

# AMIGA

## User

INTERNATIONAL

JUNE 1995 £3.75

**Six Amazing Disks Of Great Stuff Packed On These Two SuperDisks!**

### AMIGA

#### User INTERNATIONAL SuperDisk No. 59

##### The Top Utilities Disk

Boot Utility 2 - Exclusive version of the boot utility and degrader. Da Last Alert 3 - Beat those guru meditation blues. ZoneCreator - Ace utility for AMOS programmers. Octamed Secrets - Master the top music program with this guide. Plus - HandyDMS, BTView, Joytest and many more!

##### The WorkBench Essentials Disk

Startup Manager - Invaluable control over WorkBench startup. Datatypes - Additional datatypes for WB3 users. BootPics - Sex up your WorkBench boot procedure. Plus - DClock, MicroTM, ShutWB and more!

##### The Essential Fonts Disk 2

Twenty fonts for DTP in Compugraphic and PostScript format.

Boot this disk to use both No. 59 and No. 60. WorkBench 2 and above.

June 1995

## NO DISK?

Ask Your Newsagent!  
Or see the SuperDisk  
Page 14 in this issue.

### AMIGA

#### User INTERNATIONAL SuperDisk No. 60

##### The Essential Libraries Disk

Complete the overhaul of your WorkBench with this set of frequently required libraries.

##### The Shell Essentials Disk

Update your C directory with these brilliant commands. Amiga Ultimate Shell - A full upgrade to the standard shell. Pipe - Make chain commands possible. PBL - Screen blanker and mouse accelerator in one! Plus - Foreach, FlushLibs, Wild and over twenty more commands!

##### The Great AUI Games Disk

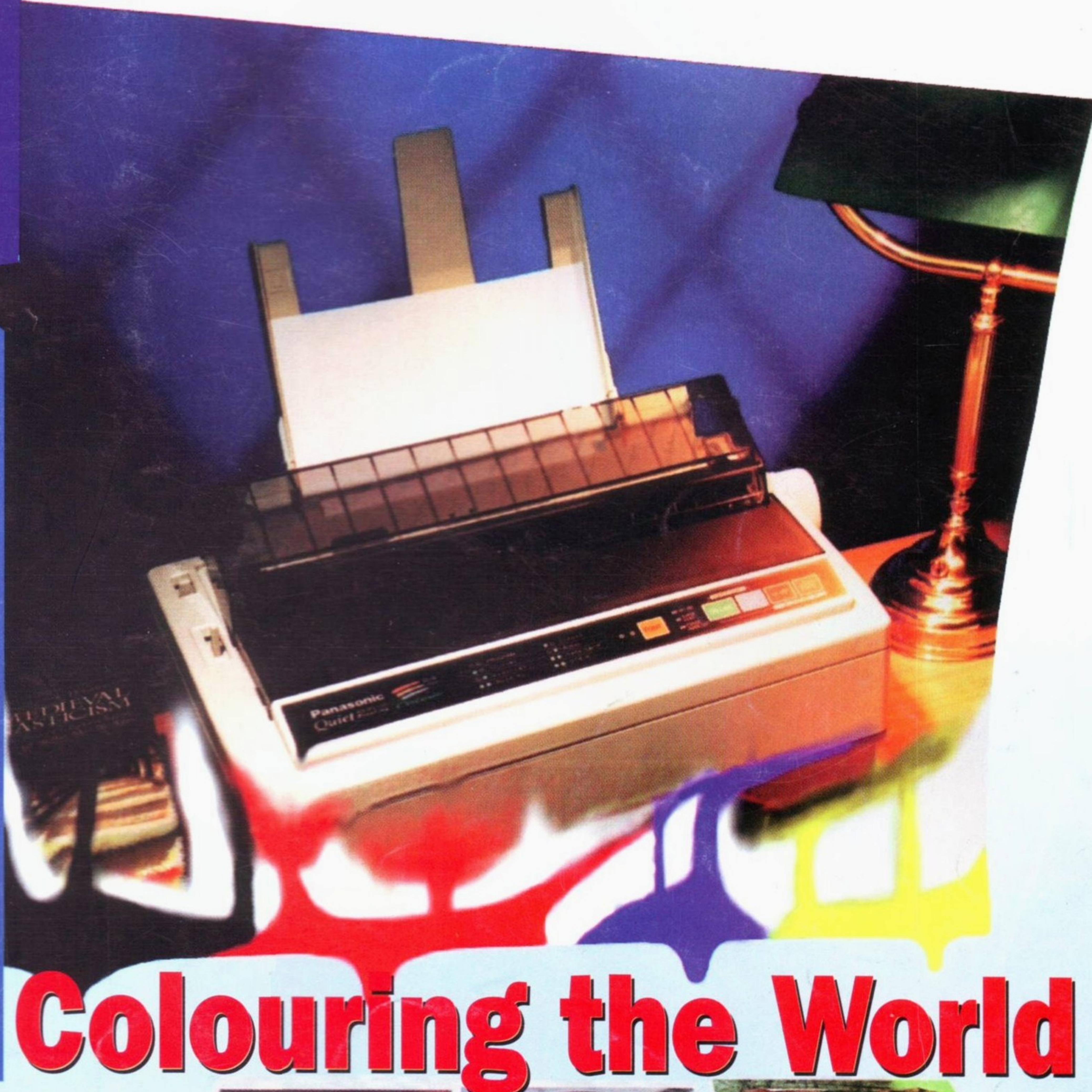
Global Thermonuclear War - Awarded 85% by AUI last month, a brilliant war game for two players from Mark Sheeky.

DO NOT boot this disk. Boot SuperDisk No. 60, WorkBench 2 and above.

June 1995

## NO DISK?

Ask Your Newsagent!  
Or see the SuperDisk  
Page 14 in this issue.



## Colouring the World



### All you need to know about Colour Printing

The New Money, 10 Years of the Amiga,  
The PowerStation and the latest news of  
Commodore and the new Amiga OS

Win the Epson Stylus  
Colour Printer and the  
new InTOS!



THIS IS THE ONE!

ALTERNATIVE SOFTWARE'S

"FOOTBALL IS  
TRACKSUIT  
MANAGER 2  
PLAYS LIKE A  
DREAM,  
FAST AND  
SMOOTH YET  
FULLY  
DETAILED"

"BIG MATCH  
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FULLY  
DIGITISED  
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AND SOUND  
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PLAYABLE  
COMPREHENSIVE  
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- ARRANGE PRE-SEASON FRIENDLIES TO GAUGE THE STRENGTH OF YOUR SQUAD BEFORE THE SEASON STARTS
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# A User

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# A

## INTERNATIONAL

### CONSTANT FACTORS

#### 5 The Amiga Dimension

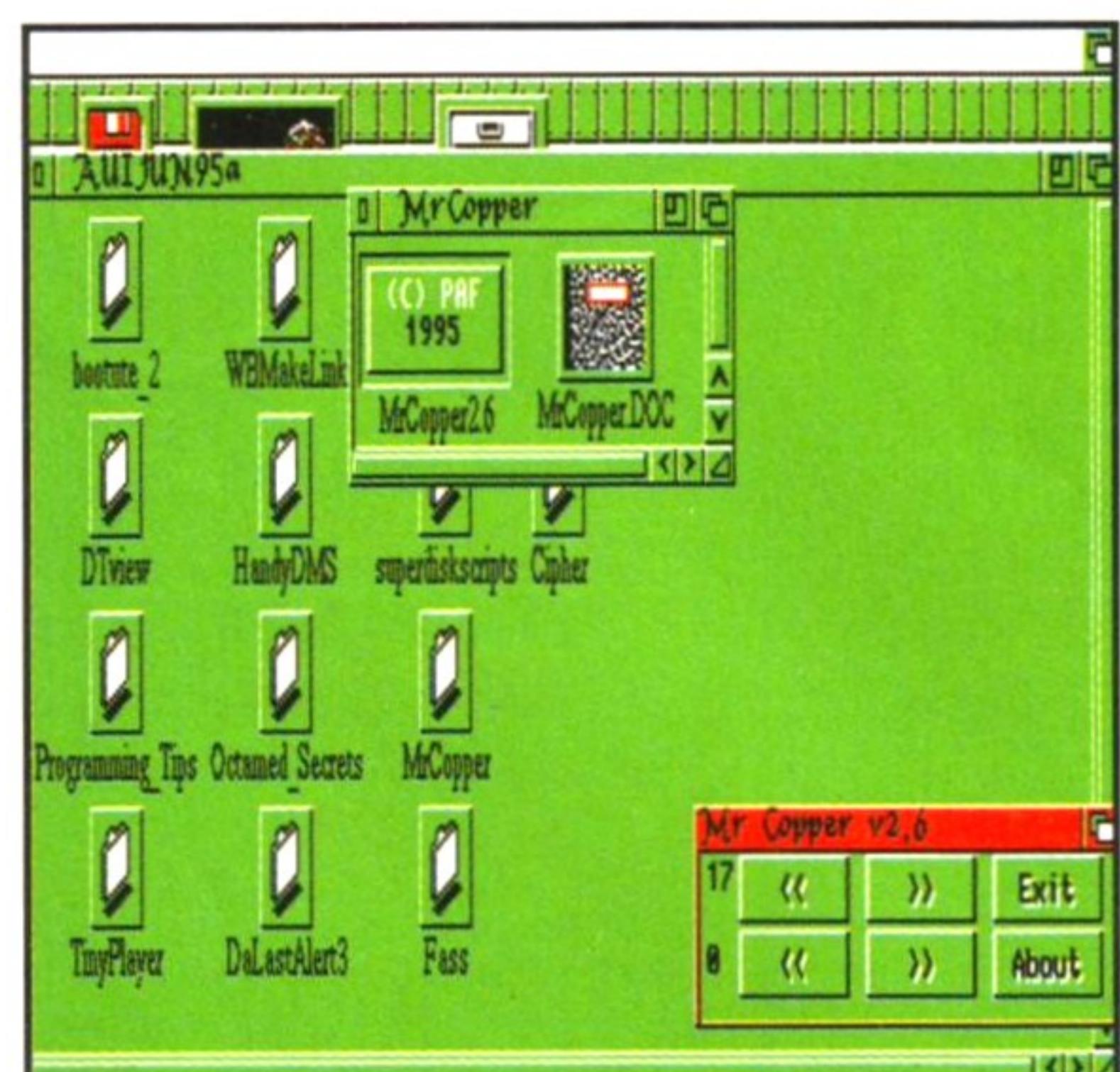
Managing Editor Antony Jacobson examines the way that the latest news of the fate of CBM is transmitted and mourns the death of an Amiga magazine.

#### 6 NewsFile Extra

The latest gen on the amazing life and death saga of the struggle for the remains of Commodore.

#### 8 SuperDisks No. 59 and No. 60

It's all written on those SuperDisk labels! Every single darn library and Shell file you'll ever and never need, brilliant utilities you can't believe actually exist... it makes you want to cry with adoration for the Amiga.



#### 16 NewsFile

The pace of technological change is now faster than ever in the history of our planet. Anthony Mael and Martin Witton grab all the hottest items and slap them, still spitting, on the red hot griddle of **AUI** news for your delectation.

#### 70 Online - The Internet Column

We had to drag Gary Fenton away from the modem at the last minute to tell you about his latest passion - Internet Relay Chat.

#### 93 Amiga Answers

For the answers we are about to receive may the Amiga - and Andy Eskelson - make us truly thankful.

#### 100 The PD Stakeout

The very latest update of PD plus absolute cracking classic Deluxe Galaga is tested by Gideon Overhead - with ample assistance from the super keen **AUI** testing team!

#### 110 Write to Reply

You have the right to reply, but anything you say may be taken down and used to hit you over the bonce by Bud Vennos.

### TEST DRIVE

#### 28 Power To The 1200 People

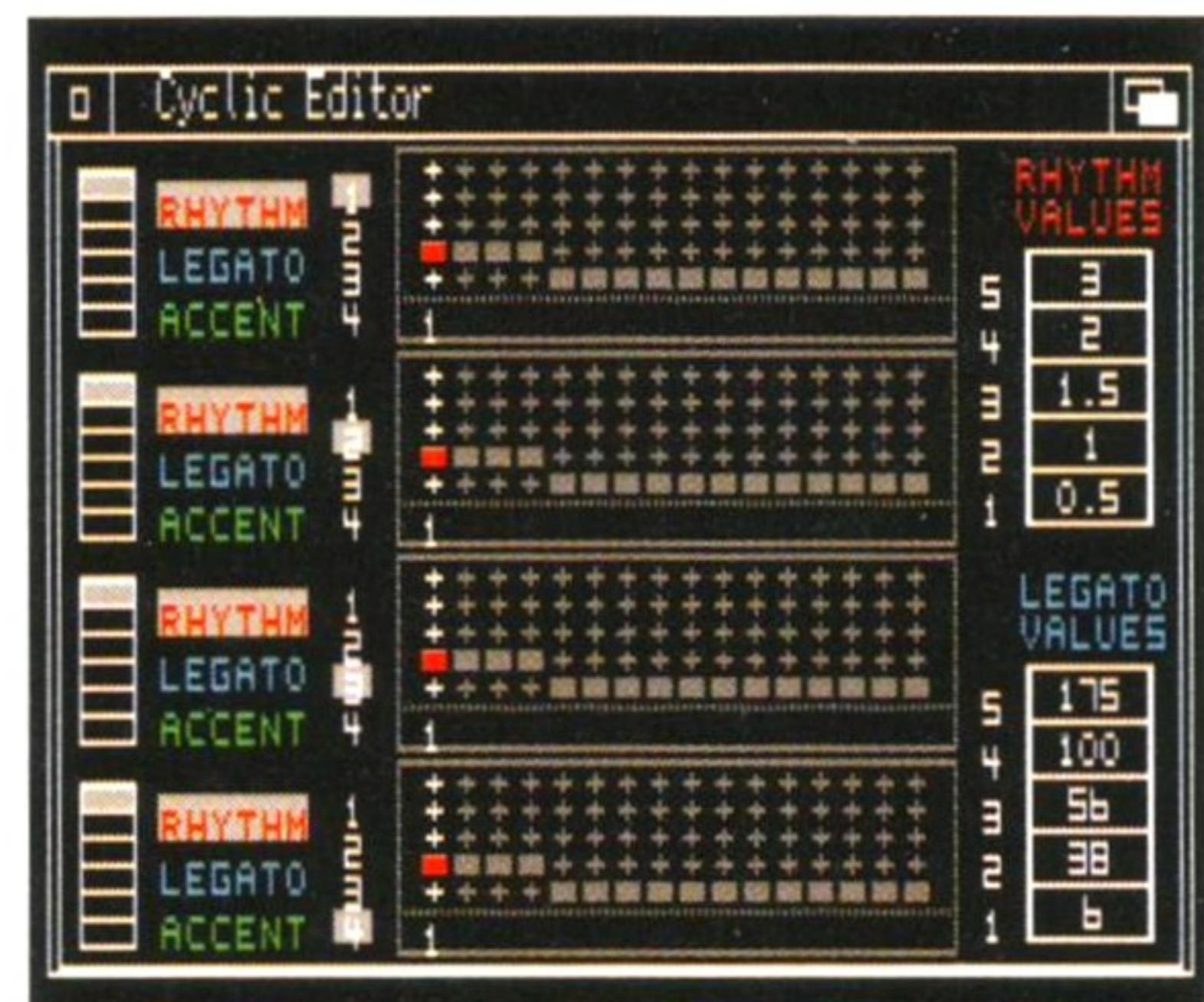
All A1200 owners soon start dreaming of ways they can boost the power of their Amiga. David Taylor takes a look at a snazzy new expansion box engineered by the inventive team at Hi-Q.

#### 34 InTOS

Paul Overaa test drives a new extension module for the popular AMOS programming tool.

#### 36 Interactive Composing

Can your Amiga create the next pop music chart topper for you while you pose for the album cover? Mark Blackham test drives "M".



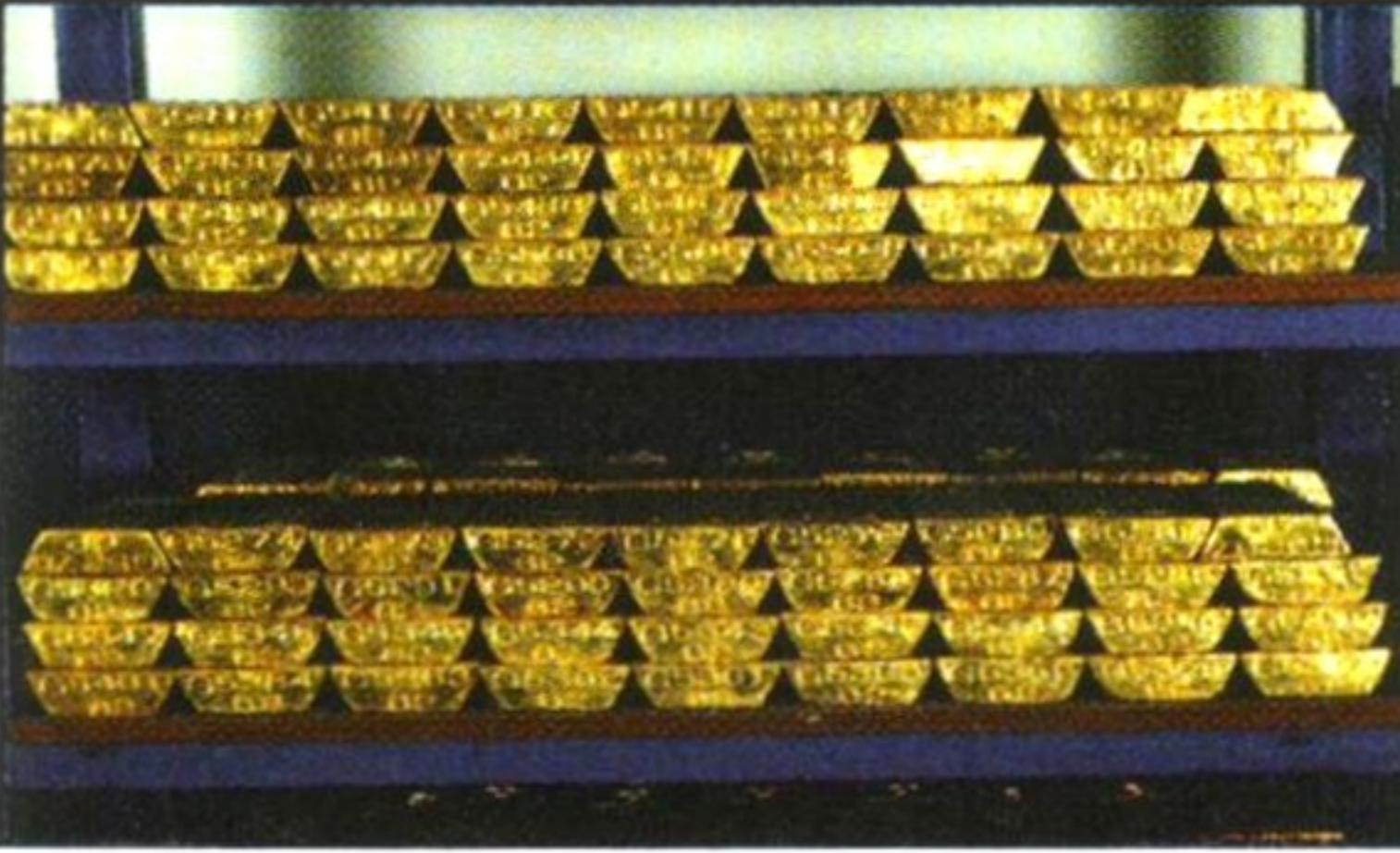
### FIELD REPORTS

#### 40 Virtually Live

From America, Michael Hanish provides a look at how the Amiga and virtual reality are transforming art and entertainment forms.

#### 68 TechnoWorld

It's a mad, mad, mad, technoworld, crazy and wonderful at times. **AUI** reveals the latest, jawdropping, technological developments around the world.



#### 74 The New Money

Cash today is not just the change jangling in your pocket or lost down the back of a couch. It's on plastic, smart cards and stored digitally in computers. Your Amiga gives access to this technology. Michael Rumbelow holds his wallet firmly and investigates the new forms of wealth transmission and creation.

### USER PORT

#### 38 Carry On Karaoke

Mark Blackham finds a company with an Amiga-based pub entertainment system.

#### 42 Amiga OS

A new Operating System for the Amiga is being discussed over the Internet. What's it all about? Edwin Dumbill, helping write the new OS, explains.

#### 58 Freedom of the Press

Have you a book or magazine inside you, yearning to be put into print and read by millions? Mark Blackham explains how you can turn the Amiga into a state-of-the-art publishing machine.

#### 72 No Amiga is an Island

Aitor Ibarra is back with more tips on connecting the Amiga with the rest of the computing world. This time he looks at WANs, LANs and Amiga networks.

### MENTOR

#### 66 Arexx Info

What function does Arexx serve? Find out from Paul Overaa's informative column.

#### 67 Programming Tips

All programmers please assemble quietly in this section for Paul Overaa's knowledgeable tutorial.

### ENTERTAINMENT NOW

62 Playtime everybody. You have fifteen minutes to eat your crisps, drink your milk and play a few Amiga games. Mark Blackham selects from: Super Skidmarks, back bigger and better than ever; Kingpin - the greatest ten pin bowling simulation; Soccer Superstars - an arcade style football fight; and Whizz, an Alice in Wonderland type cartoon adventure. Plus some special previews of Team 17 gems.



### AUI SERVICES

#### 32 Back Issues

Never before really available? Now the back issue collection of **AUI** has been opened up. Our years of accumulated wisdom can be yours - at a few pounds a time.

## 33 Subscriptions

Subscribe now and get every issue cheaper than off the shelves, delivered straight to your letterbox. Start up your own library of **AUI** back issues, but keep them under lock and key, because these diamonds will rise in value.

## 107 ARENA

Hail the Great Amiga Gladiator - step into the arena and meet other giants of the Amiga world. Here line up the great and glorious, armed to the teeth with desirable Amiga goodies - just for you to buy.

## 111 AUI Reader Enquiry Service

Before you buy, consult **AUI**. Our unique reader Amiga enquiry service lets you get the low down on all those glistening products, straight from the manufacturers and distributors.

## 112 Advertisers Index

Let your fingers do the walking, feeling and talking. Use our advertisers index to get straight to that advert you were looking for.

## 88 10 Years of the Amiga

AUI Special Report Part 2



It's been an eventful ten years of the Amiga. Mike Nelson and the **AUI** team continue their review of this amazing decade with a further report of the later stages of Amiga development, key figures, and the favourite software.

## COMPETITIONS

### 35 InTos

There are 30 copies of this clever new Amos add-on to be won.

### 56 Colouring the World

You can win the **AUI** colour printer choice - the Epson Stylus Inkjet.

## SPECIAL REPORT

## 45 Colouring the World

Inkjet Colour printing no longer means weak watery colours and dotty pictures. John Taylor and the **AUI** team investigate the modern high tech performance machines to clue you up before you consider buying. Here's your guide to Colouring the World.



## Who Does What

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## ...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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Printed in the U.K.

# The Amiga Dimension

In this **AUI**'s NewsFile we are publishing in full the invitation from the Liquidators of Commodore to those who wish to bid for what remains of the company. We received this information close to the time at which this **AUI** went to press. We obtained the actual material from the Internet.

By the time you read this magazine, which hits the streets at the beginning of May, the decision on who will have bought the Commodore copyrights and what interests us most, the possession of the Amiga, will almost certainly have been settled.

We will, of course, report this in the next issue of **AUI**. However, it is possible that you will already have learned of the victor, if the new possessor of the Amiga can so be described. Even if you do not flick through the pages of the Wall Street Journal or the Financial Times to find the no doubt tiny item recording the fate of Commodore Business Machines, you will be able, as shall we, to discover through the magic of the Internet the result of the auction.

As a journalist, it is with some frustration I offer you this possibility. Why, as the longest established existing Amiga magazine in the world can we not be relied on to bring you both the news and an analysis of what it might mean? We can but with this new dimension of networked communications, the Press, using printing technology little different in essence from that of 500 years ago, is being left behind. Commodore's destiny will be signed and sealed off and the quickest method of transmitting of the news will, perhaps rightly, be electronic not through the printing presses and paper.

This important new element in communication is an indication is going to become increasingly significant in the coming years. At present, it is said that between 20 and 30 million people are using the Internet. That is predicted to rise to 187 million by the turn of the century. If **AUI** and other magazines like it are to last, we will have to solve the problem of how to deal with this audience. I confess to you that I have no idea what future developments of this netted kind will bring nor have I seen any other publishing organisation that has a believable strategy to manage such a radical change in communications technology.

One change in the Amiga Dimension which may or may not be related is a sad one for me to report. I said earlier that **AUI** is now the longest established existing Amiga magazine in the world. I could not have made that claim until now. While **AUI** was the first Amiga magazine in Europe, Amiga World was the first to appear, some months before us, in the USA. Amiga World has now been closed by its owners, IDG, the largest computer magazine publishing company in the world.

For much of its time, Amiga World was an excellent magazine. Its first editor, Guy Wright, contributed substantially to creating an outstanding publication that we at **AUI** both admired and we hope flattered by some degree of emulation of its seriousness and the depth of its coverage of a wide range of Amiga activity.

Over recent years, Amiga World had reduced its size and pagination and lost quite a lot of its drive and energy. According to reports, its proprietors closed the magazine as, for the first time in its history, it was about to lose money.

The closure of Amiga World is not a good sign for the Amiga. It comes because of the almost complete disappearance of the Amiga from the US computing scene and the consequent absence of the advertising which could have kept Amiga World profitable.

That doesn't mean that there are no more Amiga users in the USA. Far from it, there is still a loyal user base as there is in Europe. But a year is a long time in computing and Commodore and the Amiga, for the quicker moving American market, may well seem dead and gone, especially to a huge, hardnosed publishing company with other electronic fish to fry.

It may be considered ironic that the closure of Amiga World is reported here in the same issue of **AUI** as the final auction of CBM which brings some hope for the future. However, those US now Amiga magazine-less users are in many cases also "netters". They will hear of the new Amiga regime through some online service more quickly than they would have through Amiga World. Though some kind folk have suggested that **AUI** could fill the Amiga World absence. Perhaps.

It may be the threatened demise of Commodore and the Amiga that seems the most important change facing us at this time. But the big challenge, the real change, in both the computing and publishing may turn out to be the wiring up of the whole world, or at least an increasing part of it, and the way that network moving enormous quantities of fast moving information will come to influence all our lives. We will cover that auction in the next **AUI**. But watch out for news of it on the Internet. Because the Amiga Dimension now includes the Internet too..

Antony Jacobson  
Managing Editor

# The End of the Story?

The information below is probably self explanatory. We thought that it was important enough to carry in full. It is the official invitation for anyone who wanted to bid for Commodore, the Amiga etc to stand up and be counted. Unfortunately, this *AUI* goes to press before the date on which the auction will take place. By the time you read this it should be all over.

## UNITED STATES BANKRUPTCY COURT SOUTHERN DISTRICT OF NEW YORK

**In re**

**Petition of FRANKLYN R. WILSON and  
MACGREGOR N. ROBERTSON, Liquidators  
of Commodore Electronics Limited  
in a foreign Proceeding**

**:In a Case Ancillary  
:to a Foreign Proceeding  
:Under 11 U.S.C. 304  
:Case No. 94 B 42602 (JLG)**

**In re**

**COMMODORE ELECTRONICS LIMITED  
Debtor**

**:Involuntary  
:Chapter 7  
:Case No. 94 B 42186 (JLG)**

**In re**

**COMMODORE BUSINESS MACHINES, INC.,**

**:In Proceedings For A  
:Reorganization Under  
:Chapter 11  
:Case No. 94 B 42187 (JLG)**

**Debtor.**

## NOTICE OF HEARING TO APPROVE SALE OF ASSETS AND SOLICITATION OF HIGHER OR BETTER OFFERS

TO ALL CREDITORS, SECURITY HOLDERS,  
PARTIES IN INTEREST AND INTERESTED  
PURCHASERS:

NOTICE IS HEREBY GIVEN of the joint motion (the "Motion") filed in the United States Bankruptcy Court by Franklyn R. Wilson and Macgregor N. Robertson (collectively the "Liquidators"), as liquidators of Commodore International Ltd. ("CIL") and Commodore Electronics Ltd. ("CEL"), and by Commodore Business Machines, Inc., as debtor and debtor in possession ("CBM"), for an order approving the sale of substantially all assets of CEL, CBM and certain of their affiliates (the "Commodore Entities") to ESCOM AG ("Escom") or to whomever may submit the highest or best offer at the Auction described below in this notice.

PLEASE TAKE FURTHER NOTICE THAT the sale to Escom is pursuant to a contract (the "Contract") dated March 13, 1995 providing for the conveyance of specified assets (collectively referred to herein as the "Assets"), including all the right, title and interest of the Commodore Entities to substantially all of their intellectual property, including technology, trademarks (including Commodore's logo and the names "Amiga" and "Commodore"), patents, copyrights, and know-how, and tooling, inventory, components, spare parts, microchips, and microchip test and design equipment, for a gross price of approximately \$5 million in cash. The technology being offered for sale includes all technology and patents developed in connection with Commodore's products, including the Amiga 1200, the Amiga 4000, and the Amiga CD32.

PLEASE TAKE FURTHER NOTICE that the sale pursuant to the Contract allows CEL and CBM to receive higher or better offers for the Assets at the Auction described below. Pursuant to an order of the Hon. James L. Garrity, Jr., United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court"), offers of third parties submitting bids for the purchase of the Assets shall meet the following requirements: (1) any offer by a third party shall be made pursuant to the terms of sale established by the liquidators; (2) any offer by a third party must provide for an aggregate value at least \$1,000,000

greater than the purchase price provided for in the contract, which value would be at least \$7,300,000 for the assets covered by the contract with Escom; and (3) at the time of submitting a bid, any third party bidder must deposit not less than \$1 million with the Liquidators to be held pending closing of the acquisition of the Assets by the bidder if its bid is accepted and to be refundable in full if its bid is rejected by the Liquidators or the Court. Details concerning the deposit are contained in the terms of sale.

PLEASE TAKE FURTHER NOTICE that the Bankruptcy Court has issued an order providing that any person interested in submitting a higher or better offer must submit its offer to the liquidators at 10:00 a.m. on April 20, 1995, at an auction (the "Auction") to be held at the offices of Fulbright & Jaworski, L.L.P., 666 Fifth Avenue, 31st Floor, New York, New York 10103.

Any potential purchaser, creditor or party in interest may obtain a copy of the Motion, the Contract, the terms of sale of the Auction, and other pertinent information on request from Fulbright & Jaworski, L.L.P., U.S. counsel for the Liquidators, by telephone or written request as set forth at the foot of this notice.

PLEASE TAKE FURTHER NOTICE that April 21, 1995 at 10:00 a.m., or as soon thereafter as counsel can be heard, in Room 610-2 of the United States Bankruptcy Court, The Old Customs House, One Bowling Green, New York, New York, is fixed as the date, time, and place of the hearing (the "Hearing") on the Motion, at which time the Bankruptcy Court will be asked to approve the sale of the Assets to Escom pursuant to the Contract or to whomever may have submitted the highest or best offer at the Auction.

PLEASE TAKE FURTHER NOTICE that by order of the Bankruptcy Court, all offers for the Assets must be submitted at the Auction. Any offers not submitted at the Auction will not be considered by the court or by the Liquidators, CEL, or CBM at the Hearing or at any later time.

PLEASE TAKE FURTHER NOTICE that, pursuant to an order of the Bankruptcy Court, any objections to the sale or the Motion must be made in writing and must be filed with the Clerk of the Bankruptcy Court at the address above.

Objections must also be served upon Paul L. Adderly, Bahamian counsel for the Liquidators, 41

Frederick Street, P.O. Box N-4, Nassau, Bahamas, upon Fulbright & Jaworski, L.L.P., United States counsel for the Liquidators, at 666 Fifth Avenue, 31st Floor, New York, New York 10103, Attention: William J. Rochelle III, Esq., and upon Kaye, Scholer, Fierman, Hays, & Handler, attorneys for CBM, 425 Park Avenue, New York, New York 10022, Attention Brian E. Kriger, Esq., and upon Skadden, Arps, Slate, Meagher & Flom, counsel for Escom, 919 Third Avenue, New York, New York 10022, Attention Carlene J. Gatting, Esq., with a copy to be received by the Chambers of the Honorable James L. Garrity, Jr., so as to be filed and received by counsel and Chambers no later than April 13, 1995 at 5:00 p.m., provided, however, that objections to the determination of the Liquidators as to who made the highest or best offer at the Auction may be made orally at the Hearing.

Dated: New York, New York Fulbright & Jaworski, L.L.P.  
March 23, 1995  
U.S. counsel for the Liquidators of  
Commodore International Limited  
and Commodore Electronics Limited

By William J. Rochelle, III  
A Member of the Firm  
666 Fifth Avenue  
New York, New York 10103  
(212) 318-3000  
Facsimile: (212) 752-5958

*There you have it. The invitation to the auction of what is left of CBM - verbatim, as it came out of the mouth of the Court. Will this be the end of the story? Will it be the beginning of the end or, as Winston Churchill said on another perhaps more significant occasion, the end of the beginning? By the time you can read this we might just know.*

## Commodore UK backs new AmigaOS

*In this issue of AUI, we have a report from Edmund Dumbill about the new operating system being mooted for a future Amiga. We have also picked up an interesting comment on this from David Pleasance, CBM UK managing director and joint leader of the proposed management buy out team. Here it is: I have seen the outline documentation and proposal for the development of a new Operating System and can state that if we are successful in our attempt to buy the Commodore assets, we would like to work with you.*

*We have a specification for an exciting new model Amiga which would be the natural platform for you to write to. I can assure you, that unlike previous Commodore Corporate Management, we have a reputation for integrity in our relationships with developers of both software and hardware.*

*Please contact us at your earliest convenience to discuss this opportunity.*

*Best Regards*

**David Pleasance  
MANAGING DIRECTOR**

*That message went out on the Internet and must be very encouraging for those engaged in the project. It looks like at long last things are beginning to move not only on the hardware but also the operating side too.*



# Almathera

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## ALMATHERA TEN ON TEN PACK.

This pack includes 10 CD-ROMs for the Amiga at a crazy price!

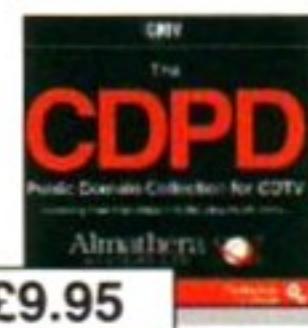
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The Almathera TEN ON TEN pack is designed for all Amiga computers with a CD-ROM.

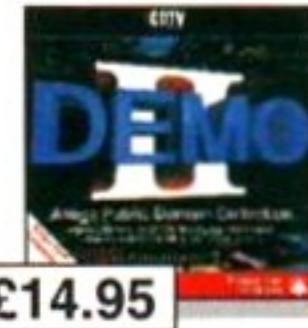
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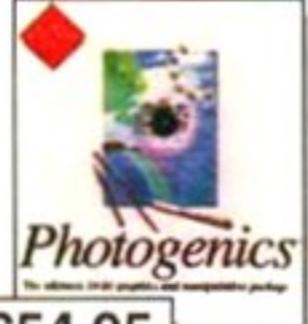
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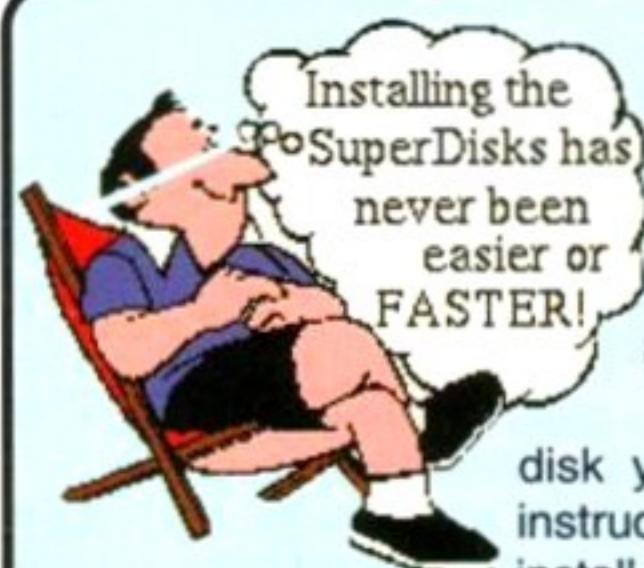


# AMIGA

## A User INTERNATIONAL

Welcome to the internationally renowned **AUI SuperDisks**. Yet another six disks with over four and a half megabytes of goodies packed on to them this month.

**David Taylor gets you started.**



### Instructions

Despite the amount of data squeezed on, installation is a breeze. For floppy installation, you'll need six spare disks or they can be installed directly to your hard drive if you have one.

Simply boot SuperDisk No.59 and select the disk you wish to install. Follow the on screen instructions. Each disk takes around five minutes to install to floppy.

See the Additional Information box on page 14 for more information.

## AUIJUN95a

### The Top Utilities Disk

#### The Boot Utility 2

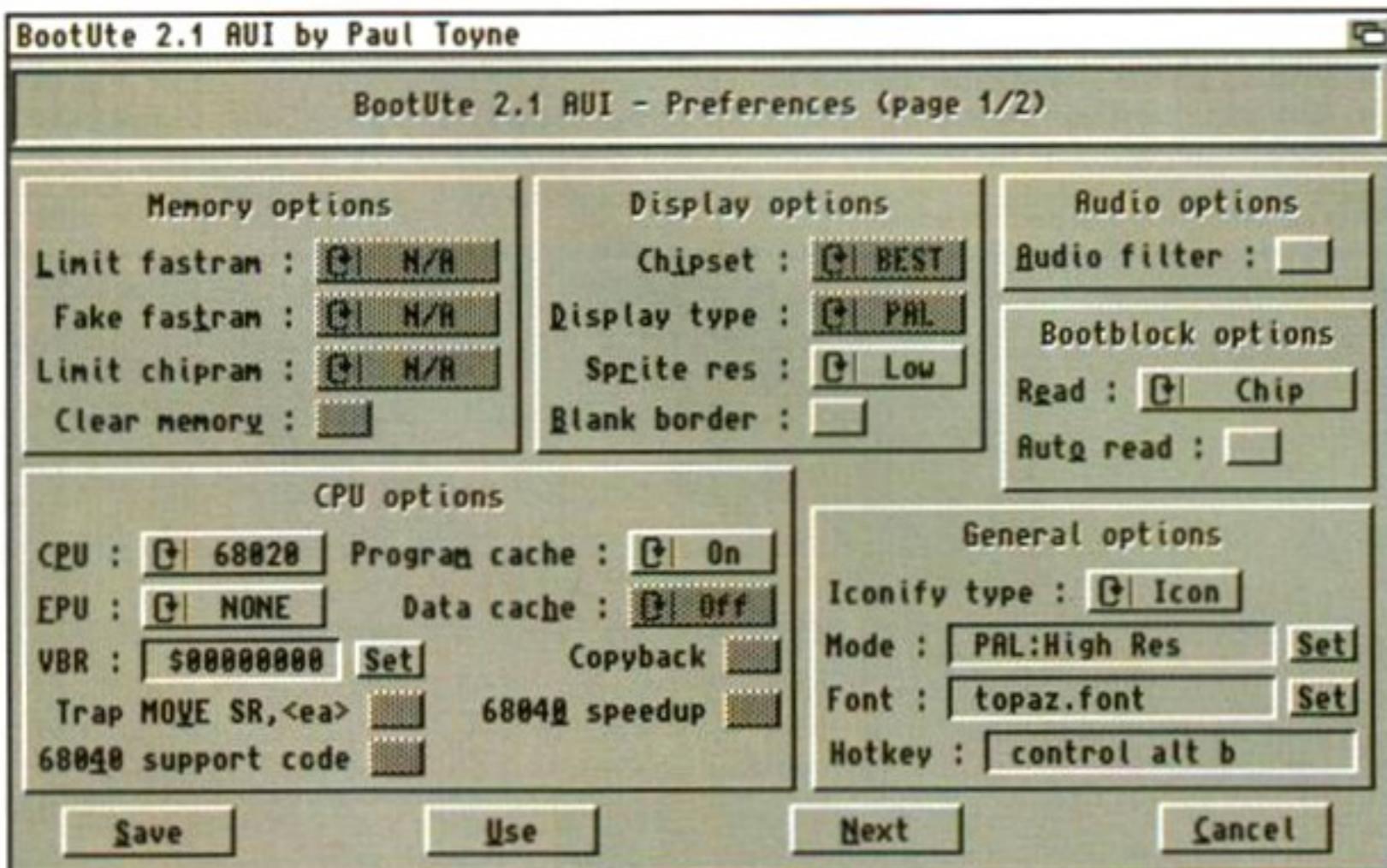
This exclusive version of the powerful utility offers more features than the Shareware version. Although the Amiga is designed to be backwards compatible, there are some badly programmed pieces of software that refuse to run on newer machines.

The Boot Utility is designed to force these programs to run.

There are two preferences screens which set up your requirements, but among other things, it is possible to load and save bootblocks. The program requires around 300K to run fully and will disengage after force the program to run.

The Boot Utility 2 is a fine example of programming and should be welcomed by all. There are extensive documents that cover its use far better than can be explained in a small space here, and they detail the extended facilities available in this version. In addition, **AUI** readers can upgrade to the registered version for half price. It's all part of the service.

BootUte 2.1 AUI by Paul Toyne



boot1.iff: The Boot Utility 2 is a handy utility to have around.



Some help finding out what went wrong.

#### Da Last Alert 3

It's not always a bed of roses in Amigaland and we all experience the unfortunate Guru Meditation from time to time. This program can be installed in your WorkBench startup drawer and after any crash will inform you what exactly happened and why the system crashed. It will only work when the system soft reboots of course, but will help you to sort out any problems you may be having. It supplements snooping utilities, such as SnoopDOS 3 (SuperDisk No.47), very well as an aid to keeping your system crash free.

#### Octamed Secrets

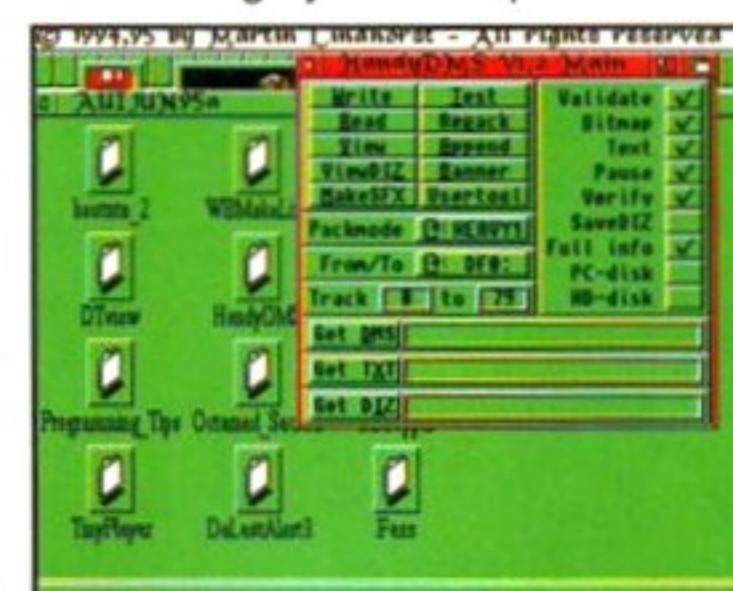
This is an AmigaGuide document that aims to help users get the most out of one of the Amiga's most popular music programs. It was written and submitted by Andy Soar, whose name is behind the tunes of several commercial games. The guide format makes it very easy to find help on whichever part is giving you trouble or whatever you need to improve on.

#### ZoneCreator

AMOS is a very popular programming language, well supported and producing some great things, such as Colonial Conquest II (SuperDisk No.50). This is a utility to help programmers save some time by mapping out the screens for them, avoiding having to do the whole process manually. Peter Herron, its author, supplied the program direct to **AUI** in an effort to help out fellow programmers.

#### HandyDMS

The Disk Masher System is still a popular way of packing entire disks, thanks largely to the speed it offers.



Powerful command over a difficult program to master.

# SuperDisks No.59 & No. 60

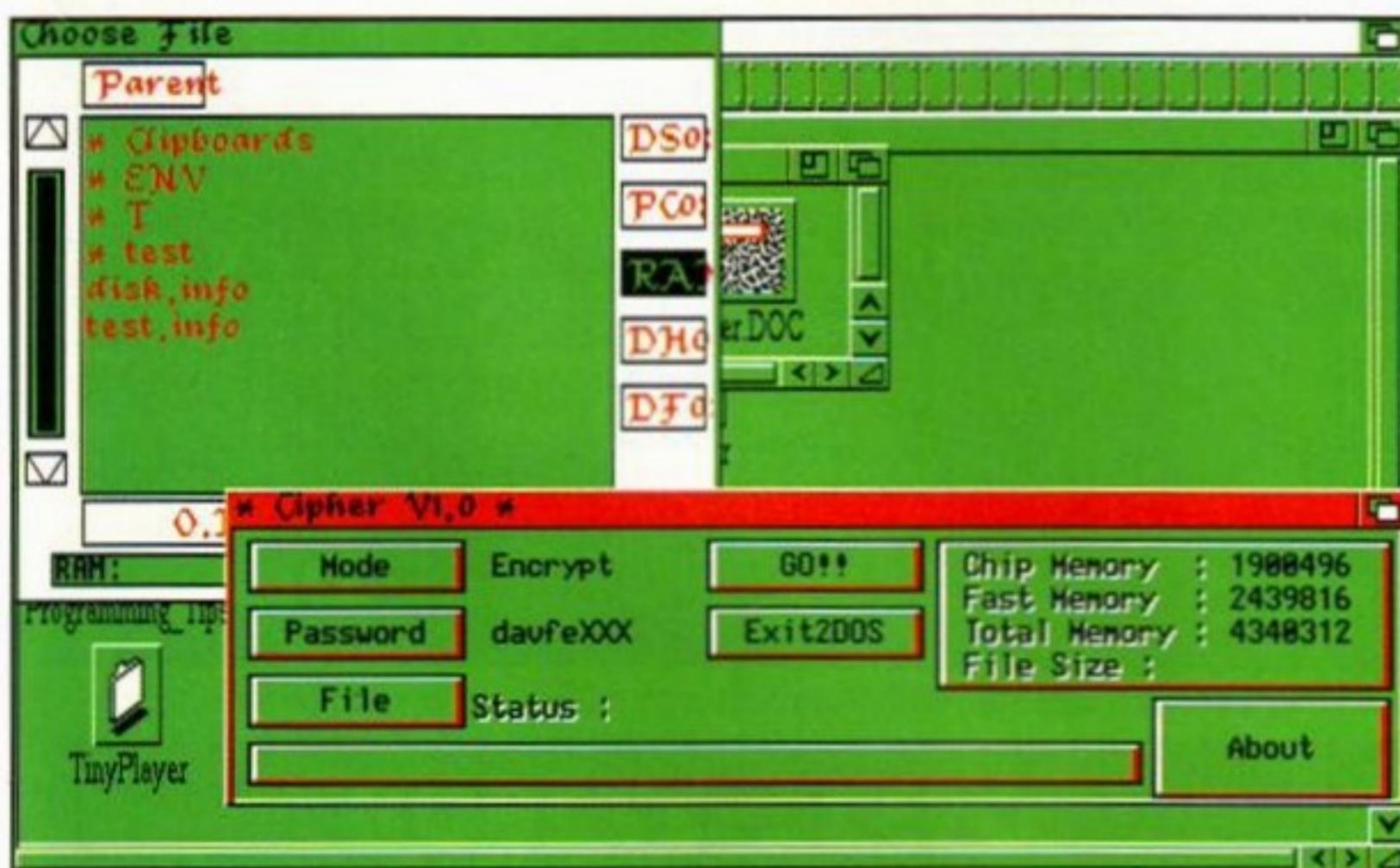
The command line though is a pain in the neck and doesn't offer too many options. This GUI will resolve all that. You still need a copy of DMS itself, but then the GUI will do everything, even allowing you to install to a RAM disk.

## FASS

Some programs that use fonts, such as DTP or paint programs, refuse to look anywhere but the fonts directory for fonts. This is a nifty GUI that will allow you to assign the fonts directory to other paths and so enable you to access them from programs. It's an ideal accompaniment to the Essential Fonts disks on this month and last month's SuperDisks.

## Cipher

If you don't want your secrets to fall into the hands of the gutter press then some form of data encoding is in order. On SuperDisk No.53, we supplied a CLI command that could do this, but Cipher makes the process even easier by making use of a friendly GUI. Each file can be given a separate password, but don't forget it as you never manage to decode the data any other way.



## WB Make Link

It's possible to make links between files using the Amiga DOS command makelink, but it's a lot easier to make use of this WorkBench utility. Simply select the facility from the tools menu and then select the icon you wish to

link and a second link icon will be produced. It's especially useful if you've got files deeply embedded in sub-directories.

## DT View

This is a viewer for WorkBench 3 users that makes use of the datatypes. It's an ideal tie in with the datatypes supplied on the WorkBench Essentials disk this month. It can display any file so long as the datatype is available.

## Joytest

This program will test your ports so that you can check any joysticks attached are working correctly. It will even check if you have four joysticks linked up using the parallel port.

## Mr Copper

It gets a tad dull having a simple grey WorkBench screen, doesn't it? Mr Copper will change all that. Flip through the cycles and your WorkBench will leap out at you in glorious technicolour.

## Programming Tips

This section contains the support files for Paul Overaa's Programming Tips article on this month's *AUI*.

## SuperDisk Scripts

As ever, the scripts that control the disks are supplied for you to examine and make use of if you're an expert user.

## AUIJUN95b

### The WorkBench Essentials Disk

The Amiga WorkBench is a great interface to your computer, but despite being on version 3.1, there are still some aspects that can be improved. PD programmers are in their element here and have produced some excellent programs that can enhance your WorkBench.

ately, there is no way of disabling this, should you want to boot a standard WB and keep all your memory. Startup Manager is designed to solve this problem. It will add a graphical description of the programs launched and allows you to disable them on boot up or quit them all en masse when WB is loaded.

## MicroTM

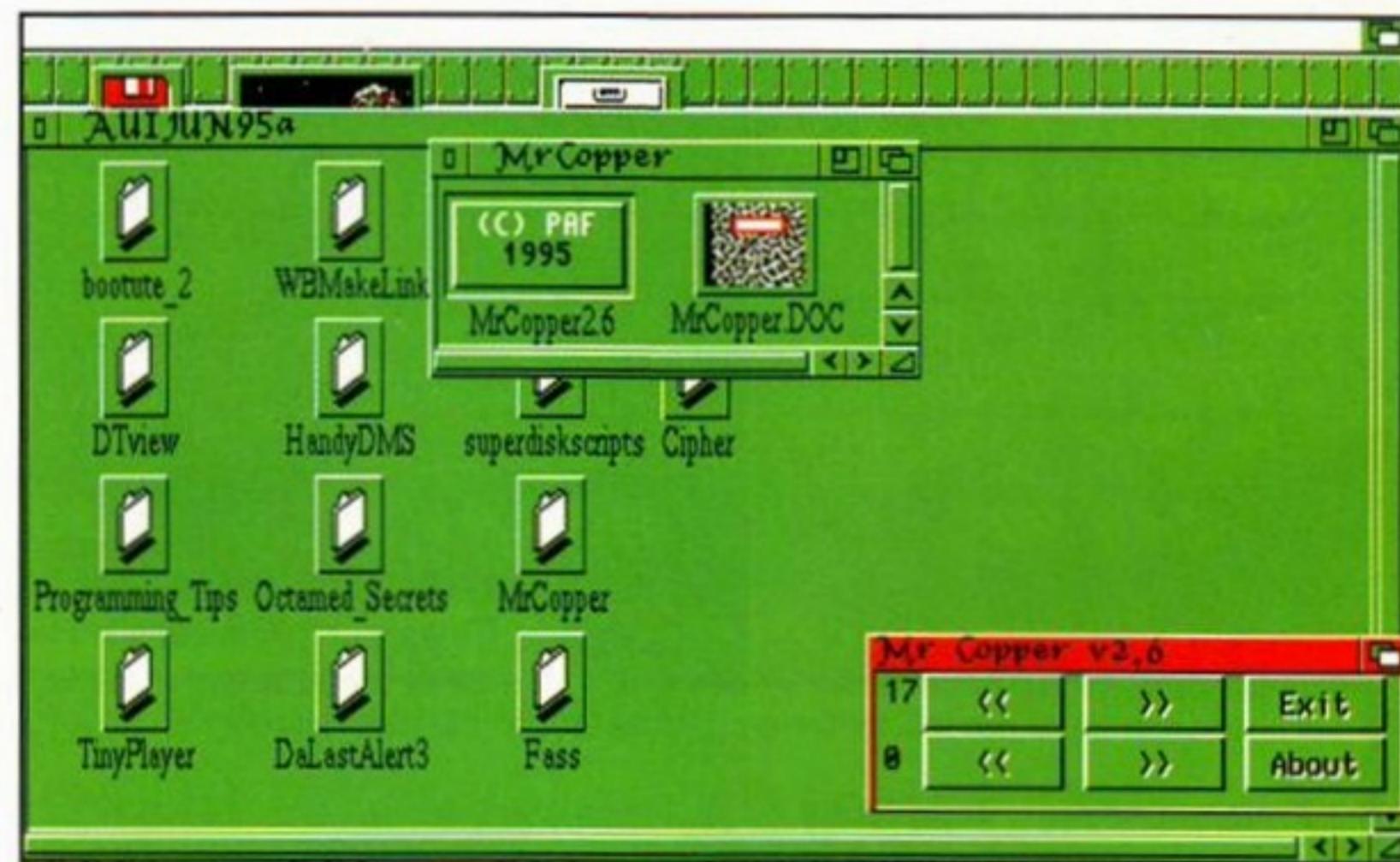
Adding programs to your tools menu can be done with various programs, but MicroTM is the smallest, making it ideal for those people to whom memory is at a premium. Adding programs is an ideal way of keeping your screen clean and saving you the trouble of rooting through drawers to find the programs you want.

## WB Title

The title bar on WB seems to be a little bit of a waste of display space to most users. This program will change all that, allowing you to customise the text and add more useful features to be displayed.

## D Clock

Having a clock on your WorkBench is a great idea, but how about one that



Make your WorkBench glow with colour.

## Startup Manager

Since WB2, it's been possible to put popular programs into your WBStartup drawer so that they are always run when WorkBench is booted. Unfortun-

ately, there is no way of disabling this, should you want to boot a standard WB and keep all your memory. Startup Manager is designed to solve this problem. It will add a graphical description of the programs launched and allows you to disable them on boot up or quit them all en masse when WB is loaded.

## Tiny Player

There are lots of players available to play modules on your computer, but most of them are quite large. This player can be loaded from either CLI or WorkBench. There are eight small modules included in this directory.

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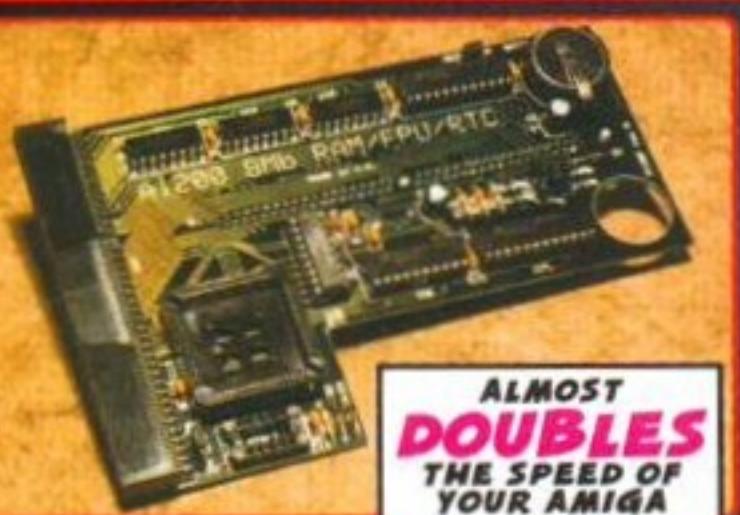
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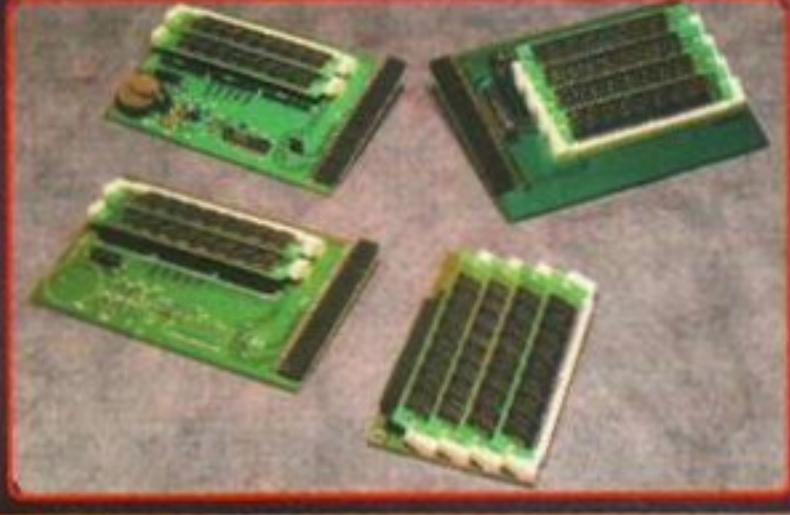
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the clock can obviously also be altered, to include, date, time, seconds, dragbar, etc, etc.

### BootPics

When WorkBench loads, it takes quite some time to execute the startup-sequence, even from a hard drive and while you're waiting, you have to look



## Workbench 2.04

### System Hard Drive

Graphics by S H Dyball.

Graphics by S H Dyball

*A rather tasty and appropriate boot picture.*

at a rather dull grey screen. Not any longer! These four pictures were submitted to **AUI** by the artist himself and we were so impressed that we've included them here. They are all designed for different WorkBenches, from 2 and 3 for both floppy and hard drive. To make it work, copy the picture to the WB disk or partition and use a IFF viewer, such as C-fade (SuperDisk No.47 & No.48) used on the SuperDisks and put the command into your startup-sequence.

Now, the Amiga will boot with the appropriate picture. Don't forget to cancel the picture at the end of your startup-sequence or you'll end up eating up memory.

### WCC

It's possible to alter the colours of your WB using your preferences, but the control is not very advanced. This is an

update to this idea, giving you much more control.

### ShutWB

When you load DPaint, you might notice that the program can shut WB in order to retain as much memory as possible. It would be useful if other programs could do this too, but

unfortunately many don't offer the facility. ShutWB has been created to fill the void and allow you to close the WB voluntarily, so saving you the memory.

### Datatypes

WorkBench 3 makes use of a great idea called the datatypes library. There are different datatypes available which can be installed and allow you to use many different formats of pictures and music samples, etc. This directory contains nine datatypes for WB3 users. From GIF and PCX to Postscript and MacSound, these should be a great addition to your WB.

To install these datatypes, read the docs and your WorkBench manuals.

*Remember that you should always use work on copies of your WorkBench disks. Ensure you know how to edit the startup-sequence correctly.*

*In addition to the programs here, you might be interested in the following:*  
 JPEG datatype (SuperDisk No.53 & No.54)  
 ScreenTab (SuperDisk No.51 & No.52)  
 MenuStay (SuperDisk No.41)  
 New Menu (SuperDisk No.41)  
 Q-Bench (SuperDisk No.49 & No.50)  
 Pointer X (SuperDisk No.49 & No.50)  
 ARQ (SuperDisk No.53 & No.54)  
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 Virus Checker (SuperDisk No.39)  
 A-Lock (SuperDisk No.55 & No.56)  
 WBVerlauf (SuperDisk No.34 or No.40)  
 Tools Daemon (SuperDisk No.40)

*and just about every other SuperDisk too! See page 32 for information on back issues.*

## AUIJUN95c

### The Essential Fonts Disk 2

This is the second disk in the set of fonts. Last Month we included a disk with seventy bitmap fonts for use with low level software. This month, there are twenty Compugraphic/PostScript fonts for use with DTP. To install the fonts, read the manual for your program and see the DTP article in this month's **AUI**.

The fonts are mostly in both PostScript and Compugraphic format. You can also convert them using the WorkBench Intellifont program. See the reference sheet for an idea of the fonts available.

## AUIJUN95d

### The Essential Libraries Disk

The Amiga is an innovative machine and one of the best concepts it uses is that of shared libraries. A lot of PD programs use additional libraries that have been made and released into the domain. Because of the size of the libraries though, they are often not included in with the program and you

## AUIJUN95c The Essential Fonts Disk 2

cambridgenormal - CAMBRIDGENORMAL	n/a - GREENCAPS
canaith - CANAITH	inkabod - INKABOD
cartwright - CARTWRIGHT	n/a - JUDAS
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eurostile - EUROSTILE	rechmanscript - RECHTMANSSCRIPT

suddenly find yourself having trouble running the program.

This disk contains some of these libraries, in order that you can keep them and make use of them when you need to.

The following libraries are included: Arp, FastMath, IFF, Req, Reqtools, PowerPacker. Should you ever require other libraries, PD houses should stock them.

## AUIJUN95e

### The Shell Essentials Disk

One of the Amiga's big plus points is the ease of use of its CLI (command line interface) or Shell, ie. the bit where you type in! For many people, the Shell is to be avoided at all costs, because they're so used to using WorkBench that they can't or won't deal with the Shell. That's normal because after the first few error reports, they normally back off.

The Shell though is much better than the system on many other machines, systems such as DOS on the PC, and it offers a great deal of power very easily. It just takes a little patience and perseverance. After a short time, you'll start to want more than the standard Shell can offer, but luckily the Amiga can provide this thanks to the hundreds of additional commands that have been written by PD programmers.

This disk contains Amiga Ultimate Shell, which is a full upgrade to your CLI, offering through compatibility, which means it makes use of the usual C commands, but adds the power of its own. To use this Shell, take a look at the documents and set the program. In addition to this, there are dozens of extra commands that can be added to your C drawer.

Here is a list and brief description of each of these commands:

**Abortcommand** - If you use a lot of programs, you'll often come across a program hanging, which is highly irritating, especially if you've launched it from Directory Opus for instance. Abortcommand will close a process even after it has hung to give you the chance to carry on and save any information or finish what you were doing before rebooting.

**Blocks** - If you take a look at the file size of a program and then try to copy

## SuperDisks No.57 & No. 58

it to a disk with that amount of space, you'll find that it doesn't fit. That's because additional bytes are used to locate and place the file. Blocks <filename> will tell you how many free blocks are required to fit the file.

**Delay** - The standard wait command doesn't offer a great deal of precision. Delay is far more accurate.

**Flushlibs** - When libraries are used, they stay loaded into ram. Flushlibs will clear any unnecessary libraries from memory.

**Foreach** - This allows you to apply a command to multiple files, instead of having to type the command each time.

**FSdirs** - Fast Smooth dirs will make directory searching far quicker especially for programs like DPaint.

**Grep** - This is really an extended search command that will search multiple files and give various reports.

**Iconmonger** - This will manipulate icon attributes allowing you to copy icon information and alter it from one file to the next.

**Isresident** - When you use certain commands, you find that they have or haven't been made resident, ie. stored in ram. Isresident will check if a command has been made resident.

**Makelink** - The standard makelink command is only capable of making hard links, this update allows soft links to be created.

**Mkdir** - If you create a directory from shell with the standard command, a directory icon won't be created. This new command will rectify this.

**Noicon** - Some programs will insist on creating icons for data that you save (WP mostly), but often you don't want them to. This command will stop them.

**Noreq** - Often when you're writing scripts, you don't want errors to throw up requesters, for volumes for instance. This command will override requesters.

**PBL** - There are quite a few blankers around, but here is an all in one, small, command that will blank the mouse and then the screen and will also accelerate the mouse! You can set the time for screen blanking, but obviously it makes sense for the mouse to blank first!

**Pipe** - It is normally only possible to put one command on a line, not to set a string of them - to pipe them. This is a utility to do just this.

**Qdir** - Like list, but far more user useful, including free space.

**QInfo** - The info command is fine, but doesn't show the information in a very usable format. Qinfo does a far more complete job.

**Rand** - this will select borders or backdrops, or pretty much anything, at random.

**Reset** - USE WITH CARE! This resets your machine and so could be useful for use in scripts or the like for protecting with passwords and resetting if it fails.

**Rm** - The Amiga DOS delete command does not require verification and can cause problems. This command offers more safety.

**Sc** - This will size your directories.

**Scopy** - The copy command, aside from being slow, gives you no indication of progress. Scopy has various parameters and will give you a graphical interpretation of its progress.

**Script** - Should you be working in a CLI, there is no way to back track beyond what's on the screen to see what you've been doing. This handler will save a record of your work for you to recall.

**Sort** - This program will sort ASCII files into alphabetical order.

**Whereis** - Should you have programs embedded in sub-directories, it's often difficult to remember where exactly

they are. Whereis will search through all the directories to locate a file.

**Wild** - The use of wild cards (\* - to denote any file, as in \*.info) is great, but not supported by all programs. Wild will change all that!

*In addition to these commands, you'll find many other SuperDisks have included useful upgrades to the Shell. SuperDisk No.55 & No.56 contained a special disk with 35 CLI programs on them.*

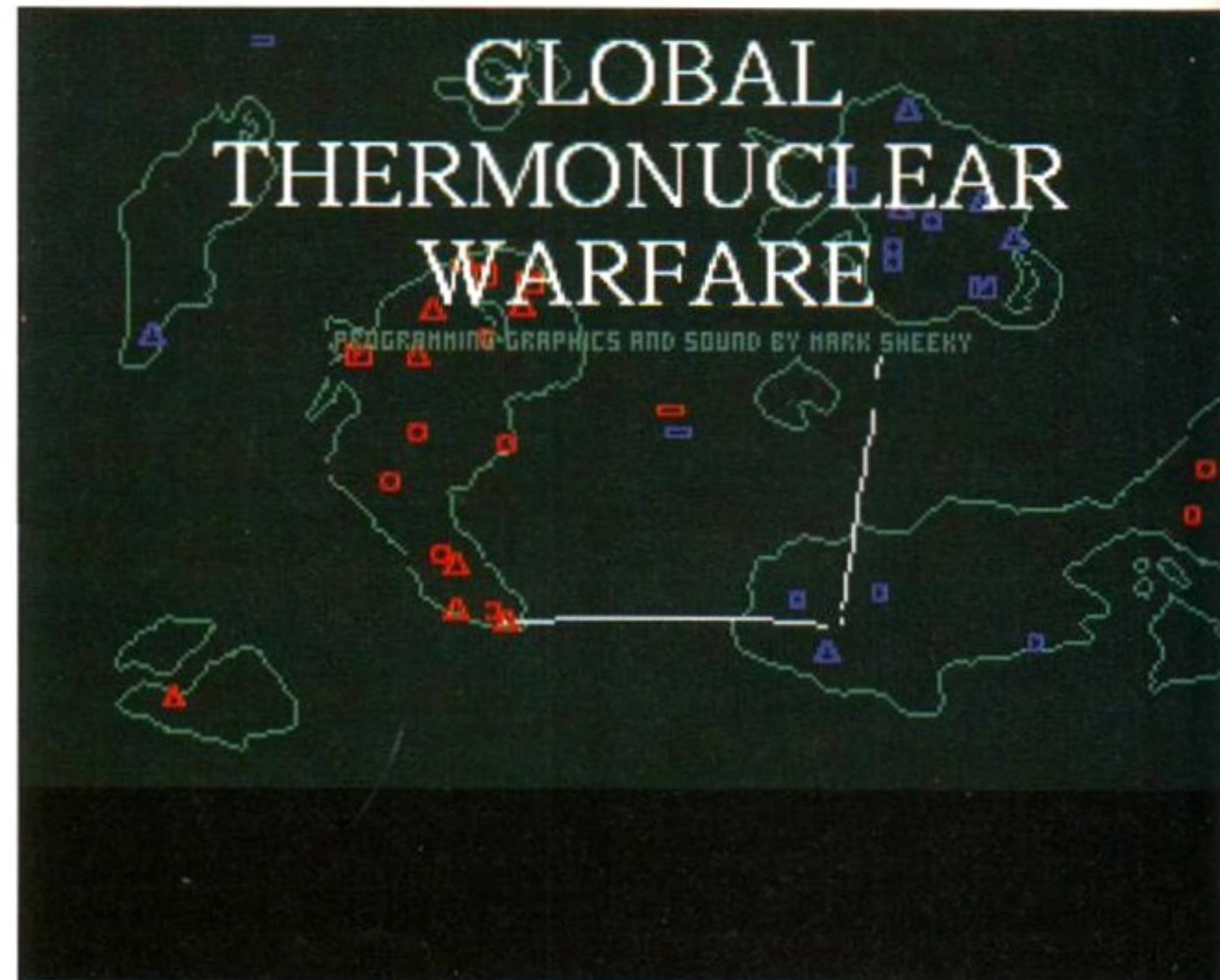
## AUIJUN95f

### The Great AUI Games Disk

### Global Thermo Nuclear Warfare

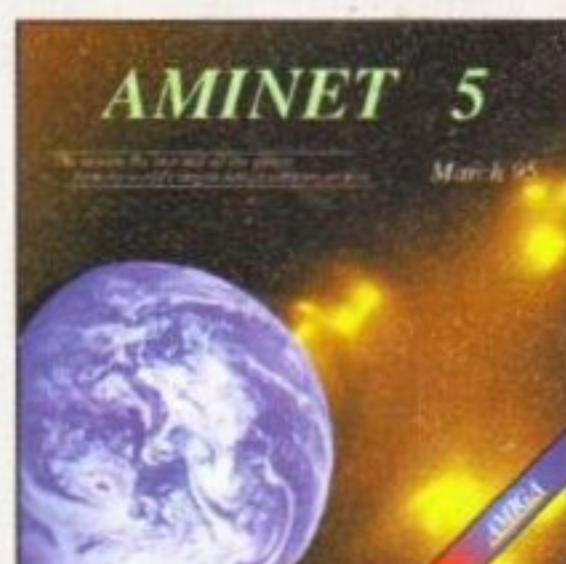
Awarded 85% in last month's **AUI**, this game will ring bells with those who remember the film Wargames. The idea of the game is very simple. There are two sides and two players control the arsenal of weapons at their disposal. Choose a launch site, and calculate the trajectory and heading, then launch and nuke your opponent. Continue until you've wiped out the opposition. Pleasant, eh?

There are three different maps to choose from and should present a good challenge to you and your friends. Enjoy... **AUI**



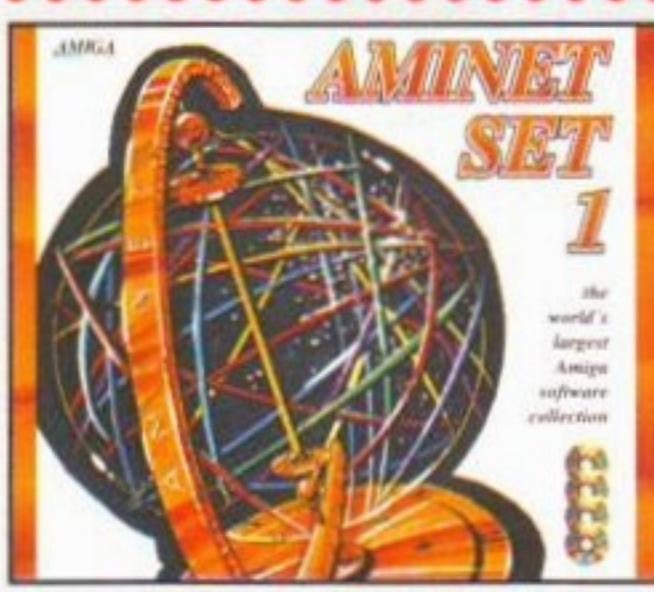
*Perhaps not the nicest of titles, but a fine game.*

CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-R



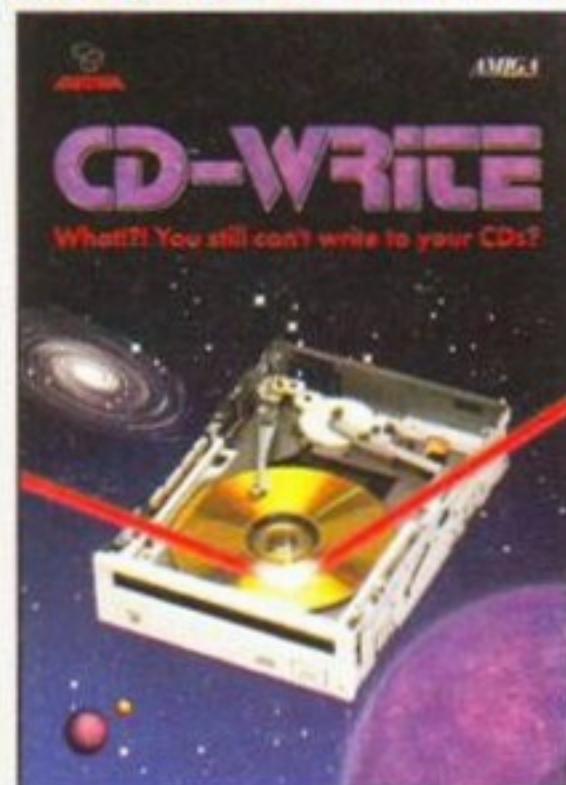
## Aminet 5

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



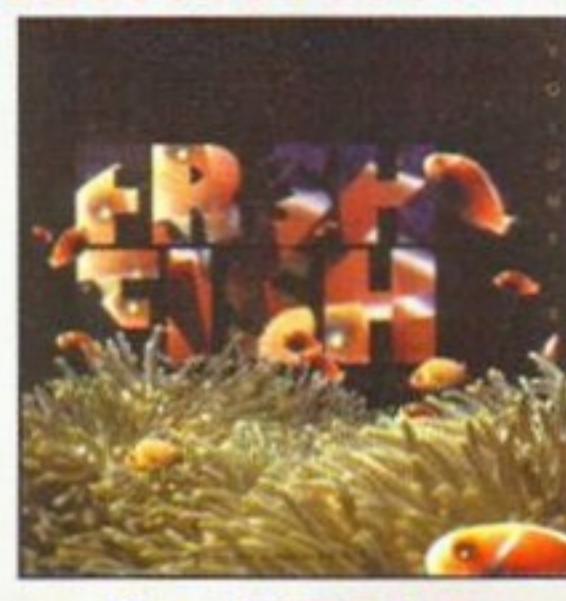
## Aminet Set 1

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 for 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



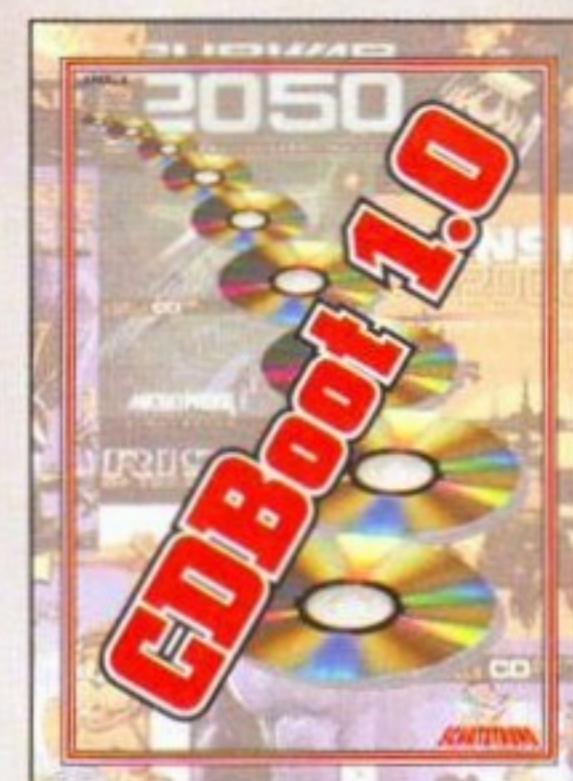
## CD-Write

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. £49.95



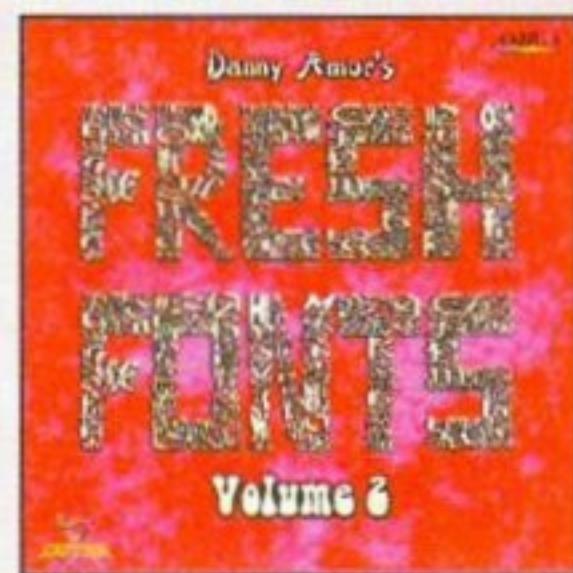
## FreshFish 8

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 release. £29.95



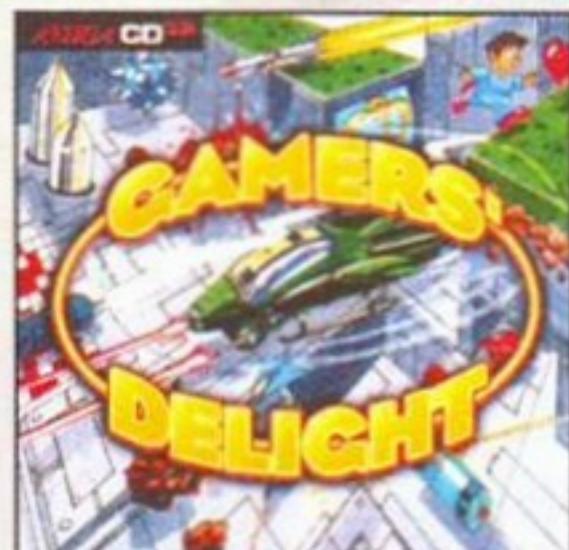
## CDBoot 1.0

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 Thielen 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), Thielen (19 families). £19.95



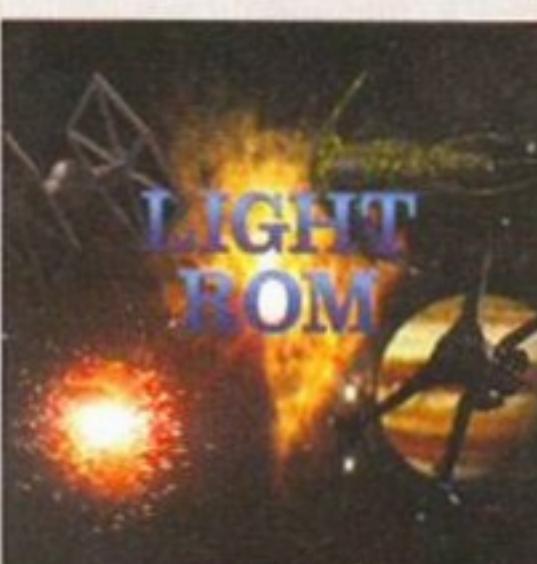
## Gamers' Delight

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 await! 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. £29.95



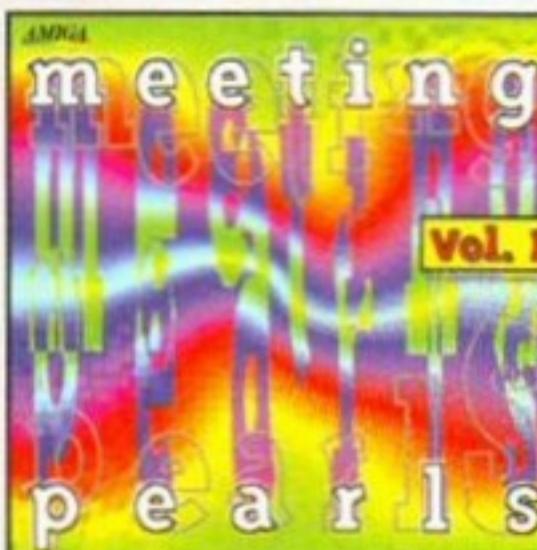
## LIGHT ROM

The LIGHT ROM CD contains almost 650 megabytes of 3D objects, images, images 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



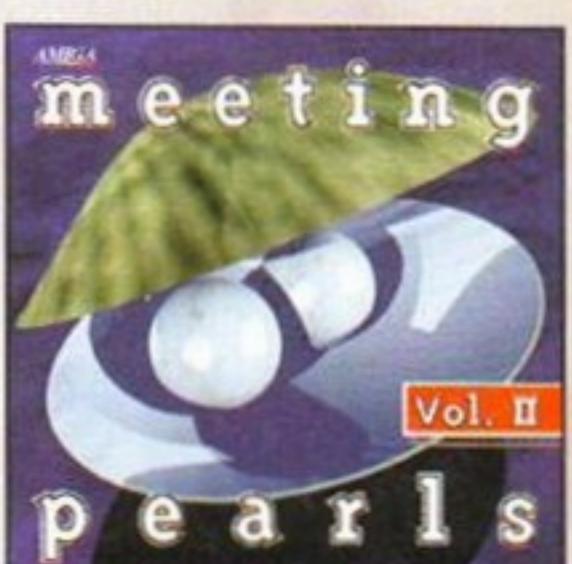
## Magic Illusions

3D Stereograms on your screen! A new, interesting entertainment is born: Without special aids a three dimensional colourful and fantastic object appears suddenly on a two dimensional strangely patterned picture. The illusion of depth has already stunned millions of people around the world. Now you can view the stereograms at home on your screen! All you need is on this CD. Besides 200 stereograms with varying difficulty, there is software on the CD, which enables you to create your own 3D pictures. £12.95



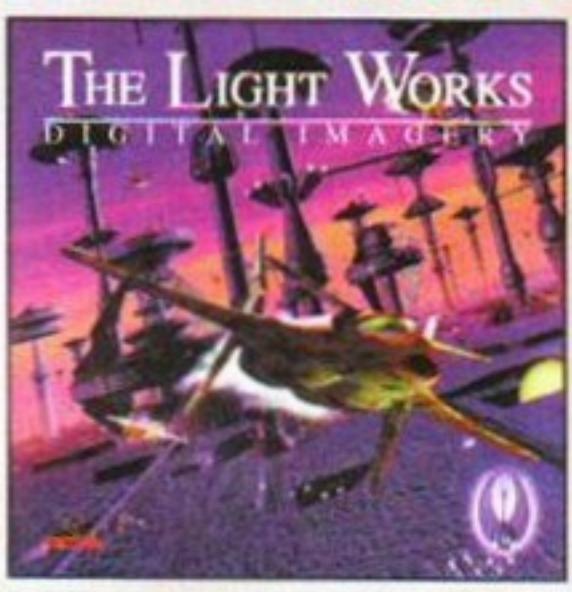
## Meeting Pearls Vol. I

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. £39.95



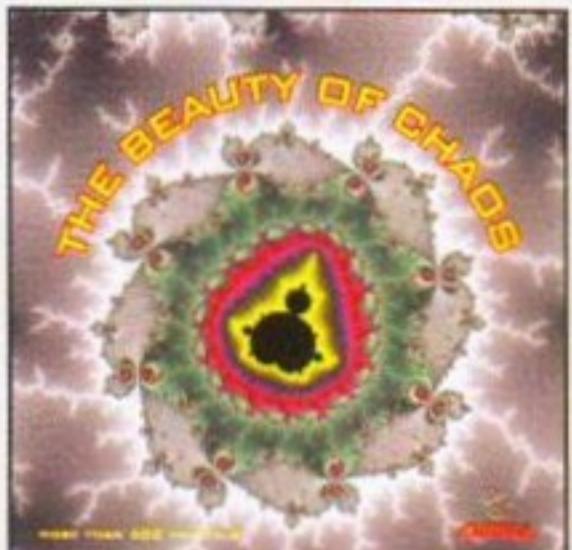
## Meeting Pearls Vol. II

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 - 2.5 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

International Distributor:



GTI  
Grenville Trading International GmbH  
Zimmersmühlenweg 73  
61440 Oberursel · Germany  
Tel +49-6171-85937  
Fax +49-6171-8302  
Email: Compuserve 100336.1245



# DISK INFORMATION

## Additional Information

### Floppy Users

You can install to any disk except this month's SuperDisks. When prompted, insert your spare disk into d0:, the internal drive. The time taken to install a disk varies, but you will notice that AUIJUN95e takes longer as it contains a large number of small files to install.

### Hard Drive Users

For the first time since the "foolproof" installation procedure was introduced, you can install directly to your hard drive. Boot SuperDisk No.59 as you do for floppy installation, and select the disk you wish to install. When asked whether you wish to install to floppy or hard drive, select 'h'. You will be given a list of available devices and the space on them. Bear in mind that over 4 and a half Megs of space are required to install the whole set of disks.

The SuperDisks will install an exact copy of the floppy disk, AUIJUN95x, to a subdirectory of that name. This includes startup-sequences et al. Delete any unnecessary files. Note also that the icon information default tool in the documents will need changing or the reader 'least' will need copying from the c directory in the subdirectory to the c directory on the partition you have installed to (not necessarily sys:c directory).

You cannot install to any path that contains the following letter sequence: "df", "pc", "ds", "ram", "cd". This is to avoid any confusion with other Amiga devices. It is not a good idea to have partitions/directories called this anyway.

### Expert Users

The installation directly to hard drive should mean that manual installation would take you longer now. It therefore seems little point detailing this. Should you wish to, remember that SuperDisk No.60 is a diskspare disk and requires this device to read them and that the commands are stored in superdisk59:c/commands.lzx. The SuperDisk scripts are available on AUIJUN95a: for you to use and it would be best to install that disk in the normal way first so that you can see where duplicate files are used.

## 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.59. 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. GL8 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 **AUI**. 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 have a masterpiece that you think can cut it with the best, send it to: SuperDisk Contributions, Amiga User International Magazine, 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 decompressing 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.£50), 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.

# OPTONICA



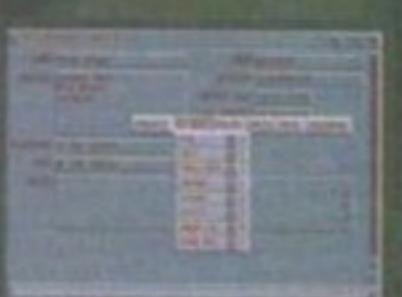
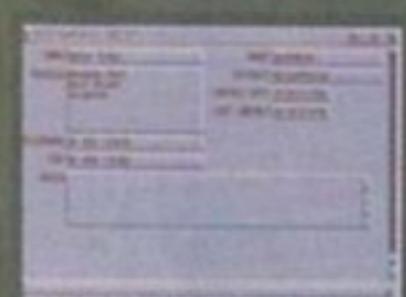
£29.95

## INFONEXUS NEW!

InfoNexus is a sophisticated file management system with integrated multimedia and network support. An ideal replacement for both workbench and CLI users. InfoNexus features a full on line help system. As well as having the ability to move, copy, delete, rename files, InfoNexus allows you to view/hear/launch just about any file. InfoNexus is simply the best File/Data manager on the market today!



ALL AMIGAS 1 MEG RAM MIN



ALL AMIGAS 1 MEG RAM MIN



£29.95

## DATANEXUS NEW!

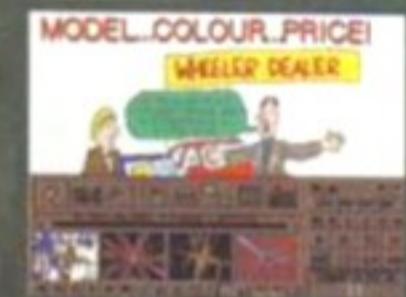
DataNexus is a very powerful and configurable, yet easy to use, flat file database. Its integral multimedia support for images, samples, text, music, animations, amiga guides, CDXL motion video, program & script launches make it ideal for just about any data storage and retrieval project. Full visual print layout and mail merge make DataNexus a must for your data.



£350.00

## SIMPATICA 2 + VTL

Simpatica allows Amiga and 24 bit image sequences to be rendered to video tape frame by frame producing the same results as products costing over ten times as much, ie, smooth video playback at 25 frames per second. Simpatica has been on sale, and improving, for over four years so you are guaranteed a reliable product. Supplied with both hardware and the bonus program Video TimeLapse, there is no better choice for video professionals.



ALL AMIGAS 2 MEG RAM MIN  
80% AMIGA USER INT MAGAZINE



£749.95

## INTERPLAY

Interplay is a unique product for the Amiga, it allows you to produce CD32 applications to the very highest commercial standard and was written specifically for the CD32 so no other Amiga authoring system comes close. Interplay was used to produce the three highly acclaimed titles below.



ALL AMIGAS 4 MEG RAM + HARD DISK MIN : 8 - 16 MEG REC

90% AMIGA USER INT MAGAZINE  
93% CDTV USER GROUP NEWS



£4.99

## PANDORA'S CD

Pandora's CD shows you just what can be achieved with multimedia on CD. An all original promotional title containing something for everyone, from educational productions to point of information, picture, texture, clipart and sound libraries, a jukebox, children's games and a sampler of Insight:Technology. Simply a must for anyone with a Commodore CD system!



CD32 - CDTV - A570

87% AMIGA FORMAT MAGAZINE  
88% AMIGA USER INTERNATIONAL MAGAZINE



£39.95

## INSIGHT:TECHNOLOGY

INSIGHT:Technology, lavishly produced by Optonica and published by Commodore, gives a fascinating look at modern technology with pictures, animations, photos, video, narration, text, music and sound effects, over 260 topics in all from the ball point pen to the space shuttle.



CD32 - CDTV - A570  
87% AMIGA FORMAT  
91% CU AMIGA



£39.95

## INSIGHT:DINOSAURS

INSIGHT:Dinosaurs is the second in the INSIGHT series, a lavishly produced, highly acclaimed title, rich in multimedia. Produced in association with the Natural History Museum, London, one of the world's leading Dinosaur centres of excellence, you can be assured that Dinosaurs is both technically correct and produced to the most exacting standards. Also features: DinoPaint, DinoQuiz and DinoPuzzle. INSIGHT:Dinosaurs has had the best reviews of any CD32/CDTV reference title so far (lowest mark 88%!), see for yourself why.



CD32 - CDTV - A570

92% FORMAT GOLD AWARD  
91% CU AMIGA (TOP RATED)  
96% CDTV USER GROUP NEWS  
90% COMPUTER SHOPPER

## Page 16

DiskSalv V.3  
Almathera Grows  
History Making Goes Pop  
Golden Image – Golden Price

## Page 17

Premier's Combi Units  
HP Sauce for the Goose...  
ICPUG Special Offer  
HP's New Colour Source  
Multimedia Futures

## Page 18

No Sex, Please, We're British!  
Over-Portable Notebooks  
And Still Chartopping...  
SyQuest Drop Price  
Ever Smaller But Bigger Too

## Page 20

Record Your Own CD?  
At A Screen Near You...  
Intermix '95  
Want To Take A Gamble?  
Bigger Than Ever

## Page 22

Sounds Like The Bose Speaking  
SX-1 Upgrade  
RAIDING The System  
Opening The Gates To A Dream  
Smart Aussies  
Surging Semiconductors  
Unzipping Us?

## Page 23

Pee See Tee Vee  
Quads Born  
Number 5 Is Alive  
Like Lemmings

## Page 24

Educating The Masses  
Taking The Pulse  
Wireless Printers?  
Booming PCs  
Quote of the Month

## Page 26

Intuitive Microsoft  
Blown Fuse  
Ultimately Intimate  
Magic Media Con  
CD-ROM Overtakes Disks  
AUI DTP Freebies  
Revolutionary Mitsubishi?  
Did You Hear The One About...

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

DiskSalv 3 has been released as a utility disk supporting all Amiga DOS file systems through 3.1. Almathera, the sole distributor, say that this is the first commercial release of longtime Amiga stalwart Dave Haynie's DiskSalv. Price £30.00, the packaging is, they claim environmentally friendly - but not included in the price!

The renowned DiskSalv 3 can be used regularly to check disks, delete files and traditional full or incremental backups can be supported with the recovery functions.

This useful utility can recover



*Haynie saves our wounded disks.*

# DiskSalv V.3

data from a disk in severe trouble, according to Haynie, and can fix a good portion of disk problems directly on the problem disk. (And haven't we all needed that help too frequently!)

DiskSalv 3 is also claimed to be

able to locate valid partitions on a disk with an unknown layout or a damaged rigid disk block. Sounds to us like a lot of lost-forever files could now be retrieved. And hooray for Haynie! Can you afford to be without your very own DiskSalv 3?

*For further details of this answer to a lot of frustration, Contact: Almathera, Southerton House, Boundary Business Court, 92-94 Church Road, Mitcham Surrey. CR4 3TD  
Tel: 0181 687 0040.*

# Almathera Grows



*Growth from products like Photogenics - as used for AUI covers - that make the Amiga what it is.*

Almathera is expanding due to, they say, the enormous success of the acclaimed paint and manipulation package Photogenics. (Which, observant readers will note has been added to the list of Amiga products used to create *AUI* - especially for Gary Fenton and the stunning *AUI* covers of recent issues.)

The Almathera expansion, this faithful supporter of the Amiga told *AUI*, is to cope with the on-going development of Photogenics and the demand of CD-ROM titles. The company has recruited a new programmer and a CD-ROM developer. The family run business, headed by father Paul Ralph and son Jolyon, has been growing in the last two years and now has a workforce of 12 fulltime employees. Good on you Almathera, long may you and your Amiga products prosper.

# History Making Goes Pop

History is being made, or so it is claimed, in the Pop music world. This month a virtually unknown band - that is virtually as in almost not in VR - The Small Town Heroes, will make a little history by releasing the first CD-ROM single. They say - and who is to refute them? - that it is the "World First". It's coming out on both PC CD ROM and Apple formats (Why not CD 32?) and contains both music and voice data.

Signs of the times for Small Town - but, possibly soon, Big Time - Heroes and the rest of us too.

# Golden Image Golden Price

Golden Image have told *AUI* that they have dropped the price "dramatically" on five products for the Amiga. Is this a case of turning a drama into a price list?

Their Multiface-III card for the A2000/A4000 is now £69.95 from £129.00. The well-received Octagon SCSI II controller for the A2000/A4000

was also £129.00 and is now a mere £89.95. The Tandem Dual CD/IDE controller for A2000/A4000 is down £19.00 from the previous £69.00. Their AlfaPower IDE controller for the A500/A500+ and AT-Bus IDE for A2000/A4000 both retailed previously at £99.00 and are now priced £74.95 and £54.95 respectively.

All this is good news for those in the market for the useful add-ons for which Golden Image have gained, yes, a golden reputation.

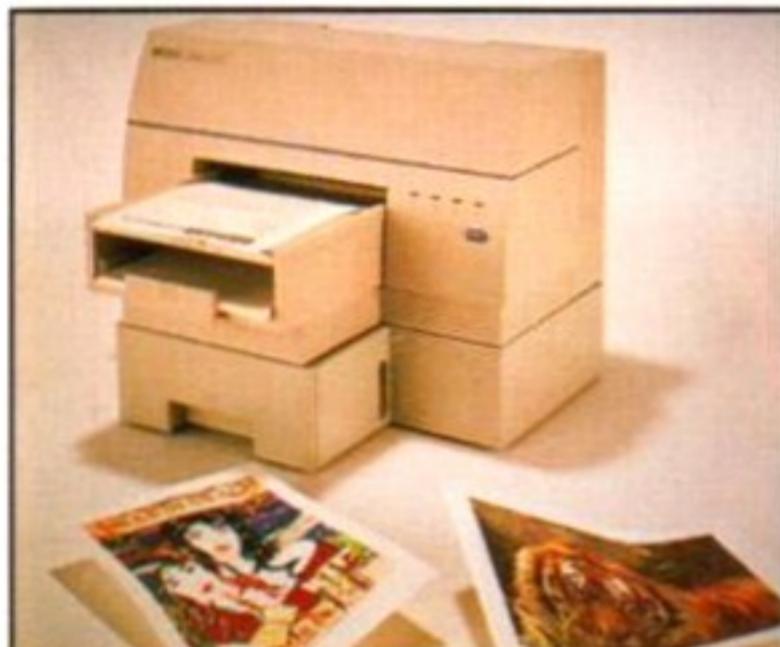
*Contact: Golden Image UK Ltd., 65, Hallmark Trading Estate, Fourth Way, Wembley, Middlesex HA9 0LB. Tel: 0181 900 9291.*



Workstations for the future?

Do Premier know something we don't? They have produced the Combi-Centre which has been designed for the "anticipated return to the market of the A1200 and the release of the top loading A1200 CD ROM unit". This "Combi" unit has, say Premier, sufficient clearance under the sliding shelf to accept the height of these two machines.

## HP's New Colour Source



Hot new colour for HP.

Hewlett-Packard has introduced what they claim to be the world's fastest, most advanced colour inkjet printers: the HP DeskJet 1600C and HP DeskJet 1600CM.

The printers are, say HP, designed for large companies and growing small businesses that want superior black and colour print quality, speed, connectivity, paper handling and expandability. The HP DeskJet 1600C and 1600CM printers are £1,150 and



£1,650 respectively.

The HP DeskJet 1600C printer and the HP DeskJet 1600CM printer, for PostScript, networked, and mixed environments are claimed to provide inkjet speeds of up to 8 pages per minute for black text and up to 4 ppm for mixed text and colour graphics.

Contact: Hewlett-Packard Ltd, Cain Road, Bracknell, Berkshire RG12 1HN. Tel: 01344 362044.

## Multimedia Futures

APT have announced their latest title "Multimedia Futures". Published fortnightly and subscription only, the newsletter is a sister product to the industry publication Computergram International - claimed to be the only daily newspaper for professionals and investors in the computer industry.

Multimedia Futures carries international financial, marketing and technological information on, and analysis of advanced television, video and multimedia,

telephony, virtual reality, CD ROM and the Internet and is aimed at professionals in these inter-related industries.

If you want to know what's going to happen in this technologically multimedia world, this might be just the info you need.

For a free sample copy contact: Rosemary English, APT Data Group PLC, 4th Floor, 12 Sutton Row, London W1V 5FH. Tel: 0171 208 4200.

# Premier's Combi Units

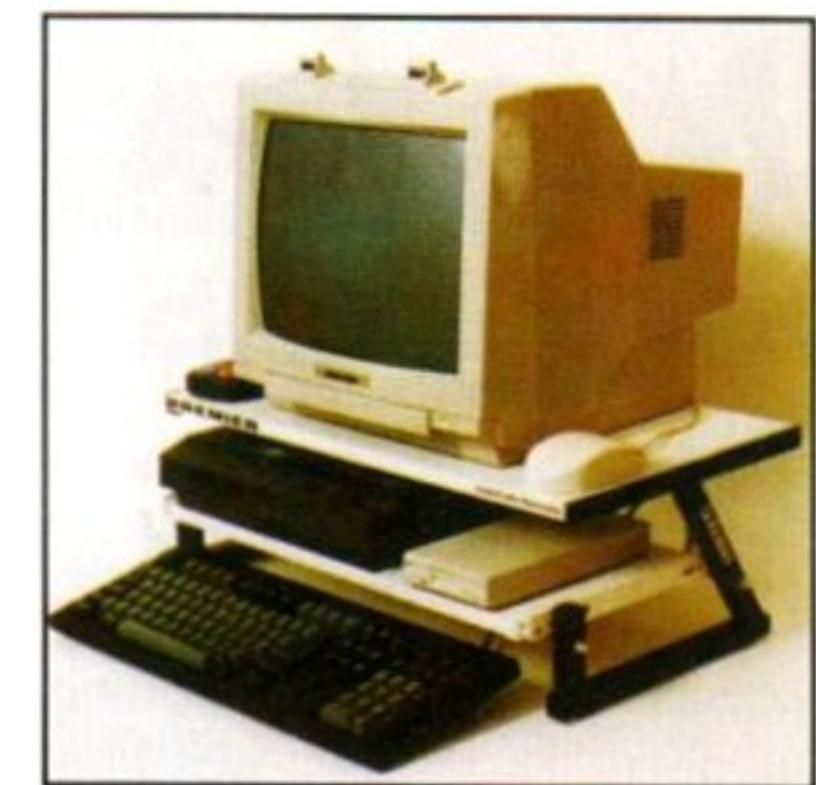
Whether their prediction of (re) release of these Amiga computers - and we assume that Premier means by "top-loading" the CD 32 - is over optimistic or not remains to be seen. There is nothing wrong with planning for the future is there? Anyway we think it is a really neat workstation and why hasn't anyone thought of it before. Or have they? (Ah yes, we hear you - the longtime Commodore users - cry. Premier has been around for yonks and they have produced this kind of workstation for machines as far back as the C64 and, of course, the A500, of

which they sold many thousands.)

This new combi-centre will take the CD32, SX1 Expansion, monitor, keyboard, disk drive and other peripherals.

Price £49.99 and supplied in flat packs for self assembly. (For anything of this kind, Self assembly must be the biggest euphemism of all time. Of course, it doesn't self assemble. Someone, preferably a masochist who enjoys a challenge has to do it.)

Though that sort of problem more generally applies to MFI-style stuff and not Premier's, we hasten to assure you.)



"for the anticipated return . . ."

Don't let the "self assembly" put you off though, the results with the Premier workstation as evidenced by their use in the very offices of AUI, are well worth the effort.

Contact: Premier Developments, 4 Third Avenue, Warboys, Huntingdon, Cambs. PE17 2SR. Tel: 0487 823684.

## HP Sauce for the Goose..

Besides goosing up the market printers for large companies, HP have not forgotten to take a gander at the home and small business market when supplying fast inkjet black and colour printers.

The new HP DeskJet 850C offers superior black print quality and near-photographic colour on plain paper, according to the company. Printing black text at 6 pages per minute and mixed text and graphics in colour at 2ppm, the 850C is targeted at small businesses and corporate users who want a single personal printer.

Price £539.00.

Meanwhile the HP DeskJet 540 printer is priced at £275.00 and is suitable for the home user "who is looking for ease of use and performance". (And aren't we all?)

The monochrome printers offer "an easy to add" colour kit for users who "do not want to be locked out of colour printing in the future." And for good reasons not to be "locked out" of colour, see the Special Report, "Colouring the World" in this AUI.

The new HP DeskJet 540 replaces the HP DeskJet 520 and the 500C.

## ICPUG Special Offer

The Independent Commodore Products Users Group (ICPUG) is offering members joining for the eight months from 1st May to 31st December 1995, a special cut price subscription of only £16.50 (including £1.00 share) for UK and BFPO members. The rate for Europe and Eire and Overseas surface mail is £20.50. Overseas Air Mail rate for this special offer is £27.50.

The old Commodore company may be gone but ICPUG, a non-profit making organisation which has been in existence for seventeen years, is there to offer help and advice to the owners of all Commodore machines, past and present, plus

users of IBM compatible PCs.

This membership offer includes four issues of the ICPUG Journal, free PD software for the Amiga plus a PD library (DOS and Windows) for the PC. There are discounts and technical help hot lines which are available for members only.

The ICPUG Journal covers the Amiga, PCs and earlier Commodore machines. The 'For sale and wanted' column is often the only way of acquiring items which are now out of production.

Contact: Tim Arnot, Membership Secretary, 17, Colne Drive, Oakfields, Didcot, Oxon OX11 7RZ. Tel: 01235 815725 after 8.30pm.

# No sex, please, we're British!

**U**S company Better Concepts is junk faxing UK retailers with lists of apparently hot and sexy products - but the catch is they are seemingly - perhaps we should say, seamily, or even steamily - not legal in Britain. ("As much brutality and violence as you like, sir, but don't lay a finger on my British skin gently")

Only one title, Sheer Delight, which features "the world's top models, posing in lingerie, bathing suits, topless and many more erotic scenes" is quoted as being UK approved. (We knew an English man some years ago who told us he had never seen his wife nude. No wonder newspapers that feature Page 3 type girlie photos do well in this country!)

At least one UK retailer has been arrested for buying Amiga sex CD-ROMs from the US, with titles such as "Plain Brown Wrapper Adult CD" and "The Sexual Fantasies CD" which promise "650 megs of XXX only action". Who needs CD fantasies anyway, when you can play out your own - with a cooperative partner or even two? And that does not necessarily involve your Amiga, except in the Spanish sense?

Still, that "Plain Brown Wrapper" title does intrigue us with its creative bit of tit-ling. Sorry for the typo.. The W/P does that on its own. (With fantasies too?)

*Contact: .... No, we don't want to tempt you to possibly illegal action! Except between consenting users, of course. You'll have to get the address from somewhere else.)*

# Over-portable Notebooks

**F**irst it was car radios, then portable phones. Now criminals have seen the potential in making off with portable computers which are easy to carry, easy to resell and in many cases are stolen to order.

Kyodai, a computer company who got burgled recently, have installed a highly sophisticated alarm and camera system and camera equipment - after

thieves stole over £100,000 of notebooks from their warehouse in Essex. None of the portables had hard disk drives in them. What's the matter don't these thieves have any idea of the memory and storage needed these days?

Though the raiders did take battery chargers. Very necessary if the portables are going to do lots of floppy disk swapping...

# And Still Chartopping...

**I**t may seem strange to those unfamiliar with the (very) odd world of computing, but while the largest part of those professionally involved with games seem now largely to be dismissing the Amiga as a dead duckling, if we hadn't already used a goosey-gander pun in this NewsFile we would be tempted to say that the computer we know and love is still capable of giving the blindly following fashion mob a good goosing. But we'll chicken out on that one.

Top of the Charts for computer games is a nice little bit of footie fun which you've probably heard of - The Sensible World of Soccer. What you and surely most of those sneering at the death of the Amiga might not realise is that this hottest of the hot in the Chart business has only appeared on the Amiga. No, no Sega or Nintendo upset the apple cart has jammed up the distribution channels with its overpriced presence in this yet Sensible World of well-programmed games.. Good on you Sensible John Hare. The Amiga still rules, OK when it comes to computer games, it seems.

# SyQuest Drop Price

**C**artridges in the games world may be breaking the banks of the once prosperous games companies but in other areas they are doing fine. SyQuest Technology has cut the prices of the 5.25-inch cartridges. The 44MB is now £41.00, the 88MB - £48.00 and 200MB - £65.00.

Ron Brown, vice president of corporate marketing for SyQuest told *AUI* that they "have responded to the industry demand for lower media costs and have brought into alignment the cartridge prices of both the 5.25 and the 3.5-inch lines." Which means, we think, that Syquest and others in the Winchester drive field are beginning to feel the highly competitive draft coming from the magneto-optical drives which are fast gaining popularity for those, such as magazine companies like *AUI*, who need to move around large quantities of data on portable drives.

"In 1994, SyQuest shipped more drives and cartridges than in any other fiscal year in the company's industry," said Brown. "This increase in demand is a result of emerging new applications in document backup, mobile computing, multimedia, document imaging and on-line services."

He's right about that. Just a few years ago, a 20 or 40 meg removable drive had a real Wow! factor. Now, designers and others who store huge lumps of data from pictures, video etc. yawn if you mention anything less than 250 megs or so. Soon the 1 Gig disk?



Down to 1.8" for more and more storage.

# EVER SMALLER BUT BIGGER TOO

**A**nd while on the subject of Syquest and their wonderful removables (Sounds like something you might get under one of those plain brown wrappers, doesn't it?)...

SyQuest has introduced a 1.8" high-performance removable cartridge hard disk drive as a PCMCIA mass storage option. The new 1.8" SQ1080 is a Winchester technology-based removable drive with a removable cartridge for portable applications.

The SQ1080's removable 80MB cartridge allows data to be removed

without taking out the drive. The cartridge's removability also means that storage capacity can be added to the drive, one cartridge at a time.

The SQ1080 offers, say Syquest, a durable transportable cartridge with the ability to handle up to 2000 Gs of shock without it affecting the data. It also offers PCMCIA/ATA compatibility, and fits all Type III and Stacked Type II PCMCIA slots.

*Contact: SyQuest Technology, 47071 Bayside Parkway, Fremont, California 94538. Tel: 800 245 2278.*

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The new BLIZZARD 1230MK III turbo accelerator board is the ultimate expansion board for the A1200. It comes fitted with the super fast 50 Mhz 68030 CPU (includes an MMU - Memory management unit) has an industry standard 72 pin SIMM socket and one PGA type FPU socket.

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All 2.5" Drives Include IDE cable

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# Record Your Own CD?

Stralfors Plc has launched two new CD-Recordable products. The lead product is the Professional Mastering CD-R and is specifically targeted for use by software developers and publishers. Among the key properties claimed for it is the ability accurately and clearly to label the contents.

Having identified that most CDs did not have sufficient room for describing the contents, Stralfors' development manager, Paul Garrison told *AUI* that the Professional Mastering CD-R offers features such as a clearly defined area for writing on CD-R content, spare surface label for updating, reversible inlay card and concise instructions for use.

The Customised Own Label version leaves the printing and packaging specification entirely to the end user. Stralfors, they say, then produces a bespoke product for that customer. Most customers choose to print their company logo and product information on the disk, Garrison told *AUI*. "Apart from enhancing a company's corporate identity a quality own label CD-R offered added security benefits and was more often economical than a branded product."

*Contact: Stralfors PLC, Enterprise House, Murdock Road, Dorcan Swindon SN3 5HU. Tel: 01793 488008.*



Will you put out your own CD - with your own logo, of course - soon too?

## Intermix '95

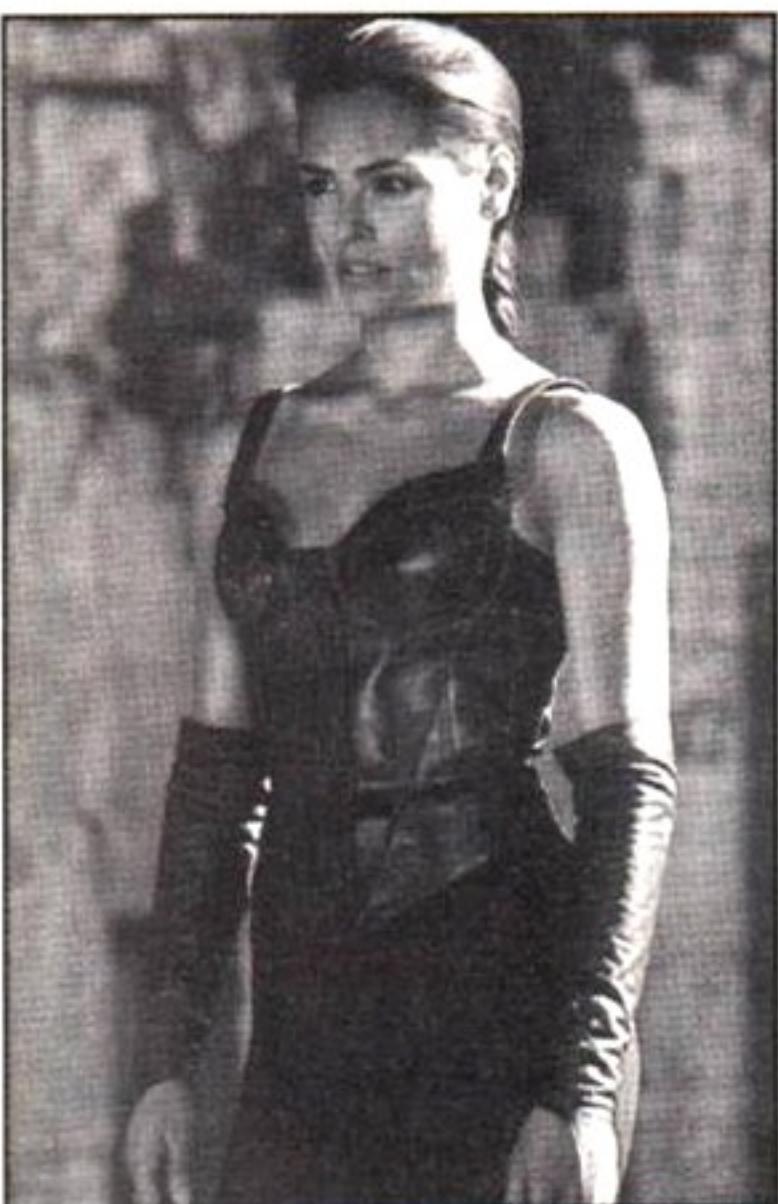
The information superhighway and multimedia event for the public sector, it is claimed. Intermix is due to take place on 24th and 25th May 1995, in Central London.

The 'what, why and how' confer-

ence aims to stimulate imagination and broaden understanding of how organisations can make the most of the technology.

*Contact: Capital Training 0171 637 0916.*

## At A Screen Near You..



Entering into a mortal kombat with this character might not be so bad after all.

Not content with inflicting as much damage as possible on the youth of the world, either metaphorically through their computer screens or actually through perverting them into believing violence is the best part of their playing life, beat 'em ups are invading the big screen too. Streetfighter has been made into a movie and already released in the USA has taken over \$30 million at the box office in just a few weeks.

Next on the list of conversions from the little to big screen is apparently Mortal Kombat and there are others planned, including, we hear, Doom.

Ironically, in the past conversions came all in the other direction. Companies such as Ocean built up their business on making computer games out of - they hoped - successful movies. Not all were very big moneymakers, largely because the film companies didn't give the games houses much advance notice of the content - that's if the games houses cared. For most of the games they produced were little more than variations on established themes no matter what the film was about.

However, now we may be seeing the beginning of another trend, which not all of us would applaud. There are plenty of violent films about without the need to add to the number by attracting millions of kids who have already played themselves silly blowing away fast-moving pixels of mindless techno-crap.

Fortunately, even seemingly safe bets for moneymaking often turn out to be a useful disposal of ill-gotten gains for those who think they are on to a good thing-style bandwagon. Hollywood may still remember the financial disaster that Super Mario became when some producers were unwise enough to try and make movie out of a single idea video game. With luck, Doom might spell their doom too.

## Want To Take A Gamble?

Ali Prior has gambled on the success of his shareware program Pro-Gamble V1.0 and has come up with a horse race prediction system - Pro-Gamble 2.1.

A free usable demo copy of the program is available to anyone sending a blank disk and a SAE, otherwise the full program is £20.00. However, if you mention *AUI* you can have a 25% discount, making the total cost £15.00. There's a fiver you can already win!

You don't need any racing or computer skills to use the program, says Prior, only half an hour and any daily

newspaper. (Not the Financial Times though it doesn't carry racing. The FT is for really big gamblers.)

The program has been re-written from scratch, and includes many new features including Intellibet artificial intelligence and PlacePot Perming which Ali claims "virtually guarantees you a profit". Oh really? That's more than our betting has brought us in the past.

Pro-Gamble 2 will run on all Amigas with 1Mb or more.

*Contact: Ali Prior, 10 Lovell Park Heights, Leeds LS7 1DP.*

## BIGGER THAN EVER

Over 750,000 visitors attended the world's biggest computer show, CeBIT 95 in Hanover, up from record attendance of 682,500 in 1994. With 6167 exhibitors from 59 countries, the show generated immediate sales success according to a closing report from the organisers. But they would say that, wouldn't they?

Nevertheless with those figures they just could be right too. Surveys carried out by trade associations showed that the exhibitor quality increased considerably "with the separation between communications technology, and information technology being a thing of the past."

What we think they mean is that with the famous "convergence" - moving together of all aspects of electronic technology - it's become more and more difficult to separate the until now diverse technologies - or at least they couldn't sort them out at CeBIT so they just lumped the lot together.

CeBIT Hanover 1996 will take place from Thursday 14 - Wednesday 20 March 1996. And if you want to spend a mind-boggling time trying to understand what's going to be the future of the computing world it might be the place to be but don't blame us if you come back dazed and confused.

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The Official Amos PD Library is the largest source of Amos related source code and programs in the world today. The library is run by Len & Anne Tucker and is endorsed by Europress Software, the publishers of Amos and Amos Pro. This compact disc contains the entire library from disk 1 to 620, each one arranged in its own directory and catalogued. The disc contains in excess of 33,000 files with over 1600 Amos source code files, 100 sprite banks, 260 Ctext banks, 800 samples, numerous music banks and several extensions to Amos & Amos Pro. This CD is truly a testament to the immense following that Amos and Amos Pro has achieved in the past few years and represents thousands of man hours of writing Amos code which will prove to be an invaluable source of help and tuition to the Amos user. The Amos PD Library contains many games and Utilities which will prove interesting to the Amos user and non-Amos user alike. Imagine the entire contents of a PD Library on one CD.

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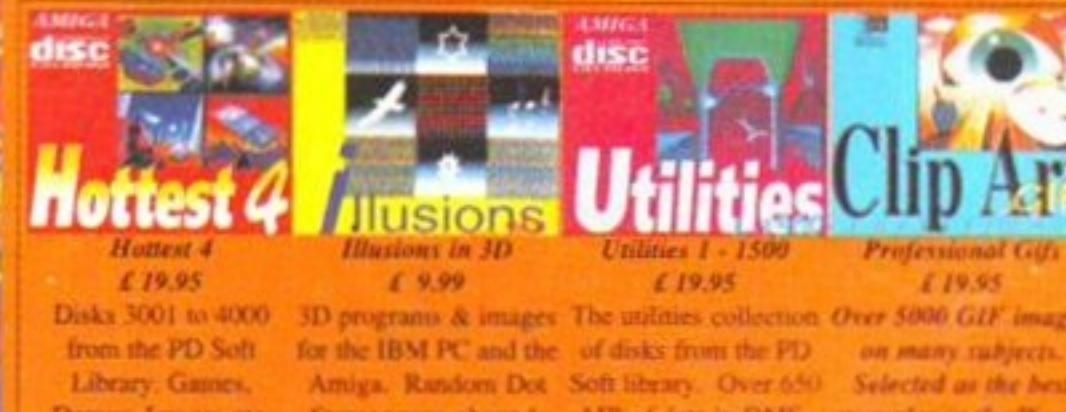


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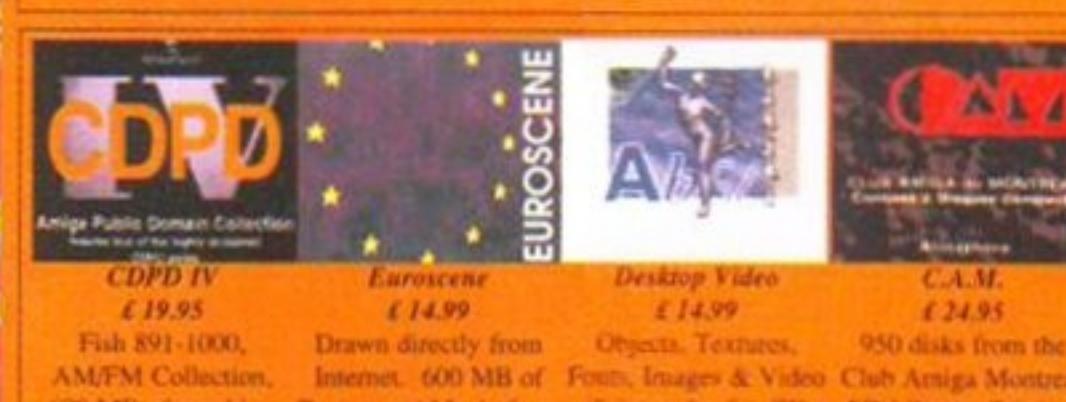
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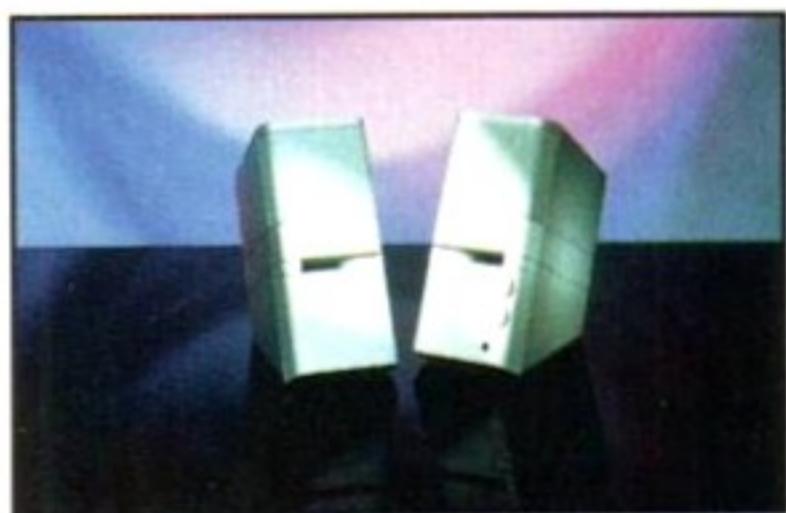
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# SOUNDS LIKE THE BOSE SPEAKING



Friends, Phonoheads and Multimedia users, lend us your ears.

Bose long regarded as the Rolls Royce of the speaker world have stepped into the era of computing. The Bose MediaMate loudspeaker has been designed, they told *AUI*, to offer audio performance from "an exceptionally small computer-compatible enclosure." (Could that mean your bedroom?)

The MediaMate computer speakers provide the rich, deep bass performance that is usually only available from much larger speakers, according to Bose. MediaMate speakers, they say, have been designed to address all the needs of multimedia users with dual source input capability for CD-ROM use.

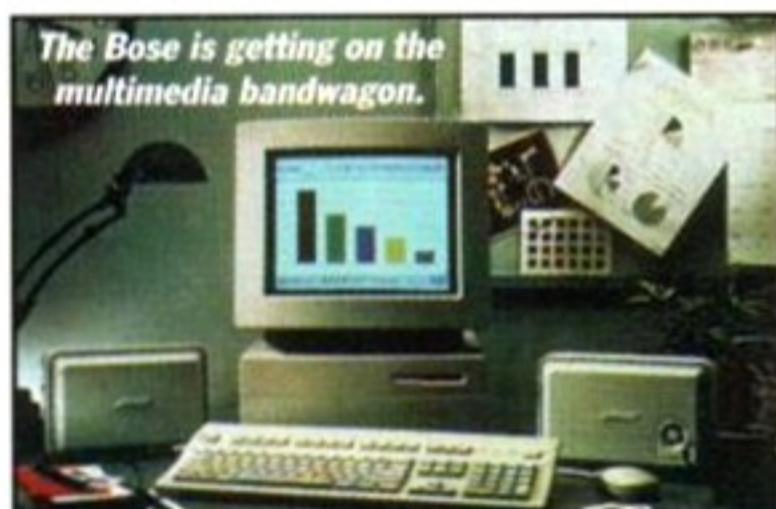
## Like a Roomate?

"Lightweight and powerful" is how Bose describe their RoomMate computer monitor speakers which they claim feature many of the technological ad-

vances used in the company's top of the line 901 loudspeaker. The use of Bose 11.4cm Helical Voice Coil full range drivers, combined with active electronic equalisation and a dual-tuned ported enclosure, as, of course, you would immediately realise, allows the RoomMate system to deliver sound from a small and lightweight enclosure. (Can that be your bedroom again?)

Bose boast that their new Acoustimass multimedia speaker system offers outstanding audio performance in a multimedia environment. The system's components consist of two tiny imaging speaker cubes that can be conveniently positioned and provide, it is claimed, high quality sound for any computer application.

It's interesting that companies as specialised as Bose are now getting into the multimedia marketplace, not surprising when you think how many computers that need speakers are now being sold. A market that hardly existed before.



# SX-1 Upgrade

When the SX-1 was produced, most of us received it with mixed feelings. It's a great piece of equipment, but it has a few design flaws that meant it crashed from time to time.

Hi-Q have designed an upgrade to the SX-1 that they told *AUI* solves all the problems. The Hi-Q 420 is a new lid for the SX-1 which holds an uprated power supply for the CD 32 and SX-1 and drive. It also includes a 3.5" 420 Mb hard drive. Because of the uprated power supply, it should cure the problem of crashes which were due to insufficient power.

The price is £259.95 and you can expect a full review next *AUI*.

Contact: Hi-Q Ltd, 176 Kenton Lane, Harrow, Middlesex, HA3 8SU Tel: 0181 9092092 Fax: 0181 9093885

# RAIDing the system

TEAC, the Japanese manufacturer of data storage products, has launched a miniaturised RAID system (redundant array of inexpensive disks). Although these systems have proven to be a reliable way of storing data for mainframe and mid-sized computers, they have up to now been considered too expensive and large for personal computers.

The TEAC system is miniaturised so that it will fit into an ordinary personal computer or file server at a cost of £3,550.

RAID - it's lovely expression isn't it? Redundant Array of Inexpensive Drives. The more the better!

Contact: TEAC UK Ltd. Tel: 01923 225235.

# Opening the Gates to a dream

Microsoft and Dreamworks SKG, a new Hollywood entertainment studio, are to form a joint venture company to produce interactive multimedia software. The venture, known as Dreamworks Interactive, brings together Steven Spielberg, David Giffen and former Walt Disney Studios chief Jeffrey Katzenberg and Bill Gates' Microsoft, who dominate the software market. Both companies have pledged to invest \$15 million (about £10 million), with Dreamworks Interactive concentrating on CD-ROM games, interactive stories and multimedia personal computer software for families.

The venture will establish an interactive studio in Los Angeles, with a development and production facility in Redmond, Washington. Microsoft's base.

Another investor in the venture is joint founder of Microsoft Paul Allen. Allen, who gets by choice lots less publicity than Gates. He has said he's going to put a cool \$500 million into the whole thing.

The combination of commercial muscle, creative talent and market domination must send shivers through the other major players in the emerging multimedia market. Whether it will really come off is yet to be proven. Big studios or big anything with big bucks have not always been the most innovative of organisations - and it's originality, creativity and innovation that has been the cutting edge success in the technoworld.

# SMART AUSSIES

The Australian transport industry has launched a contactless smart card that covers trains, buses and taxis. The card can also be used for small purchases such as newspapers and fast food.

The credit card-sized device, currently on trial in Sydney, contains a microchip on an antenna which communicates via radio signals to a card reader. Consumers can charge up the card using cash, debit or credit cards.

As we can see from the Special Report in this *AUI*, The New Money, carrying cash may not be very smart for much longer.

Contact: Transcard  
Tel: Australia 2331 1355

# Surging Semiconductors

The Semiconductor Manufacturers Association have announced that sales of semiconductors in the UK and Eire have risen by 33.7% last year to £3.28 billion. The figures, they say, reflect a surge in cellular telephone manufacturing and personal computer production.

According to the association, the UK has become a major manufacturing centre for cellular phones, mostly for export to other countries. The growth represents the strength in electronic equipment manufacture according to the market review.

Contact: Semiconductor Association Tel: 0171 331 2055.

# UNZIPPING US?

Zone Ltd and IPC, the giant publishing company, have joined forces to produce an interactive lifestyle magazine on a CD-ROM. "Unzip" will be launched as a one-off but may be published quarterly if there is sufficient take up of the first run of 20,000 copies. The price is said to be around £20 - yes, twenty pounds for magazine. *AUI* is definitely cheap!

IPC will produce the editorial and archive material from their diverse publications such as NME, Vox and New Scientist. Zone has prepared video footage, cartoons and games.

It's claimed that the total running time for the disc will be about 6 hours. IPC say that their titles are tailor made for this product and it will act "as a branding exercise". Oh really?

Unzipped? It sounds like a magazine for those dirty old types who hang around dark lanes and hoist up their raincoats to reveal... Woman's Own? Yes, we believe that is an IPC magazine.



Who do you call if it goes wrong, the TV man or your local computer store?

## Pee See Tee Vee

ICL have launched a PCTV - which is, they claim, four fifths multimedia and one fifth television. The Indiana range of multimedia home PCs, they call it. "With Japanese investment," that's Fujitsu who own this once British company, ICL are making a concerted effort to become one of the leading consumer brands in the retail market.

The all black range, described as "four fifths multimedia PC and one fifth TV" uses ICL patented technology to display a conventional analogue television signal on the 14" screen. The remote control allows the user to toggle between TV and PC, switch chan-

nels, control volume and picture quality and emulate the PC's mouse.

A user interface, called Den, (as in Dirty) guides the user around a "virtual study" which includes a hi-fi stack, a television, a games cupboard and a PC. If you want this interesting hybrid it will cost you about £1,499.

If it weren't so corny - and that the Indiana doesn't look very different from the ordinary form of a TV - we'd say that this idea, the combining of the computer with the TV, was the shape of things to come. But it's been said before hasn't it? And the Editor hates clichés anyway.

## Quads born

Zydeck have launched two new quad speed multimedia packs - Quadromedia '95 and Quadromedia Office. Unsurprisingly they have been putting it about that single and double speed CD-ROM drives are a thing of the past and say that "entry level for CD-ROM drives today has to be at least quad speed".

Quadromedia '95 (which we can guarantee will be outdated by next year, as who wants last year's model?) includes a quad speed IDE CD-ROM drive, 16-bit sound card, ZYFI speakers and sundry Microsoft software, including MS Encarta '95, MS Works V3.0, MS Dangerous Creatures, MS Golf and MS Money. RRP is £389.99. Quadromedia Office at £369.99 includes the same hardware and peripherals as Quadromedia '95 but comes with different software.

Now all that may sound wonderful but you get loaded with a lot of PC software that you may not want or possibly not even be able to use. However, help is at hand. A much cheaper range of CD-ROM drives, quad speed, naturally, has been brought out by a company called Trust. (A bit of dubious name that, if anything goes wrong.)

Their quad drive costs a mere RRP of £186. This drive is claimed to read data at 600 kb per second, bringing it up near the hard disk mark.

If being the father, sorry owner, of quads interests you might want to Trust your luck. (But we'd recommend using a condom and keeping away from those fertility treatments.)

### Contact:

Trust Computer products

Tel: 01376 500770

# NUMBER 5 IS ALIVE

A few years ago we carried, unlike any other Amiga magazine, a report on the proposed new TV station, Channel 5. We pointed out that one of the real problems with the idea was that the frequency on which it was intended to broadcast would interfere not only with VCRs but also other electronic devices. The whole thing blew over when the Government failed to get anyone interested in running the proposed channel.

Now the "Fifth" has raised its interfering head again and it looks like someone will take up the challenge of providing the UK with another terrestrial supply of gogglebox material.

Channel 5 is predicted to start up next year and warnings are being given that the frequency used will indeed conflict with those presently employed by games consoles, VCRs and other electronic marvels of the modern age.

The ITA which gives the license has said that the Channel will broadcast on channel 37 which may bring "ghosting" on channel 36 which is used by video games machines and VCRs plugged into the TV.

Nobody has come up with a solution so far despite the ITA's discussions with the games industry. Potential bidders for Channel 5 have been told that they will have to foot the bill for the retuning of equipment. It's estimated that there will be a little task of retuning some 10 million devices of various kinds at a cost of a cool - or hot - £75 million.

With all the cable and satellite stuff about, do we really need another terrestrial channel?

You don't think so? Write to your MP. Who knows, someone may see sense. It will soon be an election year...

## Like Lemmings

Like Lemmings people tend, if given the chance, to look for trouble. BMG, the recently-formed interactive end of German publishing giant Bertelsmann, who not long ago entered the UK and world games market with something of a fanfare have already clashed with another interactive Titan. Virgin Interactive, a subsidiary of video chain Blockbuster and run by old Commodore hand Tim Chaney, have taken umbrage at the announcement by BMG that they have signed a deal with games development house DMK.

You may not think DMK a household name but then they weren't drawn greatly to anyone's attention by their previous partners Psygnosis for their world smash hit game Lemmings. The story is that they just walked in off the street to Psygnosis and showed them their ideas for a game in which all those little masochists would throw themselves off cliffs etc.

Psygnosis didn't have to take many looks at the tiny suicidal monsters to realise that there would be lots of computer game players who would throw

their money at them if they released the tantalising concept. And so a legend was born...

Now, appreciating what DMK can do, BMG have teamed up with them for future productions but somehow Virgin think they had a previous arrangement. They have set their legal beagles on the hunt and it seems they have slammed in some legal proceedings against DMK and may well do the same for the novice if not virginal BMG.

"Virgin are proving to be bad losers," commented DMK boss David Jones. "I categorically deny there was any agreement with them."

It's amazing how people see things differently, isn't it? Still, as a company reputed to be worth around the £2 billion mark, Bertelsmann have plenty to pay for expensive lawyers if they need them. Though whether it would be worthwhile would depend on if DMK or anybody can, to order, come up with a game as successful as Lemmings which sold over three million worldwide. Meanwhile somebody had better stop them all from tossing themselves off a legal cliff...

# Educating the Masses

Olivetti Telemedia and StarPress from California have joined forces to develop a range of edutainment and infotainment titles for the European market. Olivetti Multimedia, which was formed last September, includes Acorn Computers, Online Media and Hughes Olivetti Telecommand Opera Multimedia. StarPress develops and publishes a range of adult and children CD-ROM titles.

Olivetti must have woken up to the fact that there is going to be a boom in electronic education and that Acorn alone is not going to be able to resist the rise and rise of the PC in schools.

One very worthy effort toward helping the thrust of technologically influenced education is an idea being pushed through by Gestetner, who used to be known for those old duplicating machines.

They are introducing a scheme to help schools get hold of laser printers donated by businesses. Apparently it's been inspired by an initiative called Business in the Community to encourage companies to combine social responsibility with profit.

It seems that many business have laser printers that they don't need any more. The Gestetner scheme is to

help them hand the surplus printers over to schools. Those companies then have an option to buy a Lexmark printer at a lower price.

Whatever helps schools to have more technological access is no doubt a good thing. But it is a somewhat dubious comment on our society when we apparently won't provide the means for schools to be properly equipped and have to depend on what really is charity to supply what is not just a luxury but in these days the necessities of education.

*If you are interested in the scheme, Contact: Gestetner on 0990 143157*



*Bowthorpe's protector: acting out of spike.*

## TAKING THE PULSE

Bowthorpe have developed a Pulse Protector Plug to protect computers from spikes in the power supply. Complying with the latest BS recommendations, two million units of the model the PPP replaces have sold in eleven years.

Targetted at the home market, the plug had been successful because sales staff 'plugged it' with every PC sale. However, those mysterious crashes to which all of our computers, Amigas or not, are too frequently subject may well be due, at least occasionally, to these egregious "spikes" and anything that can avoid people

like Gideon "It must have been a surge" Overhead claiming that's what happened must be a useful addition to anyone's add-ons. Price £14.95.

## Wireless Printers?

Busy Bees, Hewlett-Packard have come up with yet more new products which they say are improvements on their last efforts. The HP LaserJet 5P and HP LaserJet 5MP printers are, they claim, the first in the industry to offer infrared connectivity and boast 6 page per minute print speed, flexible paper handling capabilities, true 600 x 600 dpi laser output, expandability and font management

software. Wow! Does that infrared connectivity mean remote control or that you don't have to cable them up to your computer? Watch the pages of *AUI* for a future info on this interesting development..

These new printers are priced £799.00 and £970.00 respectively. *Contact: Hewlett-Packard Ltd., Cain Road, Bracknell, Berkshire. RG12 1HN. Tel: 01344 361404.*

## Booming PCs

According to research company Wharton, the PC is breaking new records for sales every year. In 1994, for the first time in the UK, sales broke the £6 billion level. PC hardware grabbed £3.3 billion worth of business with Compaq, IBM and Apple walking off with 49% of that.

Software sales passed the £1 billion mark for the first time. Guess who was top of that little pile? No prizes for saying Microsoft who accounted for a mere 54% of it. Printers too did pretty well pulling in a nice little £1.5 billion. Forecasters are saying that we could, even with falls in price, see the whole shooting match double in three years. They'll start including computers in the retail price index soon. When they work out how much inflation there is they are going to find it goes nuts as the prices for example of ever bigger hard drives halves in twelve months.

## Quote of the month

"The shelf life of most game titles is so short, they ought to be kept in a freezer with the frozen turkey". Mark Deverau, manager, Software Plus.

Mr Deverau has hit the mark. Not just because he is right about the extreme shortness of lifespan of games but because frozen turkeys are what most of those games foisted on an ever less gullible public really are.

The problem of games companies is that they have to keep turning out games just to get money in. It hasn't been so important in the past that turkeys have outnumbered Lemmings. Prices of C64 games were, for example, down below the £10 level. When the Amiga came, the games house raised the prices and along came piracy. With the advent of cartridges prices went through the roof and even the kids wouldn't go on buying turkeys at £50 a throw.

But don't bother to put them in the freezer, most of them aren't worth keeping anyway.

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## Intuitive Microsoft

Microsoft is paying \$1.5 billion - about £1 billion - in shares to acquire Intuit, publishers of Quicken, a personal finance package which outsells Microsoft's own MS Money by more than 10 to one worldwide. If you can't beat them, the saying goes, join them, or in Microsoft's case, buy them out!

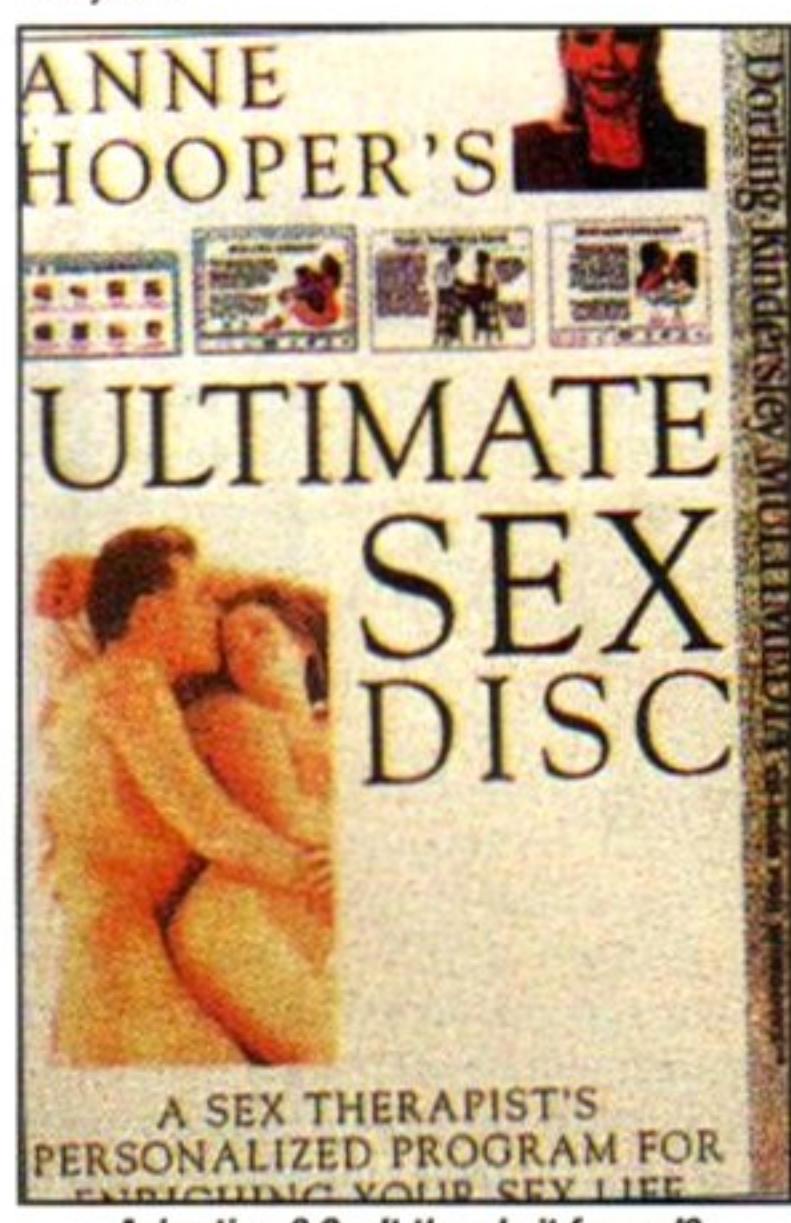
To avoid possible antitrust implications, MS money is being off-loaded to Novell's Mainstream consumer applications group for a price neither will divulge. The story is that Gates' Microsoft intends to put personal programs like Intuit online and grab the home as well as the business user for its customers.

## BLOWN FUSE

Our vision became a little bleary from looking at so many screens while reviewing the genlocks for last month's feature. As a consequence some ratings were confused - as apparently were we. Please note that the Fusion genlock recorded the lowest rating for picture quality, but nonetheless the best value, while the Rendale Genlock impressed us and received the highest rating for its fantastic picture quality. Sorry for the blur...

## Ultimately Intimate

Anne Hooper's Ultimate Sex Disc from Dorling Kindersley "features explicit animations to enrich the user's sex life, in a personalized program." Oh really? And do you believe with the universal interest in sex that this is going to be the "Ultimate" CD on the subject?



## Magic Media Con

What would you do on your day release from prison? Gary Lacey put his time to good use, for him that is, not so for Magic Media. Lacey, a convicted fraudster obviously hadn't 'lost his touch', as he secured £20,000 from the virtual reality headset company for his radical new sensor system while still serving his sentence.

Using day release time to sell his product to mail order company Magic Media, Lacey conned them into agreeing to buy the sole rights to the sensor technology for £123,000. Lacey was only paid the initial instalment and the headset project came to a full stop after Magic Media ran out of cash.

Dean Adams, MM's marketing manager, only became aware that Lacey was serving time for a series of loan frauds worth more than £250,000 when he became suspicious after six months of meetings that he had only seen the prototype. And he wasn't impressed that Lacey turned up in a Jaguar car and flew off in a plane he piloted because he said he was a tax exile.

When Magic Media ran out of money, Lacey had the cheek to try to take action for breach of contract! A virtual con indeed.



Hot thermal... Challenging the inkjets.

## Revolutionary Mitsubishi?

Mitsubishi has launched a new lightweight printer in what they say is direct competition in the low cost colour market. The Professional Colour Printer is, they told **AUI**, aimed at the professional and business user. It uses thermal transfer technology but can also take ordinary plain paper and standard transparency film.

With a resolution of 300dpi, the company claims that the output is superior to that of inkjet printers.

Printing speed is around 1ppm for a full colour page with the cost of around 35 pence on ordinary paper and 60p on OHP.

The company claims the printer will start a revolution in low-cost colour printing performance stating that the cost per copy for 100% coverage is less than a third of the cost of inkjet printing.

The Mitsubishi Professional Colour Printer costs £799.00.

### CD-ROM Overtakes Disks

The CD-ROM time has surely come. Dark Forces and Discworld have contributed to the success of PC games CD-ROM sales, which have now overtaken sales of PC full price disks. According to market research, PC CD-ROM now makes up two

thirds of all CD format games purchases, with CD-i dropping back to 6% and 3DO on 3%. Not good news for Trip Hawkins.

CDs in general now account for nearly 19% of the games market by volume and nearly 22% by value.

## AUI DTP Freebies

AUI and publisher Larry Hickmott are pleased to offer you the chance to expand your Desk Top Publishing knowledge. Larry Hickmott publishes a very useful range of books and a magazine on the subject of DTP. Some of these information-packed publications are reviewed in this very edition of **AUI** (see page 60).

The first five postcards pulled out of the chocka **AUI** postbag will receive a free copy of Larry's book Desktop Publishing (which includes two free disks of incredibly handy utilities and fonts).

The next five postcards pulled out of the bag will receive five copies of Larry's book, Fonts & Clip Art (which includes two free disks of great fonts and clipart).

The next FIFTY lucky readers will each get a copy of Larry's very own dedicated DTP magazine 'EM'. 10% of the freebies will be reserved for overseas readers. Please send your postcards, by the end of July for UK readers, to DTP Comp, Amiga User International, 203 Eversholt St., London, NW1 1BW.

If you miss out on these brilliant give-aways, or are interested in all the other lovely DTP-orientated stuff Larry publishes.

Contact: LH Publishing, 13 Gairloch Ave, Bletchley, MK2 3DH.

Tel: 01908 370 230 Fax: 01908 640 371

### Did you hear the one about...

- US Robotics, the modem company, is planning to bring out a booklet of Internet case histories, representing a wide variety of business and leisure applications, as they say few people understand its practical benefits for business and home PC users.
- Entitled "The Internet Case Book", Robotics is appealing for anyone with an interesting Internet story to submit it for inclusion. A free modem is on offer for all stories getting into print, submitted from either organisations or individuals. The booklet is due to be published this summer and will be issued free to schools and colleges. It will be available free on request from US Robotics as are their last two previous booklets - 'The Sportster Guide to On-Line Services' and 'The WorldPort Guide to Portable Computer Communications'.
- Contact: US Robotics Ltd, 224 Berwick Avenue, Slough, Berkshire, SL1 4QT. Tel: 0800 22525

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We can also arrange a courier pickup at an additional cost of £11.00.

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All our printers come with ribbon/toner, printer  
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Please phone for details

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1 page/min speed, 720x360 DPI

Canon BJC4000 Colour £317.99

NEW! Canon BJ-C600e Colour £429.99

New colour bubble jet from Canon

CITIZEN  
COMPUTER PRINTERS

Citizen printers have a 2 year guarantee

ABC Colour printer £154.99

simple (as easy as ABC) to use 24 pin printer. Comes as  
standard with 50 sheet Auto sheet feeder. Tractor feed  
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NEW! Projet II Colour £269.99

new inkjet printer with built in auto sheet feeder

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Epson LX300 £129.99

Parallel/Serial interface as standard, Colour upgradeable.

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48 Nozzle inkjet 360 x 360 dpi (max) 100 sheet feeder

Stylus Colour £439.99

Colour Inkjet, 360 x 360 dpi, 720 x 720 (on special paper)

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Star LC240C 24 pin Colour £144.99

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Stunning affordable colour printer. 3 PPM, low running cost

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Panasonic KXP4400 £354.99

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Both are 4 P/P/M, 300 dpi, 1mb memory with 1 year on site.

## CONSUMABLES

QTY DS/DD DISKS Branded DS/DD

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30 £9.99 £13.99

50 £15.99 £19.99

100 £29.99 £37.99

200 £54.99 £69.99

500 £134.99 £162.99

1000 £259.99 £299.99

All disks are guaranteed 100%. All branded disks come with labels

Disk labels 500 £6.99 1000 £9.99

## Ribbons

Citizen Swift mono ribbon £4.99

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Star LC10/100 mono £3.69

Star LC10/100 col. £4.99&lt;/

The A1200 is a pretty powerful machine by itself. At the price, you couldn't expect much more power - an 020 processor, 2 Megs of RAM. When you first get it, you wouldn't think you'd ever need anything more than a hard drive to be in computer heaven. Then, after you've started getting serious, you realise that you want more and thankfully it's easy to get. Into the trapdoor goes an accelerator with extra RAM and a FPU and that's as far as you can go, or is it? Not any more, because third party developers have started to exploit that small PCMCIA slot on the side. At first it was a case of simple hard drives, which were fine, but tended to stretch the power supply to the limits and cause a few crashes.

Now, there is a way of making much more of that slot to expand your machine to the very limits. The basis of the expansion revolves around the new Squirrel SCSI interface from Hi-Soft.

### Squirrel

When you first unpack the box, all you see is a disk and a little box with a cable coming from it.



*The Powerstation makes full use of the Squirrel and takes A1200 expansion to the limits.*

# Power to the 1200 People

It should be pointed out now that the Squirrel and therefore the Powerstation which relies on this interface are aimed at the higher end user. The minimum requirement is an internal hard drive and you'd be well advised to have extra RAM already (an accelerator isn't necessary, but if you have one, you won't be sorry - but you'll know that already!).

The Squirrel device slots into the PCMCIA slot on the left of the A1200. You can do this before boot up or after - the interface, because it's PCMCIA, can be shoved in and out without danger, although it's never a good idea to keep pulling peripherals in and out all the time because of wear and tear on the ports.

With the device itself physically installed, you need to install the software that drives it. This is why an internal hard drive is necessary. The Squirrel does not autoboot. Installation is via the Commodore installer and so

**David Taylor test drives the PowerStation, the latest development from Hi-Q, designed to upgrade the A1200.**

it's a breeze. Double click on the icon and follow it through. There's no reason why you should experience any problems at all.

The question is what do you now plug into the interface? By itself the Squirrel offers you no more power. You could simply attach any SCSI device, but if you do, remember that power problem that can happen with PCMCIA hard drives. You really need that device to have its own power supply and the whole endeavour starts to sound a tad fiddly. The other drawback of the Squirrel is the very

short cable that comes out of the unit. Why do so many developers, from the meagre joystick upwards, always assume that 20 centimetres of cable is sufficient?

Here is where the Powerstation steps in.

### **Powerstation**

The Powerstation itself does not appear to offer very much. As a reader commented after our preview "all that we appear to be offered for our hundreds is a pretty box to put any

A1200 expansions we may have into it. Well, Mr Sharman, you're right. And you're wrong.

As a bare unit, the Powerstation offers you little more than a box to keep your peripherals in and a power supply that upgrades your existing one and powers the A1200 and the add ons. However, the Powerstation isn't really intended to be bought as a bare unit, unless it's to do exactly the above. As Steve Jones of Hi-Q says, and it's great to see such honesty, he wouldn't encourage anyone to buy it bare unless they knew what they wanted it for. There are other avenues that he would advise to those users.

Apparently most users buy the Powerstation complete with at least a CD-ROM drive. There you go - immediately you have access to a wealth of new power. The vast majority of CD 32 software should run and the use you make of it relies on the CDs you acquire - Aminet, picture CDs, audio...

A half Gig hard drive, a tape streamer, a Syquest drive, a HD drive. No problem.

The Powerstation is far more than a pretty box. You see Mr Sharman, a box is what you make of it. You could say the same of anything you buy. "Good Lord, I bought a PC case the other day and it doesn't do anything." Of course it doesn't, it's just a box. It's your choice what you put in it. Isn't that better than having a defined expansion path that offers you no flexibility? You must have a CD-ROM drive or you must have a new hard drive. In fact, isn't that the point of expansion devices such as this - to offer you the choice to tailor your machine to your requirements? To me that seems the best of all possible worlds.

**It should be pointed out now that the Squirrel and therefore the PowerStation which relies on this interface are aimed at the higher end user.**

## Options

If you have the devices and are looking for somewhere to house them, then the bare Powerstation offers the following. All the internal cabling is set up and ready to take SCSI devices. It includes a replacement power supply (200 watt), which is very necessary and stereo speakers that will not only play audio CDs (if you put a CD drive in), but also mix the sound from the Amiga. Considering the price of the power pack by itself, the boxed unit is a bargain.

However, you're looking at even better value for money when you buy one of the bundles.

## To CD or NOT CD

The advantages of a CD drive, in case you aren't aware of them, are two fold. Firstly you can now play all those CD 32 games with the CD soundtracks. I doubt that this is the real reason why people are interested in getting a CD though. CDs offer a cheap way of getting at a wealth of information, a lot of it Public Domain. Aminet, for instance, is now available on a set of Compact Discs. Even if you have a modem, the CDs are a good investment as they'll save you costly online time.

There are also CDs full of demos and other PD disks. Most of these are packed and need to be de-arched to floppy disks which means you really get value for money. On top of these, it's also possible to make use of any information stored on CD-ROMs, whether they were created specifically for the Amiga or not. Of course, you can't run programs that aren't made for the Amiga, but you can access picture or sound files, which means you've now got access to almost limitless creativity.

You can get the unit with a dual speed Sanyo CD-ROM which effectively makes your system a "multimedia system". This term has been made to mean a computer with CD capabilities; we seem to ignore the fact that the Amiga has been a multimedia computer right from the start!

One CD drive not enough? How about 7 online, giving you access to 5 Gigs at a time? The Powerstation can also be fitted with the Nakamichi 7 x CD-ROM drive. It's rather expensive, but a boon for those who need this power.

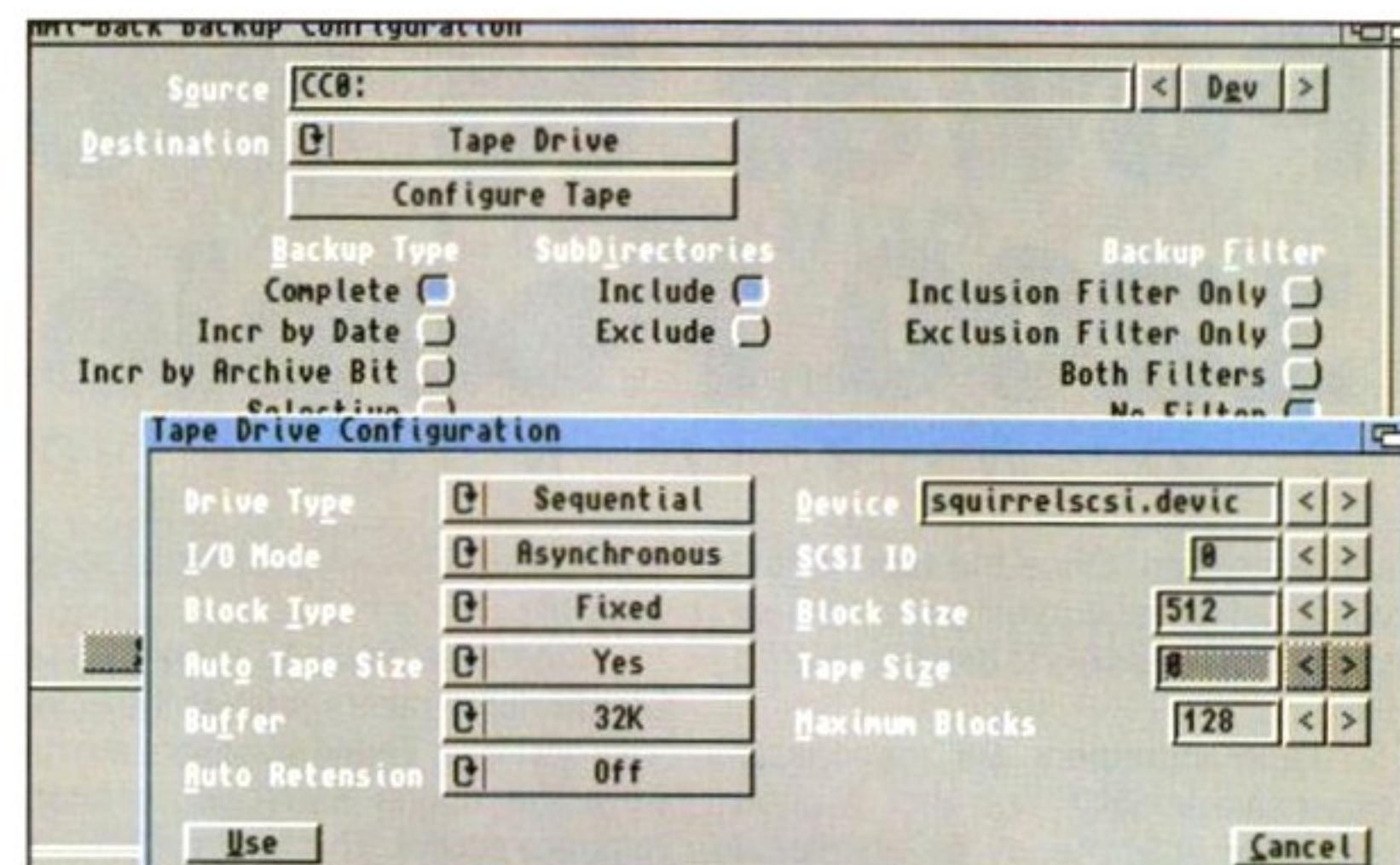
Another option is to have an additional hard drive installed. Hi-Q can fit a Quantum 540 Mb drive that should satiate most people. The problem with hard drives is that they never seem to be big enough, so if you're thinking of sticking with your internal drive, then I'd suggest you think again, unless your internal is of equivalent size. As soon as you start to get hold of the wealth of software available on CD, then you'll soon see your space evaporate.

The Quantum is a fast drive, rated at over a meg a second by SysInfo. If you are looking to expand your hard drive capacity when you buy the Powerstation, then the Quantum offers the necessary - speed, capacity and a good price.

## Streaming

Hi-Q are also offering tape streamers due to popular demand. Tape streamers are a backup facility which uses removable tapes to back up software. It was initially difficult to get the tape streamer to work with Ami-Back, although no difficulty arose using Quarterback. The problem with Quarterback is that it was only possible to do one backup per tape; any more overwrote previous data.

However, it turned out that the problem with Ami-Back was a ridiculously easy one to solve caused by a minor bug in the software. Ami-Back removes the final 'e' from the squirrelscsi.device because it can't fit the whole text in the window; add the



Using backup software can make a tape streamer an ideal, if initially expensive, backup system.

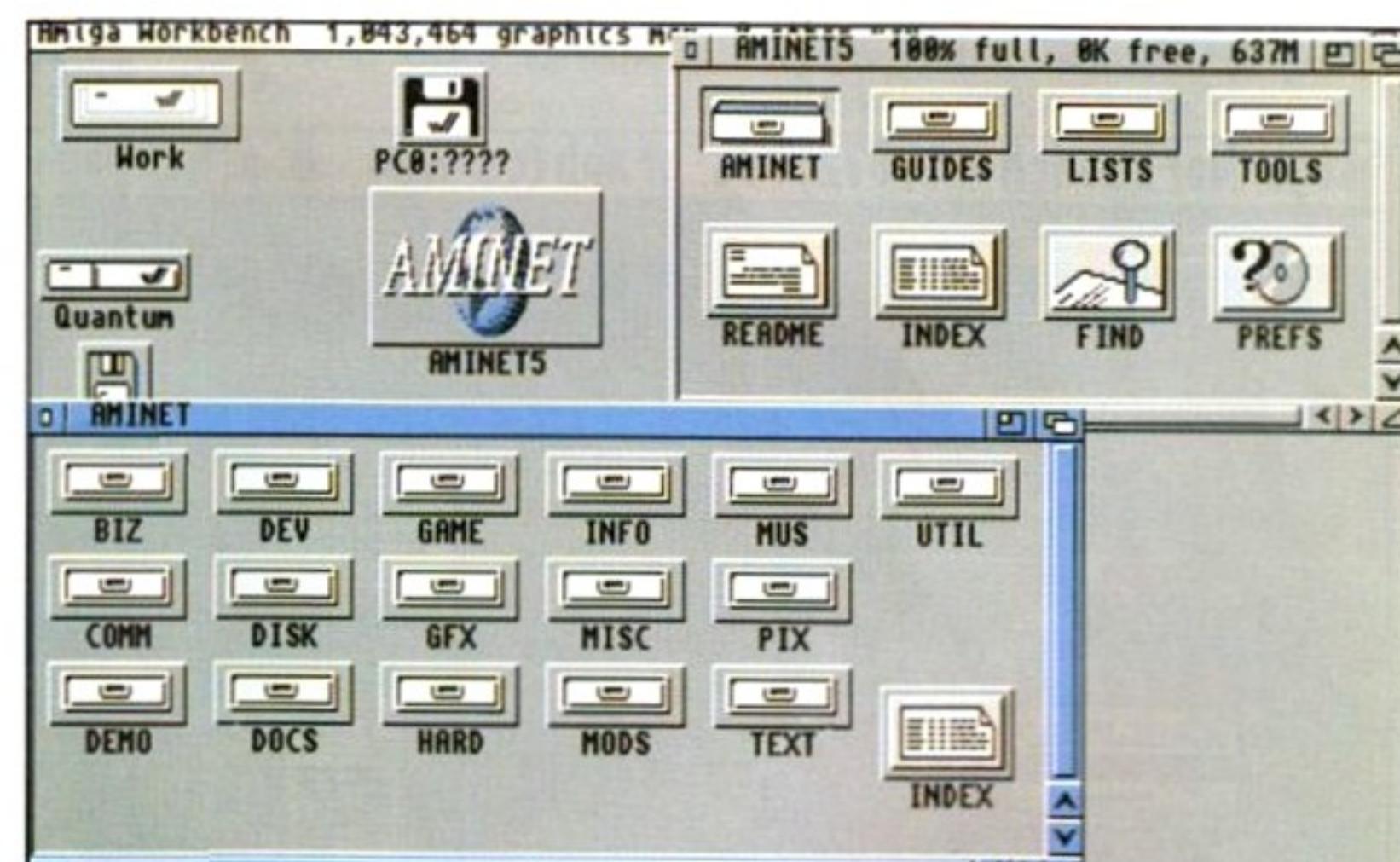
**You can get the unit with a dual speed Sanyo CD-ROM which effectively makes your system a "multimedia system".**

'e' back on and the system works fine. Ami-Back allows sequential backups,

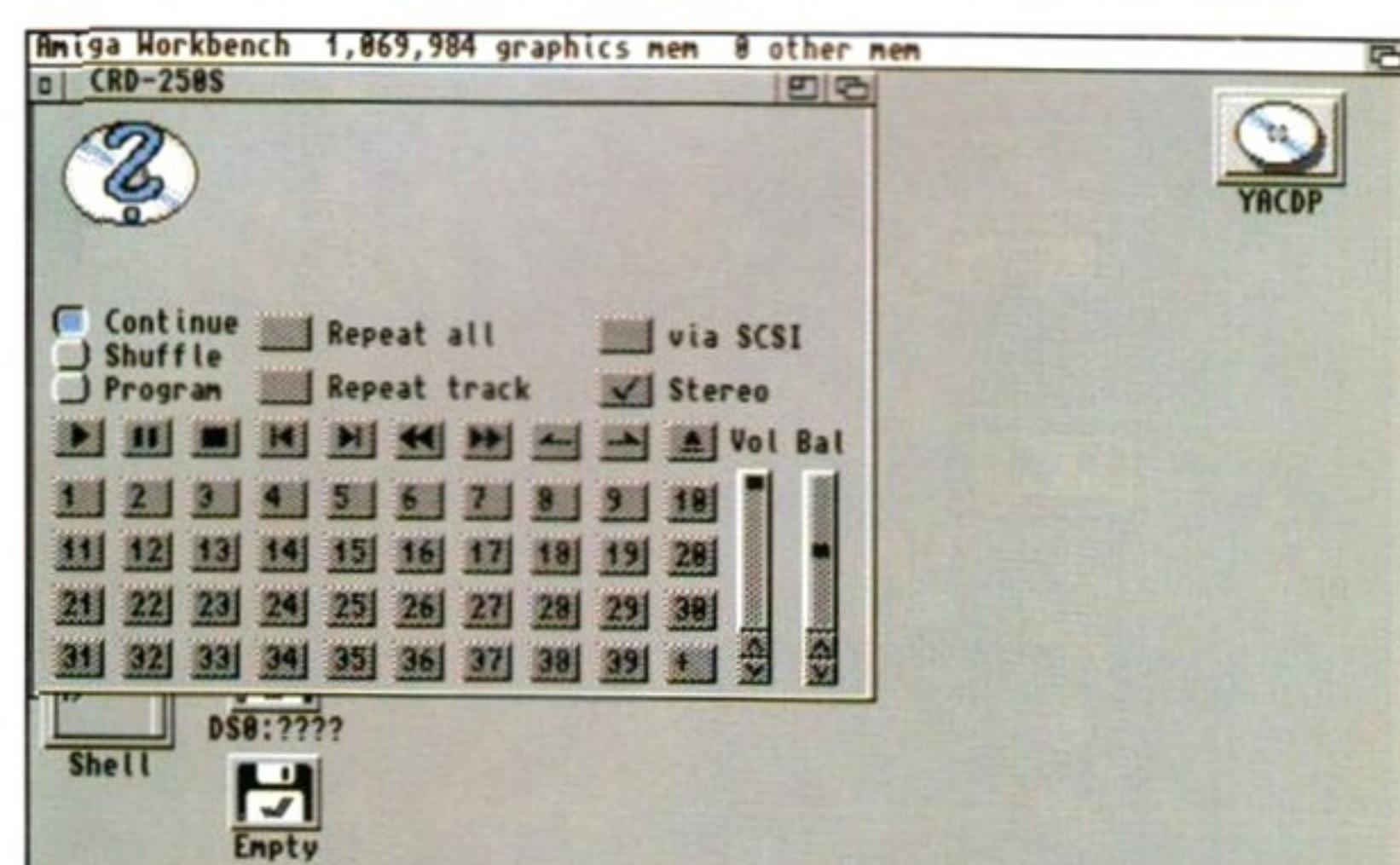
which means that one device after another can be backed up on the same tape.

To give you an idea of speed, 40 megs were backed up in around eight minutes. It's advisable to get a copy of the latest version of Ami-Back which offers you more flexibility. There are also rumours that the program Tapeworm will allow you to access the tape directly as an Amiga device (write only), so programs can be dropped on

continued



The CD audio player brings in another dimension to your CD drive.



The addition of a CD drive opens up a bigger world of new software.

# Power to the 1200 People

C O N T I N U E D

and accessed. Once the tape is full, you must either erase it or buy a new tape. It isn't possible to delete selected files.

Tape streamers are reasonably expensive initially, but offer a good return for your money as additional tapes are very cheap. Perhaps the reason we see £500 as expensive for a piece of hardware is the falling prices of hard drives.

In addition to the above devices, any SCSI devices that can be run with the Amiga can be attached.

## Sounds

The Powerstation comes with built in stereo speakers. It is possible, however, to pursue a few other avenues. Should you have a stereo with CD input, you can link the machine up to this and then you'll be able to use the CD drive as a perfect audio player taking advantage of the stereo's

capabilities. This will get the best sound possible.

Otherwise, you can invest in a set of external speakers, such as the Active 75 from Hi-Q. These speakers are run from the mains and offer a totally different sound. The best option is to buy the Tower system, which offers more accessible slots and costs £30 less. With the Active 75 speakers attached you have two 80 watt speakers that can make your Amiga sound and CD sound exceptional quality. Incidentally, if you are looking for some speakers by themselves, these are excellent. See below for details of a special price for AUI readers.

## Conclusion

You will probably be a serious user of your A1200 to look at the Powerstation. If you simply want an additional hard drive or a CD drive, then PCMCIA

drives do exist, which will save you the additional cost of the Squirrel. If, however, you're considering attaching a number of devices and want the advantages that SCSI offers you, then the Powerstation is ideal. It offers all the housing, power and sound needs that will help you transform your system. The documentation is sparse, but tells you all you need to know to set up the system.

**Choice and flexibility are the cornerstones of this equipment.**

possibilities are limited only by your needs, imagination and wallet. I'd recommend the Tower system which does not have internal speakers and a pair of the Active 75 speakers which are astounding.

With the flexibility of the system, you could, for instance, opt to house a Syquest drive or more simply for an additional floppy drive. Choice and flexibility are the cornerstones of this equipment. **AUI**

## RATINGS

### Squirrel

PERFORMANCE	90%
EASE OF USE	90%
VALUE FOR MONEY	90%

**Overall Rating 90%**

### INFO

Price: £59.99

## RATINGS

### PowerStation

PERFORMANCE	93%
FEATURES	95%
DOCUMENTATION	85%
EASE OF USE	90%
VALUE FOR MONEY	85%

**Overall Rating 90%**

### INFO

Prices:

Tower: £99.95

Powerstation + Squirrel + cable + CD-ROM: £329.95

Powerstation Tower + Squirrel + cable + CD-ROM: £299.95

Extender cable: £15

Terminator pack: £15

Sanyo CD-ROM: £149.95

Nakamichi 7 x CD-ROM: £369.95

Quantum 540 Mb hard drive: £229.95

Conner 2 Gb tape streamer: £499.95

(Additional 2 Gb tapes c.£25)

Active 75 speakers: £59.95

(£49.95 if you state you are a customer from AUI).

Contact:

Hi-Q Ltd

176 Kenton Lane

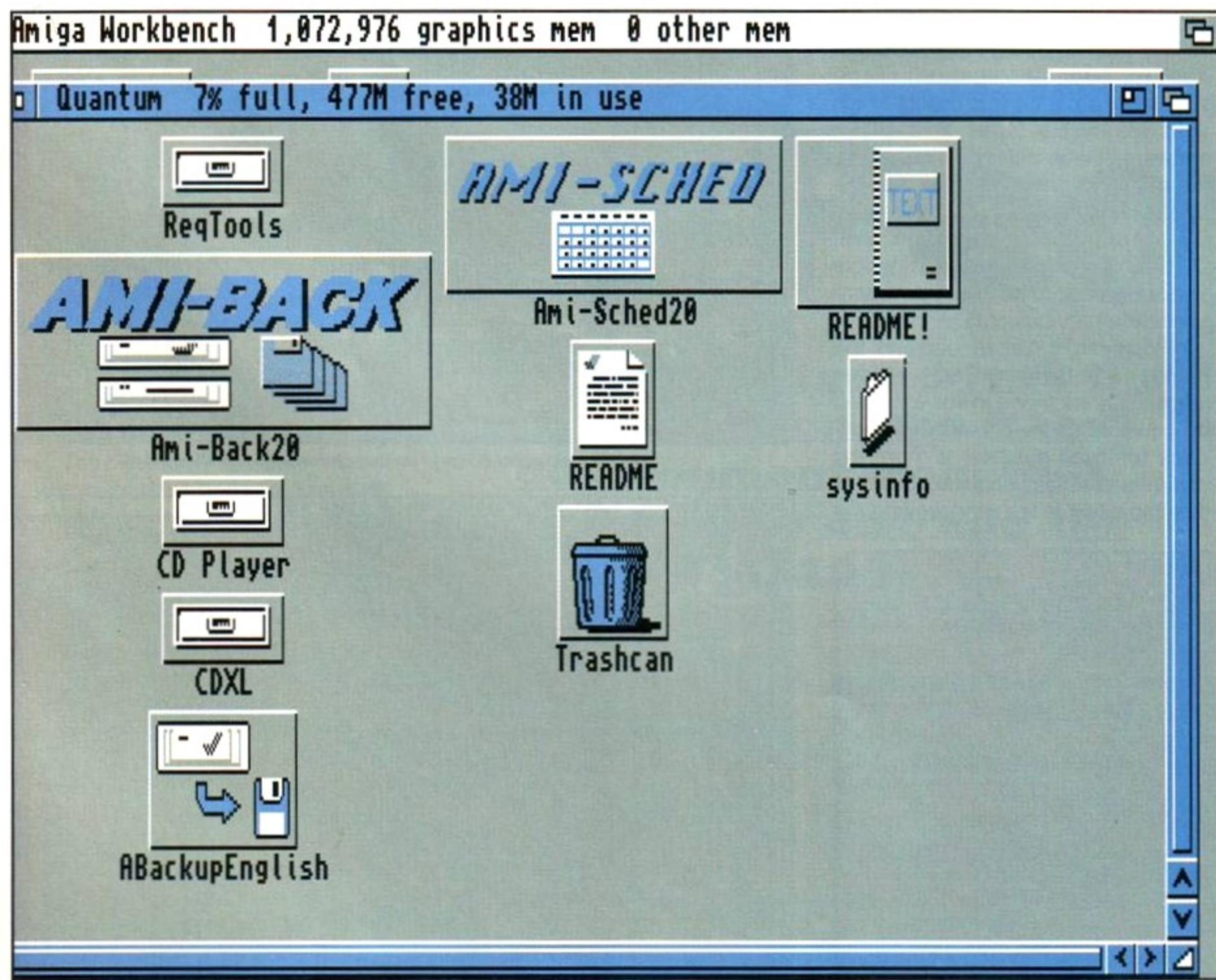
Harrow

Middlesex

HA3 8SU

Tel: 0181 9092092

Fax: 0181 9093885



Add in the Conner hard drive for a great deal on capacity.



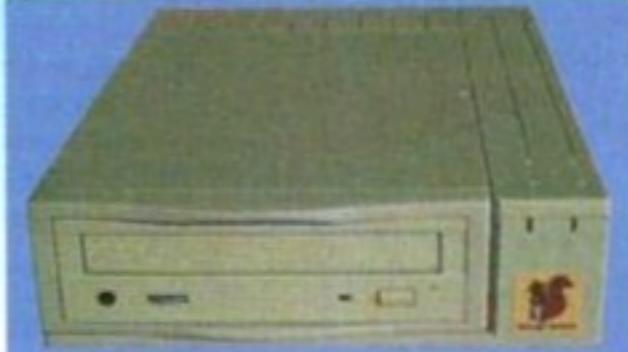
# NICE ONE SQUIRREL!

**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?

## 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.



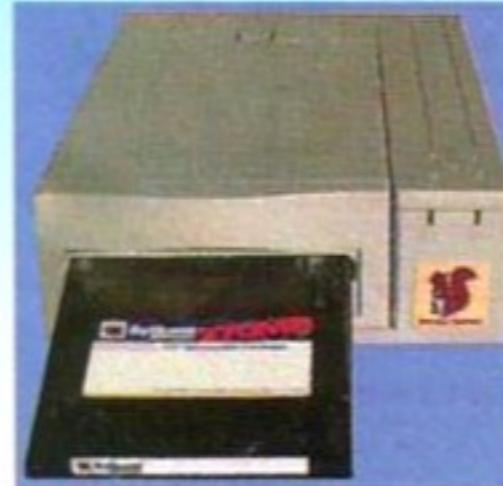
the Squirrel SCSI interface

## 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.

## 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.

## 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?

## GAMESMITH

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**

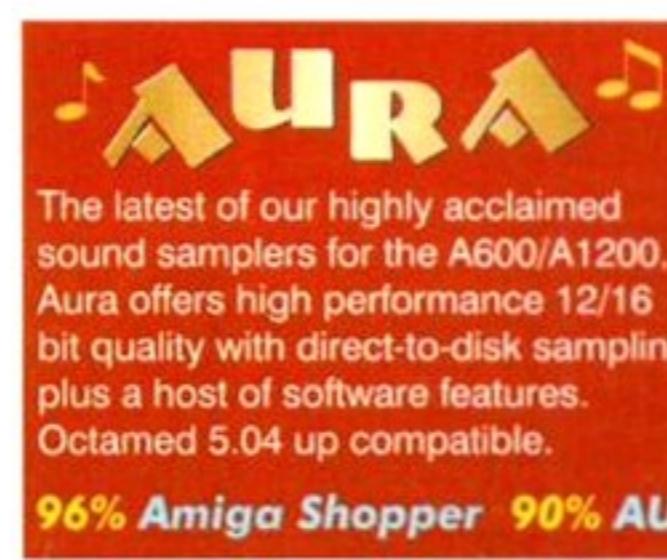
## Termite



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**



**96% Amiga Shopper 90% AUI**



## HiSoft SYSTEMS

The Old School, Greenfield Bedford MK45 5DE UK  
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# AMIGA User

# BACK ISSUE SERVICE

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AUI back issues are now available - for the first time ever!

The accumulation of years of invaluable Amiga knowledge is now at your fingertips with the AUI back-issue service.

Great demand has seriously dented our supply of back issues. Undaunted, we have opened up the vaults and uncovered the Editor's secret stash.

Scan through the available issues listed below and use the order form to secure your copies. Each issue includes the famous SuperDisks. Twin disks unpack into five disks'.

Issues are £5 each. Make cheques payable to AUI Limited. Postal orders also accepted. Sorry, no credit card sales.

### May 1995

Ten Years of the Amiga - Special Report  
Explanation of file archiving and interview with author of the new LZH archive.

Reviews of Broadcaster Elite, Shablaam!, Loader 500, Epsom EPL5600 laser printer, FX2000 Analog joystick, and more.

Including Superdisks 57 & 58: Utilities feature Spondulix finance manager, LZH archiver and Drag'n'Drop. Two disk's worth of ClipArt and Fonts. Games include Zenez, SpaceJest and Sneath.

### February 1995

Report on Virtual Reality  
Reviews of HeliOS, Main Actor, Tilling Star, Turbo Clock, Star Printers & Samsung Monitor.

Including Superdisks 51&52: Games: Scottish Football Manager - plus, Marbles, Wipeout, VChess. Utilities: Pro-titler, Lottery, Landscape, WBFlash, ToolType... and even more!



### January 1995

The AUI Awards - The Six Best Products of 1994  
Reviews of Photogenics, Final Writer, Amos Pro, Video Backup and US Robotics Ready Fax modem.

Including Superdisks 49 & 50: EdWordV5 text editor, DB2 - database and more utilities. Plus games: Colonial Conquest II, Cybermetix, Revolver, Whist.

### August 1994

Special Telecommunications Supplement  
Reviews of Lightwave, Video Creator, Animation Workshop, GP Fax, WaveTools, Examination of Digitisers, Final Part of the A-Z Amiga guide.

Including SuperDisk 41: JcGraph, ABCDir, ResumeMaker. Games: Wipeout, Lazymines... and much more!

### June 1994

Investigation into Multimedia on the Amiga  
Reviews of AdPro, Picasso II, Wordsworth 3.0, SAS C3.0, TrapFax and Personal Animation Recorder.

How to get the best from your hard drive.  
Including SuperDisk 38: Deluxe Galaga, DOS Trace 2.18, Multiripper 3, PPShow4, SuperDuper3.1: IconPack, Runit 1.8

### May 1994

Featuring the second great cover-mounted Amiga CD.  
PLUS on floppy disk: The famous Tiger Cub music sequencer - complete and free.

Reviews of MediaPoint, Disk Expander, Quarterback, Pegger, Epson GT-6500 scanner, Typesmith 2.0, MultiFaceCardIII and MBX1200z RAM expansion card.

## BACK ISSUE SERVICE

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List issue numbers

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## COVER DISK SERVICE

Have you misplaced those classic original cover disks? We are able to offer AUI SuperDisks from back issues which are no longer available. Single mount cover disks cost £2 each. Twin mount cover disks cost £3.50 a pair. All disks from 43&44 onwards are twin cover disks. They use a power packing utility to crunch many disk's worth of programs onto them, so they must be purchased used together.

Compatibility: All disks up to and including SuperDisk20 are compatible with WB1.3 and above. 80% of SuperDisks 20-30 are compatible with WB1.3 and need 1meg memory. SuperDisks numbered after 30 are WB2 and 3 only, with some programs requiring AGA.

DISK NO.	FEATURES
2	HyperBook based disk - presenting a Scramble clone from the Bitmap brothers, AdPro demo, programming tips, video tutorial and a guide to workbench.
3	HyperBook based disk - presenting Sequencer One demo, MEDplayer, the famous Missile Command game, samples, graphics and a programming guide.
4	HyperBook based disk - presenting TurboText demo, Pandaal hand scanner demo, Sequencer One songs, sound samples, and a look at Spectracolour.
5	Hyperbook presentation of Designworks, RaceTRace demo, Delux Paint IV, Jigsaw, MOSFETS explanation and a PICToANSI utility.
6	Demo of CanDO, plus full Move-it game, IFF converter, WB hacks and JRCom.
10	Tons of utilities including AutoCLI, F0ntCacheX, scroll, NewZAP, lens, Virus Checker, Plasma and HALtoIBM.
11	Scala500 demo, virus checker 6 and Remap utility
12	SuperJam demo and utilities include Mousepress, Picbase (IFFpicture database) plus bbase (full database).
13	Caligari demo, plus biorythms, findfast, multidos, virus checker, sound wave creator and APf - a text file printer.
14	Virus Checker 6.05 plus ham textures, aswarm, movieclip, lacepointer, pascal, ToolDaemon and ZeroG sound samples. Including full Arkanoid clone.
15	Full AudioMaster II programme! plus samples, multiplayer, Dsound, Wizard clock and Fitness reminder!
16	A disk full of utilities including ENote, MTVhack, VirusChecker 6.15, Org2, aqwik offline mail reader, pascal programmer, dtp fonts, le-nag event scheduler, modmdraw (draw pictures over the modem), newpos and cpcucl.
17	ABackup, DragIT, Tactix game, ToolsDaemon 2, Wasp Image converter, and more.
18	AniMan: Voice recognition. Talk to your Amiga! ReOrg2.31: Disk optimiser, TinyClock: Make the time tiny, QMouse: Speed up that mouse pointer... and much more!
18b	Rare disk. Octothello board game, wordsearch creator, realthings animation, numerical pad creator for A600 owners, MagicMenu, Epoch3, Flying Toasters.
20	WhatKick, Adorage demo, Leapfrog Puzzle game and Hyperhelpers.
21	Utilities Pack. Includes Reset, bb - workbench presentation routine, workbench degrader, typewriter mimic, FullView text viewer, Noughts and Crosses game, OneKey, Spliner screen blinder and Rend24 batch image converter.
26	2 games plus, Dash: Monitor your Amiga's performance, DiskSalv2: Disk toolkit, STP: Play modules on a Hi Fi, Translate: Convert images into different resolutions, Workbench games: 6 of the blighters, Virus Checker 6.28
27	Viewtek, Seekspeed, 3D Tips, Transplant, Virus Checkers
35	Tiger Cub: The complete, unadulterated, program.
36	Super utilities include Womble organiser, FileX file editor, Assigns, Swazinfo, AddPower, AddTools, FileM, Memclear and Vat-Check.
40	FastJPEGV1.10: View those JPEGs, ImplodeV4.0: File cruncher, DiskSalv2: Save those disks, QuickGrab: Excellent screen grab utility, Games: GigerTetris, Megaworm
43&44	Games: Shepherd, Gravity Force 2, Giddy. Utilities: Disk Manager 4: Disk database, Amiga Real Time Monitor: System analysis, Megajitter: Biological evolution simulator... and much more!
45&46	Games: Zombie II This is THE famous one! Plus, Pengo, Pub Darts, Zut Alors, Trick or Treat.
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### December 1993

Investigation into the future of Amiga, National Trust use of Amigas and PAL toaster.

Reviews of AmigaSAT weather watcher, Minigen Pro L1000 genlock, Citizen Swift 90, SupraFax modem, replacement mice, Z3 SCSI controller, PIP TV tuner.

Game tests include Premier Manager 2, Overdrive, Qwak, European Champions.

Including SuperDisk 29: MAND2000, Spreadsheet, AddTools, BigAnim.

### November 1993

Field reports on consumer electronic gadgetry, Amiga Pasadena 93, ECTS and Inovatronics.

Reviews of hand held scanners, Bars and Pipes Professional, Real 3D 2 & Brilliance.

Game tests include Bubba'n'Stix, 1869, AV8B Harrier Assault, Ishar 2 1200.

Including SuperDisk 28: MagicMenu, Random Dot stereogram creator, CacheClock, RecPlay, AssignPrets, Xatoms game, Module Player and more.

### August 1993

Feature on MPEG development and hard drives.

Test drive of Image FX, Excellence, VistaPro.

Tips on 3D, ray tracing, A1200, AREXX and programming.

Game reports include Lotus Turbo Challenge 2, A Train, B17 Flying fortress.

SuperDisk 25 includes Digital Illusions, Speechtoy 2, SysInfo, Trax

### July 1993

Exclusive feature on David Pleasance and New York World of Amiga show.

Test drives of Professional Page 4, Pagesetter 3, A-Talk III, Quarterback, Action Replay cartridge, Real 3D 2, Fujitsu hard drive.

Tips on video, databases, programming and A1200.

Game tests include Darkseed, Lemmings II, Body Blows and Space Crusade.

Including SuperDisk 24: Icon Tool Box, Data Recall, Kill AGA, ABackup, and much more!

### May/June 1993

Exclusive Interview with Lew Eggebrecht.

Test drives of Aladdin 4D, SAS C, Prowrite 3.3, Essence, Citizen Swift 240C, SuperJam & Directory Opus 4.

Tips on programming, A1200, hard drives and combating computer crime.

Game reviews include The Chaos Engine, International Tennis, Robin Hood and Carnage.

SuperDisk 23: OneKey, IFFWizard, YAK, EnvPrint.



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SAU6

**Paul Overaa test**  
**drives a powerful new**  
**extension library for**  
**AMOS users.**

IntOS is an AMOS extension, a library of additional functions, that allows AMOS users to create and use Intuition screens, windows, gadgets, menus and so on. It is supplied on a single disk and needs Kickstart 2 or greater, a minimum of 1 meg of memory, and either AMOS or AMOS Pro to run.

The library itself is called IntOS.CustLib and it offers over 120 command procedures which allow programmers to manipulate the Amiga's Intuition system using AMOS. Unlike some other extensions that have appeared of late, IntOS comes with a decent printed manual that both gets you started with the package and documents all the library functions offered by the extension. Installation is straightforward and well documented in the IntOS manual's 'Getting Started' section.

The IntOS procedures fall into a number of categories: to start with there are a collection of general commands like IN\_PRINT which renders text to a screen or window, and IN\_FSEL which opens up a file requester on the current screen. If your machine has Workbench 2.0+, and therefore the ASL library, then it is the now conventional ASL requester that is used. Otherwise IntOS opens up its own custom requester instead.

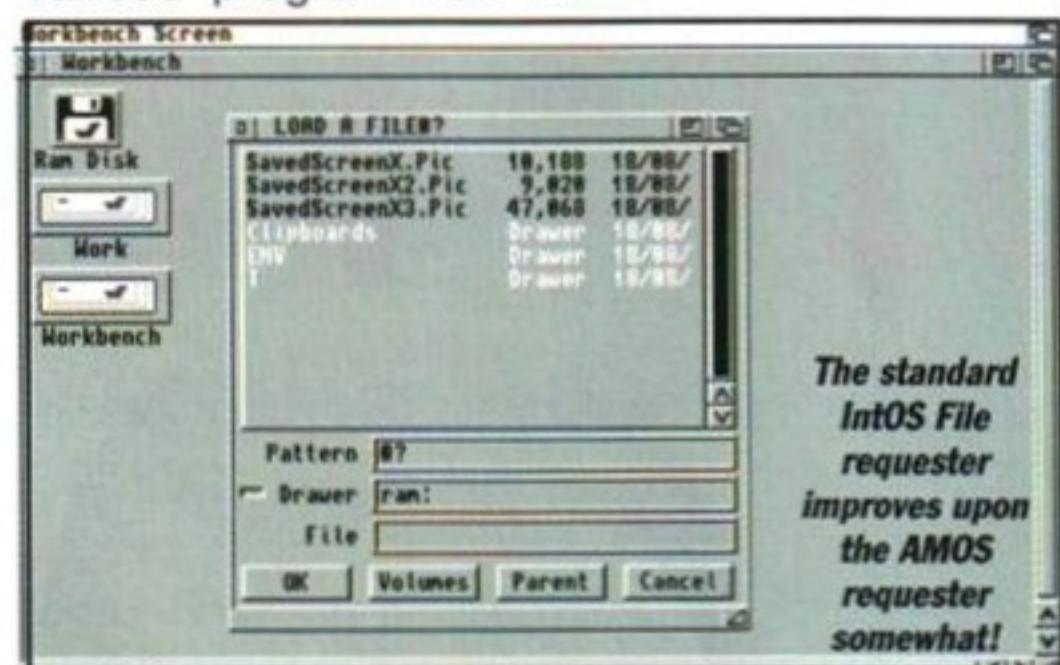
Other general commands allow you to check for NTSC/PAL systems, collect display information, position the Workbench screen to back or front and so on.

As expected there is quite an extensive collection of screen commands available including both a quick form screen definition and a more sophisticated command that allows you to specify position, depth, view-modes and title. There are commands for loading, using, and creating colour palettes and for loading and using IFF picture files.

There's also an IN\_RGB command which allows you to directly

alter the current screen's palette! IntOS also offers a number of fast bitmap-oriented drawing commands for lines, boxes, bars, circles, filled ellipses and so on as well as ones for screen clearing, plotting or reading pixels etc.

Opening one or more windows on a screen is very easy and once open there are a range of commands for switching between windows, collecting input events, directing output to a particular window, reading various window parameters and setting size limits. There are also functions, such as IN\_RASTPORT which identifies a rastport address, that allow more advanced programmers to



size, mouse button use, gadget and menu use, the detection of keypress information, window activation or deactivation, and disk insertion and removal are all well catered for with event collection itself being done through a number of separate routines - IN\_GADGET\_HIT and

**3D Workbench style buttons done the proper way.**

IN\_MENU\_HIT for instance report on gadget and menu access.

### Turbo Charged

IntOS includes a 'turbo' command which can provide increases in speed when issuing IntOS statements one after the other. The turbo arrangements are

used via sets of previously built string commands (similar to the way that AMAL is used although there are differences between AMAL and IntOS in both the underlying mechanisms and various restrictions that are imposed).

With IntOS you first create a string containing the various commands you wish to use and then having done that you issue an IN\_TURBO command. The only disadvantage here is that the commands require you to follow some fairly strict command layout rules because, to ensure maximum execution speed, very little error checking is done on the command strings created.

As an example the ordinary IntOS command to use the Workbench screen as the program screen looks like this:

IN\_WB\_TO\_SCREEN[Num]  
 whereas the equivalent turbo form being added

to a string variable T\$ would take this sort of form...

T\$=T\$+"@WB\_To\_Screen{0;}"

The turbo command form syntax arrangements are by no means difficult to understand but since they are slightly less readable it's probably best to adopt a 'one command per line' rule when laying out turbo commands in your programs.

The benefits? It's speed plain and simple - and since in favourable cases speed advantages of up to 70% can be gained by using this type of command style most IntOS users will find it useful to at least experiment with these facilities.

### Conclusion

Though a few of the IntOS drawing functions essentially only duplicate procedures that already exist within AMOS itself it is clear that, in the main, IntOS provides an extension that offers some significant advantages to the AMOS programmer and works very well. There are inevitably some limitations (no HAM screen modes for example in screen definitions) but for most users this will be unlikely to matter.

IntOS is an easy-to-use extension library that gives AMOS programmers easy access to the types of Intuition-based facilities that were once essentially the private domain of C and assembler coders. As such it is likely to be welcomed with open arms by a great many AMOS users! AUI

### RATINGS

#### IntOS - The Intuition extension for AMOS

FEATURES	86%
PERFORMANCE	90%
DOCUMENTATION	88%
EASE OF USE	92%
VALUE FOR MONEY	94%
<b>Overall Rating 90%</b>	

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*IntOS can display 256 colour AGA pictures.*

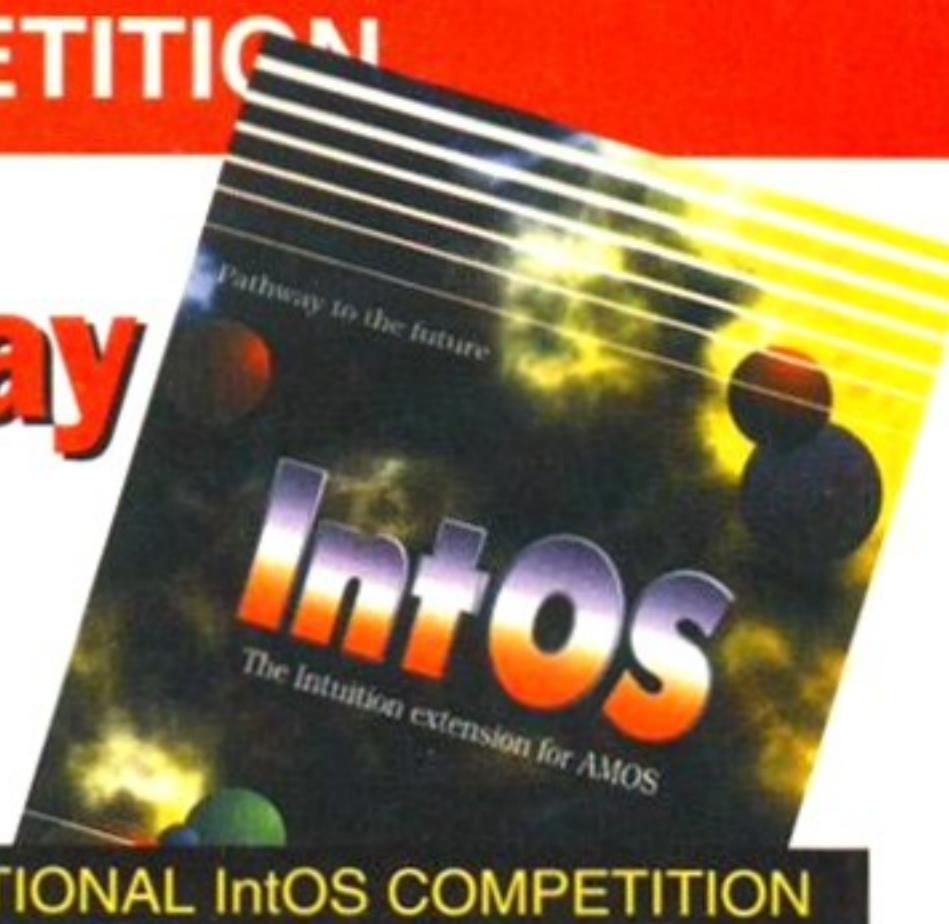
# 30 Copies of IntOS to give away

After reading Paul Overaa's IntOS review you are probably wondering where you can get hold of a copy. Well, those kind people at OTM 2000 are giving 30 copies for AUI readers to win.

All you have to do is read the article again and answer these three easy questions.

1. Which command provides increases in speed?
  - a. The Zippy Command
  - b. The Warp Command
  - c. The Turbo Command
2. Which command allows you to alter the screen's palette?
  - a. In\_RGB
  - b. In\_CMYK
  - c. In\_BBC
3. What is IntOS?
  - a. A Hair extension
  - b. An AMOS extension
  - c. A large Melon

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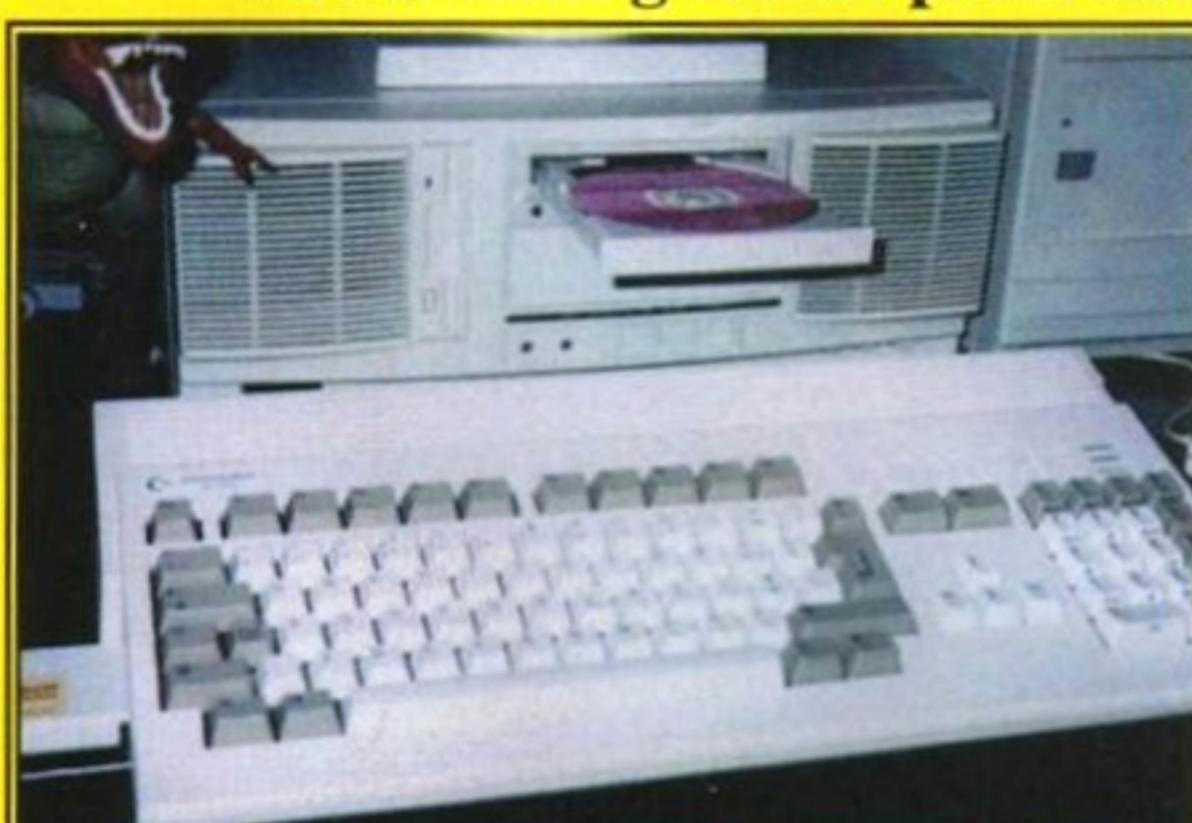
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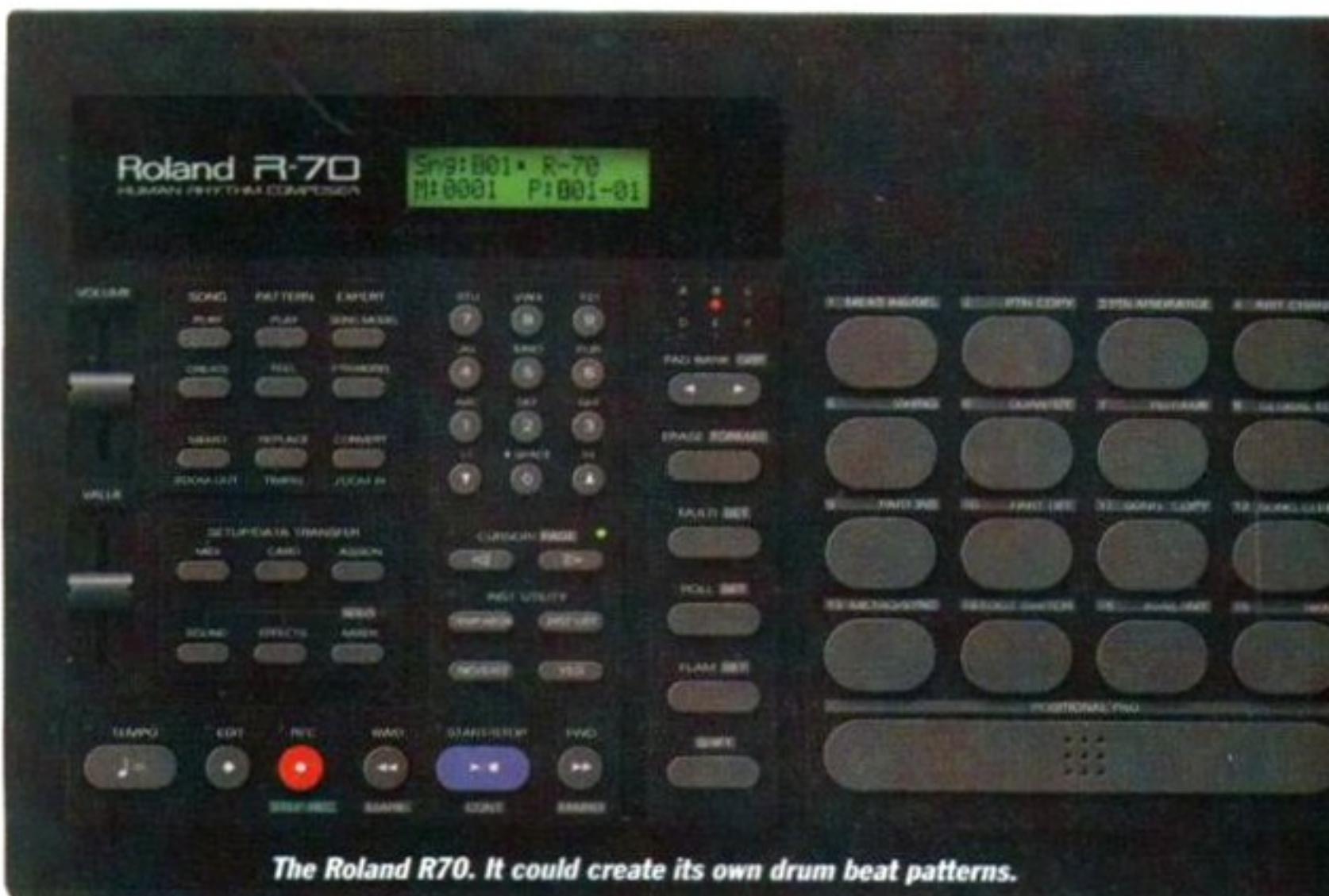
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**Let your Amiga write a Number  
One hit song while you pose  
for the album cover photo.  
Mark Blackham sounds out  
“M” a new music composition  
tool from the famous Dr T.**

When synthesizers and computers first began appearing on the music scene there was much wailing and gnashing of teeth from old school musos. One of the early concerns was with the evident power of computers to do a lot of the technical leg work for musicians. While this freed

beyond synths and sequencers, has been to assist human composition and performance. Roland recently had a go at using technology to assist the construction of percussion rhythms with the R70 drum machine. Users could select a musical style, and define the lengths the computer would go in order to make the drum patterns -



The Roland R70. It could create its own drum beat patterns.

# Interactive

up time and effort for creative thinking, it was feared that the "expertise" and human element would disappear.

The worry-warts were partly right. The rapid beats, retro analog sounds and repetitive lines of rave, techno, hip hop and jungle styles are a direct result of the computerisation of music. Uncreative sequencer users have merely turned up the BPM rate and over-used the copy and paste facilities.

Musicians have fooled around with artificial music creation possibilities for over a decade, even attaching sounds to fractal generators, but have not managed to achieve music of much depth, passion or popular appeal. A more successful use of computers,

from basic verse and chorus patterns to intros, outros and fills. The intelligent algorithms used to 'randomly' generate the patterns created some very impressive results.

The method rarely came up with the 'perfect' complete rhythm, but created patterns that could be adjusted, altered and built upon to the musician's tastes and needs.

## Adding Spice

An inherent problem in sequenced music is that it tends towards a lack of variety. The whole point of Dr T's new 'M' is to help you add spice, warmth and that elusive 'feel' to your music.

That is why they call it intelligent music composition software.

The first phase of song construction uses 'M' as a normal sequencer. It records MIDI information from a music keyboard which can then be altered on a pattern grid (which is where internal Amiga sounds are also entered).

Basic features like the recording mode, channel mute, note type, timing structure and volume are listed next to each channel along a top box. To the right is a control panel featuring the usual tape deck buttons, and a "conducting" grid, for management of performance variables over a whole song. The lower half of the screen covers the transformation side of the software. Nine column boxes give access to features which act upon the music in each channel.

Suppose that you had recorded a simple eight beat slap bass line. It sounds OK by itself, but a little bland. The beauty of 'M' is that it will help you transform this pattern into a sexy, funky rhythm.

## Functions

Take a look at 'M's cyclic editor pictured on this page. It shows three main functions for changing the way your pattern plays. Each editor box deals with the four channels grouped into each pattern.

Moving the small boxes up and down the cross-hatch rows changes the amount of accent given to any note which plays on that beat.

The Velocity editing box, in a different part of the screen, is used to set how much the strength of the accent will randomly change on each beat.

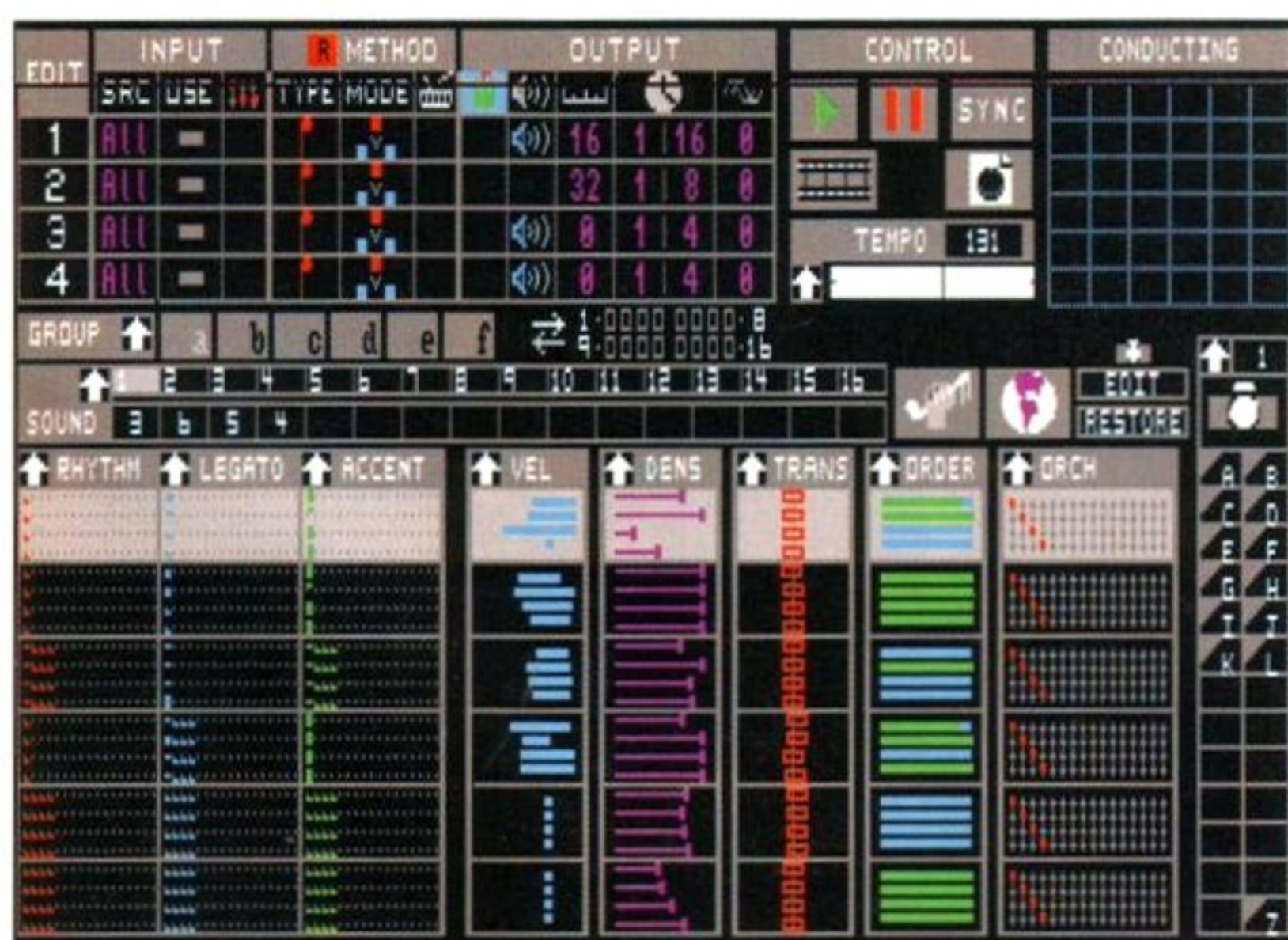
If you set the first and fourth beat to maximum accent, for example, with a strength range in the velocity box of between 50 and 100, each time the pattern cycles

through the notes, the actual accents will vary. That way the emphasis through the musical notes changes.

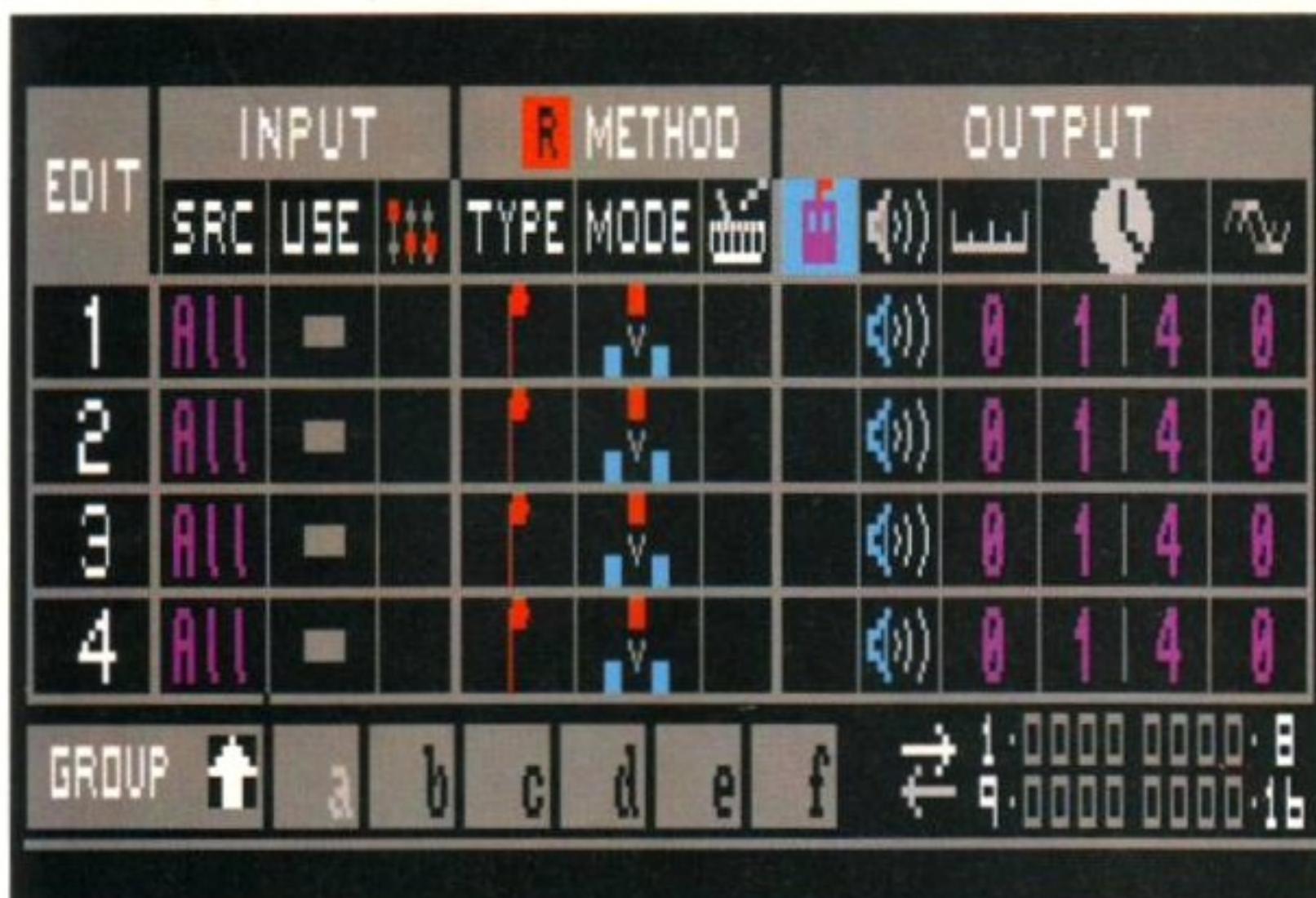
'M' uses a random generator that will give notes a user-definable chance of being slightly different in accent or timing every time they are played.

The legato and rhythm variables can also be used to alter the actual playing of your basic pattern. The rhythm editor sets the amount of time between notes. The overall timing remains consistent with the tempo, but alters within the pattern. That means some notes can be slightly off the beat, but this adds the essential element of forward moving rhythm.

The Legato variable is a way of defining the chances that a note will be sustained for longer after starting, and even run over subsequent notes. Legato is the opposite of staccato, where notes are shorter, sharper and clearly



The main 'M' screen - where all composing, editing and transformation takes place.



The channel editor. Cycle through each channel and sound four at a time to define the input and recording method, and output factors such as channel mute, pattern length, and time base (timing in respect of the main tempo).

apart from each other. So you can see how an element of change and variation is worked into a bland pattern. Too much variation will throw a sequence into wild and unrythmical chaos, but mild and astutely positioned random variation breathes life and vibrancy into a composition.

Note order can be rearranged automatically by the computer, so you can test out other patterns in the same key. A different sequence may sound

better than your current one. Another option is to let the computer choose to play the notes utterly randomly. As it cycles through the pattern, the computer will choose a note from somewhere in the pattern and play that instead of the one listed.

The degree by which any of this random note changing is applied can be set by the user simply by sliding a panel to mix in the types and amounts of randomness.

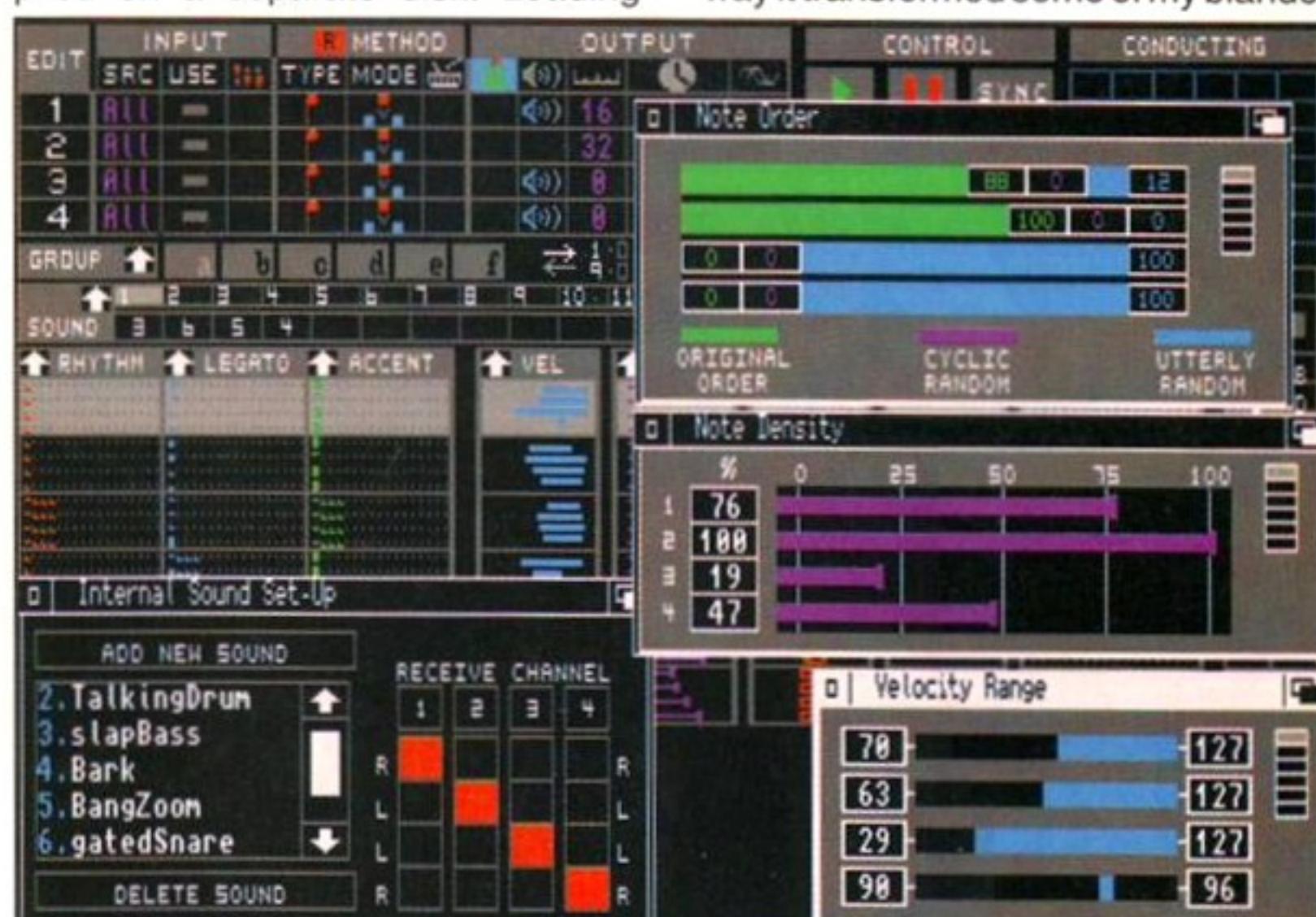
## Peculiar

'M' isn't very flexible when it comes to internal samples. Although entering them onto a grid was easy enough, I could not find a way of defining the length of such notes. Nor could I find a way of reducing the individual instrument volume apart from using the Velocity variable - not the ideal nor intended use. I also struck trouble using the IFF instrument sounds supplied on a separate disk. Loading

whole song. You can lift these lines into 'M', transform them into something sexier and export them back into the sequenced song. Because Dr. T always make their software fully multi-tasking, you can swap easily between 'M' and your sequencer.

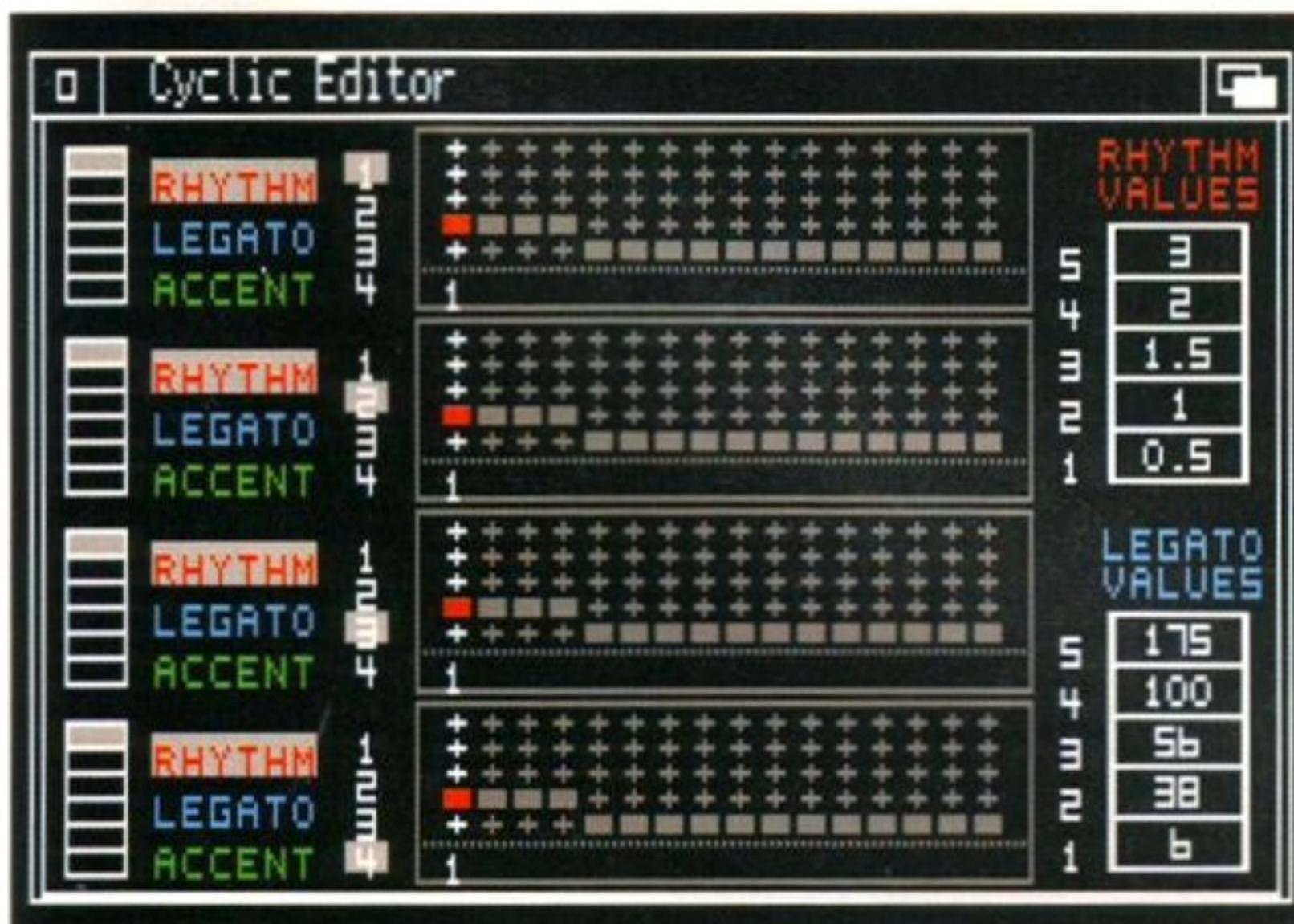
## Conclusion

'M' is best viewed as an addition to your sequencer / studio set-up. The way it transformed some of my blander



Multiple windows can be opened at any one time. They become active as soon as your mouse hovers over them.

# Composing



The Cyclic Editor. Determines how note rhythm, accent and legato will be changed as patterns are repeatedly cycled.

them from the disk into 'M' was fine, but the natural move for a hard drive user is to load them into their instruments file. Even though the files were correctly assigned, the 'M' file requester refused to find the sounds. I finally fooled it into reading the Instruments drawer, but it only recognised the samples supplied with 'M' and none of my others. Very peculiar.

All that malarkey leaves 'M' far better suited to working with a MIDI system. If internal samples are to be used, notes could be entered through a MIDI keyboard and then reassigned to an internal sound.

Although it is structured so complete songs can be created, and even turned into MIDI files for transfer to sequencers like KCS, 'M' works better as a method for enlivening patterns you have developed as part of a

musical lines into punchy, clever performances, convinced me that it is worth the asking price. **AUI**

## RATINGS

<b>'M' Interactive Composing</b>	
<b>FEATURES</b>	85%
<b>PERFORMANCE</b>	72%
<b>DOCUMENTATION</b>	84%
<b>EASE OF USE</b>	79%
<b>VALUE FOR MONEY</b>	81%
<b>Overall Rating</b>	83%

## INFO

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# Carry on Karaoke

**Mark Blackham sings, off-key but with gusto, in praise of an Amiga pub entertainment system.**

**A**miga-based karaoke? It's not a talent which gives your computer prestige, but it does give you street cred. John Blackburn, of Bolton-based company Music Machine, probably doesn't give a damn about computer snobs, although his back-room programmers are prone to argue about the merits of one platform over another. His company makes pub entertainment systems based on Amigas. The machines work well, entertain the punters, and have attracted the business of firms like Thomas Cook travel - and that means serious profits.

When **AUI** called on the family-run business at its new premises in a converted mill, John was sealing another deal to supply one of his £3000 Amiga karaoke systems to Cyprus.

He claims to sell the systems in over 15 countries around the world - mainly to British pubs, especially those setting up in resorts catering for British tourists.

## CDTV SINGS

Music Machine's "Kwizoke" system is essentially a CDTV equipped with a Roland SC7 soundcard, secured in a beer and lout proof box.

The basic system, which retails for £1000, is programmed to play MIDI files from CDs made by Music Machine themselves, and place the song lyrics on screen in the infamous karaoke fashion.



Kwizoke Plus is an advanced version that includes pub games like "Katchyphrases" - where people have to guess the well-known phrase portrayed by some cutesy computer graphics - and games like Bingo, HiLo cards, horse racing and pub darts.

Put this humble system in a pub or club, mix liberally with alcohol - and you have incredibly successful entertainment!

## HISTORIC AMIGA

John Blackburn has an undeniable pedigree in the Amiga world. He got his start selling the classic Commodore Pet - "long before IBM compatible and all that crap". He even remembers flying to Hannover in the Commodore "Pet Jet" for the launch of the Vic20.

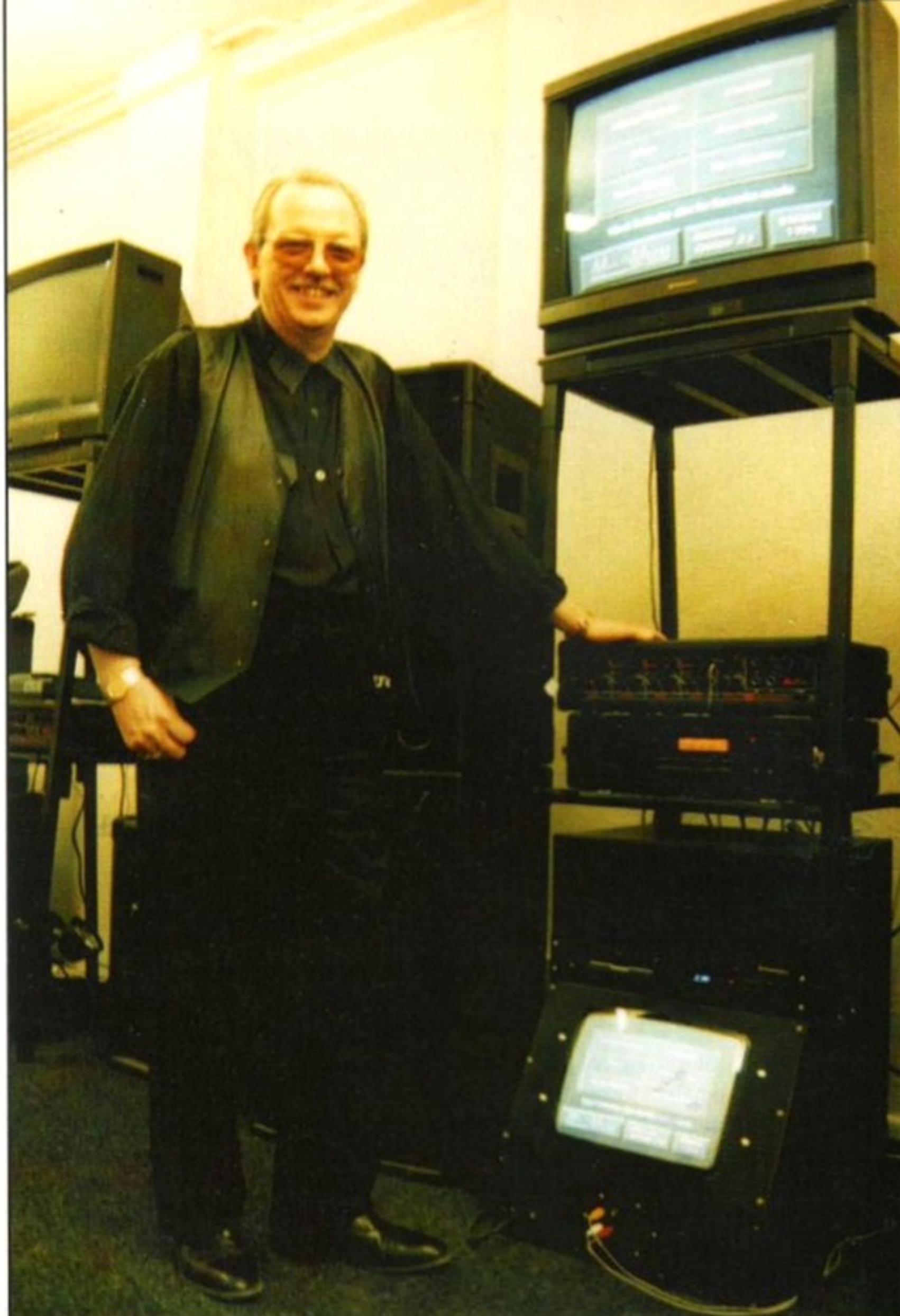
John was running a pub when the eighties karaoke boom hit the UK. He bought a system and saw profits double instantly. With his wife and long-time music making partner, Chris, he decided to take the karaoke machine on the road.

Someone asked him to make a system like his. He did, and based it on a CDTV - which holds the clever guts of an A500 inside its stereo component-like case. Just when things were going sweetly, Commodore began to hit rocky ground.

Never one to miss an opportunity, John says he bought Commodore's mothballed stock of CDTVs and components - lock, stock and barrel.

Despite the thriving sales of Kwizoke, John is always looking for new uses for the CDTV and Amiga products. He showed **AUI** a prototype coin operated stand-up version of the "Kwizoke", combined with a CD32-based arcade game player. While the arcade games are being played, the system can simultaneously run a karaoke or pub game session in the new room.

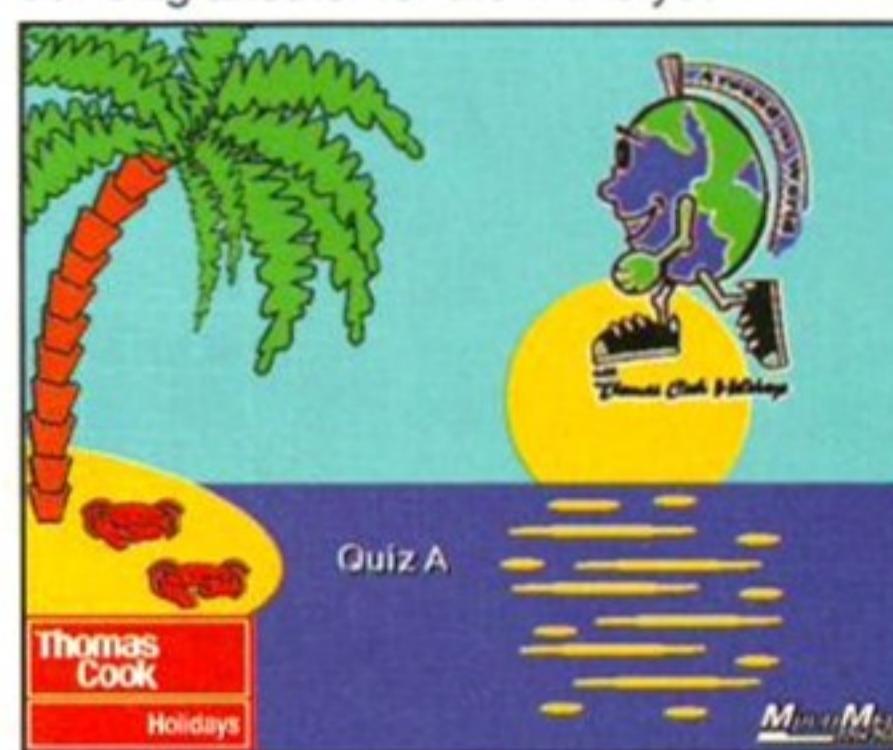
The CDTV menu screen for a publican or host to choose which game the punters are to play.



Living proof that an Amiga and a good idea can go a long way.

## THOMAS COOK IMPRESSED

An executive at Thomas Cook saw the system working in a pub and reckoned it would go down a treat at staff training nights - quizzing staff on travel related questions. The resulting quiz produced by Music Machine led to a gigantic leap in sales by staff, so Blackburn is devising another for them this year.



The quiz system was adapted for use in Thomas Cook staff training nights.

## AMIGA HEADCOUNT

The back room of Music Machine's three floor building is stuffed to the gills with Amigas. All the key staff working

on MIDI files, quiz questions, CD construction and programming, use A4000 040s.

CDTV's lie about the surprisingly tidy shelves in various proud states of use, while CD32's yawn open, awaiting the gold CDs which are recorded on site.

The music programmer constructs karaoke MIDI files using the Bars and Pipes sequencer, running on an A4000. The quiz question programmer works on another A4000 while the company's own BBS chugs away in the background.

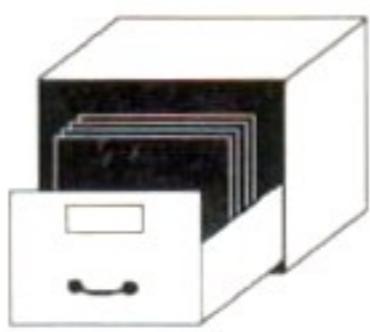
Yet another A4000, backed by an array of multi-gigabyte hard drives is linked up to a CD recording unit. The system is there to record the MIDI and song lyric files onto a 'gold' CD. Thousands of the files can fit on a single CD. It appears that the tenacity of the Amiga has rubbed off on the company. John Blackburn describes Music Machine as "the street-fighters of the karaoke business."

With Blackburn's tough attitude to success, and a willingness to get its hands dirty, the Amiga can still take on the computer heavyweights. **AUI**

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420	165	260	210	340mb 2.5" IDE	£230.00
540	179	340	230	<b>Syquest 270mb Removable Media Driver</b>	
730	245	405	360	SCSI or IDE inc 1 cartridge	£395.00
1080	385			270mb CARTRIDGE	£60.00

**NOTE:** 2.5" drives come with fitting kit for A1200 and CD32 SX - 1 module.  
3.5" drives can be fitted into A1200. Fitting kit costs £15 when bought with drive.

## Other Items

Viper EC030 Mk I 28mhz	113.00	Toshiba 520i CD Rom 3.4 speed	210.00
Viper 030 Mk II 28mhz	132.50	Toshiba 530i CD Rom 4.2 speed	315.00
Viper 030 MK II 40mhz	166.00	Power A1200 CD Rom SCSI II	197.00
33mhz FPU 68882	50.00	Nakamichi 7 disk auto-changer	370.00
WarpEngine 8mhz w/o CPU	595.00	Citizen ABC 24Pin Colour	160.00
WarpEngine 28mhz w CPU	790.00	Canon BJ10 SX Inkjet Printer	189.00
WarpEngine 40mhz w CPU	1175.00	Epson Stylus Colour Inkjet	439.00
Squirel SCSI II Interface	65.00	Canon BJC600 Colour Inkjet	439.00
Aura 12/16bit Sound Sampler	85.00	Panasonic KXP4400 LBD Laser	374.00
Megalosound 8bit Sampler	32.50	CD32 SX1 Module	192.50
ProMIDI Interface	24.00	Black Keyboard for SX1	38.00
Fax Modems - V32bis from	92.50	Cream Keyboard for SX1	£25.00

One of the big buzz words on everyone's lips (in the computer community) these days is virtual reality. The movie "Lawnmower Man" was the high tech, big budget image people have of the concept that Jaron Lanier coined some 10 years ago. In that movie, a character was placed into a computer-generated virtual world with which he could interact (and eventually become part of), made possible by ultra-fast, high powered machines cranking out the 360 degree "reality." Those toys are out of reach for most of us, but not the techniques and possibilities. The Amiga's superior graphics handling and video capabilities make it a natural platform for many different forms of interactive multimedia activities.

Way back when the Amiga was launched, a product called Live! was introduced, a real-time, low resolution video digitizing and special effects board. Live! has recently arisen from the ashes of the company that originally developed it and been rehabili-



*Virtual Reality technology has created a new art and dance form.*

# VIRTUALLY

**Michael Hanish experiences the almost real in the growing developments in Amiga interactive multimedia.**

tated into the bright new world of current operating systems and advanced model Amigas, by Argus Associates. Several programs, such as Cyberscape and Mandala, work with Live! to make possible virtual world interactions. These systems create a world for the interactant to move through, but they also extend the powers and possibilities of the user by letting them trigger other media events (sound samples, MIDI events, animations, effects, still images) by touching virtual "hot spots."

The best way of describing how all this works and can work is by showing some (and only some) of the projects users are developing. As I researched this article, with much help from Obert Sonsten of Argus Associates (the keeper of the Live! flame), I came across many more interesting projects than could be described in these pages. Think of these as the tip of the iceberg, and contact any of the developers or Argus Associates directly for more information.

## Club VR

Santa Monica, California based Club VR (310/458-6514) specializes in public events using all manner of VR systems, including video and Mandala

software, helmet mounted displays, goggles, vests, projection displays, and even a virtual surfboard.

This last item plugs into the Amiga's joystick port and, along with a helmet mounted display, provides the user with the visual and kinetic sensations of actually riding the waves. Water is optional. Club VR has had a presence at numerous large events, including SIGGRAPH, ShowBiz Expo and the "Strange Days" rave (Southern California's largest ever, slated for inclusion in James Cameron's forthcoming movie of the same name). If you attended one of these events, you might find yourself stepping into an interactive environment like a soccer game, an earthcoaster, or space ship voyage, playing a drum set, or dancing in some exotic location, your image projected onto a large screen.

Club VR's founder June Lavenberg sums up the organizational philosophy: "We take Virtual Reality to where you least expect to see it, and give the

public a chance to take a glimpse of the future. Virtual Reality is a reminder from the world of technology of the



*Music, lights and a computer - the world's first Virtual Reality nightclub - Club VR.*

truly limitless possibilities of our existence. We practice through Virtual Reality to visualize then create worlds. We learn of the power of our own minds to create any reality we want."

## Performances

Sylvia Pengilly (504/737-9844) uses the Live! board with Mandala software in solo and group performances. Cur-

rently, Sylvia is Coordinator of the Theory/Composition Area and Director of the Electronic Music Studio at Loyola University in New Orleans, but is so enamored of her multimedia work that she plans to "retire" at the end of this academic year to pursue performance full time. Images are processed through the Live! board for wide varieties of effects: infinite feedback, chromakey, inverse key, and audio triggers of all sorts. One piece, "Interface," involves brain waves transmitted from the performer, triggering MIDI sequences.

## Amusitronix

In New York, Mark Pressman's company Amusitronix (718/268-4411) provides entertainment at all manner of special events, such as trade shows, corporate events, parties, promotions, using Live!, Cyberscape, Chroma-KeyPlus, and proprietary hardware. Among their multimedia amusements are a wide assortment of games (including boxing, tennis, hockey, body painting, and drums), a "Video Sign In Board" (in which guests write a message on a drawing tablet attached to the Amiga, a composite image is grabbed (and printed out on a Sony

**LIVE**

Video Printer), and later transferred to video as a multimedia guest book), a music video production station (using the VideoToaster for compositing, titling and effects), and a kiosk for genlocking the user's image over graphical backgrounds and sending the composite to a video printer.

## Capital Multimedia

Matias Rutch, Technical Director of Graphics at the Cap Disk division of Capital Multimedia (310/907-7000) used the Live! board to create special effects and graphics for "Who Shot Johnny Rock?" a full motion CD-I game, and "Manatees," a CD-I based kiosk produced for SeaWorld. 77Hz/Rev 2 is an East Coast based audio and video band that uses Live! (and other video equipment) and live and taped images in their performances. Band members Michael Shell, Nick Didkovsky, Benton Bainbridge (415/641-0410), and Nanci Meli Walker each have ways within their performance setups to trigger and effect video in real time, adding layers upon layers of multimedia improvisation.



*Sarah Stockstill interacting with an artificial world in a performance called Wizard of Id. One person is shaking an apple through a MIDI trigger, causing it to ring, while the other makes an animated bird fly and cry out.*

## Not Stockstill!

Sarah Stockstill (508/795-3902) of Worcester MA wrote special software for the Live! board geared towards children using animated characters that respond to the participant in dance or play. Her system provides both foregrounds and backgrounds, with the participant sandwiched in between,

for large outdoor events in between movie roles (Lurch in the Adams Family, for example). His events include chasing fireflies, being chased by vampires, and a pinball game in which the participants must push the pinball.

He also produces an interactive



*A virtual reality environment from Club VR in Los Angeles - running on an Amiga 2500. While immersed in the environment, touching the symbols triggers various sound bites.*

## Live Performance

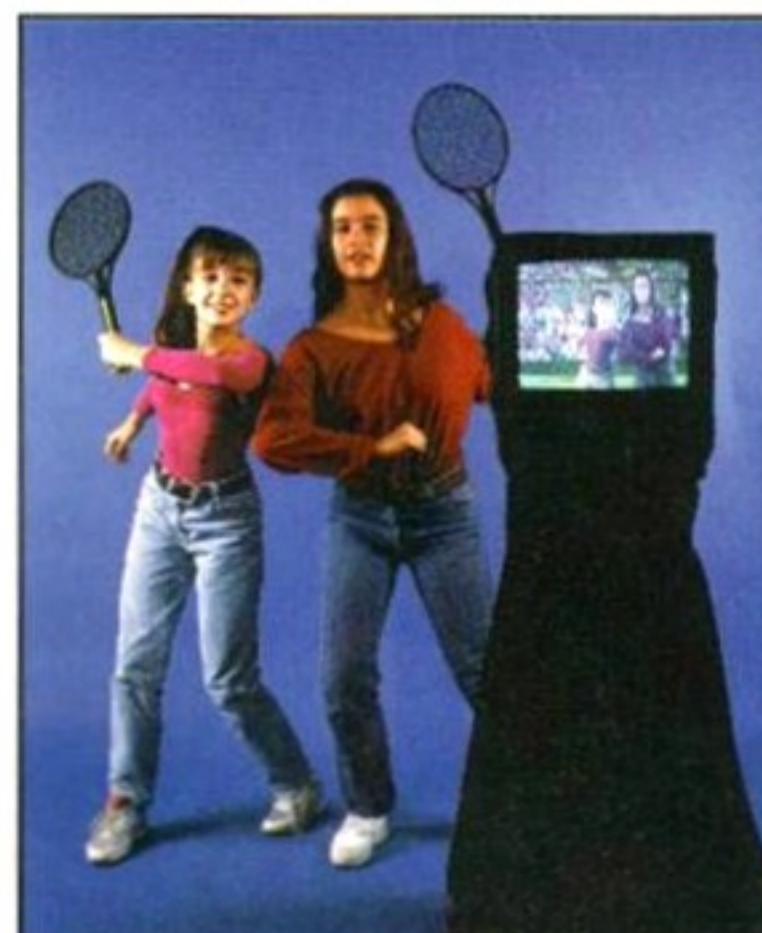
We have only been able to present a few of the people and the groups who are exploiting the low cost, high yield possibilities of Live! and the related software for interactive multimedia work.

Each of those I spoke with had two or three others I just had to contact. Many people said they really wanted to know what others were doing, and

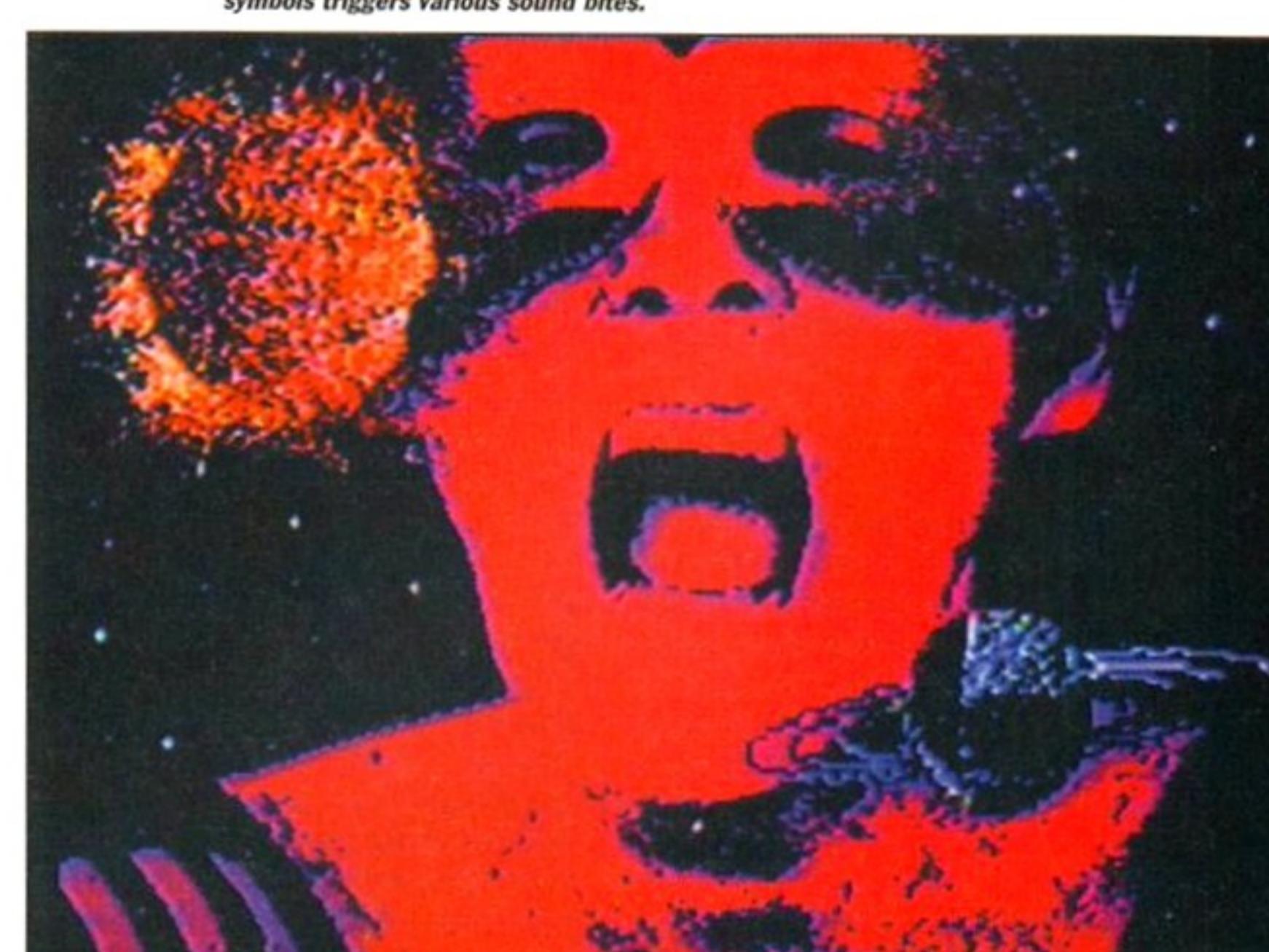
to that end Obert Sonnsten (510/724-9260) is considering setting up a BBS to connect users. If you would like to participate in such a system, then by all means contact him as soon as you read this. And at the same time, try out any of these VR systems. You'll find yourself amazed at the feelings of expansion, creativity, and possibility. AUI

## Lurch's Outside

"I'm looking for an alternative to the couch potato. Everyone has to move and sweat." This is the developmental philosophy of Carl Strucker, who uses Live! with Cyberscape and Mandala



*Pretend to be the sports star you never will be. Amusitronix use an Amiga to place people in the middle of the sports action of their choice.*



*The leading edge of art - a cry for help from within a VR masterpiece!*

# A New Amiga OS?

Those watching the USENET `comp.sys.amiga.misc` newsgroup, or reading AUI's NewsFile, will doubtless be aware of the plans afoot to write a new Amiga OS. I was approached the other day to join in the team, and it set me thinking about the merits of writing a new OS for the Amiga. Such plans have been successful in the past; in particular the GNU project which has provided much useful software for many platforms (although some may baulk at the size of them!) and Linux. Linux, a UNIX operating system, was written on the PC by Linus B. Torvalds and extended by others, and is now a popular and respected OS.

In many ways the AmigOS project is much better organised than that. The plan coordinators (seven guys from all around the world) have already over 100 people involved in coding,

had were that it was pie-in-the-sky, rather fanciful. Amiga owners are unique in their loyalty to their machine, but this was verging on foolhardiness! But then one looks at the organisation of this project: much more organised than previous distributed projects, making full use of the communications technology available. The designers are acutely aware of the potential problems of such a project and don't want to fall into the obvious traps of inconsistency. Where there's a will, there's a way, and Amiga owners certainly have a lot of determination.

One of the first things I did was scan the list of contributors for names of programmers I knew. The AmigOS project has a strong advantage in having Dave Haynie, one of the original Amiga engineers, now at Scala, as a contributor. Dave, according to the Web page, does not have a lot of time

**Will a new Amiga operating system save our favorite computer? Edmund Dumbill assesses the chances of it really happening.**

what on earth were they doing before? One also wonders how committed each of these people are, and their level of expertise. My guess is that there are about twenty or so really committed people, with the expertise to back that up, and the rest are either enthusiastic but without time or expertise, or only casual in their commitment.

## Will it help?

If, as we all hope, the Amiga is resurrected by a successful bid from either CEI or David Pleasance and co., where will the AmigOS project stand? According to the aims of the project, a new RISC Amiga wouldn't leave AmigOS high and dry, as the aim is to make the OS portable to other

# AOS Amiga Replacement Project

documenting, design and testing. They have a Web page at <http://far0066.urh.uiuc.edu/aos/aos.html> which contains the current status of the project (information can also be obtained by emailing [migosinfo@aobh.xs4all.nl](mailto:migosinfo@aobh.xs4all.nl)).

The AmigOS project has got off the ground with astonishing speed. The idea is to write a new operating system that is backwardly compatible with the existing OS, so all old software will run on it, and implement new features such as filestore compression (a la the XPK libraries, for instance). Beta testers will test components as they are written; using a feature of the Amiga's OS which allows particular library functions to be replaced leaving the others intact. The organisers have made a call for noted programmers, such as Nico Francois, to help the effort.

AmigOS will be freely distributable, under the terms of a modified version of the Gnu Public Licence, and the source for it will be freely available on demand.

There are some serious questions that need to be asked about the project though: first, "will it work?" and secondly "will it help?"

## Will it work?

The first impressions of the project I

but will help with design and programming. Certainly his name carries weight in the Amiga world, but is it enough? I couldn't see any other Amiga programmers of similar repute on the list.

**Would AmigOS provide unwelcome, and unbeneficial, competition hindering a speedy revival for the Amiga?**

You have to ask yourself the question as to whether all this Amiga talent being diverted into the OS, when the existing OS, although not perfect, is one of the best existing operating systems, is worth it? Wouldn't the time be better spent developing more applications for the Amiga? After all, the lack of a decent application base is one of the things that has limited the Amiga's success in anything other than niche markets. Suddenly 100 programmers have appeared from the woodwork to put their minds to building a new OS -

Maarten Ter Mors, one of the project's coordinators, comments "It's likely that not everyone will stay on. Some people have in fact already announced that they don't have much time to spend on this project. On the other hand, the people currently involved are here because they want to help the Amiga pull through. They may have given up hope for Commodore, but not for the Amiga."

Another issue is the bloat factor. With everyone making their requests as to what they'd like to include, the new OS might become horribly bloated, and impossible to run on a standard A1200, or require a hard disk for running.

By its very nature, the OS will have to be softkicked, and so require a reasonable amount of RAM just for installation. Such limitations may lead to only able enthusiasts running the OS. So, it's important that the organisers keep the 'bloat factor' down; but it's hard to see how this is going to be consistent with their democratic approach to feature inclusion. Maarten

Ter Mors doesn't believe this is going to be a problem, "It may turn out to be a little slower and require a little more resources (it won't be in ROM, for one thing, so you'll have to sacrifice 512K or so of your RAM memory), because it has to be fully portable to other architectures."

platforms. But would a new official OS render AmigOS useless? Or, more worryingly, would AmigOS provide unwelcome, and unbeneficial, competition hindering a speedy revival for the Amiga?

Portability is one 'plus' of AmigOS, but is that really worth it? There are many established operating systems, both commercial and freely distributable. What would motivate other people to switch, especially as software support is only likely to be from the shareware/freeware sector. I can't see any commercial interest putting their eggs in the AmigOS basket; programmers who release Amiga products have to develop for other platforms to earn a crust as it is. Perhaps I'm too cynical, as Maarten Ter Mors definitely expects commercial support, speculating that when the OS is finished, they "will contact commercial developers to port their software to, say, the PowerPC version of AmigOS. And I think developers will be willing to do this, because they can take their software and continue developing it for more modern hardware platforms than the current Amiga hardware." I remain to be convinced.

The only way that I see AmigOS being successful is if, sadly, the Amiga is not resurrected in something like its present form. Then, as no commercial

software houses would develop for the Amiga, the only way technical advance could be made is by means of the new OS. Even then, the most skilled (in other words, professional) Amiga programmers would move to other platforms (such as OS/2).

The co-ordinators expect that AmigOS will be adopted as a second OS, much like people use Linux or NetBSD at the moment. This will be attractive to developers who will see

**Suddenly 100  
programmers have  
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what on earth were  
they doing before?**

an expansion in user base of the AmigOS as it becomes available on other platforms. So the real success of this project depends not on the Amiga community, but more on the ports of the OS to other platforms and their

**AOS**

## The Amiga OS Replacement Project

---

**1. WHAT ARE WE DOING ?**

Isn't that the question life is all about? What we're doing here is writing a new version of the Operating System of the Amiga. That means everything from Exec, through DOS to Intuition and GadTools. We will do this in a hardware-independent manner, in a hardware-independent language, most likely GNU C++, so our OS will be portable to (in theory) any conceivable hardware platform.

**2. WHY ARE WE DOING IT ?**

The Operating System is the Amiga's main feature these days. Its hardware is showing its age after few real changes since 1985 and apart from that, it is likely to be a long time before the first new Amiga will appear, if ever. The Commodore fiasco surely isn't doing the Amiga any good in the professional sector: few professionals will now buy a machine (provided they can find one at all) that is no longer produced. On top of that, more and more professional software developers are moving away from the Amiga market. But the OS is software. Unlike hardware, it can be reproduced without the need for actual silicon materials that cost money, assembly lines that cost even more and factories with a price tag the size of North America. This is what we intend to do. If we can make another computer that \*is\* still supported hardware-wise, say, a Mac, run the Amiga OS, then that Mac would have become an Amiga. We could run Amiga applications on it by recompiling their sources on the new hardware (all system calls will still be in the same place and respond in the same way, remember) and use it as if it were an Amiga. No matter what the front panel says.

As an added bonus, we will be able to incorporate any and all features we want in the new OS, because we're the ones writing it! Most Amiga users will be fairly satisfied with what the OS can do (they ought to be, it's still up there with the best - we're not doing all this to save a half-decent OS, you know!), but everyone must have one thing, small or big, that they miss or would prefer to be different. We could give the OS a new, professional look, implement things like virtual memory, memory protection, network support, font-sensitivity,

Document: Done.

**AOS**

## The Amiga OS Replacement Project

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Document: Done.

subsequent adoption. I fear it may all come too late though. Maarten Ter Mors could not put a date on a possible beta release, "I dare not say when the system will be finished, but I know I'll be a happy man if we can have a bare-bones OS running by the end of this year".

### And finally...

In the end, the plans for a new Amiga OS are a nice idea, yet carried more by loyalty than anything else. Linux worked because PCs are so widespread. Amigas are not - we have to face it - and the timescale of the port to other platforms might be just too long for most people. It's a brave effort, but I think energies might be better directed toward supporting what the Amiga already has. Yet even as I've been writing this article, more people have joined the project; it's certainly captured people's imaginations. The Amiga community wants to make this work.

Perhaps the best attitude to this is that taken by Dave Haynie, that the AmigOS project is supposed to be for fun: "You're not (unless you're a dweeb) going to skip that beer party next Friday just because you can't get the sqelkfrngl.library to work".

Quite... AUI

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# Colouring The World

**Colour your world...**

**The Amiga**

**figuratively has, over  
the years, made all  
our worlds a more  
colourful place. Now,  
literally, it is doing or  
can do the same by  
helping us make  
colour printing a  
reality...**

**In this special  
report, the AUI team,  
led by John Taylor,  
examines the  
technology, the  
trends and the  
printers that are  
bringing colour  
within the reach of  
all Amiga users.**



**An AUI Special Report**

# Colouring The World

Not so long ago it was a luxury that many users could not afford. Now owning a printer is virtually universal for anyone who takes computing seriously. While it may be unusual to find such serious users without a printer, it is only now with the improved quality of output and the dizzying fall in price that colour has come within the reach of so many more users.

It is perhaps odd that the Amiga which has such impressive colour qualifications should not have led the way into the technicolour world of printing. But it has to be admitted that the biggest influence on the spread of colour printers has been the PC.

Where most Amiga users might have used colour for their own enjoyment, the PC allowed colour to appear in business, where everything could be judged by its addition to profitability. So the printer manufacturers started to compete for this lucrative and initially not highly price conscious market.

We are all now reaping the benefit of the spread of low price, good quality colour printers as the competition between those manufacturers forces prices down to within the reach of the average Amiga user.

The most notable change has been the rise and rise of the inkjet.

The quality of printing that

this method offers, considerably in general superior to that of colour dot matrix, has brought about a greater acceptance of colour as a natural part of any presentation. And the elimination of that awful banding that was so noticeable on the first Amiga colour printouts has made colour a credible medium.

There has been too a fall in the price and also the "usability" of printer consumables. This also has helped to make the use of colour a normal practice for even the home user.

What is surprising is perhaps that it has taken us all so long to accept that colour is as natural a medium as black and white. After all, we most of us, the colourblind excepted of course, see the world in colour. There is colour TV, there are colour films, colour magazines, even colour in our newspapers now. Yet many of us hesitate to make use of colour in our own computing activities - it's all right on screen but on paper...

However, with the falling prices and rising quality of the colour printing now available to us, there must be few serious Amiga users who are not contemplating the acquisition of a colour printer, if they don't already have one.

This special AUI report should give you a brief guide to the trends which are becoming apparent in colour printing, some

understanding of the technology and provide some advice on a selection of different printers which are within your price range.

It should, we hope, help you

to make the decision on choosing a colour printer to some extent future proof. Always supposing that is possible in anything to do with computing...

## From Hammers to Lasers

The idea behind all colour printing, even on the professional level at which magazines are printed, remains the same - take a base set of colours, the primary colours, from which any shade of colour can be produced. That's why, particularly on early newspaper colour, a small offset between the colour overlays ends up with a very strange looking pictures.

The implementation of this idea differs from one printer to the next.

The first type of printers, Dot Matrix, has a ribbon with four colours, the three primary and black, set one above the other. The printer then moves to whichever colour band it needs and a tiny hammer pushes the band onto the paper, making one dot. The image is built from these dots of different colours. The quality of these images is quite poor, even in 24-pin printers and for this reason they have little professional use.

Inkjet printers use the same idea, except that the ink is sprayed directly onto the page and the image quality is adequate as final copy for semi-professionals and as a draft for professional users.

There are also printers such as the Fargo from Primera, which use a method known as dye sublimation. These printers have wax rolls of different colours and melt the colours onto the page, which is usually a special type of paper. These produce very good images, but cost quite a lot to run.

The best quality images, and this will come as no surprise, come from colour laser printers. A full explanation of how these work can be found in the Laser Force supplement in AUI March 1995. The cost of these printers though, general puts them beyond the reach of all but the professional. But there are other options like inkjets and the better dot matrix.

## Jetting Up

Impact printers hold 39% of the market but their share is falling. Organisations such as Citizen have for some time predicted that the dot matrix printer has not many more years of life.

Lasers, black and white but not yet colour which still remain expensive, are taking about 30% of the market. That share has been running at about that level for a year or so.

Inkjets have now risen to 40% of the total market. The growth of inkjet has been very rapid over the last year. The inkjet market is expected to go on increasing.

600,000

inkjet printers were sold in the UK in 1993, by the end of 1994 the amount of printers sold in the UK was 850,000 printers and in future the figures are predicted to be more than one million printers a year sold in the UK market - a tremendous rate of growth.

Factors driving the inkjet growth are better technology helping quality to improve and faster print speeds.

## Colour Up

The split between mono and colour shows a trend toward colour printing. In 1993 monochrome took about 75% of the market. In 1994 monochrome fell to 62% but as this is still a growing marketplace the actual amount of monochrome printers will increase.

Colour commanded 38% of the market at the end of 1994. In 1995 the share will be almost equal with a 50/50 split between colour and monochrome printers. The factors driving this change are more people running Windows on the PC. Seeing high quality on their screens is also leads to demands for high quality output on their printers.

Additionally more people are starting to buy scanners. Scanners are just becoming to be the second peripheral purchase of many people and the prices of scanners are set to fall as well in the near future. So those reasons plus the fact that more people are using faster and more powerful PCs and Amigas, making colour more manageable make the growth of the colour market inevitable and colour printing no longer the missing element that it used to be.

To sum that up in 1994 a little more than 300,000 colour printers were sold in the UK and in 1995 it will be nearly half a million printers which is 48% of the total market.



# Decisions... Decisions...

Market research carried out by Epson of a cross section of the market including the Small Office/Home Office (SOHO), medium and large corporate and IT professionals revealed that potential users were looking for a number of things when they were deciding to buy a colour inkjet.

The key factor was colour print quality closely followed by cost then by reliability. Then came type of print media, for example, transparency for overhead projection, special paper and plain paper, finally, colour graphic speed. These were the top five requirements. But because many colour printers are used for mono output as well, mono print speed and mono print output were also important.

Epson also asked what were users' doing and what were their main applications. It was found that Bar and Pie charts were the most important use of colour closely followed by illustrations and graphics also spreadsheets word-processing and text charts. One of the facts that became clear is that people are not buying new applications for colour but instead are using their existing applications and using colour to enhance the output, particularly on the Amiga.

### It was interesting that full colour photographic quality output was at the bottom of the needs table.

It was interesting that full colour photographic quality output was at the bottom of the needs table. It was an aspirational element they would like to move towards.

People were also asked which media they would like to move into. At present about 75% of users were printing on plain paper but a significant proportion were also printing on transparencies and on special paper.

They were then asked if they had ever worked with special papers. 62% of users said they had used transparencies, 34% had used special papers and only 28% had restricted their inkjet output to plain paper only. This showed that users were realising that to get the best out of their inkjets they would have to use special paper.

The key findings of the Epson research were: first, colour inkjet printers are used to enhance existing applications. Their use was mainly for presentational and marketing material both in-house and for external use. They also found that the knowledge of colour is quite limited.

The industry has quite a job to do in educating users how to get the best of getting good quality colour printing.



## Colouring The World CONTINUED

# Canon BJC-4000

Until now buying a personal colour printer usually meant a compromise in print performance, or a higher price (beyond the pockets of most Amiga users). The BJC-4000 changes all this with a new, versatile Bubble Jet system. It is ideal for anyone who only wants to buy one printer - either for office or home use.

The BJC-4000 is the new member of the Canon Bubble Jet printer family. It provides the same excellent output quality and performance as the popular BJ-200 with the addition of brilliant colour when you need it.

With new faster drying, water-resistant non-fade inks which eliminate blurring between colours and a unique 136 nozzle print head, the BJC-4000 produces stunning, vivid, permanent colours even on plain paper. The black ink has also been modified to give a truer black ensuring clarity of text on a flexible range of media, including plain, coated and glossy paper, overhead transparencies, back printing film and envelopes.

There is also a built-in sheet feeder capable of automatic handling of 100 sheets of paper, 40 sheets of transparencies and back printing film or ten envelopes. The print head now lasts longer giving up to 3000 pages. It has been designed to carry two ink tanks, one dedicated to black ink, the other combining cyan, magenta and yellow. Bi-directional text printing ensures high speeds of up to 248 cps.

### Bubble Jet Bubbles

The Bubbles are produced by a pulsed signal in each heating element, eject tiny droplets of specially developed inks through a series of super fine nozzles.



mono-chrome throughput of four ppm and a maximum resolution of 720 x 360 dpi. The BJC-4000 prints a high resolution 360 x 360 dots per inch for colour and black combinations using the BC-21 cartridge - that's more than 40% higher than many competitive models.

The BJC-4000 will have widespread appeal to the small business user looking to produce high quality correspondence and spreadsheets. It will also appeal to the Amiga user who needs a reliable, quiet, cost-effective printer that takes up little space on the desktop. The price/ performance ratio of the BJC-4000 makes it an irresistible offering.

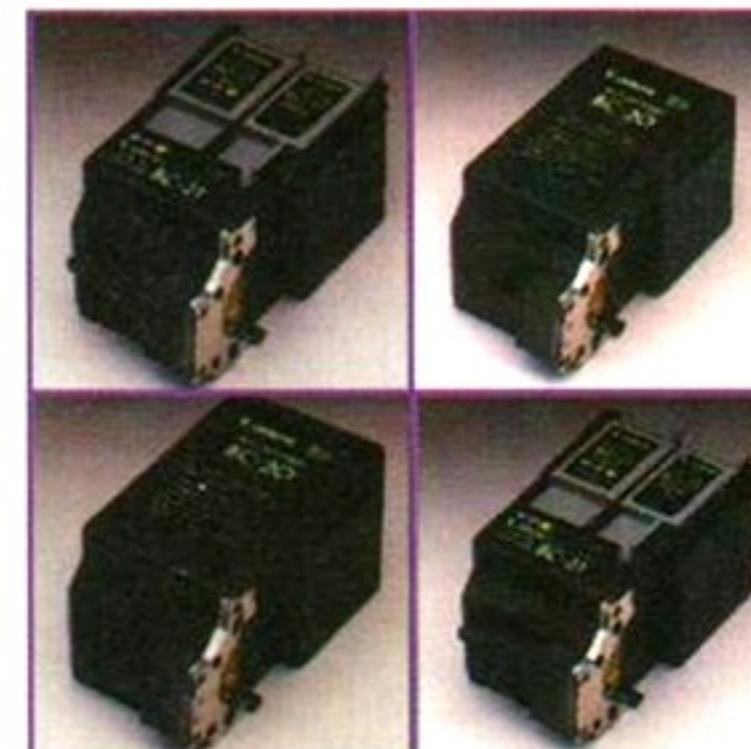
The BJC-4000 is the ideal addition to the home office. Its quiet operation - 45db(A) - means little disturbance, while low power consumption, low running costs make it an economical choice. The easy-to-install ink cartridges make the BJC-4000 the printer of choice for the novice and experienced user alike.

### Inks

The superior print quality of the BJC-4000 is only possible with Canon's



newly developed ink formulations. They dry extremely quickly which prevents blurring or smudging of images. They are water resistant and won't easily fade in sunlight that is useful when printing onto back-printing film for window displays.



Ink cartridges include the full printhead.

The BC-21 colour cartridge will produce draft text at up to 2.5 pages per minute and high quality text at nearly two pages per minute.

For more demanding users, there is an optional BC-20 black only cartridge. This cartridge has double the number of nozzles for black ink allowing up to three lines of text to be printed simultaneously at up to four pages per minute. This performance is equivalent to a laser printer at a fraction of the price. The increased number of nozzles also allows you to print at an even higher 720 x 360 dots per inch for crisper, sharper text and images.

The BJC-4000 has been designed to conveniently fit into the smallest possible working space (365 x 206 x 185 mm).

The BJC-4000 operates quietly and unobtrusively. The BC-21 print cartridge, supplied with the BJC-4000 uses separate colour and black ink tanks and a user replaceable print head to keep running costs low and ensure the highest possible print quality.

The optional high speed, black only BC-20 cartridge has five times the ink capacity for long life operation. The BJC-4000 is supplied with Microsoft Windows 3.1 driver and DOS drivers and 20 TrueType fonts. It is covered by Canon 5 one year return to manufacturer warranty (upgradable).

The BJC-4000 combines high quality colour printing at 360 x 360 dpi, with high speed mono printing around 3ppm, at the easily affordable price of £399 excluding VAT.

## RATINGS

### Canon BJC-4000

FEATURES	78%
PERFORMANCE	75%
EASE OF USE	80%
VALUE FOR MONEY	75%

**Overall Rating 77%**

## INFO

Price: £399

Contact: Canon  
Canon House, Manor Road  
Wallington, Surrey  
SN6 0AJ  
Tel: 0181 773 3173



**Colouring The World**  
CONTINUED**Paper**

Paper handling is also improved. A standard A4 paper cut sheet feeder can also accept a variety of different paper types. 10 envelopes can be fitted into the feeder or 50 transparencies and also large legal paper can be fed individually.

Epson are also supplying their own special paper allowing printing at 360 DPI and also at 720 DPI. For 720 DPI printing Epson recommend that their special paper is used, as at 720 DPI with some ordinary paper the ink can be very easily absorbed into the paper and so spoil the image. At 360 DPI, you can, however, print on plain paper.

**Running costs are low with the Stylus colour as the ink cartridge is the only consumable.**

There is also an optional slot at the back of the printer to take an interface allowing connectivity to mainframes and minis. All interfaces can be connected at the same time and the printer will accept data and switch between them automatically.

Last but not least is the reliability of the printer. Epson give a two-year warranty as standard. They can do this because the printer is robust and has a long life. It has a claimed lifetime capacity of 75,000 sheets and a mean time before failure of 4000 power on hours.

The Epson Stylus Colour is the way of the future and wins the AUI Colour Choice Award.

**RATINGS**

Epson Stylus Colour	
FEATURES	90%
PERFORMANCE	88%
EASE OF USE	95%
VALUE FOR MONEY	90%
<b>Overall Rating 92%</b>	

**INFO**

Price: £645  
(Street Price around £400)  
Contact: Epson UK  
Campus 100  
Hemel Hempstead  
Herts. HP1 7JL  
Tel: 01442 61144

# HP notebook printers

The Hewlett-Packard DeskJet 320 printer for Amiga and notebook PCs offers the highest-quality output of any printer in their class.

The DeskJet 320 costs £235, the same price as the market-leading HP DeskJet 310 it replaces.

Used in the office or at home, the printer provides professional black-and-white and colour documents quickly and easily.

It weighs less than 2 Kg. This small, lightweight design provides portability without sacrificing print quality. With a resolution capability of 600 x 300 dots-per-inch (dpi), these printers offer the same print quality as HP's more expensive personal inkjet printers.

Output is further improved through HP-developed Resolution Enhancement technology (REt). In addition, the DeskJet 320 includes HP's revolutionary ColorSmart technology, which optimizes colour settings automatically to provide the most vivid colour graphs, text and pictures.

While the new printer offers the highest DPI resolution of any mobile printer on the market today, its print



**HP Deskjet 320.**

quality is the result of a number of other factors, including HP's Resolution Enhancement technology, now incorporated into all of HP's DeskJet printers.

This means that it applies ink dots intelligently, so that output is crisp and clear; edges are noticeably smoother and curves are rounder.

The DeskJet 320 can print three pages of black text per minute and a colour page in about four minutes. The printer supports a variety of media, including letter, legal, and A4-size cut-sheet paper; transparency film; and



**HP Deskjet 1200C**

**It applies ink dots intelligently, so that output is crisp and clear; edges are noticeably smoother and curves are rounder.**

labels. An optional cut-sheet feeder, priced at £63, offers automatic feeding of up to 60 sheets of paper or 20 sheets of transparency film.

HP believes that the new HP DeskJet 320 and HP DeskWriter 320

printers will further increase the demand for portable notebook printers.

### Battery Power

The HP DeskJet 320 printer can be powered by either a battery or an AC adapter. The battery permits up to 100 pages of black-and-white printing and takes approximately six hours to recharge fully in the printer. For those with extensive portable-printing needs, a worldwide rapid re-charger is £71. It holds two batteries, each of which can be fully recharged in one hour sequentially. The re-charger also can be used as an AC power adapter.

An optional carrying case for £63, which is designed to hold the printer, cut-sheet feeder (1.4Kgs), portable PC and accessories, makes it easy to transport everything needed to create high-quality documents and presentations, anywhere, anytime.

The HP DeskJet 320 printer provides high-quality colour output without compromising black text quality. A colour kit, which consists of a "snap-in" colour cartridge and compact storage case, is £38. The user simply exchanges the colour cartridge for the black print cartridge provided with the standard printer.

### Running Costs

A replacement colour cartridge is £27. The replacement black cartridge is £25.

The HP DeskJet 320 has six built-in typefaces (four portrait and two landscape). It also supports ATM and TrueType fonts.

The HP DeskJet 320 printer comes with a Centronics parallel interface. Custom-designed cables also are available for the printers.

The DeskJet 320 comes with a one-year worldwide limited warranty. An extended three-year limited warranty that includes HP's 24-hour express exchange is available for £40.

### RATINGS

#### HP Deskjet 320

FEATURES	75%
PERFORMANCE	70%
EASE OF USE	75%
VALUE FOR MONEY	80%
<b>Overall Rating</b>	<b>75%</b>

### INFO

Price: £235  
Contact: Hewlett-Packard  
Cain Road  
Bracknell  
Berks  
RG12 1HN  
Tel: 01344 369369

# SpeedJET 360 Colour



With the SpeedJET 360 Colour, Seikosha has entered the market for Colour inkjet printers. Characterised by a compact and attractive design, it has features which are likely to convince the office as well as home computer users. However, the SpeedJET 360 Colour is not only a useful printer for current and future lovers of colour; it is also suitable for users who intend primarily to produce inexpensive monochrome printouts in an environmentally-sound manner. The 51-nozzle Colour print head is simply replaced by an optionally available monochrome "long-life" print head. Seikosha provide an appropriate print head "garage" for two print heads.

Whether in colour or in monochrome, the results of this printer are excellent and produced very quickly. Despite the capabilities of the machine, it is reasonably priced.

This is very suitable machine if you may not always use colour although require the facility quite regularly.

The SpeedJET 360 Colour provides you with a wide range of solutions for designing documents. This is achieved by means of five fonts which can be printed in various ways, including portrait and landscape formats. In particular, the optionally available scalable soft fonts offer the user a considerable amount of freedom.

### High-quality Printouts

The excellent quality of text and graphics is achieved through of the resolution of 300 x 300 dots/inch (DPI)comparable to that of laser printers, but this is low compared to other inkjet printers. Especially impressive results are achieved if use is made of the special papers and films designed for inkjet printers.

The fully automatic sheet feeder for the A4, letter and legal formats are supplied as standard with the printer; envelopes and films must be fed in manually.

The print parameters are set simply via readily-accessible setup selec-

tors. The SpeedJET 360 Colour is supplied with a 128 KB print memory and a PCL 3 Plus emulation. Cartridges for IBM Proprinter 4207 and EPSON LQ 850, a 258 KB download memory and a serial port are optionally available.

### RATINGS

#### SpeedJET 360

FEATURES	60%
PERFORMANCE	65%
EASE OF USE	70%
VALUE FOR MONEY	90%
<b>Overall Rating</b>	<b>70%</b>

### INFO

Price: £279  
Contact: Seikosha  
Unit 14, Poyle 14  
Newlands Drive, Colnbrook  
Slough, Berks. SL3 0DX  
Tel: 01753 685873

# Colouring The World

CONTINUED

Colouring The World



This 24-pin dot-matrix printer from Seikosha provides more flexibility and precision. The reason for this improvement is that the newcomer uses the optimised printer language ESC/P2. This language enables the printer to print fonts with variable heights, and also results in extremely precise graphic printouts. The SL-96 Colour is supplied with a colour ribbon, but it is equally suitable for monochrome use since a second ribbon drive is available for the standard ribbons of the SL-90/ SL-92 models. This enables the printer to produce large quantities of less expensive black and white printouts, as the colour ribbon can be saved until needed for colour printing applications.

### High Speed

Whether the SL-96 Colour is printing text or graphics, colour or monochrome, its advanced 24-pin technology with a maximum resolution of 360 x 360 dots per inch ensures excellent printout quality. With a total of eight Bitmap fonts and two scalable fonts (8 to 32 point). The SL-96 Colour provides high flexibility. And it achieves a

maximum speed of 240 characters per second and 84 characters per second for letter quality text.

The SL-96 Colour handles single-sheets as well as fanfold paper. Combined with a useful auto park feature,

**It achieves a maximum speed of 240 characters per second and 84 characters per second for letter quality text.**

the built-in push tractor ensures easy switching between these two types of paper. A paper tray is installed on the printer to facilitate fully automatic single-sheet feeding.

The 42 KB printer memory holds several pages of text. This frees the computer for other tasks while the documents are being printed.

### Compatibility

The SL-96 Colour can be connected to any Amiga via its Centronics port. The Epson emulation LQ-870 (ESC/P2) ensures that the printer is compatible with all popular software programs.

### RATINGS

#### SL-96

FEATURES	55%
PERFORMANCE	65%
EASE OF USE	70%
VALUE FOR MONEY	90%

**Overall Rating 70%**

### INFO

Price: £149

Supplier: Seikosha, Unit 14 Poyle 14, Newlands Drive

Colnbrook

Slough

Berks.

SL3 0DX

Tel: 01753 685873

**NEXT MONTH IN**



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## Colouring The World

CONTINUED

Low cost, robust, economic but above all quiet - Panasonic's latest 24-pin matrix model gives 360x360 DPI sharp colour printing for home, school or small business use. As standard the KX-P2135 Quiet-Printer includes seven colour printing, and a 20-sheet cut sheet feeder. Control of print parameters and fonts is easy using either the simple front panel controls.

Panasonic's proprietary Quiet-Printer technology gives an operating noise level of only 43.5 dBA in super-quiet mode.

Panasonic's proprietary Quiet-Printer technology gives an operating noise level of only 43.5 dBA in super-quiet mode. The KX-P2135 Quiet-Printer can operate at speeds of up to 250 cps.

As well as the 20-sheet feeder, the KX-P2135 has a flat-belt push tractor to ensure easy paper loading and versatile paper handling functions include paper parking, automatic paper load and paper saving zero tear off.

With crisp 360x360 dpi resolution for clear graphics and a choice of three draft and seven letter quality fonts - each available in 10 different sizes plus proportional spacing - creative, high quality printing is assured. The ergonomic design ensures that all levers and switches are easily accessible from the front or top of the unit and the KX-P2135 is also Energy Star rated.

### RATINGS

#### KX-P2135

FEATURES	60%
PERFORMANCE	65%
EASE OF USE	70%
VALUE FOR MONEY	85%

Overall Rating 70%

### INFO

Price: £189 ex VAT  
 Street Price: £150  
 Contact: Panasonic  
 Willoughby Road  
 Bracknell  
 Berks.  
 RG12 8FP  
 Tel: Freephone 0500 404041

# Panasonic KX-P2135

## QuietPrinter



## Colouring The World

Using colour is like any other area of computing a matter of habit. Once you have a colour printer you will use it as a natural adjunct to your computing. Sometimes black and white will be more suitable - or less time-consuming. Sometimes that touch of colour will razzle-dazzle 'em when you want to make that extra impact.

What is sure is that if you give yourself the option of colour then you have that much more freedom in the effect you want to

achieve. And whether you are black and white purist or not until now, you have to admit that the Amiga, above all computers, is a machine that can use colour effectively.

Ours is not and never has been a black and white world. It's only that until now most of us have had to live as it had been. But no longer, whether we wanted it to happen or not our Amiga world is becoming a much more colourful place. So you might as well enjoy all the colour that's going to come flooding your way. AUI

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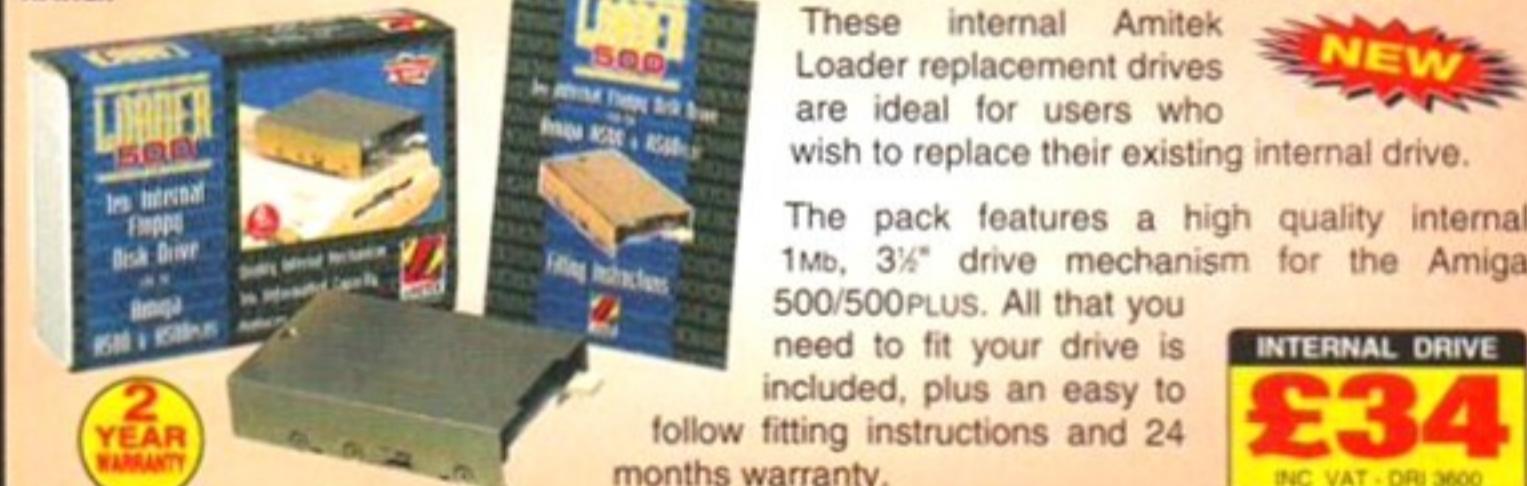
CODE	DESCRIPTION	INC VAT
RAM 0505	A500 - 512K (No Clock)	£20
RAM 0510	A500 - 512K (With Clock)	£25
RAM 0520	A500PLUS - 1Mb RAM	£30
RAM 0605	A600 - 1Mb (No Clock)	£30
RAM 0610	A600 - 1Mb (With Clock)	£40

## AMITEK POWER SUPPLY FOR A500/A600/A1200 - 1 YR WARRANTY

This power supply is an ideal replacement unit, which can deliver 1.0 Amp on 12V and 4.5 Amps on 5V. More than enough power for a seriously expanded Amiga!

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These internal Amitek Loader replacement drives are ideal for users who wish to replace their existing internal drive.

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# Win the Epsom Stylus Colour Printer The AUI Choice!

Get into colour! If you are not into printing colour for your Amiga now is the time to start.

You have the chance to win the *AUI* choice of colour printers – the Epsom Stylus Colour – in this easy competition. All you have to do is answer the following questions:

1. What are the benefits of Piezo Technology?

Answer: .....

2. What are the limitations of thermal printing?

Answer: .....

3. Which printer offers the highest DPI resolution of any mobile printer today?

Answer: .....

4. What resolution of inkjets is comparable to that of laser printers?

Answer: .....

5. Which language enables the Seikosha SL-96 to print various height fonts?

Answer: .....

Name: .....

Address: .....

.....

Send your entry to:

**Colouring the World Competition**

Amiga User International

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London

**NW1 1BW**

We are happy to take photocopies if you do not wish to damage your **AUI**.

Entries must reach us by the 31st July 1995 and the winner will be drawn from the Editors top hat after that date

Please tick here if you do not wish receive other relevant material



**Colouring The World  
with AUI**

Printer Ribbons - Ring for Ribbons Not Listed

BLACK	1 off	2+	5+	10+	BLACK	1 off	2+	5+	10+	BLACK	1 off	2+	5+	10+
Amstrad DMP 2000/3000	2.80	2.65	2.45	2.25	Epson FX/MX/RX80/FX/LX800	2.90	2.75	2.55	2.35	Star LC200	3.00	2.85	2.65	2.45
Amstrad DMP 4000	3.66	3.51	3.31	3.11	Epson FX/MX/RX100/FX/MX1000	3.36	3.21	3.01	2.81	Star LC24-10/20/200	2.86	2.71	2.51	2.31
Amstrad LQ5000	6.10	5.95	5.75	5.55	Epson LX80/86/90	2.12	1.97	1.77	1.67	Star ND/NR/NX10, NB24-10	3.85	3.70	3.50	3.30
Amstrad PCW8256/LQ3500 Fab	2.85	2.70	2.50	2.30	Fujitsu DL3300/3400, DX2200	3.75	3.60	3.40	3.20	Taxan Kaga KP810/815/910/915	3.14	2.99	2.79	2.59
Amstrad PCW8256/LQ3500 M/S	3.57	3.42	3.22	3.02	IBM 4207/4212 Proprietary X24	3.88	3.73	3.53	3.33	COLOUR				
Amstrad PCW9512 Fabric	3.38	3.23	3.03	2.83	Mannesmann Tally 80/81	3.90	3.75	3.55	3.35	Citizen 224,240, Swift 24/9	11.95	11.80	11.60	11.20
Amstrad PCW9512 M/Strike	2.60	2.45	2.25	2.05	NEC Pinwriter P2200/P2+	3.03	2.88	2.68	2.48	Commodore MPS1500/1550	9.38	9.23	9.03	8.63
Brother M1009/1024/1109/1209	3.90	3.75	3.55	3.35	OKI ML182/183/192/193/195	3.17	3.02	2.82	2.62	Panasonic KXP2123/2124/2180	10.63	10.48	10.28	9.88
Brother M1818/1824L/1924L	4.88	4.73	4.53	4.33	OKI ML320/321/380/390/391	3.32	3.17	2.97	2.77	Star LC10/20/100	6.00	5.85	5.65	5.25
Citizen 120D/LSP10/Swift 24/9	2.85	2.70	2.50	2.30	Panasonic KXP1123/1124/1140	3.46	3.31	3.11	2.91	Star LC200	9.78	9.63	9.43	9.03
Commodore MPS1220/1230	4.50	4.35	4.15	3.95	Panasonic KXP1080/1180/90	2.89	2.74	2.54	2.34	Star LC24-10/20/200	9.63	9.48	9.28	8.88
Commodore MPS1500/1550	6.75	6.60	6.40	6.20	Panasonic KXP1524/1540/1624	4.55	4.40	4.20	4.00	Ring For Toners Not Listed				
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DISKS</p

George Orwell's '1984' was wrong. Technology has not enslaved people, it can liberate them. The Amiga has given us the power to create, package and disseminate ideas and information. It has given us the power to publish from the desktop of our home or small office. Desk Top Publishing (DTP) is now widely considered as one of the "real" uses of computers. The Amiga wasn't about to be taken seriously unless it was able to produce top quality DTP work.

Fortunately, one of the strongest growth areas in the Amiga world of recent years, besides graphics and video, has been DTP.



An A1200 - a fine start into the world of DTP.

# FREEDOM of the Press

## DTP Who?

By DTP we mean the use of desk top computers to do the leg work in creating documents which will have multiple copies printed and distributed. On an everyday level, DTP can be used to create stationary for yourself or a business - such as business cards, compliment slips and headed letter paper.

Larger projects are also possible. Everyone has a book in them (even if no other person would want to read it) - these can be written then formatted on a home computer. The digital file is taken to a printing house for a printing and binding run. Many people at least have an idea, knowledge, hobby or obsession that they want others to know about. These can become the basis for successful fanzines, magazines and newsletters which are printed at home and photocopied, or given to printing houses for a small run job.

**Utility programs can convert the images to formats your system can understand, but sometimes colour and resolution is lost in the conversion.**

## WP vs DTP

Strictly speaking, the process of making a published document should see you prepare the text on a word processor, then import that text, along with graphics like photos and art, into DTP software for arranging on pages.

The process has become rather

fonts a doddle and is very flexible. PageSetter is a good for beginners.

## Amiga Set-up

Before considering the kit in which to invest, work out what you want to publish. If it's simply letter-headed

**Mark Blackham explains how DTP on the Amiga can bring you within touching distance of fame and fortune - if you are creative enough.**

blurred by the power of word processing packages.

Although many prefer straight text editors, there has been a strong demand for all-singing word processors. Top WPs like Wordworth and Final Writer now feature the ability to import graphic files, move text about pages in boxes, and even use drawing tools in the document. This is as much, if not more, than many people need for creating basic newsletters or headed stationary.

## Software

The most popular DTP software choices are Professional Page 4.1, Pagestream 2.2, Final Copy or PageSetter. Where one may be better in handling of illustrations or imported graphic files, it may have less impressive font capabilities. Either way, they are all very capable. Briefly, ProPage is darn fast and easy to use. Pagestream uses Postscript fonts and has more functions. Final Copy makes

paper or a small, mainly text newsletter then a basic unexpanded Amiga should suffice. In such cases, software such as Wordworth 3.1SE is all you need to do an acceptable rudimentary job. Serious, or even moderately serious use, will need a quite nippy and well endowed machine to run dedicated DTP software. Any machine will need an accelerator board, loads of memory and a large hard



Print straight onto film on your home laser before nipping down to the local offset printing house.

**Some gimmick  
techniques can capture  
the attention of  
readers.**

drive. The first is for speed of use. DTP programs are hair-pullingly S-L-O-W even on an unexpanded A1200. An accelerator, such as an 030, and extra memory, will allow you to play with large files and speed up operations such as redrawing the screen after you've moved a text box. A big capacity hard drive is crucial for storing the DTP work you'll create. An A4 sized colour scanned picture could take up 40 megabytes. A simple page of text and small clip art could be over 10Mb in size. You need somewhere to store this gargantuan stuff.

## Printers and Printing

At the very least you will need a home printer to see rough draft copies of your work. At the most, you'll need a printer which can fire out the finished product - what you propose distributing to readers. The former need only be a simple dot matrix or ink-jet printer. The latter would probably be a high resolution laser printer capable of handling large printing jobs.

While a great majority of your work will look fine when photocopied straight from your home printer output, if you want colour output, or even very high quality black and white, you'll have to send your work to a Printer as a file on disk.

Larry Hickmott of EM magazine has discovered that you can print the film out on a home laser and take it straight to a company using lithographic machines for "offset" printing.

## Scanning In

Scanners are essential for placing pictures and photographs in your documents. They run a length of light over a photo and transform it into digital information which computers can reconstruct into images. Hand scanners produce good line art pictures, but are not so faithful in reproducing photographs. They are fine for a fanzine or newsletter, but not for books. Flat bed

scanners (or drum scanners if you are clothed in cash) can capture high quality colour photographs without any discernable loss of quality.

## Pictures

**Top WPs like Wordworth  
and Final Writer now  
feature the ability to  
import graphic files.**

elsewhere, the scans of others and pictures created in computer paint packages (clipart). They come in varying standards - like IFFs, PCX, TIFFs and JPEGs. Your DTP package will be able

The flexibility of DTP is that you can import pictures to illustrate your text. You can use scans of your own photographs or pictures obtained

to read some and not others. Utility programs can convert the images to formats your system can understand, but sometimes colour and resolution is lost in the conversion. That's the way it goes.

## Fonts

Fonts are the styles of typeface seen on the printout. They have a great affect on the way a document looks and "feels", and can be used to reflect the subject matter. For example a hip, rad, techno-skateboarding magazine won't want to plump for a Times Roman font, but probably use a sans serif (no knobs on the points of letters) more 'modern' style.

The information your DTP needs to form these letters is contained within datafiles which are loaded into your fonts drawer.

Trouble is, the data comes in two main formats, each with a couple of different standards. Outline fonts use a formula to describe their construction. Bitmapped fonts give the computer a map of pixels that make up each character in the font.

Outline fonts result in more precise font construction on the printed page, no matter what the font size. Bitmapped fonts will get 'blockier' as they are scaled upwards. The industry outline font standard is PostScript Type 1, which some Amiga DTP programs

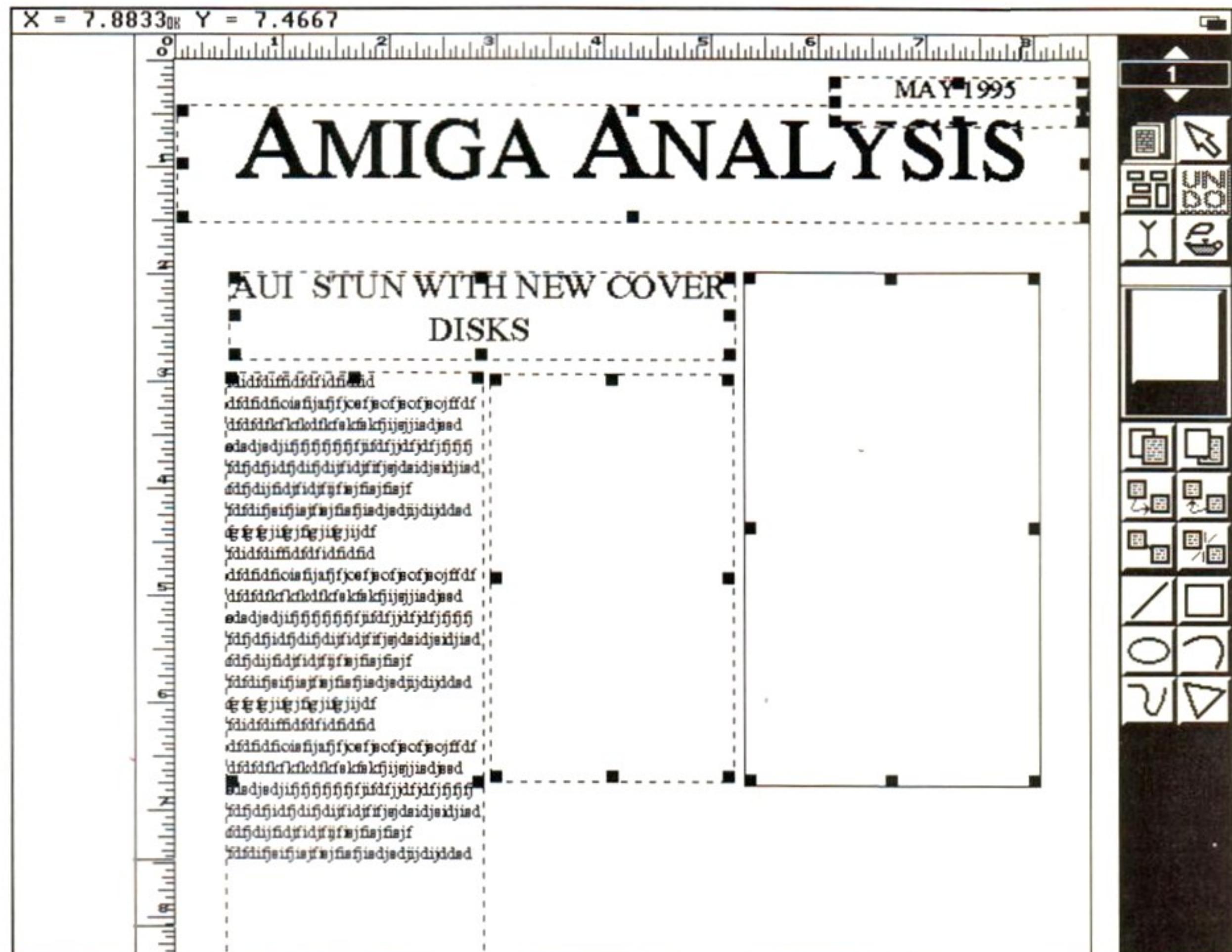
like Pagestream can use. Others, like ProPage, use them only after converting them to the Amiga's Compugraphic format. Since you will find that most printing houses will only accept PostScript data files of your DTP work, it is essential that you can output in a PS format. ProPage converts the Compugraphic fonts back to PS for this purpose.

## Installing Fonts

Some types of fonts don't co-exist peacefully in the same drawer. Each application choose fonts from the drawer applicable to their needs. You'll need to assign these drawers in the user-start-up file, so the applications know where to look.

For example, your system will pull bitmap fonts from the Fonts drawer in WorkBench, which is where Pagestream, Final Writer and Final Copy are happy to find their PS Type 1 fonts. Compugraphic fonts need their own drawer. In addition, they must be installed by running a program like CG\_Update (ProPage).

To install the cover disk fonts from this issue, copy them across from the floppy disk, without the drawer, into a special CG Fonts drawer if you plan to use them with ProPage, then run CG-Update. Otherwise, copy them into your standard Font file and use



*Professional Page in action. The quality and performance of Amiga DTP software challenges those on competing platforms.*

## Read It Up

Readers wanting to get themselves going in DTP should take a look at the following publications – all created and printed using the Amiga.

### Desktop Publishing

First timers to DTP and those who taught themselves (didn't we all!) will find this book indispensable. It will prove to be a great reference book to keep near your computer to consult when problems arise or you forget how to do something.

Desktop Publishing is part of the LH Publishing "Get Serious with Your Amiga" range. It comes with two floppy disks containing PostScript fonts, example PS files and a very essential Postscript interpreter.

The author, Larry Hickmott, has a breezy, chatty style which makes the topic accessible and understandable. Before you know it, you're learning things!

The subject is covered from start to finish, clearly explaining how the whole DTP process works. Larry then explains all the things you need to get into business - the hardware, the software, the peripherals like printers and scanners.

The confusing business of fonts and pictures is clearly explained and kept simple. Likewise, the approach to explaining bitmaps, art work, "jaggies" and various image formats, means the reader feels ready to tackle the real business of creating DTP work.

Perhaps the most useful aspects is that a lot of the book is taken up in describing how the book itself was made. When you read how someone else did it, and the proof of the method's success is in your hands, you know the process can also work for you.

**Overall Rating 90%**



Some clip art is seriously good - adding depth and dimension to your page.

Fountain (WB2) or Intellifont (WB3) to convert the CG fonts into bitmap 'outline' fonts that other programs can use.

## Fonts & Clip Art

These two topics are the root of all the success and problems people have in DTP. An explanation of what they are and how to use them is therefore very welcome. The author, that Larry Hickmott again, has included two disks in with the book. He provides eight Type 1 (PostScript) and CG fonts, 19 pictures and three utilities (DirWork, SnoopDOS and Viewtek).

Every aspect of font and picture formats, Postscript types, bitmaps, scaling, structured images, and how to install and use them on your system is covered.

Unfortunately the easy-going writing style means difficult concepts are sometimes breezed over too quickly. You may need to retrace your steps occasionally to get it right in your own mind. This isn't really Larry's fault – it can be hard to understand.

My first thought was that Larry had been rather naughty by filling up quite a few pages with examples of font styles, clip art pictures and photos. On reflection, it would seem rather incomplete to discuss the topic without giving a good range of the types of things you will come across when delving into DTP.

There is also a very good glossary and a Q&A / troubleshooting section which answers the questions we all ask.

Best of all, there is a thorough explanation of how to install fonts for each of the favourite word processing and DTP programs. By showing you how to properly structure your approach to DTP, Larry has made this book a darn useful addition to Desktop Publishing.

**Overall Rating 88%**

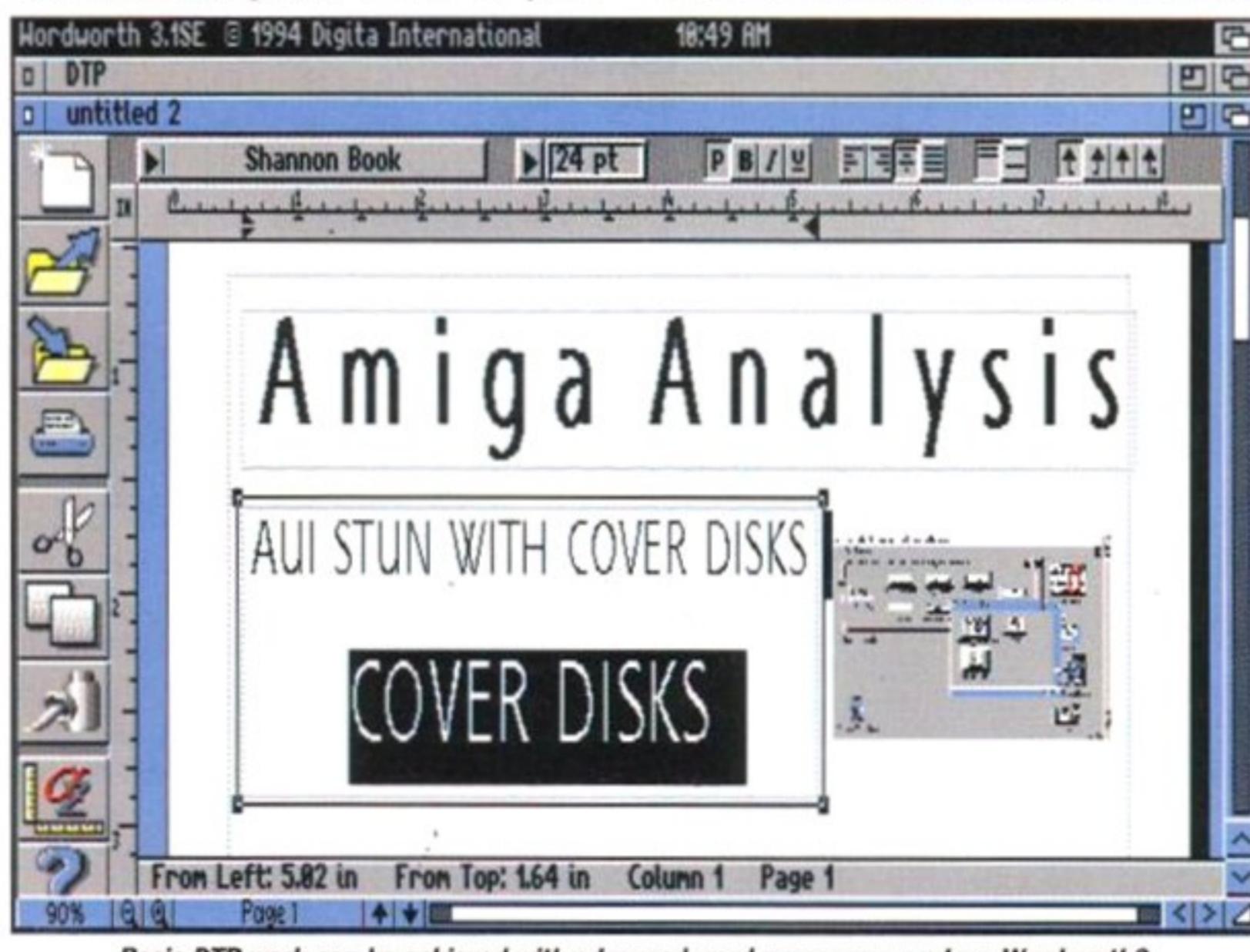
### EM

The first and only dedicated Amiga DTP magazine. It runs features and reviews of products such as software, printers, scanners and font / clip art libraries, provides tutorials on how to improve your DTP work and covers news from the DTP field.

**Contact: LH Publishing, 13 Gairloch Ave, Bletchley, MK2 3DH  
Tel: 01908 370 230 Fax: 01908 640 371**

### Document Creation

Be wary when you step into DTP of being dazzled by the opportunities. Suddenly the world of pub-



Basic DTP work can be achieved with advanced word processors such as Wordworth3.

lishing is wide open. You can publish books, newsletters, fanzines - anything. Or can you? Settle quickly on exactly what you want to do, and plan out how it will be constructed. Much DTP work suffers from a clash of ideas crammed

into one published document - which turns off a reader. Always be aware of where your eye goes when it looks at the page. The point of headlines, pictures and positioning of smaller main body text, is to draw the eye easily over the information. Don't be afraid of white space. There is nothing worse than too much happening on a page. (Except not enough!) By all means mix fonts, sparingly, to add variety, but don't mix fonts belonging to different families. Don't, for example, use serif (with little knobs on the points of letters) and sans serif (without knobs) together.

### Publish and be damned!

Although you now have the knowledge to get yourself published, there is a lot more to learn.

Don't be afraid of trying - there is no better way of learning than doing it. As the Duke of Wellington said, in a rather different context, "Publish and be damned!" **AUI**

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# SkidMarks 2

Acid All Amigas (CD32 soon) £29.99

When the first Skidmarks made fat unmissable tracks across the gaming world at the start of 1994, the Amiga was king of home computers.

Oh for those heady days - when the future was ours. We debated what the next Amiga should look like and wondered how Acid Software could top their fabulous Skidmarks. Well, the future has arrived, and I don't like it. The Amiga now has a perilous existence, and Skidmarks 2 (aka SUPER Skidmarks) looks like it had a blow-out.

Hailing from that beautiful country of ingenious people, Acid Software, played a significant part in the vitality of the Amiga universe.

It's not that my fellow Kiwis stuffed up on the much-awaited sequel, it's more that the whole kaboodle just doesn't get the adrenalin going.

This perspective comes after a weekend spent dutifully measuring the addictivity level of Skidmarks (quite

nal, go and play it after reading this review. If you still think it's brilliant, and drool at the prospect of more courses and more cars, then go out and buy this update instantly.

If, like me, you hesitate slightly, then consider the good and bad points a little more closely.

## The Good Bits

There are twelve new tracks (that's four disk's worth). The normal screen view shows you a close-up of your car on about a twentieth of the track, but a full screen hi-res mode reveals your car as a well-defined but tiny little blighter blitting around the track - which is almost all visible.

AGA machines are capable of having eight cars on screen at once. Combine that with modem link-ups and four players at one time, and things get pretty frantic.

Acid claim to have given computer-controlled cars an advanced intel-



Midget cars bump and grind over stupid channels someone has mindlessly carved in the middle of the track.

cars (big wheels, elevated suspension), cows (yes, stupid cows on wheels) and real Formula One racers.

Beginners can choose the cars in the Championship mode then flick back to race them in straight Match races. This mode allows you to set the difficulty level of the cars. There is quite a jump in difficulty between the default "Classic" level and the next level, where the cars are defined as "grunty".

Match race mode also allows you to select any track - so you can try out your favourite cars on your favourite track.

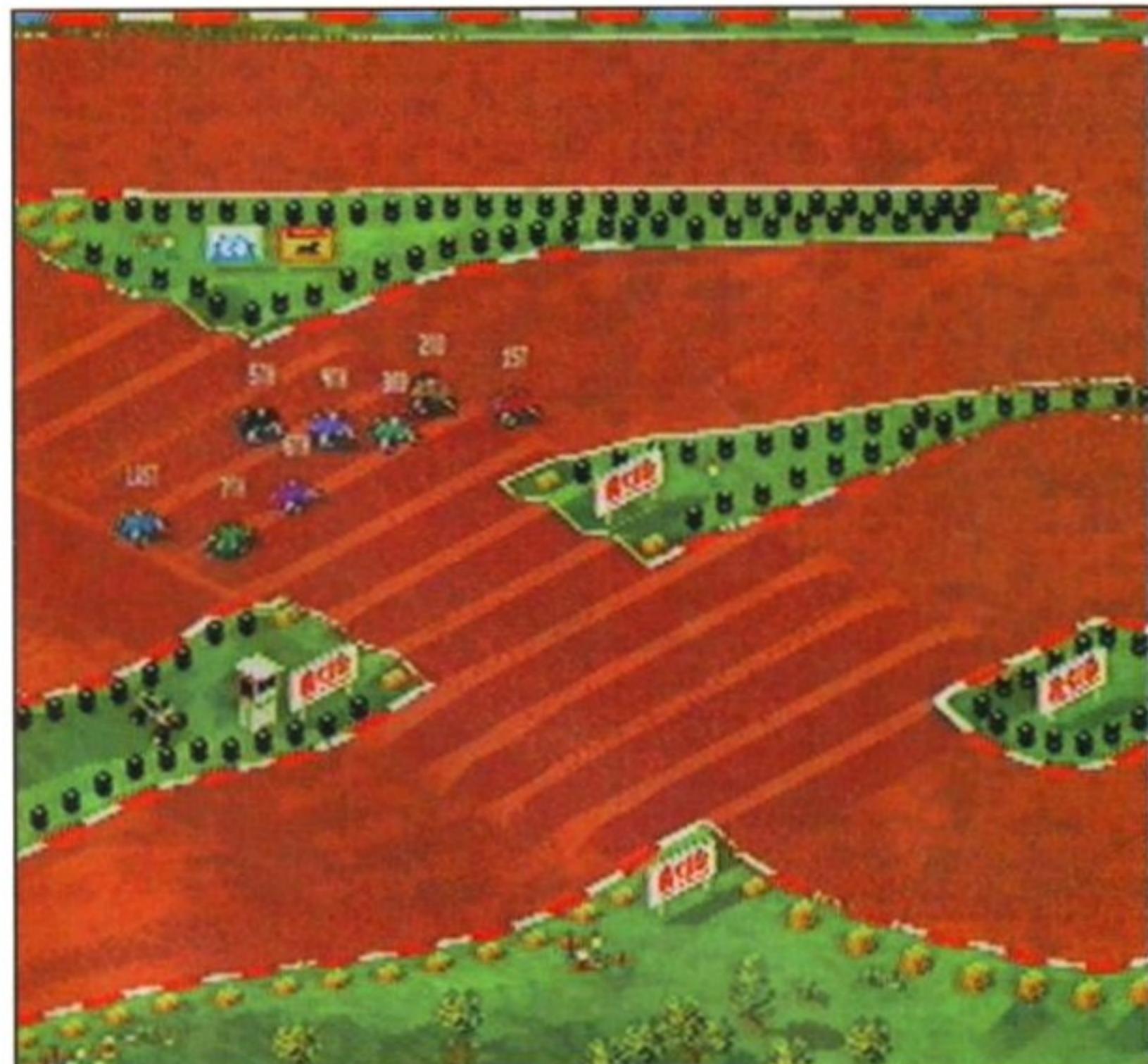
The Championship mode is best attempted when you've grown in confidence through the match races. You are taken through a series of races - of which the Formula One cars are so fast, they are crazily unplayable.

## Clever Bits

Other clever features include a shared screen mode for four human player racing, triple splitscreens for three players on one Amiga (the manual gives you a briefing on constructing a 4-player joystick adaptor), and caravan towing.

Like the ridiculous cow cars (what's the point, it's not even amusing), the caravan towing option is a trivial piece of 5-second amusement. The round 1950s style caravans are fantastically rendered. Performance of the cars are noticeably affected by the caravans bouncing behind them. As I rounded a steeply inclining corner, my car was dragged down the slope by the caravan weight. It makes for an interesting challenge if the main game becomes tiring.

A clever little addition is the PONG tennis game you can play on the main title screen or while waiting for the tracks or cars to load. A fantastically rendered and animated globe with ACID spinning around it bounces between paddles on either side of the screen. While multiple joysticks can work the paddles, the most entertaining method is via the mouse, which



The infamous silly Californian Cows on wheels take a spin on the track before milking time.

high) but ultimately failing to find myself thrilled by the game.

It isn't entirely the fault of Acid software. Over a year later, the original Skidmarks just doesn't look or feel as good as it once did. That is a problem for SUPER Skidmarks because it retains the core engine, style and method of play of the original.

OK, so what was gripping stuff a year ago, can still hold its fascination for many people. If you have the origi-

ligence. They certainly seem to know when is the worst time for you to be bumped savagely up a bank and into the barrier. In the thick of the action it's not uncommon for beginner drivers to find themselves bouncing off cars, flicking multiples 360s, and ending up facing the wrong way coughing in a cloud of computer dust as the rest of the racers speed off.

The new cars include minis, porches, midgets, beetles, trucks, muscle

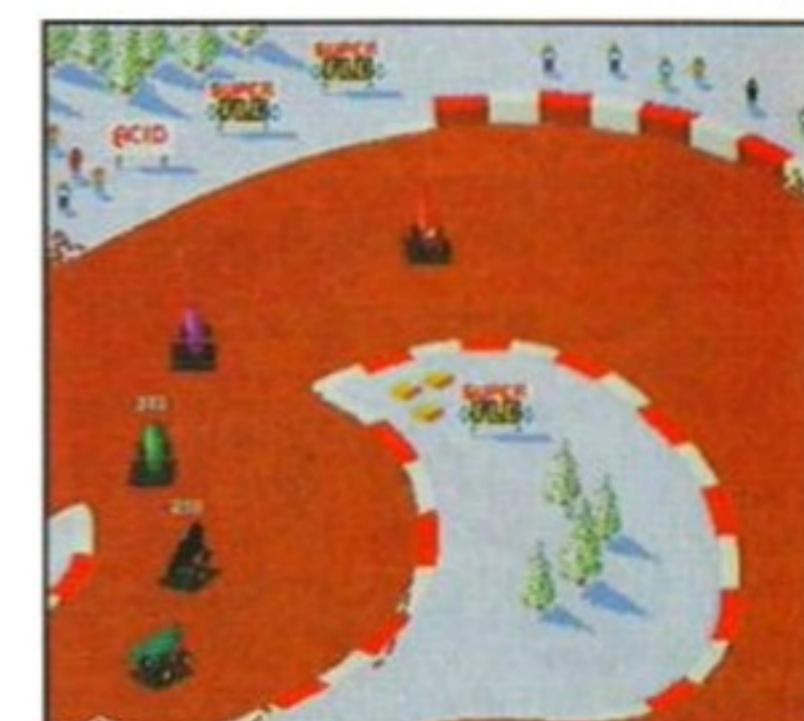
operates one paddle in the reverse of another. Moving the left paddle up, drops the right paddle down. Simple, but darn entertaining as the 'ball' speeds up with every bounce.

This simple game, playing across the top of the other, lends the whole package an even more screwy and clumsy perspective - but more on that in a moment. Because of the program-



ming style it is easy to add your own sounds, graphics and new cars. Well, the first two are easy. You merely open the directories from Workbench, DOpus or whatever and replace the sound or graphic files with your own. You could have the Skidmark cars uttering a Homer Simpson "Doh!" everytime they bump into one another! ("Doh!" was supplied on the AUI April cover disks, along with other sound samples).

The big SUPER Skidmarks claim is that users can create their own cars. That's fine, as long as you have Imagine 2. In case you do, Acid have supplied Lha'ed files to help you convert your cars to be used in Skidmarks. I severely



They're OFF! Porsches grapple for position at the start.

# Soccer SuperStars

Flair Software A1200 £29.99



The goalie launches at the ball - he's going to bugger it up again.

**P**romotional gimmicks do succeed in bringing attention to a product - but when you send a full soccer ball with a game, you're guaranteeing to make the reviewer happy - at least until they play the game.

Soccer Superstars is a sideways scrolling, close-up soccer game which emphasises the arcade aspect rather than simulating the real thing. In that respect it feels and plays more like the

arcade soccer games of the late 1980s - simple yet attractive front-end, large characters and few player movement options.

The players are well animated, and the results of a goalie diving for a save, or tackles look good. There are some nice touches, which should be adopted in other games - like the rendered kit outfit twirling next to the team line-up and the realistic ping as the ball bounces off the goalpost.

The playing performance is limited, and sometimes frustrating, to someone used to the likes of Sensible Soccer, or even Striker. But I've played the horrid yet best-selling FIFA on a console, and Soccer Superstars is probably better than that (just).

Despite the manner of your tackles, you'll never be penalised, and despite every effort to curve a ball into the net - it won't budge from its path. The Special Limited Edition of Soccer Superstars is available in some shops with the free Mitre football which Flair shipped to us.

The unfortunate problem is, you'll prefer kicking around the real ball to playing the game.

## VERDICT

Graphics:	83%
Sound:	71%
Gameplay:	60%
Overall:	67%



doubt the vast majority of users will attempt this feat even if they have Imagine, but some will, so we ought to soon see custom cars appearing in the public domain.

## Broken Promises

Speaking of which, Acid made some rash promises upon the first release of Skidmarks. They said they would supply new tracks and cars in the public domain. It appears that they didn't.

Actually, it's a sad and sorry tale of dashed hopes, which Acid relate in the manual.

They originally intended to release an upgrade that included a track editor, but didn't. So they simply completed an additional two track disks for the original game. Then - Hold Everything! - they discovered they could have eight cars with AGA systems. With the sprite system altered, and some new cars added, they then thought they ought to rewrite the front end....

Over a year later they have finally released SUPER Skidmarks.

The manual, however, is packed with more prom-

ises, such as Skidmarks Racer magazine, colouring competition, car modelling competition, full HD installation utility and Skidmarks tournaments.

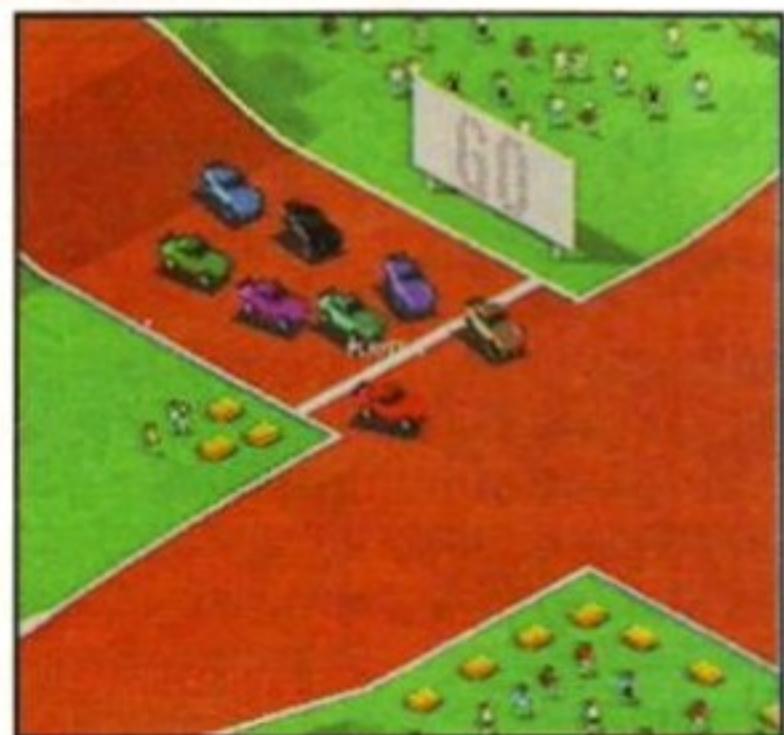
## Not So Clever Bits

Perhaps because of the patchy development, SUPER Skidmarks still feels a little rough. On one of AUI's A500s it continued to crash randomly, and even the A1200 hiccuped twice. Loading on the non-AGA machines kicks up a dog-awful messy graphic corruption scrawl across the top section of the screen.

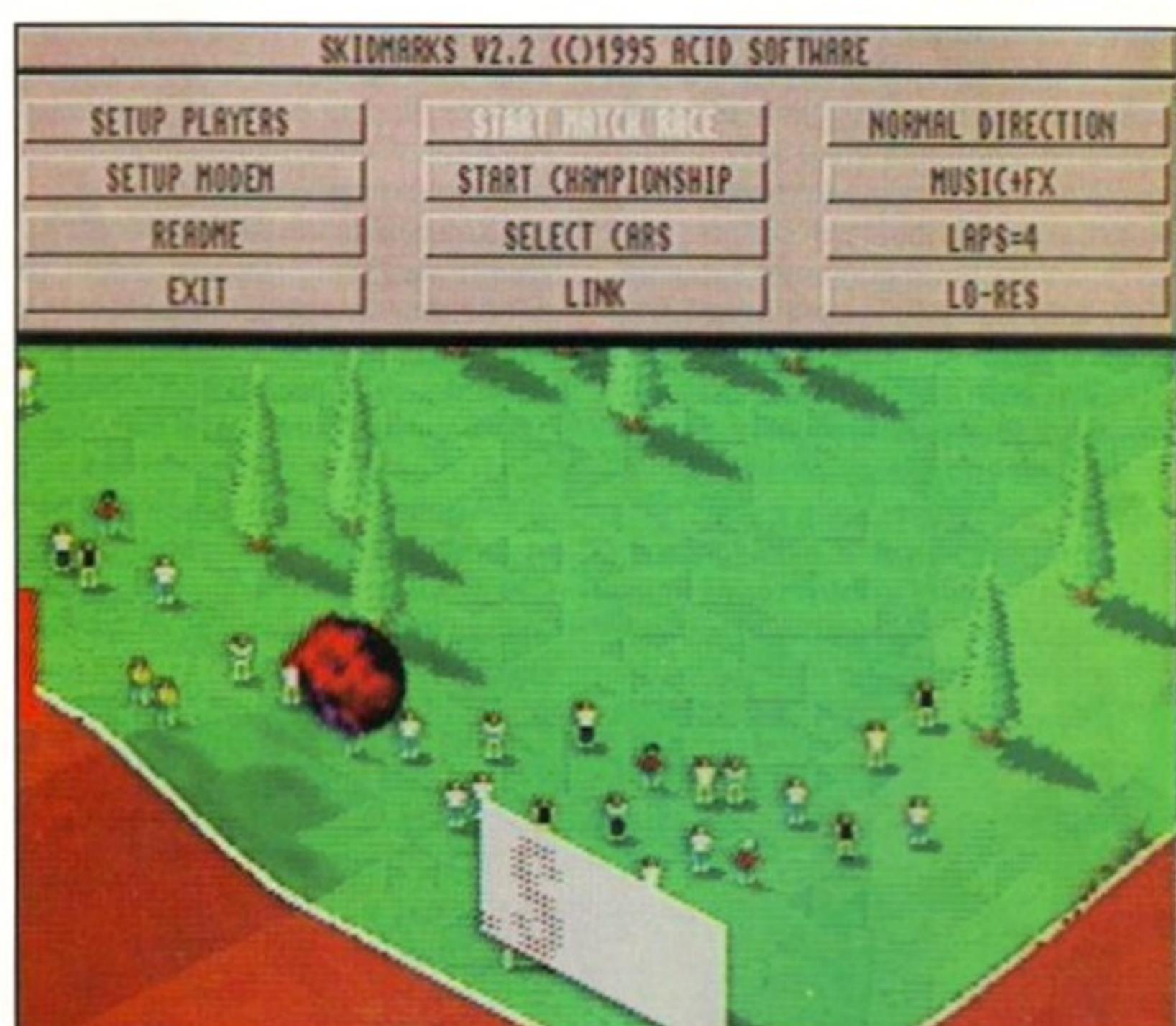
Loading from floppy is an all-round pain in the butt. It's slow, and the loading interface is rubbish. Worse, ACID let you load the game and car disks to a hard drive, but not the track disks (as an anti-piracy measure). They say you have to subscribe to their Skidmarks racer magazine to get the track installation utility.

Any in-game problems are more of a structural nature. I know it's a fundamental part of the game format, but I can't help but feel the tracks were frustratingly small. With the faster cars, it's ridiculous.

The distributors, Guildhall Leisure Services, asked the media not to comment on the packaging of the



Six of the gorgeous new tracks



review copy. I've been assured that the manual has been cleaned up. It had better be - it was uninformative and flippantly stupid.

## Blow-out

There's been a bit of a blow-out with this version of Skidmarks. If you loved, and still love, the original, you'll love SUPER Skidmarks. All the go-faster features you could possibly imagine are there to extend the original game. But essentially it's still the same model and probably won't hold its value.

## VERDICT

Graphics:	89%
Sound:	64%
Gameplay:	91%
Overall:	88%

## Team 17 All Amigas &amp; CD32 £12.99 &amp; £14.99

I've been bowled over. I cannot believe that Team 17 have managed to do so much with what seems on the surface to be a simple and straight-forward simulation.

Ten Pin Bowling. It's not exactly a winning title. It doesn't evoke images of glorious, long-lasting playability. The chief question is Why?

I remember a version on the Vic20 that moved a blocky ball up and down across the top of a lane and spun off towards the pins when you hit the space bar. There were only about five possible outcomes, with the pins duly disappearing - bloop, bloop, bloop.

gral to the game. In case you don't it goes like this: the game requires you to fire a ball (which varies in weight) at ten pins standing at the end of an alley. Each game is made up of ten frames. In each frame you get two goes at knocking down all the pins. You get a point for each pin knocked down. Knock 'em down first try and you get a strike - worth ten points plus the result of the next frame. Knock only some of them down and you get another bowl. Knock the remaining pins down and you get a Spare - ten points plus the result of the next bowl only.

The game starts with a series of

# KINGPIN

On the surface, there didn't seem much else you could do with the bowling concept. After all, what do you do in Ten Pin Bowling? You wear awkward shoes, run up to a lane and roll the shiny ball down it.

OK, so say you overlooked that simplicity and decided to simulate the game. How do you calculate the track, spin and speed of a ball and how do you work out the complexity of possible pin movements once they're hit?

With all that taken into consideration the game is looking too boring and yet too complex to attempt to simulate. Why bother? Well, Team 17 have, and succeeded.

This is a superb piece of work - injecting a surprising level of atmosphere, skill and variety into an ostensibly boring game.

They possibly made a slight mistake in assuming all buyers will know how real Ten Pin bowling works, especially since the scoring method is inter-

options which are standard variations in bowling. You can play by yourself, or with a combination of other real and / or computer players in a straight series of games (10 frames per game). You can play in pairs against other couples, or play in teams of three. Handicaps can also be added to even up competition.

There's even a Spares Challenge - where players compete by attempting to knock down increasingly difficult splits (remaining pins).

You can define players - setting up your name, preferred ball weight, left or right-handed play, and shirt colour. This feature is part of the statistics package - where you can look back over your performance.

The game itself places the player at the bottom of the screen - at the top of the lane. You are informed about how the lane is playing - fast or slow, with a natural spin in one direction or another. This needs to be taken into



S-T-R-I-K-E ! Cue: Twirl finger in the air. Prance along the lane tops. Act like a twit.



3 strikes in a row for Sparky Mark - I'm on target for a good score.

account when the shot is launched.

The pins come down on the whirling loading machine, and you then set the power your player will apply to the shot. You can select a different weight ball if required, but the usual procedure will then be to move the player into a run up position someone along the top of the lane.

When you've signalled readiness, an arrow whizzes across the lane width. Pressing the fire button when the arrow passes the direction you want the ball to travel will launch your player into a shot.

Spin can be added to the ball by pressing fire and twisting the joystick in the direction you want the spin.

The results are incredibly realistic - almost. I was able to pull a ball which appeared to be right up to the pins, from the extreme righthand side across the lane and into the left hand gutter!

On an AGA Amiga the game looks and sounds beautiful, although it's rather disconcerting to hear the woman out of Alien Breed suddenly advising punters that the bar is closed.

On a non-AGA machine the game loses a lot of its visual spark, but it is still a great achievement. I doubt you could make a Ten Pin Bowling game any better.



Eyeing up the pins from the top of the lane.

## VERDICT

Graphics:	87%
Sound:	96%
Gameplay:	89%
Overall:	91%

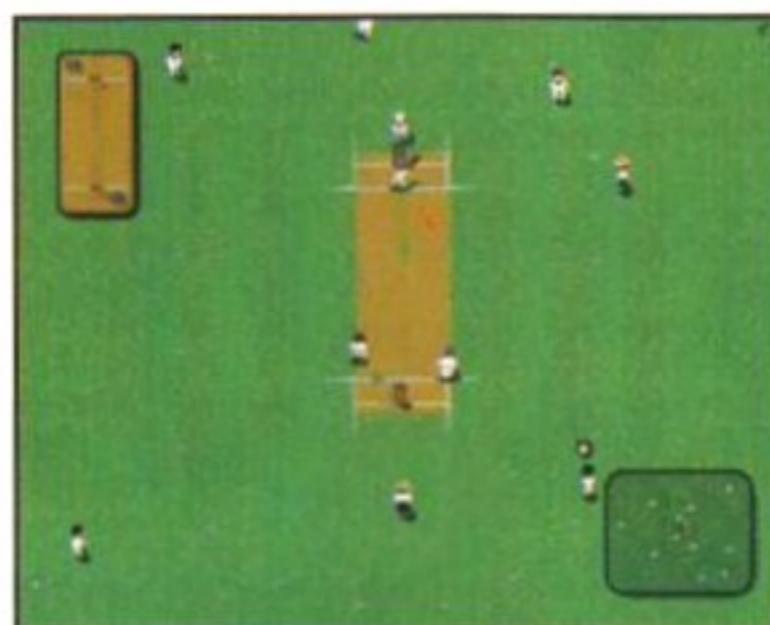
# TEAM 17 PREVIEWS

## WORMS

Team 17 have given Amiga owners something more to cheer about in 1995. They have alerted AUI to their three Amiga software releases planned for this year. They are also working on games for other platforms, which may end up on the Amiga.

### Final Over

We've mentioned this game before, but it could be the sleeper of the year - delivering the playable yet multi-faceted cricket simulation we've wished all the other attempts could have been. Just in time for summer!



*He's smacked it through the covers! It's running all the way to the boundary! Oh, no he hasn't. Sorry.*

### WHIZZ

Flair Software All Amigas £25.99

Whizz is on a winner by borrowing heavily from Alice in Wonderland. Your character - the mad hatter rabbit - and the whole zany environment captures the silly topsy turvy world of Wonderland magically.

advance from level to level.

Once the pretty scenery becomes commonplace, just the puzzles are left - yet they do manage to be testing and intriguing.

Frustrating, maddening, and potentially a lot of fun.



*Setting off the rocket gains me a couple of whizzy points or two.*

Your rabbit bounces around the lush green meadows and checker board tiles avoiding not particularly intelligent monsters and searching for gems, point flags, potions and door breakers, in the quest to get through the mystical worlds.

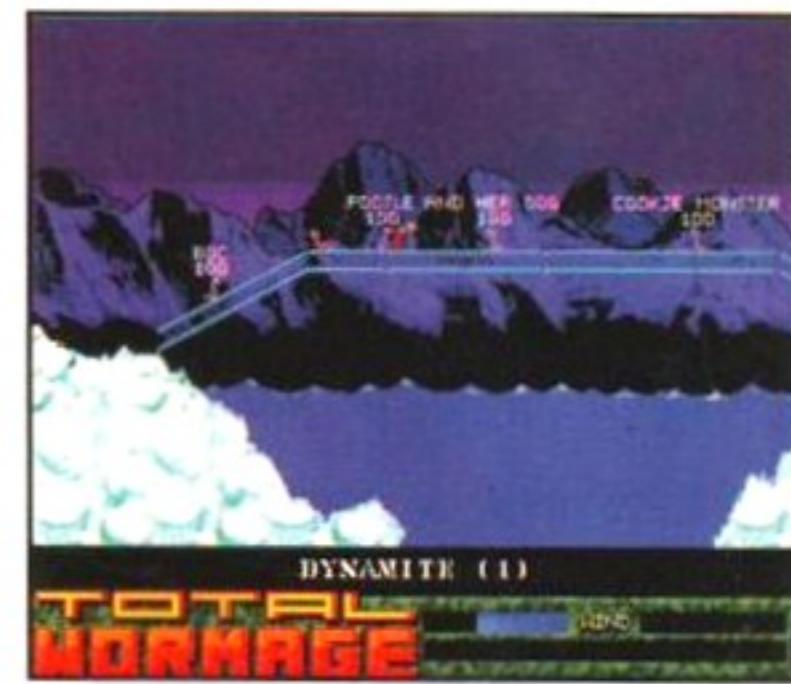
The pretty cartoon animation sequence at the start identifies the villain, Ratty, who is in mad pursuit of your rabbit. You are then left to your own devices, finding out how to

#### VERDICT

Graphics:	82%
Sound:	78%
Gameplay:	76%
Overall:	75%

There's been a long-run up of hype to this one - and the game is almost upon us. Apparently four platoons of four worms do battle over a scrolling Lemmings-like landscape - blasting each other into their various annelid parts using a variety of scary weapons like bazookas, cluster bombs and even air strikes.

An endearing feature, which all software coders are now thankfully latching onto, is the opportunity for players to define more of the game themselves. In Worms you can name each worm, include your own samples and join with 16 other players in a worm-fest.



*Turning again... Worms raid the bridge over the River Frozen.*

Here's a screen shot to whet your whistle. Oooer... Matron!

### Speris Legacy

Already nominated for the 1995 "Most Pretentious Name for a Cutesy Graphic Game" award. Speris Legacy is an 'arcade adventure' in which you guide an explorer through the world of Speris, protecting your royal inheritance from some evil dude.

There are some interesting dimensions to this game though. The player can indulge in conversations with other

characters, discover treasures, figure out puzzles and work out a strategy to achieve their long-term goals.

There's fifty puzzles and sub-games, 12 locations comprising of at least 100 playing area screens each, sword slashing battles and AGA enhancements.

Take a peek at the secret screen shot for a preliminary judgement of your own.



*Cho was on his way to Sunday School when...*

# ARREXX

**More special ARREXX help from programming ace**  
**Paul Overaa.**

With all computer languages programs are easier to write if you can do it using subroutine/function type building blocks. Since, in the next instalment, I'm going to be developing some ARREXX code that relies quite heavily on the use of nested ARREXX function calls I thought this month that it would be useful to prepare the ground by recapping on the general characteristics of these code units. In general an ARREXX function will adopt the following layout:

```
function-name:  

<statement to collect function arguments>  

appropriate ARREXX function-body statements  

return <value>
```

Note that the function name ends with a colon, and that the return statement indicates a value to be returned to the caller. Any valid ARREXX expression may be used here - here, for example, is a function which calculates the area of a rectangle:

```
RectangleArea:  

arg width, length  

product=width*length  

return product
```

The Arg instruction in this example is being used to tell the function to expect to two arguments and to place them into the variables called width and length. So this definition says that RectangleArea() is a function which expects to be given two number parameters and returns the product of those two numbers. Example 1 provides some runnable ARREXX code which shows the function in use:

```
* Example1.rexx */  

/* illustrates the use of a simple ARREXX function... */  

options prompt '?'  

say 'what are the rectangle dimensions'  

pull width,length  

say 'rectangle area is ' RectangleArea(width,length)  

exit /* logical end of program */
```

```
RectangleArea:  

arg width, length  

product=width*length  

return product
```

Note that the Return instruction serves two purposes: firstly, it identifies the end of the function

(and this results in ARREXX transferring program control to the statement that immediately follows the original function call). Secondly, it identifies the function's return value. When the function is executed ARREXX uses this result as the 'value' of the function. Notice that an Exit statement is used to identify the end of the main code.

The operation of multiplying two numbers together, which is all RectangleArea() does, would not normally be written as a function. Despite this if you were going to write it as a function you could do it more concisely by using the function's arguments directly, like this:

```
/* Example2.rexx */  

/* an alternative version of the Example1.rexx.. */  

options prompt '?'  

say 'what are the rectangle dimensions'  

pull width,length  

say 'rectangle area is ' RectangleArea(width,length)  

exit /* logical end of program */
```

```
RectangleArea:  

arg width, length  

return width*length
```

## Functions Without Return Values

The functions dealt with so far have provided return values. Some ARREXX functions however do not provide a return values and in these cases the function has to be called explicitly using ARREXX's Call instruction. Example 3 should give the general idea and you'll see that as well as including an If-Then type conditional test I've sneaked in a new ARREXX operator. The // symbol pair represents the ARREXX modulus operator so x//2 is equivalent to a Basic x MOD 2 statement.

```
/* Example3.rexx */  

/* shows two conditionally called functions... */  

options prompt 'please give me a number ?'  

pull x  

if x//2 then call OddMessage()  

else call EvenMessage()  

exit
```

```
OddMessage:  

say 'this number is odd'  

return
```

```
EvenMessage:  

say 'this number is even'  

return
```

Not all ARREXX functions have to be user-written. As well as being able to utilise functions stored in external libraries the ARREXX programmer can also make use of a comprehensive range of 'off the peg' built-in functions to simplify their programming tasks. Here for instance are details of three useful string functions with an example of their use:

```
Word(string$,n) - Returns the n'th word in the string argument.  

WordLength(string$,n) - Returns the length of the n'th word in a string.  

Words(string$) - Returns the number of words in a string.
```

```
/* Example4.rexx */  

/* This program counts the letters in each word of a sentence */  

say 'please enter a sentence'; pull sentence$  

do i=1 to Words(sentence$)  

say Word(sentence$,i) 'has'  

WordLength(sentence$,i) 'letters'  

end
```

You'll notice that in the last example I've terminated the name of the variable holding the sentence with a dollar (\$) sign. This is NOT an ARREXX requirement because, unlike languages such as Basic, ARREXX does not insist on variables being typed. ARREXX stores all variables as text strings and then distinguishes between text and numbers dynamically at run-time.

Nevertheless I find it helpful to identify explicitly those ARREXX variables which are used purely for text and consequently have adopted the convention of adding a terminal dollar sign to the name.

Another convention which I adopt is the use of capitalised first letter function names, eg RectangleArea() rather than rectanglearea() or RECTANGLEAREA(). This is done to make function names easier to read and I adopt a similar style with the ARREXX functions themselves. ARREXX itself is NOT case sensitive and in fact internally it translates to, and treats, all such references as upper-case anyway! **AUI**

# PROGRAMMING TIPS

We have recently received some letters from readers who have been finding difficulty with using the mathffp library to perform floating point addition, subtraction, multiplication and division from assembly language. The problem has been related not so much to use of the actual library functions themselves but to related amiga.lib parameter passing issues.

The Amiga has a variety of maths libraries available but basic maths functions can be handled by the routines present in the mathffp library which uses a floating point number format known as Motorola fast floating point (FFP). This library is opened like any other run-time library by loading a pointer to the library name in a1, the version number required into d0 and doing an Exec OpenLibrary() call. If you use a standard function call macro to do this the code will look something like this:

```
start lea math_name,a1 pointer to library name
moveq #0,d0 any version will do!
```

```
openlib CALLSYS OpenLibrary,_AbsExecBase
move.l d0,_MathBase save returned pointer
beq exit quit if library doesn't open
```

Using the library routines themselves is quite easy and all the available functions incidentally are documented in the Libraries volume of the RKM manuals. From the mathffp library viewpoint parameters are passed using the appropriate 680x0 registers. To add two numbers together for instance you load the registers d0 and d1 with pointers to the two FFP arguments, make a SPAdd() function call, and the result comes back in d0.

The general parameter requirements of the mathffp library are these: for functions that require just a single argument register d0 is used to hold the FFP input value. For functions that require two arguments register d1 is used to hold the first FFP value and d0 used to hold the second. In all cases the results come back in register d0 so any argument originally stored in d0 will be lost.

You can use the microprocessor condition codes to check a number of result conditions. The Zero flag will be set if the result is zero, the Negative flag will be set if the result is negative, and the Overflow flag can be used to tell you whether the arguments or results caused the function to fail by overflowing (it's important to check this because overflow will usually mean that any results obtained are meaningless).

## Parameter Passing

While the mathffp library is ostensibly used in the same way as any other Amiga library unfortunately there's a snag as in order to use it you've got to get your numbers into FFP form in the first place. If you also wish to actually display the results then yet another additional step will be required because you'll need to convert the FFP numbers back into ASCII form. The good news here is that there are ASCII to FFP and FFP to ASCII conversion func-

**Paul Overaa**  
**explains how**  
**floating point**  
**numbers are used**  
**from assembly**  
**language.**

tions, called afp() and fpa(), available in the amiga.lib linker library.

The bad news is that the functions have C language interfaces so you have to pass function parameters using the stack rather than in registers. This means pushing the parameters, making the appropriate amiga.lib function call, and then readjusting the stack so that any pushed values are effectively removed like this:

```
convert_1 pea arg1 place arg1 on stack
jsr _afp convert (arg1 now in d0)
add.l #4,sp removed pushed arg1
```

This type of conversion needs to be done for all the arguments you are going to use so the code for say adding two numbers together is going to take this form.

```
convert_2 pea arg2 place arg2 on stack
jsr _afp convert to FFP
```

```
addq.l #4,sp remove pushed arg2
move.l d0,d2 arg2 in d2
```

```
convert_1 pea arg1 place arg1 on stack
jsr _afp convert (arg1 now in d0)
add.l #4,sp removed pushed arg1
```

```
add_args move.l d2,d1 copy arg2 to d1
CALLSYS SPAdd,_MathBase add d0 and d1
FFP numbers
```

Obviously the amiga.lib parameter passing mechanism and associated conversion code will follow the same basic plan no matter what mathffp functions are being used. To multiply two values together for example all you would need do is change the mathffp library SPAdd() reference to SPMul() which is the multiplication function. the last two lines of the above fragment would end up looking like this:

```
mul_args move.l d2,d1 copy arg2 to d1
CALLSYS SPMul,_MathBase multiply d0 and
d1 FFP numbers
```

You'll find a very simple example on the **AUI** cover disk which uses the mathffp.library to add a couple of floating point numbers together. If you assemble this, link it with amiga.lib (note the xref statements in the example source - these are needed to tell the assembler about the amiga.lib conversion functions), and then run it under, say, the Devpac debugger. You'll be able to see final floating point sum (provided in a normalised 'mantissa plus exponent' form) stored in the result string. **AUI**

Symbol	Value
NULL	EQU 0
AbsExecBase	EQU 4
LV0OpenLibrary	EQU -552
LV0CloseLibrary	EQU -414
LV0SPAdd	EQU -66

```

MACRO
move.l a6,-(a7)
move.l \2,a6
jsr _1{a6}
move.l (a7)+,a6
ENDM

MACRO
LINKLIB _LV0\1,\2
ENDM

XREF
XREF _afp
_afp
_fpa

start
    lea math_name,a1
    moveq #0,d0
    result,a2
    pointer to library name
    just for a2 string via
    any version will do!
    OpenLibrary,_AbsExecBase
    move.l d0,_MathBase
    save returned pointer
    beq exit
    did library open OK?
    ; mathffp library open OK

```

*The mathffp library is easy enough to use once you've got the hang of converting the parameters to FFP form!*

# TechnoWorld

## 1 Facing Up To It

Another expressive step for mankind or is it a come on for robot-kind? Researchers at British Telecom have been working on an animated face which emulates human facial characteristics so it looks like a moving image of a real person.

Persona, as the BT people have called the new technology, has an animated head based on the digitised image of a real person, with a 3D wire frame model of a human head. The computer manipulates the features according to the sounds being produced so the mouth is linked to the synthesised voice.

BT says this will produce a friendly way to access information over the telephone, although the real benefits will come with videophones. The videophone idea has however, yet to be finalised with problems emerging of how to process large amounts of video down a small channel. The speech synthesis technology is based on what BT describes as the Laureate speech unit.

Anybody who has visited Beachy Head recently - and come back to tell the tale - will have been able to see in the tourist museum there a similar and very clever piece of technology with a talking head that looks uncannily life-like. In fact, it was more animated than some supposedly real people we have seen occupying seats in the UK Parliament.

## 2 Compaq Chips Away At Intel

Compaq has announced that it has signed up a new supplier of microprocessor chips, NextGen. This small Californian chip developer will join Intel and Advanced Micro Devices (AMD) to supply the chips to Compaq who are now the world's leading manufacturer of PCs. This new deal with NextGen will clearly threaten Intel's domination of the personal computer microprocessor market.

Compaq said that NextGen had agreed to provide high performance 'Pentium-class' and higher performance chips within the next twelve

## Martin Witton taps into the fast-moving streams of advancing technology and reports back.

months, although details of the agreement have yet to be released.

According to Compaq, NextGen's microprocessors offer performance equivalent to, or slightly higher than, Intel's Pentium chips but are 20-25% cheaper.

The agreement with Compaq which is likely to result in the company using NextGen's chips in desktop PCs, establishes the developer as a serious competitor in the market for high-performance microprocessors. Previously the NextGen's microprocessors have only been used by smaller PC manufacturers. NextGen is also believed to be in discussions with IBM.

## 3 New Scientist on CD-ROM

New Scientist the long established weekly science and technology magazine is now available on CD-ROM. An annual subscription to New Scientist CD-ROM costs a mere £595.00. The version will not take advertising and at that price should still make its publishers IPC plenty of scientific profit.

## 4 Paperless Chase

Chase Manhattan employees can now post information which they want to spread around the bank's dealing room on an electronic noticeboard. Bill Schimoler, vice president with more than twenty years' experience of dealing rooms said it is "a bit like sky-writing", enabling traders and others to draw attention to important information.

Chase also has a network of cameras fitted to some 100 desks, letting traders to talk to each other on screen and avoiding that shouting and bawling which is always shown on TV every time sterling has another crisis.

Paul Farrell, who runs the foreign exchange desk in New York, says that

they "haven't really used the video-conferencing yet, but sooner or later that will be useful to us" - particularly when the London dealing room goes "live" next year.

Maybe Barings, the London bank that recently crashed, should have had a similar system linking with their errant trader Nick Leeson who apparently blew a cool £700 million or so before anyone noticed.

## 5 Have Office Will Travel

Freeing modem users from the restrictions of being tied to a telephone socket, mobile phone manufacturers have developed the technology to make and receive data calls. Using just a cellular phone and a small plug-in card and laptop, the modems-on-the-move provide fast moving technocrats with a truly mobile office.

Manufacturers have overcome problems of mobile phone breaks in transmission by utilising a plug-in cellular data card or PCMCIA card. This is credit card size and fits in a slot provided in the latest laptops. A short cable leads to the mobile telephone, which has to be the customised digital variety.

The system is yet to be fine tuned with problems to overcome such as being restricted to the mobile phone's network reception area, but when the better weather comes, don't be at all surprised if you see the parks littered with mobile offices and stretched out executives with one eye on their laptops and the other on the lunchtime bikinis.

## 6 Virtually Higher Education

The future of education according to San Francisco's California Polytechnic State University, is the "virtual uni-

versity". This will deliver education on demand to students in the form of interactive video and multimedia course materials.

Changes to the current educational system will be minimal, they say. Which might mean, some people would argue, the whole thing could be a waste of time.

Students may still live in a virtual world in virtual poverty. But instead of asking another student to take notes when they can't be bothered to go to the lectures, they can ask for the video. Of course, lecturers won't have to turn up for tutorials either, they will be able to send a hologram of themselves!

## 7 Smart Batteries

The problem with portable equipment such as laptops or mobile phones is the sudden loss of power because the battery is flat. The Editor has this every month or so when he goes around cursing because his electronic diary won't deliver someone's address because the battery is gone. But will he use an ordinary notebook? Not he... Some people, as he brazenly admits, are to a foolhardy extent committed to the new world of technology.

However, now a new generation of smart batteries has been developed which should give warning of when they are about to fail. These batteries contain a computer chip that can 'talk to' host equipment.

Currently equipment can only guess how much charge is left whereas smart batteries compute and store vital statistics on the battery's chemistry, history and performance and how these change during charging and discharging. This allows host equipment to estimate more accurately how much working time is left, and display it like a fuel gauge in a car.

The smart battery will also eliminate the need for a different type of charger as one smart battery will suit any smart battery whatever the chemical system it uses.

A five-pin connector provides two way communication with the host equipment's smart charging system. The standard for the new devices was agreed by Duracell and Intel but can be used by all electronics or battery manufacturers.



## 8 Musicians On View

The Royal Philharmonic Orchestra has signed a deal with Diamond Cable to send film of its musicians at work into every school in Nottingham. The deal is likely to extend to concerts being filmed and broadcast to cable viewers, if an agreement can be made with the relevant unions.

## 9 Video Unboxed

BellSouth, the US regional telephone company, is to launch a trial of new interactive multimedia video services in Atlanta, Georgia. The service will combine existing analogue cable-television services with more advanced digital-video services over a shared network. Customers will be able to take the cable service without needing digital set-top boxes.

For quite some time set top boxes have been talked of as "the next big thing." If this new technology works once again the pundits will have to revise their predictions. Will the future never do what we think it will?

## 10 Netcafe Two

The second cybercafe has opened in Cambridge, but unlike London's Cyberia, it is based in a second hand bookshop. The latest interactive multimedia meeting place on the World Wide Web is for people wanting to access the Internet in company and they can do it using the three NeXTstations. They will be able to buy sandwiches and cakes besides browsing amongst the books and contacting the world.

Cyberia the London-based 'net cafe has gained lots of publicity as bits of the communications media that usually don't go near technology jumped on what they thought was a bandwagon of interest in the Internet. One publication even reported, no doubt mistakenly or even maliciously, that Cyberia had been accused of having failed to keep up to date with its Internet bills. Probably just an old medium trying to get at the latest technology that they fear is beginning to threaten them.

## 11 Virtually out of work

Homeless or out of work people in Washington - in the UK not USA - who attend the Kensington Day Centre are being offered the chance of using a personalised voice mail box to collect their messages.

Voice mail is said to impress employers as does having a phone number which empowers people who have almost given up hope of ever finding a job.

## 12 CompuServe Drags in The Shoppers

Dixons, W.H. Smith, Tesco and Great Universal Stores have seen the potential of extending their customer base through CompuServe, the largest commercial on-line information service.

With a successful on-line shopping service already established in America, CompuServe's latest venture is starting in Britain shortly. It is expected to have up to 25 leading retailers offering products live by the end of the year.

Many individual home shopping services are available over the Internet or other computer networks, but this is seen to be the first comprehensive on-line shopping service for Britain. CompuServe's 100,000 UK members pay £6.50 a month for the basic service and can browse through the electronic catalogues for the price of a telephone call and pay by credit card.

## 13 Scott of the E-Mail

Teachers will be relieved to hear that they no longer have to take parties of school children clad in thermal underwear to learn about the frozen climes. The World School and International Arctic Project brings reality to the classroom in an environmental education program. It allows classes to follow a £2000 mile expedition starting in Russia across the Arctic to Canada. The expedition will file regular reports to their home base. The base will then forward these on to participating classes as e-mail messages so they can follow the journey, learn how to handle a husky team and about flora and fauna. Pupils can also ask questions of the team by e-mail.

Contact: The Geology Department, Glasgow University, Glasgow G12 for a teachers pack.

## 14 Fire Safety

One of the most difficult tasks for firemen is searching through smoke for survivors. Currently heavy hand held technology is used by firemen which is based on photosensitivity. Now, as part of an agreement between GEC Marconi and the MoD's Defence Research Agency, tests are being carried out in Essex on small infra-red cameras which are incorporated into a headset and produce television like images seen through a special visor.

The important new element is an imaging chip that controls thousands of heat sensors which can operate at room temperature. The apparatus is lightweight and allows the use of both hands.

## 15 Fuzzy Tools

Since the advent of smart homes, smart washing machines and smart bombs, a new wave of smart power tools has been developed in Europe and the United States. Microchips have been added by manufacturers that employ fuzzy logic to machinery such as hand-held electric drills and grinders. The electronic intelligence is claimed to increase the operating efficiency and prolongs the life of tools.

What distinguishes real smart tools from those with a preprogrammed function is the ability of a tool to react and automatically adjust itself to changing conditions. Known generally as electronic feedback circuitry, this allows a drill, for example, to speed up when it senses resistance to the bit.

Despite the obvious advantages, the sale of smart tools has been slow as they are more expensive than traditional models.

## 16 Patents Slipping Through The Net

Following reports that Internet Inc which formed in 1984 registered their name with the US Patent Office in 1989 (which has yet to be verified), other patent problems are emerging. The computer manufacturer Unisys has now announced it will seek licence fees for GIF picture files.

Companies who are developing graphics software for the Internet are concerned at the implications as Unisys has revealed that it holds a patent covering any software which reads or creates GIF files, which are commonly used for graphics on the Internet.

The Unisys patent covers a compression algorithm that is vital for

creating and decoding GIF images.

GIF was developed for the online services company CompuServe and was released in 1989. CompuServe has agreed to give Unisys a one off payment of \$100,000 for using the algorithm which is known as LZW.

It is thought that other software companies such as those developing browsers for the World Wide Web on the Internet could be targeted for licence fees next.

However, it is believed that the original programmers of the GIF format, displeased by the fact that what was created for free use now appears to be about to be commercially exploited, are working on an uprated version which they intend to release as PD or shareware.

## 17 Mapping it out

Researchers at Nottingham University have been testing the effectiveness of making plans by videophone through a series of experiments using one to map out a route for a holiday trip.

Problems were identified because of the amount of information which had to be squeezed down a single line, leading to delays and jerkiness in the flow.

The study involved volunteers who had to work out a common route using maps which had been subtly altered so each pair had to negotiate a route. With an experimental delay on the videophone system of 500 milliseconds, people were found to be much worse at solving the map reading exercise than when using either speech alone or a high-speed video link which had no perceptible delay.

## 18 12 Gig Disks

Scientists at IBM Adstar in California have found a way to create materials that might allow computer disks to store up to 10 billion bits of information per square inch.

This is about 30 times today's average and has apparently been found to be possible through a new method of producing giant magnetoresistance which involves a change in the electrical resistance of a material when it is placed in a magnetic field.

The IBM researchers reported that the new method may be in operation by the end of the decade. Under this system, a single computer disk for a standard desktop terminal would be able to store the text of 10,000 300-page novels according to the company.

Has anybody ever read 10,000 novels - or would want to?

# 19 Be Warned, Back It Up!

With companies shifting away from centralised computing to networks, comp-

uter data loss is costing UK companies more than £1 billion a year. According to Prodata, the research group, fears about the insecurity of data on PC networks are on the increase. A new survey among companies with a turnover of more than £5 million across 10 leading industries, shows that only 36%

of businesses have automated data back up facilities. The Securicor group is launching an on-line remote data security service for the PC local area network environment, called SecurIT.

Remember we always say back up everything and never work on original disks.



# 20 EASY ACCESS TechnoWorld Buzzwords

*We thought it would help you to keep up-to-date if we gave you a list of some of the new technoterms coming into use. You know how the experts use jargon to keep the rest of us out. Don't let them get away with it.*

## **ADSL**

A series of modern style technologies which can turn a standard copper wire telephone circuit into a high speed digital service.

## **BANDWIDTH**

The term is now used to describe the raw speed - in other words, the capacity, of a channel or transmission medium, the amount of bits it can carry.

## **DATA MINING**

A term used to describe the examination of large amounts of data for trends or patterns.

## **DATA WAREHOUSE**

A separate body of data extracted from a variety of sources (including operational programs and other databases). Sometimes known as Metadata.

## **DIGITISATION**

Instead of using a single, complete circuit to handle one voice conversation as in analogue, digital communication, using fast fluctuating electrical states to represent 1s and 0s, means that many different streams of data: conversations, static information or images or even video can be encoded and be sent along the same circuit, in effect simultaneously. This enables there to be, for example, 50 or even 500 TV channels where only one could be used previously as an analogue signal.

## **HDSL**

High bit rate Digital Subscriber Loop; similar to ADSL which uses copper pairs to provide high Mbit/s services.

## **MPEG**

Motion Picture Expert Group which gave its name to the compression method which allows a full-colour video picture to be transmitted digitally using a minimum amount of bandwidth. MPEG 2 standard is under discussion and should shortly be implemented.

## **OLAP**

On-line analytical processing, the accessing of online applications for analytical purposes.

## **PCN**

Pulse Code Modulation is where a voice is sampled several thousand times a second and a numerical value assigned to define the amplitude of the voice signal. PCN requires 64Kbit/s to sample a voice conversion. An electrical copper circuit can now take 2Mbit/s allowing about 30 simultaneous voice conversations over a single line.

# TECHNO DIARY

## **London**

Internet World: Information Networking  
May 16-18 Wembley Centre  
Contact: 01865 730275

Multimedia: Interactive Information Forum  
June 20-22  
Business Design Centre  
Contact: 0171 3593535

European Optical Communications Show  
September 13-14  
Olympia  
Contact: 01425 473535

Local Government Information Technology ITLG  
September 20-21  
Royal Horticultural Halls  
Contact: 01322 660070

Voice Europe: Voice and Computer Telephony  
October 24-26  
Olympia  
Contact: 01244 378888

## **Outside London**

CIM Computers in Manufacturing  
May 24-25  
G-Mex Centre Manchester  
Contact: 01932 564455

Teleworking & Working from Home  
June 11-14 NEC  
Contact: 0121 7065042

EDI - Electronic Data Exhibition; Document Management Exhibition and Enterprise IS - Information Systems Exhibition  
October 3-5 NEC  
Contact: 0181 7422828

Automan: Advanced Manufacturing Systems Show  
October 10-12 NEC  
Contact: 0181 9107910

Software Development Exhibition  
November 7-9 NEC  
Contact: 0181 7422828

Geographic Information Systems Conference and Exhibition  
November 21-23 ICC Birmingham  
Contact: 01883 343139

## **Outside UK**

International Computer Expo  
May 10-13 Hong Kong  
Contact: Hong Kong +852 865 2633

The Computer Show  
June 6-8  
Tel-Aviv Israel  
Contact: +972 3751 6422

Computer Show: Sun World  
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*The Amiga preferences editors make it easy to customize your Amiga. Imagine that you could build your own custom applications in a similar way!*

**O**bject Orientation is a term that is used to describe certain methods of programming, actual programming languages, operating systems, user interfaces and ways of using a computer. The idea itself isn't particularly new but it is only now that fully object-oriented systems are beginning to appear, and lots of them are coming onto the market.

Microsoft's OLE2 has been available for some time on the Windows and Macintosh platforms. Apple's OpenDoc is promised this summer. NeXTstep has been around for ages, and Taligent will soon be available for OS/2 and AIX. All these systems claim to be object oriented.

Much of the pioneering work in object orientation was done at Xerox PARC in the 1970's. PARC, really invented the personal computer, along with other clever ideas such as the

GUI, Ethernet, and the laser printer. Their first machine, the Alto, which cost over \$10,000 in parts and so was hardly sold commercially, needed a programming language, and so Smalltalk72 was born.

The PARC researchers likened programming to the level of conversation at a cocktail party, hence the name. Like the Alto, with its revolutionary GUI, Smalltalk was meant to be easy to use, so it was developed with the help of children from a local primary school - the 'Smalltalk kids' as they came to be known. Smalltalk was object oriented; as was the Graphical User Interface.

The GUI allows you to communicate with several applications that can be running simultaneously, through the use of windows. These applications are objects which the user is manipulating.

**Smalltalk was meant to be easy to use, so it was developed with the help of children from a local primary school - the 'Smalltalk kids' as they came to be known.**

orientation is perhaps one end of a spectrum. If we go back to the days of punch cards, every program had to be input right first time, which is extremely difficult for long programs. Then some bright spark invented the subroutine,

which allowed the program to be broken up into more manageable parts.

The movement towards modularity continued: function libraries, operating systems, the separation of the compile and link stages of program building, multitasking, inter-process communications, class libraries and now object orientation. Objects are theoretically easier to program, and easier to maintain. You can build new programs just by connecting objects together.

Object orientation, by breaking programs and applications into discrete, independent parts enables an emphasis shift away from the application and towards the document. "Document-centric computing+" and "component-ware" are phrases that are these days often bandied about. You don't have to worry about which application to use for a particular task, because each function will be available to you as an object; you can use the best bits.

## Meta Applications

Different vendors view object orientation in different ways. Microsoft, which is the world's largest producer of applications software as well as operating

systems, is keen to promote component-ware but not in any way that might undermine its near-monopoly of the software market. So they encourage people to build meta-applications with Word, Excel and Access as components using OLE2. This means, however, that you have to buy three very expensive applications, when you may only need to use a small subset of each application's functions. OLE2 also has the drawback of being extremely slow on all but the fastest of systems.

The majority of the rest of the software industry is rallying itself around Apple's OpenDoc technology. Whether this is genuine support of the system

ducers would concentrate on building "parts", which would allow smaller companies to concentrate on specialised objects which the user could then integrate with other objects as they wished.

For instance, instead of having a word processor from one manufacturer, you could have a text-editing part from one, a spell-checker part from another, a style-sheet editor from yet another and so on. And the boundaries between word

## Amiga Objects

So how does the Amiga employ object orientation? Although it seems the Amiga is being left behind in the latest developments, it is surprising to see how much of the Amiga is object-oriented, at least in spirit. We too, have

a event driven, user friendly GUI. Of course, Workbench/Intuition needs a lot of work as it has been left almost in stasis since Work-

bench 2 first appeared on the A3000 in 1990. Nevertheless, Workbench/Intuition employs features such as icons, menus and windows, as well as drag and drop features like AppIcons and AppWindows. These allow, for example, the file requester in Workbench 3 to be pointed at a file just by dropping the files icon on to it. We also have inter-process communication, thanks to ARexx, although this may be beyond the average user.

From a programmer's point of view, Workbench 2 introduced class libraries, which are a feature of many object oriented systems. In a class library, each object inherits properties from its parent, so the programmer doesn't have to worry about a lot of mundane coding. To realise what this means, look at another class library, the *datatype.library*, introduced in Workbench 3.

Any program that understands the general class of, say, a bitmap graphic, will automatically understand any particular format defined by a subclass, (such as a datatype for JPEG) without the programmer having to do any extra coding. Personal Paint from Cloanto is an example of a program that uses *datatype.library* like this.

If Commodore had spent the time on writing some more *datatype.library*, we could have *datatype.library* for popular word-processing and spreadsheet formats, making any such applications on the Amiga (providing they were written to make use of *datatype.library*) instantly file compatible with similar applications on other platforms. This is the biggest problem when trying to get different platforms and applications to share data.

**The idea of porting Telligent provoked much interest at the recent Amiga developer's conference.**

Wirth, who also brought you Pascal and Modula 2, has already been well received by Amigans - and now his Oberon Microsystems have launched Oberon/F - an object framework that could possibly be ported to the Amiga.

Alternatively, the idea of porting Telligent provoked much interest at the recent Amiga developer's conference (held at the World of Amiga Show in December) when it was proposed by Cloanto's Michael Battilana. Michael has actually been to Cupertino to see Telligent in action, and says that what is taking shape there is very compact, efficient and "Amiga-like", quite apart from bringing the Amiga's easy compatibility with the applications of the future. The Amiga is an ideal platform for Telligent, because it requires to run on top of a proper pre-emptive multitasking operating system.

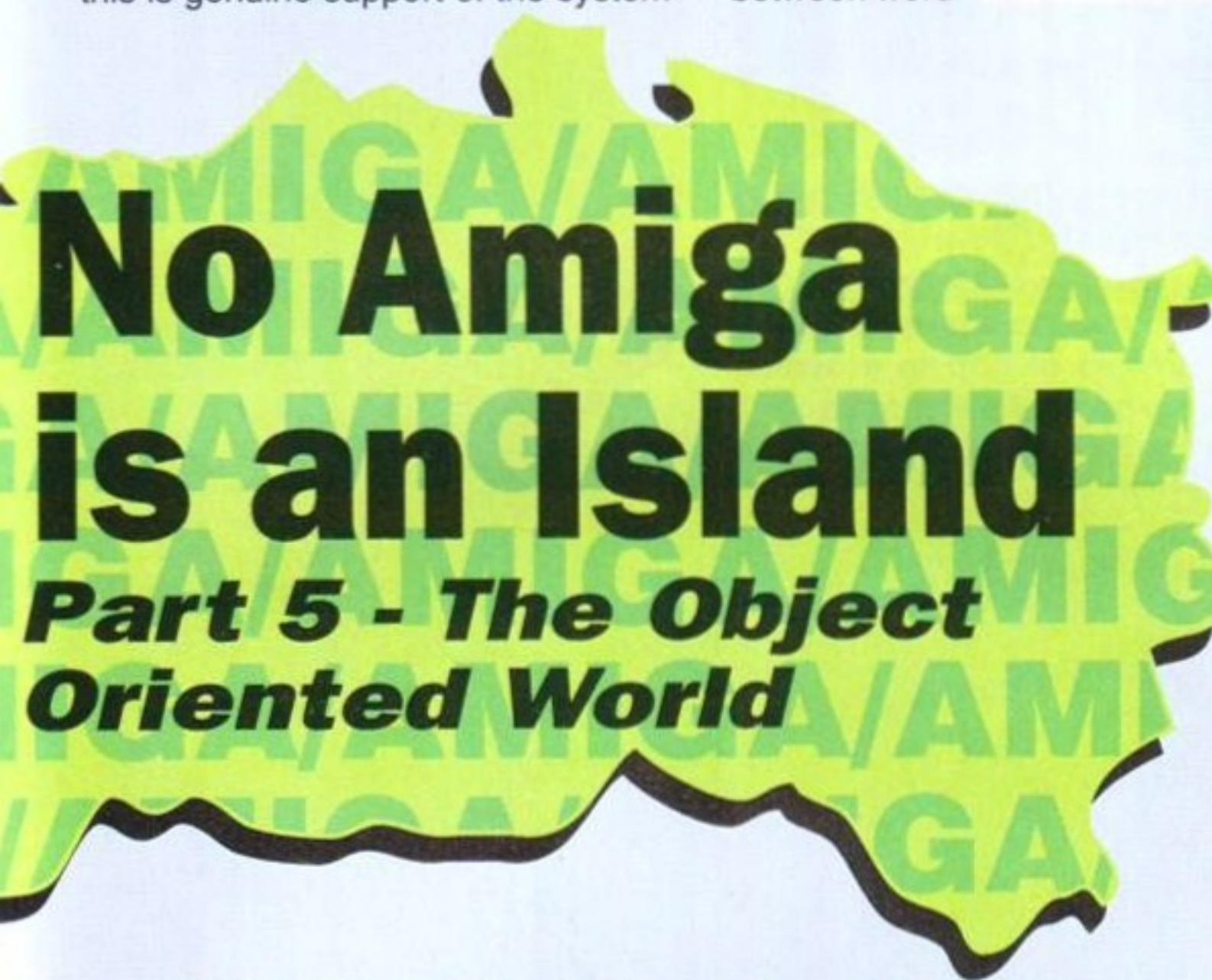
Telligent is being seriously considered as a platform for development by just about every developer apart from Microsoft (who have a vested interest in the success of Windows). Telligent is a company owned by Apple, IBM and Hewlett Packard and is developing both an object framework (TalAE) and a new operating system (TalOS), although the framework will potentially run on any pre-emptive multitasking operating system (that's OS/2 Warp, AIX, HP/UX, Windows NT, and, possibly, AmigaDOS).

Apple is having trouble updating the Macintosh System 7/MacOS to make it a true multitasking operating system but has bought some time by making OpenDoc forward compatible with Telligent. OS/2 Warp isn't quite as reliable or successful as IBM would claim, and AIX and HP/UX are flavours of Unix running on expensive workstations from IBM and Hewlett Packard. So an early port to the Amiga would be very advantageous, as the Amiga would be the only affordable platform for some time.

## Amiga Compatibility

I wouldn't personally like to back any particular object framework, although most people are betting on Telligent, but I would like to see the Amiga move in this direction. It would enable the Amiga to be more compatible with the rest of the

world without losing anything of what makes the Amiga special, so I strongly urge whoever inherits the Amiga to consider taking it in this direction. Object-orientation is a natural development in personal computing which fits in with the way it has been going in since personal computing began. OOPS, as they say, it's the future. **AUI**



# No Amiga is an Island

## Part 5 - The Object Oriented World

# OOPS! Here Comes The Future!

**Object orientation is becoming the trendy technology for operating systems. Aitor Ibarra explains what it means for the Amiga.**

or just a reaction against Microsoft remains to be seen. With OpenDoc, there are two basic types of objects, documents and "parts". Software pro-

processor, spreadsheet, database, even paint package and rendering package would blur.

# Telligent.

*The rest of the world vs Microsoft?*

## Possible Ports

The Amiga community is ready to take advantage of a more comprehensive object framework if Commodore's inheritors have the vision to bring one to the Amiga. Oberon, an object oriented programming language from Niklaus

**That nice little Amiga purring in your living room can put you on the cutting edge of a revolution into the cashless society. Michael Rumbelow gives you access to the new era of electronic money.**

# The New Money

become the norm. Once fifty pounds sterling really was physically fifty pounds of sterling silver, but now it's often just a few electrical charges in a computer's memory. So what has happened to the nature of cash to make blips of digital information as valuable as solid lumps of pure silver and gold?

The original coins - ancestors of digital money - were silver and gold bearing official Government weight and seal stamps. English merchants used to keep their gold in the Tower of London for security, until in 1640 King Charles I appropriated it to fund the defence of his crown - £130,000 worth, an immense sum in those days.

From then on merchants started to store their gold and silver in strongrooms of private goldsmiths, who kept written records of ownership. Eventually the paper receipts for these deposits in the strongrooms were accepted in exchange for goods, so the actual withdrawal of the gold or silver became unnecessary.

These receipts were the origin of the paper banknote

and modern British notes still have the 'I promise to pay the bearer...' inscription.

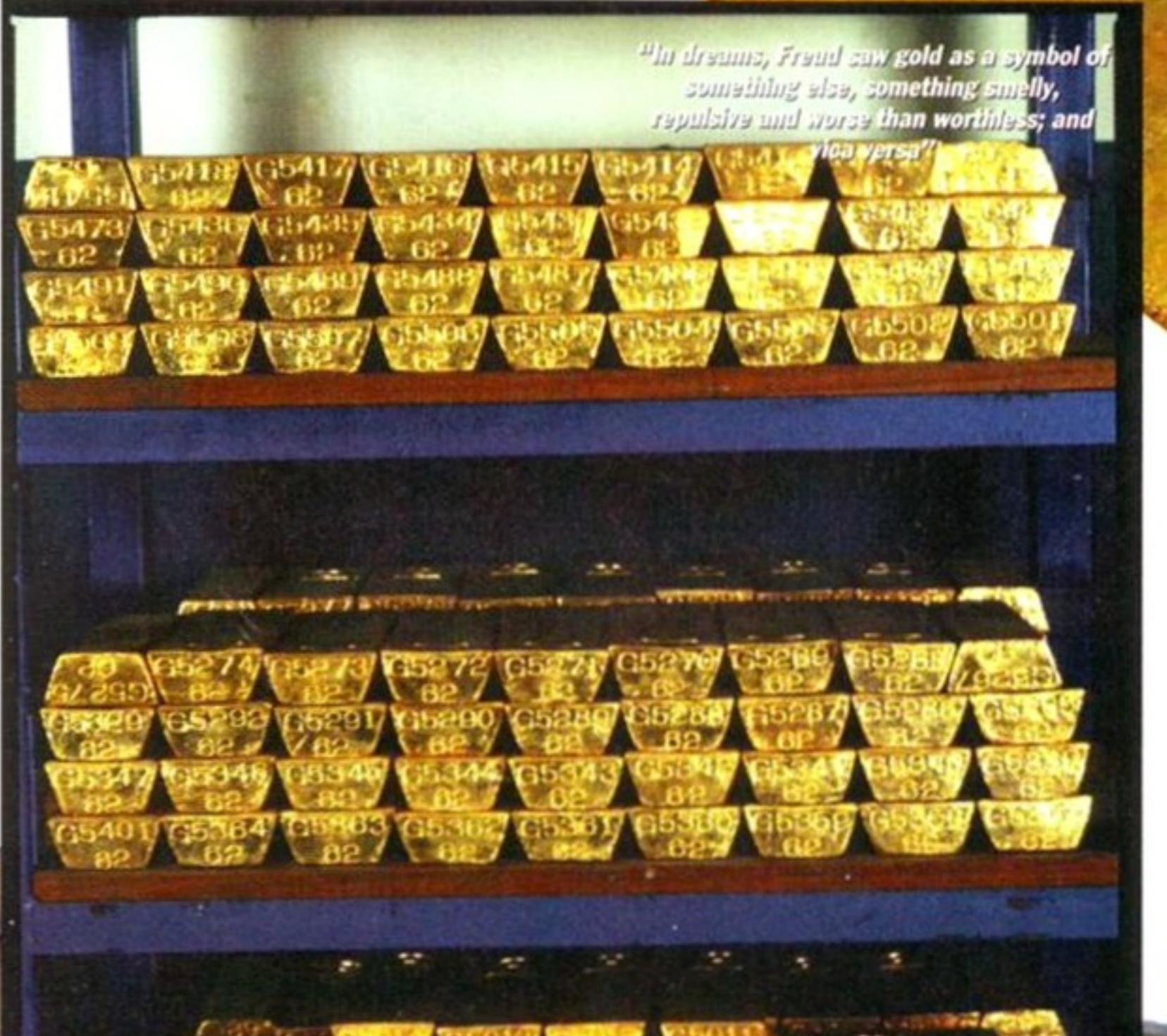
Owners of deposited gold could transfer ownership of part or all of it to someone else by writing them a signed note which told the banker to give a certain amount of gold to a named person: the origin of the cheque.



**M**oney might not get you everything. It won't buy you poverty, and it can't always buy you love. Historically though, waving bits of metal or coloured printed paper under people's noses could get them doing an awful lot of things for you.

Paper money is now though becoming obsolete as digital transactions

**A switch-card pays for things by sending a message to the bank via modem instructing the bank to transfer money from the customer's to the shop's account.**



*The Bank of England these days? The Deputy Governor was corged for misbehaving.*



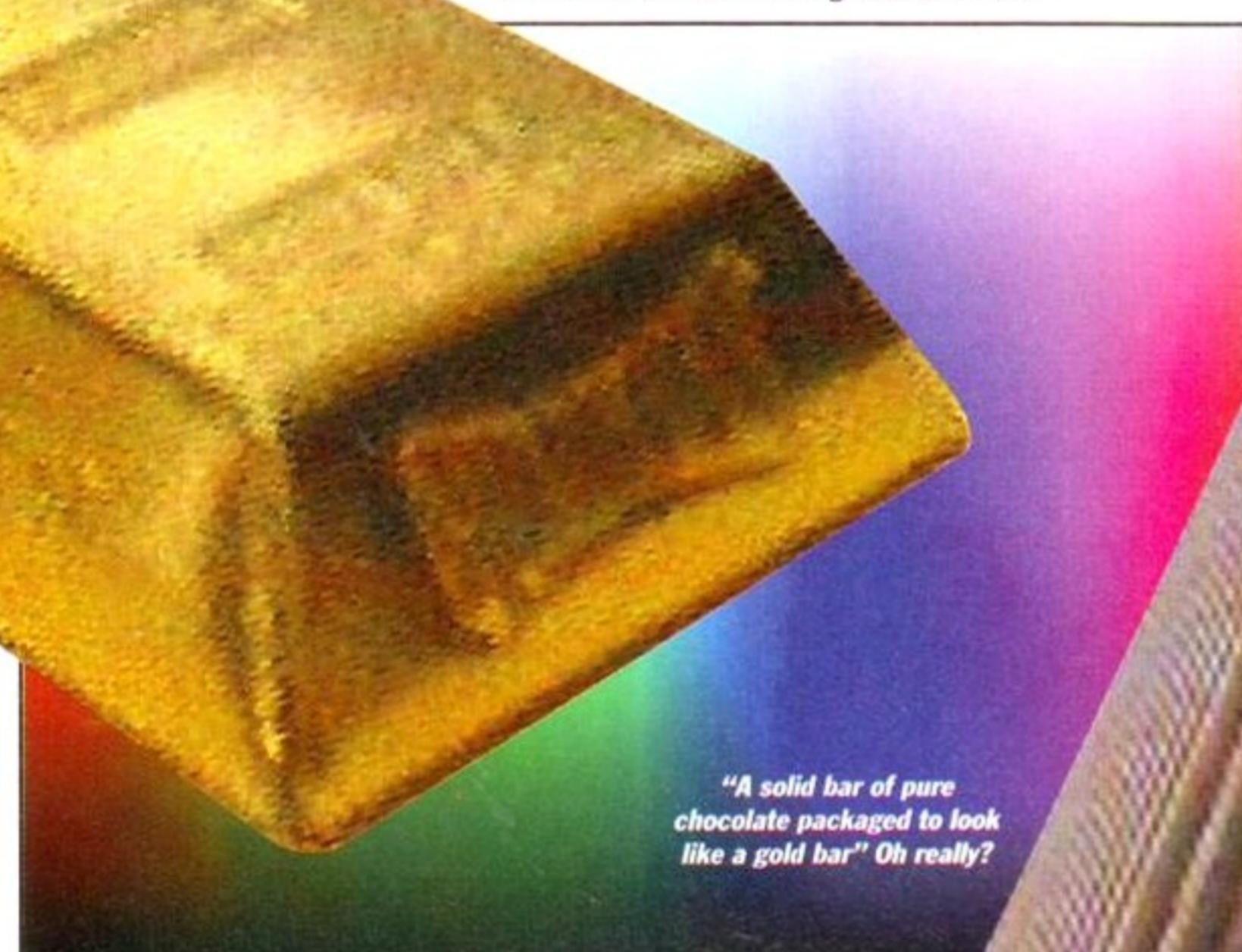
*A 'lunch' of bankers? The High Street leaders.*

## Switching It

Banks now keep records of account-holders' balances in electronic account-books on computer. This means that money can be transferred between accounts, and loaned, electronically and almost instantly. Computer messages to transfer money automatically can be sent via modem over the phone line - even, one day, from your Amiga. There is a bank in Vancouver that is using Amiga CD 32s as terminals to let customers get access to their own accounts.

Switch-cards are effectively electronic chequebooks. In any shop with a strip-reading machine, a switch-card pays for things by sending a message to the bank via modem instructing the bank to transfer money from the customer's to the shop's account. All the bank does is reduce the digitally stored balance in the customer's file on the bank's computer and increase the shop's balance by the same amount.

Some banks are operating interactive on-line systems which let account-holders find out details of their account automatically via telephone: a digital voice answers the phone, verifies your ID number with voice recognition software and gives you the account



*Money grows - the tallest building in the city belongs to NatWest.*

information you request. These systems often allow you to pay bills via telephone, too. It may not be long before electronic transfer makes paper money like cheques and cash mostly redundant.

Many commercial companies are introducing new electronic means of accepting payment for their goods or services, too. Most large supermarkets now accept Switch Cards, and some, like Tesco, also pay their suppliers electronically via an organised Electronic Funds Transfer system.

## Managing Money

Your Amiga has taken you into this digital revolution by giving you the power to run your own computer-based home or business accounts via money-management and spreadsheet software. Digital's Money Matters and Superbase Personal 2, given away free by **AUI** on SuperDisks 37 and 33 respectively, are perfect entry-level programs for electronic money management.

Equipped with an Amiga, modem and the right software you can also access international financial data via the Internet, and even trade shares, currencies and bonds via international trading systems. It won't be long before you can send instructions direct to your bank via the Amiga, and link switch-card activity automatically back to your computer accounts, as with the Canadian bank using CD 32s.

As an Amiga owner you have a special advantage in the revolution - you understand how computers are being used. That will enable you to

make the most efficient use of the technology. More importantly it will allow you to beat the banks when they claim, as they increasingly will, that money never went into your account because "the computer went down".

## Phone Cards

BT and Mercury phonecards have been around for about ten years and early editions are now collectors items worth hundreds of pounds. More recently though in the last few years Mercury and other public phones have begun to accept credit cards as well; so paying for a phone



*A fool and his gold are soon parted unless he holds tight.*

call is now often a purely electronic transaction.

## Switch cards

Switchcards are one of the biggest developments in electronic money, directly superceding cheques and cash. The vendor just passes the card through a magnetic strip reader and then triggers an electronic message to the Switchcard holders' bank's computer to authorise a transfer of the right amount to the vendor's account.

## Electronic Funds Transfer

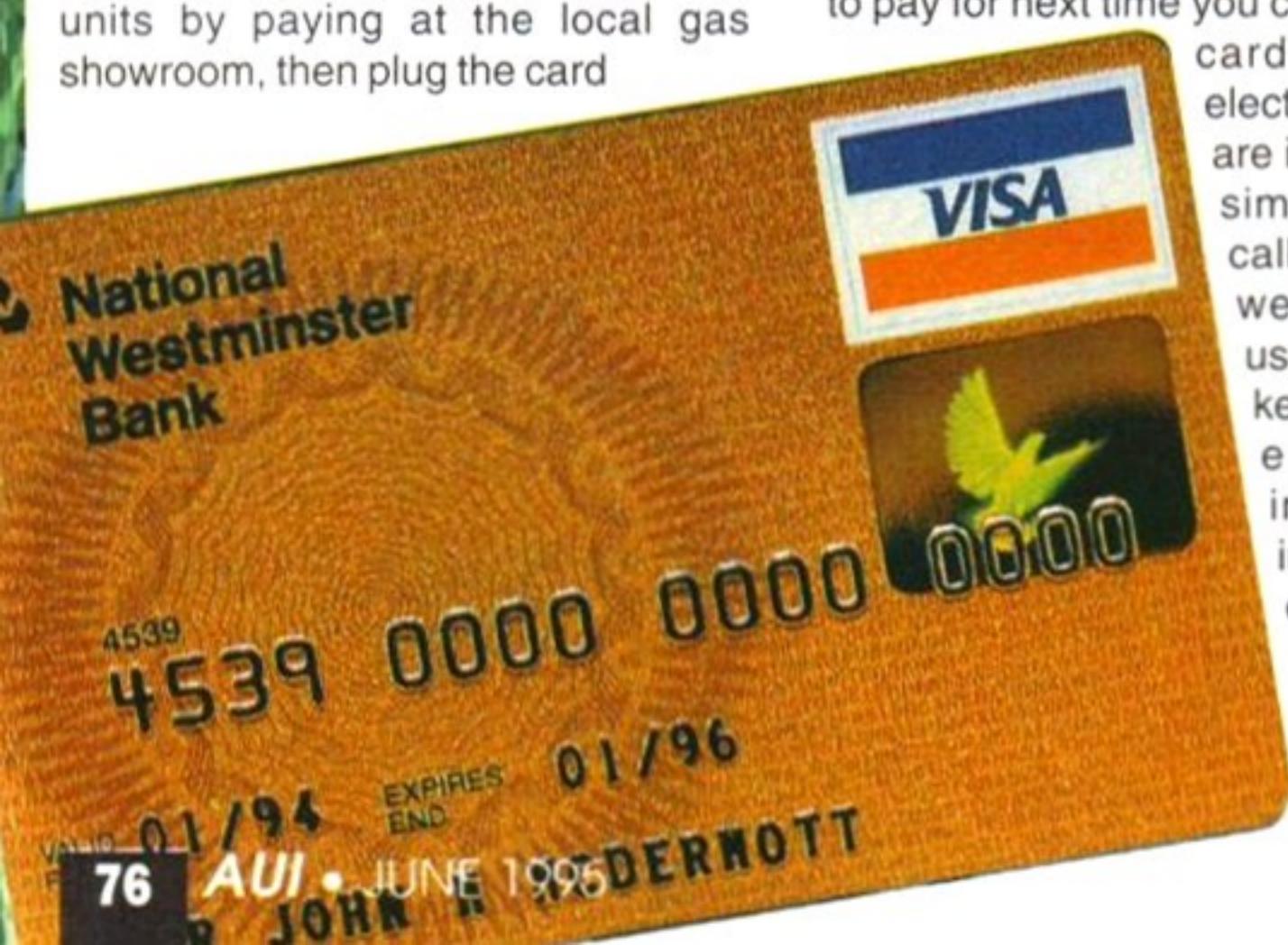
Electronic Funds Transfer or EFT is a system developed by big commer-

# Plastic Cards with Brains

## Power Plastic

British Gas has started a programme of installing charge-card type gas meters in homes to replace the traditional billing system. Householders charge the card up with gas units by paying at the local gas showroom, then plug the card

into their 'Quantum' meter which gives them the relevant amount of units use automatically. When all the gas units are gone the gas supply cuts off, though by pressing a switch you can get some extra emergency units which you have to pay for next time you charge up the card. Several electricity boards are introducing a similar system called the Powerkey which uses a plastic key containing electronic information instead of a card.



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cial companies and the banks to automate payment of orders. Tesco encourages all of its suppliers to obtain a computer, a modem and some EFT software these enable them to invoice Tesco directly via



*The cashless phone box is here to stay.*

modem for the food or other items they supply. Tesco's computer instructs the bank to transfer the agreed amount of funds to the suppliers account. Tesco can then also place orders directly and instantly with the supplier via modem, so the laborious process of ordering and invoicing is completely electronic. Tesco go one step further because the bar-code reading system at the checkout is linked to a central computer, they can tell exactly how much stock has been sold and re-order automatically.

## Travelcards

London Transport is testing a new electronic travelcard in Harrow. The card is read by just placing it near the electronic reader - there is no need even to take it out of its wallet. It can be charged up with credit at bus stations and elsewhere - so you can buy ten days worth of travel for instance, and use them when you please, unlike the current system where cards expire by a set date. London Transport expect this will save time boarding buses as well as being more flexible means of payment for passengers.

## Smart Cards

These are plastic cards with an embedded chip. The chip allows any

sum of money to be recorded or deducted by the machine into which the card is placed. They can be "refilled" with cash when empty. Not yet in the UK as popular as switch cards, possibly because the smart cards are

more expensive, in France they are used for cashless transactions in such commercial outlets as petrol stations or in charged calls to the French videotex phone-based system, Minitel. It is believed that the more technologically-receptive girls who provide those very special services to lonely visitors to Paris are already taking them instead of francs. Very appropriate for a card with an embedded chip... **AUI**



*London Transport tests new smart cards.*

## Cyber-money

Until recently the Internet was a kind of free digital 'bein', a ramshackle haven of anarchic altruism built by technohippies where they would share information freely and any mention of money was a real bummer. But now they've been rumbled by the big corporations and the trip's over, baby!

Several new kinds of money are being mooted for launch onto the Internet this year. DigiCash's electronic

cash (ecash) system enables you to 'click-and-pay' on the Mosaic World Wide Web browser and like cash, is anonymous.

In hundreds of communities around the world people have set up their own local currencies via LETS (e.g. the 'eco' in Merton in Surrey and the 'Vaux' currency in Vauxhall, South London).

A group of people invent a notional currency and then begin to sell things or services for that currency. For instance, someone might sell a sack of home-grown potatoes locally for 10 'stars', then buy a taxi-ride for 4 stars, pay 4 stars for a massage and pay someone another 5 stars to work in their garden. A central record - which could be kept on the Amiga - tracks how many stars people have spent and received - their "balance".

This year's SmartCard show at Olympia in West London was bustling with high-powered exhibitors and visitors, many emanating the kind of knowing confidence that comes from having staked a claim on the eve of an electronic goldrush. Smartcards, which are like bank or telephone cards only they have a microchip instead of a magnetic strip, are set to start taking over from cash in earnest this year. That means huge markets; anyone who uses cash, which is virtually everybody on the planet, is a potential customer.

So why the sudden surge in interest in smartcards now? After all, the smartcard concept was first patented over 25 years ago and they have been used on a small scale, for example as telephone cards in France, since the mid-eighties. The key factor seems to be security. Originally money was made from unique precious metals like gold, then it came to be pieces of



*Where's the cash? Play your cards right and you'll have plenty.*

# Getting Very Smart

paper, carefully manufactured to make them very hard to counterfeit. Electronic data though, is extremely easy to copy, even magnetic strip cards are notoriously easy to read and forge. So if money or personal account details are to become digital, how can you stop people from reading or copying as much as they like? This is where security comes in and why methods of making digital data secure are so fundamental to the success of electronic money. And that is why smartcards are causing so much interest now, because the microchips they contain have become powerful enough to scramble data using the latest encryption algorithms and to hold images of the owner's fingerprints, voice patterns, hand dimensions or signature which can provide positive ID and prevent fraud. Smartcards, in the past regarded as a solution looking for a problem, as personal computers once were before them, have suddenly found a myriad of applications, from social security benefit systems to how to pay for satellite TV.

Surprisingly perhaps, many established high street banks, - with a few exceptions like NatWest - seem relatively uninterested in the possibly deep implications of a move to electronic money. The current move towards smartcard based money

**Michael Rumbelow finds a new cashless world is beginning to emerge with some very smart cards.**

seems inevitable, though, whether the banks are involved or not.

## **Electronic Purses**

One British bank - NatWest - was at the exhibition promoting its Mondex 'electronic purse' project (see the Mondex article in this *AUI*). In this, instead of taking real cash out of a machine and putting in your (real) purse, you take cash in electronic form out of a machine and store it in your electronic purse: a smartcard. You can then spend it in shops, transfer it to other people's electronic purses, or change it into another currency, just like normal cash.

For banks physical cash is an expensive security headache, in Britain it costs banks over £250 million a year just to handle it and in bigger more rural countries with patchy transport infrastructures it's even more of a problem. So any way of reducing the

use of cash is a potential moneymaker for banks.

This is one reason why smartcard based electronic purse systems have already caught on in Africa, where the Meridien smartcard introduced by the pan-African Meridien BIAO bank is already operating in Zaire, Ghana and Tanzania and is due to be expanded to over 20 countries this year. Customers enter a 4-digit Personal Identification Number at cash machines to transfer electronic cash onto the card and can then spend it any shop with a Meridien card reader.

## **Tortilla with Chips**

The security of smartcards can also be useful in preventing social security fraud. At Olympia this year were a German company, ODS, who in co-operation with the South African company Datakor Ltd. have introduced a smartcard-based food coupon-style

system for the Mexican government. The Mexican government provides free tortillas and milk to some two million poor families. Originally the government had a system of coupons, but they weren't linked to ID and people used to sell the coupons for cash. They then tried a bar-coded ID card system but the cards were often copied, not only by card-holders but also by participating shops which could then claim reimbursement for the extra tortilla and milk issued. Also shops weren't networked so card-holders could obtain food several times over at different shops. The new 'Solidaridad' smartcard system introduced last year stores the amount of tortilla and milk issued day by day on the personalised smartcard's chip and fraud has now been cut significantly.

In Spain, too, smartcards are being used to improve the social security system. The French electronics giant Bull have licensed one of their cards to the Spanish government's Treasury Department of Social Security. In a pilot scheme the department is manufacturing and issuing half a million smartcards to people who receive social security benefit in one province of Andalusia, in an attempt to prevent fraud, reduce paperwork and improve efficiency.

## Contactless Travelcards

Innovatron are another established French smartcard company headed by Roland Moreno, one of the inventors of the modern smartcard. They have several new smartcards including a contactless travelcard being introduced on the Paris Metro, buses and regional trains. The rechargeable travelcard can just be swiped within a few inches of the sensor to open the gate. A separate LCD reader lets you see what you have left on your card.

The Austrian company Mikron have similar contactless smartcards, already in use on public transport in Sydney, Oslo and Pori in Finland. They have also developed a ski lift ticketing system which can read cards at up to a metre, even if people are standing in the way.

## T-T-T-Tango

Scandinavian countries in general have often been innovators in the use of smartcards. Denmark has one of the largest electronic purse schemes in the world on trial in the form of the Danmont bank/telephone card. And recently Seinajoki, the small town in western Finland famed for its annual summer music festival dedicated to the tango, has introduced the AVANT electronic purse. AVANT users can pay for public transport, taxis, and parking meters, as well as telephone calls, swimming pool fees and library fines with the new smartcard and this year visitors will for the first time also be able to buy tickets for the music festival with the card.



With the Mondex wallet you can transfer cash to other cards.

## The Roots of the SmartCard

Just over 25 years ago, on 10 September 1969, Jürgen Dethloff from Hamburg and Helmut Grottrup from Munich registered their patent for a plastic card, the same size as a credit card, but containing its own microprocessor. This was the ancestor of the modern smartcard.

After the war, in the early '50s, Dethloff worked in a cellar in Hamburg designing and building communications equipment for ships. Eventually his one-man business developed into Germany's biggest supplier of telephone equipment and in 1964 he sold his company, Dethloff Electronic GmbH, which is still a successful part of the multi-national ALCATEL communications corporation.

Helmut Grottrup, on the other hand, was a very talented engineer and physicist who during the war worked on the steering mechanism of the V1 and V2 rockets. He was subsequently forcibly taken to the USSR, along with thousands of other German scientists, where he led a team of 5000 German engineers and physicists developing military aircraft. He returned from the Soviet Union to West Germany in the late sixties and set up a partnership with Dethloff to work on new applications of electronics. Within three years the design for the chip card was born. Unfortunately Grottrup died in 1981, without seeing the phenomenal success of his invention in the eighties.

Dethloff continues to be involved in the development of smartcards. Although the original patent is due to expire in 1996, he is still working on new smartcard-related inventions.

## Smartcards for Health

Several companies promoting the use of smartcards in healthcare. One of the biggest smartcard manufacturers, Gemplus, sells smartcards for storing medical insurance details to eliminate paperwork, for storing your health history and medical details securely so they can only be accessed with your consent and for carrying prescription details.

## Smartcards to Cheer up The Sick

At Northwick (NHS Trust) Hospital in Harrow, north London, one company, Patientline, is installing terminals, or perhaps consoles is a better word, beside 650 beds. Each lunchbox sized console contains a 6 inch colour LCD screen, like the ones on the back of Virgin Atlantic plane seats, on which patients can watch satellite and normal TV, as well as special hospital TV channels about healthcare



'Give me that back!' Tim Jones, inventor of Mondex, buys a coffee at NatWest HQ with his Smartcard.

services, patients' ailments, meal selection etc.

There will also be ten radio stations, a telephone and a telephone answering service incorporated. Headphones will be available to avoid disturbing other patients at quiet times. Though some of the services like the radio and the incoming telephone service are going to be available to all users, the other services will only be accessible with a smartcard, the idea being that friendly visitors will buy you a smartcard as a gift when they come to see you, which will give you a certain amount of usage time for the full console service.

automatic road toll charging, as pay-as-you-drive road charging looks set to become normal in Europe and elsewhere and governments are looking for a viable charging mechanism. Several trials are under way, though there are some sticky questions of privacy and personal freedom to be dealt with before any system becomes widely adopted in the European Union.

## Optical Card

On the other hand, while not technically smartcards in the sense that they don't contain chips, optical cards are now a viable alternative to smartcards in some applications. Both Canon from Japan and the Drexler Corporation from the U.S. are both marketing optical cards which store information in a similar way to CDs, except on a straight strip on a card. These can store up to 6 megabytes which is several thousand pages of digital text, tens of times more than most smartcards, so they might be very useful for storing complex ID data such as digital images, or a detailed medical profile. As Canon admitted though, the technology is relatively new and they are still very much open to suggestions for possible uses.

## Hotel Smart

One example of how smartcards can save paperwork and speed up transactions is in hotels. The Forte Crest hotel in Farnborough in Hampshire, for instance, is trying out a scheme to bill guests via smartcard. Guests' credit card details are entered on the card and any services they subsequently use during their stay can be charged onto the smartcard using an electronic pad installed in the bedrooms. When they check out guests simply swipe the smart-card, quickly check the bill is correct and then the hotel automatically debits their credit card account. Forte predict the card should significantly speed up check out times and if the three month trial is successful they plan to extend it nationwide.

## On the Road

Another big one on the horizon and provoking a great deal of interest is for

## Has Cash Had Its Chips?

The atmosphere at SmartCard '95 was comparable to that at multimedia technology exhibitions a couple of years ago, of people excitedly anticipating so many big things to come that they don't know where to start. It's possible that the sheer number of different smartcard applications being marketed simultaneously will make cash a sensible option for a while yet. But whatever happens the spell of cash seems about to be broken, it's just not clear exactly who or what will replace it. **AUI**

# Mondex

It's surprising in a way that central banks like the Bank of England or the U.S. Federal Reserve still seem so unflustered by the current shift to electronic money. Perhaps they are too busy dealing with the latest half point interest rate hike, or the prospects of a single Euro-currency. But then again, as Charles Franklin Kettering, the innovative Vice-President of General Motors in the 1920's once said: "Bankers regard research as most dangerous and a thing that makes banking hazardous due to the rapid changes it brings about in the industry". Whether they ignore it or not, it seems that now for the first time the central banks' traditional monopoly in printed paper money is being seriously challenged by several electronic alternatives.

## Swindon

In Britain the leading alternative at the moment is Mondex, an electronic cash system devised by NatWest bank. NatWest have now struck a deal with Midland and they jointly own Mondex UK, the company which will be running the system for NatWest and Midland account-holders here. The first public test system is due to start running in Swindon in Wiltshire this July. And NatWest have also done a deal with the HongKong Shanghai Bank, who own Midland Bank, so a similar Mondex system will go on trial in Hong Kong later this year.

## Smartcards

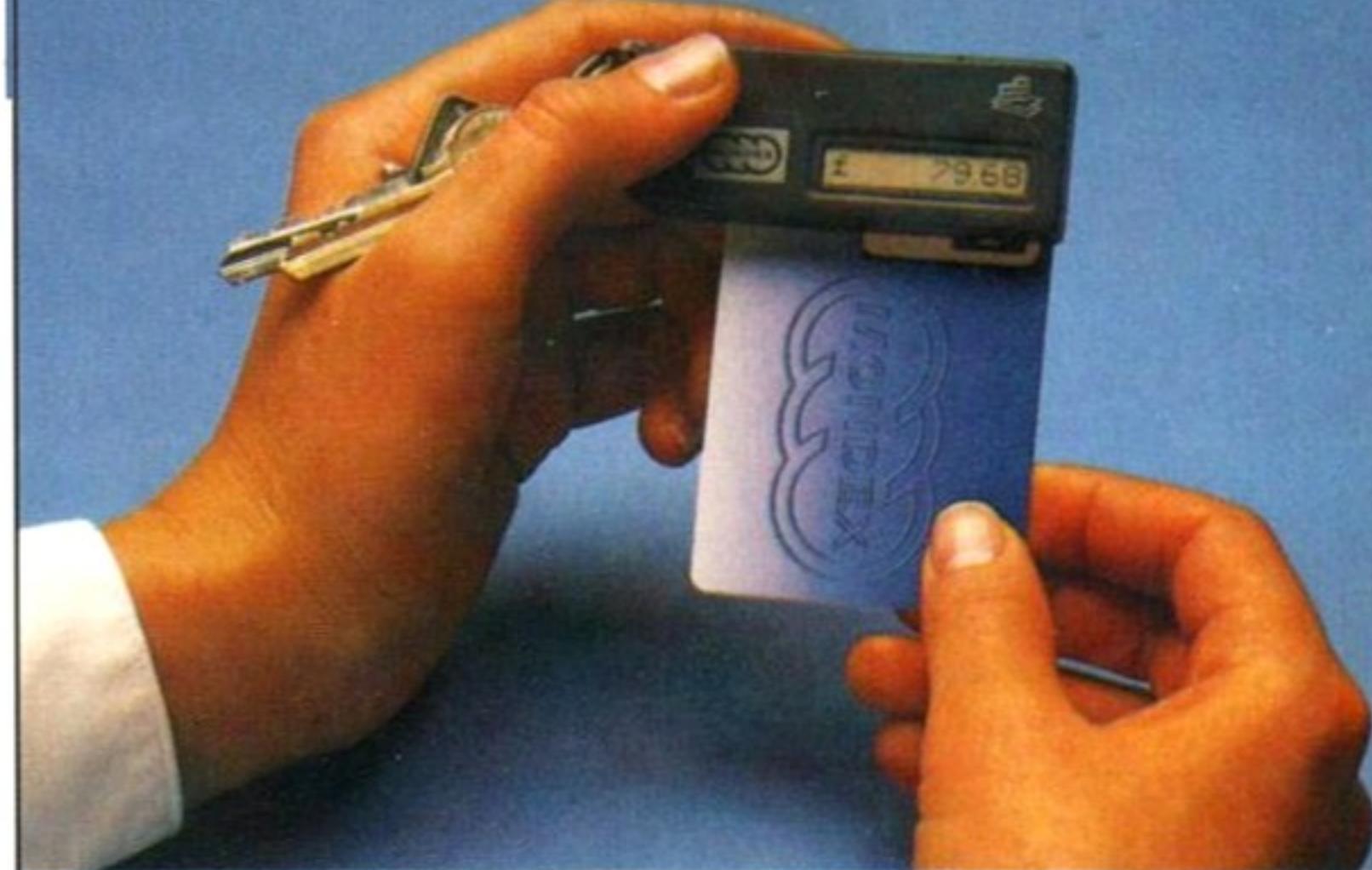
At first the system seems straightforward enough. All users are given an 'electronic purse': a Mondex smartcard with a microchip on it. Instead of taking real cash out of a machine and putting in your real purse, you withdraw cash in electronic form out of a machine and store it in your electronic purse: the microchip records details of how much money you've taken out. You can then go to any shop which has a Mondex card-reader and spend your electronic cash. The shop's card-reader takes the right amount of money from your card's chip and puts it in the shop's bank account, and that's that. Simple enough, but what are the advantages over normal cash?

## Quick, Easy Money

The main advantages Mondex claims are in speed and ease of use - no need to fish around in your jeans pocket at the check-out till for that crumpled fiver

you hope is still there, or wait for the change. But there are several extra features Mondex offers. One is that, through a deal they have made with BT, users can use specially adapted BT telephones as electronic cash machines. You phone the bank, slip your card into the special slot in the telephone and dial in how much money you want to withdraw. So you don't have to search the streets for a cash point when you want some cash urgently. There are also handy Mondex accessories like a card-reader key-ring, which lets you read how much money is currently on your card, as well as a more sophisticated calculator-size Mondex wallet. This wallet lets you read information about all your recent Mondex payments and also transfer money directly to other cards, as well as enabling you to 'lock' your card with a four-digit PIN so that no one else can use it until you 'unlock' it again. This security feature could well be useful, because unlike credit cards if you lose your Mondex card that's it, you lose all the cash on it, just as if you had lost your real purse with cash in it.

The system has had a positive response so far, in that hundreds of shops and services in Swindon have already signed up for the trial, including MacDonalds, British Rail, Bass pubs, Coral betting shops, Texaco petrol stations, Sainsbury's, local department stores and Swindon Council. Over 60,000 people, a third of Swindon's population, will be asked to take part and it's estimated that Mondex could reduce the amount of cash used in Swindon by a quarter in the first year.



This attractive keyring can read your card balance, too.

## International

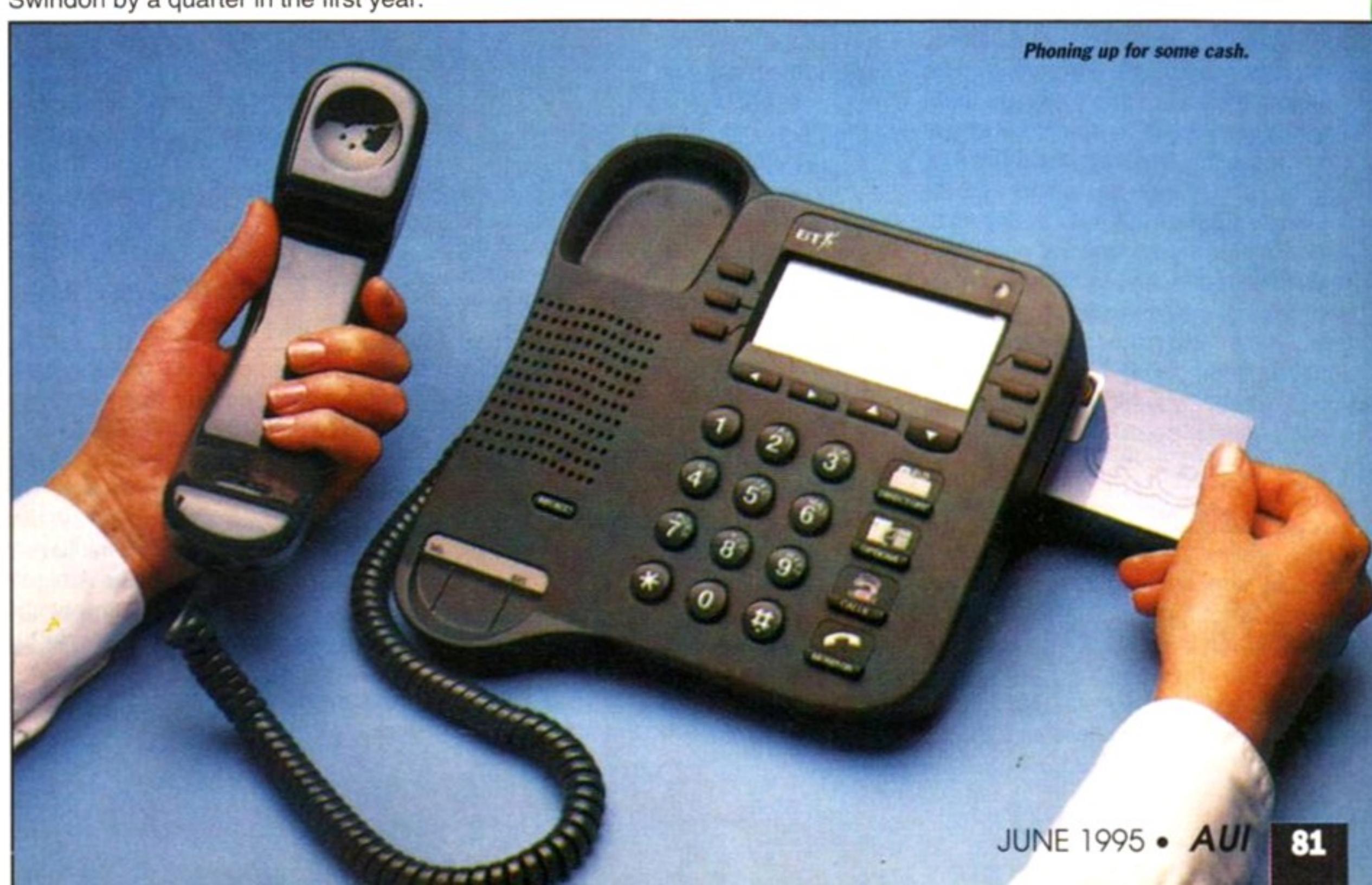
In theory, for instance, shops, restaurants and other employers could pay employees in electronic cash, putting wages directly onto their Mondex cards. These people might then spend this money without ever having to go to a bank, or use cash. It's a tempting prospect for many. And if the trial is successful Mondex is due to go nationwide in 1996. Given the trials in Hong Kong and the strong interest in Mondex from other South-East Asian countries and elsewhere, in the next few years Mondex could potentially even become a world-wide alternative to notes and coins. Certainly the card is equipped to hold electronic money not just in sterling, but in dozens of different international currencies simultaneously. NatWest's Tim Jones and Graham Higgins, who invented the Mondex concept in 1990, weren't thinking small.

## Is It Tamper-proof?

So where is the catch? The crucial point seems to be security. NatWest claim to have a tamper-proof system

on the chip - whenever a Mondex transaction is made, the chips in both the card and card-reader automatically verify that the other is a genuine Mondex chip before going ahead. NatWest are secretive about exactly how the system works, which could be a worrying sign, because in fact most of the best secure encryption systems work even if you know the techniques they use. David Chaum, encryption expert and head of DigiCash, the company behind the 'cyberbucks' electronic cash system being launched for the internet - for one, has his doubts. His digicash system uses a well-documented secure encryption technique. Chaum says that he believes Mondex is crackable, that once someone cracks it they will be able to transfer infinite amounts cash onto their card and eventually trust in the system will collapse. NatWest are nevertheless very confident, confident enough to be sinking £50 million into the Swindon trial alone. After all in the long run £50 million is relatively small change. Because as governments and central banks found before them, making money can be very profitable. AUI

Phoning up for some cash.



# The Cyberbuck

Computers have always been good at gathering information about individuals, especially for governments and other large sinister organisations. In fact the roots of IBM, the biggest computer corporation on the planet, lie in the invention of an automatic punched card processor, used by the New York State government for their 1895 population census. Even MicroSoft allegedly adapted MSDOS from an operating system used originally for tracking traffic violators in Seattle. And historically national secret services have always been great users of computers to process and collate information about possible subversives.

Another thing computers have always been good at is making and breaking codes. One of the first digital electronic computers ever, for instance, was the Colossus, developed by Alan Turing at Bletchley Park during the Second World War. The Germans were using their 'Enigma' machines to code all important military information transmissions and they believed this code was uncrackable. However, with the help of the Colossus computer and certain flaws in the Enigma code - such as the fact that a letter was never encoded as itself, for instance - the Bletchley Park team were eventually able to crack it and gained an invaluable military advantage for the Allies.

## Modem money

Now both paranoia about Big (Blue) Brother and an interest in cryptology, unfashionable for years, are suddenly hot topics again in computing. The reason is economic: people are looking for an easy way to buy and sell things on the internet; some sort of digital money they can send and receive through a modem. Only it has to be safe from digital robbers, hence the fresh interest in encryption; and preferably anonymous when you want it to be. After all you might not want everyone to know what kind of pictures you've been downloading from that Dutch bulletin board.

## Cybercash

Well, why not credit card numbers? People already buy things over the phone by giving their credit card details. The Cybercash company in the USA have developed an encryption program which they claim can scramble your credit card details so that you

can send them securely over the Internet and only the proper recipient can decode them. This kind of system could prove very useful for browsing and then buying over the Internet: information, software, plane tickets and even physical things like delivered pizzas or clothes from a mail-order companies, for instance. More or less a direct substitute for giving your details over the phone, only digital, and technically more secure.

The trouble is only appointed merchants can accept payment by credit card - you can't give someone the tanner you owe them by credit card, for instance. And also the cost of processing credit card transactions, though marginal, currently makes it uneconomic for selling cheap things like newspapers, for example. If information like text, pictures or video is going to be marketed on the Internet as it is via newspapers, galleries or video-rental shops on effectively a pay-for-the-right-to-view principle, then it will probably be sold in similarly uneconomically cheap units. There is also the question of who knows what you are buying and selling, when and where. Credit card companies would have this information and, though some people appreciate the automatic tag it gives them on their spending, others might resent it.

## Ideal Anonymity

The ideal for many people would be the option of some kind of electronic cash that they could fritter away, give to good or bad causes, or send to whom they wanted anonymously without the nagging feeling that someone somewhere could one day blackmail them with the information. Enter David Chaum, American cryptology guru and clamourer for digital privacy rights, who runs DigiCash.

## Digicash

DigiCash is a Holland-based company who recently launched its E-cash system. This uses a sophisticated dou-

# Starts Here

ble-key encryption system to give what is effectively, anonymous digital cash. You draw 'cyber-bucks' out of your on-line bank, spend them in an on-line shop, then the shop puts the cyber-bucks in its on-line bank account, all via the Internet.

The cyber-bucks themselves are just a few bytes of data, but the information they contain is carefully coded so that only people with the right key at the right time can read the necessary information and, like traditional cash, E-cash is not traceable. Chaum reckons it's a watertight, secure, anonymous sys-

tem. He would say that, but then he should know. DigiCash certainly seem the most intellectually rigorous of the electronic cash systems currently on offer.

## For the Amiga?

And they were certainly the only electronic cash company to at who appeared to have considered the Amiga platform. Apparently someone contacted DigiCash offering to write the necessary software to port the system to the Amiga, but they don't think it will be economic to do it until the Amiga's fortunes revive. At the moment the system works on MSDOS PCs, Apple Macs and Unix machines and DigiCash are currently looking for volunteers who use these machines to help spend

a million cyberbucks they are giving away on the internet as an experiment. Before you rush out to buy a PC though, this money is not convertible into real cash, it's just an experiment as yet, though E-cash proper ultimately would be convertible.

## Microsoft Money

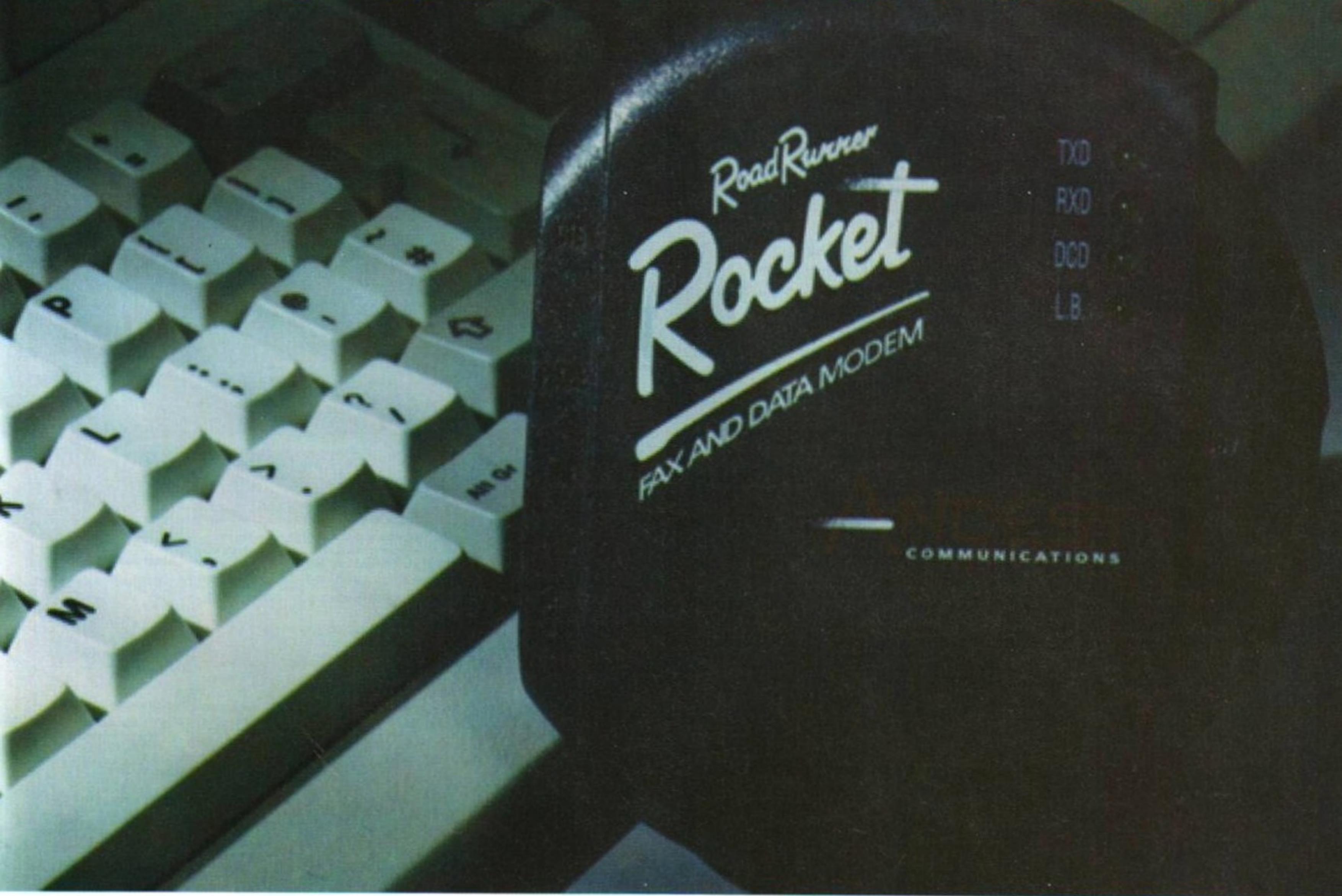
At the same time, several established banks like NatWest with their Mondex system and credit card companies like the Mastercard-Visa-EuroPay consortium are also now launching various forms of electronic cash, based on smartcard technology. MicroSoft, too, are investing millions in developing their own system of payments over networks, which would probably be extendible to the Internet.

## Paranoia or common sense?

Currently CyberCash and DigiCash seem to be the only up-and-running systems designed with the Internet specifically in mind. And DigiCash's David Chaum is certainly the most refreshingly paranoid of the figures in the industry. After all, let's not forget that the 'Clipper'-technique encryption system designed for MicroSoft Windows has a special 'trapdoor' incorporated in it to enable the CIA to tap anything coded with it.

One day soon you might be able to buy your copy of *AUI* over the Internet with cyber-quid using your Amiga, but probably many readers would rather not have MicroSoft's digitised watermark on the notes. *AUI*

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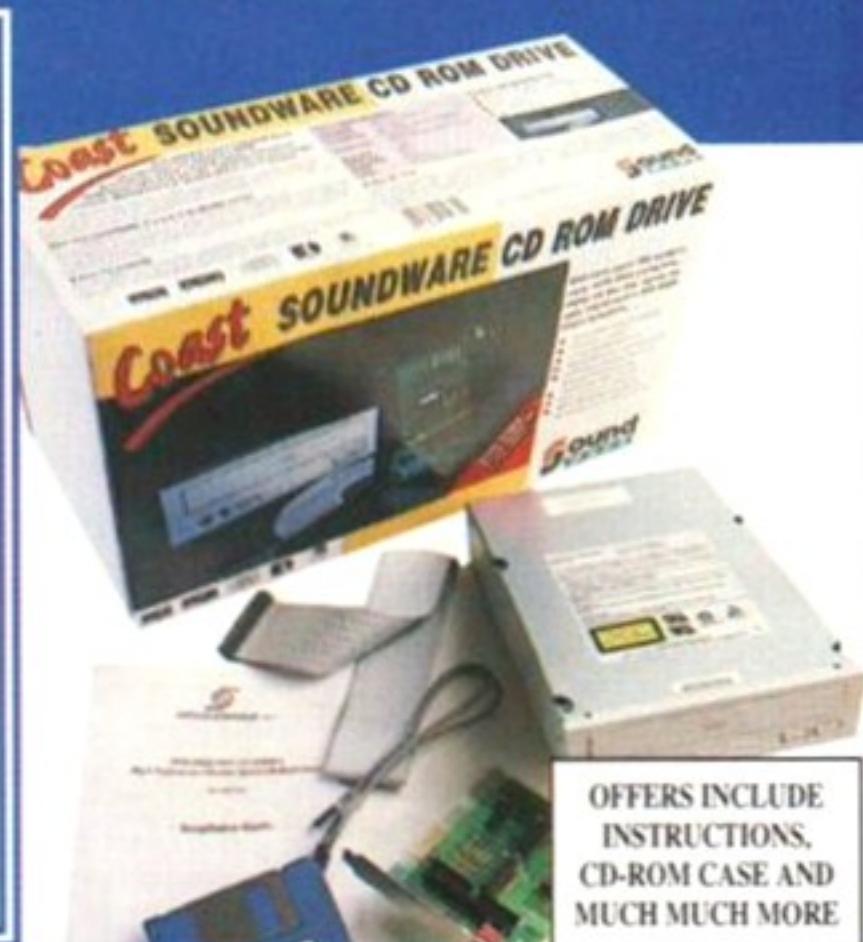
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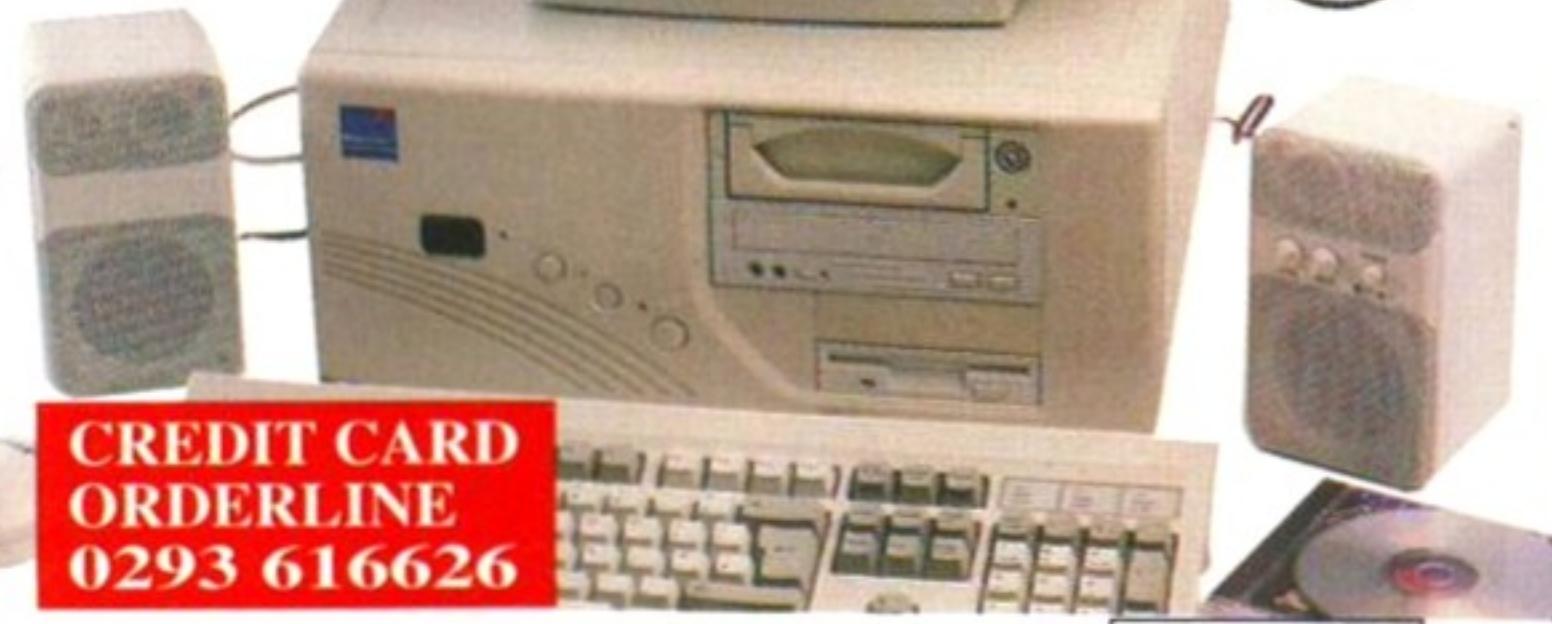
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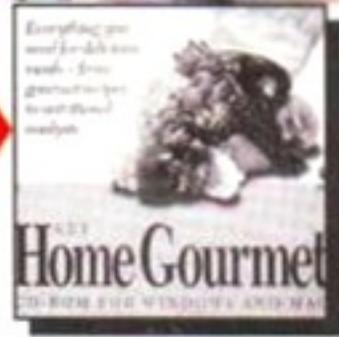
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# On Line

## Gary Fenton gets into Internet Relay Chat and proves you don't have to be called Maxwell (RIP) or Murdoch to be on top of global communications.

**H**ave you ever used a CB radio before? Isn't it fun? (Say "Yes, Gary!") With so many people to talk to you can easily make new friends, help people to solve problems, find out the latest gossip, or just pass time. Internet Relay Chat (IRC) is very much like that. It's split into channels (like radio) and there are rules to follow (again like CB).

Unlike e-mail, IRC is real time. Whatever you type on your keyboard will appear on everyone's computer on the same channel as you within seconds of typing it. Depending on the time of day you join IRC, there are at least 5000 users on-line. This also depends on the server to which you're connected. Some servers (Internet providers) have a greater penetration into the Internet than others. You'll also find at least 1000 channels, normally I find 2000 when I join IRC via Demon.

### Channels

Each channel on IRC plays home to a specific topic. Such channels include #amiga, #lightwave, #nightclub, and

so forth to give you an idea. The "#" character is short for "channel". Most channels have a topic description which gives you a very brief idea of what the channel is all about. Most of the time the topic descriptions get changed regularly for humorous reasons, making way for silly, sick, or even helpful descriptions!

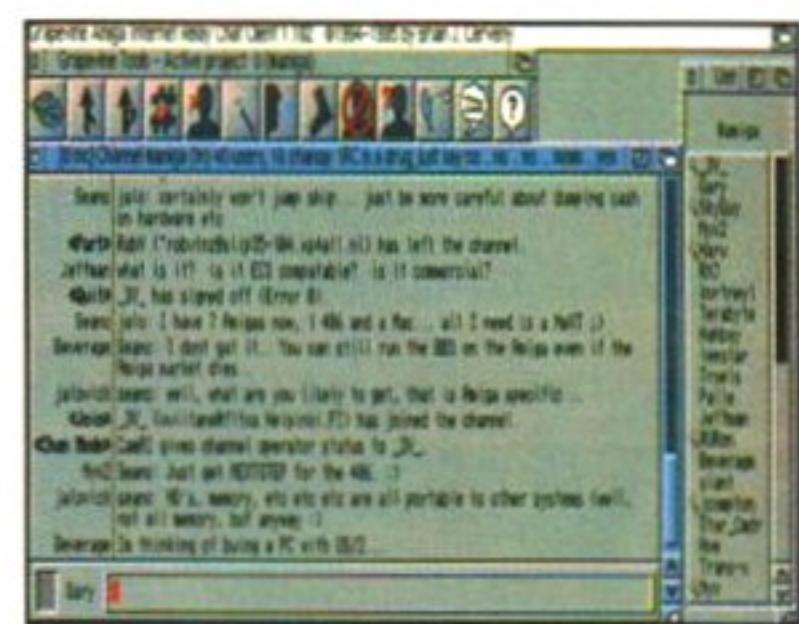
Because there are so many channels to investigate it would be very restrictive to stick with one channel all the time. Thankfully IRC lets you join as many channels as your IRC software is capable, simultaneously. This could give rise to a situation where you're talking about the Amiga in one channel, your pet armadillo in another, what you like doing with your girl/boyfriend in another, and perhaps telling everyone what you think of Saddam in the Iraqi channel. IRC can get very busy and you'll soon lose track of conversations if you join too many channels at once.

### Operators

Each channel has at least one operator. Operators are usually the people

who first started the channel, but can award operator status to other people if they ask permission. If you become an operator then you have the power to kick people off your channel or ban them completely if they become too offensive or irritating (or you find out they like PCs!).

Everyone on IRC has their own nickname. Only a few people chose to use their real name. Most like to call themselves things like Pieman, Shades, Darkside, Lemming, and so on. Some people in the more seedy channels chose to name themselves



Grapevine running with just 1 channel in 1 window.

```
setenv SOCKETCONFIG "UID=100
GID=100
USER=gary
DOMAIN=demon.co.uk
UMASK=0660"
```

Change the USER name from mine (gary) to yours, and also the DOMAIN name if it's different from the one shown here. Leave the quotes in.

The latest version of Grapevine normally appears on Aminet or De-

### Net News

- The First Bank Of Internet can provide you with a secure way of buying goods over the Internet. Why risk disclosing your VISA card details on the Internet when you can open your own virtual bank account! For more info send an empty e-mail message with the subject line "info" to [fboi@netcom.com](mailto:fboi@netcom.com)
- 15 top computer and credit card companies recently backed a new standard for Internet Security called SSL. It lets you transfer sensitive information such as credit card details without fear of someone else reading such information. (Haven't they heard of PGP?)
- 75% of World Wide Web users are "newbies" and have been online for less than a year. 85% of users run Windows and 35% use Macs. (cringe!)
- 50 UK schools are to get access to the Internet thanks to a £600,000 project funded by the DTI. If this scheme is successful the DTI will increase funding from £1.4m to £1m.
- Recently 8000 newsgroups and BBSs received an advert from a company selling hard drives. Broadcasting such adverts globally is called spamming and is frowned upon as the company found out. For several days the company received "flames" and core-dumps via e-mail and their freephone number was repeatedly dialled costing the company money. As a result the employee who suggested the idea has been fired! Ha-ha!

after their physical attributes, but let's not talk about that. You're more interesting in the computing side of the Internet, right?

mon, but you can get new versions directly from the Grapevine support site at this FTP address:

<ftp://cryogenic.com>

Have a look in the pub/grapevine directory and you'll find the latest version ready for you to download. There's also support files such as the DCC suite of programs which I'll talk about now...

### Getting Personal

While IRC lets you talk directly with people across the world, what if you want to send a private file to someone you're talking to? This is where DCC (Direct Client Connections) comes in to play. From your IRC client you can send and receive files to and from people who are currently on IRC. Typing in a line with this syntax lets you send a file from your computer to anyone currently on IRC.

/DCC SEND <recipient> <filename>

Using a bigger screen resolution I can easily fit in 3 windows and take part in 3 channels at the same time.

# TOP TEN AMINET

1	term-4.3a-Ptch.lha	Update patch for Term
2	Carnage.lha	Intense seek and kill game
3	Team17_Demos.dms	Playable game demos
4	TargaDType.lha	Datatype for Targa files
5	RomIcons8.lha	New Magic WB 2.0 icons
6	amitalk152.lha	Talking over the Internet
7	busypointers.lha	6 new busypointers for AGA
8	ZGIFDType39.9.lha	Fastest GIF Datatype
9	TPD.lha	Tron's PCX Datatype v39.7
10	AgBlankers1.1.lha	New Garshneblankers

**Created with Photogenics**

The Aminet Top Ten Chart on 27/3/95. See AUI March issue for information on Aminet and how to download files.

If you're using Grapevine then the DCC program will multitask and won't interfere with your IRC channels. You're free to carry on chatting while DCC uploads files over the Internet. You can send and receive multiple files at the same time.

## How To Talk

Although different software packages normally have different commands for doing things, IRC commands are a standard which should work on all IRC client software. These are some of the basic commands you should know about before you start using IRC. All commands begin with a / character, otherwise whatever you type will be seen by everyone in the channel.

**/join** - This joins you to a new channel. A channel name must be specified with a # before the name. eg. /join #amiga

**/leave** - This quits from the current channel.

**/msg** - Use this command to send a private message over IRC to a specific

user. You must follow this command with a user's nickname and then the message. eg. /msg gary Which Amiga do you have?

**/whois** - Follow this command with someone's nickname and you'll be given as much information about this person as the server can provide. It will always tell you their email address, sometimes their real name, and maybe even some personal comments.

**/list** - This lists all the channels currently available from your Internet provider. (With Grapevine you must type \*\* after /list). If you follow /list with a channel name then it will return with information about the channel.

**/help** - A useful command which provides help about the commands available. Follow the /help command with the name of another command to find out about it. eg. /help whois

## IRC via CIX

Most Internet providers give you access to IRC including our friends at Demon and CIX. To get on to IRC

## 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

Or you can join our amiga\_user conference on CIX, or contact me personally with e-mail at either address:

garyg@compulink.co.uk or gary@auimag.demon.co.uk

If you have sent me e-mail and I haven't yet replied then please send your mail again. Sorry, but I've been inundated with mail from **AUI** readers around the world since we started this Online column! (Canada, Brazil, Greece, Italy...)

## AUI USER PORT

### IRC Channels To Try

You must remember that IRC channels change all the time, from one hour to the next. If you can see it now it may not be there tomorrow. If you join a channel which doesn't exist then it will be created for you and you'll become the channel operator. Some of the regular channels contain outrageous, offensive, and occasionally disgraceful language so please be prepared and be careful which channels you join. Remember, there are no laws or police on the Internet. It has after all been called the great anarchic event.

Anyway, here's a short list of some of the channels I listed while online today.

#amiga - General Amiga chatter  
#amigager - The Amiga scene in Germany  
#amigafr - The Amiga in France  
#amiganor - Guess? Yes, Norway!  
#amigascn - The Amiga scene  
#england - Americans talking about England  
#HoloDoc - Holographic emergency doctor?  
#charm  
#food  
#happie - People who are stoned  
#football  
#chess - Zzzzz  
#party

not practical without using a networking system of some kind. CIX is currently working on a proper SLIP connection for full Internet access. Soon you can be running AmiTCP from CIX and utilise the whole of the Internet's features!

Finally, I must warn everyone that IRC can be addictive, and because it's a live event you must keep an eye on your watch as the units quickly clock up on your phone bill as you lose track of time! **AUI**

```
<Indecisiv> None of the software emulators run DOOM do they? (And I'm
<counting EMPANT PC as a software emulator here.)
<jcompton> appy: I don't think UU is shipping "bundles" like that yet, but if
you play your cards right, you could get a setup like that for about $450,
I'd say.
<KenP> Adam: I've heard good stories from people running E586DX on
#4800/040/40's. :)
<AdamH> Appy -> About $100 for the PC software and $550 CND (inc tax) for the
Emplant board with Mac emulation
<sidewind> is there a demo of that PC turbo?
<jcompton> indecisiv: No, and you're most correct in calling it a software
emulator.
<sidewind> that doesn't need TONS of RAM?
<AdamH> KenP -> I'd love to know exactly what they managed to run...
<ElViSp> anybody here that has played Fears 2... It is really great...
<jcompton> side: PC-Task 3, you mean? The Turbo mode REQUIRES tons of RAM,
that's how it works faster.
<KenP> Adam: Windows 3.0, apparently. :)
<sidewind> ElViSp i heard its good
<sidewind> :)
<KenP> Adam: Make your Amiga inferior! Buy an Emplant PC!
<AdamH> I haven't seen a copy of Win 3.0 for a long time
24 garyg@compulink.co.uk * type /help for help
```

/list users  
/j amiga

NComm 2.0

CIX

21:22 08:23

Using IRC on CIX via NComm can be a little more confusing but at least CIX gives you access to this exciting Internet Feature.

## 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).

# 10 YEARS OF THE AMIGA

## PART TWO

**Last month we  
recounted how the  
Amiga began and how  
the late lamented Jay  
Miner viewed the way it  
initially developed. In  
this part of the  
fascinating Amiga story**

**Mike Nelson and the  
team continue the AUI  
Special Report with an  
exclusive interview with  
another of the creators  
of our favourite  
computer,  
Carl Sassenrath.**

## CDTV and Carl Sassenrath



Carl Sassenrath - created Amiga multitasking.

**C**arl Sassenrath was one of the system programmers at the beginning of Amiga history. He was responsible for the multi-tasking nature of the operating system.

Another visionary, Carl was also instrumental in building CDTV, not really one of Commodore's runaway sales successes, but again a step ahead of the competition in using CD to store vast amounts of information.

Troubled by a combination of relatively high cost, naff software and the problems of marketing a revolutionary machine that the public did not understand, CDTV was the predecessor of the CD32. It achieved some success in the UK, blitzing the Philips CD-i once the association with the Amiga name was actively promoted. The ini-

**There must be almost  
as many DPaints in  
existence as Amigas,  
and a significant  
number of those are  
pirate copies.**

Commodore asking me if I were interested in CD-ROM for Amiga, and if I wanted to do some work on such a project.

At that stage its design was very loosely defined so I talked with Dale Luck and Don Gilbreath - they showed me their plan and needed some-



CDTV - not allowed  
near Amigas in the  
shops.



CD32 - Was Commodore too early into the CD revolution?

one to do the software, just an ISO file system really then. No one was really sure about using SCSI etc., and it sort of evolved as I wrote more and more device drivers, adding more features like music CDs, the Bookmark and so on.

We needed some help so we recruited Jim Sachs to do the startup screen and Reichart von Wolfshield who did Battle Zone, FirePower and Roger Rabbit games.

He wrote the music player part, and by now I was managing things rather than doing it all myself.

This was great as I could work from my home up in the mountains away from the city. I set up a bulletin board system so everyone could call up, find out what was happening with the project, and download the latest versions of the system software. It moved real fast - all done in one year so it was great fun to work on.

Commodore hired Nolan Bushnell (one of the creators of the Atari consoles) who was assigned to be the figurehead even though he didn't have

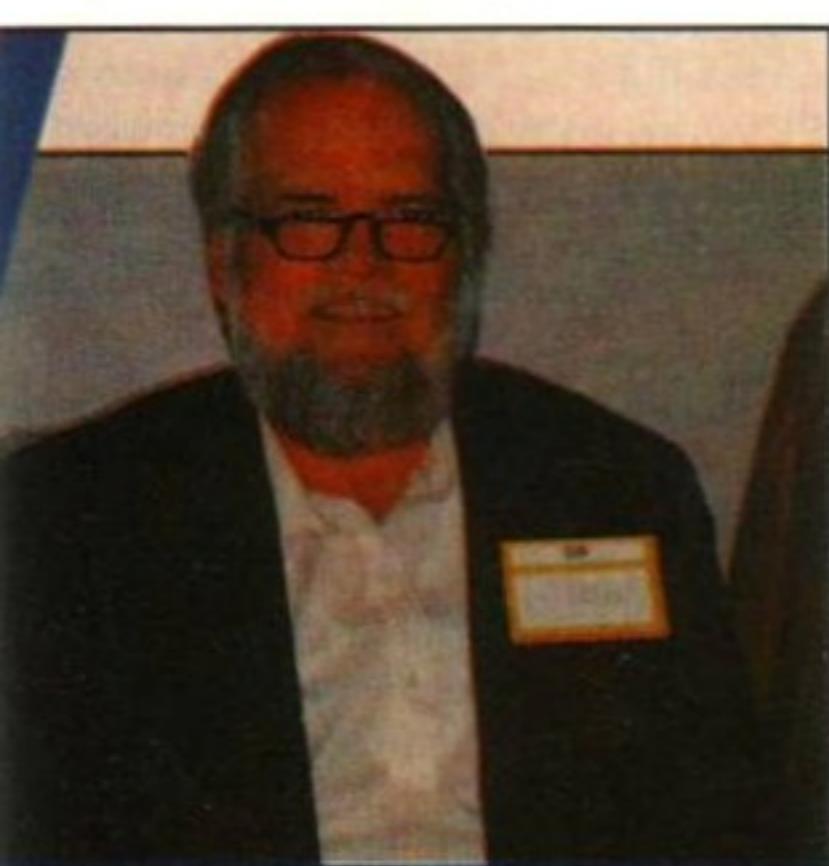
## The DMA allowed a programmer to load into memory a sampled sound, point & the chips at the data and fire away.

do it with writeable or even re-writable CDs.

Jay Miner had this to say about the CDTV: CDTV is quite a nice idea, but the software has to be right. Can you think of anything more horrible than trying to read an encyclopaedia or the Bible on a TV, rather than a nice crisp RGB monitor? As a low cost entertainment system it's a good viable long term project. I hope Commodore won't drop the ball if things aren't as good initially; they can take on Philips."

Unfortunately, although taking on Philips and beating them with a fraction of the advertising budget in the UK was more than CBM in its weakened state could do.

However, it did take a step ahead with the launch of CD32. That machine, well ahead of its time if you compare it to what is still available, may yet be developed into a winning mass market consumer electronic device.



Jay Miner - a proud parent of the Amiga.

much to do with the dream. To get my perspective on this thing it was a chance to do the original Amiga - a

## Favourite Software

We have mainly been talking about the unique nature of the Amiga hardware but it is also fair to say that some of its software has pushed the Amiga into areas in which its competitors have struggled owing to their own shortcomings. This section will look at some of the more important pieces of software from both Commodore and the various developers supporting the Amiga.

The story starts with some of the early software from Commodore themselves. The first graphics program was called Graphicraft and was written by RJ Mical at Amiga ("because no-one else could do it right", according to Jay Miner). This was undoubtedly a prototype to the classic DeluxePaint, and, in common with almost all the "home grown" Amiga software, is perfectly coded. I still have version 1.1 and, get this.. it runs without any problems whatsoever on my AGA graphics A1200 under Version 3.0 of the operating system!

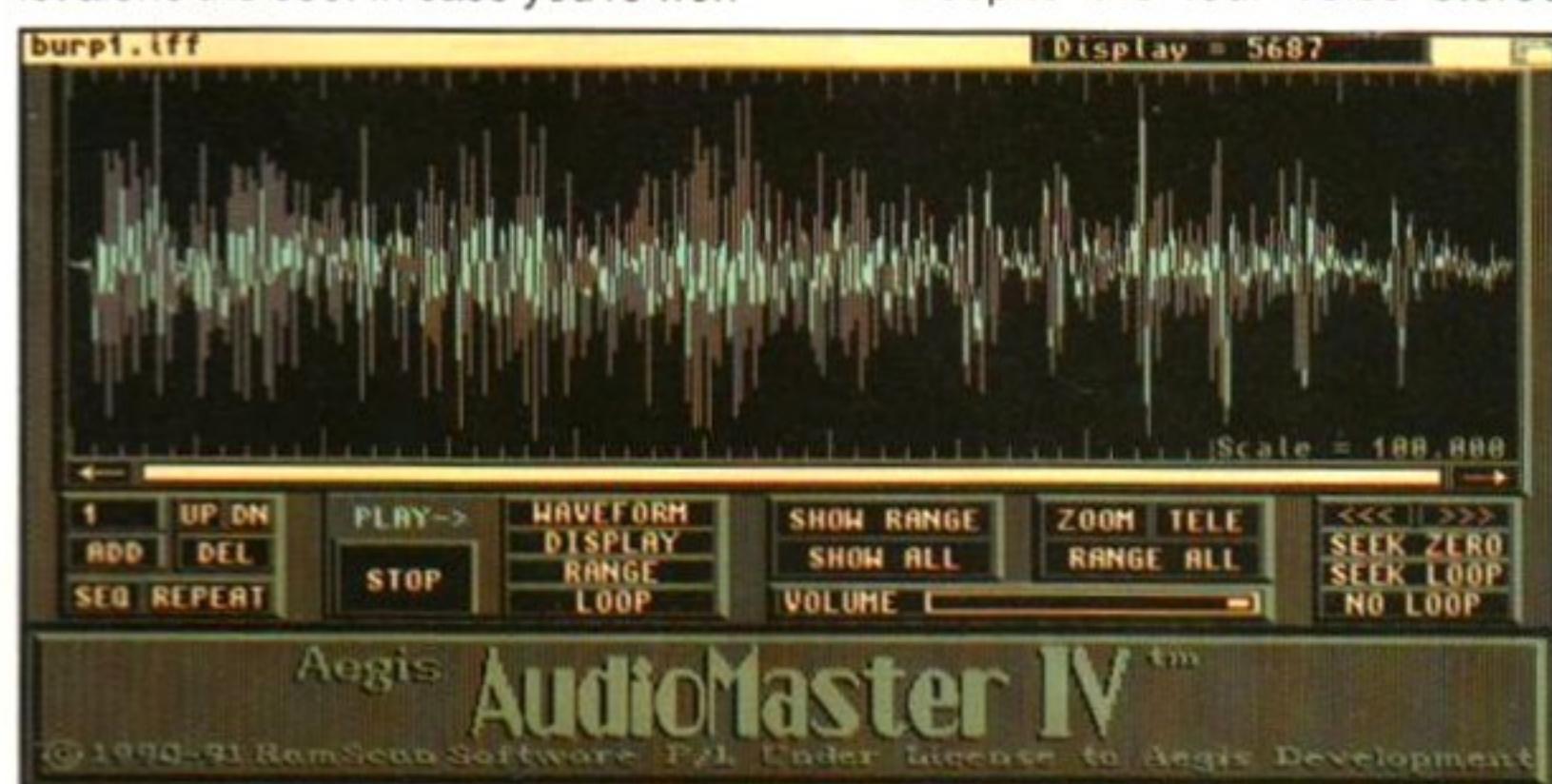
All of its colour cycling animation is timed precisely and bear in mind that the 68020 wasn't even around then, let alone the 030. In case you're won-

and the one which sticks in this doctor's mind is the animation of two hearts, one human, one artificial. Considering they are ten years old, the quality of this simple animation is superb and any outsider is left bemused at Commodore's demise given this wonderful technology.

Graphics was only half of the Amiga's beauty. The powerful sound chips represented a major leap forward over the white noise and tone generators of the C-64 and Atari-ST. The DMA allowed a programmer to load into memory a sampled sound, point the chips at the data and fire away.

Any sound was a simple matter and Musicraft was Commodore's first program to exploit this - tunes like "Smoke on the Water" with a twanging electric guitar and realistic drums were the order of the day. The program evolved significantly into Aegis' Sonix until stopping somewhat prematurely (like most Amiga stuff!) at Version 2.0. I still have it around, even if just to mess with the waveform generator and play the "Close Encounters" notes to see if there's any passing aliens in need of a place to park.

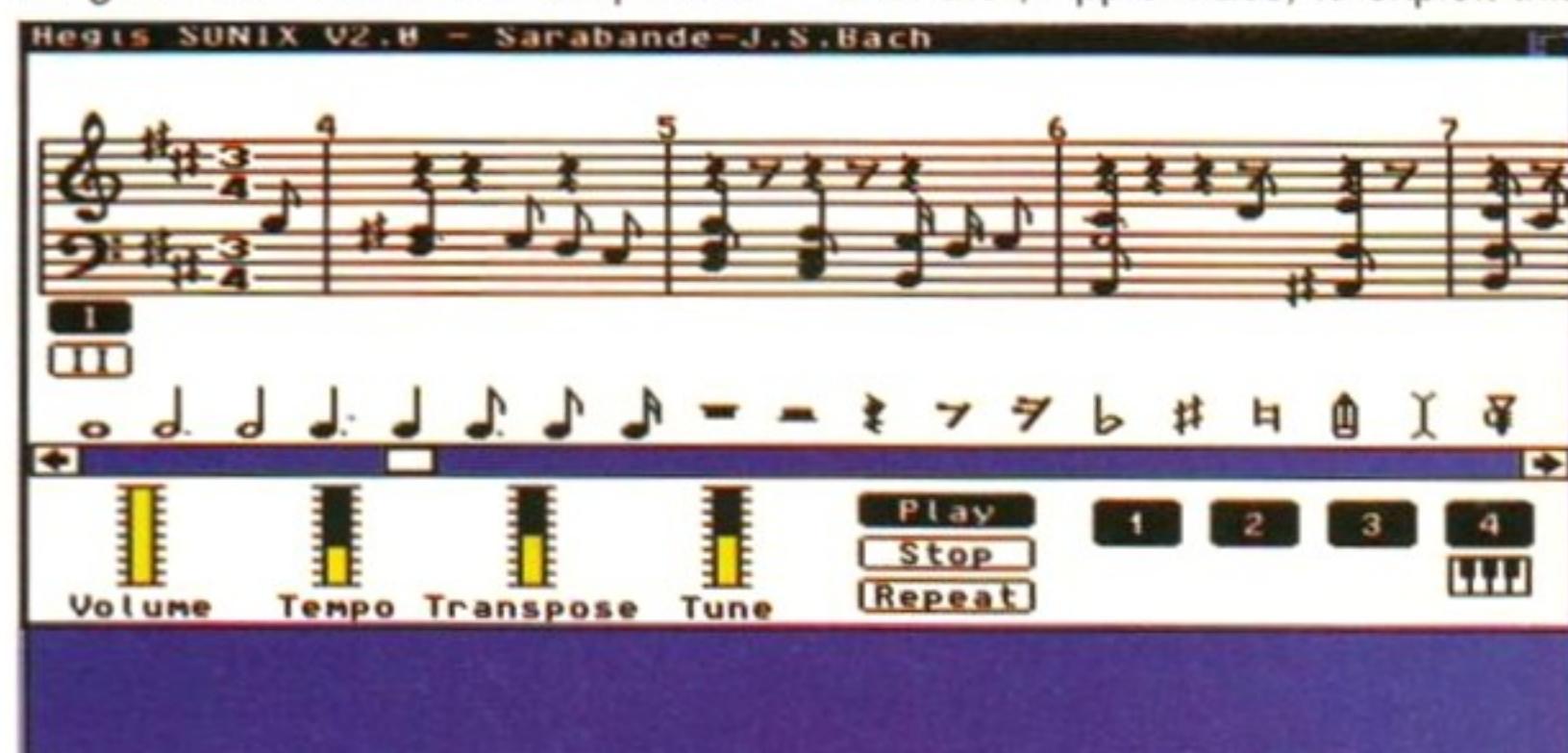
Despite the four voice stereo



Sampled sound has been part of the Amiga all along

dering it works on an 040 on any Amiga you care to mention. There are few other programs of such complexity which run so universally and represent a major accomplishment by both programmer and compiler. Unfortunately, precious little software on any platform boasts such a pedigree.

We remember the first colour cycling demos we saw with Graphicraft



Originally called Musicraft, Sonix provided an easy way of making music.

phenomenal market.

The Amiga quickly gained a reputation as a graphics machine par excellence, a justified accolade which owes much to one of the most successful Amiga applications ever. The picture of King Tut remains an Amiga favourite to this day, as does DPaint (as it became known), now in its fourth incarnation. Initially, the work of Dan Silva, there must be almost as many DPaints in existence as Amigas, and a significant number of those are pirate copies, no doubt.

Piracy has always been a problem for the Amiga (although it's not really any greater than on other platforms), and powerful programs like DPaint are relatively easy to use without a manual because of the Amiga's friendly operating environment. Not a good enough reason to warrant piracy, however.

The phenomenal success of DPaint really fuelled the Amiga. It was eventually packaged with the Amiga by Commodore and its development, particularly the inclusion of animation facilities meant the Amiga was the only machine for the job of making things move. IFF files were invented Electronic Arts and were instrumental in ensuring success.

It's difficult to imagine the Amiga without DPaint, and the various ports to other platforms only served to emphasise the Amiga's strengths in this field. Virtually all of the non-HAM artwork created for the Amiga has been passed through DPaint at some stage, and the latest version now fully supports this weird graphics mode. Paint



Can Do - one of the many multimedia presentation packages which made use of the Amiga's abilities.

made computer art not just possible, but accessible to so many people.

## Business Software

Without doubt, the most significant developer to support the Amiga was the giant WordPerfect Corporation with a port of its best-selling PC word processor. I used it for donkey's years, and it only failed when I fired up a 68040 inside the Amiga. It was compact, fast and very fully-featured like most Amiga products. It was also virtually unique in that it existed.

The only other major PC product which was around on the Amiga was probably Precision's SuperBase. Seriously lacking was a decent spreadsheet and the array of accounting software necessary these days. This didn't stop a number of businesses using Amigas to run their affairs and the advent of some excellent networking solutions allowed seamless integration into regular PC systems, although by then it was too late for the Amiga to make any real dent in the dominance of the PC.

Desktop publishing was really born when the laser printer became affordable by mortals and is an area where the Amiga should have excelled. The dodgy screen display of interlace, corrected by a flicker fixer after several years of effort by Commodore, allowed the technically inferior and grossly overpriced Apple Macintosh machine to

take over this niche with Quark Express becoming an industry standard application. At 600 it's pretty amazing, but true.

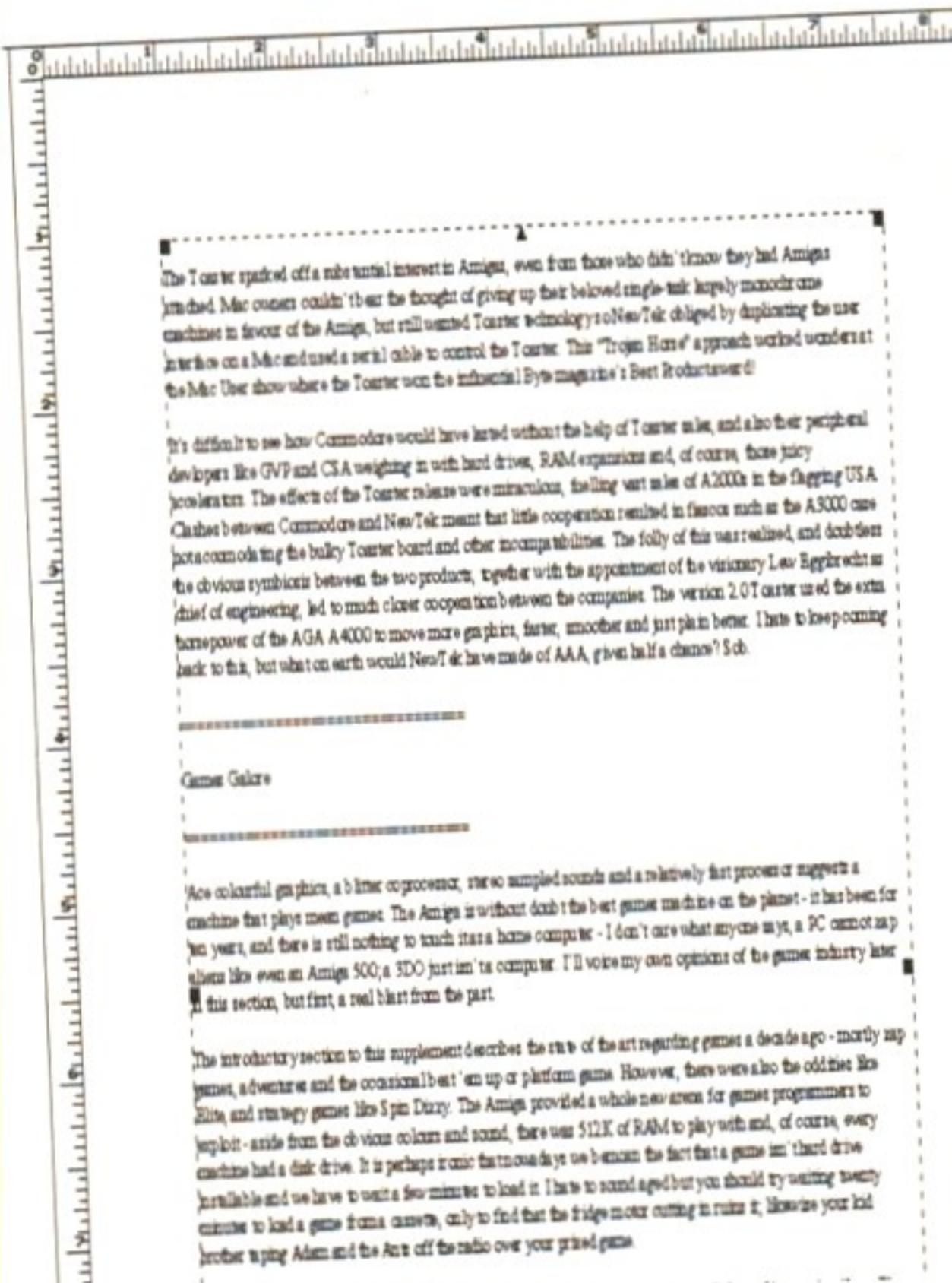
The Amiga did weigh in with Gold Disk's Professional Page but the damage was already done and the smaller company was unable to gain much of a foothold in the big bad world despite dominating the Amiga scene until PageStream came along. We're still waiting for the killer version 3.0 to be released! ARexx macros turned ProPage from an eminently useable package into a superb DTP system. ARexx has that effect on things. Too late, again!

When it comes to presentation graphics, the Amiga lagged behind the PC by a few years until the release of Oxxi's Presentation Master. This is an exceptionally nice product indeed, with the makings of a killer app. Unfortunately, although Commodore initiated the product and were due to pay towards its development (not a lot of people know that!) they apparently went back on their agreement and the Presentation Master did not reach its full potential. We said at the time of the Review, however, that it was a major achievement for Gary Bonham of Oxxi to code the entire program on his own. Just look at how many people are needed to work on a Windows project and this again illustrates the exceptional talent drawn to the Amiga and its vastly superior operating system.

## Languages

No computer is any use without programming tools and Amiga coders have been spoilt with some ace compilers and assemblers. The most notable support came from the Lattice C compiler which became SAS/C. I first used version 3.1 which ran off a twin floppy A1000 and took 10 minutes to compile a simple program - didn't have much RAM in those days, you see. Still, it worked and the job got done, but Guru knows how long it must have taken to compile the operating system, programming is not unique to the Amiga but it was several years before PCs grew away from Pascal and went into object oriented languages. The best addition to Lattice was the source level debugger, a totally magic tool that allows you to effectively watch your code running, line by line, instruction by instruction. You see the effects on registers or variables and then just before the machine hangs, you can spot the bug a mile off. I still miss the intimate conversations with the infamous Amiga Guru, however. (Carl Sassenrath, by the way, wrote a still wonderful book on Guru meditations)

Most games programmers, having cut their coding teeth on C-64s or Spectrums, were more comfortable



DTP never really got as far as it should have, despite Professional Page.

# Amiga Users Reminisce

**AUI asked leading companies and users in the Amiga world for their sentiments on the tenth anniversary of our favourite computer. Here's what they said:**

## **Digita - Jeremy Rihill**

It's a great shame the Amiga cannot celebrate its 10th birthday in better health.

It was the most successful home computer in the UK. The high points were when Wordworth was bundled world-wide with the A1200, and the 1993 Commodore Christmas party at Pinewood Studios. The future of the Amiga depends upon the timely purchase of the Amiga technology from the liquidators and the successful recruitment of the key development staff.

## **First Computer Centre - Dave Stainer**

The Amiga has been the foundation stone in the formative years of the company.

Even now, in a period when we are really unsure of what is in store for the Amiga, it still accounts for a considerable proportion of our sales in the form of software and associated hardware products.

The Amiga has provided an economical alternative to the full system costs of the increasingly popular PC. If it can continue to do this and provide comparative capabilities then I am sure it can continue to be a success.

## **Silica - John Gilbert**

The fact that the Amiga has been around ten years is a credit to its original designers. At the time of launch it was years ahead of anything else, but CBM should not have rested on its laurels.

We look forward to a bright future for the Amiga. The enquiries and orders we are currently receiving indicate that the Amiga market is still very much alive and ready for an explosion of activity.

## **Wizard Developments - Shaun Cosgrove**

We are still positive about the Amiga. Unlike any other market, there seems to be a large amount of loyal and dedicated Amiga users who continue to use their machine despite the temptations of other platforms.

Our continual commitment to bringing new products to the Amiga will not be dampened as long as people continue to buy product.

We all hope to see the A1200/4000 and new Amiga models back in the shops to ensure the survival of our treasured machine for at least another 10 years.

## **RBF Software - Ray Burt-Frost**

When I first saw the Amiga 1000 on display in the States in 1984 my first thought was "Bloody hell, 16 bit, I want one."

I still hold out hope for the Amiga's future. Only time will tell.

## **Teijo Kinnunen (Octamed author)**

I have been an Amiga user since 1987, when I got an Amiga 2000. I am really disappointed that [the original Lorraine computer] was adopted by

Commodore. Nobody but Commodore could have spoiled such an excellent computer.

Commodore had excellent software and hardware engineers who did their best to keep the Amiga up-to-date, but with ineffective management and marketing, the liquidation was no surprise.

I still use the Amiga because no other personal computer offers such an excellent multitasking operating system, with power comparable to Unix. What a pity it all had to end up this way.

## **Cyber-Tec Records**

The Amiga is a lone shining knight fighting against the evil PC and Mac.

It has had its ups and downs but it will not die - due to the massive user base, superb reliability and value for money. The Amiga has shown the computer industry how a computer can and should operate.

## **Dave McIntosh**

The highest point was the launch of the A500 - at last an affordable Amiga for those of us with modest incomes!

My disappointment in the poor price/performance of the newly launched A4000 series was quite profound. This was the Amiga's final chance to shake itself into a competitive position again and it had come up well short of what was needed.

## **Grahame Fendle**

The Amiga has [now] fallen a long way behind, and even if the Bahamas battle is resolved tomorrow, how long will it be before machines are in the shops again?

The vast majority of users that are left are true Amiga fans, and if whoever takes over the Amiga's development and production does not take the time to listen to them, then I don't think they'll remain loyal for much longer.

## **Richard Harrison**

When released it was very exciting and powerful, the first desktop with multitasking and a good OS.

A3000 release was the high point. If the A3000+ had been released I suspect that the Amiga wouldn't be as much in the sorry state it is now.

## **Graham Kennedy**

I still think of the Amiga as one of the most innovative designs yet.

If the newer generation of PC's manufacturers took even half the features that the Amiga has as standard, they would have a machine worth looking at. [The high point] has got to be the release of the A1200. For a small, cheap entry level machine it still has the power to knock the socks of many, a PC owner.

I think the management fiasco, and final collapse has to be every Amiga owners' low point. Pessimist I may be, but I can't help feeling that they will never recover from the crash!

## **Alan Lewis**

I will never forget the first time I read about the Amiga in the August 1985 issue of Personal Computer World. I was in love with a computer I could only dream about. By 1987 I had one. The Amiga's high point has to be the launch party, where Andy Warhol and Debbie Harry unveiled the machine to an astonished crowd.

Whatever the outcome [of the Commodore liquidation], in ten years time, I'll still be using my Amiga - just as I still use my PET and TRS-80, both over 15 years old - and I know I'll still be having fun.

## **Caspian Prince**

The Amiga - the only machine you can actually have fun with.

CBM going bust was a mixed blessing. Now it might get some real creative input instead of the strangulated, poorly-marketed grasp that CBM had.

# Amiga Users

**Dr. T's**  
MUSIC SOFTWARE

**TIGER cub™** for the Amiga

Fantastic music creation packages were developed by Dr T.

with machine code programming and sadly this led to some very dodgy practices indeed. Hitting the metal, as it became known, was OK if the metal remained constant. Even if Commodore were slow to upgrade, technology refused to stand as still and faster processors with caches and extended RAM caused a stack of hassles for people with anything other than a 1 Mb A500. Luckily, the diverse nature of the Amiga range has decreased these problems quite substantially.

## ARexx

It's worth mentioning the impact of ARexx on the Amiga's development. Often, this is understated and woe betide software that doesn't include ARexx compatibility these days. What is it? It's an Amiga version of the mainframe language Rexx, a relatively simple programming language not a squillion miles away from BASIC in its structure.

ARexx allows different programs to communicate with each other and the operating system, really opening up applications for the user to customise functions or automate tedious processes. As an example, imagine you had a drive full of IFF files and you wanted to convert them into a MAC-friendly TIFF format. Something like ADPro from ASDG with ARexx compatibility allows you to write a script to automate the process so you don't have to go through the load - convert - save cycle a zillion times to get the job done.

This is a comparatively simple ARexx application. ProPage's later incarnations have "Genies" which are no more than ARexx scripts to provide a simple means of carrying out complex manoeuvres on documents at the click of a button. Essentially, ARexx is the coolest thing since the Ice Age and surprise, surprise, the PC community have only just woken up to its advantages.

Of course, they have to wait for Windows NT to provide proper multitasking before they can actually use it, and naturally invest in vast amounts of RAM and hard drive resources first. We'd laugh hysterically if the Amiga weren't in such a desperate state. Maybe there isn't a God, after all.

## Integration

The Amiga's thoroughly ace operating system also made possible a couple of programming environments for very inexperienced coders. Commodore's own AmigaVision and CanDo from Dallas-based Innovatronics allow simple scripts to be written to do fairly complex multimedia oriented tasks using the Amiga's super graphics and sound capabilities.

Integration is the key to multimedia and is really the Amiga's strongest asset. Even today, CanDo is like the glue to bind all the possible resources, both hardware and software, together, and ARexx compatibility is again the essential component. A good example might be to use SuperBase to store factual information, an IV24 to display 24-bit high resolution graphics and CanDo to write a friendly user interface, maybe even controlled by a touchscreen. The user need never know all the different products behind the display.

The advantage for the programmer is there is no need to keep reinventing the wheel as the chances are high that someone has already solved a particular problem. For a while Commodore did have some grip, however tenuous, on reality when they proudly advertised that "Only the Amiga makes it possible..." This is true to some extent today - there is nothing on

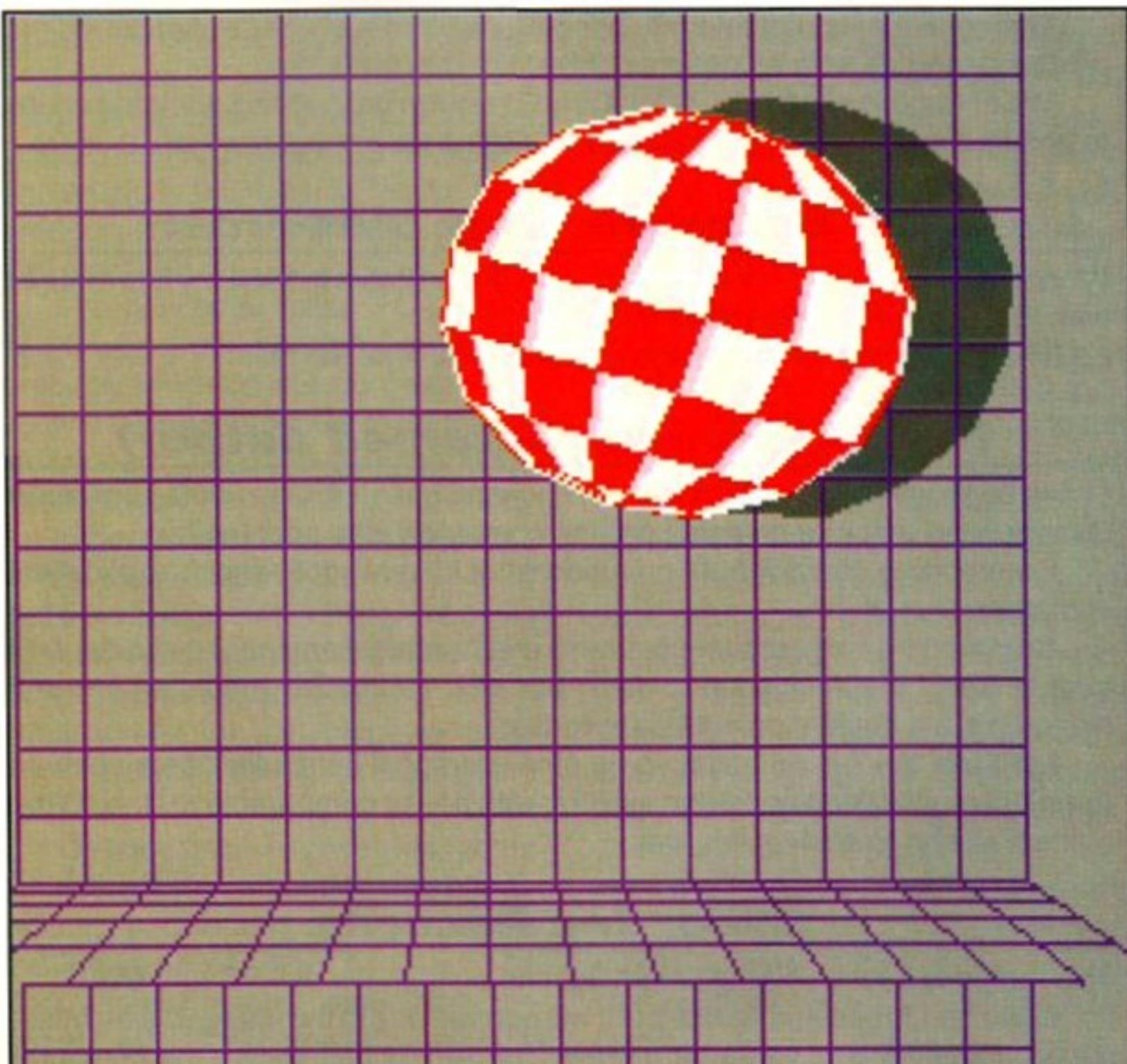
the planet as capable of delivering multimedia for such a competitive price.

Games programmers have been realistically forced to use Assembly language or at the very least C to code their blast 'em to bits, kick lumps out the Ninja bad guy software, but there has always been a very nice alternative lurking in the wings.

Blitz Basic was, I think, an Australian invention, which really did shift some butt. Another compiled language based on the old favourite, Blitz was highly optimised for the Amiga's graphics chips and trundled along at a fair old lick. Unfortunately it suffered from the old "I'd rather not support superprocessors" kind of affliction until a relatively recent version 2.0. This is a shame, really, as Blitz Basic did have real potential as an Amiga programming language.

While on the subject of recreational software, Oxxi came out with a really nice system for designing adventure games. Unfortunately, they released Visionary just as adventuring became as trendy as real fur coats and the title was less than apt. I have to admit that I liked the old text games, and the advent of spiffing graphics, CD-ROM and such like may yet see a renaissance of this type of game. Surely there's only a limited number of ways of beating the living daylights out of a Kung Fu master and its about time we had another look at dungeons and dragons type games. Hang on a mo., what am we talking about? This ain't the games bit...

**Ten Years and still going strong?**  
*The story of the revolutionary computer that has changed our lives continues next month with more revelations of how it all happened.*



Showing what the Amiga can do - Boing, the first and most impressive Amiga demo ever.

# The Amiga Answer Machine



## VIDEO

Dear AUI,  
A resolution of 800x600 but only in an interlaced screen. The Monitor is capable of displaying 800x600 non-interlaced (I think!!) and the AGA chipset is supposed to be programmable.

Is there any way to force the Super72 driver to push out a non interlaced signal. I notice that there are several tool types that can be modified but as this could be potentially fatal to my monitor I would rather not mess about with these unless I know what I'm doing. Any suggestions? Also, at the moment I am running the monitor in Productivity (640x480) mode. The borders at the side are a real pain in the neck and although I have the new overscan program, there seems to be no way to obtain full width. Any help especially with the meaning on all those tool types for the monitor drivers would be greatly appreciated. Thanks for any help you may be able to throw my way.

Daven Sangeelee

bsc4084@dcs.napier.ac.uk

Dear Daven,  
Sorry, your letter appears to have been messed up a bit, I'm not sure where

**Andy Eskelson, Guru of the mysteries of the Amiga, answers your queries and solves your problems.**

that happened. Not to worry I've got enough of it to work on.

A Super 72 non interlaced would exceed the monitors ability to sync. If you are only editing graphics, you could use the Super72 mode, in non interlaced mode, and set the number of lines to 600. If you have autoscroll turned on you can whiz up and down the screen very easily.

You can use Moned2 to tweak the monitor settings, this program is available on Aminet. Moned is also have a good description of the tooltypes.

## OTHER

Dear AUI,  
Thanks for your continued support for the serious side of Amiga computing, for sanity's sake keep it up. Though I suspect, from glancing at your competition, that they are at last beginning to realise where the real future for the Amiga lies. My set-up is as follows:-

B2000-full ECS-WB2.04-1 meg chip

4 Meg 16bit-4meg 32bit

SSL A5000 68020

A2320 Flicker Fixer

Microvitec 1438 Multi-sync monitor

GVP II SCSI with 52meg Hard Drive

I run the system in Hires-interlaced, but can only get full overscan on the top, bottom and left side of the screen. There is always a 1/2" gap on the right-hand side. Can I overcome this?

Most of my software allows me to run it in interlaced but is there a way to force programs that don't to do so e.g. Klondike and Epoch-Master?

Regarding the A5000 accelerator, is it practically possible to upgrade it by changing relevant chips etc. Again regarding the A5000 is it possible to extend this board away from the Motherboard by using a relevant plug and socket with a very short ribbon cable in order to give sufficient clearance between the two to fit a DKB Megachip board for that extra meg of chip ram?

Finally can you please confirm, or otherwise, that I can run any SCSI CD ROM drive and if so could you recommend one that will give good access speed and value for money? Thanks for providing an extremely valuable service, my only request regarding the mag. is could you extend the PD coverage? Is there a utility that will allow me to run the mouse-pointer in Hires-interlaced?

Do you have any plans for a review of the 1200 tower system that is being offered by Ramiga and others? None of the suppliers can offer much in the way of literature; not even a picture of it. If you do have any info, on this system it would be extremely helpful as short of buying a 4000 it seems the only logical upgrade from my present system.

Brian Sharman  
Leicester

Dear Brian,  
The problem with your setup is that there is not much control available to you. I have a similar problem, I just live with a 10mm border each side. You can try fiddling with the monitor settings with something like Moned, but there is not much to work with (I usually end up making a mess and rebooting).

You could try Promoter, but once

## Answer Types

### APPS

Programs etc]

### VIDEO

Video related problems

### COMMS

Communications

### PROG

Programming

### OS

Operating System

### PRINT

Printer Problems

### COVERDISK

Cover Disk problems

### OTHER

For Anything Else

again this is really designed with AGA and WB3 in mind.

It is not possible to upgrade a 68020 to an 030 by a direct replacement. I doubt if there is an easy way to upgrade the 5000. I don't think that an extension would work. You could try, but the timing signals would probably object to the extra cable.

As far as I know any SCSI CD ROM can be fitted. It is worth getting a compatible drive for whatever set of drivers that you intend to use.

As for types, you can read the specs as well as I can. Take your pick, Matsumi, NEC, Apple have all been pressed into service.

There is a mouse utility that puts the mouse pointer in hi res mode. Unfortunately I can't find any reference to it. It is either part of a mouse utility package, or was called doublepointer or similar name. I remember being suspicious that it might have been causing me problems so I dumped it. (The pointer on my 2000 is low res CBM default)

Amiga Answers is not the place to ask if we are going to review this or that. I'll ask someone for you. Remember that most magazines run a couple of months behind the real world, due to printing and distribution, so you might have already seen something by the time that you read this.

Note from the Editor. Yes, we do plan to review the tower system but we won't do it until it is generally available. Our information is that supplies are not yet fully available.

### OTHER

Dear AUI

Regarding Your reader Simon Margerison's search for a PCB and

circuit drawing program, please find enclosed a copy of ProCAD Electronic which I think should fulfil his needs. This is a PD demo which is available from IMMEDIATE Arts, 26 Lyndhurst Gardens, Glasgow G20 6QY for £1.00 (p&p inc.)

James Morrison.

Dear James  
THANK YOU!

This package is very very good indeed, so good that I think I'll make some use of it myself!

Unfortunately the letter that I have from Simon does not have his full address. SIMON Please contact me with your address and I'll pass the disk onto you.

## VIDEO

Dear AUI,  
Having read of the display problem of your reader James Whittaker of Devon I can sympathise since my A1200/Microvitec combination has suffered from the same problem for several months, i.e. intermittent flickering and horizontal ghost lines on the screen for the first 15 to 25 minutes after turning the machine on.

This is obviously not attributable to the monitor as I have tried it on 2 monitors with the same result.

Repair people react as though the fault is unique when described on the telephone but I am prepared to bet that many others suffer similarly from the same malaise or are unaware because they use a TV set instead (as I did for 18 months) and therefore do not use the high resolution screens.

I would be interested to know how many others have had or have overcome this problem, or simply like me, switch on the machine 25 minutes before use to avoid the frustration.

Paul Millington  
Shropshire

Dear Paul,  
There must be more people suffering from this problem as you say, but you are only the second person to tell me about it. You have identified the problem as being with the Amiga rather than the monitor. The next thing to do is to find out exactly what the problem is.

Intermittent faults are the most difficult things to trace, and they can require a lot of work to find. My A4000 sometimes flickers, I tap the case and the problem goes away. This indicates a poor connection, the cure is to reseat the expansion boards and other connectors. As most of the A1200 utilises surface mount technology a dry joint would seem to be the most likely cause of the problem. This is where the can of freezer spray comes in handy.

I'm not surprised at the reaction of the repair agencies that you have spoken to, try to be a bit more descriptive of your fault. Flickering and ghosting would mean different things to different people.

## OTHER

Dear AUI,

Please help me. I have just had a 345MB hard drive fitted to my A1200 and I am having difficulty in installing some multi-disk games to this drive to a partition I have called GAMES.

The games in question are, Monkey Island, Indiana Jones & The Fate of Atlantis and Populous II. When I try to run these games after installation all I get is scrambled graphics on the screen and they refuse to run. I have successfully managed to install others such as Syndicate, Liberation, Eye of the Beholder II and Innocent Until Caught and have had no problem at all with these programs, please help as this is driving me mad. I am using the installer for the game and original disks not back-up copies.

Also I own a Casio SF9600 digital diary, and purchased from a PD Library a program called Casio Communication which enables the Amiga to communicate with Casio diaries to save information to disk obtain print-outs etc. On this disk was a diagram to build an interface to allow the Amiga and Casio to do all of the above. However after a couple of attempts at constructing this it did not appear to work. It is possible to buy a ready made interface together with software, but for the PC. Obviously I know that the software would not work but would such an interface be suitable to use on the Amiga, as I do not want to rush into buying one if it will be useless at it is rather expensive costing around £70? It connects to the serial port of a PC. If it would not be compatible, do you know of anywhere who would be willing to construct an interface or lead at a reasonable price?

Is there a way of converting Amiga desktop publishing files for use by commercial or high street printers. I know that you can convert IFF s to GIF etc. using ADPRO or IMAGEFX and then saving to PC1: or PC0:, is it possible to convert Pagestream or Pagesetter II and III files for use by MACs and PCs, as I use my Amiga for business design i.e. leaflets, business cards etc. for my father's business and it would be useful to have this facility to obtain high quality and bulk print-outs of same.

Just how good is PC Task 3?

What hardware specifications will it need to run? Will it be able to run Windows 3.1 etc.? As not owning a PC at home it would be quite useful to be able to run applications etc. that are used in offices so that I could continue work at home.

S Hindle  
S.Devon

Dear S.Hindle,

I don't have any of the games that you mention, (I have very few games for that matter) and you really are at the mercy of the games programmers. Your first option should be to degrade the A1200's graphic set via the boot options screen (hold down both mice at boot-up). Choose original graphic set then 'boot' and play your game. You could also try the Runit program that was on a our coverdisk a few issues ago. Turn off the caches and use ESC as the display mode. That is very often the cause of graphics corruption.

A serial interface is a serial interface. You will be able to use any comms program on the Amiga (such as Ncomm) to talk to the Casio. Just how well this will work will depend on the transfer facilities provided by the Casio. As AUI is an Amiga magazine, I can't help with the construction of interface for the Casio. Is there a Casio users group that you can contact?

The one common format for DTP output is PostScript. Many DTP programs have PostScript output capabilities. You need to output a PostScript file to disk and then take that to the printers. Use MSDOS format disks (use Crossdos) as most printers will be able to read them. You will be limited to files the size of the disk capacity, and as PostScript files can be very big, keep a careful eye on this. Remember that Zip which is a file compression utility very common on the PC is also available for the Amiga. By Zipping the file first you will get a more data on the disk. You will need to find a printer who will be willing to do a few tests to see what is the best method of transferring the data.

PC Task 3, how long is a piece of string? It works, I doubt if it will run Windows (Windows is a very messy piece of software that uses all sorts of tricks to overcome the limitations of MS/DOS) Quite often your DON'T need to run applications, just access the data.

When I work at home, say I'm writing a report, I just type the text in with the Amiga, and output it to a file as reformattable ASCII. I then pull this file into a PC from a floppy. The point is that I don't use any formatting commands at all. It is a fairly quick job to format a document once the text is typed in. Same with spreadsheets, most systems can accept a comma delimited file of data.

## OTHER

Dear AUI,

Like John Walker, I had an A1200 and MicroBotics M1230 XA with 8 Meg simm. I used it for over a year and had no trouble. Perhaps John and the dealer he mentioned do not realise that different computers use memory in different modes. As a result there is more than one type of industry standard 8 Meg simm with the same appearance and edge connector. He may have the wrong type.

He should also note that the Workbench memory meter is unreliable. It does not measure the amount of memory actually available. I suggest he contact White Knight Technology, who were very helpful when I upgraded my M1230 XA to a 32 Meg simm.

Patrick McKeown  
Sidcup

Dear Patrick,

Thanks very much for the suggestion, and I agree that White Knight do seem to have a very good reputation if the number of compliments about them I see is anything to go by.

Your point is valid, and I have printed your letter as a warning/suggestion to other readers who might be thinking of upgrading their 1230. In John's case the problem was solved with a replacement 1230 and a lot of messing about with conflicting startup scripts.

## APPS

Dear AUI,

I have owned a basic A1200 for about a year, it has the standard 2Mb chip ram, no hard drive but an external disk drive and runs Workbench V3.0, on a Commodore 1940 monitor, printing on a Panasonic KX-P2123.

Wordworth v.2.0 was bundled with my computer and I am just getting to grips with it. However I am having difficulty trying to use fonts other than those already on the Wordworth disk. I have purchased several disks of PD Fonts but cannot get them to load.

I have tried adding a tootype to the Ww icon, and also copying them to RAM with an assign but to no avail, your help would be greatly appreciated as many of my previous problems have been solved by reading your answers column.

R.A.Marks  
Cheltenham

Dear R.A.Marks,

You have a couple of options. The easiest option is to locate the font drawer on your WORKING COPIES of your Wordworth disk, and copy the fonts from your additional disks into it.

You then have to run the *Install Outlines* program. This should be clearly detailed in your handbook.

If you want to specify another directory for your fonts, you have to change the tooltype in *Install Outlines* to point to the new location. The tooltype is **FONTSPATH**

Note that without a hard drive it is important to use the **NAME** of a disk rather than the name of a device, so don't set the **FONTSPATH** to **DF1**: that will confuse things. Make a disk called **MyFonts**: and use that name (or any other name that you fancy).

## VIDEO



Dear AUI,  
I am writing in connection with Steve King's letter printed in the Feb 1995 issue of *AUI*, in which he asked about the possibility of *AUI* running a 'teletext converter' hardware and software article. You replied that it would be too large a project for *AUI* to design the device and to write the software. I have information which may be useful, and one question (at the end).

Fortunately ALL the details of a working teletext converter which decodes virtually any country's teletext (including UK) AND some excellent software for using the device is available in the Public Domain. The device plugs into the parallel port but does not prevent use of a printer, and looks to be quite easy enough for a beginner to assemble (given enough time and patience). Someone reasonably experienced would need 3 hours to assemble it, with NO special equipment.

The project was designed by Jan Leuverink and works on any Amiga with WB 2.04 and above and a SCART equipped TV set. Full details and IFFs of circuit diagrams are provided with good instructions and lists of components, and the software. I obtained my copy from 17 Bit software, disk number 3137, and the program itself is shareware (for a fully working version able to save teletext to disk).

I would very much like to see an article (perhaps a series of three or so) illustrating how to assemble the device. Since ALL the design and software work has been done (and to a very high standard), it would be simple for *AUI* to run the articles. I think the series would be popular because it has not been done elsewhere and no commercial device appears to be available which does the job.

If this does not appeal to you perhaps you could print this letter to spread the news that a teletext

converter is available in the public domain for those (many) who are interested.

I have one question: where would be the best place to get a teletext converter chip (needed for the project) number **SAA5246** made by Philips (this is the standard chip used in most TVs for teletext)? If you have an RS (Radio Spares) catalogue (I don't) perhaps you could tell me if it is in that (it probably is)

Jason Williams

Dear Jason

This is still not a project that most *AUI* readers can take on board. Anyone who wants to do so can go and dig out the information as you have done. If the project is so well produced, it does not need a series of articles.

You can get stand alone teletext decoder boxes that might be pressed into service, see the electronic mag adverts for more info.

I can't find any references to the decoder chip in Maplin, Farnell or RS, so I suggest that you look in the specialist TV servicing magazines.

## OTHER

Dear AUI,  
I own a standard A600 attached to it are a Citizen Swift 9 printer and 14 inch colour TV and would like your advice, on what add-on go-faster goodies to buy, I have a limited amount of cash about £500 to spend. So a few ideas or suggestions would be greatly appreciated.

Specifically what size of hard drive would you recommend? What is meant by a bare hard drive? If I purchase a hard drive are they easy to use? And would I have to expand the memory of my machine?

The TV I use as a monitor has a SCART socket on it, is it possible to connect my Amiga to the TV via this facility? And would it improve the picture?

I use my machine mostly for writing letters, and when I was working for invoices etc. I wrote this letter using a program called *TransWrite* but it seems to be very limited in its uses, it won't allow me to print in colour but that could be my fault due to my inexperience. Could you please recommend a decent word processing program preferably under £30 and that is fairly idiot proof?

Although I used to program robots and automated machines, the computer world is pretty alien to me. Is there a program that will run on the Amiga and allow me to write programs for Siemens or Telemechanique Controllers?

I realise that this may be beyond your experience as the two machines I have mentioned are com-

mon within industrial applications but are not generally known outside of their specific uses but I would be grateful if you could point me in the right direction. I read your reply to A.R.EDWARDS and the reply to Patrick Devlin in the February edition and have found some of your answers very helpful in the understanding of my own machine. Thank you for an excellent magazine. I enjoyed it a great deal and will definitely purchase it in the future.

I hope you find the space to print my letter as I am keen to expand my machine and hopefully my understanding of it.

Stewart Dunbar  
West Yorkshire

Dear Stewart,

Hard drive, well as big as you can afford you will soon fill it up. Hard drives are as easy to use as floppy disk, in fact they are easier as you don't have to keep swapping them about. Consider 120MegaBytes as a minimum.

You are a bit short on memory compared to newer machines, but you don't need memory to use a hard drive. The drive will use some memory for its buffers, but that is under your control.

Yes, the SCART should give a MUCH better result, providing that the SCART input of the TV is up to the job (they usually are). You need a suitable cable - try Silica.

Well, the PD Wordprocessor *EdWord* that was on *AUI SuperDisk* 49 would be a good starting point. Unless you can get a stock clearance item, there is nothing about at the price you mention. You need to look at £50 before you start getting a choice.

For your budget I would have a long hard look at dumping the A600 and getting the A1200 with a hard drive fitted. That will give you a massive performance boost and the latest chipset as well.

I don't know anything about the controllers that you mention. It will depend on how the programs are written. If you have a special application program that needs to be run, it is unlikely that the application will run on anything apart from the platform for which it was written. If, on the other hand, it is just a simple text file of commands, the Amiga is as capable of creating that as is any other computer.

## COVERDISK

Dear AUI,  
I have an Amiga 600 with 1 Mb RAM expansion + clock. A 60Mb IDE 2.5 " Hard drive and Workbench V 2.1

I have just rushed out and purchased December *AUI* (as usual worth every penny) but I'm having problems with some of the utilities.

SnoopDos, AssignManager, StatRam and ImageStudio have "guide" files with them but every time I click on the icons a message comes up "unable to open your tool Multiview". Now I know that the easy way round this is to change the tool to another such as Muchmore, which I have in my c:directory. The only thing with doing this is when viewing files meant for Multiview I end up with all of the control characters left in the text (not a pretty sight).

I have encountered this 'Multiview' problem before so the last time I visited my local computer shop I asked if he had a copy of the offending program, which he gladly provided on a PD disk. HELP.

I am now completely baffled! I loaded the disk, clicked on the Multiview drawer and found in a window the Multiview icon which I excitedly clicked on. Lo and behold "unable to open your tool, Multiview." I did look at the icon information, which shows one Tool type **L. Marquess**" and that is it,

I have looked at the contents of the drawer using DOpus and found *Multiview.Doc* *Multiview.Doc.info*, *Multiview.info* and *info*. These were the only 4 files there.

Can you please throw some light onto a poor novice's problem?

R.J.Brown  
Lincoln

Dear R.J.Brown,  
Strictly speaking your computer shop should not have given you Multiview, as that is a Workbench 3 program, and it is not PD. The files that you are trying to look at are *AmigaGuide* files. Multiview is one of several programs that can read the *AmigaGuide* files directly (by the inclusion of the correct datatype). All you actually need is the *AmigaGuide* distribution library, which is available from several PD libraries. Install them and you will be able to read the guide files in all their glory. You could set up DOpus to automatically use *AmigaGuide* when it finds such a file.

## OS

Dear AUI,  
My system comprises of an Amiga 600 HD with a few peripherals that aren't important. I'm writing to ask a few questions regarding fragmentation of data on hard and floppy disks.

I read the other day that the problems arise when a file is added to, during the course of its construction, just like this letter is added to when I save every now and then I have a hard drive of only 20 megabytes, which to date (touch wood) has never failed on me. However,

(01903) 850378

SEASOFT

**A1200 ONLY**

1885 AGA UTILITIES (3)  
Rend24, PPShow, Viewtek, BBlank, ForceVGA, DoubleX, Plasma, Icon Illusion, Quick Grab, Ham8-JPeg, Clouds etc.  
1619 A1200 HD SET UP (1)  
A1200 HD prep disk  
1273 ASI FIX DISK (1)  
Get A500 programs working!  
1431 BIGTIME SENSUALITY (2)  
Impressive Mega Demo  
1358 BIG GIRLS (X) (1)  
1732 BODY SHOP 8 (X) (3)  
Page 3 style pictures  
1834 BREATHAKER DEMO (5)  
Megademo needs 4megs/HD  
1875 C CRAWFORD (X) (3)  
1881 CLAUDIA SCHIFFER (X) (3)  
Excellent pictures of top models  
1873 CHANNEL Z MAG (2)  
Packed with articles, utilities etc.  
1758 CYBERTECH CORP (2)  
Destroy the Aliens if you can!  
1384 DIAGNOSTIC PROG (1)  
Comprehensive A1200 tests  
1660 DIRT (1)  
Demo from Mystic  
1725 DONKEY KONG (1)  
Classic Platform game  
1879 ELLE MCPHERSON (X) (3)  
1383 ERIKA ELENIK (X) (1)  
Excellent pictures of top models  
1376 EXPLICIT 2 DEMO (1)  
Some stunning effects  
1756 EVIL INSECTS (1)  
Stunning puzzle - shoot-em-up  
1408 FIT CHICKS VOL 3 (X) (2)  
Page 3 style pictures  
1340 FULL MOON DEMO (1)  
Stunning AGA demo  
1802 FRIDAY AT EIGHT DEMO (1)  
1663 ILEX DEMO (1)  
A must for the Demo collection  
1970 KILLING TIME DEMO (4)  
Spectacular AGA Demo  
1345 LOCK PICK 2 (1)  
Helps instal many games on HD  
1772 LOTTERY WINNER (1)  
Will it help you win a Million?  
1775 MAX OVERDRIVE 2 (3)  
Breathtaking AGA Demo  
1344 MAGIC WORKBENCH (1)  
Jazz up your WB - needs HD

1936 MAGIC WB EXTRAS (2)  
More Magic Workbench Icons  
1813 MINI AGA S'SHOW 2 (4)  
Excellent raytraced pictures  
1655 MISSLES OVER XENON (2)  
AGA "Missles Command" game  
1754 MAMMA WAS A VAMPIRE (2)  
A variety of excellent effects  
1711 MONOPOLY (1)  
English version board game  
2006 MOTION DEMO (2)  
Another Party 94 Winner  
1811 MOVIEGUIDE AGA (2)  
Learn all about the movies!  
1941 NEXUS 7 DEMO (1)  
Stunning Demo  
1369 NINE FINGERS (2)  
Excellent collection of copiers  
1786 COMPUGRAPHIC FONTS (4)  
A must for all Demo fans  
1938 VIRTUAL DREAMS (3)  
Psychedelic Demo - a must for Demo  
fans (needs HD LHA format)  
1798 ROCKETZ V2 (1)  
Excellent gravity/thrust game  
1969 ROOTS DEMO (1)  
Blow you mind with this Demo  
1805 SHARD ART (2)  
Excellent Ferrari pictures  
1910 AGA SPECTRUM EMULATOR (2)  
Latest emulator with 23 games  
1714 SOME JUSTICE 94 (3 Meg) (1)  
Excellent Sound track Demo  
1978 SOME JUSTICE 94 (3 Meg) (1)  
Fixed version for A4000 owners  
1865 SOUL KITCHEN DEMO (2)  
Brilliant Demo from Silents  
1752 SWITCHBACK DEMO (2)  
Excellent AGA demo from Rebels  
1793 TOOTHBRUSH DEMO (2)  
Watch that toothbrush  
2004 THE PREY DEMO (2)  
Stunning Demo from Polka Bros  
1974 TWISTED DEMO (4)  
Out of this world (Needs Fast Ram)  
1773 VIDEO TRACKER AGA (1)  
Ultimate demo maker  
1839 VIDEO TRACKER EXTRAS  
(4) Help with your Demo making  
1867 THE WEATHER GUIDE (2)  
Full of interesting information  
1514 TUTANKHAMUN (2)  
AGA Slideshow of the treasures  
1757 WIT PREMIUM DEMO (1)  
Stunning Demo from Frezers  
1797 ZOOTJE DEMO (1)  
Weird - Beavis & Butthead

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Highway code tutor  
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Final Writer Macros  
1997 FINAL WRITER PATCH (1)  
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2009 HARD DRIVE UTILS # (1)  
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ReOrg, Tools Daemon, Mr Back Up etc.  
1918 HD GAMES 2 INSTALLER (1)  
Install many games onto your HD  
including Mortal Kombat etc.  
1626 ICON EDITOR V4 (1)  
Excellent Shareware Icon Editor  
2003 IMAGE STUDIO V2 # (2)  
Latest Shareware version - Image processor and conversion package  
1951 IMAGINE OBJECTS (3)  
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1954 IMAGINE OBJECTS (1)  
Babylon 5 objects  
1719 LION KING CLIPART (3)  
IFF Colour clipart from Disney  
1769 MENY MENU SYSTEM # (1)  
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788 MESSY SID 2 (1)  
Amiga > PC File convertor  
1999 MORSE CODE TUTOR (1)  
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1919 MSDOS > AMIGA DOS 2.3 (1)  
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1261 N COMM V3 (1)  
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1987 PAGESTREAM 3F UPDATE (2)  
1318 PRINTER DRIVERS (1)  
CanonBJ/HPDesket/Ricoh LP1200  
1998 R.A.E. TUTOR (1)  
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1768 SID PROF V2.01a # (1)  
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1770 SNOOPDOS V3 # (1)  
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1858 FACES 2 (1)  
1762 FAST CARS (1)  
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1764 STAR TREK NEW (1)  
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1767 DROP IN THE OCEAN (1)  
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Dr. Strange  
Cashfruit  
Wrestling (2)  
Super Blue Kid  
Nonofly  
Wally World (2)  
Marbles  
Tetris Pro  
Solo Assault  
Giddy 2  
Orbit  
Parachute Joust  
Green 5  
Dithers Wonderland  
Gunfighter  
Kingdom at War  
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Spectrum Emulator V2  
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Action Replay 4  
Megaball AGA  
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Babylon 5 Slides  
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# THE AMIG

Dear AUI,

As an avid reader of your excellent magazine for several months, I was wondering if you could give me some advice on a small problem. I am the relatively new owner of an A1200, with the following "additions": a 420 meg Overdrive, an additional disk drive and a recently purchased Citizen Swift 240/c printer.

Without wishing to bore you too much I purchased the Amiga several months ago primarily to help with my research into my family history, and being a late starter in the computer world (being at 33 years old, a child of the forgotten seventies!), I needed something cheaper and easier to use than a PC. So I chose the A1200 after studying several magazines at the time. I have since learnt however that for the wrong reasons I made the right choice as I certainly wouldn't consider buying a lowly PC now, which finally brings me to the problem. The Mormons have an excellent prog for family history amateurs like myself, entitled "Personal History File". The problem being it's only available in MS-DOS format and, according to the accompanying literature, won't run on the Amiga without a "card". Though it's not specific what "card" it requires to run. While I suspect the "card" info. is a red herring if I were to purchase PC-task. Would I, as I suspect, be able to run this prog from comfort of my user friendly A1200? If not could you please tell me exactly what I would need to run this

program? Incidentally the computer requirements for the "Personal Ancestral File" as listed are.

MS-DOS, 2 double sided disk drives, DOS 2.0 or above, 512k memory and a hard drive.

I must say that for a novice user like myself your magazine is an excellent source of information, and while some of the questions are at times for very basic functions of the Amiga you answer all with (sometimes) remarkable politeness and everyone, no matter how advanced or basic their knowledge is treated equally.

Keep up the good work you have, unknowingly maybe, been a constant help in my efforts in getting to grips with the rewarding, but sometimes complex and frustrating hobby of "computing".

H Daniel

Ogmore Vale

Dear H Daniel,

I hope you know what you are getting yourself into! A friend of mine is very

I'm very wary of the fact that one day no doubt, it will suddenly die on me when I least expect it and I'll have to go through the whole rigmarole of reformatting it. When the day comes, I'll probably go further and re-partition it as well, giving the files their very own little portion to procreate in, leaving the guts (main programs) of the hard drive to their own little untouched sanctuary.

Had I known a bit more about this little gem (the 600) when I first bought it, I'd probably have re-partitioned it before I'd done any work on it, but one has to learn somewhere I suppose. When I first got the machine, I followed the manual to the letter, copying my Workbench disks and preparing my hard drive. I was a little bit sick when after installing the Workbench onto the hard disk. I found that the damn thing was already there in the first place. That was my first mistake and I've been learning ever since.

Anyway time for my questions. I've read that fragmentation of disks, besides slowing the reading and writing of data, can be one of the causes of disk failure. I have read that there are some programs that can help to tidy up files etc. to stop them being fragmented, but I don't know what they are, whether they are PD, shareware, licenceware, full commercial programs or what. However, what I'd like to know is whether or not it's possible to tidy up data just using Workbench.

Having formatted several disks, I now know that a disk, when formatted, has 80 cylinders. Are those cylinders on both sides though? Are there 40 cylinders on one side and 40 on the other?

I sometimes copy disks using X-Copy. Its screen tells me that there are 80 cylinders on each side. That means that there are 160 cylinders on each formatted disk. I'm getting confused. Now if I was to use the information thingy in the Icons pull down menu after clicking on a file, it would tell me how many blocks are in used for that particular file. How many bytes per block and how many blocks per cylinder?

One of your rival magazines tells us that the easy way to copy a disk is through using the shell and typing DISKCOPY DFO: to DFO: I know an even easier way. Simply click on the disk that you want to copy and pull down the Copy item in the Icon menu (or even use the Right Amiga C Macro). I'd like to know the harder way to copy: disk than through the Shell. All you need is a colon or a letter in the wrong place and any time you think you've saved has been lost.

Anyway back to this fragmentation problem. As far as I can see, If

I were to copy one disk of files to another blank disk using one of the Diskcopy modes, those files that I'd have transferred would appear on the new copy in the same fragmented form. However, am I right in thinking that if I were to copy each file individually from a master disk that had been well fragmented onto a newly formatted disk, each file would appear on the new disk in a complete unfragmented block or set of blocks? One piece of evidence that I have seen to back up this theory is the fact that I recently moved all the files from one disk to another disk and the percentage of disk in use dropped from 93% to 91%.

As you can probably tell from my letter, I've got a slight grasp of using the Workbench properly, I even use AmigaDOS from time to time. The biggest obstacle to using AmigaDOS that I find is that the Amiga Workbench manual and a few AmigaDOS publications that I've borrowed from our local library seem to be very good at telling us commands and things, but they don't seem to cover when or why we have to use them. It's like trying to learn knowledge from some sort of secret society. What's the best book to learn this somewhat inaccessible information?

One thing I found the other day that lost me a bit because I couldn't find enough info in the Workbench manual was when I tried to move a file into a drawer that already had a file of that name in it. I got a window telling me that the file already existed and it had three radio buttons. They were Replace, Replace All and Cancel. Could someone please tell me what the difference is between Replace, and Replace all?

Ewan Carmichael  
Cleveland

Dear Ewan,  
There are several defragmentation programs about. They have even appeared on the AUI coverdisk.

Re-Org is one such program. Now I have to admit that I don't like any program that messes about with the hard drives. I think that I know a lot better than any program as to how I want to format a drive. But programs such as Re-Org do a very good job, providing that you accept the risks. I would always have a verified set of backup disks prepared just in case.

Fragmentation will not damage a hard drive to any noticeable extent that I know of. Hard drives thrash about so much anyway that whatever extra head movement is caused by fragmentation is of little importance. Perhaps you should drop the publication that printed that little gem!

Any form of direct disk copying will recreate a disk with the same frag-

mentation. You are correct in thinking that copying files one at a time will defrag a disk. This is exactly the method that I use on my drive from time to time.

The reduction in disk usage was probably due to fewer blocks being used in the directory tables.

Blocks are normally 512 bytes, that is the RAW data count. It will depend on how you format the drive as to precisely how many data bytes you can get in a block. (Some devices have very different bytes per block, but they are not that common). Blocks per track vary from device to device.

A cylinder is a description that comes from the very early days of hard drives. If you stack a pile of disks one on top of the other, you can think of each track forming a cylinder through the pile of disks. Many hard drives have several disks mounted on a common shaft. The disks are called platters and the shaft a spindle. Each platter has two surfaces.

In the case of a floppy, there is one platter, two surfaces with 80 tracks on each side. If you watch the formatting process very carefully you will notice that the Amiga will format each cylinder before moving onto the next.

As for the Disk copy commands, I would also agree that using the CLI is the better method. If I type DISKCOPY DF0: TO DF0: into a shell window, I know exactly what the results are going to be. You would be surprised at the number of users that find using a GUI totally user unfriendly. (It amazed me when I saw the mess that some people make.)

Remember that the up and down arrows will give you a command history to play with.

AmigaDOS is simply a collection of commands that you can use. There is no one answer to your point of what you use them for. The real answer is that you use them for whatever you want to do with them. Simple commands like diskcopy are fairly obvious. If you want to see what you can do, have a look at the installation scripts on the coverdisks.

Books, well, there are several. The bible is the AmigaDOS Manual, but that is a programmer's book. The Bruce Smith, and Abacus range of books are good, it boils down to a personal choice really. Have a browse through both and see what set you prefer.

Replace, and Replace all. Well, replace means replace this occurrence. Replace all means perform the replace every time. It's the same as a replace and replace all option in the find and replace in a word processor.

Speaking of which, treat yourself to a new ribbon, you already have a partially jammed pin on the head, and a worn ribbon might be snagging the pin.

interested in family history and has spent a lot of time on the subject.

I don't have the program that you mention, but I expect that it will run on PC Task. However don't go down that route just yet, I can offer you some pretty good Amiga programs of the same type.

The literature was not misleading at all. Commodore produced a card called the Bridgeboard. This was a PC of a card that was designed to fit in the A2000/3000/4000 expansion bay. Third party manufacturers have also made such cards for the A500 and A1200. They are NOT emulators such as PC Task, however you have to be slightly wary of using them because some PC programs are very sensitive as to exactly what hardware is being used. As the program that you mention is so lowly specified, I doubt if there would be any problems at all.

Thanks for the nice remarks, you do make a valid point, it is one that I can remember being made many years ago by a teacher. Basically he said "Don't be afraid to ask a question, because if you don't know the answer you can be sure that quite a few others in the class don't either!"

I can understand beginners' problems, and people who get confused with some aspect of the Amiga. What I really don't like is people who don't try to help themselves, especially when it just comes down to reading the compatibility box.

Speaking of compatibility, there is a little red light on the caps lock button. It's much nicer to read text that has been typed with this light mostly off. (Lucky that ProText can switch case very easily)

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## OTHER

Dear AUI,  
I own a Amiga CDTV 1.3, I also own a Atari portfolio 64k PCMCIA memory card it is PC compatible (enclosed is a brochure of the Portfolio). The problem I have is transferring files from the Portfolio to the CDTV and vice versa.

The equipment supplied with the portfolio was a parallel interface which plugs into the bus connector on the right side of Portfolio. Also with the package came a 3.5in Software containing the PC transfer program.

I would dearly love to transfer my Spreadsheet (Lotus 1 2 3) and letters onto my CDTV. This will save me money by saving my work onto

3.5ins disk because the memory card are very expensive for storing files, it will also be nice to Printout on my printer which at the moment I am using the printers at work.

In the magazine I have sent off for PC software like PC Task, Messy sid & PC emulator so that the portfolio 3.5in program would run on the CDTV, but I could not get any of it to work. eg when I use PC Task all that keeps showing on screen is "non - system disk error replace and strike any key when ready". Should I be using a IBM disk drive instead of the drive from my CDTV please can you tell me. Also am I using the right PD software? Which one is right for the CDTV and what about the cable, which is the right way of connecting the two computers together.

I have seen an advertisement for a PD software called Networking (com 8-3). This links Amiga together or two PCs or Amiga to PC. Will this simply work on my CDTV? Is it easier than using say PC Task with link up leads costing £19.99

I eagerly await for answers to my problem, I do hope you can help me.

J. Vidal  
Birmingham.

Dear J. Vidal,  
It is quite easy to transfer files from the Portfolio to the Amiga, and a little more difficult in the other direction. However if you really do have the Parallel interface then you are stuck. What you need is the Serial interface.

Run a comms package such as Ncomm on the Amiga use a suitable connecting cable, and then copy the file to the AUX device from the Portfolio DOS. If the data is only text, you can Print the data directly to the serial interface via the applications print menu.

It is a little harder getting data into the Portfolio, the tip I found was to set the terminal speed very low, say 300 bits per second, that way flow control is not so important. What you really need on the Portfolio is a comms program, I don't know if any such programs exist.

The message from PC task means that it wants a 3.5 inch disk formatted to MS-Dos standard with the system files on it. Remember that you can only read 720K PC disks, rather than the high density 1.44M disks.

I doubt if the program will work on PC task, from your description it sounds as if the Portfolio program addresses a PCs parallel port directly.

I've not seen Com 8-3, but it sounds very much like a program called TwinExpress. This should be available from most PC libraries, it will be on the network CD as well. The complete archive contains programs for the Amiga and the PC and it works

quite well. The only down side is that the interface is command line driven but it is fairly easy to get to grips with.

## OTHER

Dear AUI,

I have a very modest set up, but seem to have a very major problem. My system consists of an A1200 with a 85Mb hard disk, a GVP A1230 II with 4Mega of ram, a GVP G-Lock, a Hewlett Packard 500C Deskjet printer, Archos CD-ROM drive and an additional disk drive. The major programs running on my system are DPaintIV AGA Scala MM300, Final Writer and Photogenics.

Sorry for 'beating around the bush', but I thought that it was necessary. And now for the problem, before I purchased my CD-ROM drive I had no problems, but since then whenever I install the CD-ROM software on my hard disk and play any script (big or small) from Scala, the screen goes blank and a requester comes up stating that the machine is out of memory. This is very annoying as I would not thought that 6 Megs of ram was a lot of ram.

I have also purchased the Scala MM400 upgrade (yes MM400), this was meant to cure problems with CD-ROM but it doesn't cure mine.

The only way I can use the CD-ROM drive is by booting up the computer with the supplied software, and by doing this the problem is still there.

Do I,  
1. need more RAM for my system.  
or  
2. only able to use Scala and the CD-ROM drive separately.

Please help

Kurt Dallas  
Harrow

I think that this is an interaction of the scripts that set up the CD ROM drive.

I know that another AUI reader has been having problems with a similar setup, and the interaction is with the GVP script and the Archos.

I would advise you to deinstall the CD-ROM scripts completely and just install the DOS-drivers to use the

Archos as a standard CD ROM. You could make up a custom floppy boot disk should you really need the CD32 compatibility modes.

## COVERDISK

Dear AUI,

Being the owner of an Omega 1200, I purchased the November edition of AUI along with the coverdisks. I tried the utilities pack 2 which includes the programme "prtsc" and tried to read the docs to see how to use/run this particular programme the screen displayed "unable to open your tool 'AmigaGuide' what does this mean and how can I progress from here? All I require is a programme to print whatever is displayed on the screen can you help an aging new owner/user?

David Fields  
Cleveland

Dear David,

This is a common problem, and you should have seen my Toolbox article of the reasons for this. A tool is Amiga-speak for a program. If you have a word processor, and write a letter with it, when you save it you will normally get an icon that represents your letter.

This icon is not the word processor program, it is your data, i.e. the text of your letter. However when you double click on the letter icon, your word processor starts up and your letter is loaded into the word processor for you to work on. In this case the 'tool' is the word processor. If you looked at the icon information, you would see that the default tool of your letter icon would be the name of your word processor.

In your case AmigaGuide is the name of the 'tool' that knows how to display text files that have been formatted in a hypertext form, known as AmigaGuide.

Oh, you don't have an Omega, you have an Amiga <grin>

As you have the A1200, you don't actually need AmigaGuide, the WB3 general purpose viewer program Multiview can understand AmigaGuide files. Start up Multiview, and use its file selector to read the program instructions.

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:

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or E-MAIL:  
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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 various Amigas. However, it is advisable for you to check with your PD supplier that the disks you are ordering are compatible with your own type of Amiga.

## PD or ShareWare?

All freely distributable software comes under the rather deceptive 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.

## JUMP 'EM



### Disk G300 *Saddle Tramps*

There have been quite a few games with this theme recently. By this I mean the type of game where you have to guide your character to the other side of the screen by making him jump from square to square. We had a game like this on our February coverdisk called Marbles, and I have reviewed others recently here.

While Jump 'em is extremely polished and contains some arcade quality graphics, it is not as much fun to play as Marbles for it is not as demanding. The author of Jump'em also wrote Xenex and also Global Thermo-Nuclear War, so this game comes with a good pedigree.

**85%**

## Roberta's Little Blue Plastic Disk

I suppose we can't blame someone for naming a disk literally, and it is what it says it is. This is another of those "Workbench Essentials" disks which has a number of useful utilities to make life easier for you when you are using your Amiga. It may possibly contain a number of programs you already have but you will always find this situation when you buy a compilation disk of this kind.

The first program is called Mformat and is a small util for formatting disks. Sounds boring? Well, yes, but it is

## JUMP 'EM



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### Disk UT246 *Roberta Smith*

extremely useful. It was designed to be a replacement for the Workbench version.

Other useful utils include Workbench Startup Manager which offers you an easy way to deactivate and activate commodities or other programs that are run from your WBSStartup drawer.

There are, however, a few utils which you will probably already have like Snoopdos and the Commodore

Installer. There is also one program which I think is a bit of a joke. It claims to speed up Zmodem transfers by up to 150%. It doesn't seem to work. I became suspicious when I saw the accompanying document. It is about 10 lines long and just gives you the arguments for the CLI command. It appears to have no information on how it works or who actually programmed it. How very odd.

**80%**

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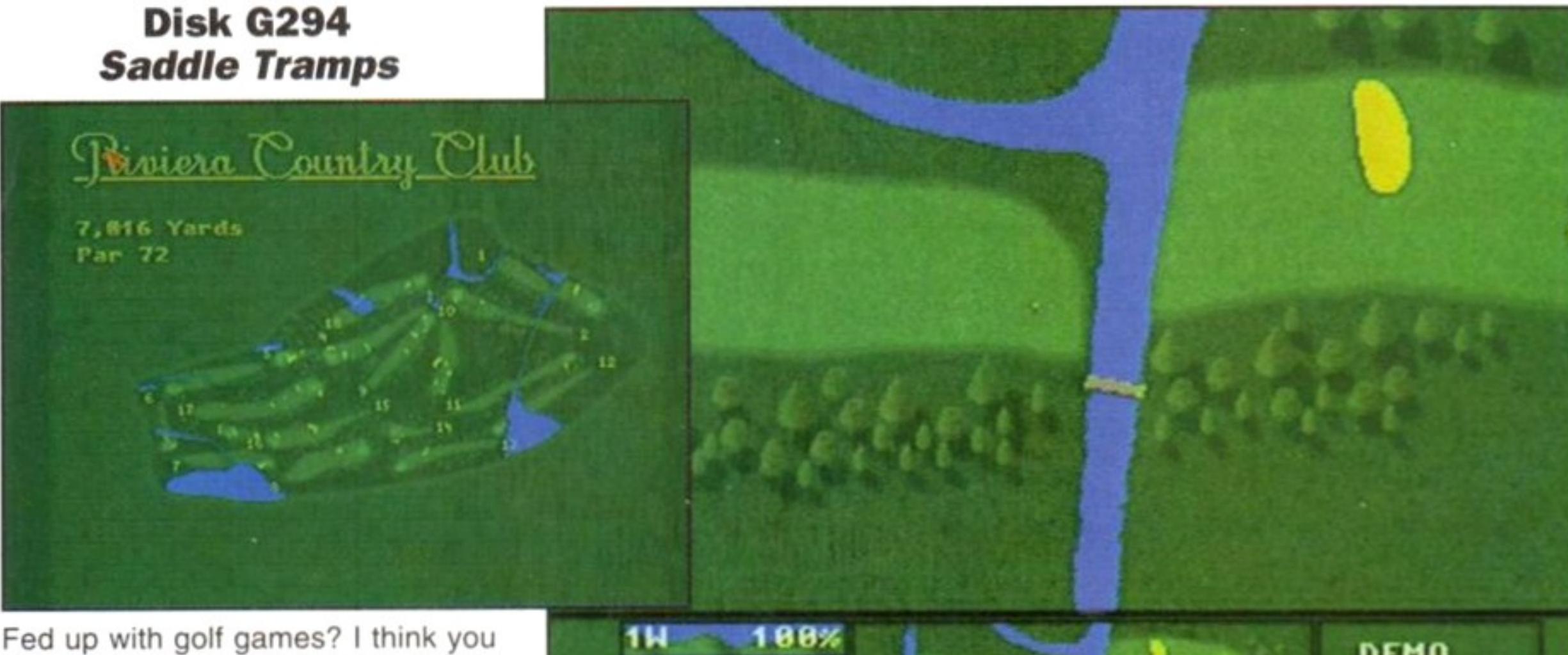
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# International Golf

Disk G294  
Saddle Tramps



Fed up with golf games? I think you should have a look at this one because it really is rather good. International Golf also contains an efficient way of making you actually want to buy the game. Some programmers cut out features, but doing this will not give you a true representation of what the game is like. So what has been done is to give you a time limit which lets you try out the game but makes you kick yourself when the program suddenly stops in the middle of a round.

Some people will be annoyed,

switch off the machine and curse the program. I think that more people are likely to want to go on playing the game and will register for it.

The game itself is a highly polished piece of programming and is great fun to play. It is viewed from above which isn't original. What about seeing the game from the ball's perspective. Oh hang on, we are talking

about an Amiga here, not enough power yet!

For a review of the full version see the Entertainment pages. If you are still not sure as to whether you want shell out money for the full version, take a look at this demo beforehand.

**80%**

## X-FILES GUIDE

Disk OI13 Online PD

This Science fiction TV series has become very popular and I have seen many text files and discussion about it on various BBS's and on the Internet. Now an Amiga X-files disk has been released containing a collection of text files related to the series.

First, there is an FAQ (Frequently Answered Questions) file. Second, there is a first and second season episode guide, and thirdly there is a 200K, 34,000 word document containing UFO sightings and stories.

I can't see many people reading the whole file from the screen and it would take a mountain of printer toner and paper to print out so I guess you will have to skip through to find the information you are interested in.

It is a shame that the text files are not in AmigaGuide format which would make it a lot easier to read but as they are probably taken from an Internet Newsgroup this just wouldn't be possible.

**80%**

### S. Hargreaves

Every time a new computer was launched, especially at the dawn of the computer age, the first game that seemed to appear was chess. Why didn't they try draughts - or checkers as it's called in the USA? Draughts should be much easier to master than Chess.

But here we have Draughts. Draughts was a lot simpler but perhaps it was too simple. While it is initially enjoyable, the fun is soon over as there is not as much of a challenge compared to a good game of chess. Though I'm told that an old uncle, Jack, of the Editor is world renowned player and notorious for getting girls to take off their clothes in Strip draughts, not a game I've had the pleasure of playing.

I found this Amiga conversion very enjoyable. The graphics are good and you can play against the computer which is fun. There are 10 skill levels and this demo version has a 10 minute time limit when it will then cease to work and you will have to reload it. The demo will cost you £5

**80%**

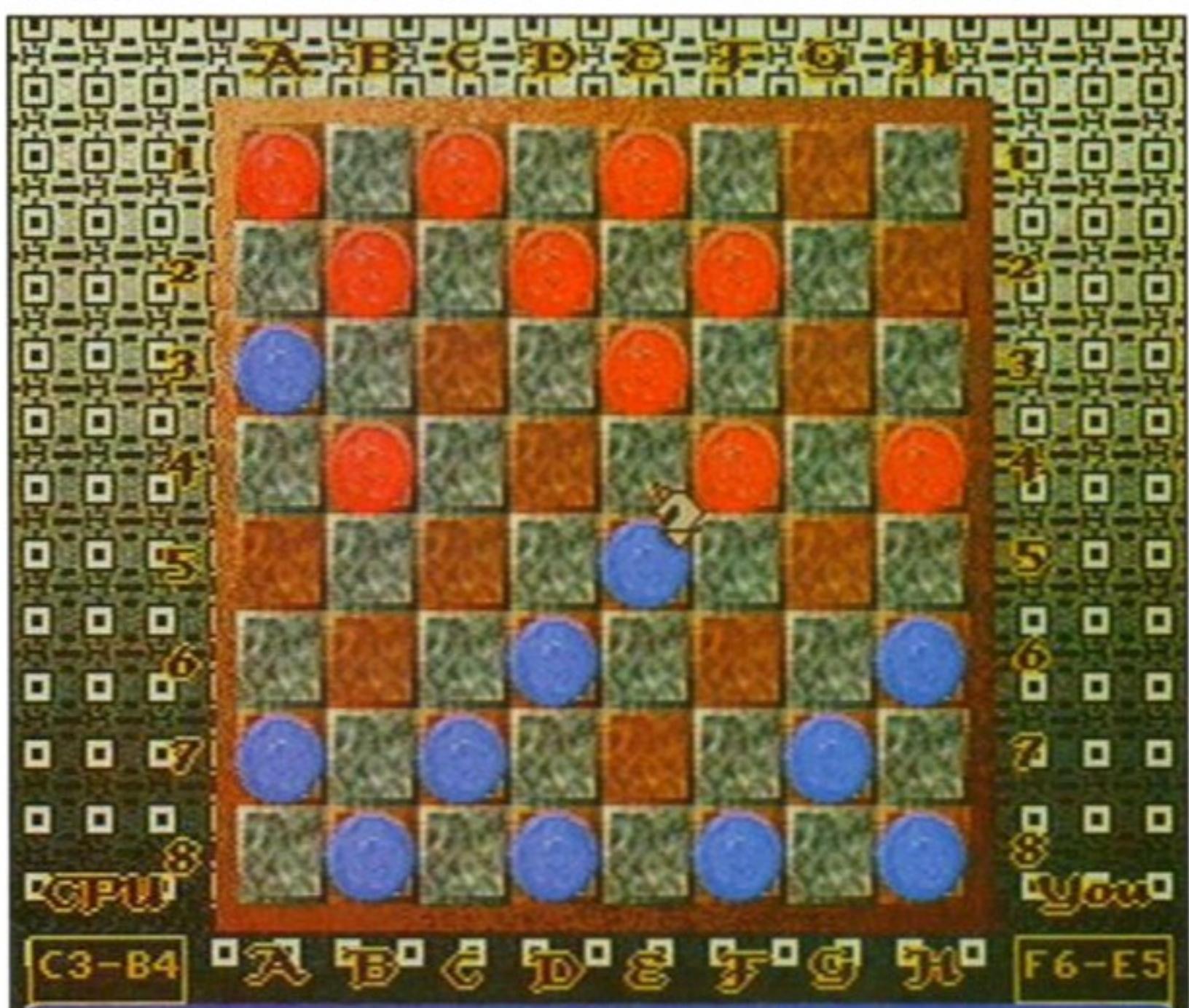
# Vark VII

Roberta Smith

- Vark sure makes a good utilities disk, second only to our own.
- His latest disk contains around fifty useful utilities.
- Fifty, I hear you cry, on one disk? We have been beaten! Not so, every one of these are CLI utilities, where **AUIs** are a combination of these and bigger programs.

- All the programs on this disk are executable and this means that all have been crunched with Powerpcker which is a pain if you don't like that way of archiving data.

- Understandably there are one or two of these util that have appeared on recent **AUI** SuperDisks. These include Lastalert, ARQ and Memclear.
- Nearly all the rest are new to me.
- Useful programs which caught my eye were an alternative delete and undelete command, Flick which is a PC FLI amim player, and Shutdown, a smart little util which makes sure all your programs are shutdown and all disk activity has stopped before it lets your machine reset.



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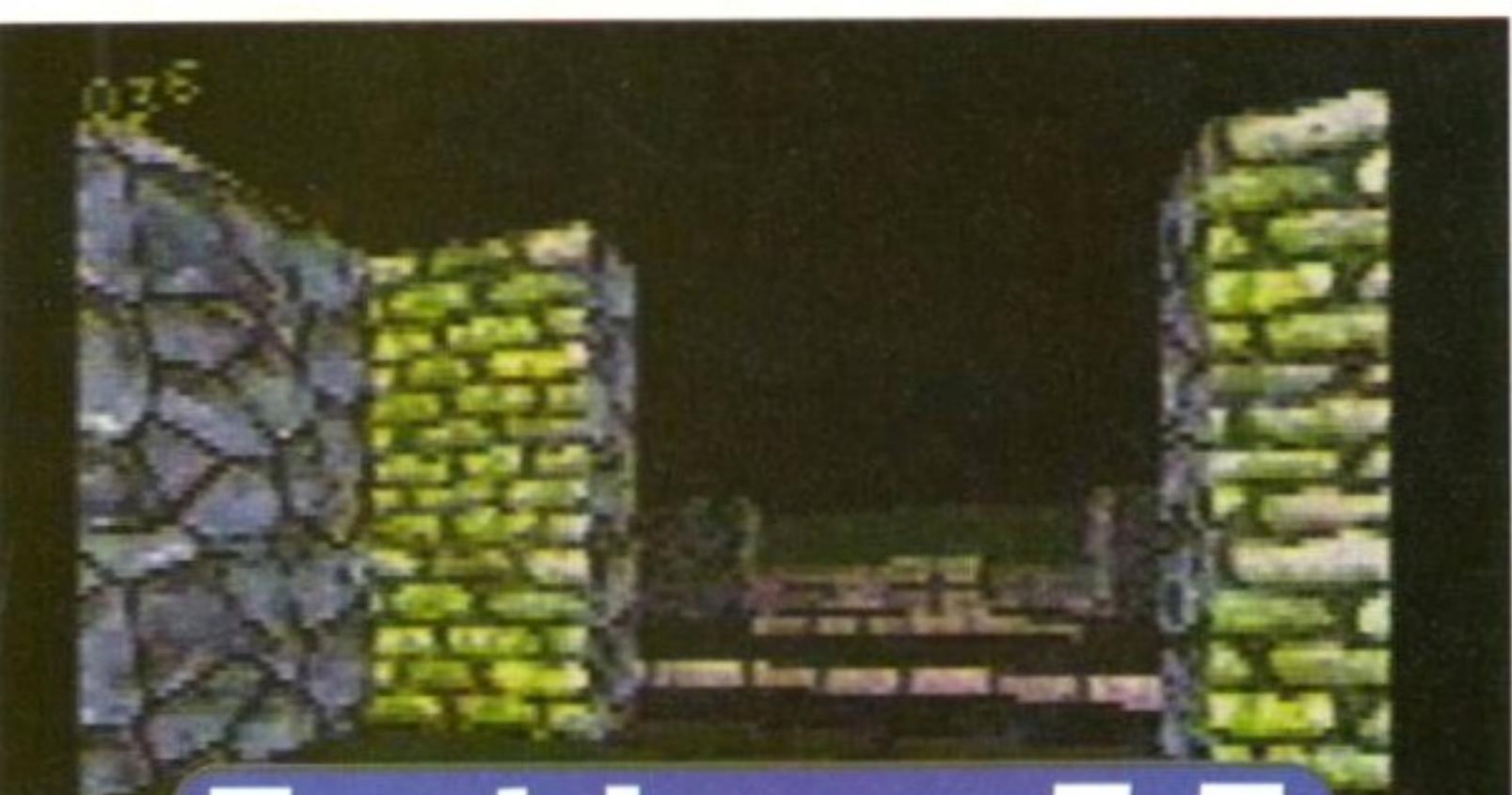
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## Textdemo 5.7

Disk G422 Network PD

If you were glancing through a PD catalogue the chances are your eyes would skip over this disk. To be honest the title doesn't really make you want to find out any more unless you were looking for a word processor.

Textdemo is actually a texture mapped demo. It is to demonstrate a new graphics engine. The authors aim is to create an engine which will equal or surpass that of Doom. Not an easy task considering this is an Amiga.

The demo comes on one disk but you will need a hard drive as textures are created the first time you run it and take up 256K. You will also need 1MB of RAM (preferably Fast), Kickstart 2+ and a 68020 or better.

There have been several Doom engine demos on the Amiga recently. Some have been actual games and some have been just silent mazes

which you can just wander around. The games have not felt like Doom at all.

Textdemo is a silent maze but it is the closest the Amiga has been to recreating the "Doom feel". This is achieved by not only by sheer speed but attention to detail. The way you bounce up and down slightly when you are walking along, and the manner in which your movement is damped as in real life.

The graphics in this demo are also very similar to Doom, the only thing missing is a game to play! I could even live with the screen size which is pretty small. The whole project is still in development and the author is determined to make it work and playing his demo makes me think he just might do it.

**90%**

## Poker Mania

there are many sub games which are infinitely more enjoyable. These include Chase the Ace, and Higher & Lower (always fun to play) and Pontoon. While most gambling games can continue indefinitely, this one actually has an object. The aim is to reach £100. What actually happens when you reach this figure is not revealed but at least you have a goal.

**90%**

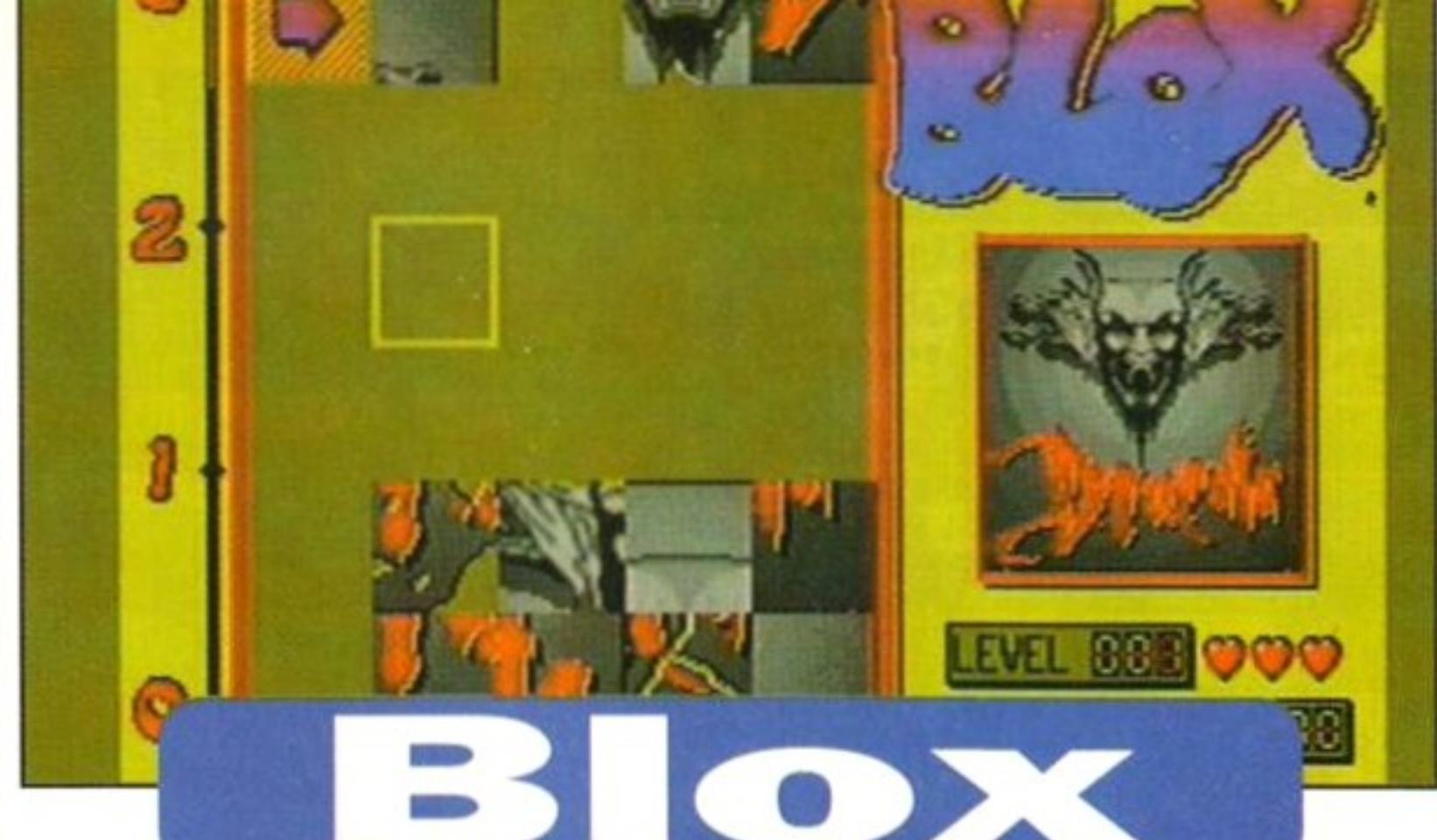


Disk Online PD

Card games are always fun to play and if they are good games then they can be very addictive. I had to stop myself playing Poker mania otherwise I would have never finished this review.

The author has combined a fruit machine with poker to produce a successful and very playable game. You are first dealt five cards. You can then choose the ones to hold just like a fruit machine, the rest of the cards are replaced with new ones. The higher the hand the more money you win.

The fun doesn't stop here because



## Blox

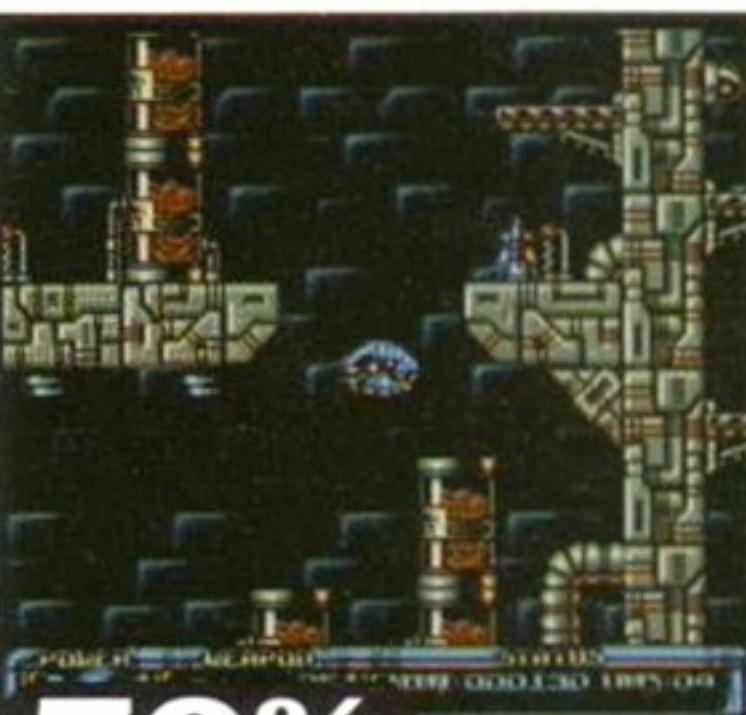
Disk G 302 Saddle Tramps

than 10 seconds, 20 seconds will be lost. These blocks must be got rid of if you are to complete the level.

I am sorry but this type of game just doesn't appeal to me any more. Perhaps 10 years ago but not now. It is nothing new and frankly quite boring. It is also a demo version. If you want to buy the full version it will cost you £2.95

**50%**

## AQUANAUGHT



**70%**

Disk F1-068  
F1 Licenceware

This looked a promising game. It has perfect graphics, great sound, liquid smooth scrolling. I just found the game itself somewhat boring and unoriginal.

If you have played the game Nanofly which we had on a recent *AUI* coverdisk you will know what to expect. You control a small aquavehicle called The Shark and the object is to destroy all the enemy who have invaded your secret underwater base.

Aquanaught is very predictable with all the usual power ups and creatures to shoot at. I find it a shame that these wonderful graphics weren't put to better use. This game is exclusively sold by F1 Licenceware.

## Zxam 1.6b

Disk OU100  
Online PD

We have reviewed this Spectrum Emulator before but there have been many changes in it that now make it better than ever. The first alteration was to

## Flummy Utils 3

Disk OU116 Online PD

Yet another excellent disk containing 14 new utilities to enjoy. Dialling Codes has been on a previous *AUI* coverdisk but this new version takes into account the extra "1" which we now have to put in front of all our dialled numbers here in the U.K. I keep on forgetting but I guess I'm not alone, right?

Other utils include Handy DMS which is one of the best DMS front ends around. Colour Patch is a great colour commodity which as well as altering the red, green, and blue which the workbench preferences program already does, also allows you to change brightness, contrast and overall colour. There is a editor for the game Settlers, and also a lightning fast Uudecoder which claims to be twice as fast as UUXT.

**85%**

include an ECS/OCS version as before it was AGA only which seemed silly for a Spectrum which only had 8 colours. Apparently this was because the AGA graphics chips were better at converting the Spectrum's pixels and attributes to Amiga bitplanes.

There are now faster versions of the emulator which are about 10% speedier but are not as detailed. I found I could tell no quality difference between them though. I tried out the emulator on a unaccelerated A1200 with 4 megs of fast RAM. The speed was slightly faster than a real Spectrum would have been.

I think really this is the "ultimate" Speccy emulator. It accepts both PC and Amiga Spectrum snapshots even if they are Powerpakked.

**90%**

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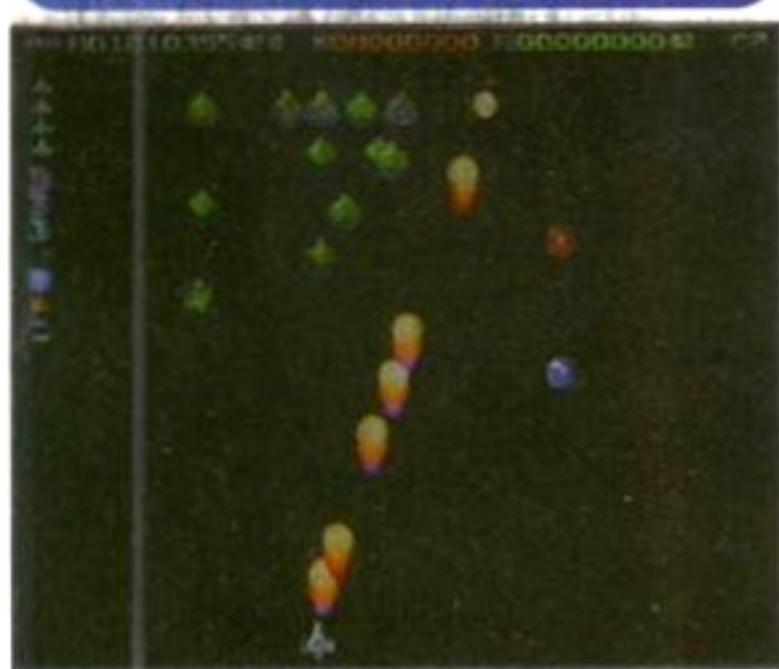
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## DELUXE GALAGA V2.5



### Disk AGAM 173 CPU PD

There is some good news and some bad news. The bad news is that this is probably the last update to Deluxe Galaga. The good news is that the author is currently working on a new Deluxe game Donkey Kong which everyone who loved Galaga will be eagerly looking awaiting. I am sure it will be every bit as good.

There are a few extra features added to V2.5, the main one being an excellent option which allows you to iconise the game from anywhere during play including in a meteor storm. Just hit "HELP" and you are returned to the Workbench screen, very useful. There are also a few extra game secrets and sub games.

I think this has to be one of the best PD games of all time.



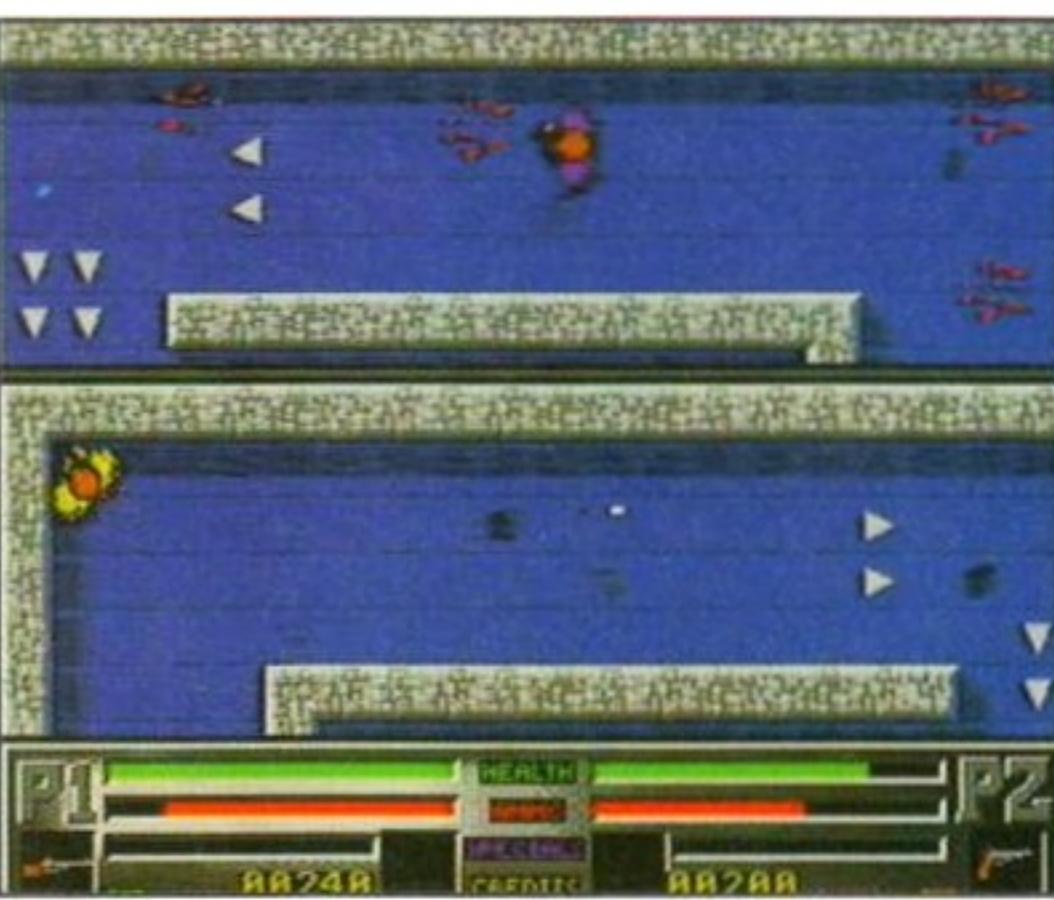
**98%**

## Disk OX131 Online PD

It is immediately apparent which game has influenced the author of Scavenge. It is Alien Breed and you can tell this not only from the graphics but also the sound which is very similar when you pick up a weapon. Even the background hum is the same.

Scavenge is a two player A1200 only game in which all you have to do is kill the other player. No reasons are given but why do you need one nowadays? It is great fun to play and there are very agreeable effects.

The split screen display works well and there is a rather sick blood splat-



tering which appears on the floor next to the other player whenever you hit him. Being a demo version many of the features are not present and there is an annoying reminder nagging you to register the game which pops up every half a minute or so.

There are only two extra weapons in this demo version. If you register you will get such lovelies as machine guns, an assault rifle, Cannon, Laser and rocket launcher. Teleport and cloaking devices are also included.

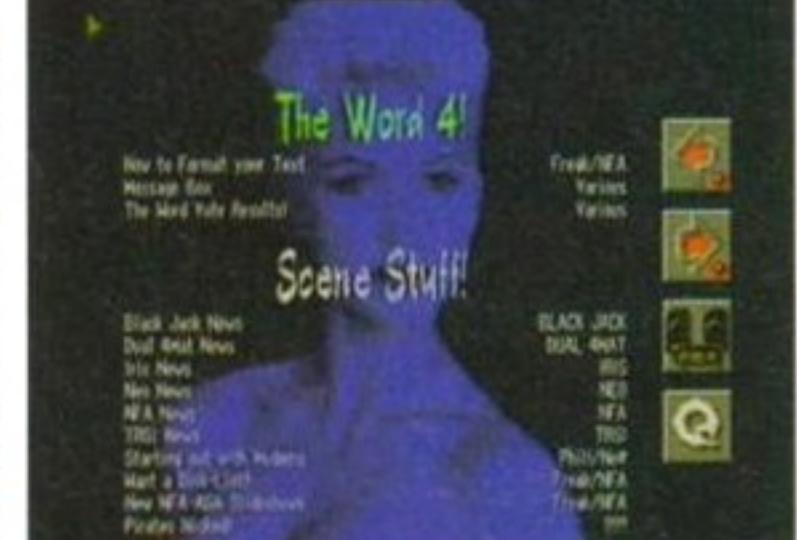
**82%**

which is fine if you are a part of it, however for Joe Public the conversation will probably travel right over his head.

There is a reviews section which contains people's opinions on various music CDs, PD, and both Amiga and arcade games. There is also a joke section but on the whole most of it was waffle. I will say one thing good about it though, at least it wasn't programmed in AMOS!

**70%**

## The Word 4



### NFA

This disk isn't anything to do with that trashy Channel 4 program compered by that awful presenter but is, in fact, a magazine disk. It is unusual to find a PD company who actually code their own demos. I think NFA were an Amiga group first which also decided to branch out into PD distribution.

The coding is first class but the disk magazine is aimed at the Amiga scene



## The Ultimate Quiz II

### Disk F1065 F1 Licenceware

After the success of the previous version, Andy Gibson the author of The Ultimate Quiz has released number two which is much improved even if, as the Editor insists, "ultimatr" means final and you can't have a second version of the final thing, can you?

The whole program has been revamped. There is a new graphical interface and the way the questions are stored has changed.

Instead of several categories within the game, you now have to insert a separate data disk which contains 500 questions on each. It seems that the difficulty of all the disks have risen. I found them very difficult indeed but I guess my knowledge of the specialised subjects is not extensive. I do think though that these disks will appeal to hardened quiz addicts.

There are quite a few subjects from which to choose. As well as pop music, movies and pot luck there is both a Red Dwarf and Star Trek disk being written which I am sure will be very popular. I know I am looking forward to them, at least I will get a few more right!

The game disk plus a pop music data disk will cost £4.99. You can buy two data disks for a measly £4.99.

**95%**

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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## Contacts for PD reviewed in this issue

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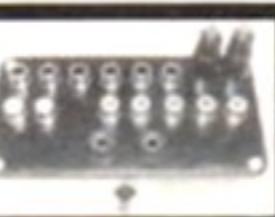
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# Write to Reply

**Bud Vennos is diluting his generally acid mood. Remembering his disreputable Parisian Past and even touched by a reader's story. . .**

Dear Sir,  
Please could you tell me where I can buy an operating manual for SuperBase

Personal 2 which was AUI SuperDisk 33 March/April 94. There doesn't seem to be an address in the magazine or on the disk. I have enclosed a stamped addressed envelope, thank you.

G.G. Marks  
Cornwall

Dear G.G. Marks,  
The short answer is you can't. At least without buying a full copy of the program and you probably won't find a copy of that anywhere because now the most current version is SP4.

The longer answer is that you have, if you have AUI March/April 94, all the necessary instructions for using the program. We gave more than enough for anyone to use it in the SuperDisk pages that month. (If you haven't you can buy a back copy).

On the other hand, you could contact Oxxi who published SuperBase2 but I suspect that they would rather sell you a copy of SuperBase4 which is in any case a superior program. I'm sure they would give you a reduced price as you already have SP2 and only require an upgrade. The same would, I should think, apply to any reputable dealer. Try Silica who advertise in this AUI.

Dear AUI,  
I will get the creepy bit done first, think the mag is great, great value, great cover disks, (always one program that's of interest, well worth the couple of quid) and some of the writing ain't bad neither. I appreciate that the programs which I would like are not the

ones that everybody else would choose, taking that you, as in AUI, have settled for 5 disks each week, I would like to see the disks as, disk 1, One main program (as usual, keep them coming) disk 2 and 3, Utils (love them, mind you some of these progs are bloody dangerous especially to hard-drives, if you don't know what you're doing, eer yeah?) disk 5, Games (more power to the joy stick?), I left disk 4 till last because I would like to have a disk of Demos, Music, Art anything, the stuff people do with their computers, please! And now for something completely different.

Dare I say what is happening with the proclaimed take-over for the Amiga? I have a standard 1200 with a 200MB hard-drive, Philips CM 8833II and external disk-drive and have been completely happy with its performance for pound, but Oh yes here come the buts, I have needed an upgrade for some time and thought that the situation would have been resolved by now. I know that an accelerator card could be added, BUT do not think these are good value for the money! (Several people that I know have sold up and moved to different platforms) £300, £400 for an accelerator may appear to be good value when compared to what £500, £700 will purchase the pound to performance equation does not look good e.g. Mac 460, 475, 630 and as for PCs? And the situation higher up is even more unsatisfactory, the cost of an 040 accelerator? (Well???) I rest my axe), "These money grubbing bastards could be the end of the AMIGA" as the

situation stands...if you hear the retort "There isn't the numbers THING" this is a chicken and egg piece of bullshit, most of these suppliers are cross platform DEALERS. While the rats desert the Amiga this fool will have to wait "Time to go".

PS. IF (a much better word than but, don't you think) IF you get what you pay for, why are there so many poor people? And why are most computer games about evil corporations taking over the globe, who's selling this concept???? And how about a 4000 with a 33MHz 040 loads of RAM a chunk of hard-drive, for oh! £750, NO! £650 with CD drive. One last thing what is the address of AMIGA UK..MYHEAD? (just out of curiosity)?

All the best

Alex Reid  
Norfolk

Dear Alex,  
I like your style of writing. It sounds like what I find on my computer after I celebrate with a nice lady - well, sometimes she's nice (and sometimes bloody awful! Thank goodness she doesn't read this!) - and we quaff a couple of bottles of the real bubbly stuff. If I go back to my Amiga and answer a few letters etc, in the next A.M. my writing has strangely become as "bubbly" as yours. But not so entertaining. Your suggestions for the AUI SuperDisks have been duly noted and passed to those who make the decisions in this organisation. I mean, of course, Ruby who cleans the mugs and Nelson and Samson whom the Editor claims are the most intelligent members of the staff

but other people think are a dog and cat belonging to members of his family.

There is no truth however in the rumour that they program the disks. They only do the spellchecking for AUI, as you will have probably noticed.

As for your specifications for the new Amiga, I think you are right. Lots of RAM and loads of power for a reasonable price would bring the Amiga to life again with a flash of lightning that would be seen all over the computing world.

And you are quite right in thinking many dealers and others in the computing industry couldn't give a tinker's cuss about the Amiga. They have no loyalty to it, unlike millions of users around the globe. All they want is to sell boxes full of electronics, could be mindnumbing games or cloned vacuum cleaners, for them it's all the same. As someone once said "Guildenstern and Rosencrantz are in bed."

Sorry I meant, "Something is rotten in the state of Denmark." Only I don't think it really applies just to Denmark, which is in any case now in the European Union and living high on the hog, as they say in that bacon-producing country.

Thanks for the compliments. We love 'em and need 'em to keep us going in this uglifying, commercialised world.

Dear AUI,  
I am writing to you in response of your article in the March 95 issue regarding, "Another Amiga". I've enclosed most of the specifications on the A2200; where as some others are to be left hush, hush. According to AmiTek, the manufacturer and legal owner of all rights (the Better Business Bureau has verified this) to the A2200 series. It is totally independent of Commodore and Amiga, yet it contains the full AGA chipset, also some other Commodore specific chips ie Akiko Rev. B AAA - 16 Bit Audio Chip etc.

My A2200 blows the standard A1200 away by processing at half the power of an A4000 w/040 clocked at 40mhz. Unfortunately the A2200 offers not even one Zorro I or II slot or even a video slot. So there's no way to add an Audio, Video, RAM or other board. For 1200 pounds, you'll get an A2200 with the following:

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Speedy PD .....	P77, 107/108/109 .....
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Eric  
Ontario, Canada

Dear Eric,  
Merci beaucoup - I know Canada is a dual language country and I would hate to see Quebec secede just because we hadn't done the French bit. (Ah yes, my years in Paris, I remember that French bit well..).

Thank you for informing us on those 2200 specs. They make really interesting reading. As you say, it blows away the standard Amigas of the same level. But, rightly, you point out the absence of slots. As that old French girlfriend of mine - she'd be about 70 now! - used to say, no slots you not got a lot. Expansion, as Alex Reid so acutely pointed out in his letter - see above - is really what it's all about in computing. As your need grows, the same French mademoiselle used to remark, so does the satisfaction required. And if you can't add to your resources then you are going to get stuck and slide off to another machine. As eventually she did, I weep to say.

I'm surprised that it appears from your research that someone else seems to have the grabs on an Amiga. So far as anyone here knows the copyright for all that was Commodore is being bid for at this very time. How the "Better Business" people, whoever they may be, can assert that someone else really has taken hold of a piece of the Amiga would no doubt interest the bidders.

Amitek are a known and well-reputed organisation, I think they make CD drives which are sold in the UK. It will be interesting to see if they really go to town in marketing the 2200. Which as we are all impatient to see the Amiga on sale again would at least be better than nothing though might cause some confusion if it comes out at the same time as any new Amiga.

Dear AUI,  
I do like your magazine. But I'm not going to go into scads of fulsome slush telling you how wonderful you are. One of the reasons is that I think that nearly all, if not all in fact, of the other Amiga magazines are so poor in journalistic quality that's it's not hard for you to shine. And you ARE a little light of sanity in a potty world.

I mean that the others all

seem to treat their readers as if they are either games-barmy, propeller heads or snotnosed adolescents. Why don't they grow up? Have you ever seen their stupid claims of "Exclusive" in some quite banal aspect of the Amiga - and when you are often carrying the very same thing too?

It certainly seems that AUI is written for an older and wiser group who don't believe in the silly approach that makes anyone who has read anything else than computer magazines absolutely squirm.

I won't mention names because I don't want you to get sued but the whole way some of them treat things, which often seems except for games to be pleasing some advertiser or other, means that you can't trust what they say about almost anything.

And their childish ravings over some game or other makes me want to vomit. I am more turned off the Amiga by the journalists who write about it than by anything offered by the PC.

I've been using computers for nearly ten years so I suppose you could call me one of the generation that has grown up with them. They don't I'm sure need to be just another teenage boys toy nor do they need to be treated by magazines as if they are the whole and exclusive interest of their readers.

I like AUI because somehow I think you share that view and the magazine sounds like something that a reasonable human being - not just a pimply games freak with his head stuck up the bum of his machine half the night shooting pixels at anything that moves - can enjoy. You ain't terrific but for me you stand out from the crowd.

Keep at it,

Richard Boston  
Chesterfield

Dear Richard,  
You may be damning us with faint praise but I for one - and though you might not think so, I am just one - largely agree with your point of view. One of the problems with the computer world is that it appears to treat people as if they have no other interests except that which is included in the name of the magazine. It can be argued, I suppose, that if the reader wants to be informed, entertained or even find out about anything else he, and generally, of course, it is he, would buy another magazine. But that is a view of humanity, that each of us may have many aspects but that they don't

interconnect, that I don't share.

We are all capable of being much more than our limitations would appear to let us. And much the same applies to magazines. I won't go as far as you in saying that the other Amiga magazines make me want to vomit but they don't, in general, appear to do much to make you proud to be a member of this particular community, do they?

I hope that sometimes, if not all the time, AUI does go just that bit further, offer that extra idea more, treat people as if they are just that little more intelligent so that - who knows? - they not only learn about the Amiga but get a slightly different perspective on other perhaps equally potentially rewarding aspects of their life too. We hope, as that old French girl friend would always advise, to try to keep it up.

Dear AUI,  
This letter isn't necessarily intended for printing in your excellent bible (it's too long anyway), it's more of an opinion that I would like to share with you and hope that rescuers might at least read. I'm sorry it's a bit tatty looking but I've only got a borrowed 9-pin printer and Transwrite. I do have PenPal but it's a real clat to load text files without a hard drive. Before I get to the nitty gritty, is there any chance of obtaining the cover floppies that I never got round to exchanging CD's 2 and 3 for? I kept them in the vain hope that one day I might be able to afford a CD-ROM. I did manage to exchange CD1 but my experience at the hands of the customer indifferent Comet staff didn't exactly inspire me to make another 52-mile round trip to exchange them. Any chance of a Bars and Pipes demo on a coverdisk in the future?

Wil Mobberley is absolutely right (AUI "Opinion" May95) with his Legomiga system. This must be high on the consideration list for the re-launch of the only serious user-friendly computer in the world. Why do I think this? Well, to answer that I will give you the background to my Amiga experiences.

In the summer of 1993, my mother-in-law was seriously ill with cancer. Anybody who has been in this situation will know of the stress this can cause. She gave us a gift of £300 as a gesture of thanks for all that her daughter, my wife, and I were doing to make her comfortable in her remaining days. We were doing it for love but she insisted that we buy

the computer that the kids wanted.

At that time, I hadn't a clue which system to go for but I knew that it had to be a computer and not a games console. The options were a second hand IBM compatible (I didn't know what that meant either - to me PC meant personal computer), an Atari 1040 or an Amiga. I considered Acorn as they were being used in the schools here but they looked a bit expensive for my budget.

The Apple just didn't look very nice to me. As a session musician, I was used to using 1040's in the studio but their creaky keyboards and susceptibility to crashing at the most inconvenient times put me off. Just like the 1040, the IBM-compatible that was within my reach was a bit long in the tooth and I wanted something that was a bit more up to date. The A600 was on offer for around £160 with my brother's YEB staff discount.

A fellow musician had an A600 and we often played Pinball Dreams after a gig (after all, smashing up hotel rooms is old hat nowadays) and I was addicted. I wanted one. It looked like the one to go for until I heard about the A1200 with its 32 bit graphics (I didn't know what that meant but it sounded impressive and the other systems didn't have it) and 2 megs of RAM. What's more it was available in my local computer shop for £299, with a couple of games and a joystick thrown in! Fnarr fnarr.

We purchased the A1200 in August 1993 and it gave us some escapism from the stress we were under. My mother-in-law died the following month and whilst the rest of the family took time to cope with their loss, my wife swears that the escapism the Amiga provided helped to counteract the stress, and consequently were able to cope with the funeral arrangements. Thank you Gladys for our Amiga and God bless you.

So to me, the Amiga is a very personal thing and although I'm not alone, it is very depressing for me to see the Amiga suffer the way it is at the moment. I hope that very soon, the Amiga world will be celebrating a miraculous recovery. Musicians can be very vociferous about which is the best guitar/amp etc. and they always aspire towards the best but I have never come across such brand loyalty from

# write to reply

C O N T I N U E D

users and developers alike as there is for the Amiga.

The point of all this is that as a musician I never have much money (it's an expensive career) but I could see this machine as a tool. But I also aspire towards the best in computing and to me now, this is an A4000 with loads of add-ons.

Lottery aside, I could never afford to sufficiently upgrade my brilliant A1200 let alone a bare A4000. As I am now also a mature student of music teaching, money is at the minimum at the moment and when I most need to fit a hard drive for my DTP for course notes etc, I have to splash out on replacing an out of guarantee PSU. So upgrading in a modular form which would be within my price bracket would appeal to me.

What about a bank loan I hear you ask? Try this little exercise sometime. Go to your bank and ask them for a loan and then tell them you're a musician. If you're really masochistic, try it with your car insurance company too! If only the Stones and The Who hadn't driven Rollers into swimming pools and smashed hotel rooms up!! Great bands though.

In my school placement I have come across the attitude that PC is the best but let me tell you, I've used Cubase on a 40MHz PC and it is in no way as good as on a lowly 7MHz Atari. I just wish it was available for the Amiga but that's probably another story, and I can't get on with Tiger Cub a la coverdisk May 94. It might be good but Cubase is that horrible phrase "industry standard" and I'm used to it and like it and, no, I'm not a drummer!

The other thing I don't like about PC is everything! I have never sworn at a computer as much as when trying to do basic tasks in Windows or just trying to set MIDI up how it's supposed to run. It is totally user-unfriendly. I understand more about PC from using

AmigaDOS and reading *AUI* than I could ever hope to understand MS-DOS from using MS-DOS. I now troubleshoot for my brother-in-law's PC even though he's been using PC a lot longer than I have Amiga, and every time I do, which is often, I just wish that everyone had an Amiga experience before wasting their money. I could go on but that would just be selling coals. But PC is "easily" upgradable and the A4000 is easier but I still can't afford one.

Yes a modular system is the way to go where your entry level is set by your available budget but your dreams can become reality. With no limit to the way you could expand the system or in which direction, business users might cotton on to the idea of buying a system that in theory could never become out of date. If the developers are wooed by the idea of an infinitely expandable platform then their development would be limited only by their imagination. PC would then look like a ZX81. PC emulation would be the first step to bring businesses back to the stress-free world. TV advertising could take the form of a PC user at his terminal next to his colleague on the new Amiga A5000, (i.e. infinite expansion), and getting annoyed by the fact that his Amiga colleague always seems to meet his deadlines and go for a round of golf whilst the PC plods. Oooh, groan, maybe I am a drummer after all!

I admit I have a limited knowledge of computing and it isn't as simple as all that but, as a Piscean, I too like to dream. But just maybe, one day, we'll see the Amiga where it deserves to be. Number one.

Yours loyalty,

Ian Leese  
Lincolnshire

Dear Ian,  
Your letter is so interesting and in some ways moving that we thought it could be included in full instead of an Opinion this month.

It describes your own personal story, which is different, of course, from anybody else's. However, there are many stories like this which show just how much effect the Amiga has had on people's lives.

When in last month's *AUI* we said that the Amiga had changed our world that was really a true statement for many, perhaps millions of us. Computers in general have but maybe there is something special about this particular computer that can get it compared to the way that sailors used to think of or feel about their ships. They sometimes called them "She" because the ship often took on more than the obvious character of an inanimate object. If you want to read that

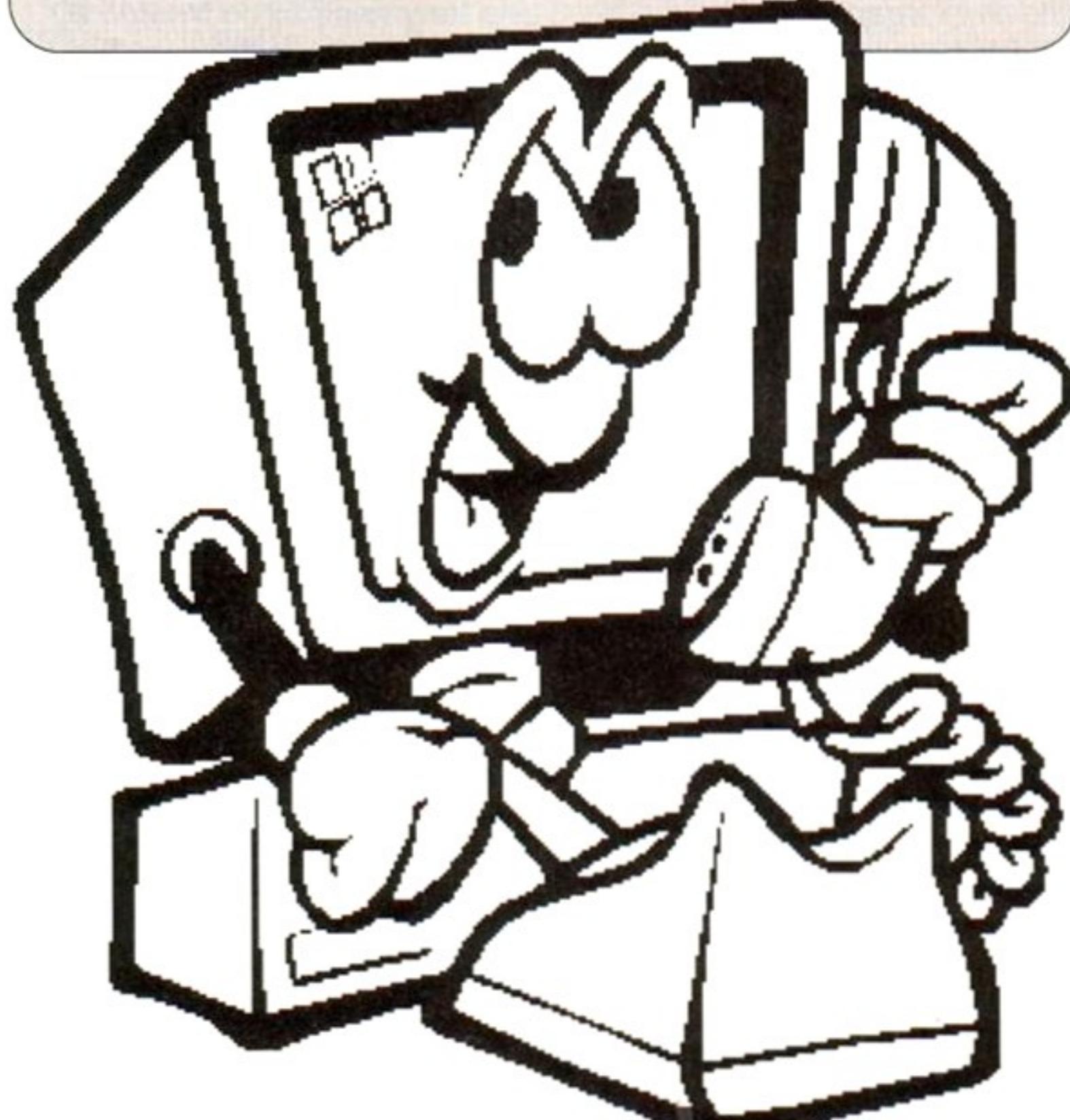
emotion so well expressed pick up any book by Joseph Conrad about the sea.

The Amiga appears to so many of those who write to us in the same way. No computer, in my view, except just possibly the PET, also of Commodore manufacture, has so gripped its public's imagination and loyalty. And you, Ian, are clearly among that number who have understood and appreciated its special abilities and perhaps sensed that exceptional personality that has made it what it is to Amiga users. As I think I have said before. Something so special deserves to survive. And with support from people like you, it may very well do so no matter what the odds against it.

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