of my hair out trying to decide. As an afterthought from reading your article on AAA/RISC machine, should I hold out a bit longer?

**Mark Naylor  
West Yorks**

Dear Mark,  
I really hate letters such as yours, as they are almost impossible for me to answer. There are so many variables to consider. The best I can do is discuss some of the things that you should be thinking about.

Last things first, forget about AAA/RISC - it will be quite a time before we see anything along these lines.

If you get a FULL 68030 processor, it will have the equivalent of a 68851 MMU built into the chip directly.

What sort of market are you aiming your graphics at? If it is purely for your own use, then stick with the 1500, and shove a big accelerator in

it with lots of on board 32bit memory.

The accelerator boards have their own 32 bit RAM and you normally get utilities to map the Kickstart ROM image into 32bit RAM for even more speed. The only time things will get slow is during I/O operations.

Just how effective this will be will depend on the software that you use. If it works mainly in CHIP RAM then you have problems. chip RAM is on the motherboard and will cripple the efforts of a fast processor. If the software does all its clever manipulation in fast RAM, and then copies the result into CHIP, things will really whizz along.

I'm leaning very slightly in favour of the Picasso, mainly because I keep hearing good comments about it. Technically there is not much to choose between them.

If you get an A4000/030, you will have to get a SCSI adaptor to be able to run your hard drive (if you intend to carry that over) If you are doing lots of rendering, what you need is raw processing power, and you can get that at fairly reasonable prices for the A1500/2000. If you want the new graphics modes for display purposes, you might like to consider getting a fast processor for the 1500, and an A1200 for display purposes. All sorts of swings and roundabouts, you can see why I don't like this sort of questions.

## OTHER

Dear AUI,  
I've recently bought AUI to help me decide which Amiga to buy, I've read most of it and am no way nearer to understanding what I wanted to know. I've around £300 to spend so I'm on a fairly tight budget. What I want is a simple setup to play games, learn basic programming and to set up files to keep all my college notes on.

I realise that the A1200 is a quicker and more advanced computer than an Amiga 500 or 600 but all I want is a simple computer. Which is easier to use an A1200 or A500/600? I've a number of questions to ask I'll write them below separately.

1. I've heard that not all A500/600 games will run on the Amiga 1200. Is this true, if so does that include more recent games like Mortal Combat or various other newer games?

2. What's the difference between the A500 and A600?

3. What are Hi Resolution Denise 8373, 8372 Fat Denise, Fat Agnus Gary Chip Dil, Paula Chip Dil and what do they do?

4. Are Commodore going bust

and if so how long will there still be Amiga software published?

5. How can you tell if a used Amiga is running as it should be? For example, if I want to buy a second hand one from somebody would there be anything I could do to test it?

6. Can you recommend a beginners' user manual for the Amiga?

7. How much should I be paying for a good used A500/600 or A1200 without any extras just simple software complete?

I know there's a lot to answer but I've asked friends and they don't really have a clue themselves so I hope you can help I'm hoping to buy soon.

Alan Haigh  
West Yorks.

Dear Alan,  
I'll answer your questions first, as they will provide some useful background information for you.

1. True, this is because the internal architecture of the A1200 changed significantly. Commodore has always given dire warnings to programmers about making assumptions that the operating system would remain fixed, and to use the system independent methods of calling system resources. Some programmers ignored these warnings - some ignored it because it was the only way to get the speed that was required, others ignored it because they could not be bothered to do things any other way (perhaps).

The upshot of this is that some software breaks on the A1200. Most new games state what machines they will run on. You have to be aware of the problems and check carefully before buying.

2. There is not much difference between the A600 and A500, the A600 has a smaller keyboard, and uses surface mount technology in its construction. Apart from expansion devices and a upgraded Workbench, you can consider the A600 and A500 to be identical.

3. All these funny names are the code names given to the custom designed chips that make the Amiga what it is. You will sometimes see these referred to as the PAD chipset (Paula, Agnus Denise).

4. Commodore HAVE gone bust, they did so quite a long time ago. At the moment various deals are being considered, and I have received a press release from Commodore UK which is very good news. You will have read all about this in the news pages of AUI. The market for Amiga software is still very big, and new titles are being published.

5. Testing a second hand computer is always a problem. However if you can get a demonstration of the

following you will be fairly safe.

See a big application running.

A game

Check that the Workbench clock program runs (esp. the seconds).

See a printout working, graphics mode if possible.

See the serial port working.

Other things such as TV output will depend on the computer, if you need to use a TV then you will need a TV modulator or a direct SCART cable depending on the TV.

The real problem that you can't easily test for is temperature related problems, they just take time to appear.

6. I would suggest you have a look at the Bruce Smith range of books, and the Abacus range. I like the Bruce Smith books more but it is a personal choice. Both range of books have general beginners titles.

7. I can't answer that one. You will have to take the new price and work backwards.

As you are on a limited budget you are going to have to be careful in what you get. You will need an Amiga and a second floppy. The second floppy is not essential but it makes life that much easier.

All the software you will need can be obtained from the PD libraries (and the AUI coverdisks).

EDword, Superdisk 49 (Workbench 2), Superbase Personal 2, Superdisk 33, Personal Paint, Superdisk 31 are three very good programs from the coverdisk.

Many programs are now Workbench 2 or better only, so watch out for this if buying second hand.

Memory is not so important but a machine with one meg of chip RAM is a must have. A500s originally came with 512k of chip RAM, and could not easily be expanded beyond this. Later machines could take 1 meg of chip RAM. From the CLI type AVAIL and you will get a listing of the memory configuration. Or look on the title bar of Workbench 2 and check the graphics memory. Chip RAM is the only RAM that can be directly used for display purposes, and the more graphics memory you have the more complex the display can be.

## OTHER

Dear AUI,

I own an Amiga a1200 with 127 Meg hard drive (all two months old) and a Viper Turbo MK II accelerator board with 4 meg of RAM.

I recently purchased PGA European Tour, which I have been having a few problems with. It runs fine from floppy; it seems to load to the hard disk OK. The intro works fine, you pick your course and clubs

etc, then it asks for disk 2 (copy protection).

This is where my problem arises, sometimes it recognises disk 2 straight away, other times it takes a number of attempts before it recognises disk 2 and most of the time it does not recognise disk 2 at all. Would this problem be caused by faulty software, or is my floppy drive misbehaving? I have changed the software once, which resulted in the same problem.

Can you please shed some light on this problem?

Pete Ryan  
Beds.

Dear Pete,

If your floppy works normally at all other times, the problem is with the software. The copy protection routines that some companies use are not the most disk friendly programs about. It may be that a slightly different routine is used in the hard drive installable program than when directly used from floppy. I'm afraid you are stuck with it.

## OTHER

Dear AUI,

I have been following your series, "No Amiga is an Island" with interest. Over the past year I have noticed that the Amiga community has turned its attention to the CD-ROM storage medium. I am still waiting for the official Commodore CD drive before I make any purchase decisions.

At the moment I have access to a 486 with a dual speed CD-ROM drive (a Panasonic CR526B). I know that there are some dual format CD's for the Amiga & PC such as "GIF's Galore" & "Sounds Terrific", and I wondered if CDs like AmiNet or FishGold would also access on a PC drive? Ultimately I would like to transfer Amiga stuff from the PC CDROM drive onto a PC formatted floppy disk, and using CrossDos I would transfer it to an Amiga formatted disk.

Perhaps as part of your "No Amiga is an Island", you could list the Amiga-PC compatibility with CDs.

Jonathan Walsh  
Coventry

Dear Jonathan,

Providing the CD is recorded to the standard ISO 9660 then generally the Amiga can read it. There are several CDROM filesystems available for the Amiga. The dual speed bit is more a function of the drive than anything else. (We will run a review of a FileSystem soon, and you may al-



ready have seen it.) We also ran a review of a CDROM system some time ago, **AUI** July 94. Since then the Zappo has been reviewed.

The big problem with the PC is that it uses a rather old file name convention that only allows filenames in the 8+3 letter format. This can cause problems with some Amiga (and Unix) filenames that are much longer. It will depend on how the PC CDROM driver software handles long file names. Other than that you can easily do as you suggest and dump the output onto floppy and then onto your Hard drive. You could also investigate a program called Twin Express that will link an Amiga and a PC into a form of network, and allow direct access to the PC drives from the Amiga.

I have had a few compatibility problems with magazine CDROM coverdisks, particularly with CDs that have music on them as well as data. But so far none of the dedicated PC ROMs that I have tried have failed to bring up a directly listing. (Running the programs is, of course, not on but access to any text or graphic files is not a problem.)

## OTHER

Dear **AUI**

I am in need of help concerning my Workbench, in particular the ED command from the shell.

When I invoke the ED and it is about to start, I then press the right mouse button and a menu comes up, but after a few seconds another but smaller menu comes up and the larger one disappears and does not come back.

The larger menu seems more useful but how can I get it to stay there and what is the use of the smaller menu, my computer is an Amiga A600 with an A601 RAM expansion the Workbench is 37.71 and the Kickstart is 37.299. I also have a MPS 1230 printer.

In case you are wondering the A601 has no clock and it is new.

Now about the expansion A601, although I am under the impression it is a 1 Megabyte RAM the booklet says you can move about the jumper pins to get either a 2 Megabyte or a 1.5 Megabyte,

I follow the booklet to the letter and the with the one configuration I get 1.5 Megabyte or in the other way the memory remains standard as if the A601 has not been fitted, I DO NOT get any problems at all with this expansion in either configuration.

With the A601 configured as though it is not there I can not find any fast RAM (thinking that this

might be the case), if I use AVAIL from the Shell there is no fast RAM no matter what the configuration.

AVAIL with A601 fitted  
AVAILABLE IN-USE MAXIMUM LARGEST  
CHIP 1281520 290320 1571840 1278350

FAST 0 0 0 0

TOTAL 1281520 290320 1571840 1278350

And why did Commodore not put a file requester on the Memacs, to be more exact Read-File, Save-File, Save-as-File. There is just no requester anywhere. This is a bit annoying as other good text editors have the requester there in the program. ED has one so why not Memacs?

And why is it there is no Multiview On the Workbench =2.05? I have nicked a FullView from a Public Domain program called Filofax. This program works perfectly well with my Workbench but can I get Multiview or at least something like it from somewhere? Without going to the expense of upgrading to a Workbench 2.1.

Finally my Amiga has been checked over by Wang Services a few months ago with no problems what so ever. (The A601 was not fitted at this time.) I took it out in case the P.C.B was changed, and also I borrowed my mate's Perfmon, from his 1.3 Extras and this reads with A601 fitted 2M Fastram 0 without A601 1M Fastram 0. I assume the M means Megabyte. If Perfmon is correct with 2M then where has the other 512k gone?

I would be very grateful for any help on any of these questions.

Mike Lee  
Wigan

Dear Mike,

I'm confused, which version of Ed are you using, and how are you starting it?

I just typed ED RAM:TESTER into a CLI and only got the standard ED menu system (Project, Movement, and Edit). There are NO other menus used by Ed. Using ED V2, you MUST give me more information as to what you see on the screen, a few details of what was on this other menu might help me to track down what you are seeing.

You have a 1 Meg A601. Set the jumpers to ONE Meg and leave then alone. You will only confuse the operating system with any other setting.

You should end up with 2 Meg of chip RAM. As you have seen another program has spotted that you have 2 Meg of chip RAM, Avail is probably confused by the jumper settings.

Multiview was produced for the

Workbench 3 systems and as such is not available separately. Stick with FullView or ViewTek or whatever viewer or reader takes your fancy.

Memacs is a port of a very well known program from the Unix platforms. As such it does not use requesters. Once you get used to an editor things like requesters only slow you down. This is an area that you can do something about. The Amiga operating system is very rich in commands that allow you to reduce the amount of typing that you have to do. Look into the ASSIGN command (see last month's ToolBox). This allows you to give a simple name to a complex directory path. Set up a few assigns and all you have to do is enter something like MYDIR:testfile and Memacs will be quite happy.

You would have to type the name of the file into the requester anyway, so the only extra work that you need to do is type the MYDIR: With a requester you would need to search through the volumes until you had built up the full path.

There are plenty of text editors about that use the file requesters, Cygnus Ed, GoldEd, editors in the DevPac, and SAS C packages - take your choice.

## OTHER

Dear **AUI**,

I am 18 and have had an A1200 for a year now and consider myself fairly experienced. I never like to miss an issue of **AUI** because your SuperDisks are so fantastically crammed with utils and your articles make compulsive reading.

Also, congratulations on your CD-ROM coverdisks (although they could do with a little Workbench support) and I hope you will do some more.

Now to business and to consult your advice and guidance in answer to a few of my questions.

My system is as follows:

Amiga 1200HD (127Mb), Power XL Drive, Microbotics MBX A1230-XA 50MHz 68030 CPU + MMU, 68882 FPU, 6Mb RAM in total, and finally a "Zappo" CD-ROM drive from Indi, all purchased from adverts in your mag.

While the Zappo seems to have had a glowing report in your mag, I have had software problems which it seems nobody has yet mentioned. The problem is when playing a CD Audio disk, that is the first track of the CD you play is track one, then it sticks one minute twelve seconds in! All other tracks play okay, and yet the same thing happens with all of my CD collection. I wrote a small batch file to

overcome the problem simply by having it play a second of the first track, and restart and like that it doesn't stick.

Despite many phone calls to Indi, I still can't get software without this annoying bug. I know that the problem lies in the OverCD-Handler, because the same happens with any player. It's the third set of software I've had from them and now I'm up to version 9 of Archos' software. I'm sure many of you're readers have experienced difficulty with the software. Could you advise if there is any alternative software I could find, perhaps in. PD? I've nosed around on AmiNet III, but all I can find is SCSI software, as opposed to PCMCIA slot directed.

I have enclosed a copy of the "software", and the archive of my own "very temporary" bug fix, which is simply an icon I put on my Workbench which runs a routine I described earlier which prevents the track from sticking. As you can appreciate, even with my bugfix, it's most inconvenient to have to run it first, every time you insert a new CD if you intend to play track one.

Finally, I would ask your advice on hard drives. I've found that my (large) collection of PD software which I use frequently has filled my 127Mb hard drive. (I've even crunched everything and use the PowerPacker patch so I could crunch the icons as well!). I intend to go for a Gigabyte or 540Mb capacity but I'm not quite sure what I can get internally and externally. I would be grateful if you could explain the problem with 3.5" drives as opposed to 2.5".

I've heard that part of the casing of the machine must be cut away so that it'll fit, is this so? (My A1200's out of warranty now anyway). Also, what can I do with my previous hard drive.? Is it possible to connect BOTH hard drives, like you could with SCSI on the A500? I could then use the 127Mb as a boot partition and for my work and use the Gigabyte for applications, but how could it be connected outside of the machine? Would I need yet another power brick to power it?

Your wise suggestions would be most welcome,

Dave Lomax  
Wirral

Dear Dave,

Archos produce the driver software for the Zappo, and you have taken things as far as possible. Indi are the distributors, and V9 is the latest software. I would suggest that you formally report the bug. I doubt that you

# TOOLBOX

**L**ast month we laid the foundations of using the scripts and startup files. It is possible to make the user-startup file contain the Assigns for every program that you have but this tends to make the startup files big, and unnecessarily slow. (It does make a lot of sense to have the most common programs set up in the user-startup).

Programs that are less commonly used are another matter. What is needed is some method to make the assign happen only if the program is run. This facility is already available as part of the Amiga Operating System. The function is called ICONX. This is a CLI command but it is a command that you don't type into a Shell window at all. It is used in an Icon.

The first thing that you have to do is determine which assigns and other options a program needs. Once you have this information you then need to write a script file that contains these commands.

Use a text editor such as Memacs or Ed and enter the required commands.

If you were starting up a new text editor, CleverEdit you might need to set up the following Assigns.

CleverEdit to be assigned to wherever you have the CleverEdit directory.

CEfiles to be assigned to wherever you want text files to be saved/loaded to.

CEfonts to be assigned to where you store the fonts for CleverEdit

You would create a script file that looked something like this.

Assign CleverEdit: Programs:Utilities/Editors/CleverEdit

Assign CEfiles: CleverEdit:files

Assign CEfonts: CleverEdit:fonts

That's is all there is to it. Save the file as CE-startup (or any other name). As this is a SCRIPT file, it is common practice to store script files in the S: directory.

Notice that once The initial Assign of CleverEdit is made, it can be used to save typing. The script could have defined each path explicitly such as;

Assign CleverEdit: Programs:Utilities/Editors/CleverEdit

Assign CEfiles: Programs:Utilities/Editors/CleverEdit/files

Assign CEfonts: Programs:Utilities/Editors/CleverEdit/fonts

This would achieve exactly the same function. However if you ever move the location of the CleverEdit directory, you would have to retype the

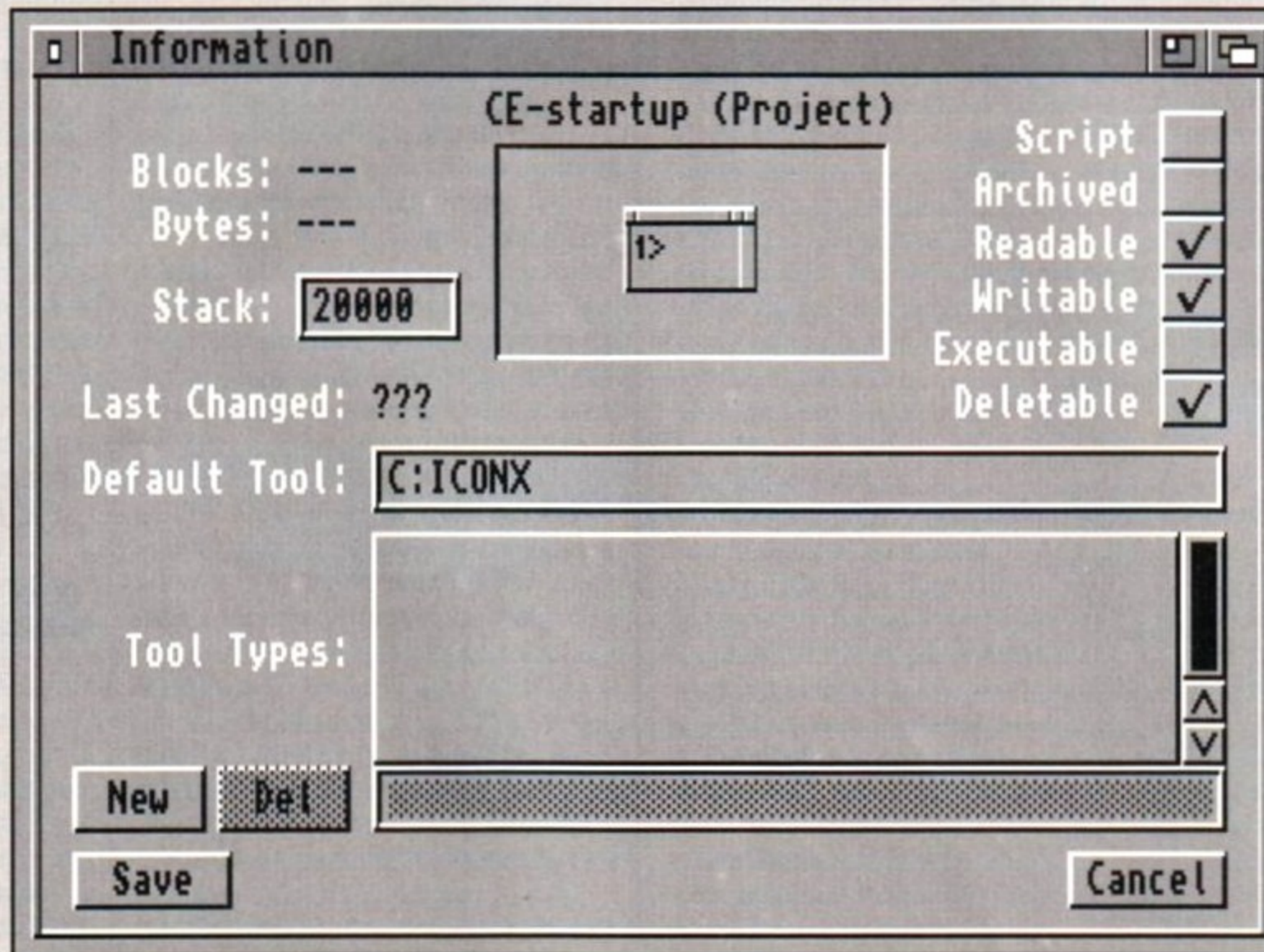
intended to happen. It is up to you, however the BEGIN and END words clearly identify the block of commands associated with the CleverEdit program. This makes it very easy to tell what you intend the script to work with, and should you later decide to include this file in a larger script it will be easy to locate within the larger script.

The next stage is to create an Icon to run the program. ICONX needs a Project type of icon in order to work. The easy way to create an Icon of this type is to copy an existing icon.

An program with an Icon comes in two parts, (use the Dir command) the first is the actual program, which have the name of CleverEdit if we use the example. If CleverEdit had an Icon it would be called CleverEdit.info the .info is the standard identifier for an icon.

The most common Project icon is that of the Shell. To make things easier, drag the Shell Icon into the ram: device. Then open up the shell and enter the following command (or use a directory utility)

CD Ram:  
Copy Shell.info to CE-Startup.info



new path in each of the three lines. In the first example, only the first line would have to be changed. Less typing normally means less errors.

It would be nice to start the program as well as set up the assigns, so a final line of Run CleverEdit:CleverEdit needs to be added. Just to give a more complete listing here is the format that many programmers will use.

```
:BEGIN CleverEdit
;
Assign CleverEdit: Programs:Utilities/Editors/
CleverEdit
Assign CEfiles: CleverEdit:files
Assign CEfonts: CleverEdit:fonts
Run CleverEdit:CleverEdit
;
;END CleverEdit
```

The semicolon ; is a comment line. You can type whatever you like there and it will not be acted upon. You could add the date you created the script, or some more information about what you

You will now have a copy of the Shell Icon but it will be called CE-Startup. Note that this is the same name that you used to save the CleverEdit script as.

Only one last thing remains to be done now. Change the default tool in the Icon that you have just created to C:ICONX. Click once on the Icon, then select the Information option from the Workbench Icons menu.

Drag the Icon into the directory where you want to keep it, and when you click on it, it will look for the script file and then execute it. You will end up with the assigns done, and then the program run.

A small refinement that you can do to amuse yourself with, is to edit the Icon that you have created to change the Shell picture into something more appropriate for CleverEdit. You can use the IconEdit program for this task.

To Summarise:

- Create a script and save it as S:<name>
- Copy the Shell.info as <name>.info
- Change the default tooltype to C:ICONX



will find anything in the PD for the Zappo, I'm in the same boat with my Mitsumi + Tandon combination, it's not a SCSI system.

I'm not really surprised that this bug has been overlooked, I would think that most users would not use the drive as a CD audio player, and if they do, it would be for sampling rather than entertainment. I'll ask about and see if I can confirm that you have found a real bug, just in case it is your system and not the Zappo, but I would think that this is unlikely.

The A1200 is geared up internally for 2.5" hard drives. The main difference between the drives are:

2.5" drives are a lot smaller than 3.5", more than the 1 inch difference might suggest. The 2.5" drives take their power via the interface cable rather than a separate power connector.

The A1200 IDE interface is not really capable of supporting a cable more than an inch or so long. You may well find that longer cables do work but it is a risk.

It is possible to fit 3.5" drives into the A1200, and sometimes you do have to cut and carve away the shield and the case, it depends on the actual dimensions of the 3.5" drive as to how much carving about will be required. See the instructions for installing a 3.5" drive in this issue.

It is possible to run two IDE drives at the same time, one must be set to master and the other to slave. However, there is a problem in that not all IDE drives will work happily together, even to the point of drives from the same manufacturer not working with each other. It seems that the Amiga implements the IDE spec a little more rigorously than do PCs, hence the Amiga is a bit more fussy over drive types.

I'm a bit paranoid when it comes to power bricks, the supplied brick should support the A1200 and one hard drive but sometimes they can get a bit marginal. For my SCSI devices on my A2000, I bought a PC mini tower case and PSU and power the external devices from that.

You can get heavy duty bricks and it might be worth remembering that if you do run into problems especially as you are running the A1230-XA as well. Companies such as Hi-Q are worth contacting as they specialise in fitting hard drives to A1200s.

## COVERDISK

Dear AUI,  
I am having a little trouble with Superdisk 45 and 46 which I received with the November issue of AUI. I have managed to copy the programs onto spare disks as was

explained in the instructions.

However upon trying to load 'Filthy Lucre' I am met by the following.

Filthy Lucre Doc Icon error message reads Unable to open your tool AUI muchmore.

Filthy Lucre Icon Insert Amiga Fonts

Once this has been done error message is Filthy Lucre cannot find wombleofnt.font!

I have an Amiga A1200 Innovations pack, which I might add I have just received. I know that I am doing something wrong when loading the program.

John Falcus  
Northumberland

Dear John,

This is a fairly common problem with newcomers to the Amiga, so don't worry about it too much.

(It's so common I've even made it the subject of a couple of toolboxes.)

The first problem, this is dead easy to solve. What is happening is that the docs of the program are asking for the program muchmore, which is on the AUI utilities disk. You have copied the programs onto your own disk so that is why the Docs cannot find them.

Muchmore is a simple text file viewer, as you have an A1200 you will have the multiview program somewhere on your disks, you might as well make use of it.

Using your copy of Filthy Lucre, click ONCE on the doc icon until it is highlighted. Then from the Workbench ICONS menu, select information. A window will appear that tells you all sorts of things about the doc icon. Look at the default tooltype entry, does this look familiar to you?

Click on this field, and enter Diskname:drawername/multiview, where Diskname is the name of the disk, as displayed when you put it in the drive, note that there is a colon after the name, and drawername is the name of the drawer where multiview is located. Normally this will be in Workbench:utilities/multiview, but you will have to modify this if you have moved multiview anywhere else.

The second problem is similar, the womblefont needs to be moved onto the fonts disk. Open up the Filthy Lucre drawer, and then select the show all files option from the Workbench window menu. You will then see some extra drawers appear.

Open up the fonts drawer that should have appeared in the window, and you will find a womblefont drawer, and a womblefont.font. Open up your RAM disk, and drag the womblefont drawer and womblefont.font into the RAM disk.

The icons will normally be invisible, so click in the RAM disk window, and select show all files again, and you will be able to see them.

Pop your Amiga fonts disk into the drive, and click on it. Select show

all files. Drag the womblefont files from the RAM disk into the Amigafonts disk, when you run the program it should be able to find the fonts and start up without any problems.

When writing to Amiga Answers include as much information as possible about your system and about which software/hardware you are running. This will help to determine what your problem might be and its solution! Send your questions to:

**Amiga Answers**  
**Amiga User International**  
**Carriage Row**  
**203 Eversholt Street**  
**London NW1 1BW**  
or E-MAIL:  
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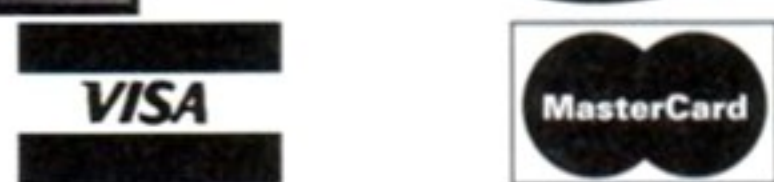
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# THE PD STAKEOUT

## Scoring

The marks awarded to each PD disk are based purely upon its own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

## Compatibility

The PD disks reviewed in this issue were tested on an A500 with Kickstart 1.3. Please check with your PD supplier that the disks you are ordering are compatible with your Amiga. Amiga Plus, 600, or 1200 owners should be aware that roughly half of the software in the public domain will not work with Kickstart 2 or 3. Always ask first.

## PD or ShareWare?

All freely distributable software comes under the rather deceptively umbrella of "public domain". Quite a lot of this software is, in fact, shareware. Shareware means that if you like the software, or use it regularly, the author will request a reasonable donation from £5 to £20. There is usually a note on the disk informing you if the software is shareware or regular PD.

Whether or not you send a donation to the author depends totally upon your level of conscience and morals. Remember, if you send a donation to the author, you may receive an updated version of the software. Even if you don't receive an update, you will have given the author the incentive to continue contributing into the public domain.

## Disk G404 Network PD

What a charming title for a game. If you have seen the film War Games, you will know what to expect. The main screen is a map of the world on which are scattered missile silos and cities. The Americans are red and the Russians blue.

Apart from the obvious object which is to destroy everything belonging to the enemy, there are other ways

of ending the game. One way is to destroy the enemy HQ which is one of many circles on the map. The other is to ensure that the enemy runs out of all his ammunition which essentially



# Global Thermo Nuclear War

means just sitting tight and hoping he doesn't hit you with any of his missiles.

When firing, you have to select both direction and elevation. This is not very accurate but good fun to watch

as it is difficult to predict where the missiles will hit. If there is a skill factor to this game I haven't yet found it.

**85%**

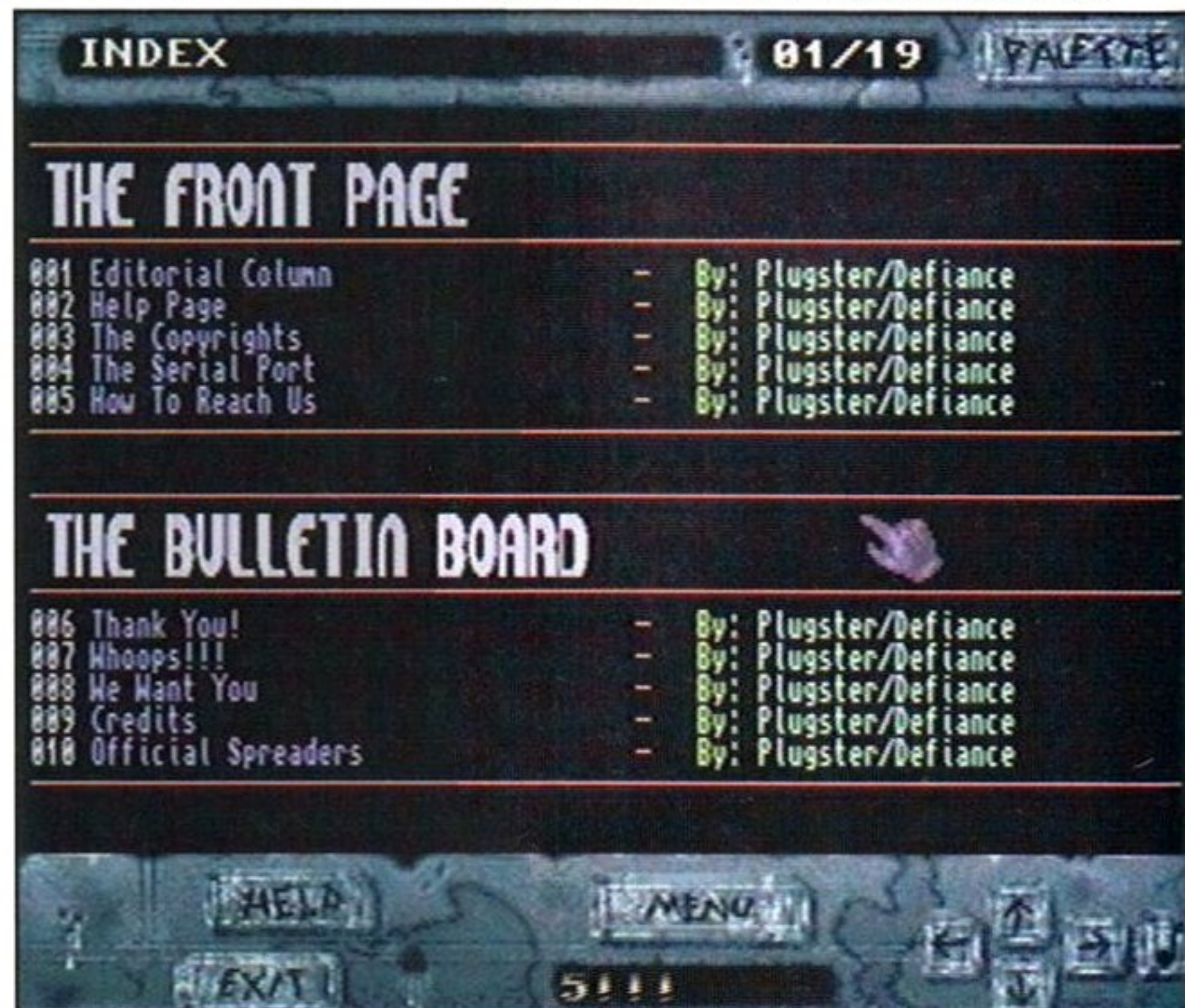
## BUZZ 5

## Disk 0110 Online PD

I hadn't actually heard of this disk magazine before now. It is more like Grapevine than most others in PD libraries today. By this I mean that it is about the Amiga Scene which is probably not what the average Amiga user will want to read about.

Swapping is talked about, who is the best at coding demos, who is the worst at coding demos, and a lot more nerdy subjects which most people will find rather pitiful. There are, however, a few articles worth reading; the software reviews, and the comments about Commodore.

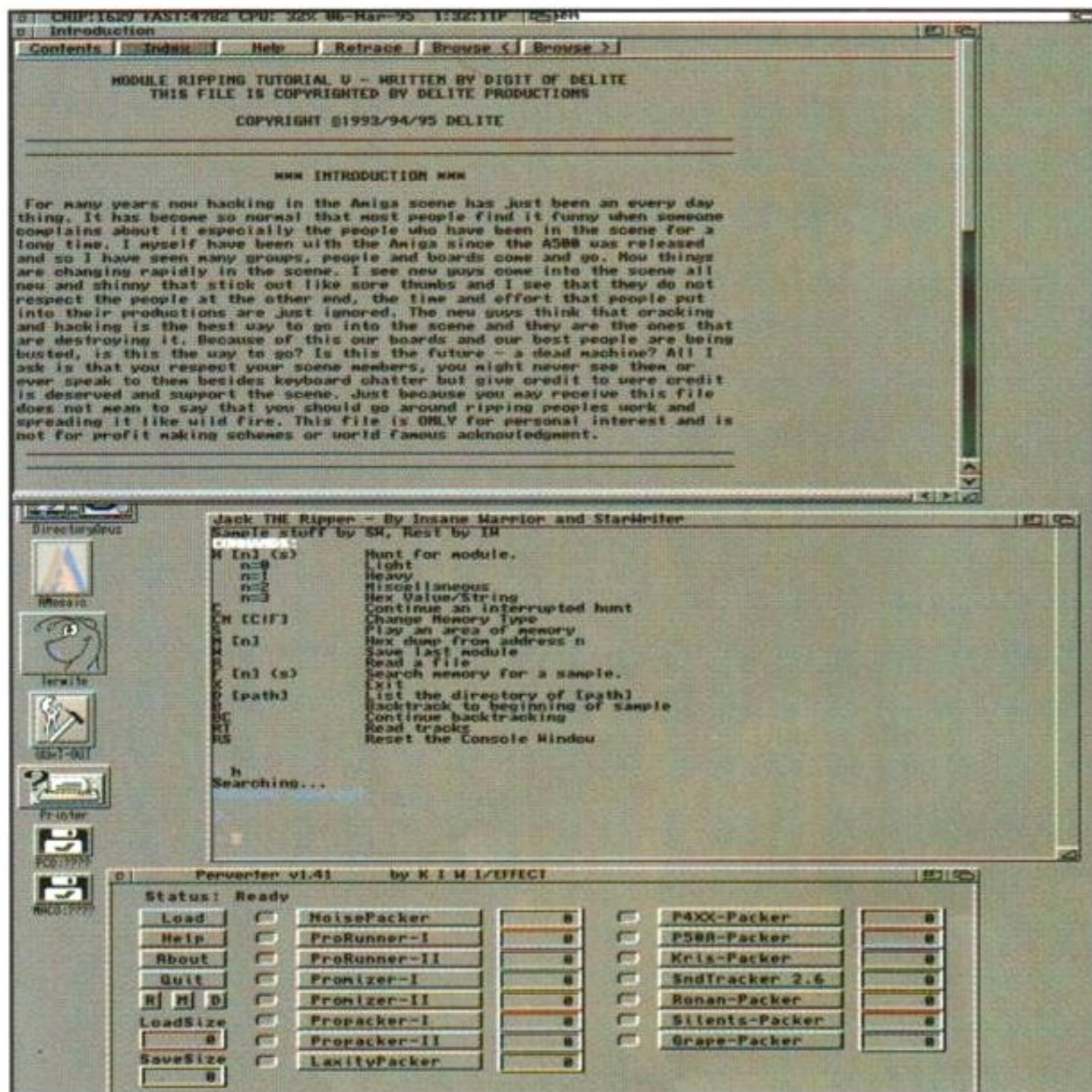
The presentation is excellent and has a slightly different way of flipping from page to page. As well as the normal way of clicking on the arrows to



advance, you can also just move the mouse to the extreme right hand side of the page and the screen changes.

**75%**





# JACK THE RIPPER

**Disk U759 Network PD**

This disk has only one purpose and that is to steal other people's work. Rippers are used to rip out tracker modules and sometimes pictures from games and demos and its quite easy to do. Simply load up your favourite demo and then reset the machine. Next, load in the ripper. Most of the demo should still be left in memory. The ripper will then search the memory and should find a sound module. If it does, it can be saved to disk and loaded into any tracker program to be replayed.

Why would people want to rip off other people's work? Well, I often use rippers but not to steal as such. I only use them if I find a tracker module in a demo I like, I rip it out to play separately on Protracker. I don't see anything wrong with that!

Along with several rippers, there is a tutorial in AmigaGuide format which explains exactly how to carry out the dirty deed.

**80%**

# DYSK-STYK V1.1

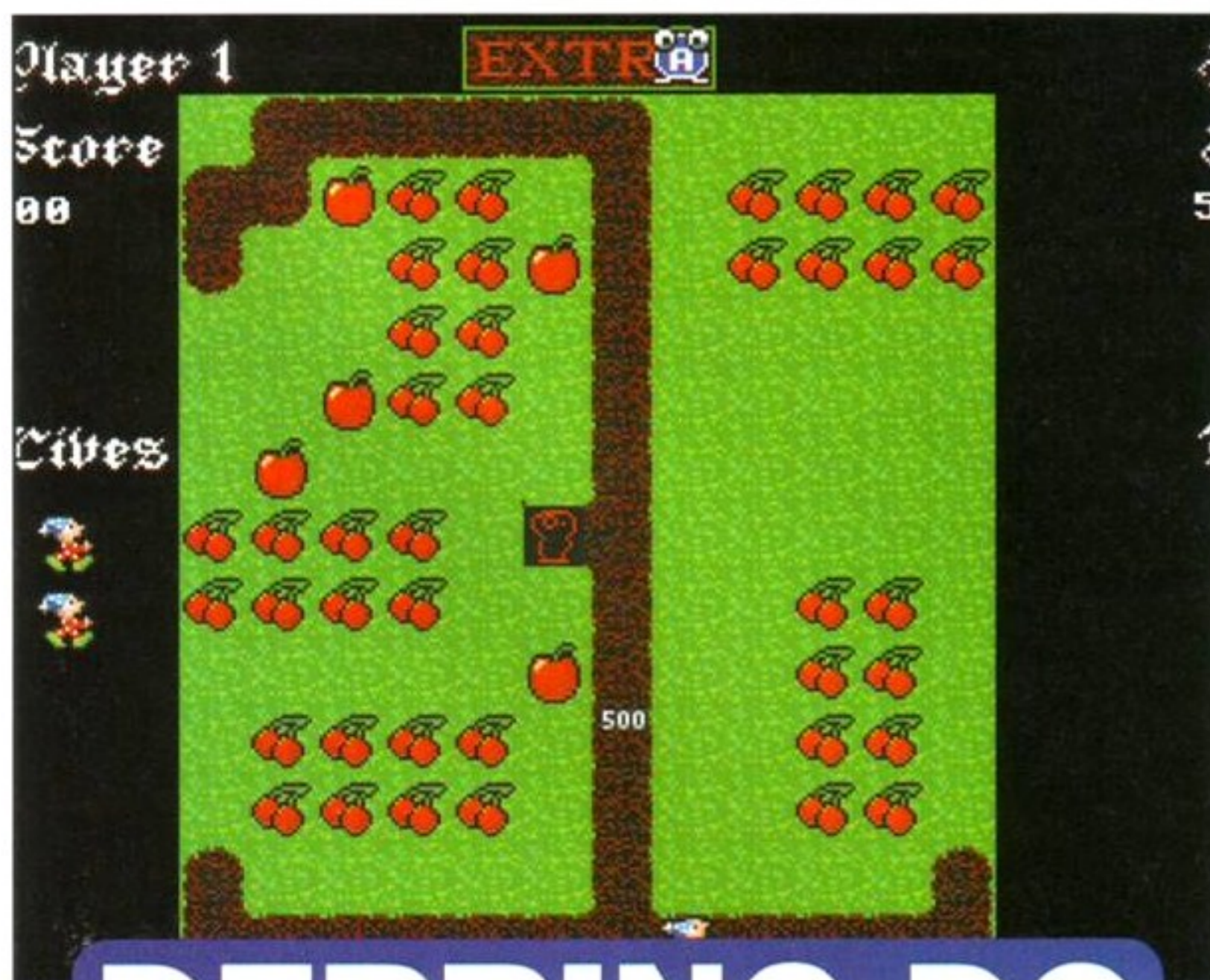
**Roberta Smith**

I have yet to find a label printing program which works first time around and prints the text exactly in the right place and not all over the edges.

Dysk-Styk was actually designed to be used for printing out 3.5" disk labels. It is an AMOS program which

although still has that amateur look to it, works well. It was designed to be easy to use and it does seem that way. The screen is well organised and has simple to understand instructions.

**80%**



# DERRING DO

**Freestyle PD**

Most people will not have heard of Mr. Do as it was a game which appeared exclusively in the arcades about ten years ago and then forgotten about, or so it seemed. It was one of my favourite games and because it was made so long ago, would not be that difficult to convert perfectly onto the Amiga. Although there have been around three attempts to do this, none of them has been completely faithful to the original. Either the graphics or the sound were different and therefore didn't capture the atmosphere of the original.

This is not to say the games were bad, they weren't. I think the author who wrote Deluxe Galaga should write

a faithful version, I am sure it would be very popular.

You control Mr. Do, and to complete a level all you have to do is travel around a maze collecting the cherries, or kill all of the baddies. These can be killed in two ways. either by dropping apples on their heads or by using a special weapon which when thrown, bounces around the maze until it hits something.

Mr. Do is great fun to play but the music and sound are not quite right. There is also a haunting scream when you lose a life which seems out of place somehow.

**90%**



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Who remembers Danger Mouse? For those of you who don't, he was a cartoon character who was a secret agent. It was a very funny cartoon, and there are several samples from the series in this game. It is not original and I recognised the format straight away. It is essentially Hunchback with different graphics.

Hunchback (I think) first appeared on the C64 and was one of the earliest and simplest platform games.

All you had to do was make it safely to the other side of the screen. As you continued it became more and more difficult with different and increasingly dangerous obstacles in your way. It was a classic at the time but making Danger Mouse the main character doesn't really cause it to be any more exciting. Still, I have seen a lot worse.

# DANGER MOUSE

Disk NU102 Numero Uno



## Green 5



Tasmania PD

As I've said before, presentation isn't everything, and this is a prime example. The game starts with an impressive intro which reminds me of the game Flashback in both graphical style and the atmosphere it creates. The similarities don't stop there. The in game action is also very similar.

Green 5 is an arcade adventure in which you walk along on various levels and have to fight both what seem to be bird type creatures and humanoids who just appear to want to kill you at any cost but is this not the case in most games nowadays?

You can kill them by using your ninja skills. I found this a very difficult game to play and extremely frustrating

## WORKBENCH GAMES

### Disk GA571 Your Choice

Workbench games are rather like Windows games. These are the sort which you will see advertising staff playing instead of working. As they are displayed in separate windows, when the boss comes back, they are easily hidden behind other windows.

All the favourites are here, Pong, several versions of Mine Sweeper,

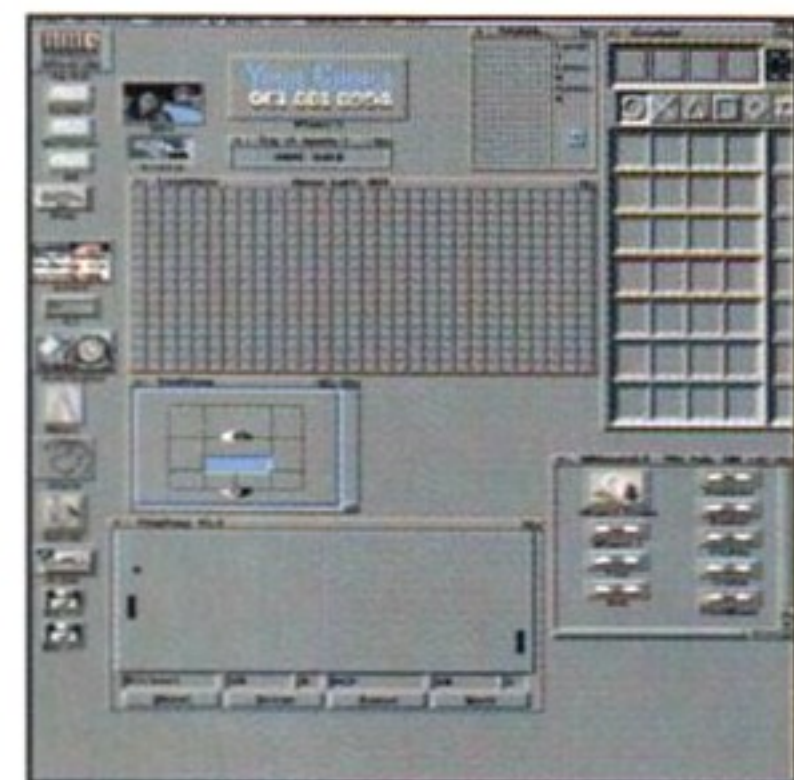
and, of course, the legendary Tetris.

Minerunner and Worm are the only two which are not true Workbench games as they open on separate screens but they are still fun to play. There are twelve altogether, and I found Boulder my favourite. This is a very simple but fun to play version of Boulderdash.



as there seems nothing you can do about the attacks. With a bit of practice I am sure that it is possible but to be enjoyable and addictive I think the author should have made at least the beginning of the game a little bit easier.

77%



90%

## IN THE DEAD OF THE NIGHT

### Freestyle PD

Interactive games are becoming more and more popular. I think CDROM has a lot to do with this, enabling a lot more animation to be squeezed on. Although this game could have benefited from considerably more sound and animations, it just isn't possible from only 3 disks.

This game is similar to the Monkey Island series but it is nowhere near as good. The problem lies in the text. Much of the game involves you asking various characters questions. The problem is that English isn't the author's native language, Italian is, and

the translation is far from perfect.

You can easily understand what he is trying to say, but the atmosphere of the game doesn't come across as well as it should.

You start off in a house and can move from room to room interviewing everybody and picking up various objects. These can be used with other objects or on people to progress though the adventure. This kind of adventure games can get a bit tedious, this one is not too bad. If you have a lot of patience I think you will quite enjoy it.

77%

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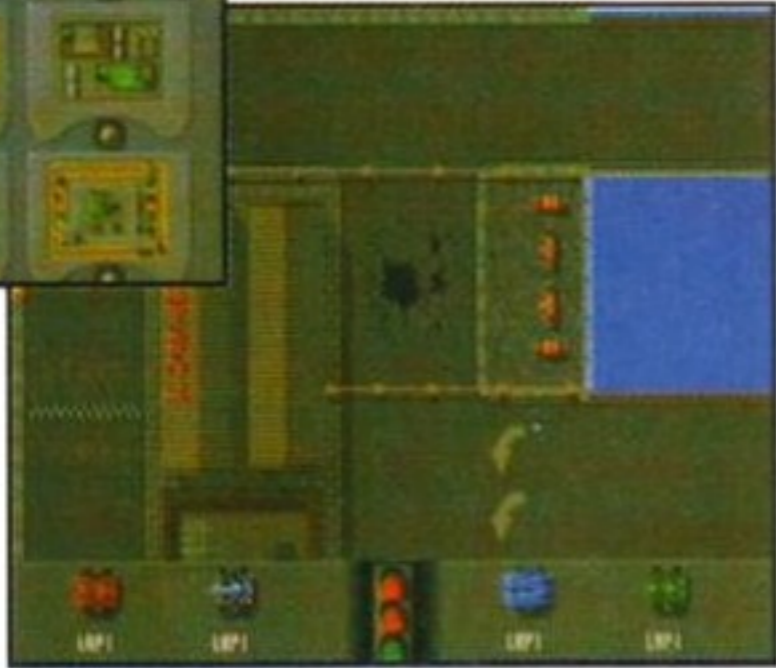
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# HYPERRACE



If you enjoyed the game High Octane then you will like HyperRace. It is another overhead racing affair in similar guise to the Psygnosis game Nitro.



**Disk G189A  
Scribble PD**

That was difficult to play and also quite awkward to control. You kept hitting the sides of the track and it drove you up the wall. HyperRace seems to me to be even worse, but perhaps it is just me and I need a bit of practice. You can have up to four cars on the screen at once. Any

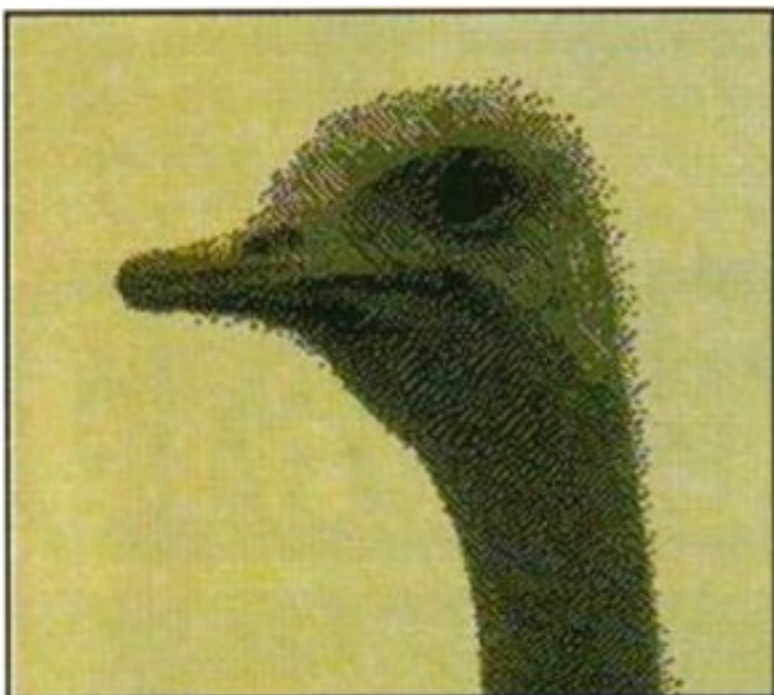


or all of these can be human controlled. This is made possible by joysticks and convenient keyboard layouts. This game seems to take up a lot of memory, one megabyte may not be enough. This may be because each

car features about 160 frames of animation but the graphics are not as good as either Nitro or High Octane.

**78%**

# ZOOTJE



I think there are two ways of keeping your attention in a demo. The first is to amaze with new innovative effects and not boring vectors with techno music. The second is to include something that makes you laugh which this demo achieves.

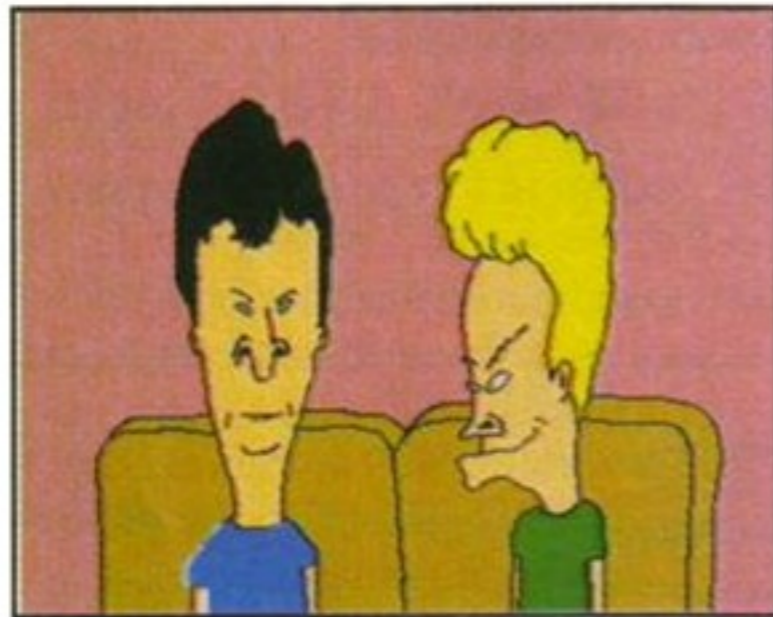
It doesn't last very long but I find I tend to keep this type of demo rather than the type which try to cram as much as possible onto one disk, take ages to load, have too many scrolly messages and, well, I could go on complaining but I think I should get to why I think this demo is a bit different.

It is lot shorter than most others and it doesn't go for flashy effects just

**Disk OD28  
Online PD**

for laughs. The first thing you see is an ostrich headbanging to some heavy metal music. I know that doesn't sound very funny but it made us here in the office chuckle.

The second part is also funny but only if you like Beavis and Butthead, two horrible little cartoon characters



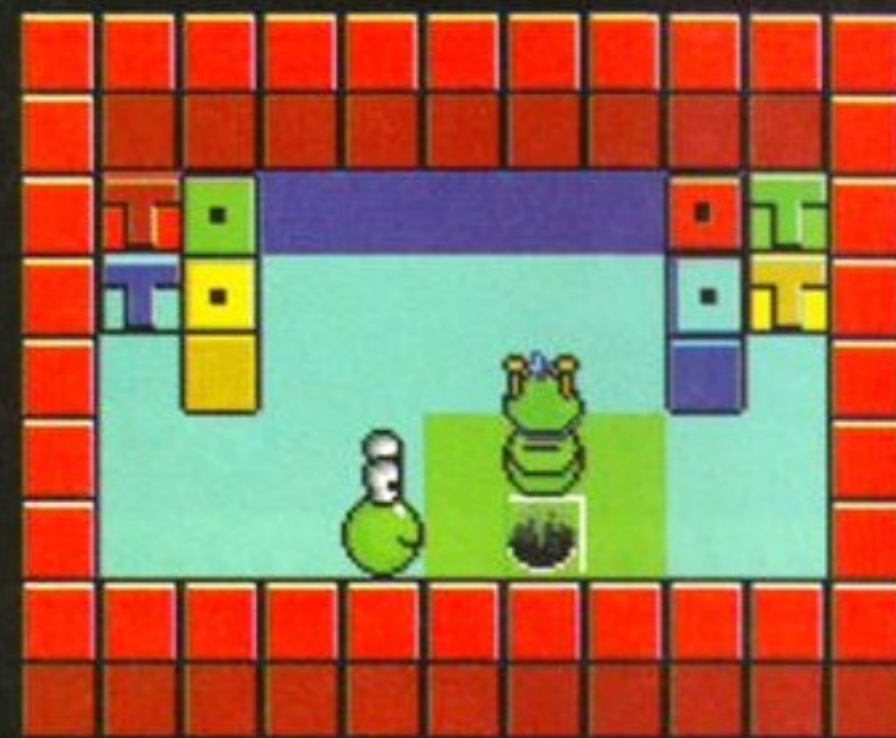
who have irritating laughs and destroy everything they touch. That's all there is but it is still better than a lot of demos around at the moment.

**86%**

is exactly like it, so I guess it is special in its own way. There are elements of Boulderdash here with perhaps a dash of Gauntlet.

As usual there is a rather silly story behind the game. You play a pair of Jesters which have been imprisoned in the king's dungeons which are 25 levels deep. You have to make your way up to the surface overcoming

# SCHEBITZINC



**Tasmania PD**

I don't mind if games don't have flashy graphics and sound, it is the playability which makes them drag you back time and time again. I think Psygnosis had this problem in the early days when they produced games with stunning graphics, presentation and sound but when it came to the game play they fell down flat.

Schebitzinc is nowhere near commercial standard, but at least it is

playable. You cannot blame an author for giving a game an unoriginal title this time, and I still don't know what it means!

Both the sound and graphics are nothing to write home about but it is challenging to play.

All you have to do is place coloured blocks onto the appropriate squares. Sounds easy? In theory it is. The blocks are two squares across but to count, the correct side must be placed on the matching block. This is sometimes tricky to arrange and takes a bit of thought on the later levels.

Perhaps this game is too simple and may not appeal to everybody but I found I actually wanted to see if I could complete the next level so I guess it was quite addictive too.

**75%**

**80%**

# Jinx

**Freestyle PD**

Jinx is a mixture of several games and therefore is not original. At the same time I have not played anything which

# mad pd

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## FIGHTER DUEL PRO V2



I have not seen a simulator as smooth as this on the Amiga before. This is possible by using minimal detail. You may think this is a little silly but it isn't important as this is a fighter pilot simulator and action is all that counts. Unfortunately I found this game a bit too realistic and that meant that I was having great trouble keeping the aircraft in the air. I obviously don't know how to fly an aeroplane and God help you all if I ever have to try in an emergency but I think they could have made it a bit easier. It would have been a lot more fun.

Fighter Duel Pro V2 (FDP2) uses a Hi-Res Interlace screen which is unusual for a game which has to

### Disk GA575 Your Choice

contain a large amount of high speed graphics. On my 25mhz A3000, the graphics speed is incredible. Even when you get close to an enemy aircraft there is no slow down. The only downside is that it is quite difficult getting near the enemy, they just zoom



past you. With practice though, I was soon on their tails.

This is one of the first PD games to allow an analog joystick to be connected, and one of the first games, PD or commercial to permit you to use a Thrustmaster. A Thrustmaster is a professional analog joystick which as well as having numerous buttons

scattered around its well-moulded handle, has a "hat switch" on top where your thumb sits, which is essentially a mini joystick.

This can control the power, rudder, or sometimes, if you are playing a 3D space game or controlling a helicopter, the ascent and descent. It works well and makes fiddling around with the keyboard a thing of the past.

FDP2 will work on any Amiga with 2 megs of memory and you can buy an enhanced version which allows you to select other aircraft while in flight, and also 2 player modes which also lets you have a wingman. The full version costs about \$50



97%

## DISCOVERY OF THE ATOM

This Educational two disk set is a very interesting and somewhat frightening introduction to the world of the Atom. It is written in CanDo, well presented and split into eight sections starting with early development, through atomic structure, and inevitably arrives at the invention of the atomic bomb.

This part is quite frightening as there is a section called Nuclear Weapons Data where crater sizes and

### Disk 1688/9 Barkin' Mad

survival ratings are listed.

For instance, did you know that a 20 Megaton bomb would make a crater in the earth 2,800 feet across and 210 feet deep. There is no limit to the size of a nuclear bomb and the most frightening fact of all is that 65 megaton devices have been constructed but

there haven't been targets that have warranted such a large detonation, yet...

Considering that a 20 Megaton device will burn you to a cinder if it were detonated 16 miles away, you don't really want to work out how much a 65'er will achieve, it makes your trousers fill up just thinking about it.

I found this part the most interesting but must not forget the rest which is informative and contains the odd diagram, some of which animate.

90%

## Contacts for PD reviewed in this issue

Roberta Smith DTP  
190 Falloden Way  
Hampstead Garden Suburb  
London NW11 6JE  
Tel: 081 455 1626

Your Choice  
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Chorlton  
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Freestyle PD  
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Willenhall  
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Lincoln LN5 8BS  
Tel: 0522 510984

SpeedyPD  
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Batheaston  
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## 80% CYBERMAN

### Freestyle PD

This is one of the weirdest games I have seen in a long while but at the same time, it is one of the most original. It is essentially Pac Man which is not original at all so I am lying through my teeth! What IS original is the way it is played.

If you have ever wanted to see the world through the eyes of Pac Man, you now have the chance. Playing the game like this now makes Pac Man look like a driving simulation. It is difficult to define an object to the game, all you have to do is travel round a maze eating pills and monsters.

The monsters are modelled on other computers. There are Intel, Apple, and Atari signs to kill. You do this by eating them which you can only achieve if you swallow a power pill first. The game has both a very amateur feel to it but at the same time, a great deal of skill is apparent in the game play. It is just the graphics which make it look slightly childish.

The author, who is Italian is asking \$100 or an equivalent amount for his efforts which I think is a bit steep.

## HeliOS

### Disk 4301 a/b/c Speedy PD

I don't know a great deal about programming languages. HeliOS is like Forth but very much more powerful and easy to use. This is a three disk set and is a demo version. The only differences are that you are unable to save.

The main executable program is on the first disk and the remaining two contain extensive documentation. HeliOS is best suited for writing games as it is very fast.

For a full review of HeliOS, which was awarded 80% and reviewed by Paul Overa, please see page 28 of the February AUI.

80%

If you have created a masterpiece and you would like it reviewed here or if you own a Public Domain company and want to contribute new and interesting PD, please don't hesitate to send it in. The address is:

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# Write to Reply

**Bud Vennos gets his wish again - a bigger postbag and even more pages! But you'll find his temper hasn't improved yet.**

Dear Bud,  
Thank you very much for publishing my last letter in the February 1995 editorial of *AUI*. I was delighted to see you published a very long part of it, thanks.

Since then I have bought *AUI* March 1995 edition and I am still reading through your latest magazine.

I have found your coverdisks this time around to be of the best use especially the one with the printer utilities. I always use typewriter for typing envelopes now thanks to this handy little utility.

I have written to Andy Eskelson concerning my hobby "Shortwave radio listening" as you stated I should write to him as we are on the same wavelength. I have not to date received a reply from Andy yet, could you please let me know if he is going to reply or not!

I would like to know who the winners of the Samsung printer competition were from way back in about November 1994 as you have not to date printed the winners in any of your magazines yet!

I have enclosed a postcard with the answers to the latest printer competition on it, could you please pass this on for me.

I am currently working on Issue number four of my Amiga disk magazine called "Info Amiga Mag" and it should be completed at around the end of March 1995. It is the April edition.

I have a very large collection of your magazines dating from February 1994 and I find that in your coverdisks

there have always been more exciting Amiga utilities and programs than any other Amiga magazine I buy. Overall, Amiga User International is the best buy for the Amiga.

I would like to see "BUDDY SYSTEM V4" utility on your next cover disk please as this would help me and many other Amiga Users to get to grips with Deluxe Paint.

I shall continue to buy Amiga User International each month.

Yours faithfully,  
Patrick Paul Devlin  
Co. Antrim  
N. Ireland

*Dear Patrick,  
You are one of many who have written telling us how much they like our SuperDisks. The *AUI* team trawl the sea beds of the Amiga oceans to catch the "Fish", as they correctly used to be called, for your delectation. We are glad they are to your taste.*

*Andy ALWAYS replies to letters of genuine inquiry and particularly when you touch upon subjects, like radio, close to his heart. If you haven't already received a reply by the time this magazine hits the streets, you can be sure it will be shortly reaching you.*

*The winners of the Samsung printer competition have been informed but your entry for the most recent competition has been put with the loads of others that arrive every day.*

*The suggestion that we should put the Buddy System on an *AUI* coverdisk is an interesting one, and we will certainly consider it. However, it was originally a commercial program - and a very good one*

*too. It is now shareware, I believe, and I would like to think that the author would find plenty of honourable users sending him the required fee if it appeared on an *AUI* coverdisk for thousands of readers to benefit from. Nevertheless in such a matter, as an ex-commercial program, we would probably want the author's full permission to include it so as in no way to infringe copyright.*

*I'm glad you are going to go on buying *AUI* each month - what we need is a world with more intelligent and appreciative people like you. Why not buy *AUI* subscriptions for all your friends and relations? What an ideal gift for birthdays, Xmas, New Year, Eid - thank you Sajit! - Chanukah, Silver Wedding, Get Well Soon!, Happy Divorce, Barmitzvah, Passing Examinations, Leaving Prison, Celebrating Ceasefires, St Patrick's Day, even the Return of the Amiga occasions! Or if you don't have the cash to hand why not ask a bank such as Barings to give you a loan to buy *AUI* subscriptions for the deserving poor of Co. Antrim? Banks like Barings seem to have plenty of spondulicks to toss around and personally, though you may think me biased, I can't think of a better use of their money than buying *AUI* subs for deserving users, as *AUI* readers are..*

*Dear *AUI*,  
I have just read my March issue of *AUI* from cover to cover, on the day of issue, and felt compelled to write, simply to congratulate you all on a first rate magazine. I have a A600, 2Mb, with an 85Mb hard drive, and use my machine mainly for word processing*

associated with my business, plus a data base. I suppose a PC would do me just as well in this context but there is something about the Amiga, as you and all your readers are aware, that inspires affection in us all. This intangible element, in the end, will be what will pull the Amiga back to where it really belongs in the market. PCs seem bland and rather boring by comparison.

I am 50 years old, and not of the "computer generation", but I know a good thing when I see it, and I do see it, both in my Amiga and in the standard of journalism in your magazine, long may we all continue.

Sincerely,

Peter Thomas  
Finchley, London

*Dear Peter,  
Right you are indeed when you say that there is some magic, some endearing mystique about the Amiga. I've never known what is, after all an inanimate piece of machinery - don't crash on me you lovely 1200, I'm only joking! - inspire such loyalty among so many otherwise probably unemotional users.*

*The Amiga has that certain something that in theatre terms they call "star quality". The PC may take over the world but it is, or has been until very recently, a case of the bland leading the bland. And for that reason alone it can't, for most Amiga users, ever replace the Amiga. If there is any justice in the world, "star quality" - or any real quality - should not be allowed to die.*

*We hope, as we try each month to put out a magazine that not only informs and entertains but presents itself in a more creative, intelligent and possibly less superficial way than the majority of consumer computer magazines, to enrich, if only modestly, the lives of readers such as yourself.*

*And indeed, long may we all, and especially you, continue.*

*Dear *AUI*,  
As a newcomer to *AUI*, may I say how delighted I am with the standard and contents of your mag.*

*I am, what you might call, "a mature" highly motivated and unashamed, champion of the Amiga, having endured all the prerequisites such as utter bewilderment, sheer frustration, and blatant antagonism, which I suppose must be experienced, before developing a genuine love for the beast.*

*I delight in cocking a snoot*



at my friends in the PC fraternity, who are for example, with their WARP software, only just beginning to experience the joys of 'multitasking'. I love to demonstrate the ease and simplicity of installing a program, or simply naming a file in my letters draw after its recipient viz. RonAndrews. Jan95, instead of having to use the archaic MSDos convention.

The Amiga has developed a tightly knit and ferociously loyal family of users, and its related family of magazines reflects its user friendliness, frequently with offbeat comment and humorous editorials, which get to the heart of the matter quickly and effectively, without the need for complex and frequently unintelligible jargon, common in PC magazines.

I run a small business with the aid of my Amiga 1200, and it performs perfectly, managing everything I throw at it with consummate ease. Off duty, I can be found playing the Settlers until the early hours, when I should be communicating with Hong Kong or Australia, in an effort to make more money to pay for the growing list of add-ons.

I have a Microvitec 1438, and find the 'DBLPAL HiRes no flicker' mode best, but would love to be rid of the side bands (about 1" on my monitor). I have been lamenting that no-one has written a decent driver (one of those frustrations mentioned earlier), but I understand that you have a solution to the problem, and I have enclosed a disk in order that you may send me the programs listed in your March issue, under *AUI* answers. Presumably the Readme file gives all the necessary instruction, as I do not have November's issue of *AUI*, where I understand the problems were first discussed.

I have managed to get a full screen using 'Super72 SuperHiRes laced' mode, which does not flicker but there is a little contrast control, so the colours do seem to be rather washed out, and refresh is comparatively slow. I had to juggle with the tooltypes a bit, changing the TOTROW and TOTCLCK values etc. The version of IPrefs and Setpatch also seemed to have an effect, but as I was not entirely sure of what I was doing, I eventually settled for the default values.

I am now a confirmed *AUI* subscriber, having been

poached from the Amiga Shopper.

Yours sincerely,  
Alan Haywood  
Essex

Dear Alan,  
*The disk is being returned to you with the data you requested. For all readers, I would like to pass on the heartfelt request of the Editor and Andy Eskelson that if you want anything sent back to you then please enclose a stamped addressed envelope - it will surely reach you more quickly and certainly that way.*

*What you say about how you have, through a trial and error process, been able to learn how to overcome problems probably applies to most if not all of us.*

*The playing around - experimenting - with different ways of solving a problem is a very useful human talent. And it is especially applicable to computing. There is also a very strong sense of satisfaction in having found, what they call in pure science "an elegant solution"; a solution that fits all the needs perfectly and gets whatever you want to happen just the way you want it to happen.*

*Hang in there and stay cool, as an boss of mine used to say. (Not the Editor of AUI! Of course, he would never use such an "inelegant" phrase.) And that's clearly what you are doing, hanging in there and making it happen. Good on you, you mature and highly motivated user. The world can never have enough of people like you.*

Dear *AUI*,  
As an avid reader of your mag. I was extremely disappointed and frustrated to see a whole page of the March 95 issue devoted to the HiQ big box conversion kit.

When you have read through the waffle and have looked at the pretty pictures that make up this article all that we appear to be offered for our hundreds is a pretty box to put any A1200 expansions we may have into. No extra expansion capabilities of any description. In other words nothing we could do without this box.

Arguably since the release of the 1200 the most significant development has been the launch of the 1200 tower system. We regularly get new and better accelerators and graphic cards etc. but at the end of the day they are just another accelerator or graphics card. The tower system is the first opportunity given to Amiga 1500/2000

owners to make a logical upgrade, short of buying a 4000. A system that appears to provide a pretty box but with all the lovely Zorro 11 and PC expansion slots and a separate keyboard!

For some months you have regularly displayed adverts for the tower system BUT where are the reviews? Presumably you actively seek out these products for review rather than sit back and wait for them to come to you?

I'm sure that a review will appear eventually, but now would be nice for all the 1500/2000 owners who wish to upgrade without making one step forward and one step backwards as is the case with the 1200.

May I make a plea for when a review does appear? A comprehensive in depth look at which cards will or will not work with this system would be invaluable, though I realise probably not easy to compile. However, considering the significance of this product certainly justified.

Kind regards,  
Brian Sharman  
Leicester

Dear Brian,  
*The advantages of the HiQ PowerStation should not be underestimated. Box it may be but it gives the user the opportunity to include a PC as well as lots of other devices including a CD ROM drive all within the same container. Now while we may not like the PC, we must keep our feet firmly planted on terra firma. There are advantages in being able to draw upon a single CD-ROM drive for both computers and also use such things as hard drives in a common way too.*

*While the PowerStation may not be everyone's ideal solution, it will appeal to many as an improvement on have a whole pile of add-ons stuck into a 1200 and, if you have need of it, a separate PC occupying a chunk of space on your desk too.*

*As for the 1200 tower, it's a very agreeable idea but there's not much point in reviewing it yet - it's simply not around for most people to buy. When it is, you can be sure that *AUI* will be in there with an unprejudiced in depth review of it. And, if it is at all practicable, informing readers of the cards that are compatible. That is not always an option though because specifications for such add-ons may change with horrifying speed and giving the green light to readers to buy something on the basis of transitory compatibility is*

*something the wise journalist avoids like the plague. And are the *AUI* journals not the wisest of the wise? I leave you to comment on that.*

Dear *AUI*,  
Firstly I would like to say how much I love(!) your magazine, I never miss an issue and your magazine is probably the best, the disks are superb, which brings me to my second point...

It is a fact of computing that some disks are going to get disk errors, unfortunately it usually happens to disks you have files on you want, which is what happened to a couple of your SuperDisks, 34, 40, 45 and 46. So, well over a month ago now, I sent them off to be replaced by the company in your magazine for faulty cover disks. About a few weeks after I sent them I bought the March edition and read the letter by someone else who had sent them off and not received them. However I've waited over a month for them and no sign of a padded envelope has been seen, so I'm writing to you in the hope that you might replace them. (Just to prove I did have them and not just trying to gat free disks, I have enclosed some evidence!)

Thirdly, for anyone who has ordered the Polka Brothers demo 'prey' from 17 Bit, like me might have found that disk 2 is Non Dos (which it shouldn't be) so it can't be installed and the disk stops at the screen with the monster and the little kid. After many replacements and calls to the 17 Bit offices (in which some of the staff insisted that the disk was meant to be like that and the demo is meant to end there) I decided to run the disk through Disksalv 2 (an amazing utility, it has sorted out many of my faulty disks) on repair mode it did the trick.

The disk should end up DOS named prey 2: and in it should be 2 files d & e. So if any of you reading this mag have had problems with it...PROBLEM SOLVED...so now you can install it properly and watch the demo in full.

Fourthly, why won't the datatypes.library work on any other disk than the Workbench disk or the hard drive (I have an 2000 and it's parnetted to my old 500+ (with 2mb) and (I am receiving my hard drive in a few days) all the datatypes are in the right places, the OS insists the datatypes.library isn't the right version but I know it is.

# write to reply

c o n t i n u e d

Finally, on a future coverdisk I don't suppose you could include some more datatypes, images and if possible the graphics and gadtools libraries. Also do you know any bulletin boards in Hull or Grimsby.

Thank you for your help.

Yours faithfully,

Edward George  
Brigg, S.Humbs.

Over to David Taylor who creates the SuperDisks...

Dear Edward,  
Thanks for the information about the demo, I'm sure it's of use to people with problems with that disk. I have personally dispatched some replacement disks to you, although it's a bit of a mystery as to why you haven't had those from our duplicators. For general information, the replacement disks are not sent out every day as that would be extremely uneconomical, but sent out as batches every week, which might explain some of the delay. In any case, the disks should be with you by now.

Now, the problems with the datatypes.library are interesting. Believe me, I know. I spent the vast majority of my Christmas break fiddling around trying to get the Amiga to note where datatypes were in an attempt to convert JPEGs into IFFs for the March SuperDisks without making the reader insert WorkBench. As you'll have noticed, it ain't possible. It appears that despite any assigns you make, the Amiga will still insist on checking the original libs: directory for the library and throw up problems if it doesn't find it.

Some datatypes require a specific update of the library and will throw up the error "can't find datatypes library" if it's the wrong release, even though a version of the library is there. Odd, a quirk of the program accessing the datatypes possibly. So, unless anyone knows differently and has found a way of conning the Amiga, that's all we can say. If you are talking about the JFIF datatype, as I suspect you are, note that several other files must

be installed in the correct path (again, assigns will not suffice) and I'd suggest using the installer to avoid problems. So, you need everything installed exactly on the machine you are using - don't try accessing the libs over parnet.

There are plans for more datatypes, in fact for a WorkBench Essentials disk which will include, amongst other things, replacement and updated libraries and everything to ensure your WorkBench is as good as possible. As to more pictures, this must be your lucky day, there's over one hundred and thirty on this month's SuperDisks!

BBSs in the Hull area? Go on then, here are a few...

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Dear AUI,  
Firstly, may I congratulate you on a superb Amiga magazine. I have been buying the Amiga User International in Australia for quite a while now and enjoy not only your coverdisks but all the mag's contents, especially the reader's contributions, although we do not get the latest edition until more than three months after publication in the U.K. This leads me on to the reason why I'm writing this letter.

I was really looking forward to entering your competition to win one of the five CyberMaxx Virtual Reality Headsets, and avidly awaited the December 1994 issue to get the second coupon and post both off to you as soon as possible. You can imagine the horror when I finally got it at my local newsagent (after weeks of enquiring) during the 2nd week of February only to discover that the closing date for entry was January 31st 1995! I believe that being an international magazine you should at least consider international readers and

supporters in far away places like Australia, who, through no fault on their part, cannot obtain the magazine until after the closing date for entries, and are thus at an unfair disadvantage.

I don't know if there is an easy solution to this annoying problem except to: 1. Extend the closing dates for entries so that the overseas entrants have a chance, or 2. Try and get the magazine distributed sooner if practicable, (or maybe a combination of both).

I am enclosing the 2 competition coupons anyway as proof and to show that I was ready to give it a go. Looking forward to your reply.

Yours sincerely,

Mr S McGrady  
Higgins, Australia

Dear Mr S.McGrady,  
Oh dear! Those readers who are as long in the tooth as I am (at least those molars I can still call my own) will remember that we've had this problem come up before. For this reason the entry period for competitions was lengthened, specifically to allow entries from such distant parts of the world as your own. (Although I don't suppose it feels distant to you, does it? But then you must feel quite near home, don't you?)

As was explained then, (Why do journos always these days say "back then"? What does the "back" bit add to the meaning? Nothing so far as I can judge.) AUI September, for example, comes out right at the beginning of August and we decided then that the competitions should run till the end of the month after the date of publication.

In other words, a competition in the September issue would not close until the end of October. That would give a full three months - August, September and October - for the competition entries to arrive.

Obviously, that's no longer enough time. So the Editor has told me that now we will extend it another month to give distant - or close up, depending where you are standing, or sitting even lying down - readers a further grace period. Good luck to your distant - or near - entries!

Dear AUI,  
What has happened? Where has it gone? Has it flopped on its third issue? Or is it going it alone from Amiga User International? What's happening?  
The subject referred to above is the excellent magazine Amiga CD! Imagine my dismay when in August 1994 I found

August's issue of AUI but no mention of Amiga CD! Amiga came and passed with the same occurrence, no Amiga CD! Other inferior CD magazines appeared but none could replace the CD shaped hole on my CD32 except Amiga CD!

By September I was pulling my hair out waiting for hints on Labyrinth of Time (which I had been stuck on since March 1994) as I expect was Michael Rawson. What happened? Is this game so hard that even you can not come up with a solution so decided to halt publishing?

Please could you reply soon as forking out £5.00 for a CD with virtually nothing which interests me on it each month is getting on my wick a bit. Provide me with a small ray of light concerning Amiga CD!

Yours hopefully,  
Stuart Hibbert

Dear Stuart,  
You are right, I agree. Amiga CD! was something a bit special and whatever has come out from other publishers doesn't just come up to scratch.

The problem for Amiga CD!, it seems, is that there is not really a large enough number of CD 32s to make it commercially viable because a lot more cash had to be spent on creating Amiga CD! discs than is necessary just to shove a load of programs and demos onto a CD making it really little more than a big floppy with lots of storage.

Amiga CD! went boldly where no other such magazine had gone before, - or has gone since - into genuine interactive multimedia. And that takes time and cash to create. To make it worthwhile there has to be sufficient readership out there. When the Amiga CD 32 returns to the world of the living and gets into the homes of an increasing number potential readers, like the Arnie character, Amiga CD!, no doubt, will be back.

Dear AUI,  
First off, congrats on producing the best Amiga mag around! AUI has enlightened editorial excitement, great graphics gurus, cool coverdisk compilations, vivacious video visions, and humongously humorous hacks! Keep up the excellent job!

I was fortunate enough to get the first Amiga CD!, but the other two CDs seem to have eluded my grasp. Is it possible to order these two tomes of Amiga CD wonderfulness, or will I be forever doomed to

wading through the 600 megabytes of PC CD ROM rubbish I receive with the various PC computer mags I buy?

All the best to the AUI team, may your drives stay hard and your CIA chips never blow!

Cheers!

Paul Stanley  
Stamford, Lincs.

Dear Paul,  
Yes, we still have in stock some copies of the CDs 2 and 3 of Amiga CD! Magazine. Send some cash - £2 each now - and they shall be winging their wild and wonderful way to you.

Dear AUI,  
Since your reply to a letter from a Mr. Owen Rolfe-Herbert which I felt though justified and appreciated was a bit strong, I have decided to release our basic instructions on how to fit the Connor drives that we sell for internal fitting. Obviously these instructions are given on the understanding that HiQ Limited accept no responsibility for any damage caused by

their use or misuse etc. I am not however giving the wiring diagram for the cable packs as we do make money from these and offer them at 20.00 inc Vat and P&P.

The reasons for putting these instructions into the public domain is that firstly, we can compete on our drive prices alone with most companies, and we do not charge for fitting any more. Secondly, we are fed up with people buying the drives elsewhere and then expecting us to support them. While we have great experience and like to help we are after all a company trying to make a reasonable living from the Amiga. Thirdly, with the advent of the Squirrel interface and the HiQ PowerStation we are not so reliant on the internal drives as people are upgrading their hard drives with the PowerStation system and one of our low cost 39p/mbQuantum Mavericks.

Finally I would like to stress that the reason we only specialize in one drive and do not sell larger versions or other makes is a simple business decision which is:

1) that they work well within the constraints of the A1200 standard power supply, and we have never had one returned with power problems.

2) We have a 2% failure rate on these drives, which is very

small.

3) They are fast and low cost, for example using the Blizzard 1230 accelerator with the ROM mapped into fast memory we can achieve 2.175mb/sec transfer rate using Sysinfo.

Thank you for your time.

Stephen Jones  
HiQ Limited

INSTRUCTIONS AS SUPPLIED WITH DRIVE  
PLEASE BE SURE TO READ SECTION 4 AND GET THIS RIGHT!

Instructions

1. Remove the 5 screws

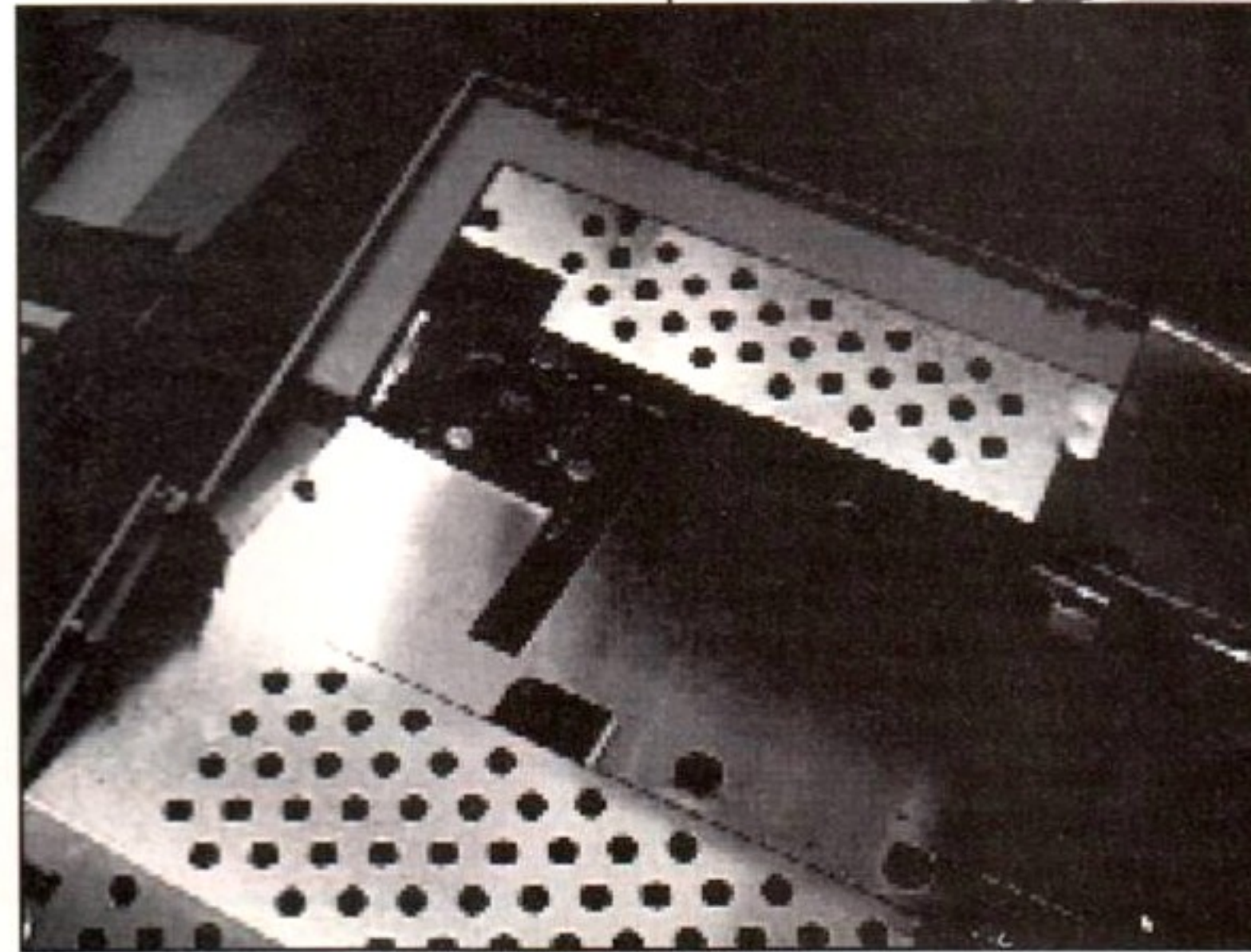


Figure 1.

from the base of the machine and take off the top of the case, be careful as there is a cable connecting the lid to the mother board which must be removed.

2. Disconnect the keyboard or lay it over the back of the machine whichever you prefer. The cable is replaced by lifting the white connector sleeve, putting in the cable and pushing down the sleeve again. This is a bit fiddly so be careful and mind your fingers.

3. Remove the floppy disk drive, by disconnecting the two cables and unscrewing the two supporting screws underneath the machine.

4. Now, you have to remove the top shielding of the motherboard by lifting the tabs all round. The reason is that there is a piece of shield that stops the drive fitting neatly (see Diag 1). This can be cut out and do no harm. Just cut along the lines shown and try not to leave any rough edges, use tin snips not wire cutters, you will also notice on the left a piece of base shield now jutting upwards this must be

Note these four blank holes and their position

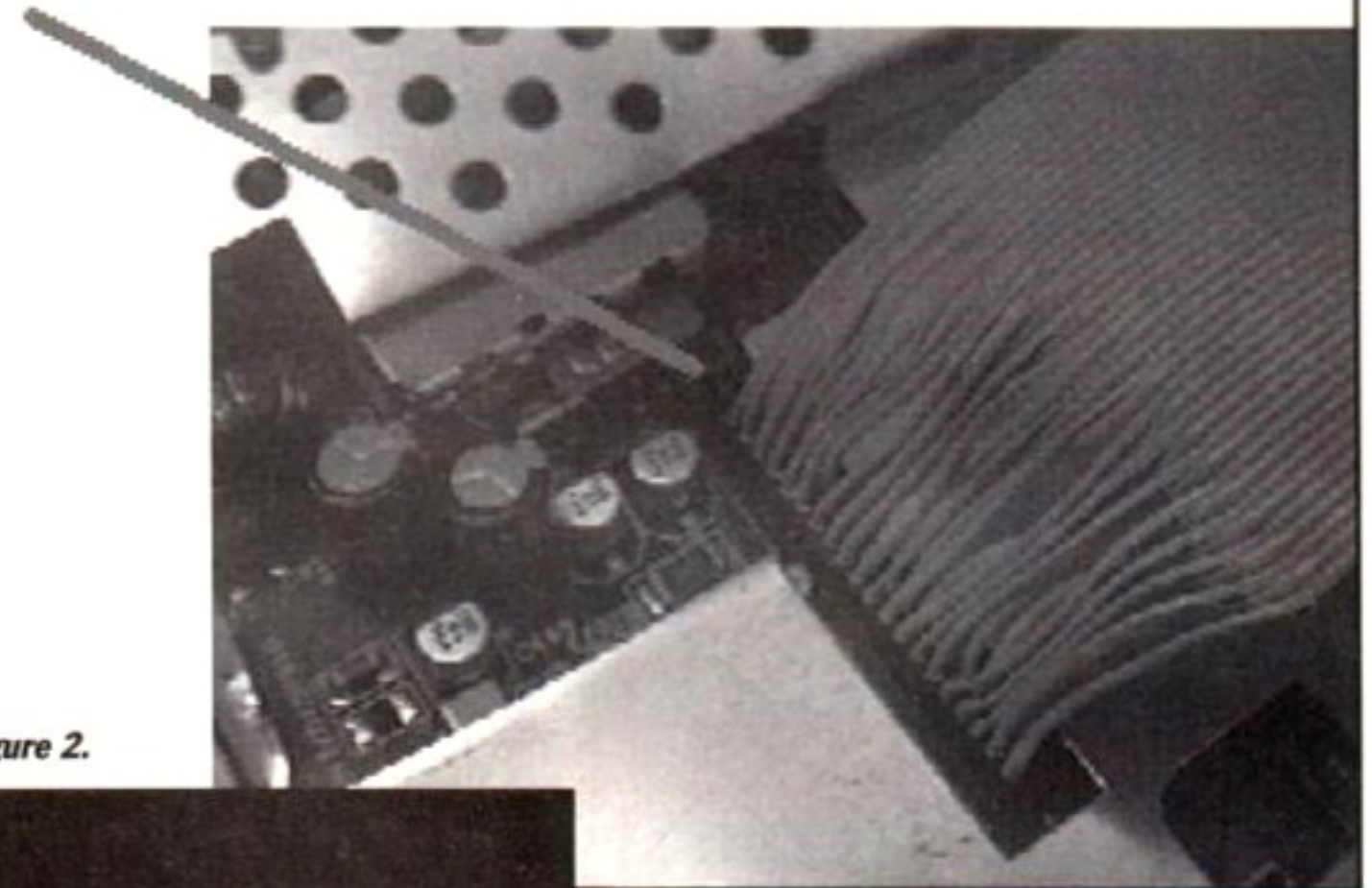


Figure 2.



Figure 3.

connector and so does not touch anything, however feel free to put a piece plastic or paper under this although it is not necessary.

7. Now replace the keyboard and test the drive as it should auto boot straight away, if it does then screw the case back together.

8. You must install the full WorkBench system by opening the shell window and typing these commands.

(a)Makedir dh0:fonts  
(B)use menu bar to add drawer called "Storage"  
(c)create another drawer called "Locale"

(WB3.0)copy df0: all dh0:  
(Extras)copy df0: all dh0:  
(Please note that "0" is a Zero!)

(Locale)copy df0: all  
dh0:locale  
(Storage)copy df0: all  
Dh0:storage

Dear Stephen,  
Thank you for your unselfish act of supplying the instructions. I still think it's a hell of a liberty for someone to buy one company's drive and then ask another company to supply the instructions. It's a little like trying to get Marks and Spencers to change an article bought from one of their competitors. I bet some people have even have the nerve to have tried that!

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# write to reply

c o n t i n u e d

*I'm sure though that plenty of readers will thank you for the help you've given.*

*(However, if there are any queries or problems PLEASE don't contact me or AUI, dear, considerate readers, get in touch with the kind Mr Jones of HiQ! Telephone: 0819 093885.)*

Dear AUI,

No, my name is not some kind of a joke, is yours? (Cross between a beer and a cough mixture perhaps?) I realise that in this competitive and back-stabbing world that we live in we cannot expect to get something for nothing which is why I had decided to buy something from whoever helped me out in my situation.

I did write to HiQ and am planning to buy a 200W power supply from them but if they share the same view as you they can put this down as a lost customer and I will buy from elsewhere. Similarly I was going to subscribe to your magazine if you were to help me but I have decided otherwise and have also convinced friends not to buy your magazine for a period of three months to show you that they are not happy with the way you treat YOUR customers - that's right I am one of your customers.

The reason I wrote to you was that I hoped that you had the decency to at least try and help me out of a possibly fatal (to my Amiga) situation and not just slag me off.

The drive wasn't particularly cheap. I paid £210 for the drive and cables. The HiQ drive now retails at £169.99. (A quick lesson of maths will show you theirs is cheaper). Anyway I made no reference to the price that I paid so where you get your idea of "cheap" from, I do not know.

Also what do you mean "some other company's product". When I said the same model as I have", I meant exactly that. The hard drive I have is exactly the same as the HiQ one which is

a Connor drive. As far as I am aware HiQ do not manufacture their own drives. I could have written to Conner but I doubt very much that they would know what an Amiga is or how to connect the drive to such a machine.

You may be pleased to know (well, you probably aren't) that I managed to fit the drive correctly from the help given by many Sysops (that's a very kind person who has devoted their time and computer just to help out other computer owners) from the great Amiga bulletins boards around the country. Perhaps you could learn a thing or two about courtesy from these great people.

Again you are probably not pleased to hear that I can now use my Amiga to its full potential and am enjoying every second of it.

Yours sincerely,

Owen Rolfe-Herbert

New Haven, East Sussex

PS. It says in the magazine that you are a contributor - what exactly do you contribute? Is it the game reviews because I can find no reference to you having

written any of the 'serious' articles or do you just write the mindless pathetic immature and long-winded drivel known as the letters pages.

PPS. If I receive a personal apology from your editor I will be happy to continue buying your magazine after three month non-buy period. I still like your magazine but am not impressed in the slightest by your attitude. The compliment wasn't for you anyway it was for the others who REALLY contribute to the magazine.

One last thing - I have enclosed a disk and a self-addressed envelope on which I would like the monitor programs which you sent to L.Hellawell (March 1995). I doubt you will send it to me after this letter but you have done this for other readers in the past and I have bought around twenty issues of AUI during the last two years.

Dear Owen Rolfe-Herbert,  
Two things I have learned in life, first, if you get something wrong or make a fool of yourself, admit it and apologise. You committed what I, and I think any reasonable person, would say was a slice of stupidity. If you buy something from one supplier, that's where you should get your service from and not try and recur to the good nature of a second supplier if you made the error of not choosing them in the first place.

HiQ have been more generous than you are entitled to expect from any commercial organisation and, as you see in this issue supplied the information you unjustifiably requested of them. Be grateful -

and humble enough to apologise for your crass faux pas.

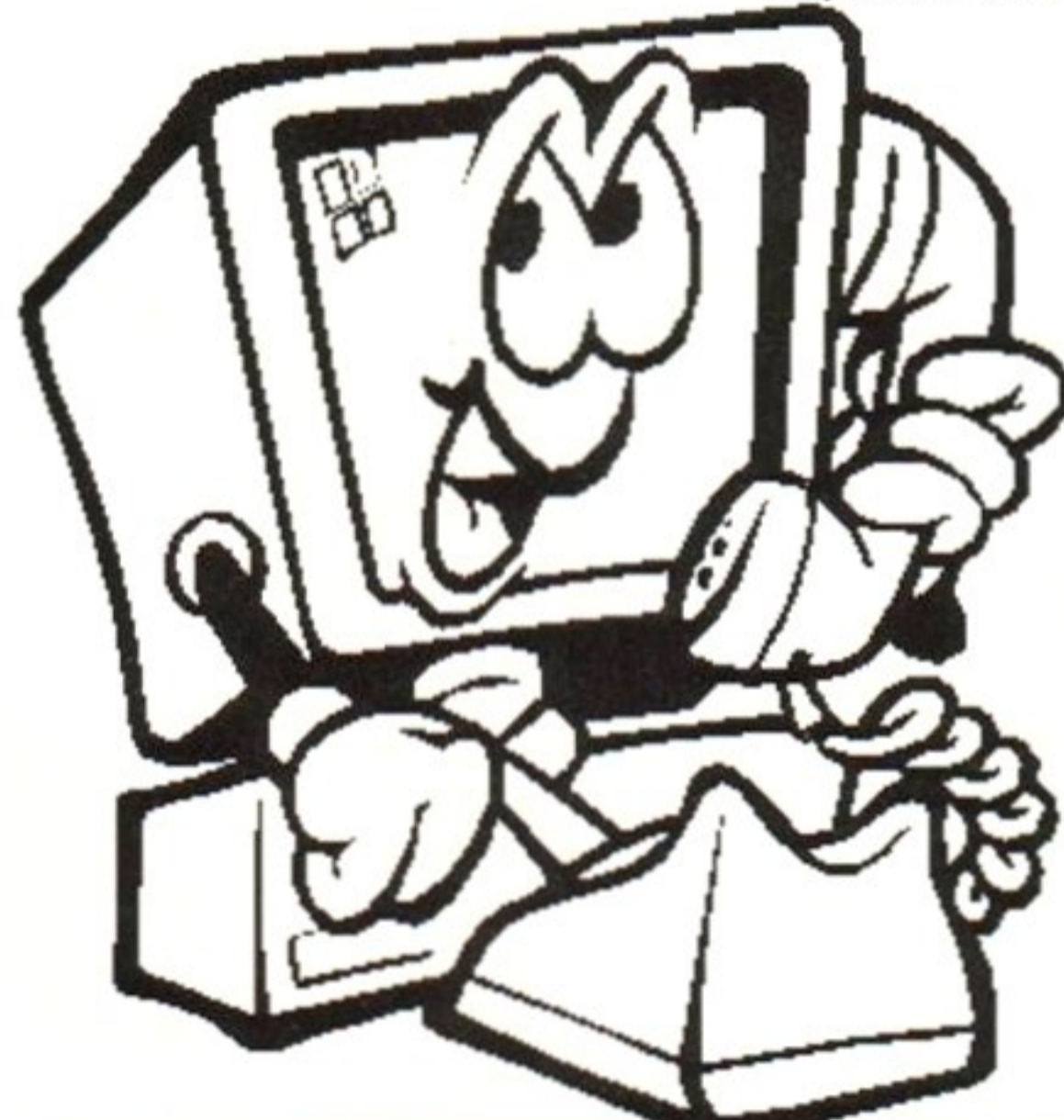
We do reply to requests that have a stamped addressed envelope and yours will be no exception.

What do I contribute? I contribute to the general benefit of the human race by speaking up for those who can't speak for themselves to, and possibly against, people like you who think that the world owes them something to which they are not entitled. Perhaps some readers may think that a worthwhile contribution.

It is an especially useful contribution, I in my partial way consider, when it comes to dealing with threats to cease buying the magazine or influencing others to, as apparently you have tried to do. Blow wind and crack your cheeks, as the Bard put it. AUI is not the house of straw for you to blow down even with your inflated ego to let some air out of. There are thousands of readers who, as you see from this month's postbag printed here, like and welcome AUI. If you think you are going to get an apology from the Ed, then you are, as the current ad says, as thick as a Redwood raft.

If you don't buy AUI, it will be, as the other readers of AUI and the Editor might put it, your loss. I might say more simply, get lost.

The second thing I've learned? Never write to a magazine in an insulting way. The magazine can choose to print what it likes and one thing you can be absolutely sure of, it will, leaving you either speechless in frustration or looking a fool or both, always have the last word.



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# AMIGA

User

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# Opinion

## Wil Mobberley opines that what we need is a Lego-style Amiga.

I have a dream, a dream that one day I'll be able to go into an Amiga Centre of Excellence and carry on a conversation something like this...

"Good morning sir, how can I help."

"I'd like an upgrade on my Amiga system."

"Certainly sir. Which level are you currently operating on?"

"Amiga modular 6"

"And what do you want to do?"

"I want to upgrade my co-processor and add a Zorro slot please."

"Hmmm. Let's see. That'll mean a jump to Amiga Modular 8 which means two times 50. 100."

"Thanks very much."

"Don't forget your evaluated discount. Let's have a look at your current board. Do you have your spec grading card handy?"

"Sure. Here it is."

"Ah, I see you have a grade 1 board with grade 1 component status so we'll be able to give you 20% discount on the co-pro swap. Do you want to go for grade 1 brand new components or second hand certified-OK?"

"I'll go for second hand."

"OK, that's a further 15% discount on your upgrade but your spec status card will be downgraded to level 2 so you won't get as great a discount with your next upgrade/component swap."

"That's OK."

And that's my dream. Does it make sense? Well, let me explain.

Why did I, and several million other people, buy an Amiga 500 all those years ago? The answer: because I couldn't afford an Amiga 2000. Then I bought an Amiga 1200 because at the time I couldn't afford an Amiga 4000 040.

Why do I buy magazines like **AUI**? To read, and drool, over all those lovely bits of hardware which I can't

afford yet because they cost a great deal of money of course. (Notice the word "yet". First lesson of life - be an optimist!) That's why I like loads and loads of screen shots and an in depth description of what colour the monitor turns as you press the on switch! A 30 page review of that fancy Zorro slotting card doobry? Yeah! Give me more. Show me photos of the connectors and give away a free life size cardboard cutout. I'm dreaming, man! I'm dreaming because I'm saving up - which is what we're all doing if we're honest. "Computer enthusiasts" is a blanket term for people who are saving up for another add-on and it's a never-ending process. Frustrating it may be but we love it!

Now, given that the Amiga was so successful with products like the Video Toaster doing so well and a whole host of splendid add-ons turning heads and leaving costly rivals with egg on their faces, it's easy to start wondering how Commo-dire managed to mess things up. Easy, that is, until you consider that a fancy add-on for the Amiga didn't directly benefit them at all because they'd already sold their machine.

Strip away what didn't go in Commodore's direction when all those clever peripheral manufacturers made a sale and you'll realise that virtually all the benefit for Commodore was not in terms of hard cash but in kudos for the machine. Since Commodore were graduates of the Titanic School of Shipping when it came to advertising their wares, it's just as well that so many enthusiasts did much of it for them. It's a wonder they lasted as long as they did.

When I consider just how much I have spent over the years on Amiga hardware, it makes me realise that I would have spent a great deal more had I been able. By this I mean that the jumps were too great. If the A500, instead of being a totally alien, virtually

dead-end machine, had been designed as a starter module with subsequent upgrades costing only 50 a shot, I'd have regularly upgraded and spent a fortune in the long run.

Most users, for example, didn't actually need a serial port, or a parallel port when they bought their A500s. I'll bet there's a high percentage of users who have never had cause to use them - no printer, no interest in midi, no comms. I just wish that Commodore had been a little more far sighted and realised that the most basic of all their machines should have been totally upgradable to the very top models in easy steps, even if the A500 had had no parallel or serial ports (but with the option to add them) but had come in a 1500 box instead.

"Upgrading" to an Amiga 1500 (the lowest expandible machine) from my A500 with its extra RAM and accelerator card (bought because it was the only way I could afford to go at the time) would have been a retroactive step. Shame that the A500 had to have a silly box and be such a cul-de-sac. Imagine what might have been if Commodore's approach had been different. I could have just ported my accelerator card and ram instead of kissing it goodbye.

Boy would they have sold some! Do you think I'd have minded if my A500 upgraded to 4000 040 level in 50 instalments had cost me 1000 more in real terms than if I'd just bought the 4000? Hell no! For most of us it meant the difference between upgrading at high cost or NOT AT ALL. The closest anyone got to this dream was the Bodega Bay expansion but at what a cost! Full marks anyway for ingenuity but the Bodega Bay had to battle for compatibility with a product which hadn't been designed with that kind of expansion in mind. My beef is that it should have been from the word go. There was too the HiQ 1500 box that

caused CBM UK actually to create the 1500 which I bought.

Now back to my shop scenario and picture a completely modular Amiga. One week you buy a basic box. Another week you buy a circuit board, then a few MB of ram. Then you upgrade the co-pro, add a few zorros etc., etc., etc.

Surface mount technology made the Amiga even more reliable, eh? Pah! Completely the wrong approach. It made upgrading even more difficult. Don't you see? We all WANTED Amiga 4000 040s, 2 billion mhz - the works. We'd all have gladly paid and as we upgraded, discarded parts could have gone back into a pool. Amiga centres could have evaluated each upgrade stage and advised when a board/component needed replacing. I'm talking LEGO!!!

OK, so I'm exaggerating. We all know that computers are complicated beasts but the principle is a valid one. If computer companies really want to sell millions of components a week, they should make it easier and try a bit of marketing - give green shield stamps, offer free Princess Diana mugs when you upgrade to module 12, run clubs aimed at the different levels encouraging them to make that next jump. ("Come on everybody. Another 50." or "Special offer - one week only, jump two modules for the price of one.") Anything to help keep things moving.

Can you imagine the magazines on the shelf? "Amiga Module International." "Amiga Upgrader." The endless articles about what you need to get to be able to do XYZ. Features on that latest module. Commodore could have farmed module manufacture out and maintained strict compatibility guidelines and over the last four years, they would have got at least 2000 extra out of me and I'm sure I'm not alone.

No imagination. Sad, isn't it? My sincere hope is that the buyers, dare I hope rescuers, of the Amiga line don't turn out to be former directors of Krakatoa Time-share Inc.

And can we have a modular Amiga please?

*Opinions expressed in the AUI Opinion Column do not necessarily reflect the views of the magazine or its staff. AUI is happy to consider contributions from those with an Opinion to express. Non-libellously, please. AUI*

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