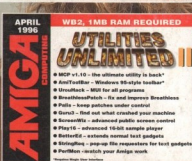


# AMIGA

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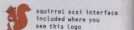
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### SYSTEM NEWS 84

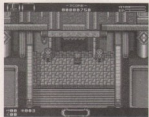
Andy Maddock brings you all that is weird and wonderful on the Amiga games scene

### PLAYER MANAGER 2 EXTRA 88

We haven't seen a football management game for absolutely ages and finally we get one. Will it be as good as its predecessor?

### SPERIS LEGACY 90

We present you with a three page bumper review featuring Team 17's latest offering



### WATCHTOWER 93

Take control of a commando soldier and watch everything from up a tower. Check out the preview

### HINTS AND TIPS 94

Our dedicated feedback page where you, the readers, can write to us and complain your socks off. Go on, we can take it

### DOOM ROUNDUP 96

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### INTERNET PACK 64

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### SYQUEST DRIVE 67

A removable storage solution with more space and faster transfer - a challenge to the Zip supremacy

### COUNTING HOUSE 68

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### DIGITAL QUILL 73

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### LASER GUIDANCE 60

The shining silver platters are under the microscope again. The CD buyers guide goes from strength to strength

### BEGINNER'S GUIDE 71

Steve White continues his insider guide to the finer points of mastering the idiosyncracies of the Amiga

## THE COVERDISKS

### CAPITAL PUNISHMENT

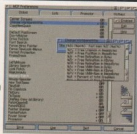
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## COVER STORY

### VIDEO SPECIAL 52

Adam Phillips provides a definitive guide to the art of pro-quality video production. From scripting to story boarding, producing to directing, it's all here.

**Plus,** a roundup of the best video cameras and recorders



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**O**sn't it great to have the Amiga back in the shops again? Admittedly, it would be nice if it were in more shops and being actively promoted, but hey, at least it's there, right? But what about the next generation of Amigas? These new PowerPC-based beasts, how will they fare in the big, competitive world of home computing? The old Commodore attitude of building down to spec to save cash can't continue with the new owners of the Amiga, and here's why.

From about 1990 the computer industry has built up enough momentum to ensure that new products get introduced more and more frequently – look at the competition for small physical size removable media. We had a 128Mb Magneto Optical drive about four years ago which was sluggish enough when reading, but unbearably slow when writing to a disk. Now we have Zip and EZ drives, and later this year we will get Jaz and SyJet drives that hold around a gigabyte on a small 3.5" cartridge and transfer at rates that would be acceptable in a hard drive. To top it all off, scientists now reckon that they can increase the storage capacity of hard drives some twentyfold due to a process that works around the magnetic resistance of the media.

## YOUR LIMIT

Now how about the poor old Amiga? Well, as much as it may seem at the moment, 4.2Gb is your limit when it comes to storage space – there's no more room in the RDB (Rigid Disk Block) that is stored on every hard drive and hard drive partition. The reason for this is that the RDB is only 32-bits long and as we all know from studying our binary, the largest number you can have in 32-bits is in the 4.2 billion range, hence the limit on size. Previously, this hasn't mattered for Amiga owners, but with desktop video and hard drive hungry applications, the amount of space we need is going to grow incrementally, and anyway, why should we be restricted in this fashion? After all, a few years back Amiga owners were laughing at the fact that our PC owning friends could only have 32Mb partitions, but who's laughing now?

It's not just storage space that's becoming an embarrassment. The Amiga supports

# Back for the future?



practically none of the now established standards like TWAIN – the standard for scanners which allows any TWAIN-compliant package to use any TWAIN-compliant scanner, that includes paint packages and even word processors, and systemwide support of TrueType or Postscript fonts, copy and paste, and many other things (I haven't even got onto OLE or OpenDoc yet...). This must be addressed. It doesn't matter if only a few people use these features, the point is that when businesses are buying machines they are going to want the most seamlessly integrated system for their current setup. A company that wants to do so (insert something the Amiga still beats other machines at, er, video?) might still end up buying a PC or a Mac, not only because that's all they'll get

Amiga Technologies assures us the Amiga is back for the future, but have they been looking that far ahead? **Ben Vost** wants to know

to do about, but also because they are practically guaranteed compatibility.

On another front, have you heard the one about the world's largest database company, Oracle, asking for a \$500 Internet box, one that would have the ability to be connected to a TV, have a modem and no local storage so that applications could be downloaded from the Net and used that way? Acorn have and are apparently doing the business with Oracle, but it would seem that Amiga Technologies haven't. Shame really, because they could offer Oracle an Internet box that did have local storage along with all the other criteria for not much more than the requisite half a grand.

## The AC team

**EDITOR** Paul Austin  
**DEPUTY EDITOR** Ben Vost  
**ART EDITOR** Tyni Lackey  
**NEWS EDITOR** Tina Hackett  
**COVERDISK EDITOR** Neil Mohr  
**PRODUCTION EDITOR** Judith Chapman  
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**CIRCULATION DIRECTOR** David Wren  
**COMMERCIAL DIRECTOR** Denise Wright  
**DISTRIBUTION** COMAG (01895) 446055  
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E-Mail contacts:  
Editorial: [edit@acomp.demon.co.uk](mailto:edit@acomp.demon.co.uk)  
Advertising: [edit@acomp.demon.co.uk](mailto:edit@acomp.demon.co.uk)

**CHAIRMAN** Richard Hease  
**MANAGING DIRECTOR** Ian Bloomfield

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

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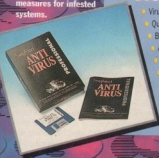
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# news

By Tina Hackett

## SHOW STOPPERS

The World of Amiga UK Show is all set to happen on the 13 and 14 April and two long-standing Amiga supporters are already promising to launch ten new products at the show. Both Digita International and HiSoft Systems have products planned for the event, with Digita premiering Wordsworth 5 and Wordsworth 5SE which is intended specifically for A1200 owners with 2Mb memory and only one disk drive. They will also be showing Organiser 2, a personal diary, and their database, Datastore 2.

HiSoft intend to show off their new products too with the Squirrel Mpeg add-on which allows the playing of Video CD and CDI discs from SCSI CD-ROMs to broadcast monitors, TVs or video recorders. They will also be

showing their Surf Squirrel which is a new version of the Squirrel SCSI interface. This has a high-speed serial transfer for high-speed modem use and auto-booting drivers to allow full auto-booting from SCSI hard disks.

Amongst the plethora of products there will also be an update on Terminate TCP and CinemaFont, an add-on which allows the loading of any Type 1 font directly into Cinema4D. There will also be CinemaWorld, another Cinema4D add-on which creates 3D worlds and landscapes plus CinemaTree which creates trees (no surprise there).

So there you have it - World of Amiga is the place to be and with any luck should get some much needed attention back onto the platform attracting old and new users alike.

## POETRY CORNER

Two of the most unlikely pastimes have been united in some bizarre anthology being put together by Poetry Now. They want budding Keats to send poems in to them (in no more than 30 lines) on the topic of technology in the world today. Anything from opinions on the Internet to console bashing would be appreciated, so get out your quill and parchment and send your scribbles to Poetry Now, The World Of Technology, 1-2 Wainman Road, Woodston, Peterborough PE2 7BU before the 30 April 1996.

There's no entry fee required but a stamped addressed envelope is appreciated. The copyright remains with the author and if accepted for the anthology, royalties will be paid.

## EYE, EYE

Amiga upgrade specialist Eyetech have brought out a new package which will help the Amiga realise its multimedia ambitions. With every A1200 AV (Audio Visual specification) hard drive upgrade kit they will also supply a copy of Optonica's MME, their multimedia authoring system.

MME will be installed on the drive and comes with a hard disk-based tutorial and on-line help facilities. They will also have over 40 PD and Shareware utilities ideal for multimedia on them.

MME has been chosen because it's the only UK system of this type which is designed to run on and produce stand-alone applications that run on a standard 2Mb A1200 or CD32.

Eyetech promise that even a non-technical user will be able to install the drive (without having to cut or drill the case) and have it running within half an hour. The price for this little bundle is £229.95 which includes VAT. A full manual and back-up program/tutorial diskette pack is also available for a small charge.

C The new MF-8515 monitor from Iiyama



## MONITOR MADNESS

Iiyama have announced the launch of their new 15" Vision Master monitor which at £299 provides excellent value. It supersedes their previous Vision Master 15 model and has many new features such as a 0.28mm dot pitch flat square tube and 30-65KHz horizontal and 50-100KHz vertical scanning frequencies. It also offers a 350mm diagonal viewable screen with non-glare and anti-static coating. It should hit the shops this April.



(1) Eyetech's 1.083 GB hard drive installed in an A1200



(2) With the drive comes Optonica's MME multimedia authoring software

## VIEW TO A THRILL



Ⓜ The ViewSonic PT-770

ViewSonic, renowned monitor makers, have a new 17" monitor in store which they will launch at the forthcoming CeBIT show in Hannover. Called the SonicTron PT-770, it has an aperture grille mask rather than the conventional shadow mask and has a maximum resolution of 1600x1280 pixels. It will cost £819 + VAT. Also on the cards from ViewSonic is the 15" 15GA multimedia monitor with two hi-fi loudspeakers and integrated microphone. The picture is produced by a 0.27mm Invar shadow mask and a Super-Contrast screen with special anti-reflection/anti-glare coating. It should retail at £379 + VAT. And finally, they are also releasing a 20" model which will cost £1039 + VAT. Offering a 50cm screen, it has non-interlaced resolutions up to 1600x1280 and a high refresh rate of up to 76Hz at 1280x1024. It also allows the user to be able to adjust screen colours to match printed output.

## AMIGA IS THE STAR

The Amiga 4000 was in the spotlight recently at the MIDEF festival at Cannes. A music video starring a pop band called Cramp in the Leg (hmm) was made using the machine and won the producers a bronze medal for editing. The video was produced by Myth Machine and used VLabMotion and LightWave 3.5. As well as including rotoscoping of chronicle material, there was also a scene with modern musicians standing in Red Square in 1930.

## STUCK ON SPERIS

Binary Emotions are lending a helping hand for players of The Sperris Legacy. A hints and tips book is now available and is priced at just £2.99. Call 01722 416074 for more details.



Ⓜ ViewSonic 15GA



Ⓜ ViewSonic 20G

## AMOS PRO EXTENSION

Milton Keynes company Blittersoft have a new Amos Pro Extension kit ready for UK distribution. Priced at £49.95, it should give a whole new lease of life to Amos Pro with over 600 new commands. Now you will be able to program fully Multi-Tasking software, Gadtools (gadgets and menus) Datatypes, DOS functions and StoneTracker support. To run it requires OS2.x or better and has 100 help procedures to allow even the novice to get started straight away. We'll be bringing you a full review soon. Watch this space.

## RAMMING IT HOME

Premier Mail Order are offering some bargain price SIMM chips so you too can get all the benefits from the latest Doom clones like Breathless. They believe that if more people had FastRAM on board then developers would take more interest in the Amiga (good, guilt-inducing advertising techniques there), so they are offering the following at these prices which include VAT and delivery:

- 4 Meg 72 Pin 70ns - £119.99
- 8 Meg 72 Pin 70ns - £239.99
- 16 Meg 72 Pin 70ns - £445.99
- PC1208 RAM Board - BARE - £59.99

Contact Premier Mail Order on 01266 271172 for more info.

## news snippets

### SCALA

Anyone wishing to contact Scala should note that they have a change of telephone number which is: 01920 484148.

### OOops!

The review we featured last month on the Blizzard 1260 accelerator had the wrong scores put on it. They should read as follows: Ease of Use: 95%, Implementation: 95%, Value for Money: 72% Overall: 92%. These scores are higher than the ones we printed and we apologise for any inconvenience caused.

### SHOCK, HORROR

Check out the SoftWood Web site (<http://www.Softwood.com/>) for all the latest information on their products such as Final Calc and Final Data. As well as a brief history of the company (they began in 1986, you know) there is also the shock announcement that after two years in the making they have Final Writer - for Windows '95. Hmm. Oh well, who says PC owners get the best things first?

## AMIGA COMPUTING ONLINE

Amiga Computing are pleased to announce that their Web site is up and running once again. Check out, for example, the current news, updates on what we're up to, plus games hints and tips. Follow [www.idg.co.uk/amigacomp/](http://www.idg.co.uk/amigacomp/) for all the latest and greatest.

## AMIGA COMPUTING SURVEY

Amiga Computing's reader survey has attracted a good amount of replies. It seems most of our readers so far have actually got machines with a much better spec than the default, with CD-ROM drives being the most popular hardware add-ons (so look out for a CD coverdisc) and the sections of the magazine that are proving most popular are: ESP and ACAS.

We will be running the survey until the end of March, so there's still plenty of time to get your entries in, but do send them in as we can only make a better magazine for everyone if you all tell us what you want.

As a reminder, the entry that we draw out of a hat will win £200 worth of prizes tailored to your machine. So get writing and send us your entries.

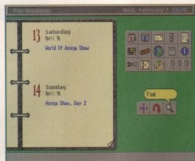


## GET ORGANISED

**P**ro-Soft have announced the launch of their latest program designed to get even the most scatterbrained of us organised.

As a slight diversion from their usual gambling-related programs, they are launching Pro-Organiser, a personal organiser program at a budget price.

Running on all Amigas with 1Mb, you can get a free usable demo by sending a blank disk and Stamped Addressed Envelope to Pro-Soft, PO Box CR53, Leeds LS7 1XJ.



Pro-Organiser will help you remember important diary dates

## SECURITY FEARS

**A** recent case which was brought before the House of Lords has raised controversial issues on computer security. The case involved a police officer who asked a police computer operator to get him information for his job as a debt collector, a role which is outside his duties as a police officer. He was found out and charged with 'using' personal data against the laws of the Data Protection Act.

He appealed, arguing that reading information off a screen could not be considered 'use of data' and the House of Lords upheld this. However, if he had actually taken action on this information, it would have come under the Act. Elizabeth France, the Data Protection

Registrar, remarked: "Reports of Thursday's ruling in the House of Lords case, *R v Brown*, may have given the impression that accessing information from a computer screen is not covered by the Data Protection Act." She continued: "The Lords clearly ruled that processing data in this way is covered by the Act and where it is carried out improperly, I can take enforcement action against the data user against which appeals can be brought to the Data Protection Tribunal." However, an individual employee cannot now be prosecuted under the Data Protection Act for 'browsing' personal data, although it may be possible to prosecute under the Computer Misuses Act 1990."

## COUNTING THE COSTS

**C**omputer crime has been estimated to cost the country around £1 billion a year. According to the Association of British Insurers, insured theft losses cost £200 million a year, but in fact this figure is estimated to be much higher due to non-insured losses, lost production, and lost business opportunities.

Recent incidents such as a factory in Scotland having £2.3 million worth of computer chips stolen and an armed gang stealing £150,000 worth of computer equipment from a South London factory have shown how bad the situation is.

The Association want to help combat this, so are issuing an information sheet with advice on how to ensure your computer and electronic equipment is safe from thieves. Businesses and the public can get this sheet by sending an

SAE to: Association of British Insurers, 51 Gresham Street, London EC2V 7HQ.

And in the same vein, news just in reports that the Dixons Group has launched the Computer Weekly campaign to combat computer theft. Dixons, together with the Metropolitan Police, have launched a campaign to deal with the problem and have already met with 19 of the major manufacturers of electronic goods to ask them to build anti-theft safeguards into their future products.

Dale Heathcote, co-ordinator of the Dixons/Police projects commented: "We will work together with those involved in this campaign to share information and help to encourage the industry to ensure that the next generation of expensive consumer electronics equipment such as computers become less attractive to the criminal."

## SONIC PRESERVED FOREVER

**T**he British Film Institute has begun an initiative to preserve video games to make sure they do not become lost forever. The Institute fears that games such as Sonic and PacMan could go missing as happened to some of the earliest films, so they have set space aside amongst the 275,000 films housed there. Assistant Director for the BFI commented: "The BFI is taking the bold initiative to preserve games - from the first

primitive blips of the early '70s to the sophisticated virtual reality of today's games. This move will enable researchers and young people in 100 years time to find out a great deal about the lifestyle and interests of young people in the 1990s."

The BFI are appealing to anyone who has any particularly old games, especially those that can be played on the Lynx, Dragon 32, BBC Micro, Texas TI994A, Sharp

## SPEEDY ACCESS

**U**S Robotics have a new modem on the horizon which will offer a speed of 28,800bps. Priced at £199 (exc. VAT) it is the Internet ready version of the Sportster Vi fax modem. The 28,800bps version follows on from US Robotics 14,400 bps modem and for those who spend long periods browsing the Web, it could make a more economical option. It includes a voice mail feature which could be taken advantage of if anybody writes the software for it!

## NEWS FROM THE NET

### NET PROTEST AT TELECOM ACT

This February saw President Clinton sign an act which has huge implications for Net censorship. This wide-reaching legislation should reform and benefit some of the laws regarding communication but on the other hand - and the cause for all the controversy - there is the Communications Decency Act which some believe could lead to widespread censorship. The CDA will make it an offence to post 'indecent' material on the Internet, with prison sentences or fines of up to \$250,000 dished out for those who break the law.

However, those opposing the CDA believe the term 'indecent' is extremely vague and fear that even things like works of art showing nudes could be banned.

### DON'T DILLY DALLY ON THE WEB!

America - the first case of divorce on the grounds of 'adultery' on the Internet is being put to the test. John Goydan found explicitly sexual exchanges between his wife and another man which they'd been having over the Internet. Although the relationship had never been consummated, Mr Goydan of New Jersey claims they were planning a rendezvous at a New Hampshire hotel. The case raises interesting legal implications as his lawyer believes it could change the way adultery is defined in law but Mr Goydan's accessing his wife's e-mail could be seen as a violation of her personal privacy.

### BANNED BOOK OUT IN PUBLIC

A book which was published only to be banned soon after has found its way onto the Internet. The book in question, 'Le Grand Secret', caused uproar because it revealed allegations about the health of the late French president, Francois Mitterrand. Written by Mitterrand's personal physician, it claimed that Mitterrand ordered the fact that he had prostate cancer to be kept quiet.

It also claimed that his medical records were falsified. The book found its way onto the Internet via a French Cybercafe owner who scanned in the pages into his computer and then released them onto the Web.

M2700, Commodore Vic 20, Atari VCS, Coleco Vision, Jupiter Ace and Mattel Intellivision, to get in touch. If you do come across any gems contact Tony Hetherington, BFI, 21 Stephen Street, London W1P 2LN. Also on the agenda at the BFI is an Interactive Encyclopaedia of Computer and Video Games and an exhibition which will show games and machines from the last two decades.



## NEW GVP TO UNVEIL 060 ACCELERATORS

The 'New' GVP, a collaborative effort between M-Tec and Power Computing, is on the verge of releasing its first new products. Of particular note is the Amiga 4000/060 accelerator, sporting a Motorola 68060 chip at 50MHz, 4 SIMM slots for up to 128 megs of RAM, and a SCSI-II controller. Pricing has yet to be announced.

At present, GVP is considering building an A3000 design based on the A4000 card. The space constraints of the A3000 would dictate a reduction in SIMM slots to 2, for a maximum of 64 megs of memory. In addition, GVP is the distributor for the MacroSystem Falcon A1200 040/060 card in North America. They also plan to restart production of several of the 'old' GVP products, including the DSS-8+ and PhonePak in the near future.

GVP can be reached at +610-522-9350 voice, +610-522-9354 fax, and 102150.1665@compuserve.com via e-mail.

## SILENT PAW SOLICITING INVESTMENT PARTNERS

Silent Paw Productions, creators of the Personal Amiga Workstation (PAWS) laptop kit and the Gecko display enhancer, are looking for investors to help further their development and bring their products to market. Shares in the company as well as bonds

were offered in an attempt to replace lost capital, caused by the collapse of their earlier potential investor.

The company can be reached at +703-330-7290 voice, +703-330-5752 fax, or via e-mail at slntpaw@ix.netcom.com.

## WONDER COMPUTERS ENTERS BANKRUPTCY

Barely a month after the successful World of Amiga Toronto show, the hosts, Wonder Computers, Incorporated of Canada entered court supervised bankruptcy proceedings. The news came as a tremendous shock to the North American Amiga market, to say nothing of WCI employees. While Wonder's six retail outlets continued to be profitable, the low returns on WCI's Information Technology and Lazarus Engineering divisions prompted a recall of a large WCI loan. Unable to meet these terms, WCI was forced to enter bankruptcy. The firm of Ernst and Young has been appointed to oversee WCI's operations and liquidation.

WCI CEO Mark Habinski is attempting to organise a buyout of the WCI assets in order to form a new, debt-free corporation. While so far the trustees have expressed willingness to work with Habinski, time is limited.

Any customers, manufacturers, dealers, or distributors with outstanding accounts should immediately contact Ernst and Young at Wonder Computers' Ottawa headquarters on +613-226-0000 or by fax on +613-226-9990.

## AMIGA ATLANTA CELEBRATES 10TH ANNIVERSARY

Amiga Atlanta, one of the oldest user groups in the world, rang in its 10th Anniversary on 20 January with a large banquet for members and special guests from across the country.

Booked as special guest speakers for the evening were Amiga Corporation legend and former 3DO executive RJ Mical, Amiga librarian extraordinaire Fred Fish, Commodore and Amiga hardware guru Dave Haynie, and myself. In addition, Dale Luck, formerly of Amiga Corporation and now Senior Software Architect for 3DO, attended the event, as did a sizeable entourage from NewTek led by company president Tim Jensen.

Motorola RISC Marketing representatives

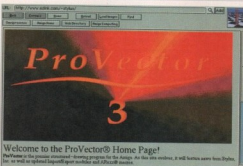
were on-hand to plug and promote the PowerPC, the next generation of Amiga computing. The event was presided over by CNN TalkBack Live host Susan Rook and Computer Chronicles host Stewart Cheifet (a proud owner of two Amigas himself). Quite a bit of reminiscence and a few derogatory remarks about other computer platforms were the order of the evening, which stretched past midnight.

The film crew of Amiga Atlanta tirelessly committed the evening to videotape, and a professionally edited presentation of the banquet will be available for sale from Amiga Atlanta soon. To learn of its release and keep up to date with other AA events, check them out on the Web at <http://www.mindspring.com/~amigaatl/>.



by Jason Compton

## PROVECTOR CATCHES THE WAVE



Stylus Inc., developers of the ProVector 3 structured drawing package for the Amiga, have released their LightWave saver module. The module, a 'plug-in', allows ProVector projects to be saved as LightWave object files, for further use and manipulation in NewTek's popular 3D rendering environment.

The patch is available directly from Stylus for registered users and can also be found on Aminet FTP sites and from Stylus' new Web site, <http://www.ezlink.com/~stylus/ProVector.html>. For more information, contact Stylus at +970-484-7321 voice, or [stylus@ezlink.com](mailto:stylus@ezlink.com) via e-mail.

## LIBRARY SERVICES BECOMES CRONUS

If you start to see an unfamiliar name behind some familiar products in the coming months, don't worry. Fred Fish has renamed his Amiga Library Services company to Cronus. All subscriptions with ALS are still valid, and support for Amiga products will continue.

## CONTACT POINT

You can contact Jason Compton with your American news at:

jcompton@ixnet.com  
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## COVERDISK PROGRAMS

The first coverdisk with the Capital Punishment demo on is self-booting and can be run direct off the disk, or hard drive users can install the game on their hard drive by dragging the disk icon to wherever they want the Capital Punishment game drawer.

To extract programs from the second cover disk, you need to boot your machine with the second disk. To extract any single program you should double-click its icon and follow the on-screen instructions. If you want to quickly extract the program to RAM, select the **NOVICE** level on the installer welcome screen, press proceed and then press it again on the next screen. After a short pause and if no error messages appear, the program can be found in your RAM disk.

You also have the option of using a floppy disk. If you pick this make sure you have a blank formatted disk at the ready – you can format disks from the Workbench menu – and if you only have one disk drive be prepared for a long wait and plenty of disk swapping.

### Hard drive users

Hard drive users can boot their machines as normal. Once the Workbench has loaded, if you do not have, or are not sure that you have the Amiga Installer program or Lha, you should double-click on the Setup-HD icon and this will copy the relative programs across to your hard drive. It will check beforehand if you already have these programs before copying the cover disk versions over.

If you wish to extract a file archive to a specific place on your hard drive, when you double-click on a file you should select **EXPERT** and then press proceed. You will then be able to select the destination. You also have the option of using the **MultiExtract** Installer script which allows you to extract either all or just some of the cover disk programs to a destination of your choice.

# The coverdisks



On this month's exclusive Amiga Computing cover disk we give you the chance to kick hell out of a friend. Hurrah

## CAPITAL PUNISHMENT

Author: Pxl Computing  
A1200

### DISK 1



You are a warrior about to embark on a most dangerous journey. Your goal is to dethrone the evil master of an immense castle. You begin your mission in the rancid, putrid catacombs of this castle. However, the master is aware of your presence and has placed guards on every floor.

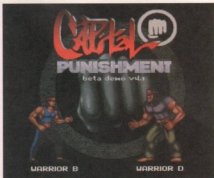
You must work your way up to the top of the castle and defeat all who stand in your way in order to battle the master.

Helping you along will be the spirit of your deceased mentor but, even with his aid, this will, without question, be a physically-draining experience. By journey's end you will be injured, bruised, and tired, but if you think of the price of failure, this is a small price to pay, for should you lose a

battle, you will suffer a fate worse than death. You see, the master looks favourably upon assassins. Thus, he has the power to make you immortal and you will be forced to serve him for eternity in this most unpleasant environment. Even worse, you will be confined to a single room, becoming one of his guards. Almost as bad as being forced to watch the *Girlie* show.

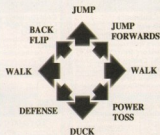
### CONTROLS

The Capital Punishment demo is a two-player game – player one plays with a joystick in port 2 or the cursor and alt keys, while player two uses a joystick in the mouse port. On the initial menu screen, use left and right to flick through the various warriors that will be available in the full game – for the demo you can only pick the bare-chested, muscle-bound guy. In play, Capital Punishment takes a slightly different



You can get a sneak preview of some of the characters in the final game

### JOYSTICK CONTROLS





## SHAREWARE

Many of the programs on the second cover disk are what are commonly known as Shareware. Such well written programs take many hours to write and a lot of hard work and dedication on the part of the programmer.

When a program is called shareware it means the programmer has generously allowed you to try out their program, a lot

of the time with no restrictions, and if you then decide you like it you are obliged to send the author the shareware fee.

Normally this is no more than ten pounds and in return the author will usually keep you supplied with the latest version of that program, along with their undying gratitude of course.

So please don't forget to send your fee.



To use the following program you need to have the Magic User Interface v2.3 installed on your system. Without it you will not be able to run any MUI program. MUI is available from any good PD house.

## MCP v1.10

Author: Alien Design  
Magic User Interface v2.3  
Workbench 2.04



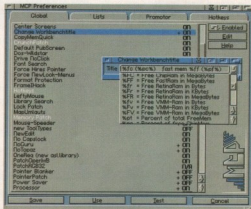
Errrrh, your feet smell awful

slant than other fighting games. Instead of losing a set amount of energy from a starting total each time you get hit, in Capital Punishment the energy bar takes the form of a tug of war. Each time you hit your opponent they lose some energy and you gain a little, meaning if you can put together some combos you can quickly regain an advantage.

The other unusual game element is the addition of two stamina bars. The pink bar represents the head, while the blue bar indicates body stamina. Player One's stamina is

on the left, while Player Two's is on the right.

In addition to robbing an opponent of vital main energy, a hit will also take away their stamina, head or body, depending on where the hit landed. If all their stamina is taken away, the player falls into a dangerous state of fatigue, and at this point the other opponent can get as many hits in unopposed. When fatigued, a player can rejuvenate himself by quickly tapping the fire button, and the only way to get stamina back is to stand still.



It dices, it slices, it will even feed the cat. MCP will do everything you need and probably a few things more

number of extra small libraries that need to be copied into your Libs drawer. Another small command you get with MCP called "Patchcontrol" has to be installed separately by copying it into your C directory and inserting the command C:Patchcontrol near the top of your startup-sequence.

The MUI preference program means you can easily configure MCP. It comes with a demo configuration to help you get going, and with over 50 different types of functions there is plenty for you to play with.

For all you hard nosed MCX users there are a few really helpful extras provided in MCP that MCX does not have, for example an XPX auto-decrunch patch, a complete screen mode promotion patch, tool alias patch and assign preferences - there is more than enough for everyone.

That's still for a while

AMIGA COMPUTING  
APRIL 1996



## PLAY16

Author: Thomas Wenzel  
Workbench 2.04

It may seem as if every other modern computer has 16-bit sound and is using 16-bit sample formats, but this should not stop Amiga users being able to play them, should it?

Well, this latest version of Play16 allows you to do exactly that. 16-bit samples recorded at 56kHz, no problem. Play16 will allow your lowly Amiga sound output to handle it, playing the sample back at 14-bit quality, due to a special technique, and it's all at the correct speed.

Sound channels are requested in a friendly manner from the operating system, and samples can be played directly back from your hard drive, so any super huge samples you have on CD will not be a problem. There are also a good number of automatically recognised file formats, all from different computer formats – such as Wave, Voc, Sun Audio, Maud and Aiff – and they are all supported in their 16-bit mono or stereo compressed formats.

## BREATHLESS PATCH

Author: Fields of Vision

The original Breathless game was pretty amazing, and on an AT200 with extra memory it was very playable. For all owners of the original game you are about to get a little bonus in this update to the original game engine.

Installing the new version should be no problem – hard drive owners can use the installer script to copy the new version into the original Breathless directory, while floppy owners should copy the program file onto a copy of the original first game disk.

Improvements over the original include:

- now works from a non-PAL Workbench screen
- added Mouse control and Configuration save option
- smooth look up and down facility
- frame rate increase by up to 20%
- configurable player inertia and mouse sensitivity
- autosaves last level code

FIRST WORLD – SECOND ARENA  
RETRIES LEFT 3



This latest version of Breathless is faster, smoother and more configurable

## DISK 2



## STRING REQ

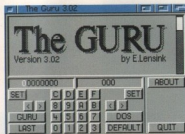
Author: Enrico Altavilla  
Workbench 2.04

Every now and again you get a small program that does something so useful that you wonder why no one thought of it before. Well, String Req is one of those programs. It allows you to pop up a file requester when using any string gadget and insert the file or directory name that you choose.

To install String Req you should drag it into your WBStartup drawer, and that is it. You can now double-click in any string gadget and a file requester will appear, and by editing the tool types you can, alternatively, use a hot key to pop up the requester.

## THE GURU 3

Author: Emiel Lensink  
Workbench 2.04



The student surpasses the master grasshopper

failure which means almost nothing to the normal user because when it pops up you are faced with an unintelligible list of numbers.

The Guru is a program that will help decipher the meaning of these strange hexadecimal numbers.

The reason it is called The Guru is that the original programmers of the Amiga's operating system, who were a little eccentric, had a board they used to sit on. However, they had to sit on it as still as possible, otherwise it crashed their machine.

Therefore, a guru meditating on the board could cause a crash, so a crash became known as a guru meditation, or so the story goes. I hope you understood this.

Unfortunately, this was all changed in version 2 of the operating system to plain old software failure – obviously to make it look more professional when your machine crashes.

When you run the Guru you get a straightforward interface. There are two string gadgets into which you can enter numbers – the left one accepts software failure numbers, while the right one takes DOS error numbers. Hitting return will then display the meaning of the number.

There is also a number that will automatically get the number of the last software failure and explain what caused the crash. Therefore, after all this, at least you know why the machine crashed.

Anyone out there who has not owned a Workbench 1.3 machine may not quite understand the title of this program, but they will be more than likely well aware of a certain red flashing rectangle.

This is the dreaded software



ScreenWiz will automatically create the screens you specify when a program tries to appear on it

gave no way of configuring how the screen should look or act. The only one you could configure was the Workbench screen. Sure, some programs allow you to open their own screens but control via these programs is normally still limited.

Screen Wizard is an all-singing, all-dancing solution to this predicament. Once installed via its installer script you can add new screens from the preference program. Here you can choose the screen mode, the screen font, what palette it should use, a background pattern, and a number of other options such as shanghai which will make all new programs open their windows on that screen.

## BETTEREDIT

Author: Allan Odgaard  
Workbench 3.0

It always seems to be the case that every part of the Amiga's operating system was written to be functional – not that this is a bad thing but it usually means that these functions are not particularly great to use. One of these parts is the string gadgets which only provide the barest of editing functions. Well, BetterEdit adds many great new features on top of the usual ones. To run BetterEdit just double-click its icon, or to permanently install it drag the icon into your WBStartup drawer.

One of the additions of this utility is Blockmode which allows you to copy a section of your entered text. By hitting the Amiga b keys at the start of the area you can mark out the text you want and then copy it to the clipboard. An undo buffer is provided so all the changes you have performed can be undone by hitting Amiga q. Similar to KingCON, there is a file name completion function which works by typing the start of a filename, hitting Amiga tab, and BetterEdit will do its best to work out what file you are typing and complete it.

## SCREEN WIZARD

Author: Raymond Penners  
Workbench 2.04

I have probably said it before, but one of the handiest abilities of the Amiga's operating system, due to the copper, is its ability to have lots of separate screens open at the same time. This makes it so much easier to use programs and copy files around because the Workbench can be separate from any programs you may want to run. For example, Macs can be a nightmare to use because you need to keep hiding programs, and as the window redrawing is dreadfully slow this is very laborious.

A problem with Amiga screens is that you have very limited control over them.

Public screens were introduced with Workbench 2 and allow many programs to share a single screen, but it

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01 ABCDEFGHIJKLMNOPQRSTUVWXYZ







**T**he 20 and 21 April 1995 marked the final buyout of Commodore. The victors were Escom and for \$10 million they bought all Commodore's intellectual properties, technologies, trademarks and patents. This April marks exactly a year since all this took place, so Amiga Computing is taking a look back at the year Escom dragged the machine from what seemed to be inevitable oblivion. We talk to the key players from both Amiga Technologies and the Amiga community and take a look at the high and low points of the year.

Looking back over the last 12 months, everyone's going to have their own opinions of how much or how little Escom have achieved. One thing's for sure, for a machine that was off the shelves for over a year, they had a tough job ahead of them to re-establish the machine in a market place where everyone was looking forward to a new generation of consoles and 'serious' users were contemplating owning, or already owned, a PC.

However, there was still strong opinion in the industry that there was room for an entry level computer that could not only run the latest games but could be used for serious applications – something that wasn't just a games machine but a cheap, reliable computer that was a quarter of the price of a PC. It was for this reason, perhaps, that it came as such a shock to learn the intended price of the new Amiga packs. It was in our October issue that we found out that the relaunched A1200 would cost £399 – £50 more than when it left the market place. The increased cost of DRAM and rushed manufacturing was blamed for ramping up production costs.

A month later, though, some of our initial fears were quashed as the software that would be in the £399 bundle was announced. Quality titles such as Wordworth 4 SE and Personal Paint v6.4 were included, along with Scala MM300 with the hard drive Amiga bundle – however, Amiga Technologies' choice of games did raise an eyebrow.

## COMEBACK

If the Amiga was to stand a real chance of comeback, its new owners were also faced with the problem of getting the Amiga back into production in time to take advantage of the Christmas sales. This they achieved and the first Amiga rolled off the production lines on 13 September at the Soletron factory in France. For Gilles Bourdin, PR for Amiga Technologies, this was one of the high points of the year: "There were several high points for the Amiga in 1995. Everybody remembers the day when the first Amiga 1200 came out of the production line in Bordeaux. That was a very exciting day for all of us."

They got the machines back on the

# A year in the life

It's been a year since **Escom** bought the Amiga. **Tina Hackett** takes a look back at the machine's progress



**The Amigo Corporation saves struggling SDL**

shelves in time but, unfortunately, it was at a price. It was soon discovered that there was a compatibility problem and that some existing software would not run on the new machines. Barry Thurston, Managing Director of Scala UK, pointed to this as one of the low points of the year: "What I think was unfortunate was that the product came out with fundamental problems, with the disk drive being different and therefore not being compatible with most of the software."

## COMPATIBILITY

He continued: "It would appear at the moment that Amiga Technologies GmbH don't understand how important it is for the product to be compatible with all the current software that's out there. It's great having a lovely piece of technology but if you don't have good applications to run on it, it's not

worth much." However, he stresses that time was of the essence if Amiga Technologies wanted to meet the pre-Christmas deadline. "They should have got the product right but again they were strapped for time and that's one they missed unfortunately. They could have been a little bit more stringent in their QA [Quality Assurance] but they'd run out of time, they had to get the machine back into the shops before Christmas."

Despite setbacks, the year saw many positive events and significant achievements. One that springs to mind is Amiga Technologies' agreement with Microvitec, and in a deal worth £20 million, Microvitec were to produce the official monitor for the Amiga. They celebrated the first official M14385 monitor coming off the lines at their factory in Bradford back in Autumn. A deal was also reached during the year with VISCORP who

## DEVELOPMENT CONTINUES...

For the Amiga to succeed there has to be new software in development to keep users interested. One of the key Amiga packages is Scala, and Amiga enthusiasts were concerned to see this title ported to the PC. However, Thurston was quick to allay fears that they would stop developing for the machine.

"From our point of view there are applications in some of the markets we're in where an Amiga is still the best option. It's still the most cost effective and as long as those market opportunities are there and as long as the platform is available, we will continue to offer that."

He went on to comment: "If the market grows again and Escom manage to pull the phoenix out of the fire then we will be working with them with the next platform – the new RISC-based machines – to develop a new generation of Scala product based on the new technology we've developed for PC. We'll have to see how the future of the Amiga lies first before we'll commit, but if that success is there then you will see an object-oriented Scala family of products come out for the new Amiga based on the backbone technology for our PC products." He stressed their loyalty: "We've been very successful on the Amiga platform and Scala is not a company about to forget that."





❶ Sales of the Magic P&K were disappointing over Christmas



❷ The Cologne Show proved successful

wished to use Amiga technology in their set top boxes. This could have far reaching implications for the future of the Amiga and, in effect, could mean millions of households seeing Amiga-based technology in their living rooms to do things like accessing the Internet, home shopping and playing games.

Shows too like the Video Toaster Expo, held in Los Angeles in November. Speculation had been rife over what processor was going to be used for the next generation of Amiga, with PA-RISC being rumoured. However, the show put an end to the gossip with the PowerPC finally being announced

## CONFIRMATION

The Cologne show was the next major event on the Amiga calendar and it was here that the plan for an Internet package was revealed. The final details were confirmed with the package containing an A1200 with 2Mb RAM, a 260Mb hard drive, a 14,400 baud modem, and all the software needed to access the Internet. If it does hit the shops at the estimated £600 price tag then it could



prove a very viable option for those looking for a cheap way to surf the Net – a bit of advertising wouldn't go amiss though...

But as we've seen over the year, little has been done in the way of advertising the machine, and many have expressed disappointment at the lack of any marketing from Escom – especially in the run up to the important Christmas period. It seemed they were content to let the enthusiasts and Amiga press fly the flag on their own.

## CASUALTIES OF COMMODORE

As Escom attempted to get the struggling machine back onto its feet, the take-over came just too late to save some long-standing Amiga companies which were badly affected by the lack of Amigas on the shelves. The first victim was ZCL, who on 30 May 1995 called in the receivers. ZCL were one of the biggest Amiga distributors and despite launching the Calibre PC range in an attempt to make up for the loss of the Amiga, it was not enough to compensate for the losses caused by the absence of the machine.

SDL, Amiga distributors and owners of the retail chain Silica, did not escape Commodore's crisis unhurt either and, having been hit by severe difficulties, saw them having to apply for an Administration Order in October. The company who were chosen to distribute the new A1200s and 4000Ts were one of the luckier ones, however, as only four weeks after this news, the company was saved by a take-over by Anglo Corporation.

On the games side of things, Rasputin, the publishers behind Base Jumpers and Charlie J Cool, also disappeared with their staff being taken on by Soundscape Multimedia. The future of Kompact, another company which was prevalent in the Amiga games scene, remains uncertain. Reports are coming through that Kompact, publisher of Football Glory and Tactical Manager, have hit problems and have fallen into voluntary liquidation. The company handled numerous firms such as Arcane, and Max Design.

However, as Thurston commented, their budget had been limited: "There wasn't enough done to market the machine but they spent an awful lot of money acquiring the assets and there was a lot of fudging going on about what assets went where, what were real, and what weren't."

He continued: "I know they have experienced problems where manufacturers who got stung by Commodore are not co-operating with AT to do products. They've really got some major problems and what they've had to spend to get round them has limited their budget. They needed to see whether or not there was a market there that was sustainable before they threw lots of money at it."

He also believes that everyone has been over critical of Amiga Technologies: "They never made any bold claims. Amiga Technologies thought 'Okay, well we've got the product, it's cost us an awful lot of money and we've got an awful lot of work to do.' I think the perception in the

*"The Amiga has a chance to catch a whole new generation of enthusiasts and a whole new generation of developers."*  
Barry Thurston, Scala UK

Amiga market was that the knight has come up on his white charger and will wave a magic wand and everything is going to be wonderful. But I know, having worked at Commodore, the scale of the task they've got. It's not an easy task to get it back into the shops. "However,

**"The forecasts have not been reached the way we expected and this forced us to reorganise our operations in the UK." Gilles Bourdin, Amiga Technologies**



even though the machines were back in the shops, the sales over the Christmas period were not as high as were hoped. Lack of marketing, compatibility problems, and SDL's troubles were put forward as possible reasons.

Bourdin admits that the company had some problems over the year: "The bad experience we made last year was related to our former distributor in the UK, who went into financial difficulties. The forecasts have not been reached the way we expected and this forced us to reorganise our operations in the UK."

We asked him whether they'd achieved everything for the Amiga that was hoped for over the year. He pointed out: "Not everything. But we are still satisfied by the results regarding difficulties we encountered during that year. We sold about 40,000 machines worldwide, which is a good result for only three months of sales activities. And considering the actual situation in the computer industry, I would even say that this is an excellent result."

He admits, when asked if he wished he'd done anything differently: "Our distributors, dealers and outlets including myself were too enthusiastic. Our forthcoming forecast will be more conservative."



Amiga Technologies signed a deal with Microvitec to produce the official monitor

John Smith hopes to bring new powerful Amigas to the market



The Amiga and Scala proved a winning combination this year

## A BRIGHT FUTURE...

A year has passed and as we look back it seems pertinent to see what the future has in store. Escom have already proved that the Amiga is not just for Christmas, with promises of new technology and major plans on the horizon. Amiga Computing, not content to crystal-ball gaze, asked the major players to reveal their plans.

Bourdin told us: "We hope to be able to show the new Amiga model at the CEBIT fair in Hannover this March. Our contracted engineering office is progressing as planned so far. The power PC port has started in close co-operation with Motorola, our strategic partner who supports us tremendously. We have former Commodore engineers working for us on that project."

They are also attempting to redress criticism of the lack of advertising so far and Bourdin confirmed that there would be more moves in that direction this year: "We have a new marketing plan for 1996, with international coverage. We will go into non-Amiga media to attract new customers and, hopefully, our mother-company Escom will support us in this direction."

John Smith, General Manager of Amiga Technologies UK, gave us his hopes for the future: "I hope we can continue with the research and development that will enable us to bring new and exciting more powerful Amigas to the market. Amiga Technologies in Germany continue to assure us that they are forging closer links with Motorola in this quest and, like most Amiga fans, I say the sooner the better. In the meantime we will continue to enhance our current range with exciting new packs like the 'Surfer'. I also hope to see a more powerful Amiga 1200 emerge in the not so distant future."

We asked Barry Thurston about what he

hoped to see from Amiga Technologies in the future: "We're primarily interested in the big machines for professional applications. We just want a product that is reliable so that we can sell professional solutions based on the Amiga. A lot of people, when asked [what they would like from Amiga], go on about having a machine with lots of DSP chips and multiple processors and all the rest of it and yes, that would be nice but we're dealing with reality. We just want a good solid machine with good marketing from Escom to get the Amiga into the position it used to enjoy."

He also believes that recruiting new development teams is the way forward: "We need a lot of work from them [Amiga Technologies] in encouraging new developers to write good applications, programs and games. I stress new because a lot of people who cut their teeth and made money on the Amiga have got to a size whereby they now look at the global market and are only interested in big platform coverage like PCs, Saturns, and Playstations. I think those guys have got rather big on the back of it and are now looking forward. What the platform needs to survive is a lot of new and upcoming programmers. I hope there are some and that the kids haven't been too busy playing games."

He concluded: "Some are being a little cynical at the moment and are knocking Amiga Technologies and what they are trying to do, but it's only out of frustration I think. Given the product is through and it's constantly on the shelves, I think some might come back. Some of the big boys who got really fat won't - it's just not a viable platform for them. The Amiga has a chance to catch a whole new generation of enthusiasts and a whole new generation of developers."



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**T**he Amiga is not a serious business machine. Despite its undoubted strengths in so many fields, it never did look right in the office environment, and nobody has made great efforts to change that fact. The Amiga first and foremost is about being creative and having fun in the process.

But though Commodore's baby, for one reason or another, never made it into the accounts department, companies that have priced their business products affordably for the home market have successfully been reaping the rewards over the years. Amiga users have demanded top class features from word processors, spreadsheet analysers and databases, but they could rarely afford to pay the prices businesses regularly fork out for their PC software equivalents.

And so we turn to Final Data Release 3. No-one's expecting the most advanced database software in the world for just under £40, but expectations for a product that combines quality and value will nevertheless be high.

The questions is, have Softwood done enough to keep Final Data up-to-date?

For any newcomers to Softwood's database, the basic design and interface is in keeping with the clean cut approach found in the company's other high-profile products, Final Writer and Final Calc.

There are menus, sizeable windows, and keyboard shortcuts to give users maximum convenience. It lacks the pretty but unnecessary icons that characterise Digita's rival offering, but since such embellishments generally slow programs down, that's as much of a benefit as a handicap.

As becomes a program from the Softwood stable, you can expect a high-quality manual providing an easy-to-follow guide to the program's various features. Final Data is all about the boring but necessary task of organising and recording data in a way that's easily accessed at a later date; thankfully, Softwood have made it a relatively painless and swift process.

Users can develop databases with an unlimited number of columns and rows, all of which can be resized and repositioned at a later date if required. As you'd expect with such software, data is edited and formatted differently depending on whether it's a date, a time, an amount, a calculation, or text.

A neat way of attaching more in-depth information to an entry is achieved by Final Data's use of multiple memos. If, for example, you had a list of names and addresses, you might want to add a note on a particular individual's birthday. Having attached a memo with this information, the individual's row would indicate that there is extra information that can be accessed with the click of a button. Generally, however, notes are kept tidily filed out of site.

Of course, building a record of names, addresses or whatever is only half the purpose of a database. The ability to conveniently sort and search through that information is equally important, and fortunately Final Data has always been quicker than the opposition at doing both. Incidentally, sorting will allow you to organise a database so the data is easier to access, but it also allows users to sort

# Dealing with data

**Softwood's popular database** has received

yet another face lift, but do the new features add up to make it an attractive overall package?

**Gareth Lofthouse**

puts it to the test

## Final Data

*Database Manager for the Amiga*



from Softwood, Inc.

information for reports or a set of labels. The option to print these reports and labels, or to 'print to disk' is also unusually quick.

The searcher gives users a complex query requester that means they can be quite specific about the criteria under which the software should search a database. Then there's the Find and Replace function, a commonly used option within the searcher tool that allows users to locate specified information and then replace it automatically with another value.

This allows you to keep your database up-to-date much more conveniently than if you were maintaining a set of records on paper.

Softwood don't wish us to forget that this is part of an overall suite of business programs for the Amiga, and hence Data can be integrated with Final Copy or Final Writer via the numerous ARexx macros that come supplied.

It's slightly strange, however, that there still doesn't seem to be similar support for use with Final Calc.

With Final Data it's possible to have multiple databases opened simultaneously, making moving between relevant records a simple process as one could expect. The program also includes a few other small but handy extras such as International Date, Time and Currency options.

Users can, of course, add, modify, and delete columns at any time, or give them left, right, or centre alignment. Another strong point about the program is the ability to select multiple columns for processing, saving and printing to speed organisation up. The first version of Final Data only allowed users to do this with adjacent columns, but since Release 2 this shortcoming has been rectified.

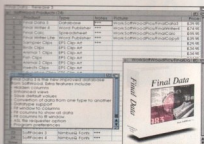
## NEW FANGLED FEATURES

An at-a-glance summary of the latest updates to the Amiga's cheap and cheery database:

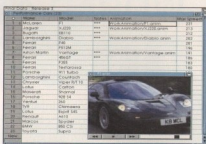
- User-defined sort, search and column views
- Hide columns from view on screen or print out
- Save default for Find and Replace requester
- Conversion of data from one type to another - e.g. from a text to a memo column.
- Extensive user-defined preferences

- Automatically adjust window size to column widths
- Automatically adjust column widths to show all data
- Automatically adjust column widths to fit window size
- Standard Amiga ASL file requester option
- Displays graphics and animations
- Plays sounds
- Slide show facility





A slideshow facility has been included, though this will be a gimmick for most people



Your databases need no longer be dowdy now that Final Data can display animations and play sound

## VERDICT

Final Data has always been a competitive little database, one that is fast, efficient, and simple to use. Lightning quick sorting and searching facilities and flexible editing functions mean that developing and printing databases is as simple a procedure as it ideally should be.

The latest update is slightly disappointing because the new features are generally no more than cosmetic. However, those who previously found the program off-puttingly bland in appearance will welcome the chance to jazz their databases up with graphics and sound. The interface has also received some simple but important improvements in its general ease of use, and one or two true new features.

Of course, we have to be grateful that Softwood are continuing to develop this product line at all. The fact that every Amiga Magic Pack now sold includes Digita Dastore means that newcomers to the market are unlikely to be buying another database in a hurry, regardless of the fact that Softwood's latest release is better.

Maybe there are hordes of old Amiga users out there who have been meaning to get a database for ages and just haven't got round to it yet. Sadly, however, one suspects that this handy product's market will be rather limited, and that this really could be the Final Data of them all.

Regardless of that, it's pretty much the same old perfectly dependable program we've come to expect.

## SPRUCE UP

Release 3 of Final Data, of course, comes with a number of new features. A typical example is the new option that allows users to define sort, search and column views. This really boils down to a method for breaking databases down into subcategories. For example, you could divide your music database into different 'Views' named rock, classical, and jazz so that Final Data will create a sub-list from the overall database. That's no big deal, maybe, but it adds another possible level of helpful organisation to the program.

One complaint about previous incarnations of Final Data was that in comparison to Digita's Dastore it was bland and grey in appearance. Hobbyists who want to embellish their CD catalogue with pictures of pop stars and sound samples will be pleased to find that Release 3 supports graphics and sound files. It will also run animations, though the value of this feature in a database is rather questionable.

To make that data really sing and dance, however, Softwood have also been good enough to include a slideshow facility. Hence you can have graphics updating one after the other, either within their own screen or within the screen in which Final Data is running. The time between pictures depends on the user-defined delay.

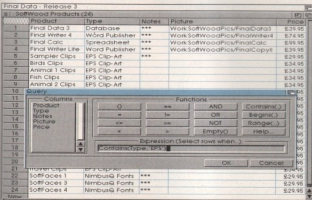
Not only does the Final Data interface look like a spreadsheet, but it also operates on the

same basic principles. Thus, users enter figures and text into cells, and they can have running calculation columns and screen totals. Release 3 continues to borrow essential features from the accountancy packages by offering a hide columns option which means that selected information in a database will not be displayed to others when it is shown on screen or printed.

The option of converting a column's data from one type to another also makes it easier to modify a database once it's created. Changing the data type will often change the way it is formatted for display, as well as the way it's edited for data entry.

Other than this, the update only really tweaks the familiar program to make it more user-friendly. The program will automatically adjust window size to column width, or column widths to show all data, or column widths to fit a window size. You can save the default for the Find and Replace requester, and Data's overall functionality is increased by the addition of a greater number of user-defined preferences than were previously available.

One final point charts the steadily rising demands of Amiga software as time moves on. Final Data will still run on any Amiga running WB1.3 or higher, but Softwood are now recommending it for use with 1Mb+ Amigas running on WB 3.



A complex search requester allows you to locate information easily

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended

512k

RAM

1.3

Workbench

1 Mb

RAM

3.0

Workbench

### PRODUCT DETAILS

Product	Final Data Release 3
Supplier	Softwood Europe
Tel	01773 521606
Price	£39.95

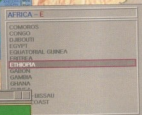
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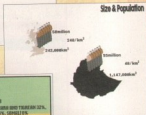
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RELIGION	MUSLIM 60-65%, ETHIOPIAN ORTHODOX 35-40%, CHRISTIAN 1-2%
LITERACY	67%
LANGUAGES	AMHARA, TIGRINYA, SOMALI, GAMBELLA, SOMALI, ARABIC
GDP	\$22,780,000,000
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# Operation database

Paul Overaa

starts a programming project aimed at producing a really easy-to-use database program

Over the next six issues these pages are going to be devoted to the writing of a database program, EasyBaseAC. There are already plenty of commercial and PD/shareware database programs around for the Amiga, so why write another? One reason is that even with the PD/shareware offerings around, no one gives away the source code nor explains how the programs work. One objective of this project is to look at how a database program can be written and provide both the finished utility and the source code to examine!

But that's not the only reason for the series. The aim is to produce a utility that is both useful and easy to use. On-line help is high on the list, so too is a scheme for easy record creation, and I think you'll like the approach I've chosen here. Another requirement is the ability to merge related database files because one of the things I intend to use this utility for is to provide details of Amiga library functions. Readers of my regular AREXX and Assembler programming columns should find this quite useful because they'll be able to take the descriptions provided on disk each month and read them into a single library function database whose contents can be retrieved at the touch of a button.

## DESIGN WORK

As far as the design/coding issues are concerned, I'm letting you in near the start, having only started work on the project last week. Now, I know this is risky but, with the coding approaches I use, any alterations/enhancements, bug fixes (heaven forbid) and so on that need to be made will be straightforward. What I didn't want to do was make everyone wait until the end of the series before delivering any kind of usable program, so you will, in fact, find a preliminary version of EasyBaseAC on this month's cover disk.

There are plenty of things that still need to be added, of course but the current version is usable. I'm developing EasyBaseAC on an A4000/040, but the final executable version, a mere 40k in size, is going to run on all Amigas that have Workbench 2 or greater.

The thing to do now is explain how this version of EasyBaseAC is used. To run the program just open the EasyBaseAC drawer and double-click on the EasyBaseAC icon. No special installation procedures are necessary to run the program from hard disk - just drag/copy the complete EasyBaseAC drawer over to your chosen partition.

## THE INITIAL DISPLAY

The EasyBase help engine is just a cut-down version of the main program and the help file a conventional EasyBaseAC database. When the program first loads it runs the help engine as a separate process and you'll see a display similar to figure 1 containing a list of help topics. Just mouse-select the subject you wish to view and a window will

open to display the help information (see figure 2). At the moment, the on-line help available is at its 'bare minimum' level but the help file will grow over the coming months. This 'click and view' method used with the help file, incidentally, is the basic approach used for viewing the records of all databases.

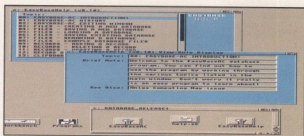


Figure 1 The EasyBaseHelp windows

## THE MAIN WINDOW

By closing or moving the help windows you will see the main EasyBaseAC scroller-based list window. This window is always present when EasyBaseAC is running and closing it (either from the window's close gadget or the 'Quit To Workbench' menu option) shuts

down the program. In addition to this, the main EasyBaseAC program has a Display-Only window and a separate 'Record Creation and Editing' window (used for building record definitions and for editing the records of existing databases).

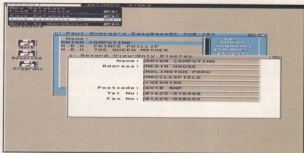


Figure 2 The main EasyBaseAC display-only window containing a trial database

## LOADING

### A DATABASE

Select 'Load' from the Project menu and use the ask requester that appears to choose a database file. Apart from the help database (called help.db), I've provided small name/address (address.db) and Amiga function library (function.db) example databases.

## NEW RECORD DEFINITIONS

Just select 'New' from the program's Project Menu and a Record Creator and Editor window will appear that contains a sizing gadget in the bottom left corner. Alter the height of the window until you've got the number of fields you want, then alter the width until the string gadgets on display look suitable for the information you want to store. At this stage you should type the field names you require into the string gadgets (see figure 3).

Field names at present can contain up to 15 characters and the only restriction on the format of the first field is that it must not start with a space. At the moment, the first field is used as a fixed record sort key and you should bear this in mind when creating records. If, for instance, you were creating a name and address database that you wanted to be sorted by surname, you might build a record description like this:

```
%Surname:
First names:
Address:
<untitled fields to provide extra lines for the
address> Tel No:
```

Alternatively, you could decide to store both first names and surnames together:

```
Name:
Address:
<untitled fields to provide extra lines for the
address>
Tel No:
```

but in this case, if you wanted the database file sorted by surname, when entering data into the records you would need to enter the surnames first in this fashion:

```
Name: Overton Paul
```

When databases are loaded it is always the content of this first field that gets placed in the main display's scrolling list. So, in the first case you'd see a list of surnames whilst in the second it would be a list of Surnames followed by first names. As soon as you are happy with the field names, click on the 'Store' gadget. At this point your new database is ready for use and you'll be provided with an Editing window for entering data. Record information can be entered straight away!

## ON-LINE HELP

At the moment, on-line help is restricted to the EasyBaseAC display that appears when the program first loads. If you have closed the scrolling list help window you can re-start the help engine by double-clicking on the EasyBaseAC icon. Eventually, the idea is to provide context sensitive help by driving the help engine using messages sent from the main EasyBaseAC program!

## SAVING A DATABASE

If you are just saving a previously loaded file, EasyBaseAC will save the file as soon as you select 'Save' from the Project menu. If it is a newly created file that has not been named, this option will display an ask requester to allow you to choose a name for the file. I suggest using filenames with a '.db' extension for consistency, but EasyBaseAC doesn't actually care how you name the files. If you wish to save an existing file in memory under a different name, use the 'Save As' Project menu option.

## THE TECHIES

One of the most important initial design considerations with a utility like this is not so much to get the file structure completely right first time, but to allow some flexibility. What happens, of course, is that as the development proceeds you often decide you want to store additional data items.

With EasyBaseAC I am adopting a format that includes both a global file header and individual record headers. In other words, this sort of arrangement:

```
datafile<file header> { record header<record
data> }
```

EasyBaseAC is being written using Dice C and, as a C structure, the file header looks like this:

```
struct DatabaseHeader {
    ULONG db_1;
    USHORT db_DatabaseHeaderDataSize;
    USHORT db_FieldCount;
    USHORT db_FieldSize;
    USHORT db_KeyField;
    USHORT db_Flags;
    USHORT db_1Flags;
};
```

The four byte identification field is just a protection against users trying to load non-database files into the program, and the way I do this is to use this macro:

```
#define MakeID(a,b,c,d) ((LONG) (a)<<24 |
(LONG) (b)<<16 | (c)<<8 | (d) )
```

to create a four byte header id 'DH00' using this statement:

```
#define FILE_ID MakeID('D','H','0','0')
```

The header size field is an important inclusion because it will allow the preliminary version of the program to continue working even if the size of the header is increased later on.

The program reads the header size and is able to skip over any additional entries that might be found in files produced by later versions of EasyBaseAC. The individual record headers, incidentally, adopt a similar format, only they are currently given a 'RH00' id value.

The field count and field size entries of the database file header have a special use when files are read into the program.

When a user creates a new record definition by altering the dimensions of the record creation windows, the program looks at the sort of Workbench screen and font in use and works out how many string gadgets can be used, and roughly how much text they can contain without the entered text scrolling out of view as you type.

These field count and field size values get stored in the database header and, when such a file is read back in, the dimensions are used to re-open a window the same size as when the record format was created.

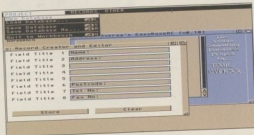
To find out exactly how this window opening is done however you are going to have to wait until next month!

## ACTING/DELETING/EDITING

Once a database file has been loaded (or created), the Editor window can be used to enter the details you wish to store. You can copy any existing record into the editor simply by moving to the main scrolling list display window and clicking on the record entry you wish to work on. Providing you create records whose first (key) fields are different to any existing records, the record information will be stored as a new record. If you create a record whose first field is identical to an existing record then the new information will overwrite the existing database entry.

You update record entries then by selecting the record, altering any of the data except the first (key) field, and then re-storing the record.

To delete a record just select it from the main display list and choose 'Delete Record' from the 'Records' Menu. If, incidentally, you want to expand the width or field count of the record you can do this from the editing window. Simply use the sizing gadget to adjust the window size to suit and then save the database. You will not loose information if you cut the window width so that field information becomes hidden, but if you cut the number of fields being used then only those fields that are on display will be written to disk. The new window size definitions will be used next time the database is loaded (at present, I've not provided any field re-labelling facilities so any extra fields you create will be unlabelled).



Creating a database record description with EasyBaseAC is very straightforward

## CLIPBOARDS

You can copy the details of the currently selected record to the clipboard. If, for instance, you have built up a names and addresses database and were writing a letter with your favourite word-processor, you could select a name, copy the name and address to the clipboard, and then paste those details into the letter.

## GET THOSE BUG REPORTS IN

To assume, only one week into the coding of EasyBaseAC, that we already have a bug-free utility would be naive in the extreme (particularly since I'm only able to test it on a single Workbench 3-based A4000/040 machine). I've had it running under Enforcer etc., and everything seems fine, but if you find that the program doesn't run on your Amiga, or crashes with a Guru message, then write me to care of Amiga Computing. The sooner I know about any snags, the sooner I'll be able to fix them!



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# LightWave 4

## — the next generation

At long last **Paul Austin** delivers an exclusive review of the ultimate in Amiga 3D

**I**f you can cast your mind back to issue 86 of Amiga Computing you may recall a preview of LightWave 4 which promised that a full review of the finished package was already in the post. At last, and a mere twelve months on, postie has finally come good, and I've got the chance to deliver the long awaited goods.

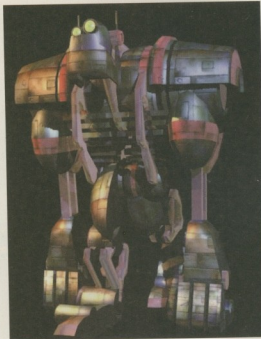
Given the importance of NewTek's latest release and the scale of change throughout from 3.5 to 4.0, I'll be breaking the review over two issues, kicking off with a tour of the latest additions and improvement in Layout.

At first glance there appears little change from the previous incarnation, but look closely and you'll soon discover an impressive collection of new and improved features lurking behind the familiar grey interface festooned with buttons, sliders and envelopes.

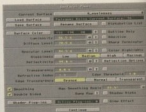
To kick things off we'll start with a stroll along the control panels, the first and obvious choice being the Scene section which, ironically, only offers a couple of subtle changes but important revisions. The first of these is the introduction of adjustable frames per second because an adjustable FPS makes designing for a whole range of applications rather than just video much easier – CD-ROM being a prime example, with playback rates generally hovering around the 15 FPS rather than the traditional 25 FPS of PAL video.

However, perhaps the most important underlying change is LightWave's approach to textural animation in relation to time. In the past the program calculated all its animation in metres per second but that's all changed with the introduction of FPS as the default measuring system. Now, textures animate over FPS, therefore a scene designed at 15 FPS will automatically have textural animation to suit the playback rate. In short, there is much more control and far less guess work within scenes running at non-standard frame rates.

The next new addition is the arrival of hide and show menus for all objects, bones and lights. Although not earth shattering, both can be very handy when things start to get seriously complex or cluttered.



**(1)** An example of LightWave's prowess as an animation system, with superb modelling and texturing combined with a fully actuated skeletal structure that can not only walk but also run around its virtual world



## SURFACE PANEL

Here again, there are some fairly major changes across the board, with much improved reflection mapping options being one of the highlights, including Backdrop only, Spherical map, ray traced & backdrop, and finally ray tracing & Spherical. As you've probably guessed, the two latter examples offer a new and much more flexible method of adding realism – if perhaps at the expense of rendering time – to the reflections options within a scene.

Another excellent addition is an Alpha shadow option which provides an easy method of adding shadow to backdrops or mask objects that have been projection mapped within a scene – 'dancing on the desk effects' – with added believability. There are yet more

## OBJECTS PANEL

After minimal change in the Scene panel, Object control delivers a more dramatic makeover. It's here that the first plug-in, entitled Disp map, appears with its counterpart Object replacement – alias Obj rep – both offering access for third-party developers to produce add-on displacement programs, automated object manipulation and deformation systems and, of course, particle animation software.

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

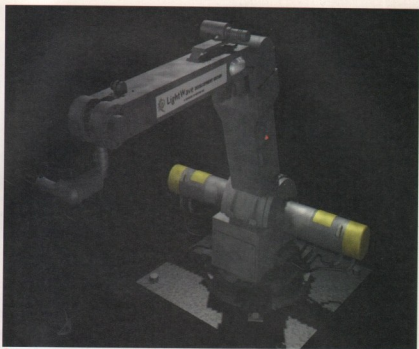
traced scene. An obvious advantage of this is the time saved by reducing the amount of ray tracing calculations in a frame. However, the other essential use is to stop mask objects in a front projection mapped scene from being affected by shadow and object reflections, both of which would destroy the illusion.

Unseen-by-fog is another newcomer and does exactly as the title suggests, thereby enabling certain objects, backdrops and projection-mapped elements to play an uninvited part in scenes employing the fog effect.

# 4.0

## CAMERA PANEL

To be honest, camera control hasn't really seen too many changes, if you exclude the arrival of a motion blur dithering option. In fact, the only big-ish change is numerical input for aspect ratios. For the average videographer altering aspect ratio isn't exactly an everyday event, but for anyone looking to work in film or print, it can often be an essential.



A classic demonstration of IK in action as the arm turns, bends and twists to complete its imaginary and monotonous duty

plug-ins, this time in the textures department. Unfortunately, the promised Steve Worley collection of Essence procedural textures – originally from Imagine – isn't part of the LightWave v4 software compendium.

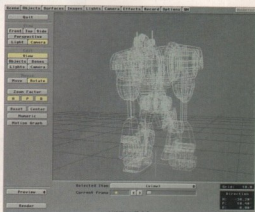
A late arrival in the Surfaces section is the long-awaited, and processor hungry Glow Effect. Courtesy of glow you can add a user-definable aura or incandescence around any surface – no need anymore to slap lens flares everywhere if you need to fake some radiosity. Better still, Glow offers a means of easily generating some very tricky effects, such as realistic lasers, neon lighting and so on, the only downside being the outlandish rendering times that its application incurs.

Needless to say, a plug-in also lurks in this section in the form of a shader plug-in which, like its counterparts, awaits the attention of

third-party developers to produce assorted image processing add-ons for surfaces.

Perhaps the most dramatic change between the finished surface panel and its beta predecessor is the arrival of the surface previews. Although part and parcel of the PC version, it was unsure whether this feature would make it into the Amiga version. Thankfully it has.

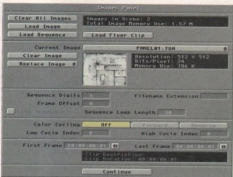
If you open the surface panel and hit the S key, LightWave will automatically render the selected surface to the selected display device, along with a caption containing the name of the surface in question. Better still, holding down shift and the S key prompts a panel where you can define the diameter of the texture on the spheres surface as well as specifying whether you want a checkerboard on the sphere to help define texture transparency.



## I MAGES PANEL

The image section is unique because it's the only section not to boast any major changes. Not surprisingly, support for Flyer Clips has been added to the sequential image section but that's about it.

Unfortunately, there's still no direct support for the PAR, VLM or any other third-party DV system. In fact, apart from a minor change which has been added to accommodate file naming conventions, the panel is pretty much the same as in version 3.5. NewTek would no doubt argue that there's no need to mess with perfection...



## RECORD PANEL

The most notable changes in this section are the option for user-definable file naming conventions and the long-awaited ability to save in a variety of file formats. The former is an obvious attempt to make LightWave files more compatible with the filename requirements of other packages, in particular pre-Windows 95 PCs, whereas the latter is a much more attractive addition for Amiga fans. Courtesy of Elastic Reality - formerly ASDG - it gives LightWave the ability to save out in no less than 19 assorted file formats including IFF 24, pict, jpeg, TIFF, YUV, Targa, and lots more besides.

Add to that 16 assorted alpha save formats and you have a save selection that caters for just about every eventuality. NewTek have even included a fader alpha button to accommodate external video faders, linear keyers, and external compositing programs which may require a specific type of alpha image to control switches that use an alpha image as a fade control.



## OPTIONS PANEL

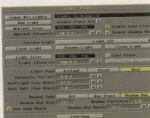
Perhaps the biggest disappointment in the Layout redesign is the lack of improved support for third-party RTG boards. Needless to say, the Picasso II is still catered for with 800 x 600 or 1024 x 768 screenmodes, but unfortunately that's it. The manual once again falls back on plug-ins as a possible solution to the problem by speculating that developers could use them as a means of adding their boards to display available options.

However, this doesn't really offer an answer as to why the one board that is directly supported doesn't actually work correctly in 800 x 600 and 1024 x 768. Although the interface is marginally faster when running a 800x600 display, it's still very clumsy in comparison to the standard display. And worst still, wireframe and bounding box previews flatly refuse to play back.

short, if you want to see your animation before you commit to rendering, the standard display is still the only option.

Unfortunately, there's an even more annoying problem when it comes to display size. Although Layout has its limitations in high resolutions, Modeller is simply superb - especially in 800 x 600. However, if you render Modeller from LightWave the two must share the same resolution to work correctly - which can obviously cause problems, if like me, you use the import and export functions frequently during a modelling session, yet still want to preview animations from within layout.

The obvious solution is to run the t



## LIGHTS PANEL

The changes to the Lights panel fall into the interesting, rather than essential bracket, a prime example being the Global Flare Intensity. Basically, this provides a means of ramping all the lens flares in a scene up or down automatically. This feature was a specific request of the boys and girls in the SeaQuest DSV production team in order to simplify the process of controlling lens flares during power ups, power outs and explosion sequences.

Individual flare control is another area that's seen something of a facelift, with one of the biggest changes being the ability to add a user-defined Anamorphic distortion. This is ideal for the sci-fi classics, as seen in Star Trek TNG, as warp jumps and other spatial anomalies. Combine that with user-definable streak settings which include the ability to set streak, intensity, density and sharpness, and you arrive at a much more comprehensive set of tools for controlling flare effects. The final and fairly subtle tweak is the addition of envelope control over intensity fall-off. Not exactly earth shattering, but very handy when the need arises.



ⓐ A very curious example of design, animation and the ubiquitous lens flares as a space craft hurtles through a virtual city, lights flashing and presumably sirens blaring

## Jargon box

**RTG** - retargetable graphics card  
**Inverse kinematics** - automated relational movement between objects and bones  
**Plug-ins** - input options for third-party enhancements  
**PAR** - Personal Animation Recorder  
**DV** - Digital video  
**ASDG** - the makers of ADPro and MorphPlus  
**VLM** - VLab Motion  
**Goal** - the target object or bone in a kinematic chain

## EFFECTS PANEL

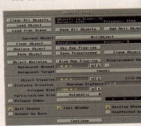
In most cases, LightWave's control panels have undergone a minor reshuffle rather than a complete overhaul, mainly in order to accommodate the odd new feature. However the Effects/composition panel is a major exception.

Effects and, more importantly, composition are massively undervalued aspects of LightWave. Hopefully, the overhaul will help to redress the balance by providing a much clearer indication of exactly what's on offer and, more importantly, what's actually going on during a composition.

Apart from the physical change, the panel also holds some new features including foreground dissolve with envelope, plus a new high/low colour feature for colour keying operations.

For some bizarre reason, composition is also the home for the control system for the glow effect and the now ubiquitous plug-in which, in this case, allows access for third-party image filters.

Unfortunately, like Essence, the rumoured ImageFX image processing plug-in is nowhere to be seen - watch this space, you never know with NewTek...



programs separately in different resolution and simply save and load alterations from a solution perhaps, but hardly a pretty one.

To finish on a good high note, there is very welcome news when it comes to Picasso II. Thankfully, NewTek have returned the original 3.0 render display for the Picasso which actually lets you keep track of the rendering process without constantly diving off Amiga N & M keys.

Aside from the still unresolved RTG problem the only practical change to the panel is the arrival of a Show field chart option.

## SCREAMERNET

For the big boys in the rendering business, there are a few minor changes to LightWave's shared rendering solution. New arrivals include an option to switch between ScreamerNet original and ScreamerNet 2 which unlike its predecessor, supports distributed rendering over a suitable network - up to 1000 CPUs rendering simultaneously. Arguably the biggest disappointment of ScreamerNet in version 3.5 was the lack of batch rendering. Fortunately, NewTek have seen the error of their ways and built the ability to have a maximum of 16 scenes queued and ready to go prior to a ScreamerNet session.



## HARD COPY - MANUALS

In the past, LightWave's documentation has tended to deliver the essentials rather than in-depth examples for the functions on offer. To a much lesser extent that tradition still continues. However, to be fair, there is a marked improvement across the board, with much more detail and a writing style that leans far more towards actual application.

In order to make navigation of this massive package a little simpler, NewTek have wisely split the manual into two separate volumes, one acting as a user guide while the other delivers a reference to all the available functions. The former is particularly useful for the beginner courtesy of a large collection of tutorials for both Layout and Modeller.

Put together, the two add up to almost 800 pages of well written essential information. My only real complaint is that the indexing of the two volumes could be a little clearer - as finding very specific bits of information can be a little more arduous than it need be. Other than that a "good job" as they say in the States.

basically overlays a cross-hair on the layout display which is meant to aid object placement, whilst at the bottom of the panel you can import new plug-ins to the LightWave database, and define the current working directory for load and save operations.

## INVERSE KINEMATICS

At first glance, life on the main layout screen seems almost identical to 3.5. In fact, the only obvious difference is the change from XY, XZ and ZY view buttons to a far more comprehensible Front, Top and Side selection. However, look a little closer and you'll notice what has to be the most important new arrival in the entire package, namely the mysterious IK Opts. Believe it or not, this insignificant little gadget is the key to Inverse Kinematics.

After a little experimentation, it's obvious the arrival of features like bones, child bone and auto Key adjust in 3.5 was no accident. When these features, especially the bone options, are blended with the new IK Opts you arrive at something spectacular.

In most 3D programs kinematics can be a painful experience, but in LightWave it's both a dream to use and very simple to set up, the robot arm being a classic illustration of the technique. However, you can use bones in exactly the same way - and with even more impressive effect.

Firstly, you add the basic elements - which in most cases will be just two null objects.

Then you add the component objects in the kinematic chain, all of which should be parented one to the other starting with one of the null objects - that's where the child bone function can come into its own if you're using bones to form a kinematic chain.

Finally, you simply instruct the last object in the chain to treat the remaining null object as its goal.

The only real difference between bones and objects is that with objects you have to pay close attention to the pivot point of the individuals in order to make the joints function correctly - and more importantly realistically. From then on it's playtime! You simply grab the second null object and move it around - at which point all the objects or bones will bend at their joints in an attempt to track the goal.

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

All things considered, this is a perfect and painless solution which has been made all the better since the beta with the addition of optional limits on the movement, or angle of rotation for the various elements in the chain. For example, a forearm can now be constrained so that it revolves at the elbow but won't do the impossible, no matter how much kinematic force is applied.

Needless to say, bones are the major beneficiaries, with believable flexing and bending of organic forms - all without a single seam or hinge in sight. Effortless kinematic movement in a matter of minutes...



A famous example of just how good LightWave images can be. Again, superb modelling combined with excellent animation as the hero of Desert Storm makes tracks in the sand and blasts away at the buddies

## WATCH THIS SPACE

Although not immediately obvious, kinematics also provides a solution for another missing link in the LightWave chain. In previous revisions it was impossible to target one object to another, but thanks to IK Opts we finally have a solution.

Because objects/bones don't need to be physically linked to each other, or the goal they're tracking, making one object 'watch and follow' another is really easy.

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

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

## WHAT'S IN THE BOX

Although there have been rumours that the LightWave 4 CD would be fit to burst with assorted freebies, it actually contains roughly 87MB of assorted scenes, images, objects, fonts and surfaces.

This may not seem too impressive considering the storage capacity of a CD, but the material that has been included is well worth having, featuring a collection for excellent example scenes, pro quality objects and example scenes which, if explored, go a long way towards explaining many of the mysteries of LightWave. Particularly nice touches include a useful selection of type 1 fonts and an equally handy array of surfaces.

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended

8 Mb RAM Workbench Hard Drive



### PRODUCT DETAILS

Product LightWave  
Supplier Premier Vision  
Tel 0171-721 7050  
Price £695 plus vat

### SCORES

Ease of use 85%  
Implementation 90%  
Value For Money 82%  
Overall 89%

## KEEP PLUG-IN AWAY

Given the profusion of plug-in options throughout the program, it's pretty obvious that they are seen as playing a big part in the future development of LightWave. However, after browsing NewTek's FTP site it is also pretty obvious that most developers are pointing their programming power towards other LightWave friendly platforms.

During our initial preview the likes of WaveMaker, Dynamic Motion Module, Power Macros and Impact were all on the way for LightWave 4.0. This indeed may be the case, but there's still no sign of any of them for the Amiga version.

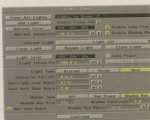
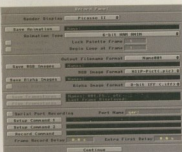
Admittedly, this could be down to NewTek's ever-changing release date for the Amiga version. However, 'Brad Peblar's, initial claim that a number of projects "were well under construction," over a year ago, seems a little well let's say, hopeful...

On the other side of the coin, NewTek have indeed come good with their deal with ASGG regarding loaders and savers as a standard element, and will cater for all the major image formats, across all platforms - thereby taking a lot of the pain out of post production.

## RECORD PANEL

The most notable changes in this section are the option for user-definable file naming conventions and the long-awaited ability to save in a variety of file formats. The former is an obvious attempt to make LightWave files more compatible with the filename requirements of other packages, in particular pre-Windows 95 PCs, whereas the latter is a much more attractive addition for Amiga fans. Courtesy of Elastic Reality – formerly ASDG – it gives LightWave the ability to save out in no less than 19 assorted file formats including IFF 24, pic, Ipeg, Tiff, YUV, Targa, and lots more besides.

Add to that 16 assorted alpha save formats and you have a save selection that caters for just about every eventuality. NewTek have even included a fader alpha button to accommodate external video faders, linear keyers, and external compositing programs which may require a specific type of alpha image to control switchers that use an alpha image as a fade control.



## LIGHTS PANEL

The changes to the Lights panel fall into the interesting, rather than essential bracket, a prime example being the Global Flare Intensity. Basically, this provides a means of ramping all the lens flares in a scene up or down automatically. This feature was a specific request of the boys and girls in the SeaQuest DSV production team in order to simplify the process of controlling lens flares during power ups, power outs and explosion sequences.

Individual flare control is another area that's seen something of a facelift, with one of the biggest changes being the ability to add a user-defined Anamorphic distortion. This is ideal for the sci-fi classics, as seen in Star Trek TNG, as warp jumps and other spatial anomalies. Combine that with user-definable streak settings which include the ability to set streak, intensity, density and sharpness, and you arrive at a much more comprehensive set of tools for controlling flare effects. The final and fairly subtle tweak is the addition of envelope control over intensity fall-off. Not exactly earth shattering, but very handy when the need arises.



A very serious example of design, animation and the ubiquitous lens flares as a space craft hurtles through a virtual city, lights flashing and presumably sirens blaring

## Jargon box

**RTG** – retargetable graphics card  
**Inverse kinematics** – automated relational movement between objects and bones  
**Plug-ins** – input options for third-party enhancements  
**PAR** – Personal Animation Recorder  
**DV** – Digital video  
**ASDG** – the makers of ADPro and MorphPlus  
**VLM** – VLab Motion  
**Goal** – the target object or bone in a kinematic chain

## EFFECTS PANEL

In most cases, LightWave's control panels have undergone a minor reshuffle rather than a complete overhaul, mainly in order to accommodate the odd new feature. However the Effects/composition panel is a major exception.

Effects and, more importantly, composition are massively undervalued aspects of LightWave. Hopefully, the overhaul will help to redress the balance by providing a much clearer indication of exactly what's on offer and, more importantly, what's actually going on during a composition.

Apart from the physical change, the panel also holds some new features including foreground dissolve with envelope, plus a new high/low colour feature for colour keying operations.

Unfortunately, like Essence, the rumoured ImageFX image processing plug-in is nowhere to be seen – watch this space, you never know with NewTek...

## OPTIONS PANEL

Perhaps the biggest disappointment in the Layout redesign is the lack of improved support for third-party RTG boards. Needless to say, the Picasso II is still catered for with 800 x 600 and 1024 x 768 screenmodes, but unfortunately that's it. The manual once again falls back on plug-ins as a possible solution to the problem, by speculating that developers could use them as a means of adding their boards to display available options.

However, this doesn't really offer an answer as to why the one board that is directly supported doesn't actually work correctly in 800 x 600 and 1024 x 768. Although the interface is marginally faster when running a 8000x

display, it's still very clumsy in comparison to the standard display. And worst still, wireframe and bounding box previews flatly refuse to play back. In short, if you want to see your animation before you commit to rendering, the standard display is still the only option.

Unfortunately, there's an even more annoying problem when it comes to display sizes. Although Layout has its limitations in higher resolutions, Modeller is simply superb – especially in 800 x 600. However, if you run Modeller from LightWave the two must share the same resolution to work correctly – which can obviously cause problems, if like me, you use the import and export functions frequently during a modelling session, yet still want to preview animations from within layout.

The obvious solution is to run the two



programs separately in different resolutions, and simply save and load alterations from dds. A solution perhaps, but hardly a pretty one...

To finish on a good high note, there is some very welcome news when it comes to the Picasso II. Thankfully, NewTek have returned to the original 3.0 render display for the Picasso, which actually lets you keep track of the rendering process without constantly diving on the Amiga N&M keys.

Aside from the still unresolved RTG problem, the only practical change to the panel is the arrival of a Show field chart option. This

## SCREAMERNET

For the big boys in the rendering business, there are a few minor changes to LightWave's shared rendering solution. New arrivals include an option to switch between ScreamerNet original and ScreamerNet 2 which unlike its predecessor, supports distributed rendering over a suitable network – up to 1000 CPUs rendering simultaneously. Arguably the biggest disappointment of ScreamerNet in version 3.5 was the lack of batch rendering. Fortunately, NewTek have seen the error of their ways and built the ability to have a maximum of 16 scenes queued and ready to go prior to a ScreamerNet session.

# Conference call

The Amiga is not exactly up to its eyes with networking products.

**Neil Mohr** puts an American solution to the test

**N**etworking is one of the most important aspects of business computing. The ability to quickly share, process and analyse information is of paramount importance, and the ability to do so is taken for granted in the PC and Mac world, so what about the Amiga?

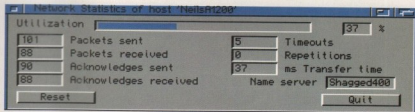
Well a very good networking standard was introduced by Commodore called SANA-II, and a couple of ethernet cards were produced by Commodore themselves, but perhaps due to the Amiga not being accepted as a business machine, or Commodore not pushing networking as standard on any Amiga, or possibly manufacturers just producing products for the entry level Amiga machines, there are only a few SANA-II products around.

Well a low-cost, fully SANA-II compatible networking solution has appeared in the form of Amiga Link. This sort of low-cost network is just the thing the Amiga could have benefited from years ago if it was fitted and supported as standard. For instance, the Mac has really benefited from Apple's foresight of including the Apple Talk network in every Mac model, as not only does this give it the advantage of having networking out of the box, but you get the added bonus of the system software supporting networking, so the programs you run on the Mac all support and take advantage of networking as a matter of course.

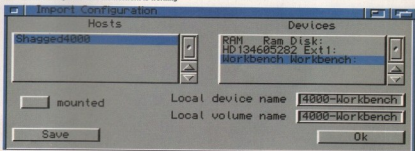
## DEMANDS

The other advantage is as people use the network and take advantage of all its facilities, they are going to demand more from the system software. So the Mac has gained useful functions like multiple printer sharing and print spooling over the network, as well as having full user and group options allowing you to restrict access to machines over networks.

When I first got hold of the Amiga Link package I really had no idea what sort of horrors installing it would hold, so when I had our



Find out exactly how hard the network is working



You can link to any other machine's drives as if they were on your own machine

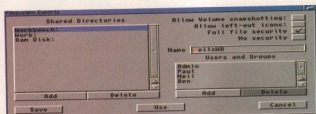
three Amigas networked together and sharing devices in under 15 minutes I was pleasantly surprised. It is also very reassuring that the Amiga OS is that simple to extend, which is the way it should be.

Installation is very simple. Initially you need to set up your network of Amigas. Amiga Link works from a small interface that plugs, unusually, into the disk drive port – if you have external disk drives this does not matter as you just plug the interface into the external drive's through port, though you will only be able to have, at most, two external drives.

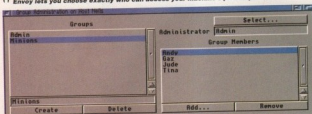
Each interface is connected together using standard coaxial cable, with the ends of the networks having an end cap. Up to 20 Amigas can be on a single Amiga Link network, and

the total length of this can be up to 100 metres. As each stretch of coaxial cable you get with Amiga Link is five metres this works out quite nicely, and as most Amiga companies use their machines in close proximity, this is more than long enough. If needed, AmiTrix do supply the coaxial cable in other lengths and apparently the total number of connected computers and length of the networks can be exceeded, but the reliability of the network could suffer depending on the amount of local electrical interference.

Once all the interfaces are in place and connected together with the coaxial cable, you can install the software, for which there are two options. As standard, you now get the original Amiga Link software as well as the far more



Envoy lets you choose exactly who can access your machine's private parts



System Administrators can safely develop a good superiority complex in safe surroundings with Envoy

advanced Envoy software. The original software has a number of advantages over Envoy, being simpler to set up as well as running under Workbench 1.3 and from a floppy.

Setting up the Amiga Link software is very straightforward, with an icon to copy the network device driver and an Amiga installer script to set up the network file system. When installing the file system you are given the choice of having the current machine being able to export devices, allowing other machines access to hard drive partitions or any other storage device on that machine over the network. Normally, you would want this as you still have to specify these drives as being accessible over the network from that machine, but if security is a consideration you can choose not to.

## FLEXIBLE

The network is very flexible when it comes to adding or removing computers at a later date. The hardware seems very robust as you can disconnect and reconnect machines at any time, and the software also handles this very well. Adding extra machines is just a case of fitting the interface to the machine then connecting it up with the coaxial cable. The machine can be added to the end or in the middle of the existing network, and once the software has been installed you will be able to access other machines straight away.

If you will be regularly removing a computer from the network, AmiTrix can provide extra 'T' connections that you place in the network where the machine should go - this allows machines to be added with no disruption to network traffic at any time.

To allow other people access to your hard drive partitions or other devices on your machine, including CD and floppy drives, you need to mark these as exported devices using the export program. The Amiga Link file software only works on the device level and has no additional security measures. Therefore, any device you marked as exported will be available to everyone on the network, but I would imagine that in most cases, like in the Amiga Computing office, this is not a problem. You

can make these devices automatically available each time you reboot your machine by clicking on save. This creates a new file in the WBStartup drawer that automatically places the device on the network.

Similarly, if you want to get access to a device on someone else's machine you need to import that device using the import program. This has two list views from which you choose the machine you want to access and then the device you want to mount. Clicking on mount will immediately make your machine mount that device, and you will see the device icon appear on the Workbench. If this happens to be a hard drive partition that has icons left 'left out' on the other machine's Workbench you will also get these appearing, which can cause a bit of a clutter.

Another helpful feature here is one that allows you to change the name of the volume you are about to mount. The main reason for this is that when you first mount an imported device it has the name of the machine prefixed in front of the device name. Therefore, if you have an AmigaDOS or installer script that refers to the original device name, they would stop working unless you remove the machine's name extension.

In use, it is hard to find fault with the Amiga Link software. You could complain about lack of security or the inability to have password protection for users and groups, but there is a simple solution to this in the form of the Envoy software that comes with Amiga Link. Hardware wise, Amiga Link is simple to set up and appears quiet robust in use, and as it is a peer-to-peer-type network, speed should not suffer with additional machines connected.

Amiga Link is very good, but for the money you are paying I would have preferred the transfer speed to be higher as these hover around the 30K/sec mark, which is usable but not exactly staggering. As a low cost network, Amiga Link is your only choice and is something that should have been available a long time ago. Now when is someone going to write some SANA-II games so we can have a good blast in the office?

## ENVOY

Also available for use with Amiga Link is the Commodore written Envoy networking software which has a number of major advantages over the conventional Amiga Link software. Instead of working on the device level, Envoy allows you to export any directory and give it a specific export name. So our FTP download directory, which is hidden in a good few other directories, can be exported onto the network as downloads.

Possibly more important is that once Envoy is installed using a standard Installer script, proper groups and users can be set up, allowing you to specify if necessary, who can and cannot gain access to directories. This is also backed up with full password protection ensuring there can be no unauthorised access.

One currently under-used part of Envoy is its services which make Envoy fully extendable, giving the network new capabilities. Therefore, at any point in the future you can add a new service such as a conference or talk service, allowing you to communicate with others on the network, or anything else that may appear.

Envoy also works with AmiTCP, and allows mail and FTPing to be performed between machines. Using AmiTCP does open up the possibility of accessing PC machines over the network because you could either FTP them or, using the right software, actually mount their drives as a normal Amiga device.

*Amiga Link is very good but for the money I would have preferred the transfer speed to be higher*

## SPEED TESTS

Operation	Envoy	AmigaLink
File Create	12 files/sec	13 files/sec
File Open	12 files/sec	13 files/sec
File Delete	21 files/sec	25 files/sec
Dir Scan	197 files/sec	21 files/sec
Seek/Read	11 seeks/sec	14 seeks/sec
Create File	27K/sec	36K/sec
Read from File	25K/sec	37K/sec
Write to File	30K/sec	34K/sec

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended



Kickstart



RAM



Kickstart



Hard Drive

### PRODUCT DETAILS

Product	Amiga Link
Supplier	AmiTrix
	5312 - 47 Street, Beaumont AB, Canada T4X 1H
Price	US\$3275 - 2 units \$135 - 1 unit
Tel	+001 (403) 929 845
E-mail	sales@amitrix.com

### SCORES

Ease of use	90
Implementation	85
Value For Money	72
Overall	85



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available NO



## Benchmarks

A3000 030 Oktagon SCSI 2

Test	FFS	AFS	Unit
DirScan	409	1780	File
CreateFile	227	1073	k/s
ReadFile	244	1363	k/s
Seek and write 4bytes (start & end)	x100	53.6 Sec	4.4Sec

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Italy: Db-Line  
South Africa: MLSystems  
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"Without AFS! -no thanks"

## BORED WITH THE AMIGA

When Escom first 'saved' the Amiga after the Commodore fiasco, I held high hopes that they would build the machine into something which would put today's competition to shame.

However, in the light of the recent inactivity by this company to produce anything worthwhile, I'm not sure if my first impressions were correct. Yes, Escom have put the A1200 back on sale, but they seem to already be showing signs of getting bored with their new machine.

There are all the new games coming out for it? There are some, indeed, but nowhere near as many as there are for rival machines such as the 'super' consoles and PCs.

Christmas is a time when a company should be pushing their products for all they are worth. Not so with Escom. While rival computers are receiving extensive limelight with newspaper and television advertising campaigns, Escom have simply left their Amiga on the starting blocks as if it will be able to go out and sell itself!

If the attitude of the people at Escom does not change in the foreseeable future, I am highly tempted to trade in my A1200 for another machine - perhaps a PC - for which the Amiga truly does die, something which - if left to Escom - may unfortunately not be in the too distant future.

As an Amiga magazine you are in a prime position to rally your readers to lobby the staff at Escom in the hope that they can pull their socks up and keep the Amiga in production and, most importantly, in popular demand. Please see what you can do.

C Burley, Sheffield

Amiga Technologies reported that they had a disappointing Christmas, but it comes as no surprise to you or I, nor many other people.

There does need to be some promotion of the machine. If you read the Undercover Amiga article in January's issue you will know how difficult it is to buy an Amiga these days, and with Acorn getting at least part of a huge internet deal with industry giants Oracle instead of Amiga Technologies, it makes you wonder if AT are doing anything to rectify the situation.

Unfortunately, while we print articles praising the amazing qualities of the Amiga, we are writing for a converted audience. No PC owner is just going to pick up *Amiga Computing* just to see if there is an alternative to what he already has, the same as most Amiga owners would rather spend their money on magazines which talk about the machines they own. I believe this year will be make or break for Amiga Technologies. They have had problems with the new CE mark standards imposed by the EC and they have achieved quite a lot considering they haven't actually been going for a very long time, but as you say, they need to pull their socks up before they lose all support.



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## HOLA AMIGO!



Nowadays, almost everyone writing to you is telling you how the Amiga should be in the future and that's what I'm going to do too.

I am studying electrical engineering and frequently have to present information with lots of graphs and mathematical expressions, for which I use a PC equipped with Windows. I use Word to write the text, Word's formula editor for the mathematical expressions, Excel for the graphs, and sometimes a CAD program to make plans. When I have all the basic work done I edit the layout of the document in Word and then print it. The last step is very hard as Windows is not very efficient - it needs lots of memory and things do become very slow, but at least I can do my work and the results are very impressive.

I can't do any of this with my Amiga because although there are some very good word processors, spreadsheets and CAD programs (does anyone know of any formulae editors?), there isn't a standard way of passing data (objects) between different programs like OLE in Windows. The Amiga has the dipboard, but if a program wants to use the data there it must understand that data. Things have become better with datatypes, but this is not an ideal solution because datatypes are only bitmaps which means the print out from them is very bad. To top it off, how many programs give you a datatype for their data format anyway?

I think this is one of the principal directions in which the OS must grow. I can live without virtual memory, network capabilities, or internet access - all these things can be done by third party developers. But a standard way to

interchange objects between applications must be integrated into the OS by Amiga Technologies.

Now some words about your mag. I think *Amiga Computing* is the best magazine for the Amiga. Your reports are clever and about interesting matters, and the aesthetic is very pleasant. The only thing I don't agree with are the demos of commercial programs on the covers. I would prefer you to invest your money in shareware and amateur programs which are the best the Amiga has.

Salvador Fandino Garcia, San Sebastian, Spain

You know, you're quite right. The Amiga does need some form of object interchange, and a lot of the other things people go on about could be integrated by third parties, but as you say, it would have to be done properly.

It would also almost certainly mean that the Amiga's OS would have to run from a hard drive, but that would be no bad thing anyway. As for your comments about developers giving datatypes for their file formats, I think that would be a great idea and could mean that Multiview (or a similar program) could become a universal file viewer for programs like DOpus. It would also increase programs' abilities to import foreign file formats.

Finally, we actually ran a formula editor on one of our covers last year (July 95's in fact). It needed MUI which was on the same coverdisk and was called *FalconMath*.

There are other equation editors available now on Amint, try the misc/math directory.

# PC/MAC EMULATOR?

When I was reading the Workbench 96 article in the January issue of *Amiga Computing*, I could not help to think that WB96 would be like Windows95 or a System 7 clone. I do agree on some features that need improvements (printing, networking) and the addition of an AREXX recorder and small things that are currently addressed by PD software, but for the most part, if WB96 is implemented as described, it would be just like other operating systems. Where is the innovation? Why should we follow what others have done? If Mister Ben Vost has a lack of imagination, he should ask Amiga users for input. We would be more than happy to do so.

I am part of two Amiga user groups in Ottawa, Canada. We could send Mister Vost a FAX, e-mail, or even snail mail features that would really blow other operating systems in the water! And not just the Mac or Windows, but Unix, NextStep, OS/2... I wonder if Ben Vost has ever really used an Amiga.

Denis Desjardins via e-mail

May I speak on a matter of personal alarm over a few things I've seen in your magazine in the last few months? They all deal with where the Amiga is now and where it is going (and then again, what little has appeared in *Amiga Computing* recently that hasn't focused in some way on that issue?)

I feel as though some bad decisions, and some unfair judgements, have surfaced concerning our favourite machine in recent times, some of them through your magazine.

First of all, I would like to address the issue of the Amiga's operating system. The comparison made recently in *Amiga Computing* between the various OSs was very interesting and "one of those things we always wanted to see." But I feel this article made the same mistake many people have been making lately, that is the separation of OS from GUI. This was

supposed to be a comparison of Workbench 3.1 to System 7.5.1 to Windows 95. Isn't there something wrong here? Workbench is little more than a graphical representation of the filing system. AmigaDOS, or Amiga OS (whatever they're calling it these days) is where the real power is. Exec and Intuition form the core of an extremely powerful operating system whose power, in some ways, has only begun to be realised. Workbench certainly does it no justice.

## FOCUS

Granted, the review did include some information about the OS itself but it focused primarily on the Workbench and software included with it. This is in comparison to the Macintosh where you used System 7.5.1, the whole OS, rather than just (what do they call it? the Finder?), the true analog of Workbench. And Windows 95 seems to be just some big convoluted inseparable mass. Technicalities? I think not. If you're going to compare operating systems, compare the whole operating system. I think that despite the weaknesses of Workbench, when viewed in this light, the Amiga's OS is far ahead, in terms of speed, power, efficiency, and ease of use, of the competition.

Another issue that concerns me is the debate over custom chipset versus graphics card for the next Amiga. Many people are using this as a complaint over the Amiga's lack of compatibility with other platforms. Come on, people, that's the point! If you want an IBM compatible, get an IBM compatible. Macintosh users don't complain about the lack of compatibility between their platform and the IBM PC. They view that as a strength, not a weakness. We Amiga owners should too. If we don't stop viewing ourselves as a little upstart computer sub-class, rather than a separate platform in its own right, nobody will!

To elaborate further on the issue of the custom chipset, I don't see why on earth we

should ditch this in favour of some graphics card. Very few graphics cards can keep up with even the OCS or ECS for animation speed much less AGA. My 486 PC can get about 3.1 from a precalculated Lo-res animation. The 68030 Amiga, on the other hand, consistently passes 30 fps in Lo-res, even in HAM mode and it doesn't animate much faster than it is when it was a 68000 machine. Very few graphics cards can do this, and if they can, they're likely to be very expensive. Besides, the digital processing power of the blitter and copper is still amazing. Plus, the still-high-quality sound system and all sorts of I/O originate in the chipset.

The chipset is one of the Amiga's great strengths. The only real weaknesses of the current chipset are lack of 24-bit modes, low resolutions, and the slowness of the planar display. It would only be a natural progression for the AAA chipset to bring 24-bit graphics, a 64-128-bit video bus, higher resolutions, and addition of chunky pixel modes, not to mention improved sound capabilities (it's about time to the Amiga. This combined with the AmigaOS and the PowerPC could help launch a surge of Amiga use in the video and multimedia industry.

Michael Webb via e-mail

I am the owner of an A3000 and have been since its introduction. I did not purchase it because of its similarity to any other computer. At the time I bought it, IBM compatibility was available through the 286 power Bridgeboard and Mac compatibility through the original AMAAX system. I did not buy either of these as I saw no point in having them. I bought my A3000 because, for its price, it is the best graphics system available, and so might even argue that it was the best graphics system at the time, period. Neither Macintosh, nor the PC compatible could do close in the animation abilities of the Amiga without very extensive and expensive upgrades.

To this day, I have not added an accelerator and still I have friends coming to me to do animations on my system using Imagine 3.1.6, though they have PowerMac 8100A/V system and Strata Studio Pro software. They claim animations done on my A3000 using DLook better than theirs - partly because Amiga doesn't drop frames when it is overloaded as the PowerMac is known to do.

Much of the success of the Amiga in the world of its animations, can be attributed to ECS graphics chips in the machine. They're this cheap computer system almost as powerful as a graphics workstation as an SGI Indy, without the high software costs. This is why I bought the computer for and what I believe made it a limited success in the United States. Yes, other computers can display more colours than my system, but in order to animate the most need MPEG decompression hardware added to them. Even 100MHz Pentium PPC640-based systems have annoying problems to their animations without these upgrades must animate in lower resolutions and smaller screen sizes than my Amiga can.

Perhaps in living only a short drive

## SHOULD CANON BE CANONISED?

I recently purchased a new Canon BJC70 colour printer. It's a little beauty - little being the operative word! Anyway, as you're undoubtedly aware, this type of printer is nearly always only shipped with printer drivers for DOS and Windows on the PC. This, of course, may be standard procedure with any new printer these days and it shows a willingness to help the end user get better results.

Unfortunately, this is of no benefit to us lucky Amiga users! I am a registered user of the excellent Studio 2 printing enhancement program though, and while I would have undoubtedly been able to find a suitable driver, there was not a dedicated driver for the BJC70, unlike other Canon printers. When I returned the warranty card to Canon (UK) Ltd, I included a letter expressing my concerns. Bearing in mind that this letter was only sent on a Monday morning, I was very pleasantly surprised to receive two separate envelopes with the Canon stamp on them in the early Thursday morning post.

One envelope contained the two year extended warranty I'd requested (a steal at only £25!), the other, from a separate Canon department contained a disk full of Canon drivers. As I found out in a readme file, it was actually a cutdown version of 'Canon Studio', although a fairly recent one as it contained BJC70 specific drivers.

And even though this one works perfectly, not satisfied with

what they had already done for me, they'd also included a letter with a reference number and phone number on it explaining they were currently working on a new BJC70 printer driver for the Amiga and that I would receive it free of charge as soon as it was available.

All this goes to prove that they had read my letter thoroughly and not only taken note of the points I raised, but acted on them what must have been almost immediately, when you consider that I received their reply only three days after I had posted my letter! Now that's what I call great service and eagerness to enhance customer satisfaction and relations. I have absolutely no reason to doubt that every customer is, or would be, treated any differently.

I'd be very grateful if you would see fit to include an undoubtedly cutdown version of this letter by way of thanks and appreciation for their efforts, and to make fellow readers of *Amiga Computing* aware of not only what should be expected of any major company, but the level of service they will definitely receive from Canon (UK) Ltd.

David S Duncan, Chester

It's good to know that there are still companies out there that take their obligation to their customers seriously. Nice one Canon.



## AND FINALLY

I'm writing to you to take to task Ben Vost's article on operating systems. The article set out to compare the top 'three' operating systems. Problem is, you ignored the 32-bit OS that has somewhere in the range of 10,000,000 installed users - OS/2. I've used an Amiga since 1987, a PC since 1988, had the misfortune to need Windows and discovered OS/2 (2.1) back in 1992 - now I use Warp (v3.0). The object-oriented desktop of OS/2 has similarities to the object-oriented Amiga Workbench, you really should have compared it as well. Here's your sidebar list with OS/2 added in:

Add-in System Extensions	Yes, via the Startup Folder
24-bit support	Yes, direct support
Multiple Screen Support	Yes
Networking	Yes
CD-ROM Support	Yes
Comms & Internet	Yes, IBM's excellent Bonus Pack contains them
Security	Yes
Pre-emptive 32 bit Multitasking	Yes
Runs from floppy	No
Foreign Language Support	Yes
Plug & Play	Yes
CLI & GUI	Yes - OS/2 Desktop, OS/2 CLI, DOS CLI, Windows 3.x GUI
Systemwide Programming Language	Yes - REXX
Representational Interface	Yes
Universal Menus	Partial
System pref changes during op.	Yes
Three Button Mouse Support	Yes
Undelete Function	Yes - user selectable on a drive-by-drive basis.
Hard Drive Self Repair	Yes
Hard Drive Optimisation	Yes - especially so under HPFS
Virtual Memory Support	Yes - both dynamic & user selectable
Quickstart Applications Menu	Yes - user configurable LaunchPad
Disk Compression	Yes - third party
Style Guide	Yes
Help For The Disabled	Yes
Online Help	Yes - more comprehensive than Win95 - context sensitive, hypertext links, etc.
Dynamic RAM Disk	No

There's more, but that basically covers your own areas. As I need to swap between the PC & Amiga environments many times each day, I find OS/2 & Amiga more easily workable than OS/2 & Windows (3.x or 95).

Indeed OS/2 has many similarities to the Amigas' OS, but, one must say, has done much better and far more professionally. Anyway, that's my two cents worth, next time you guys do a comparison, at least try to remember that the world's leading 32-bit Operating System is OS/2, remember Win95 is not a true 32-bit OS, indeed much of Win95's code is 16-bit.

A last quibble. Thanks for a fine magazine, yours is one of only two foreign mags I pick up (the other being Byte), I just wish it'd get here earlier - rather than two months behind England...

Lance Lyon, via e-mail

### all aids to a better working environment.

You'll notice that I didn't ask for the animations that Windows 95 plays when you are copying files or checking your memory status, and I didn't ask for the filetyping that can really make Mac use a pain - I just want the Amiga to have the best operating system (and front-end if you want to be picky Mr Webb) possible. And to my mind, the best OS around is an amalgam of the features of Workbench, Windows and the Mac OS (and OS/2, NextStep and so on).

Why shouldn't Amiga Technologies learn from the mistakes of other OS providers and make a next generation interface all Amiga users can be proud of. And it's no use saying 'Ooh we have to keep the custom chips' when it is woefully slow compared to even the cheapest graphics card now available when run under the same conditions. The whole point of the Amiga going CHRP would be to take advantage of all those graphics, sound, ethernet and other cards available for other platforms at

cheap prices and get them to run on our Amigas.

And why would anyone buy a CHRP Amiga? Because by that stage the Amiga would need to have proper multimedia support, video and audio inputs and outputs, an Amiga Technologies graphics card with built in genlock, etc. It doesn't matter what it is that makes the Amiga unique in the future, but it does matter if no-one can do anything with the machine because its operating system and hardware isn't modern enough.

By the way, I have owned Amigas since 1987 when the A500 first became available in the UK. I have had an A3000T now for over three years and have expanded it to the point where there is no further room in the case, so yes, I think I can say that I have used an Amiga. As part of the jobs I have held, I have also become at least a journeyman when it comes to PC use and have even spent a time building them, and I use Macs every day as our office is full of them.

Apple's corporate headquarters I have a somewhat unique view of the differences between the Amiga and the Macintosh, but the article written by Mr Vost would seem to imply that the Amiga and its users would be best served by making the Amiga very much more like the Mac. Most of his references to changes in the Amiga operating system referred directly to System 7, and his suggested changes to the hardware would seem to imply that a CHRP (Common Hardware Reference Platform) design is the one Amiga Technologies should adopt, specifically a PowerPC-based system, using a PCI bus, and with no custom chips.

When the first PowerMacs came out, almost all of the operating system that came with them was emulated 680x0 code. They actually ran slower than the 68040-based Macs when running the same task. In light of this I can hardly believe that emulating the AGA chips in software will allow a PPC604-based Amiga to run as fast as an Amiga 4000 when animating, or doing anything else for that matter. If anything, the custom chipset needs upgrading, or even complete redesign, but abandoning the idea of blazingly fast graphics on the system bus in favour of making the Amiga like other computers will only hurt Amiga Technologies here in the US, and will contribute to the extinction of the Amiga, not advance its cause. Changes made to the hardware and operating system of the Amiga should be seen as improvements to the entire system and not just an attempt to build another Macintosh or PC.

I am not stating that I disagree with all of Mr Vost's observations. I agree that the PowerPC is a good chip for Amiga Technologies to adopt, and that the Amiga hardware and operating system need to be more than simply dusted off. But, quite frankly, if Amiga Technologies brings out a CHRP-based Amiga why should anyone buy it instead of a CHRP-based Macintosh when the price would likely be very close, especially considering that the Mac already has a much wider software base?

In short, the Amiga is much more than a Macintosh imitator with an offbeat operating system and a small software base. It is a separate computer system with its own strengths and these should not be compromised in the search for similarity.

Edward K. Smallwood

### Ben Vost replies...

As pleased as I am to have received so much feedback from one of my pieces, I feel all those letters that are printed here have missed the point (with the exception of Mr Lyon's e-mail covering OS/2. The reason I didn't cover it was because a) I am not very familiar with OS/2 and b) only wanted to cover one OS per platform, and since all the flavours of Windows outsell OS/2 by a fair amount, I decided against it). I was not advocating that the Amiga should be turned into a Mac or Windows clone, merely that other systems have features that the Amiga ought to have, not because they are Windows or System 7, but because they are



## DISK DOLDRUMS

As a subscriber to various Amiga magazines I have found their help invaluable. When I bought my A1200 it came with German instructions, and as there is no one around here that can help, I have been battling alone.

The problem I am having is that when I try to run certain disks or programs, error requesters keep appearing. I hope to be able to solve these problems with your help before I die as I'm 71-years old, and it is good gymnastics for my brain to battle with computers:

- 1) Cannot find V37 reqtools.library. How do I clear up this problem, and where do I find v37 of the reqtools.library. Should this be dragged into Libs, or what other place?
- 2) I need explode.library, or I need explode.library.v4+. I have found where the explode.library is located but where do I drag the file to so I can get rid of this problem?
- 3) Unable to open your tool. Here I have a number of problems with C:AmigaGuide, C:More, C:Installer and Sys:c/mpp. Where can I find mpp, and where do I drag it to? The same goes for the others. I have tried dragging AmigaGuide into Tools and a requester appears saying it already exists there. Should I drag it into Tools or C?

Edith Bosson, France

The problems you are experiencing are things I am sure every Amiga owner has had the misfortune of suffering and are due to a number of reasons. To start off, one of the Amiga's strong points is its ability to have new features easily added at a later date through the use of what are known as run time libraries. These allow programs to access new features that were not originally available in the operating system. This all started years ago when the ARP library was first written which gave programmers access to a decent file requester, for the time. This was then quickly overtaken by the req and then finally the reqtools library.

This is all very well and good, but if you do not have these extra libraries you are stumped as you are normally unable to run a program without them. To answer your first two problems, the reqtools and explode are two commonly used libraries - reqtools particularly so. Normally, you find overdisks do not carry these extra libraries, but disks from PD houses that have been specifically put together for one program will have the libraries on the disk.

The problem here is that unless you actually boot your machine from the floppy disk, it will not be able to find these libraries. As you have already guessed, you need to copy the library file from the floppy into your hard drive's Libs drawer. If you open the floppy's drawer and choose show all files from the Workbench menu, you should normally find a Libs drawer icon in which the libraries are stored. All you need to do now is drag the required library across to your Workbench partition's Libs drawer. Unfortunately,

things are not always as simple as this. If you do not already have the library then no problem, go ahead and copy the new library into your Libs drawer. If, however, you already have a copy of the library then you should not automatically copy this over as it could be a more recent and, therefore, more up-to-date version than the one you are to replace it with.

As there is no simple way for beginners to check the version of libraries, I would say that unless you are having problems running programs that are specifically stating that a library is too old, do not replace it. The simplest way of telling if one library is newer than another is to check the library size. A more recent version will almost always be bigger than an older version because new features will have been added, so making the file bigger.

Your other problem involves the way people are expecting hard drives and disks to be set up. Again, many floppy disks have things set up so they work fine if you boot your machine from the floppy, but as soon as you try to do anything from the hard drive you get all sorts of errors appearing.

When people create a text or AmigaGuide file they give a specific path where the program used for viewing the file should be found. Even if you have a copy of this program, as you do in the case of the AmigaGuide, you will get an error message unless there is a copy of that program in the specified path. In your case, you would

## SUPER KICKSTART

I use an Amiga 3000 bought back in 1991 that came preloaded with Workbench 1.3. When Workbench 2.04 became available I immediately updated my 3000 and in doing so created a problem that has been frustrating me for some time now.

Although my Amiga operates well with Workbench 2.04, try as I may I have been unable to get rid of the System 1.3 partition.

This is wasting precious hard drive space, slows down response time, and sits there intractable with its icon glaring at me every time I open my Workbench. How can I get rid of it?

Joseph Cohn, Fairfield USA



An A3000 handles the KickStart differently from any other Amiga model. Whereas all the other models have the KickStart stored on a ROM in the computer as standard, the A3000 stores it on a specific hard drive

partition called System x.x, where x is the version of the KickStart - this does have the advantage of keeping all the files completely separate.

If you really want to get rid of the 1.3 partition there are only two options available to you. Firstly, you could just format it which would leave you with a blank 6MB partition - not the best solution but the most straightforward.

The problem you have is that you will never be able to repartition your drive because you have to leave your System 2.04 partition alone, and if this is damaged you will not be able to boot your machine at all, not even being able to get an AmigaDOS window.

The only other option is to buy the 3.1 KickStart ROMs and fit these to your A3000.

You could then re-partition and format your hard drive, and replace the files on it, but even this is not a perfect process because if you have important files on your System 2.04 partition, you would need to back these up before hand.



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need to copy AmigaGuide to the C directory, or change the tooltip to simply read AmigaGuide.

In the long run, neither of these solutions is very practical because you would either have lots of copies of AmigaGuide all over the place, or you would have to change every icon's tooltip. However, there are two more attractive alternatives.

Firstly, you could use a program such as ToolManger to place an icon on your Workbench for Multiview. This would allow you to drop any AmigaGuide or text file into the icon and view it. The other alternative is to use a ToolAlias program such as MCP. This allows you to get Workbench to ignore certain programs and use others in its place, so when you double-click on any text file's icon that tried to run MMPP, you could, instead, get the file to load into Multiview.

If people creating icons would stick to the standard Amiga viewers, or just Multiview, then people that do not like these can just use ToolAlias or a ToolManager icon to use their preferred programs.

## HACK MAD

I have been attempting to install SysHack, but to no avail. I can get the program to alter the sizes of the sliders but cannot get the 3DLOOK option to work at all. I have added the Run >NIL: SysHack 18 14 16 13 3DLOOK line just after the C:SetPatch command in the StartUp-Sequence, so what am I doing wrong? All the screen shots in your February issue of ImageVision have 3D gadgets, so it must be working for you.

Mark Mountford, Staffordshire

I think you have missed something here. ImageVision's buttons always look that way, and SysHack just affects the look of the Window gadgets and sliders. If you want to effect the look of system buttons, the new Urouhack does give your programs a more MUI look, and works quite well, replacing SysHack and MagicFrames.

## PC CONVERT

I am a programmer on the, dare I say it, PC, but have had an Amiga for a few years now. I have only really used it for games but now I have decided to start using it for more serious purposes. I have just bought a 270Mb HD and am now trying to get to grips with using Workbench rather than Windows, which I admit is easier for a lot of purposes. However, there are a few areas that I am not familiar with, and they are not mentioned in the manuals and books I have.

I understand that every icon has a .info file which has in it the data for the icon's picture and position. I would like to know how the data is stored and how I could edit this data. I have tried to use the Workbench tool IconEdit but this seems limited to icons of 80 by 40 pixels or less, yet I know icons can be huge. Perhaps there is a way I can save DPaint brushes and convert them to icons?

I am also interested in how the system-configuration works. I know this contains data for the colours and resolutions of Workbench, speed of the mouse movement, keyboard sensitivity and the mouse sprite. Is there a program that allows you to edit this? Could I replace it with a program written in Blitz or any other language, or would I have to use 68020 assembly language?

Finally, is it possible to use the standard SVGA non-interlaced monitor I have on the PC with my A1200, or do I have to shell out an extortionate amount of money to get a multisync monitor so I can read clearly the smaller fonts on Workbench?

Eric Palmer, Grimsby

I am glad to hear you find the Amiga's Workbench easy to use. Version 3 did bring quite a lot of useful improvements over the earlier versions, even though you still need a few programs such as Magicmenius to make it really easy to use.

I cannot tell you how the icon data is stored, but I doubt it would be complicated. The best advice I could give you is to

get hold of the program Iconian. This is an extremely powerful icon editor, with more functions than you will probably need. Along with the ability to have icons of any size, it has direct support for the Amiga clipboard so you can cut and paste brushes from DPaint straight into Iconian. It also has Datatype support so any picture file that you have the Datatype for can be loaded directly into Iconian. The picture is then automatically scaled and dithered to your settings.

The system-configuration file is a throw-back to the old Workbench 1.3. Stored in the devs drawer, it holds basic information about the screen colours and position, pointer sprite and keyboard speed, and is now really redundant. Workbench 3 still reads this file but all its preferences are overridden by the new Prefs program that gets its settings from the files stored in ENV:Sys. These are set by the Amiga's preference programs. Apart from using the old 1.3 preference program to change the system-configuration, you would have to get hold of a program called PPrefs that can be found on an old Fred's Fish disk.

It should be possible to use an SVGA monitor on your A1200, but the problem is with setting your machine up. What you need to do is copy the MultiScan monitor driver into your DEVS:Monitors drawer, which will either be in your storage drawer, or you can get it off the Storage Workbench disk.

Once done, double-click on the monitor icon and load up the ScreenMode preference program. You will now be able to select the new multiScan modes that the SVGA monitor can use. The problem here is as soon as you select save, the screen on a normal TV will go haywire and you will need to switch off the TV and computer and then hook up the SVGA monitor and restart the computer. If all has gone well you should have a nice rock steady Workbench display. This happens because SVGA monitors cannot take the normal TV signal that normal Amiga screen modes work at.

# acas

Do you have a problem? Do you sometimes find yourself poised over your Amiga with axe in hand, spouting profanity at the stubborn refusal of your software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDC Media, Media House, Adlington Park, Macclesfield SK10 4NP. Alternatively, e-mail us at ACAS@acomp.demon.co.uk

## Jargon box

**SCSI** - Small Computer Systems Interface, an ANSI standard interface that allows you to have up to seven peripherals connected at any one time.

**IDE** - Integrated Drive Electronics

**Zorro** - the name of the expansion slots in the Amiga. The A1000 had the original Zorro 1, while the A2000 had the 16-bit version, with the A4000 sporting the extended 32-bit Zorro 3 version.

**KickStart** - the name of the Amiga's Operating System. Specifically it is normally used to refer to the version of the operating system you have. Version 3 is Workbench 3.

**Partition** - when a hard drive is being set up you can split it into a number of separate sections which are treated as completely separate drives.

**Datatypes** - Datatypes were introduced with Workbench 3 and are modules for loading different file types. In theory, any program can use datatypes for loading files, thus creating a system-wide translation tool.

## WHAT'S YOUR INTERFACE?

I have an A1500 and a friend of mine recently gave me a hard drive. What I want to know is how can I get the drive to work, is it an IDE or SCSI drive, and what interface do I need? The drive is made by Rodime. I can find no mention of its capacity, and it has a 50-pin male connector at the rear. Also, is anyone selling accelerators for the A1500 these days? There must be some bargains out there for 030/040's, but no-one advertises them any more?

David Daly, County Cork, Ireland

If the drive has a 50-pin interface then this means it must be a SCSI drive because IDE drives have either 40 or 46 pins, depending on whether they are 3.5 or 2.5 inch mechanisms. Therefore, to get this to work you will need a Zorro 2 SCSI interface, such as the Oktagon 4008.

What you must remember is that the A1500 is just a rebadged A2000, so the same peripherals will work with both machines. Phase 5 and GVP produce 060 accelerators for the A1500/2000, and another option would be the Apollo 030 board. You should also remember that most of the A1500/2000 accelerator cards come with SCSI interfaces, so you could kill two birds with one stone.





Affordable gubbins ahoy!

Dave Cusick sails the good ship  
Amiga into the warm waters  
of the shareware sea...

**T**his month's Public Sector definitely reflects the impressive diversity of PD and shareware. We've got demos, diskmags, game creation packages, Dungeon Master aids, adventure games, and Amos extensions. As the old saying goes, the best things in life are free, although sometimes there's a registration fee involved...

## AMOS INTUITION EXTENSION v1.3A

Programmed by: Andy Church  
Available from: F1 Licenceware  
Disk No: F1-120

Amos users are a very patient bunch, bearing with their favourite programming language even though it's always lagged a long way behind the cutting edge of Amiga technology. Fortunately, various Amos devotees have, in recent months, dragged it forcibly into the '90s, first with the AGA Extension (reviewed a couple of issues back) and now with the Intuition Extension.

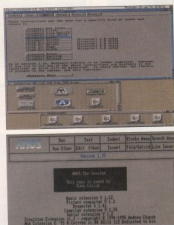
One of the greatest problems with programming in Amos is that the language is totally system unfriendly.

The irritating Amiga-A multitasking combination (instead of the usual Amiga-M) and the program's habit of opening a spare blank screen are bad enough, but they are not half as annoying as the hideous Amos

requesters and the need to create nasty Amos screens rather than using proper Workbench ones.

Fortunately, thanks to the AMOS Intuition Extension, there is an alternative to learning C programming. The Intuition.lib file, which needs to be placed in the AMOS system drawer, comes in two flavours, catering both for Classic and Pro programmers. The extensive range of commands added by this library are all neatly described in the comprehensive AmigaGuide documentation, which helpfully cross-references entries and provides some command templates.

It would have been helpful if a few example files had been included, but this isn't a major omission and I suppose disk space was limited. This is another essential purchase for keen Amos programmers everywhere because it adds a whole new lease of life to the language.



**C** The extensive AmigaGuide documentation means using the Intuition Extension shouldn't be too tough

**C** With plenty of extensions installed, the prospect of programming in Amos becomes almost pleasant...

## AMOSZINE #10

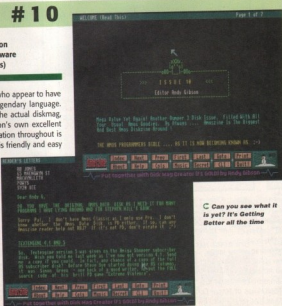
Produced by: Andy Gibson  
Available from: F1 Licenceware  
Disk No: F1-121 (3 disks)

More Amos stuff from F1 Licenceware, who appear to have become the lone champions of the legendary language. The first of these three disks contains the actual diskmag, unsurprisingly written with Andy Gibson's own excellent Disk Mag Creator, meaning the presentation throughout is extremely impressive and the interface is friendly and easy to negotiate.

As usual there are plenty of articles, ranging from readers' letters to general Amos-related news stories, personal opinions, and discussion of programming matters.

The other two disks are filled with archived bits of source code, demonstrating techniques and enabling keen Amos'ers to exchange ideas and methods. These are all well commented and many are discussed in articles on the first disk.

The whole package is definitely worth a look if Amos is your mug of steaming herbal stuff.



**C** Can you see what it is yet? It's Grotting Better all the time

## NOBODY LIKE YOU

I want to hear from you if you have any program, whatever its purpose, which is considered worthy of review. Whether it will be freely distributable public domain, shareware or licenseware, if you feel it's of sufficient quality to merit coverage then stick it in a jiffy bag or padded envelope and send it in with all haste. Although Public Sector receives too many submissions to cover them all, I promise I'll at least look at your work... even if it's yet another Lottery program or Klondike card set. It does make my job a lot easier though if disks are clearly labelled. Please also include a cover letter detailing the disk contents and price, and giving some basic instructions. The magic address is:

Dave Cusick  
PD submissions  
Amiga Computing  
Media House  
Adington Park  
Macclesfield SK10 4NP

# BATMAN DEMO

Produced by: Batman Group  
Available from: Mon PD



Batman: it starts out dark and moody...

I've never really been a big demo fan, largely because I just don't see the point in talented programmers wasting their time making fancy texture-mapped cubes rotate and bouncing balls zoom around the screen when they could be employing their talents in producing something altogether more, well, useful. The Batman demo starts out well, but alas falls into the usual trap eventually.

The opening sequence is eerily atmospheric, with dark visuals and some suitably sinister music. The Caped Crusader stands high above Gotham City as the lightning flashes and the thunder rolls, and then suddenly an ill-defined polygon spacecraft shoots past like some sort of frontier reject, and things are somewhat spoilt. After that it goes rapidly downhill, and before you know it, you're watching rotating texture-mapped cubes and animated running Cheetahs.

It's not as though all Batman references are then abandoned, however; it's just that from there onwards, all you get are a large Batman Returns poster scrolling up and down, and a wireframe model of Batman's mask thing spinning slowly around. It really is a bit disappointing that what starts out looking like an impressive animation deconstruction into a rather run-of-the-mill technical workout. It could have been so much better.

The frightening aspect is that Batman is probably still the most imaginative demo I've seen in a while.



...it finishes up crap and cheesy

# PARASITE

It's Dungeon Master! No, wait; it's got a two-player split-screen mode. It's Bloodwych! Alright, so originality wasn't high on Mr Waters' priority list when he sat down in front of his trusty machine to commence production of his latest effort. But graphics and style obviously were, and so was playability.

Parasite scores highly for its slick presentation, which puts many commercial offerings to shame. If Parasite was a car, it'd be something like a Capri; not new, but certainly attractive. If it was a television program it would be Baywatch; nice to look at, and without any sort of pretence of a plot. You see, in a sentence, Parasite is a tasty first-person 3D maze walkaround thingy, with knobs on.

It's an AGA-only game, and the moody graphics and the fun-packed, often confusing two-player option are what set Parasite apart from the numerous Black Dawn clones currently knocking around the Public Domain.

There are only really a couple of complaints I can level at Parasite. Firstly, it appears that two mice are necessary for the two-player mode (just like Lemmings... blimey, there's a blast from the past). Secondly, if you don't happen to have a handy chum with an extra rodent, the walky-fighty action can feel a little dated at times. Still, once you've cracked the control mechanism (which is not especially complicated) you really can get engrossed in a game of this kind. Not bad at all.



Not exactly a new idea, but Parasite's playable enough all the same

# MORSE CODE TRAINER

Programmed by: John J Cassar  
Available from: John J Cassar

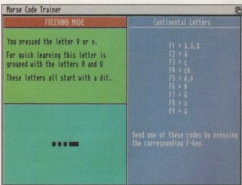
The latest version of this rather specialised program is impressively slick, with a wide range of features.

There's a 'freehand' mode in which the user can simply press keys and find out the appropriate morse code signals. Helpfully, the program also lists other letters with similar signals so that groups of associated letters can be learnt. The complete alphabet is, of course, covered, along with continental letters, numerals, punctuation, procedure signals, informal amateur CW abbreviations, international Q-codes and RST codes (although I confess to not knowing what half of those actually are).

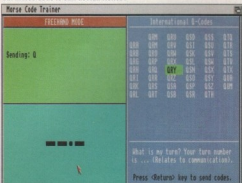
Morse Code Trainer also supports the Farnsworth method, in which letters and numbers are transmitted at a relatively low speed allowing distinctive rhythms to emerge.

There are plenty of drills to practice, and the multiple speed settings allow you to start out at a comfortable pace and work up to full pelt.

The presentation is excellent, with a colourful and uncluttered screen layout and a sensible overall design. Whilst it will obviously be fairly limited in appeal, Morse Code Trainer is an accomplished effort which serves its intended purpose extremely well. The program should run on any Amiga and is available directly from the author for £2. By the way, it's shareware, so radio buffs making regular use of Morse Code Trainer ought to send Mr Cassar a crisp fiver.



It's not as high-tech and trendy as e-mail, but morse code is still useful. Monast



Dot dot dash, dot dot dash

# GRAPHIC ADVENTURE CREATOR (GRAC) v2.0

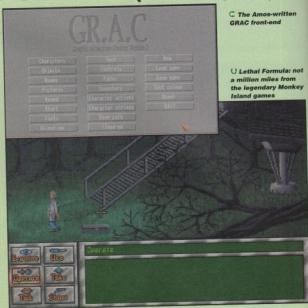
Programmed by: Edmund Clay  
Available from: F1 Licenceware  
Disk No: FG-001 (2 disks & printed manual)

If you've always wanted to create your very own Monkey Island-style pointy-clicky graphic adventure but could never be bothered cracking some nasty programming language, then GRAC is the ultimate solution. A far cry from graphic adventure creators of yesteryear, which basically produced text adventures sprinkled liberally with some static images, GRAC is capable of creating some really impressive games. An example game, Lethal Formula, is proof of just what can be achieved with this excellent system.

GRAC allows you to tie together images and animations created in other packages such as Deluxe Paint to create a believable game environment. Music and sound effects can, of course, be added too. Some of GRAC's fancier features include character scaling for realistic perspective effects, a script editor which is vastly improved from GRAC 1 to include 31 new commands, the facility to include up to 32 background objects in every room, and the option of switching between characters at any point in a GRAC game.

The whole package costs £6.99, including an excellent 40-page manual which talks you through the entire game creation process. From helpful advice on designing background graphics to a detailed look at the GRAC scripting language, everything you'll need to know to create top quality adventure games is included in this well-written booklet. There is also a step-by-step tutorial, which demonstrates the basic operation of the GRAC editor.

This is most definitely the best non-commercial games creation package in existence. I can't recommend this program enough to eager game designers, and I confidently predict that over the next few months Public Sector will be flooded with scores of cracking GRAC-created adventure games.



© The Amos-written GRAC front-end

U Lethal Formula: not a million miles from the legendary Monkey Island games

## IMP PRO v0.620

### UTILITY of the month

Programmed by: Zach Forsyth  
Available from: Aminet (as game/role/ImpPro620.Jha)

As anyone who's ever participated in a fantasy role-playing game such as Dungeons & Dragons will know, a Dungeon Master's job is not an easy one. His task is not only to conjure up a believable fantasy environment in the minds of the adventurers, but also to handle all the rules and behind-the-scenes details.

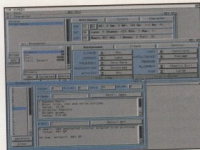
ImpPro makes the task much simpler by placing a variety of useful aids at the DM's fingertips. An intuition-based modular program, ImpPro can keep track of game time, generate monsters using information from its large monster database, create suitably impressive names for characters and titles, and even generate lists of shops for towns and supply details of price and availability for the wares they sell.

It can also display a scrolling dungeon map which the author hopes will soon be linked to an events module, making it much easier to run dungeon romps. Once monsters have been slain, treasure hoards can be swiftly generated and experience points doled out to the players responsible.

Other impressive and incredibly helpful features include the facility to simulate the rolling of dice, either individually or in large quantities, and to keep track of monster and character hit points, as well as allowing swift access to important gaming

tables such as those listing saving throws and hit rolls. Many of the modules interact with one another so, for example, details of defeated beasts are automatically recorded in the Game Log.

Whilst ImpPro is not yet finished, it is already an essential program for any DM. Although specifically tailored for the Advanced Dungeons & Dragons game, the world's most popular RPG system, it can easily be adapted for use with other fantasy systems. In the future, extra modules are planned, most notably including ones to handle horses and combat, and basic details on constructing your own modules are thrown in too. Totally excellent



U Fridd Gwyno takes on a motley collection of beasts armed only with his trusty staff, eager to lay his mits on the small, gem encrusted crystal brazier with pictures. AD&D: so much better than it looked in E.T.

© The fantasy city of Muckaleeford: in the words of Ben Kenobi, "You will not find a more wretched hive of scum and villainy"

## SOMETHING HOT IN A COLD COUNTRY

F1 Licenceware

31 Wellington Road, Exeter, Devon EX2 9DT  
Tel: 01392 493580  
E-mail: steve.f1@compuserve.com

John J Cassar

31, St Mungo Avenue, Townhead, Glasgow G4 9PG

Mon PD

217 Wyllan, Hainault, Wymondham, Norfolk NR11 1JL  
Tel: 01693 4551620

Roberta Smith

190 Falkland Way, Hampstead Garden Suburb, London NW11 1JL

Tel: 0181 4551620



# CD-ROM



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The Power CD-ROM for the Amiga 600/1200 plugs directly into the PCMCIA port and provides a direct SCSI-II and SCSI-II interface, allowing up to six additional devices to be connected. What's more the Power CD-ROM features a 'Hot-plug' which allows you to connect and disconnect the CD-ROM and any other additional devices even when the Amiga is switched on.

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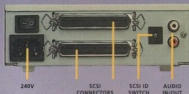
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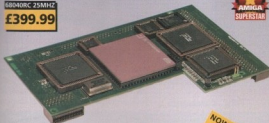
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# POWER.

# Video

**Frank Nord** takes a look at some of the most popular video recorders and cameras to see which is most suitable for your editing needs

## ALL HANDS TO THE DECK

First up is our selection of video recorders, starting with the cheapest and working our way up...

### PHILIPS MATCHLINE VR757

Price: £429.99 Tel: 0181-689 4444

The cheapest deck in our round-up, the Philips Matchline is a very good-looking machine with unusual top-of-deck controls and a stylish remote handset. For a relatively cheap machine, the Matchline has an extremely good picture and its four head mechanism gives good re-recording fidelity. As is becoming the norm, the Matchline features PDC in addition to the now familiar Video Plus+, so it will be good for off-air recording sessions as well as editing.

Editing features on the Philips include an assemble edit feature for up to eight edits, and Philips have taken the precaution of adding a synchro edit socket on the back of the machine which can cope with a wide variety of connector types. The machine automatically performs a pre-roll to ensure that your in/out points are matched to your requirements. Finally, the deck also caters for 16:9 recording and will automatically switch a compatible wide screen television over to wide screen mode when playing them back.

**Connections:** 2 x SCART, stereo audio in, stereo audio out, synchro edit socket, front video and stereo audio connections

**Features:** Synchro edit, assemble edit (both with pre-roll), Video Plus+, PDC, Index searching, 16:9 recording, NICAM stereo

**Format:** VHS



### MITSUBISHI HS-M1000

Price: £699.99 Tel: 01707 276100

Mitsubishi's gold-sprayed recorder is getting on a bit now, being the oldest recorder in the bunch we are reviewing, but that doesn't stop it from being the best edit deck in our round-up. Although its looks may be ostentatious eighties in style, its performance leaves little to be desired. The only S-VHS deck in our selection this month, the M1000 has a full complement of useful functions.

For a start, the M1000 has the ability to play back NTSC recorded tapes, although it can only do so with the linear stereo track on the tape, not the Hi-Fi one, and it can also play back and record the specially formulated 16:9 broadcasts from television. The M1000's Jog/Shuttle dial is used to choose options from the on-screen display when recording or setting video functions and gives a very fast visual search. Index marks can be created and

deleted manually, which is very handy for finding those special moments on your tapes and the M1000 has the ability to play an indexed section over and over again indefinitely should you wish it to.

Perhaps more useful for the budding editor is the Mitsubishi's date and time insert function which will add cg text to your recording to make it easier to catalogue or timestamp. A good deck for a very reasonable price.

**Connections:** 2 x SCART, Y/C, stereo audio in, edit socket, front video (CVBS and Y/C) and stereo audio connections (All gold plated connectors)

**Features:** Assemble edit, index searching, fast visual search, 16:9 record and playback, NTSC playback, child lock, datestamp function, on-screen controls, NICAM stereo sound

**Format:** S-VHS



# madness

## JVC HR J725

Price: £469.99 Tel: 0181-450 3282

JVC's new stereo video is another stylish looking deck. The controls on the front panel and remote are all well laid out and the picture and sound quality is up to JVC's usual standard.

There are two outstanding features on this recorder for editing. One is the extremely fast visual search with 14 x normal speed. The other is JVC's random assemble edit feature which allows the user to set up eight edit points from a tape and reorder them as desired. The video performs a pre-roll to ensure that the edit points are as accurate as they can be without any sort of timecoding, and results are generally good with this system.

The video comes with the ubiquitous Video

Plus (with the oft neglected 'add time' feature. This will become obsolete when PDC comes to all channels, but until then it remains a feature only found on a few VideoPlus+ compatible decks and the original VideoPlus+ handset) and the becoming-ubiquitous PDC for off-air recording, and has the usual complement of facilities. In short, a good buy in the sub £500 bracket.

**Connections:** 2 x SCART, stereo audio out, edit socket, front video and stereo audio connections

**Features:** Random assemble edit, Video Plus+, PDC, index searching, fast visual search, NICAM stereo sound

**Format:** VHS



## CAMERA ACTION

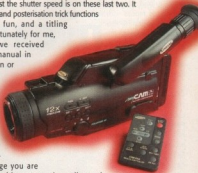
Starting with the cheapest again, we present four cameras that might suit your budget, needs and format. All the cameras we reviewed came with a standard set of accessories which included a battery, battery charger, shoulder strap and tape. The JVC camcorders also came with an adaptor to play back VHS-C or S-VHS-C tapes on standard VHS or S-VHS video recorders. You can buy one of these separately, but expect to pay about £20 for a motor wind version like those included with these cameras. Don't be tempted to buy one of the cheap ones that retail for £10 or less as these are hand-wound and quite often damage your tapes because of over tensioning.

## SAMSUNG VP-U12

Price: £459.99 Tel: 0181-391 8258

Our first camera up for testing is Samsung's very cheap U12 model. The U12 actually manages to look slightly more expensive than its price tag should warrant. The only giveaway is the tacky looking viewfinder arm which is plastic and feels insecure. The viewfinder itself is mono, unsurprisingly, but the picture from it is sharp and clear. The camera is in the mid-range for weight coming in at an acceptable 0.8kg, and the mono microphone is set well back on the body to avoid lens noise from the autofocus motor.

For such a cheap camera you may well be surprised to learn that it has a variety of tricks up its lenscap such as a portrait mode, sports mode, and high speed mode, although the manual doesn't actually mention how fast the shutter speed is on these last two. It also has a fader and posterisation trick functions to add to the fun, and a tilting function. Unfortunately for me, the camera we received came with a manual in either Norwegian or Swedish, neither of which languages I am particularly fluent in, so I had a little trouble, but providing you get a manual in a language you are familiar with, this camera is well worth auditioning if you are on a restricted budget.



**Connections:** Video and audio out, external Mic. DC RF

**Features:** 12x Zoom, remote control, tilting, program modes.

**Special effects:** Fader, Posterisation, interval recording (for time lapse)

**Format:** Video8

## GOLDSTAR DOUBLE DECK RECORDER DV171

Price: £799.99 Tel: 01753 500400

The only twin format recorder in the round up, the Goldstar is a death star of a deck. Big, black and bulky, it has a Hi8 slot on the left of the machine and a standard VHS slot on the right. The LED display has been widened accordingly to provide information for both tapes and the machine is obviously designed for recording from one format to the other. However, the quality of the deck, while satisfactory, is not outstanding, and the choice of VHS rather than S-VHS does seem a little odd in combination with a Hi8 tape as the best quality won't be achievable in the transfer from one to the

other. The recorder also has pretensions towards standard home use with VideoPlus+ and PDC recording and a child lock.

The recorder also has manual index insertion and deletion functions, but the lack of any A/V connections must limit this deck's attractiveness to the home editor.

**Connections:** 2 x SCART

**Features:** Synchro edit (from one deck to the other), manual index insert and remove and index searching, child lock, VideoPlus+ and PDC, NICAM stereo sound

**Format:** VHS/Hi8



## JVC GR HF900

Price: £749.99 Tel: 0181-450 3282

Our first camcorder from JVC in this round up is a neat square VHS-C Camcorder which weighs in at just under 0.8 of a kilo.

This little box is feature rich with a list that can start with stereo audio facilities (along with an external mic connection), a powerful floodlight for those poorly lit parties, a colour viewfinder, that, unlike some, is quite true to the actual colours recorded to tape (apart from a slight yellow tinge), and an image stabilising feature. The HF900 doesn't



stop there though. It also has a wide range of trick features to suit every occasion, as they say.

There's a 'widescreen' mode that chops the top and bottom off your footage to give it that cinema-mascope feel, and a sepia mode that turns everything a dull brown to make it look like you are actually using a very old super 8mm camera with very old stock instead of a state-of-the-art piece of far eastern technology.

If you are shooting at dusk or dawn you can turn on the twilight function which changes the white colour balance to try to ensure that your colours are a bit more true to life. There's also the usual gamut of portrait modes, sports and high-speed modes with vastly increased shutter rates for capturing the action as it happens.

Overall, the HF900 is a great little camera, particularly since its price drop of £50.

**Connections:** Video (composite and Y/C) and stereo audio out, edit, external Mic, DC RF

**Features:** 12x Zoom, remote control, tilting, program modes, focus fixing, image stabiliser, limited selection of preset titles (wedding, Christmas, birthday, etc.) Special effects: Widescreen, Sepia, Twilight, Fader, interval recording (for time lapse)

**Format:** S-VHS-C

## Jargon box

**PDC** - Programme Delivery Control. PDC is currently used by BBC2 and Channel 4. It sends a signal out at the start and end of programmes so that video recorders can start and stop recording a programme at the appropriate time. This should mean that even if a football match goes into overtime, you won't miss anything.

**Nicom** - Near Instantaneous Compounded Audio Multiplex. A stereo broadcast system developed by the BBC and adopted by the UK and several other countries for stereo transmission.

**Pre-Roll** - a method to help get edit points right. Because videos take some time to start playing back or recording, a pre-roll is necessary to ensure that you start recording at the time set and not after.

**Index searching** - an index mark is a tag on your video tape that normally indicates when you have started recording. Some video recorders, as you can see from the reviews, can manually insert index marks. Index marks can be searched for using an index search facility on your remote control.

## SHARP VLH420H VIEWCAM

Price: £1,200 Tel: 0800 262958

Sharp made a complete departure from the normal handgrip-at-the-side, look-down-a-small-tube-style of camcorder with this new design. In case you've never seen one before, the photos show the way it works. The viewfinder is the large LCD panel on the back of the camera body and the camera's lens is on a swivel mounted arm on the side of the camera and almost looks like an afterthought.

One of the major benefits to this manner of operation is that you can hold the Viewcam up above your head if you're standing in a

crowd without losing the ability to see what you are recording. Similarly, if you want a puppy's eye view of things, you can hold the camera down low (be it to a broom handle if you're really brave) and run along with it like that. The Viewcam also makes taking footage of yourself much easier as the screen can swivel all the way around to face the front of the camera. As you do so, the on-screen controls all flip so that you can still read them - a nice touch.

As for performance, the Viewcam is okay, but not outstanding in the quality stakes. The stereo sound on the camera I received for review was particularly clear and the picture was certainly reasonable.

The camera does weigh more than your average camcorder at 1.2kg, but its design means that this rarely becomes a problem unless you need a hand free. I have to say I



am slightly worried about the durability of the connection between the body of the camera and the lens arm as my review model seems slightly wobbly.

**Connections:** Video (composite and Y/C) and stereo audio out, DC RF (all on a plug-in module), headphones, external Mic

**Features:** 20x zoom, remote control, manual focus and exposure, program modes, snapshot, image stabiliser, macro lens

**Special effects:** Fader, Widescreen

**Format:** Hi8

## JVC GR-SX1

Price: £799.99 Tel: 0181-450 3282

The last camera got a great review and I stand by it, until that is, you have a look at this one. The SX1 (not to be confused in any way, shape or form with the CD32 add-on, by the way), is the S-VHS-C big brother (it weighs slightly more too, at 1kg) to the HF900 and used to cost £1000. With the price reduction to only 800 quid, you'd be a fool to pass up this opportunity for better quality. You might, of course, need to upgrade your video recorder to a more suitable spec as well, but that's the price of progress.

The SX1 has the same raft of features as the HF900 - the widescreen, sepia, twilight and sports/highspeed modes (highspeed on the SX1 actually goes up to 4000 frames per second), and adds the ability to fade in or out and fade in or out from colour to mono, or vice

versa. Both JVC cameras are equipped with an edit socket and offer an assemble edit function to synchronise your video recorder to the camera, and the SX1 can create index marks from the remote.

I'll finish as I started. This camera represents extremely good value for money and should be snapped up by anyone with an eye to better than average quality.

**Connections:** Video (composite and Y/C) and stereo audio out, edit, DC RF, external Mic

**Features:** 10x variable speed zoom, remote control, program modes, manual focus and exposure, image stabiliser

**Special effects:** Colour fader/Fader, Widescreen, Sepia, Twilight, interval recording (for time lapse)

**Format:** S-VHS-C







## THE CREW

For a small scale amateur production, you'll ideally need the following:

**Writer** – without a decent one, you might as well return that camcorder to Dixons now.

**Producer/Director** – who organises the fundamentals, brings what money there is to a production, and then changes hats and calls the shots.

**Production Assistant** – the vital organiser who helps the director stay on track.

**Lighting Camera operator** – who'll turn that vision into a reality. A thorough understanding of how to get the best out of lighting in any shape or form will add immeasurably to a production (after all, in somewhat pretentious terms, you are 'painting with light' so to speak. Quite).

**Sound Recorderist** – ideally, a detachable microphone and manual sound controls included on your camcorder are vital.

For maximum effect, these will require the aural expertise of the sound recorderist to get the maximum benefit.

**Editor** – the person that splices all those shots together into a seamless masterpiece.

# Video nation

'There's a novel in all of us.'

**Adam Phillips** believes there's a film or two tucked away inside us as well...

**T**he world is crammed with people itching to unleash their vision onto the cinema screen or even just the local town hall in front of a mass of friends and relatives. While wild enthusiasm may start you off thinking about that glittering career, movie-making usually has a very defined process that needs to be learnt. The very nature of putting a production together from start to finish can be a complex and lengthy process. Here for your perusal is a bite-sized guide that'll hopefully start you on the road to becoming a doer instead of a dreamer.



Ⓢ Expects directors to look after her during her performance

The three acts of a classic Hollywood script in all their glory

### ACT I

**exposition:**  
intro main char and 'the problem' or obstacle; what's the char need and what's in the way?

**PLOT POINT** (pp 25-30):  
something happens in the story to shift focus, to tighten tension and make the problem/obstacle tougher than it seemed before

### ACT II

**development:**  
"throw rocks" at main char, more complication, 'the plot thickens'

**MIDPOINT PLOT POINT** (pp 35-40):  
again, something happens to shift focus, increase danger to main char getting what s/he wants; reversals of fortune can happen

**FINAL PLOT POINT** (pp 85-90):  
the hero may fail, danger abounds, obstacles everywhere

### ACT III

**resolution:**  
but the hero comes through (usually), 'the happy ending'

## PRE-PRODUCTION

Actors beg for them. Directors dream of them. And the public (usually) loves them – good scripts are gold dust. The foundation of any film or video, the art of screenwriting has been dissected by many professional word maestros. Judging from the production line that is Hollywood, it's painfully clear that even some of the top dogs haven't got their heads round the basics.

Any script starts off usually with a story. The favoured route is to start at the beginning, work through the middle, and wind up at the end. It's the classic movie structure split into three acts. There are always successful opposites to this (take a look at Pulp Fiction's leaping time frame), but you can't break the rules unless you've learnt them.

If you have a relatively clear idea about the story you want to tell, the best place to start is to tell the story in simple words in the shape of a treatment. Flick on the Amiga, boot up Wordsworth, and type away. Don't include any dialogue – classic movie teachings dictate that the story should be told in images and actions, not through the spoken word. Once you've bashed out the story, leave it for a couple of days and then read through it. If you find yourself flinching at certain moments, change them for something more appropriate.

With any story, never be precious – think of all the options for your characters and how they'll face the conflicts thrown up throughout the film's journey. Rewrite, chop and change until you're happy you have what appears to be

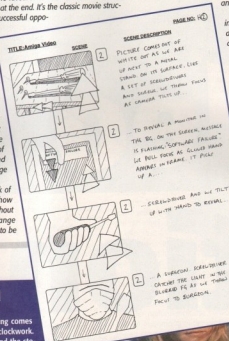
the best options at that time. Once this is done, you should hopefully have a treatment that is already very scene oriented. To further aid the actual structure of the story, not necessarily the content itself, write out each scene on a piece of paper with a simple header. Arrange each card on a wall and take a long hard look – ask yourself if one of the scenes might be better if moved forward in the film and vice versa. This visual reference guide can really help to blow away any cobwebs of over analysis when viewing bulky text onscreen.

When done, it's time to plough into the actual screenwriting itself. This process should be far less taxing if you've done all your homework beforehand. Keep dialogue to a minimum and use it as an opportunity to set up further intrigue for the viewer – simple exposition of the plot is dull and uninviting.

For further info, and if you have a Net account, visit the Screenwriter's Resource (<http://www.teleport.com/~cdeemer/Screenwriters.html>) which offers valuable insights into the craft and, more importantly, has many pros who are constantly talking to one another over the Web about the ins and outs of writing for the screen.

Once the script has gone through various drafts where it has been honed, sharpened and structured, it's time to sit back and ask yourself how much all this is going to cost you. If you've written an epic Genghis Khan screenplay that runs at four hours, you may as well throw it in the bin now or try your luck logging it to someone (that's a whole book in itself).

Meanwhile, if you've managed to construct a simple but intriguing piece, you could easily shoot it on your Hi-8 camcorder. The thing to always remember is that while on initial thought you might possibly perceive



Your drawing skills don't need to be exemplary for storyboards – as long as they communicate

## PRODUCTION

The shoot itself is where all that preplanning comes into fruition. Schedules should flow like clockwork. Actors will get their lines in the first take and the storyboard makes the transition from paper to the big screen gracefully. The reality is somewhat different. Things can go wrong. The weather will change. A passing jumbo will drown out the sound, and certain shots will eat into your schedule more than you'd like.

Throughout all this, you must be prepared to make compromises and have a PA sharp enough to rearrange times in a matter of minutes to help put you back on track. Above all, always appear to be in control – if you've done your planning properly, you'll invariably find that your mind is focused enough to come up with informed decisions on the spot. Call it a form of programming your subconscious [see Freud].

To keep morale high on set, try and keep the shoot running as fluidly as possible so that complacency doesn't set in (very apparent at times on amateur shoots when people realise that filming isn't as glamorous as they thought it was).

Always check everything you've shot there and then. This doesn't mean you have to look all the way through the entire two minute take, but simply at the end of the section to make sure the tape isn't a dud. At the end of each shooting day, look through the rushes (takes) to make sure you don't need to reshoot anything. If you do, it's better to find out there and then than later in the heat of editing.

One final note is to remember continuity – use a Polaroid camera to take snaps of what the actors are wearing, how a location looks and so on if the shooting of a particular scene is spread out over a few days.



that there are only a few minor expenses to incur, there are always a myriad of costs to consider. First off the bat, you'll need actors, a skeleton crew (only three to four members), video stock, lighting, locations and more. Sit down with the script and go through it. What props are needed? What locations? Any extras? Put basic headings for each part of the process – Crew, cast, equipment, editing, stationary and so on. Then fill in all the elements under each heading – you'll find that sheet of paper can suddenly become very full.

While you may well be able to get much of the listed for free in the shape of enthusiastic film fans and friends giving a helping hand, it'll help you work out every element that is vital to the production. Use Final Calc, the Amiga's premier spreadsheet, to lay out your needs and their prices to create a budget sheet. Armed with an overall cost that you feel can be achieved, it's time to start organising the shoot.

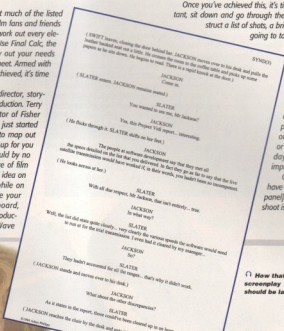
Unless you're a hyper confident director, storyboards are a vital element of any production. Terry Gilliam (ex-Monty Python and director of *Fisher King* and *Twelve Monkeys*) has only just started not to use them. By using drawings to map out each shot, a clear vision can be built up for you to work from. The finished result should by no means be absolute – the very nature of film making is that you might get a better idea on the day or be forced into another while on location. Never be afraid to change your mind and deviate from the storyboard, unless you're adding effects in post production using your Amiga and LightWave

(these need to be exactly planned). With each frame of the storyboard, fill in a short description below of exactly what is happening and any dialogue that is to be spoken. Don't worry if you're not an accomplished drawer – basic stick men, buildings and so forth will do the job adequately. Just make sure they're clear enough for the camera operator to understand though, if you have absolutely no faith in your drawings whatsoever, then writing out what each shot will entail can be enough.

Once you've achieved this, it's time to write up a shot list. With your production assistant, sit down and go through the storyboards, giving each shot a number. Then construct a list of shots, a brief description, and work out roughly how long each is going to take to shoot. After this, schedule each scene into your shooting days. Certain scenes may be shot together due to the same location, but never expect to shoot shots in exact order. Moving about and constantly resetting can take too much time.

While you're juggling all this info, also list all the costumes, locations and props that'll be required for the production. Ask a friend to help out with the organising – if you can't, you're going to need the patience of a saint. Location hunting should be carried out with the camera operator and can be done before or after the storyboards – expect changes though on the day. That imagined shot might just prove to be too impractical or time consuming to carry out.

Once the storyboards, shot list, and time schedules have been drawn up, it's time to search out the actors [see panel]. On securing their talents, setting the date of the big shoot is the final step before the plunge.



How that screenplay should be laid out

## "I WANNA A WINNEBAGO...NOW!!"


Alfred Hitchcock referred to them as "cattle." James Cameron has dismissed them as "puppets." The general public think they can be "luvvies." Good actors, however, in the amateur scene can be difficult to hunt down. There are places to begin that search for the right face for the part – try hooking up with the local amateur dramatics society and go along to see a performance. There may well be another Emma Thompson strutting her stuff in a Noel Coward play desperate to get some film/video experience. Have a chat with the director to see if they can recommend anyone.

Universities, colleges and drama schools are also ripe hunting ground for blossoming talent – put up advertisements in the student bars and other public places to see if anyone takes a bite. Again, they usually will. To them, as with you, they want experience and aren't too bothered about payment as long as they are working with someone who has a professional attitude and they don't have to cough up £30 for their travel expenses.

The pros have screen tests and casting couches (regrettably alive and kicking even in humble little Britain). The newbie has enthusiasm and sincerity as their principle tools. With any interested parties, interview them and make sure they are both confident and flexible enough to offer ideas for the performance and also receive direction. Rehearsals are vital for any production – it can alter the storyboards and shot list as you and the performers work on the script to bring it to life. How you treat actors varies between individuals. While there's straightforward direction giving, some performers need to be handled with kid gloves or an iron hammer respectively. For example, Sigourney Weaver is quite happy to admit that she likes the director to look after her "and nurture her performance" while others will start eating the set if you decide to interfere too often. For identifying what type of approach you'll need, that interview is especially important.

Directing actors has had several hundred books written about it over the years. For first timers, the rule is basic – keep it simple. Don't stand waxing lyrical about 'character arcs' and other chin stroking exercises. It can help the very inexperienced to envisage what they need but, more often than not, it'll end up in confusion – by about half way through the shoot, the performers will know more about the character than the director ever will if each has done their job properly.

Give to the-point directions. A single word or explanatory phrase. The more you explain a scene or a line, though, the less impact you'll have and less chance the actor will have to 'make it their own'. It's important that the penny drops on its own accord instead of you trying to shove it down everyone's throat. Directing actors is all about experience and they will make mistakes.



## POST PRODUCTION

Most of us can't afford the sometimes extortionate prices that editing facilities cost. For more info on what the Amiga can do for you, check out this issue and in the February issue for details on the rather fabulous Draco system that would have most pro editors whimpering to their bosses for money.

The first stage before jumping into the rushes is to log every shot. This can be done during the actual shoot itself, but it can be carried out at leisure afterwards by going through the tapes and marking down what time each take starts at on a particular tape. Also, decide there and then which takes you will most likely use - this all saves time with the actual editing process.

The editing process itself usually has the three stages - the rough cut (slapping everything together with no real attention to exact timings to see how well the whole production hangs together), the second cut (making accurate cuts and taking out unnecessary shots) and the final cut (where the video is honed to near-as-damn-it perfection). Never be afraid to write off shots if they aren't necessary - if they're not needed, they'll dissolve the impact of the film when showed to an ever-critical audience.

Never underestimate the power of editing. It sets the pace of the entire film and breathes life into your separate shots and makes it a whole, attention-grabbing experience. Once you're done snipping, all you need to do now is show it to as many people as possible (see panel).



## WHERE TO NOW?

The one truly valuable thing to always bear in mind when considering a professional career is simple - talent is a prerequisite. The real deal is that you must make contacts. There are certainly plenty of talented people without jobs in the industry and plenty of average directors and writers peddling their wares on our TV and cinema screens. How come they made it? Because they know someone in the business either as a friend or relative, or they have the social skills to network themselves into a job.

It's an incredibly important talent and vital for success in the film industry where socialising and getting your face seen means everything. If you have a friend or relative in the business, don't just sit there with your lower jaw stuck out in indignant pride thinking "I will do this myself. I'm not jolly well going to leech off someone else." Get out there and wring every last drop of career-building juice out of a contact. If it's family, all the better - nepotism is good.

Another vital element to 'making it' is to get your work seen. Short of being put out on general release or broad-

cast on television, it's vital that your production must make a splash somewhere. Film festivals are the first and most obvious port of call.

From county film shows to international festivals, the amateur does have plenty of places to put their work on show. You'll usually find that the smaller affairs are simply for enthusiasts who want to enjoy the experience of movie-making but are non-plussed about getting anywhere. Again, set your targets feasibly high. Find out which festivals have high profile - while the Oscars are obviously a no go in most cases, the likes of the Cork film festival and the Chicago film festival do attract a fair-sized audience. Check out the British Film Institute's film and television handbook for more details.

Depending on how much money you have for video dupes and how good you think your work is, send out tapes to targeted production companies and individuals. Again, just pick up a copy of BFI's handbook to see the amount of different production companies and what they may be interested in. One note of caution though - don't

always expect to have your tape sent back to you - these people are usually horribly busy.

Bear in mind, having a contact who can recommend your work to someone in authority can give them that push to put the tape in the video machine. Quentin Tarantino handed the *Reservoir Dogs* script over to a tennis coach who happened to play with Harvey Keitel's wife. She read it, thought it was excellent, and recommended it to her husband. He read it, committed to it, and the money started pouring in. It's all about exploiting contacts and targeting your audience/funders.

Film seminars, workshops, and local arts meetings are also useful meeting places where equally struggling but determined fresh talent are looking to meet, mingle and work with people of a similar attitude.

Finally, never forget that 'making it' requires gut determination and ever abundant motivation - you'll never get anywhere unless you're prepared to work like a horse. The film and TV industry is not a nine to five job with a company car.



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## OCTAMED 6



The 6th official version of the major music maker on the Amiga has landed. Over the last few months there have been demos of it popping up now and again around various Internet sites, but now the final version is here we can happily make spring time a musical one.

My favourite version of Octamed was 5. The previous versions weren't my cup of tea, mainly because they had a very PD look and feel and were extremely unfriendly, and I could barely live with them. However, having said that, I was still able to produce some half decent tunes.

Therefore, when version 5 came out I was particularly pleased, mainly because of its user-friendliness. In fact, the whole of my hard drive was packed with samples and I managed to spawn the occasional dance remix, even to rival some of the pap that was already out there. Unfortunately, none of my tunes saw the light of day – mainly because there wasn't much I could do with them – and when winter time comes I like to hide away and listen to a bit of indie, which just cannot be created on an Amiga. Sorry.

So Octamed 6 arrives and I instantly injected some life into my own tunes. These can be imported from other versions of Octamed which, incidentally, was difficult to do with version 5.

Obviously, the main difference that most users are pleased about are the extra channels. Basically, instead of always being able to play four samples at once you can now play eight, which in turn means you can have far more variety and more sounds to choose from to make your tunes.

Previously, if I made a dance tune, for example, I usually needed a drumbeat, bass-drum and a melody, which left only one channel to use for either cymbal crashes, hand claps or even vocals, so the choice wasn't exactly what I'd deem wide. So without explaining all the new features in great detail, which would take around seven days, I'll give you an idea of the new additions, and what you'll get for your money.

MIDI – which stands for Musical Instrument Digital Interface – was first introduced around version 2 and can be linked to an external device such as a synthesiser which can be connected through a MIDI interface which connects to the Amiga's serial port.

Basically, all the options and selection boxes are now cleverly positioned in windows for you to move and resize to your own preference. The prime example of this is the Tempo

*Er, I'm not entirely sure why I picked this off the Artworx CD, I can't think of any reasons...*

# Laser guidance

All the usual and more in our monthly review of the latest Amiga CDs. **Andy Maddock** reveals all

window which, usually found at home at the top of the screen, now has its own windows. The prime reason for this is so the options you use a lot will have priority because the amount of options would litter the screen ridiculously. Also, each section of the actual program is split up into around four main windows which can be closed down, especially if you need some free memory to edit samples or other memory-consuming processes.

If you use Med frequently then this is an essential purchase and one that should never be missed, but for people like me who don't take their Amiga music too seriously, version 5 is more than enough. However, if you have neither, I can't recommend Octamed version 6 enough.

## Bottom line

### PRODUCT DETAILS

Product:	Octamed 6
Supplier:	Weird Science
Price:	£29.95
Phone:	0116 234 0682

### SCORES

Ease of use	85%
Implementation	90%
Value For Money	89%
Overall	90%

## PHASE 3



Two months ago we reviewed E.M. Computergraphic's second image, font and clipart package and it received 90 per cent. The third CD in the series has now arrived and I can tell you that this one doesn't alter E.M.C.'s superbly consistent record.

The latest volume contains hundreds of images of excellent quality along with many more directories containing fonts and clipart. This time, the clipart caught my eye. I tested the quality of the disc by thinking of different topics which I would need relevant images for to accompany this text, and I came up with ancient pottery, sewing and pants of the world. Unbelievably, I found clipart suitable for all these pseudo-documents, and I'm still in shock after finding several pictures of pants. There truly is a use for all the

## NOTHING BUT GIFS AGA

The Amiga is well known for its Graphic Interchange Format or GIF as it is more widely known. Basically, if you haven't worked it out already this CD is devoted completely to GIF images which are always one of the best quality formats on any home computer.

Not only will you get hundreds of megabytes of images but you will also receive various viewers such as the standard FastView or others such as image converters and datatypes. There are plenty of converting utilities on the CD so you will never have any image viewing problems.

The image directory is divided into suitable categories, each one containing its own thumbnails file. You can't really get better quality pictures than the ones contained on this CD-ROM and the choice of pictures are also pretty varied. The main CD is split into three directories - digitised, rendered and

hand-drawn pictures - and in each directory there are a number of categories.

The whole CD is polished off by an excellent AmigaGuide which displays the contents of the CD superbly. Just click on the file name to show the picture, along with a short description of what you're going to be looking at. However, some of them don't actually have a description which does get slightly annoying, although the thumbnails file more than makes up for this.

Overall, Nothing but GIFS is a very high quality CD, and shouldn't be missed by any art fan.

### Bottom line

#### PRODUCT DETAILS

<b>Product:</b>	Nothing but GIFS AGA
<b>Supplier:</b>	17 Bit Software
<b>Price:</b>	£19.99
<b>Phone:</b>	01924 366982

#### SCORES

<b>Ease of use</b>	<b>94%</b>
<b>Implementation</b>	<b>90%</b>
<b>Value For Money</b>	<b>92%</b>
<b>Overall</b>	<b>91%</b>



These wooden toy things were used to reflect your mood. It didn't work for me, because I kept sticking them in naughty positions

pictures contained on the CD. As usual, all the pictures have been categorised correctly and each directory has its own thumbnails file. The pictures are of the highest quality which is nothing short of what we expect from E.M. Computergraphic, and the categories, as mentioned before, are of a varied selection. Without doubt you will find something to use, so whether you're after images or clipart for desktop publishing, or you're after a fancy desktop picture, you'll be spoilt for choice.

The images are just the tip of the iceberg. There are huge volumes of postscript and imagine fonts, and to top it off it's all presented in a very professional way. This is certainly a CD you wouldn't be forgiven for missing. A true essential.



Two months ago we featured a nice cute dog to demonstrate Phase 2. So for Phase 3, here's a nice cute cat with a cute dog!



### Bottom line

#### PRODUCT DETAILS

<b>Product:</b>	Phase 3
<b>Supplier:</b>	E.M. Computergraphic
<b>Price:</b>	£24.99
<b>Phone:</b>	01255 431389

#### SCORES

<b>Ease of use</b>	<b>92%</b>
<b>Implementation</b>	<b>92%</b>
<b>Value For Money</b>	<b>88%</b>
<b>Overall</b>	<b>91%</b>

## ARTWORX



Our collection of image CDs has grown immensely over the past few months and the best so far has been Phase 2 by E.M. Computergraphic. Other than that, all the others have come way down the line. However, most of these CDs are under a tennor so they usually just about warrant their price tag.

The images contained on Artworx are of a fairly standard quality and most of the pictures are contained on other cheap CDs elsewhere. So what can you expect for your £9.99?

The images are split up into various categories ranging from the usual Dogs to Cars, so there are no annoying pictures referred to as something like '10034/10' which is probably just a Chaffinch pecking at a nut.

All the images have come courtesy of various Amiga artists and every single one is in colour which is a bonus - especially when you own a colour printer, although for something as widespread as desktop publishing the choices are not so vast.

Although £9.99 is a nice cheap price for a packed CD, the images aren't particularly outstanding and you'll be pushed hard to find anything good enough to use yourself.



Not only does Artworx contain a variety of images, there's also a bundle of stereos!

### Bottom line

#### PRODUCT DETAILS

<b>Product:</b>	Artworx
<b>Supplier:</b>	Weird Science
<b>Price:</b>	£9.99
<b>Phone:</b>	0116 234 0682

#### SCORES

<b>Ease of use</b>	<b>90%</b>
<b>Implementation</b>	<b>86%</b>
<b>Value For Money</b>	<b>80%</b>
<b>Overall</b>	<b>81%</b>

**T**wo printers, two inkjet printers, to be precise, from the two biggest manufacturers landed on my desk the other day. The Epson Stylus ColorIris and the Hewlett Packard Deskjet 850C are from the new range of inkjet printers that can manage an incredibly high resolution.

The high quality resolutions like the ones that these printers offer mean that printers are getting to the point where they can provide a cheaper alternative to reprints of photographs, especially if you have the right quality paper available.

Both of the printers on test today share certain features. They can print at very high resolutions (720dpi for the Stylus and 600dpi for the Deskjet), they both really require the use of high quality coated paper to get the very best results from them, and they are both just about cheap enough to make even the most thrifty DTP'er look twice. Both printers also use the cartridge system that is fast becoming standard, where the black ink is held in a separate cartridge.

#### OUTPUT

This is particularly important if you are using the printer for all your output and not just pictures because it will mean you use more black than any other colour. The Hewlett Packard offers the user the facility for both cartridges to be used at once, meaning you get true CMYK performance while printing pictures, and it can take a larger sized cartridge for black, a definite bonus if you print a lot of text in addition to all your pictures.

But first appearances can make a difference, so how do they look? Well, top points have to go the Deskjet for this, although even it doesn't seem to be up to the same standard I have come to expect from Hewlett Packard. The printer's case is somewhat plasticky and because there is such a large amount of room inside the case, the glowing LEDs that show the printer's status, etc. shine onto the back of the printer's insides which doesn't look too good.

However, overall construction is superior to the Stylus which continues Epson's odd tradition of seemingly leaving the design of their printers to the last minute. The Epson printer itself is much smaller than the Deskjet, but has a fold out sheet of plastic underneath to act as the Stylus' paper tray.

To be honest, I think I would rather have a moulded tray like that on the Deskjet that:

- a) doesn't look as flimsy and
- b) works more effectively

But even Hewlett Packard have been cutting costs. The familiar smoked grey plastic paper tray cover has gone, making the printer slightly more noisy than the DJ500C. I still occasionally use.

In fact, noise was a problem with both printers (not much of a problem, obviously, when compared to dot matrix printers, but a problem none the less). Now, I should really point out that I wasn't actually using the printers in the best possible location for deadening noise, but I was running out of room in my office, so they both ended up having to stand somewhere where noise could come from the

# Printer punch up

Hewlett Packard and Epson are probably the two biggest names in desktop printers. **Frank Nord** sees how their latest output matches up







*A plus point in the DeskJet's favour is the quality of the ink they use. Even in areas of dense coverage, the HP's ink doesn't seem to bleed too much*

## FINAL WORDS

Well, if I had to pick one of these two, it would have to be the DeskJet. The Stylus is much cheaper, has a higher theoretical resolution, and is faster under certain conditions, but the DeskJet gave the feel of a quality piece of hardware, is backed by Hewlett-Packard's globally renowned name, and gave results that were still impressive. Until Epson solve the problems I encountered with banding and the general tacky design of the Stylus, I'm not going to buy one for myself.

## YES, STUDIO AGAIN

I know we mention Studio every time we do a printer review or round-up, which must make it the single most published piece of software for the Amiga other than Workbench, but it does bear reiterating. If you want to get the best possible results from your printer, get a copy of Studio. That's all. Just factor the extra fifty quid into your budget for a printer and make sure you get it.

bottom of the printer as well as the top, sides and front.

Despite this, both the printers, particularly on the head clean or startup cycles, were noisier than I had expected. But hey, you don't really care about the noise do you? What you care about is output, output, output.

Both printers performed pretty well with a variety of types of output, from a high resolution render (1000x1500 pixels), to a standard DPaint screen, from a general DTP layout from PageStream 3 (which supports both printers with its new XPD files), to output from a text editor using printer fonts.

In my opinion, the DeskJet outperformed the Epson in terms of output quality, notwithstanding the Stylus' higher resolution, but the Epson was faster than the DeskJet, particularly in the PageStream 3 tests because SoftLogix have taken advantage of the fact that the Stylus can skip blank lines.

Actually, the Epson showed signs of banding when running on normal paper, but this improved with the high quality paper Epson gave us for the review, but then Epson themselves say that you shouldn't try 720dpi printing on plain paper.

Unfortunately, the lack of a fourth colour for printing with the Stylus meant that black was created by mixing the other three colours, resulting in poor quality at low point sizes. This manner of printing will also increase costs if you intend mixing colour with black on your pages, unless, of course, you are willing to try and overprint your pictures afterwards.

Another plus point in the DeskJet's favour is the quality of the ink they use. Even in areas of dense coverage, the HP's ink doesn't seem to bleed too much and paper wrinkles are kept to a minimum.

So it's still neck and neck as we go into the final decision. Which will win?

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended



Studio II

### PRODUCT DETAILS

Product	Hewlett-Packard DeskJet 850C
Supplier	Hewlett-Packard
Tel	01344 461274
Price	£450

### SCORES

Ease of use	75%
Implementation	75%
Value For Money	75%
Overall	75%

### PRODUCT DETAILS

Product	Epson Stylus Colour IIs
Supplier	Epson
Tel	01734 303681
Price	£240

### SCORES

Ease of use	75%
Implementation	75%
Value For Money	75%
Overall	75%



# Surfing

**G**etting online to the Internet has never been an easy business for the Amiga user. Sure, the Amiga has all the necessary software to get on and use the Internet, but the trouble is that the main source of software is on the Internet itself, and even if you had all the software you have to be a fairly well experienced Amiga hand, and have a smattering of Internet knowledge.

The major stumbling block when trying to set up the software is how you configure it. The Internet uses the TCP/IP protocol to transfer information between all the machines connected to it. Currently, the most widely available version for the Amiga is AmiTCP - originally shareware the latest version is commercial. Even though it is a very good TCP/IP stack, every piece of Internet software you want to use with it has to be separately configured, which for even experienced users is easier said than done.

The only real solution is to provide a single complete package, giving the user a configured TCP/IP stack along with all the necessary Internet tools, all set up and ready to run. Originally, only a few Internet providers gave this sort of support for Amiga owners, and then the software was only really just adequate. However, the planned Amiga Technologies Surfer pack looks like it could kill both of these problems in one fell swoop.

Amiga Technologies are quite lucky with the most important part of the pack, the TCP/IP stack. Before the demise of Commodore, one of the last useful things they managed to

Amiga Technologies' forth coming **Surfer Pack** is almost upon us, and **Neil Mohr** has gathered all the packages together to take a sneak preview

produce was AS225 - their very own implementation of a TCP/IP stack - which by all accounts is very good, better than AmiTCP. However, up until now it has only been available to registered developers.

The Surfer pack will see the first official public release, which in the long run will probably mean little to owners of the Surfer pack, but it will be the last remnants of the old Commodore to be seen by Amiga users. We do not yet know what implementation of AS225 will be used, but it may be one written by a third party - possibly Net225 by Interworks, an American Amiga company specialising in networking.

From the initial versions of the Surfer pack we have looked at, the software is going to be very good, but there are a few surprises. Firstly,

## WORTH THE WAIT

Just from this quick look at the programs that will be provided in the Surfer Pack, it looks like it should be an excellent buy. AmiIRC and AmFTP are both extremely well written programs and provide every function you could want in both types of program, all backed up with an interface a fool could use. MindWalker is made by the same people, so hopefully the same can be expected of that, even though I would not expect it to match NetScape. Voodoo also looks the part and is again very easy to use, which is what is really needed in such a package.

Currently, the only possible problem with the pack is that

there seems to be little newsgroup support. Normally, Web browsers do allow you to access these groups, and do work very well with text only entries. We will have to wait for the final pack to see what newsgroup functions MindWalker will have.

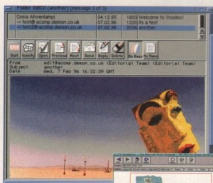
When the Surfer pack finally hits the street we will be able to comment on how well everything has been integrated. It's no good having great programs if they are hard to run, but by all accounts the pack looks and runs great and I cannot see any reason why the final version shouldn't too.

## INVISIBLE MAIL

The Surfer mail package is called Voodoo which is a full Mime-compatible mailer. E-mail only deals with plain text, which is fine for text messages, but if you need to send anything else such as pictures, sounds or programs you have to specially encode it for e-mail transmission. The recipient of the mail then has to cut out the picture part of the e-mail and decode it – not the most elegant system in the world.

Mime is an attempt to make this encoding/decoding process invisible to the user. When sending mail you can simply include pictures and the such by dragging and dropping them into the mail window, or via a file requester. Each of these files are then treated as separate parts of the mail that you can view by clicking on the icon which appears in the speed icon bar. When the person on the receiving end gets their mail they will see exactly the same thing.

Voodoo seems very simple to use. With all the mails listed in the top section of the window, and with support for multiple mail boxes and a straight forward e-mail address book, Voodoo certainly looks the part and provides everything you need.



Now you can include graphics in your mails as easily as slipping them in an envelope

# solution

it is very interesting to note that not one of the supplied programs uses the standard Amiga interface library GadTools. The IRC, FTP and Web browsers use the Magic User Interface, while the mail package uses a more recent GUI package called ClassAction.

Three of the programs are produced by the same programming group. Called Vapornare, they are responsible for the IRC and FTP clients along with the as yet unseen Web browser. All three programs require MUI 3, so provide all the advantages and disadvantages that come with MUI programs.

Internet Relay Chat is an open forum where people from anywhere in the world can join discussion groups and talk about every subject imaginable, and probably a few you cannot. AmIRC is going to be the way you get onto IRC from the Surfer pack. The version we have

been testing is only a beta but after using it for a while, I can safely say AmIRC is going to be one of the best IRC clients on any computer, never mind the Amiga.

When you first start AmIRC you are confronted with a list of servers that you can connect from – you would normally use your Internet provider. Once you have selected your server, AmIRC can be made to auto-join a channel so you can jump straight into your favourite channel. The main AmIRC window allows you to access just about every feature of the IRC. As you would expect, the major part of the interface is taken up with the talk window, but an extremely handy window, lists all the other users on the current group, along with a number of function buttons.

The buttons are configurable, allowing you to add your own commands, but the standard

setup has most of the more useful IRC functions, such as DCC transfer and talk which allow files and messages to be sent direct to another IRCer.

AmFTP is the Vapornare FTP client. As with AmIRC, this is an excellent, well thought out program. When you first run it you get a large list of FTP sites into which you can enter more, along with the normal log-in routine and directory that you use.

A really helpful option here is to connect as an ADT server, which I think is an Amnet-only phenomena, but it allows you to connect to an Amnet site and get a list of the most recent uploads, sorted by date or subject. This makes it so easy to get all the latest programs, and as AmFTP remembers when you last connected, you only see the programs from days you have not connected.

For normal FTP, use AmFTP which is an absolute dream. One of the major problems with other FTP programs is that their response time to user input is terrible. You press an abort button and are lucky if you get a response a minute later. As AmFTP has completely asynchronous transfers, the main program can respond instantly to any user requests.

Unfortunately, the only piece of software from Vapornare that we have not been able to cast a critical eye over is the Web browser. Originally known as Voyager, it has managed to find a name change for the Surfer Pack to MindWalker.

MindWalker is again a MUI program and from what we have seen it handles forms – an absolute necessity for a Web browser – and has eight network connections that allow multiple Web page graphics to be loaded at the same time, so greatly reducing the time it takes to load a single page. This is a big problem with Amosaic as it greatly increases the amount of time you are left hanging around for pages to load. With multiple connections, text and graphics are loaded simultaneously.

Mindwalker will hopefully be every bit as good as AmFTP and AmIRC

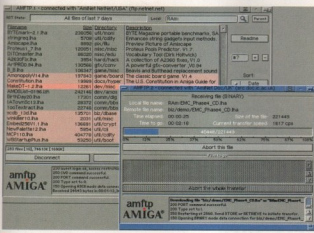
## Jargon box

**Internet** – refers to the worldwide network of computers that pass information between each other. Each computer forms a tiny part of the whole thing.

**TCPIP** – when data is passed between computers connected to the Internet the data has to be packaged in a specific way. This protocol is called TCP/IP, the major one on the Amiga is AmTCP.

**IRC** – Internet Relay Chat is one of the Internet services that you can access via an IRC client. On IRC you can chat about any subject on various chat 'channels', even though the sex channel seems to be inhabited by people talking about how big their Pentium is.

**FTP** – File Transfer Protocol another Internet service that allows you to access files on other machines that are acting as an FTP server. This is the best way of accessing Amnet and getting all the latest Amiga CD.



I just can't restrain myself. It's all so lovely, I don't know how I lived without AmFTP

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How I wished I had waited! How many times have you said that or heard it being said when it comes to electronic equipment. The TV and video you bought two years ago now look shabby compared to the latest state of the art, the computer you bought six months ago now seems woefully underpowered, and the magneto-optical you bought just before Christmas now appears to be less of a bargain than it first seemed. And why? Because electronics companies are never standing still. They create, innovate and disseminate at a rate unseen anywhere else in industry. And thus there will always be the early adopters who end up seeming like has-beens rather than people at the cutting edge of consumer electronics because they bought Betamax or its latest equivalent.

So enter the SyQuest EZ Drive, the latest in a long line of technological innovations that will doubtlessly be superseded in a matter of months. But let's take it on its own merits, as we should. The EZ Drive takes a leaf out of the Zip drive's book with its stylish, designer looks that are as far from the original SyQuest's looks as to be almost unrecognisable. It's only when you see the familiar SyQuest button/lever approach to inserting and ejecting a cartridge that it becomes apparent that the drive may be new, but it has its roots firmly based in early '80s technology.

## PEDIGREE

However, you needn't be worried by this SyQuest's pedigree - it is far in advance of the early 40Mb drives with their noise, slow speeds and unreliability. The EZ drive is not only compact, but it is also very quiet, fast to spin up, read and write, and very reliable in the time I've had it for review. I can honestly say that I'll be sorry to see it go.

If you want to know just how fast it is, the EZ drive gives me speeds of about two and a half meg a second according to the notoriously inaccurate SysInfo, only half a meg short of what I get from my hard drive. I tried it in a more 'real world' setting, copying animations from a hard drive to the EZ drive and from RAM to it, and you couldn't really tell it apart from a hard drive.

The EZ drive is obviously going to be compared with Iomega's Zip, so let's do it. The Zip drive still looks nicer than the SyQuest in my

opinion, with a real BladeRunner feel to it, but the SyQuest feels more solid. The EZ Drive is also more expensive, at about £240 compared to £190 for the Zip, but the cartridges cost the same price and you get an extra 30-odd Mb of space on them. I don't know if there is a similar deal where you get discount for buying multiple cartridges as with the Zip, but even if there isn't, the SyQuest cartridges still look good value for money.

Part of the reason that the SyQuest drive is larger than the Zip is owing to the fact that it has proper external SCSI connections in the form of two 50-way, Centronics-type connectors familiar to external hard drive owners (you get a 25 to 50 way cable and active

terminator with the SyQuest drive), and the EZ drive can also be set to any SCSI ID, unlike the Zip which is restricted to only SCSI units five or six.

All in all, the EZ drive is a very nice piece of kit which only has a couple of bad points. The first is the cumbersome eject mechanism which has been SyQuest's trademark since their first drives, and the other is the power supply for the drive. It's one of those plug-cable-transformer-cable-plug jobs, but while the cable from the wall socket plug is of adequate length, the cable coming from the transformer is more than a little short, meaning you end up with the lump of the transformer sitting on your desk next to the drive. Overall though, the EZ drive is well deserving of a Blue Chip award, so we've given it one.



SyQuest's competitor to the Zip drive gets a critical eye from **Frank Nord**

*"If you want to know just how fast it is, the EZ drive gives me speeds of about two and a half meg a second"*

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended



SCSI controller

### PRODUCT DETAILS

Product	SyQuest EZ Drive
Supplier	White Knight Technology
Price	£239 for SCSI, £189 for internal IDE
Tel	01920 822321

### SCORES

Ease of use	90%
Implementation	90%
Value For Money	90%
Overall	90%

## WHATEVER NEXT?

The race to provide swift reliable removable media is hotting up even more this year with the announcement of Iomega's Jaz drive, SyQuest's SyJet, and Pinnacle's Magneto/Optical drive. Iomega's Jaz drive will have a 1 Giga capacity and access the data on its disks at about 3.8Mb/second, the SyJet is supposed to hold 1.3Gb and will transfer data at 4Mb/second, but SyQuest say it will also have a burst mode for motion video and other time critical functions that will boost that speed even more.

Pinnacle's Magneto/optical drive might not be as fast as the other two but it will hold 4.6Gb on a single disk and read and write data at an impressive 2.4Mb/second (impressive for Magneto/optical that is). All these drives should cost less than the current cost for the drive size they use, i.e. the Jaz drive will cost less than a 1Gb hard disk, the SyQuest will cost less than a 1.3Gb drive, and the Pinnacle will cost less than a 4.6Gb drive (and will also act as a CD-ROM drive...)

## Internal version

SyQuest's EZ Drive is also available in an internal IDE version which retails at about the same price as the Zip drive (around £189), but we haven't had the chance to test this one on our A4000.

**I**f there was ever an accounts package that had its roots on an Amiga, you would definitely be able to point to The Counting House as a prime example. How many accounts packages on other platforms even know the term metaphor – let alone use it? The metaphor that The Counting House is based around is that of a house (surprisingly enough) with rooms holding various details dealing with traders, inventory, management and so on.

The program has up to nine levels of security which are all managed through the Management room and three levels of familiarity which allow you to choose exactly how much handholding you need. The Counting House comes with an on-line manual and printed tutorials in addition to the extensive password protection list which, curiously, is about 100 pages of plant descriptions. Fortunately, the way the password protection works is far friendlier than most games. Along with the usual page, line and word numbers, you get a letter count for the word in question making it easier to narrow down whether you need to account for blank lines, headings and so on in your line count.

## EFFICIENT

The Counting House is not your average accounts package and it does things a little differently to how you might expect. It has grown out of a need for a business accounts package for Applied Research Kernel over a period of about ten years and is actually used in-house as well as being made available to other users. If you are familiar with standard stock management/purchase/sales ledger-type systems like Accpac or other similar products, you'll find it difficult at first to find your feet. But as the bewilderment wears off, you will see that The Counting House's way of doing things can be a lot more efficient.

The whole system hangs off a SuperBase 4 professional runtime module and consists of a variety of databases that are all interrelated. The user never sees this because they are hidden behind a set of forms that have been created either to suit a standard Hi-res screen (640x256) or Hi-resLace screen (640x512). The forms are all very well laid out, presenting the information you would expect to see where you would expect to see it, and are all in a muted and very business-like mid-blue.

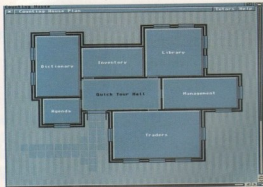
Every time you start The Counting House it sets up temporary directories in RAM: to help speed processing up, but everything is constantly backed up onto the hard drive so a crash doesn't mean that you lose everything.

The fact that The Counting House is actually a SuperBase database means that users of SuperBase will be instantly at home with the way it works, but people coming from other accounts package backgrounds will not appreciate the fact that you can't overtype fields or leave data entry mid-way through a form. However, they will like the easy access to features and the clear requesters that SuperBase affords the user.

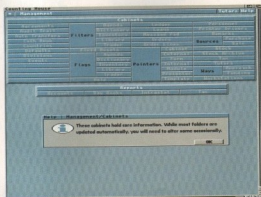
So let's work our way through the installation of a fully-blown cash and credit accounting system. To start with you are asked vari-

# Counting out some money

A complete business accounting system based on an Amiga? **Frank Nord** investigates



The first thing you see once you've entered the password



It's a good job the management room has on-line help

ous details like your company's name and address and trading name, if any. You will also be asked your position in the company, whether or not your company is VAT registered, and other pertinent details.

Your next task will be to enter some inventory, but if you're a bit confused as to how to go about doing this, there are guided tours to entering information in all the sections of The Counting House in the Quick Tour Hall in The Counting House. Assuming you've already read this (you can print the information out too), you should find it relatively easy to enter some stock items. Your inventory can consist of Vatable items, items with barcodes, items with serial numbers, and many other identifying features. Using SuperBase's multimedia features, you can even have pictures of your stock or, perhaps you might be running a record shop, you might want to have samples for each CD you stock (of course, you might need to talk to the Performing Rights Society about having samples of people's records on your machine).

The inventory database also allows for additional information if size is actually important or for related items and so on. You can set up your buying price and your selling price to distributors, retail and end users, along with settings for volume discounts, special offers, or end-of-line discounting if you wish. Special offers can have end-of-sale dates attached to them to make sure your staff aren't underselling products, and to top it all off you can view the inventory database at three different levels of complexity, depending on your needs.

Okay, so we've entered some items that we want to stock and/or sell on. If we now

## THE DICTIONARY

This is a searchable database of information that can be entered on such diverse topics as postage information, company rules and regs, addressing, basically anything you can think of. But you have to enter it all in. The problem with this is that SuperBase's text field entry doesn't support pasting text from the clipboard or loading text in, so you'll have to fill out each description from scratch without the benefit of any editing features like moving the cursor a word at a time or selecting a block of text.

Once you have entered all your descriptions you can also add flags and filters to further categorise each bit of information and add external files for further explanation (for instance, you were to enter an emergency plan for fires, you could have a map of your building showing the available exits).

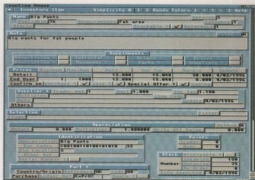
set up two traders we can arrange it so that we buy from one of them and sell our stock on to the other. The version of The Counting House I am reviewing deals with both cash and credit accounting so that we can sell direct to end-users on a cash basis while deferring our payments to our suppliers until the end of the month. Entering company data is just as easy as entering inventory data, and just like in the inventory section (and indeed every other section) of The Counting House, you can click your left mouse button on any of the labels in a form and get a helpful requester up explaining what the field is used for.

For companies you can specify whether you are buying from them or selling to them, and whether this is on a cash or credit basis. You can also subdivide your trader entries into categories like advertising, public relations and so on, to provide greater flexibility. Once you have set up your trade accounts, you can start the process of commerce very easily by just going to the 'process' menu in the traders database. This will bring up a new

form that represents a purchase order. You can then choose from your inventory the items you wish to order and The Counting House will present you with a default price you are accustomed to paying for these goods (which you would have previously entered in the inventory database). All these items then get put onto your purchase order which can then be printed out and faxed or posted to your supplier.

When you are entering a purchase or sales order you can even state the method by which you contacted your supplier, or how your customer contacted you, whether by phone, fax, mail or in person. For some entries like these you are also offered an 'any method' option if you are not interested in tracking things like this. Another aspect that offers the 'any method' option is payment where you can choose from direct debit, standing order, cash, cheque or credit card options, along with that handy 'any method.'

Okay, so that's the traders and inventory sections looked at, but what of the library, the dictionary, the agenda and the management rooms? Well let's start with the library



Your inventory doesn't have to look as complex as this - there are three levels of complexity

## DO YOU ACCEPT CASH?

There is a cash only version of The Counting House suitable for shops and other non-credit based companies. Priced at only £59.95 you might actually want to spend the extra £40 and get the full version.

## CONCLUSIONS

The Counting House is a very serious piece of software that really can't have justice done on it in a brief two page review, but in the time I have had to run through its features it has been solid, and even when I crashed the machine on purpose the amount of data that I lost was minimal. The approach that The Counting House has will almost certainly confuse people used to the more traditional approach favoured by packages like Sage and Accpac, but The Counting House's power lies in this as much as anything else. I would hope that the author continues to expand on the on-line help as the lack of a full book-based manual is somewhat disconcerting at times, particularly since the user cannot access help files while entering data. Overall though, The Counting House is an impressive entry in the shrinking library of serious applications that the Amiga can boast.

## THE LIBRARY

The Counting House is a pretty unique program in the fact that it allows you (and your business) to collate information that might not be considered necessary to an accounting package, but which, nevertheless, is very useful. The library is there to catalogue media like CD-ROMs, records,

books, videotapes or any other form of reference material. I haven't worked out how to link the library's database with my inventory so that I can simply cross-reference the two, but I have little doubt that even if it can't be done right now, it will only be a matter of time.

## THE AGENDA

The agenda room acts as an organiser for the whole company which acts in conjunction with the personnel file in the management room to allow for cross-scheduling of appointments and inter-personnel messaging.

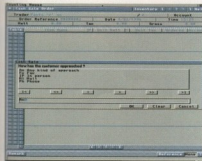
## MANAGEMENT

This is the mother of all rooms in The Counting House. It has so many options it is hard to know where to start. The management room itself is subject to personnel restrictions with only people with a security rating of five or higher (the highest is nine) being allowed access.

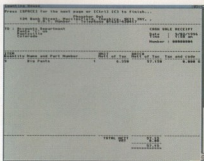
Once inside a higher security rating is required for certain operations. As previously noted, it is here that you enter personnel

details and set security levels and passwords for your employees. But that merely scratches the surface.

As you'll see from the screenshot, there are more buttons here than I would ever be able to cover in a two page review, but they tend to deal with configuration of the various databases, setting flags and filters and doing final accounts, profit and loss statements and other such important financial data.



Counting House will ask for additional details



A cash sale invoice is produced

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended

3 Mb RAM Kickstart Hard Drive



### PRODUCT DETAILS

Product The Counting House  
- Cash & Credit version  
Supplier Applied Research Kemel  
Tel 01983 551496  
Price £99.95  
E-mail richard@ark.co.uk

### SCORES

Ease of use 75%  
Implementation 80%  
Value For Money 95%  
Overall 84%

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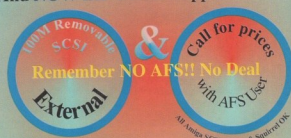
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**beginners guide** Part 4

## TILE ME DOWN

One of the great pluses of Amiga Workbench 3 is the ability to add background images to both the desktop and windows. You do this via the WBPattern program located in the Prefs drawer.

You can choose from the eight preset patterns, design your own, or even load in a picture. The great thing about WBPattern is that it tiles small images to fill up the desktop or window. This proves an excellent way of displaying patterns without wasting precious RAM. As long as your pattern can be matched up on all edges you'll have no problems.



Workbench tiles small images to fit the desktop and windows so that you can create stunning backdrops with very little RAM

If you want to become an Amiga **expert** and leave behind beginner's blues, here's a **helping** hand to set you on your way

## TOP SECRET

If there are certain files on your Workbench that are vitally important you can actually protect them from deletion and even stop prying eyes from reading your personal information.

The command that lets you lock away your secrets is called **Protect** and allows you to set certain protection flags associated with the file you are working on. Let's imagine you had a file called **Bootup** in the **Utilities** drawer which you wanted to protect from deletion.

In order to do this you would load up the Shell and type in:

```
protect Workbench3.0:Utilities/Bootup -d
```

To unprotect the file you would type:

```
protect Workbench3.0:Utilities/Backup +d
```

If you want to stop people from reading your text files or any other file in fact, simply use the following (substituting Text/Finances with the appropriate path and filename):

```
protest Workbench3.0:Text/Finances -r
```

And to unprotect it:

```
protect Workbook3-0:Test/finances +
```

It's as simple as that.

## CUSTOMISING SHELL

Although the Shell requires you to work in DOS (Disk Operating System), it is far more powerful and quicker than performing functions from the Workbench menus. And, just like Workbench, it can be customised to a certain extent.



Customising the Shell is extremely easy and almost all its attributes can be altered in some way.

The biggest gripe with Shell is its small size and important information often bleeds off the bottom of the window. Sure, you can re-size it, but wouldn't it be nice if you could set the size permanently? Well, you can and it's simply a case of clicking the Shell window once and selecting Information... from the Icons menu. In the Tool Types gadget you will see something like:

WINDOW=CON:DISK/130/AmigaShell/CLOSE

It is this line that allows you to alter the size of the Shell as well as a few other useful attributes. The complete syntax of the WINDOW command is:

WINDOW=COM:x/y/width/height/title/option

Don't worry too much about the option part (see the Jargon Box), it is the x, y, width and height settings that are of interest to you. By clicking the line in the Tool Types you can edit these values to suit your own requirements – you could even change the title for that personal touch.

## C2 IT

If you own a hard drive, the prospect of backing it up can be fairly harrowing. However, there are several short-cuts which will considerably reduce the time and disk space taken to back up.

As you progress with your Amiga you'll find that the C directory rapidly starts to fill up with your own programs, and you'll soon become confused as to what the original C files are and which are the ones you've added. In the end, you'll most probably end up backing up the entire C directory which will mean more disks.

One way around this is to create another drawer called C2 in the same directory as C in which you can copy all the programs you have added. You then need to add a new

Assign in the Startup-Sequence using Ed. Open the Shell and enter:

ed s:startup-sequence

Now, under the line which reads Resident  
>NIL: C:Execute PURE  
add the following:

Assign &gt;NIL: C: SYS:C2 add

You can then save the new Startup-Sequence file by pressing Esc, X and then Return.

This new line informs the Amiga OS to look in C2 as well as C for any files it would expect to find in this directory. And in the future, all you need to do is back up the C2 directory.

## BOOKS WITH BUTTONS

One of the most welcome additions to Workbench 3 was Multiview. Multiview uses a hypertext language that provides the user with an interface capable of displaying text, viewing pictures, and listening to sound samples. In fact, Multiview is limited only by the file datatypes present in your Datatypes drawer in Devs.

The great thing about this program is that you can simply click on a button within text displayed in Multiview and skip to another section of text.

Many commercial programs now use Multiview for their on-disk documentation. Provided you have the correct datatype, you can direct text, pictures and sound samples to Multiview by clicking once on their icon, selecting information... from the Icons menu and typing in the Default Tool gadget:

DEV:Utilities/Multiview

A file will only display buttons if it has been written in the Multiview language, but even for reading plain text it is certainly far better than most other text readers which can't even display pictures or play sounds.

## I AM NOT A NUMBER

When using the Shell for certain tasks you will invariably come up against the Amiga's error messages. Unfortunately, most are pretty vague so here is a list of the most commonly encountered error messages, their meanings and recovery suggestions:

**116 Required argument missing** - you have failed to type in the command correctly. Check the command instructions and try again.

**118 Too many arguments** - you have entered too many arguments to the command. Check the command instructions and try again.

**121 File is not executable** - you have either misspelled the command or the file may not be a loadable type such as a text file. Check the file type and try again.

**202 Object is in use** - the specified file or directory is already being used by another application. If a program is reading a file no other program can write to it, and vice versa. Stop the application that is using the file or directory and try again.

**203 Object already exists** - the name that you specified already belongs to another file or directory. Use another name or delete the existing file or directory.

**205 Object not found** - AmigaDOS cannot find the file or device you have specified. Check the filename and retry the command.

**225 Not a valid DOS disk** - the disk in the drive is not an AmigaDOS disk, it has not been formatted or it is corrupt. Check the disk for compatibility and if the disk worked before use a recovery program to salvage its files.

## Jargon box

WINDOW=CON:x/y/width/height/size/options

**x** - the number of pixels from the left edge of the screen to the left border of the window

**y** - the number of pixels from the top of the screen to the top of the window

**width** - the width of the window in pixels

**height** - the height of the window in pixels

**size** - the text that appears in the window title bar

**CLOSE (option)** - the window has all the standard gadgets, including a close gadget

**AUTO (option)** - the window automatically appears when the program needs input or produces output. The window can only be closed with the **HIDE** command

**BACKDROP (option)** - the window appears on the desktop behind all the Workbench windows. The only gadget in the window border is the zoom gadget

**NOBORDER (option)** - the window opens without any left or bottom window border

**NOBAG (option)** - the window cannot be dragged

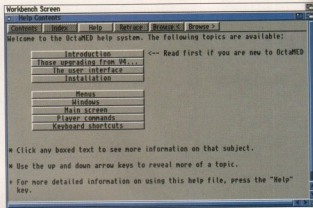
**NOZOOM (option)** - the window only has a depth gadget

**SCREEN (option)** - the window will appear on a public screen. You must specify the name of the screen after the **SCREEN** option

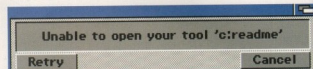
**SAMPLE (option)** - if you enlarge the window, the text will expand to fill the newly available space, allowing you to see text that has been scrolled out of the window

**SMART (option)** - if you enlarge the window, the text does not expand to fill the newly available space

**SNAP (option)** - the window can only be closed by selecting the close gadget



1 Multiview allows you to read text, view pictures and listen to sound samples



1 Make sure icons are pointing to the correct Default Tool file otherwise you'll get this error requester

## MISSING TOOLS

When copying programs to your hard drive or floppy disk you may, at times, be required to alter certain information so that the program will function correctly. This is mostly the case with text file documents, commonly known as readme files and you may already be familiar with the alert requester stating:

Unable to open your tool 'c:apps'

If you click once on the icon of the text file and select information... from the Icons menu on Workbench you are able to see the actual

program being called in the Default Tool gadget - in the example above it would be **cmmp**. You can then change this Default Tool setting to the location of your text reader on your hard drive or floppy disk. This would most likely be:

Workbench3.0:Utilities/Multiview

Multiview is the Workbench 3 supplied text reader. You may have a preferred text reader of your own, in which case just type its location and name instead.

## PERMANENT ICONS

As you become proficient with Workbench and AmigaDOS (Disk Operating System), you will find that much of your time is spent copying and deleting files from the C and S directories. These directories are not immediately visible, so you may want to attach a drawer icon to them so that you can simply drag files to their location rather than using the Shell. The best way to do this is to load up IconEdit and use the default drawer icon. Make sure the icon type is set to drawer and then simply save the icon as Cinfo or Sinfo in the directory these drawers are located in. They will now always be visible. You could also perform this procedure for the Libs and Fonts directories.



1 Copying files to the C directory can be made easier by attaching a drawer icon to the actual directory

# Pen and ink

A new text editor is hardly going to set the world alight. Most people have a text editor lurking on their hard drive and at some point are going to have to use it. For many, this will mean battling with the original Commodore Ed, which is barely usable. Anyone that has owned an Amiga for a while would normally have got hold of a better one, either from the public domain—GoldEd springs to mind—or from one of the commercial editors such as CygnusEd or Turbo Text, both of which are competent at their jobs and will take some beating.

Digital Quill comes on one disk along with a very thorough manual covering every part of the program, including its extensive ARexx port. The initial installation is straightforward thanks to the use of the Amiga Installer, and allows you to have Digital Quill set up for use with either Dice C, SAS C or Benchmark Modula-2. This sets the program up with preset hot keys, menus, and speed buttons for compiling programs direct from the Digital Quill interface.

## DEBATES

The first thing you are going to notice when you run Digital Quill is that it has a button bar running across the top of its window. Whether this is of any real use or not is debatable, but either way it is there for you if you want it. A very powerful feature is the macro recorder which allows any combination of key presses and functions to be recorded and played back at any time, or saved off as an ARexx script for future use as an external Digital Quill macro. These macros allow you to automate repetitive tasks such as reformatting a table or document, and, as they are ARexx scripts, allow other complex functions to be performed.

One problem not with Digital Quill but with just about all Amiga text-related programs, is that there is no way to search and replace formatting commands such as tabs, returns and new paragraph marks. The only program I am aware of that allows you to do this is Wordworth. Digital Quill's search and replace facility offers all the usual limited controls along with the ability to use the full set of Amiga wildcards. So a search on **Text?** will spot every

word beginning with text. Comparing Digital Quill against other editors means it has to compete with the speed of CygnusEd and the system compliance and configurability of Turbo Text, but overall it does a good job on both counts. Firstly, it is completely style guide compliant so can be run on any screen, including RTG boards such as the Picasso II, and it has font sensitive windows and menus so it looks the part too. Speed wise it loads and saves as fast as CygnusEd, and matches it for scrolling speed around even very large documents. Finally, its full ARexx port cannot be faulted.

Where Digital Quill does fall down is when you start editing large documents. Whereas CygnusEd and Turbo Text will not even show any sign of strain, Digital Quill seems to slow a little. In CygnusEd, if you hold the return key down new lines will be added as fast as usual, but Digital Quill's response is slow. It does have a very comprehensive undo function allowing many levels of undo, similar to CygnusEd, but again does not work as fast, with a slight delay each time an undo is done. As an avid CygnusEd user the editing speed is the real problem. Even though this 'slight' delay in editing does not make Digital Quill unusable, it does detract from an otherwise excellent program.

Another Amiga text editor jostles for a place in the already crowded market. Neil Mohr reviews.



The fully style guide-compliant interface looks the part

## Bottom line

### REQUIREMENTS

RED essential BLACK recommended

1 Mb

2.1

RAM

Workbench

### PRODUCT DETAILS

Product	Digital Quill
Supplier	Phantom Development
Price	£39.95
E-mail	caldi@usa.nai.net

### SCORES

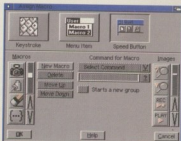
Ease of use	95%
Implementation	75%
Value For Money	80%
Overall	75%

## SHOP AT MACRO

Though Digital Quill does not provide the flexibility that Turbo Text does in being able to define every aspect of the program's menus, it does have a much simpler and user-friendly way of adding macros to the program.

From the Assign Macro menu option you get a straightforward looking window from which you can choose to assign a command to either a hot key, menu option, or via a new speed button. A command can be a previously saved macro, an AmigaDOS command, or one of Digital Quill's built-in commands. If you select a Quill command you get a requester with a list of all the available commands, otherwise you get a file requester from which you can choose a previously saved macro or AmigaDOS command.

Adding a new hot key or menu function is just a case of selecting the new command you require and specifying the key combination or menu entry that you want. The final method of adding a new speed button is very much in the Final Writer Wordworth vein. Press New Macro, select one of the available icon images and the new command you want executing, and you have a new speed button.



Apply your own commands to hot keys, user menus and the speed button bar

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# Lightening the wave

**R**ight now, it seems like the only growing industry on the Amiga is producing add-ons for the reigning champion of 3D animation packages - LightWave. In recent months more utilities have come to light and we present two here for your delectation. It's a mixed media review this time since we have a book and a video tutorial guide called LightSpeed.

## AT THE SPEED OF LIGHT

Let's start with LightSpeed, a two-hour monthly video magazine dedicated to improving LightWave users' skills. The video consists of a variety of sections with reviews of LightWave-related products and advertising interspersing the tutorials. The tape I was sent was from last October and to give you some idea of what was on it, we had a tutorial explaining how to build and animate a lighthouse scene and a corridor scene, an advert for Impact! visually demonstrating the benefits of using it, something you could never do in a print ad, a tutorial on building LEGO, another on building spaceships out of foams, a review of World Construction Set, an animation gallery and several other bits and bobs.

The video seems to be constructed by a variety of people recording their own sections and sending them to the editors where they are all joined together to make one video. This means the quality of recording is variable (especially since the whole thing has to be standards converted to PAL afterwards), but it is encouraging to see that all the systems used by the tutors were still Amigas.

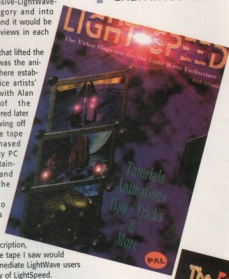
The quality of the tutors was variable too, with the lighthouse guy being particularly unsuited to teaching. The scene he created was nice enough, but there was no explanation of what he was doing. The tutor merely repeated back the numbers he was entering,

making for a very sterile experience. However, the rest of the tape was pretty good and the adverts for the add-ons certainly had more impact than their print equivalents. The reviews section pulls the tape out of the 'its-an-expensive-LightWave-tutorial-tape' category and into the magazine field, and it would be nice to see more reviews in each issue.

The other section that lifted the quality of the tape was the animation showcase where established and apprentice artists' work was shown, with Alan Chan (author of the LightWave book covered later in this review) showing off his techniques. The tape can also be purchased with a high density PC formatted disk containing the scenes and objects used in the tutorials on the tape.

I would need to see more tapes before I could give an honest overall opinion of the subscription, but the quality of the tape I saw would be enough for intermediate LightWave users to snap up their copy of LightSpeed.

3D packages always need add-ons to make them easier to use. **Ben Vost** examines a couple



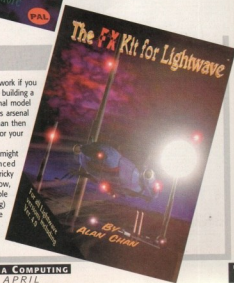
## STARTLING FX

The FX kit for LightWave is our next item up for review. It's a wire bound, 310 page volume with an advert for LightSpeed on the inside back cover and it deals with a good variety of topics in LightWave. It starts gently enough with introductions to both Layout and Modeler, but soon gets stuck into some more messy subjects like tunnel chases, page turns and flag waving. The tutorials then proceed onto creating fractal-type landscapes replete with nice clouds and water. Alan Chan makes no secret of the fact that there are certain things that are difficult to achieve in LightWave and says that things like tumbling waterfalls and rapids are probably not subjects suitable for a beginner's book.

He goes onto devote a whole chapter to that most overused of LightWave's talents - the space scene - and starts it with a caveat to not simply try to duplicate the effects used by Amblimation or Foundation Imaging, but to create something new. While imitation might be the sincerest form

of flattery, it certainly won't get you any work if you want to make a living from CGI. He covers building a spacecraft from the initial sketch to the final model using all the tools in a LightWave owner's arsenal including the dreaded metaform. Alan Chan then goes on to discuss surfacing techniques for your models and the best way to light a scene.

The book doesn't just deal with what might appear basic principles to experienced LightWave owners, but also goes on to tricky effects like volumetric lighting (you know, when you see a laser in a video and people chop holes in its beam, that kind of thing) and compositing digital images with live action. The book finishes up with a look at bones and the inverse kinematics featured in LightWave 4.0



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## Contents

### System news

The latest news from the Amiga gaming world, plus a chance to win a prize worth £100

## Reviewed

### Speris Legacy

Legend of Zelda... Oops. I mean this is a unique game, completely original and one of its kind. Honest.

### Player Manager 2 Extra

The updated version of Anco's fabulous football simulation has arrived. Is it as good as we expect?

## Previewed

### Watchtower

We preview OTM's Commando-like shoot-'em-up. If it's half as good, it will be nothing short of superb

## Features

### Doom debate

At last, the whole Doom issue has finally come to an end as we look back on the epic tale

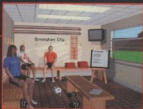
## And more

All the latest chips and teats in our new section  
- "Greasy Food and Milk Supplies" Er, I mean tips and cheats...

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By Andy Maddock

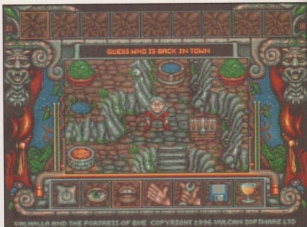
## Vulcan Software's new releases

**P**ortsmouth's finest who have refused to leave the Amiga scene are back with a batch of new releases which should be making their way on to your screens later this year.

Firstly, they are releasing an expansion disk for the excellent *Timekeepers* which should be out soon and will have a price tag of just \$5.99. It will contain 60 more levels which will be made slightly harder.

The second release will please almost every gamer as Vulcan have planned to bring out the latest *Valhalla* edition entitled *Fortress of Eve*. The little prince has now grown up and he's after a wife. It will have four levels, a 1000 word vocabulary, a text option for the hard of hearing, and a brand new pseudo-isometric view instead of overhead. And all this for only \$14.99. Watch this space.

The last two releases are pretty sketchy at the moment, although you may be familiar with the first. It was entitled 'Penguins' by a geezer called Scott Hayne, and he was going to publish the



The third *Valhalla* adventure will be released later in the year. It's certainly something to look forward to

game himself until he found a better offer. Yep, Scott Hayne has sold the idea to Vulcan who will be re-designing the graphics and selling it under the new title of *Bograts*. The other release is called *Mat's World* and will be similar to *Valhalla* - it's a multilevel platform speech adventure and that's about all we know. We'll keep you posted.

## I'm a rock 'n roll star

How would you like to help us in a large operation. Well, it's a big job and it involves us wearing protective clothing and heading for the tatty, poor unfortunate, dying games cupboard. If you can help us by emptying it slightly you can keep some of the contents! But we can't just give them away willy nilly. Oh no.

That would be too easy, and there's loads of excellent stuff in there too!

What we want you to do is show your creative side in the best possible way. If you've heard of 'Everybody's Girlfriend' by David Pleasance then you'll know what I mean.

You've got it. We want you to write a song about the Amiga. And you are completely free to do anything. You can just write some lyrics, make a tune using Octamed, or record it on to tape. We'll promise to look at every single one of them. And remember - we're not expecting that much, but if you can impress us enough we may even send you a special prize worth around £100. And don't forget, there will be loads of runners up prizes.

So come on! How much does the Amiga mean to you?

Name: .....

Address: .....

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Age: .....

Song Title: .....

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Send entries to: Hey look, I'm Noel Gallagher Competition, System, Amiga Computing, IDG Media, Media House, Adlington Park, Macclesfield, Cheshire SK10 4NP.

## Guildhall's release schedule

We have just received the latest news from Guildhall Leisure that they are to further their excellent track record with more quality software than ever before.

Firstly there is Fears and Gloom 2 for the CD32. If you've been dying to play them on the 32-bit machine then your waiting is up as you will be pleased to know they should be available now.

Over the next month or so, we should be seeing a brand new game by the name of Blitz

Tennis, and the release of Wembley International Soccer which I am looking forward to as I never got to play it the first time around when it was published by Audiogenic.

Late in the year we shall also be seeing games entitled Microlyte Warriors and the much awaited Brian Lara '96.

It looks like it's going to be a good year for Guildhall with a mountain of excellent releases. Stay tuned for more information.

## Caught in the Net

If you're looking for Amiga games on the Internet, here are some links to get you started. Whether it's Public Domain or commercial demos you'll find something on these sites.

### Virtual Software Library

<http://vsl.cnet.com/>

This contains an excellent software searcher - it's fast, efficient and very large. Just select 'Amiga' from the menu and you'll be away.

### Aminet

<ftp://src.doc.ic.ac.uk>

This is probably the best place anyone could want to go to to search all aspects of the Amiga world. It's also updated daily so you will be able to access all the latest software.

### Amiga Web Directory

<http://www.cucug.org/amiga.html>

You will occasionally find news of up and coming Amiga games releases as well as some excellent links to other similar related sites.

This is an Amiga owner's second home. If you are an enthusiast you'll probably spend more time here than anywhere

### The Games Domain

<http://wcl-rs.bham.ac.uk/gamesdomain>

You will find mountains of software littered all over this place for various formats as well as loads of Amiga goodies

## Official System top 10

This is our up to date, official top 10 most played games in the office. As you can see the standard of software over the last few months has been absolutely outstanding and we hope it will continue.

Game	Publisher	Score
1. Worms	Team 17	91%
2. Sensible World of Soccer 95/96	Time Warner	92%
3. Pinball Prelude	Effigy Software	90%
4. Super Tennis Champs	Audiogenic	80%
5. Xtreme Racing	Guildhall	90%
6. Breathless	Power Computing	92%
7. Alien Breed 3D	Team 17	91%
8. Coala	Empire Int.	91%
9. Gloom Deluxe	Guildhall	N/A
10 Flight of the Amazon Queen	Time Warner Interactive	93%

## ECTS Report




The European Computer Trade Show is once again making its annual return. The dates are 14-16 of April and whether there'll plenty of Amiga games on show will be another matter. It won't surprise me if the show is dominated by the Playstation, Saturn and PC, but we'll give you a full run down in a future issue anyway on all the present Amiga software titles.

## Xtreme Racing

ROAD CIRCUIT 1  
LOADING - PLEASE WAIT...

0001 LAP 02:00:00 XTR



PRESS FIRE TO START  
HELP/PAUSE - BUTTON TO VIEW TRACK  
ESC/PLAY BUTTON TO INET


## Zeewolf 2

## Hillsea Lido

## Soccer Stars '96

**Southampton - Everton**

<p><b>Entry prices</b></p> <p><b>Ternating - 6 +</b></p> <p><b>Seat - 10 +</b></p> <p><b>Playing style</b></p>	<p><b>Main area of training</b></p> <p><b>Free kick</b> <span style="float: right;">+ 0 +</span></p> <p><b>Penalties</b> <span style="float: right;">+ 0 +</span></p> <p><b>Goalkeeping</b> <span style="float: right;">+ 0 +</span></p> <p><b>Set pieces</b> <span style="float: right;">+ 0 +</span></p> <p><b>Out of play</b> <span style="float: right;">+ 0 +</span></p> <p><b>Offside trap</b> <span style="float: right;">+ 0 +</span></p> <p><b>Defensive line</b> <span style="float: right;">+ 0 +</span></p> <p><b>Attacking</b> <span style="float: right;">+ 0 +</span></p> <p><b>Regulation</b> <span style="float: right;">+ 0 +</span></p> <p><b>Individual training</b> <span style="float: right;">+ 0 +</span></p> <p><b>GO AHEAD 93</b> <span style="float: right;">+ 0 +</span></p>
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**Offside trap**

**Baiting: 5**


**On OFF**

**Planning**

**NO. 2**

**NO. 3**

**Plan**



**Contra. attack**

**Mix bounce - 0 +**

**SHULING**

## Pinball Prelude

## Worms

## Sensible World of Soccer 95/96

Score: 92%

[illegible]

"If you're a real fan of Sensible Soccer then this an absolutely essential purchase"

## Breathless

Score: 92%

"Breathless features some excellent graphics and sound effects, and it plays like a dream"



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GRAPHICS

SOUND

GAMEPLAY

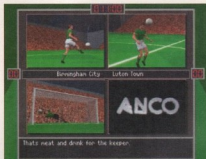
OVERALL

93%

87%

94%

88%



The new highlights screen is split into quarters and each one displays graphics relating to certain incidents

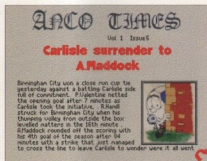


The boot room is no longer empty as it always used to be. It is now full of three players sitting there doing nothing

# Player Manager 2

## extra

Reviewed by Andy Maddock



The newspaper will give you an in-depth report on the match you have just played

**P**layer Manager 2 was released last year sometime and to be honest it was nothing short of excellent. It received 94% in our September issue. Now comes the pseudo data disk - well completely new version actually.

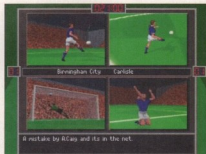
I mentioned in my previous review that the player's names were truly awful, especially as they kept real life teams and then invented completely fictional names. I don't know whether Anco acted upon my criticisms, but in the Extra version all the names are updated. Obviously there's no Juninho at Middlesbrough, because for a start they still haven't managed to assign the clubs into their proper divisions, but a rumour did occur that if all the real life teams were included it would take too long for a season.

Most of the differences that have been added to the Extra version are quite in depth. To begin with there is a knockout and challenge mode where you can take on other human opponents in a league just to see who does best. The challenge option is to see how many points you

can possibly get, with the more points gained resulting in better offers being received from other clubs.

The other changes are more or less cosmetic. Instead of walking around an empty stadium, you will now find the chairman sitting in the correct seat and secretaries where they should be, but there's still no-one in the treatment room!

To be honest, Player Manager 2 received 94% only because of the management part being so realistic and detailed. The actual arcade action



The new highlights are by far the best addition. Especially when you're winning and you're in the limelight all the time

**PUBLISHER**  
Anco

**DEVELOPER**  
In-house

**PRICE**  
£24.99

**DISKS**  
4

**HD INSTALL**  
No

**SUPPORTS**  
A1200

## How many?

All these changes haven't really made the game better because under all the make-up there are quite a few changes which are pretty annoying.

Firstly, when you are ready to go off and head for the boot room, a long wait follows while all the results are calculated. When each wait lasts around two minutes, at the end of the season you will have waited well over an hour. Surely there's something else worthwhile you could be doing. If you try sitting absolutely still for an hour, you'd probably go mad!

The last annoying feature is probably the worst in the entire world and was fairly well hidden in the last version. There used to be three disks - one to load the game, the second for the management, and the third for the arcade bit. Consequently, if you wanted to just play the management side it was no problem because you always kept one disk in the drive.

Now, disaster has struck. The introduction

of another disk has had disastrous effects. For example, when you want to visit the boot room you have to insert disk 2, and if you want to quickly check your bank balance insert disk 4. God help you if you click the wrong button.

At first, I thought I could sneakily get around this problem by only visiting the rooms from one disk, but eventually I was told to report to the boardroom. I felt my stomach almost dissolve into nothing as I worried about my job security. I put on a brave face and knocked on the door only to hear a manly voice sounding extremely disgruntled. Oh no, I've finally entered the world of football management!

I came out of the room somewhat peeved and also relieved because not only had I had a warning about turning up to a match ten minutes before kick off, I'd also had messages from my scouts and coaches complaining that they had had no work all season. And this was all because

you have to insert a disk every time you want to visit one of your employees.

What's the problem, I hear you ask? Why didn't I just install the game to resolve all these problems? Well, this is the worst piece of programming in the entire world. Usually, when someone writes a program that has to use more than one disk they'll think to themselves, why don't I just write a nice, easy install script so they won't have to lift a finger? Marvelous.

You don't even get a sniff of hard drive all the way through the manual - apart from the PC version! Typical. "That's alright," I thought to myself. I'll do it the long way by going through Workbench, copying all the various files into a directory, and then assigning the volumes. It would take time of course, but at least it'd be better in the long run.

What do I find when Workbench loads up? "DFO: Is not a DOS disk". Excellent - I'm not playing this anymore.

**To be honest, Player Manager 2 received 94% only because of the management part being so realistic and detailed,**



The match day screen now gives player ratings and a man-of-the-match award

was pretty pathetic. I suppose I could have marked the game down slightly because of this, although you could switch it off and just watch or manage.

Although this option is still present in the Extra version, there is also the addition of two new features. One is a scoreboard which shows rubbish pictures of various incidents happening on the pitch all the way through the game. To be honest

it's slightly long winded and when you've seen one animation, you've seen them all.

The second feature is by far the best. The highlights option splits the screen into quarters and every now and again you will be shown still pictures of rendered footballers controlling, shooting, passing and fouling. And although they're only still pictures, it presents more of an atmosphere than any other options.



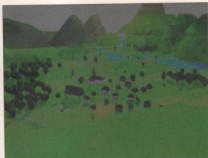
You will now have to attend all relevant press conferences to answer the questions posed by the press



The match scanner displays all the information at once, although unfortunately it's far too bland

## Final word

If you're a very patient person who would wait a lifetime just for a beloved management simulation to finish mulling over some simple calculations, then Player Manager 2 would be a great purchase. If some extra thought went into the actual technical side of the game it could have been absolutely excellent, possibly even the greatest ever football game in the world. The game is there, the statistics are there, everything is almost there, but the lack of thought spoils everything.



The Sperislands in all their glory. Aaah, looks idyllic, ey?



Binary Emotions have developed the game, taking their inspiration from Zelda on the SNES

GRAPHICS

90%

SOUND

30%

GAMEPLAY

75%

OVERALL

75%



Destroy the flowers to uncover some treasures

# The Speris Legacy

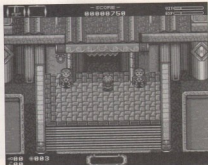
**T**his is one of those games that seems like it's been in the pipeline forever. Some games just pop up out of the blue in a reviewable state with no introduction at all, whereas others meander along, eventually appearing when they're good and ready. Speris is in the latter category, and when a title takes this long to appear, you build yourself up for something really special. So does it live up to our high expectations?

On first impressions the answer is yes - the graphics look bright and cheerful and a lot of

Reviewed by Tina Hackett

attention to detail has obviously been paid but when you start playing, things are a little slow to say the least. There are plenty of characters to interact with and places to explore but it's the amount of repeating yourself you have to do - walking around the same places and talking to the same people just becomes exceedingly tedious.

Well, those are only first impressions and it would be unfair to judge the game on these initial findings. Okay, so a description of the game is



Enter the palace to find out your mission from the king

## PUBLISHER

Team 17/Ocean

## DEVELOPER

Binary Emotion

## PRICE

£25.99

## DISKS

4

## HD INSTALL

Yes

## SUPPORTS

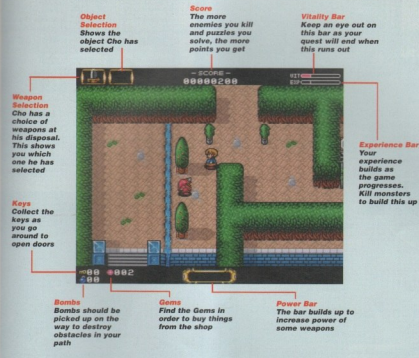
A1200/4000 + CD32

## Story time

Hardly a plot that will blow your mind, but nevertheless it gives the game a point. You play Cho, the hero, who is on a mission to avenge his friend's death. His friend, Kale, was murdered by his evil brother Gallus in a quest to steal the kingdom away from him. The King promises Cho the throne, so he sets off to fight Gallus.



## The playing screen



needed here, I feel. As you can probably see from the screenshots, it takes its inspiration(???) from Zelda on the SNES. It's an overhead adventure game which requires you to collect objects, get past enemies, and solve puzzles. You control the game either via the keyboard, joystick or CD32 controller, and walk around eight different levels on your quest. On the first level called

Sharma City, you wake up on the first day of your adventure, adjust to your surroundings, and find out the mission from the king. You also need to find the sword to arm yourself and get to grips with collecting gems - the main form of currency needed to buy things in shops.

You will also need to interact with other characters to find out clues. However, the speech is

‘ I’m not going to completely write this off - it’s still a **playable** enough game and if you’re into adventures then I’m sure you’ll gain quite a lot of **enjoyment** from it’



When you do actually get somewhere you can walk around the lands from a large map

## Control freaks

Control is either via the joystick, keyboard or CD32 controller. The controls you need to master are, of course, walking, using weapons (for instance, the sword or bombs) and speaking. Whenever you meet another character a speech bubble will appear over their heads and you can choose the appropriate reply you want to make. When you come into contact with an object, an eye icon will indicate that you can examine it to see what it is - you will probably also get a clue as to what it can be used for later. To access the inventory screen you can press F2 which allows you to look at and select the objects or weapons you have collected.

## review



Your home from home B&B with all the comforts you'd expect – but what about any clues?

rather time consuming and when you've already spoken to a character and just happen to walk past them again, you really do have to pay attention and walk quite far away from them or you find yourself talking to them again.

The sound effects work quite well with teleportation effects, sword whooshes and so on, but it's such a shame the absolutely terrible music continues throughout. The tunes do change depending on which area you are in, but they're all dreadful and the only way to avoid it is to turn the music off which is a shame as you miss the sound effects.



Graphics are worthy of a mention because they are so detailed and perfect for this style of game. The sprites look good and blend well into the cartoon backgrounds, and each part of the Sperislands have been thought out nicely, from the dinky little rooms to outdoor scenes.



These sign boards tell you where certain places are but little else



Choose your speech by clicking on the reply you want to make



Interact with other characters to find out vital clues

## Where is it now?

Remember we previewed a very similar game called Legends way back in Christmas 1994? Well, this was being published by Krisalis and looked set to rival The Speris Legacy but unfortunately, we don't know what on earth has happened to it. Last we heard on the rumour mill was that it was ready for release, but Krisalis weren't publishing it and it had been passed on to someone who was. But who is the mystery company and are we ever going to see this game? Let's hope so because although the graphics didn't look up to the same standards as Speris (when we saw it anyway), it looked very good fun and, dare I say it, more imaginative.

## Final word

To be fair, there is nothing technically wrong with this game – the graphics are superb, the scrolling smooth, and some of the effects, such as teleportation, have been done very well. It looks the part with some cute sprites and detailed backgrounds.

However, playability wasn't quite up-to-scratch and although it did deliver some quite nice puzzles, I felt that some of the time you were left wandering around without a clear idea of where to go next or what you're supposed to be doing.

Another point which just can't be ignored is the way you have to stand in exactly the right place to destroy obstacles such as flowers. It would be OK if you could casually slash them with your sword as you walk past but oh no, sometimes you end up spending precious minutes lining up your sprites to hit the flowers. And you do have to destroy them because underneath there are vital supplies and teleport squares. Teleporting becomes rather boring at times too, especially if you teleport yourself to the wrong place and have to wander around the maze all over again – very frustrating. Re-appearing enemies also become tedious.

I'm not going to completely write this off – it's still a playable enough game and if you're into adventures then I'm sure you'll gain quite a lot of enjoyment from it, but for the casual player who demands to be instantly entertained by a game (and why shouldn't we be?) then it's not going to be for you. There's too much tiring and fro-ing for my liking, so I'll give this a miss and leave it to those who are fans of arcade adventures.

# Watchtower

Reviewed by Andy Maddock

**O**TM are fast becoming one of the leading forces in the Amiga games industry, and hopefully this new release, *Watchtower*, will secure their place. Basically, it's *Commando*. Yep, remember that now dusty old arcade game which you'll probably find locked away in a dark room, most likely because it's so old it'll be falling apart and already vandalised by school kids during lunchtimes. *Commando* was one of the greatest games ever.

When I was little, I used to wander into some social place, usually with a good reason, and walk straight past the Snooker and Pool tables and head for the arcades to continuously ram 10p's down their throats until they were blue in the face. Back then it was either *Frogger*, *Asteroids* or *Commando*. It was a tough choice, although they were all frustrating so, inevitably, my temper frayed and the machines were abruptly abused with my feet, fists and anything I could generally throw at them.

Well, *Commando* was a top-viewed war/action game. It featured this little war guy who had a machine gun and some grenades. I could never remember the plot because it was simply a case of sticking your coin in and achieving the highest score – the intro screens barely saw the light of day. It was set in the jungle and the idea was to kill all the enemy, release hostages and blow up bridges.

After receiving a Spectrum during the '80s, I managed to find *Commando* in the shops for



The action screens are much like a cross between *Commando* and *Ikarl Warriors*

£1.99. Blimey! A game for less than two quid! And to this day it's still one of the greatest games ever to grace computer screens. Not because of the graphics or sound, but for sheer playability.

*Watchtower* is based on the same idea, although it will obviously be far superior in presentation and hopefully in gameplay too. You can play two players on the screen at once and both can battle through three different stages including the Desert, Jungle and City, with six missions in each one.

Just like the original *Commando*, there are tanks, helicopters and other vehicles to battle against which will take an enormous amount of firepower to destroy, and when you've got foot soldiers firing at you from all angles, it gives you an idea of the challenge.

I can't remember if *Commando* had end-of-level guardians, although I seem to recall a big door where the enemy used to come pouring out.

## Insight

*Watchtower* is only around 75 per cent complete and should be ready around early April. It's already looking pretty polished not to mention, very tough. Hopefully we'll bring you a full review as soon as the game is in its complete form.



The briefings report will take you all around the world on different missions



The enemy rate will increase dramatically, especially when you stick it on the hardest level

YOU ARE ONE OF THE BEST OF  
HITHEN... MERCS... DOGS...  
YOU ARE A PROFESSIONAL  
SOLDIER OF FORTUNE.

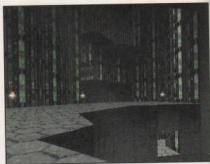
Here's some of the plot. It's the same sort of heroic rescue missions and everyone loves you

‘You can play two players on the screen at once and both can battle through three different stages,’

# hints & tips

Hints, tips and helpful answers  
on all your gaming problems.

Andy Maddock sorts them out



One of the many Doom clones that has appeared on the Amiga game scene is Alien Breed 3D

# Feedback

## Breeding problems?

After having purchased a copy of Alien Breed 3D and installing it onto my hard drive (not as easy as it sounds), I then found the game icon hidden within the drawer (call me stupid, but I thought game icons were normally visible) and loaded it with anticipation. As the game loaded I noticed a definite similarity between this game and Doom on my sister's PC (I still haven't converted her). Am I correct in this assumption or am I dreaming?

Please find enclosed a list of codes which have been compiled in a time consuming but very satisfying way, followed by a couple of helpful tips to ease the pain of dying so quickly.

LEVEL 1	No code needed
LEVEL 2	CMOFFJENPPHFFFF
LEVEL 3	MIOOEOPPPFFFFF
LEVEL 4	KPKOFOPHOEHFFFF
LEVEL 5	NLIAMBOOPHHFFFF
LEVEL 6	FOIINMPOCNFFFFF
LEVEL 7	CCCGIDOPPEEFFFF
LEVEL 8	PPKKNOPLIJEFMFEN
LEVEL 9	DBAMHFPABEFIFFN
LEVEL 10	JMCGDIOKPLFBD CGN
LEVEL 11	HKAMHHIPPPFFFFF
LEVEL 12	DPLOCKPPEEBFFFF
LEVEL 13	OLKOLEOAAPELAIHP
LEVEL 14	GGAOLMOOMNMILKHJ
LEVEL 15	LKKOPHPAIOJBIOH

If you replace the last eight letters of any code with the letters EEEEDCGN, or the last four with AIHP, or the 7th and 8th letters with OO, you will, in most cases, raise the level of firepower and help

your cause greatly (depends on your armaments). It can also raise your vitality level.

Also, here is a way of defeating the last alien in the 'Test Gamma' level one. When the alien is freed, run back to the first arena and make your way up to the balcony where the alien is. There you can crouch down and watch the alien bomb itself into oblivion. Thanks for your magazine and your coverdisks

Darren White, Ipswich

## Colonization

If you name your new colony 'Charlotte' you will be able to view all the maps, ports, and other country's statistics instantly. And as an added bonus, your bank balance will be topped up by a total of \$50,000.



Colonization allows you to build up your own colony





Breathless was one of the finest Doom clones on the Amiga - and so say all of us!

## Brutal: Paws of Fury

Enter NINE SPROGS on the password screen. This will now make you invincible.

Thanks to Martin Phillips from Chesterfield for that one.

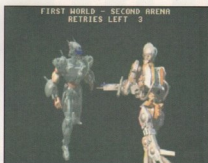
## Premier Manager 3

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Mr Brown is obviously a Doom fanatic from the amount of games he plays

## Out of breath

Read your piece about Breathless. Doom type clones. Review coming out soon. I would like to praise AB3D which is just brilliant. Playability superb. Aliens at different locations each time I play. Intelligence fantastic.

I do want to see better graphics. I want to see games programmed for the best set-ups rather than the lower grade set-ups, then we can all go out and upgrade our Amigas a bit more.

Also, loaded your freebie, Image Vision. I simply get a drawer containing two icons. One of which restarts the loading sequence all over again. Cannot get Image Vision to run!

A Brown, Northampton

Well, Mr Brown (we think that's your name, we couldn't quite make out the signature) It's nice to hear your thoughts on Doom clones. And I'm sure we'd all like to see more 'high spec' games on the Amiga.

We're a little stumped on your problem with Image Vision because we don't know what set-up you have, so we can't really help. Having said that, try reading the instructions carefully to see if there's anything you may have missed. The cause maybe that you don't have the required specifications to run the program. If the symptoms still persist then write to ACAS at the usual address and state in more detail the problems you have encountered and, more importantly, what set-up you have.

## Behind the Iron Gate

Michael Jepsen from Reading has obviously been hard at work these last few months because he's managed to churn out level codes for one of the first Doom-type games on the Amiga.

- 2-"E113333FAS"
- 3-"G224444ETJ"
- 4-"H224444EUJ"
- 5-"GBL2222CLL"
- 6-"TQOPPPPW2E"
- 7-"43CCCCC2TE"
- 8-"NADITTTK1M1"
- 9-"3YNNNNNUKC"
- 10-"IKQ6666GU3"
- 11-"GAEVVVVV3W"
- 12-"5ZAMMMMLVJ"
- 13-"AAEVVVVVWVK"
- 14-"KLP5555HRT"
- 15-"H26OOOXX3B"
- 16-"FGCTTTT2G"
- 17-"H26OOOXX3B"
- 18-"ZEARRRRID3"
- 19-"KUGBBBBBYEC"
- 20-"GPL1111DX"
- 21-"UMIZZZZA5W"
- 22-"D15PPPPWHC"
- 23-"CY3NNNNUAG"
- 24-"K51LLLR6N"
- 25-"K51LLLR6N"

## Some might say

If you have any questions about anything whatsoever, or if you have any checks, either put pen to paper or type to keyboard and either write to us at

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or e-mail us on:

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And remember: if your letter is any good or if you raise any interesting subjects, we may even dig deep in our already well-stocked games cupboard and reward you. So, come on, let's hear what you have to say.

## I'm having an absolute Nightmare!

I am a subscriber of Amiga Computing and the articles are all relevant and superbly written. I was wondering whether you would be able to send me a guide of how to complete Nightmare. I know it's a very old game but also very difficult to complete. I thank you in anticipation.

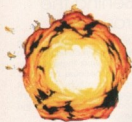
Lee Jones London

I haven't heard of a game called Nightmare, and when I asked around the office the only one we managed to think of was Nightmare, the game conversion from that bland TV show that came on around tea time. However, we don't think this is the one you're thinking of, so I'm afraid we can't really help. Sorry.



# Ultimate Doom

Reviewed by Andy Maddock



**E**ven though we protest we don't compare the Amiga Doom clones to the PC or Playstation Doom, I suppose deep down we do. In fact, I'm sure we'd all like to see something that would wipe them off the face of the Earth completely. So much so in fact, that accounting offices would then be killed out with networked Amiga's and instead of the staff pretending to work, they'd actually be playing a Doom clone on the Amiga.

## Perfect Doom?

All the games that feature in this round-up don't really fall short of the 'fun' hurdle, and some still leave a lot to be desired. I think what's missing is the speed. By managing to display graphics of super Hires standard at full screen, we might be on to something. Is it possible? Who knows. Most people believe the specifications for the Amiga just aren't good enough. But with programmers finding new ways of manipulating the Amiga, continuous ways of upgrading, and even coming up with ideas surrounding the new RISC-based Amiga, we could well see something better than the PC.

One thing we have learnt during the past year with the rise of Doom-like releases is that speed does have a price. Playing these types of games on



a standard A1200 cannot be justified. We have tried it, and it's very slow and jerky - reducing the playability tenfold. Consequently, a higher spec machine is fast becoming a necessity rather than a luxury.

Everybody knows that computers are an expensive purchase, and the decision to get one should be carefully thought through. However, what people fail to realise is that if you do purchase a computer, you must remember that the expense will not end at your local computer



store - you'll be forced to invest in the world of upgrades.

It's a vicious circle. If you spend £1000 pounds on a computer, it is inevitable that you will need to pay even more as time moves on, especially if you want to play the latest 'high spec' games and use the latest applications. If you don't upgrade, your software will become dated and inefficient and you will probably never use it as much as you should - you have more or less wasted £1000 or are not getting value for money. So what choices do you have? I'll tell you. Absolutely none.

Let's start with the PC. For an average machine, something like a 486 which would cost around £1000, you'd get a monitor, a 1000 meg hard drive and probably some games. The standard 486 comes with 4 megabytes of RAM, so you'll have to upgrade to 8 megs before you start - especially if you want to use the much hyped Windows 95.

So why was a computer released with inadequate memory? The answer is quite obviously because PC developers thought that would be enough memory for the software available at that time. To play the very latest games on the PC, 8 meg is nothing short of a necessity, and it

costs around £200. So what about 1997 or 1998? Will 8 meg be enough to cope with the software being released? Probably not, and what would happen if there was ever a Windows 97 or 98? Would 16 megabytes enough? This is the point where computers manage to deem themselves an expensive purchase.

Let's go back to the Amiga - a standard A1200. Take the Magic Pack, for example, which costs anything up to £500 because people have begun to realise that life with just a floppy isn't good enough. Another example of an upgrade which was deemed expensive a couple of years back is a hard drive. Now, however, the majority of Amiga users have one, and, thankfully, they're now included within the package.

So how can you upgrade an Amiga to a suitable level to play all these Doom-clones that are currently dominating the market? Firstly, the main addition to a standard Amiga A1200 has to be the accelerator. With mail-order companies selling decent ones for about £140 to £200, they really should be snapped up. However, if you want to take the expense a lot further you'd probably be able to lay your hands on a 68060 board which will set you back around £600 - £700. If this is just to play Doom clones, you might as well buy yourself a PC and play the real thing.

I can remember a few months back that we ran a Reader Survey which was aimed mainly at games players. The amount of people who had a higher spec machine than a standard A1200 was tremendous - there was only a small percentage of A500 and A600 owners out there. So when users are upgrading all the time, it is quite safe to say that we will see the perfect Doom-clone out there. When? Now, that's another matter.

It's just possible that the time may be around May. By whom? Well it has to be none other than Team 17. Alien Breed 3D was absolutely excellent and they've already begun work on a follow up which, from what we've seen, is looking pretty unbelievable. If you thought Breathless looked good, this will undoubtedly make the average PC owner green with envy.

I spoke to Martyn Brown from Team 17 to get his views on the whole Doom issue. I began by asking him how it all started?

"Around mid 1994, the Doom thing was just starting and we'd seen a beta version of Doom. We didn't really consider it possible on the Amiga until we got talking to a guy on the Amiga newsgroups on Usenet (Andy Clitheroe) about the possibilities, and he claimed to have a similar engine. We spoke at length, he came over, and the rest is history. Alien Breed 3D was born."

What is the attraction with Doom? "I played Doom to death on the PC. We have played over

‘With  
programmers  
finding new  
ways of  
manipulating  
the Amiga...  
we could well  
see something  
better than  
the PC’





*Alien Breed 3D 2 is looking graphically superb – let's hope the gameplay remains from AB3D*



*Doom on the PC and Playstation. We all agree it is a good game, but most of us would like to be playing it on an Amiga*

## Under comparison

### Fears

I think this was the second Doom clone we ever saw and I actually preferred this to Gloom because I wasn't particularly at ease playing it with all those pixels.

And what I liked about Fears was the fact you could adjust resolutions, screen modes and detail levels to suit your particular requirements. Also, as well as featuring a level editor, it was a challenging game and in my mind it still reminds me of Doom.

### Alien Breed 3D

Alien Breed 3D entered our offices around the same time as

Breathless and it was a tough choice between the two. Eventually I plumped for Breathless.

Alien Breed 3D does pack in some excellent graphics and sound and the gameplay was nothing short of excellent, but I found Breathless slightly more playable... but only just.

### Gloom

This was one of the most played games in the office, although I have to admit it was mainly me. I wasn't particularly happy with the graphic display because of the resolution, but I still played. This was because I used to get so far into it, then I'd just die,

and then I'd think: 'I can do that bit, I can.' And there you have it – addictiveness at its most lethal.

The range of weapons were good and the death sequences were particularly superb, but the thing that let it down was the fact you couldn't configure the game.

This is a problem, especially when your system setup is not particularly fast, or you want to take advantage of any other peripherals you have. Other than this, Gloom is still a very worthy purchase.

### Breathless

Some might say this is the



the Network, and I even own a copy of the Playstation. It's because Doom is fun, there's always a great atmosphere. It's not complicated, and it's easy to pick up and have a blast with. Doom was probably one of the first pseudo-3D games that really grabbed people by the balls and stuck them in an unreal alien environment. I suppose the timing was good because people were raving about Virtual Reality and everything and Doom provided a simpler model of this at home anyway – that's the way I saw it.

The latest problem has been the Amiga's specifications and the home user's set-up. It is impossible to cater for everybody's needs. Martyn believes it's because the Amiga has severely lost out in retail terms over the last two years.

"These days it's becoming less common to see Amiga software getting any sort of priority in stores. Retailers have been reluctant to stock A1200 editions, let alone high-end versions. Alien Breed 3D

2 is the first game we have ever done that you really need an accelerated machine for. A bog standard A1200 is adequate but it needs more, certainly a 68030 and true 32-bit FastRAM. AB3D 2 has to be severely crippled in terms of on-screen presentation and image-size to get it to run on anything other than pedestrian speed on a standard A1200. Having said that, on a decent spec machine it's looking phenomenal!" So, what's the main obstacle companies such as Team 17 must overcome to release a Doom game?

"It's the feel of the thing, the playability aspects. There's absolutely no point doing something that looks really great but plays like a bag of old socks. With Alien Breed 3D we went for maximum frame update and spent time on the atmosphere, level design and playability. You'll soon forget the pixel size and screen size and get involved with the game. Alien Breed 3D has no graphical cutbacks and the gameplay remains better than ever, but





*Breathless features some superb graphics although it is slightly let down in terms of action - only just though*



*Gloom is still in there with the rest of the pack and even though it's not strictly speaking a Doom engine, it's not bad!*



ultimate Doom clone, although it's set in the distant future featuring robots instead of beasts. In my mind, the only thing that let this down was that the weapons didn't really give you a feel of power.

For instance in Doom, running around a maze with just a shotgun and then finding a Rocket Launcher in a secret room would give you that instant rush to blow away everything in sight.

However, the weapons in Breathless are slightly weak, apart from the flame-thrower. Other than that, the graphics are the best seen on first-person games, and at the

moment it looks like only Alien Breed 3D 2 can challenge this game.

### Behind The Iron Gate

It's a bit unfair to call this a Doom clone, though it was based on the same idea. There was more RPG-type action whereby instead of moving with the gun in the middle of the screen, you used the keys to move yourself, and the mouse to move a crosshair into various positions for you to target.

It wasn't really a new idea by any means. In fact as far as games go, it just slips into the 'miscellaneous' category.

### Citadel

Programmed by polish team Arakis Software, this one was just too damn hard. The major gripe was that when you walked into a wall, the blow took a notch off your energy. Therefore, if you weren't particularly dainty around the corners you'd end up with hardly any energy before you had even reached your first enemy.

The blood and guts in this were good. They may not have had the flying limbs as in Gloom, but the bodily spillages were nothing short of gut-wrenching. Just make sure you've had no Cheese and Tomato Pot Noodles before you play.



the downside is that you need a toolled up Amiga to mean business."

With this in mind I asked him about the future of Doom games on the Amiga.

"The future of this type of 'high spec' game is in the hands of the buyers - they must prove there is a viable market. However as far as we're concerned, the future rests on the outcome of Alien Breed 3D 2. We are taking it as far as we can."

Finally, which is the best Doom clone on the market so far and why?

"AB3D. I say this without bias because it felt the same as Doom, although you perhaps needed FastRAM or a faster processor. It really is the game, not just the graphics. Breathless was a bit of tart, looked nice, but the novelty wore off after 30 minutes. Gloom was very nice, although not strictly speaking a Doom engine, and more of an out and out blast. Fears was pretty unremarkable and just about unplayable."

## League division Doom

This is the official system league table of Doom games. On the right are the scores we have given them in our reviews. This is how it stands now.

Publisher	Graphics	Sound	Gameplay	Supports	Overall
Alien Breed 3D	91%	88%	90%	All Amigas	91%
Breathless	92%	90%	92%	A1200	92%
Fears	93%	89%	92%	A1200	92%
Gloom	85%	80%	84%	A1200	81%
Citadel	62%	70%	63%	All Amigas	70%
Behind Iron Gate	71%	62%	60%	All Amigas	64%



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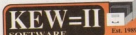
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Paul Overaa discusses  
the image loading  
example that you'll  
find on the cover  
disk of this issue...



# Tricky loading

Having briefly outlined the AmigaDOS scatter loading routines and indicated that they can be used for various non-process-based purposes, it seemed only right to provide a runnable example so that you can see the ideas in action. I've chosen a fairly simple Workbench-based intuition program that allows you to use the ask requester to select and display an image that has been stored in AmigaDOS load file form (as discussed last month).

Needless to say, the code used to perform this trick is fairly minimal but in order to provide a runnable example, it is necessary to incorporate the various statements into a fully fledged intuition program. You'll find the source for this on disk as the file `seglst.s` and it is the overall structure of this code that we need to discuss. The program begins by opening the DOS, graphics, intuition, gadtools and all libraries using a loop arrangement. Immediately after the library opening comes a set of allocation/de-allocation routines controlled by a series of subroutine calls (this arrangement has been used in many past examples).

Once the program is up and running, control passes to an event handling routine whose sole job is to identify the various classes of `IntuiMessage` events and take the appropriate actions as events are detected. The event handling code uses an `exec WaitFor()` call to put the program to sleep until intuition sends it a

## THE CODE ON DISK

You'll find the source, two loadable test images (`loadable_image1` and `loadable_image2`), and a runnable version of the example on disk. To run the program just double-click on the 'seglst' icon and load one of the images. For simplicity I've chosen to just display the images on the Workbench screen but of course ideally, we should see how many bitplanes the image needs and open a suitable depth screen and window for the image in question.

Incidentally, for those of you without the official Amiga includes, I've provided a separate include file, called `seglst.i`, which contains all the system definitions required. Just make the changes shown in listings 2 and 3 before assembling the example!

message. When you look at the tag entries in window opening sections of the example, you'll see that a `WAI_IDCMP` tag is being used in conjunction with the `IDCMP_MENUICK` and `IDCMP_CLOSEWINDOW` tags, so the program is notified whenever the user activates the menu or hits the close gadget.

Since I'm adjusting the window size to suit the image on display, I also ask for `IDCMP_CHANGEWINDOW` event notification since these events enable us to tell when window resizing is complete (new images are only ever drawn after such events are received).

Having cleared any existing image using a call to



The image loading example in action

the graphics library `SetKast()` function, this routine has to bring up the ask file requester and then copy the user selected file path/name to the filename buffer. Because the example program can be used to load more than one image, we need to also check for (and unload) any existing image before loading a new selection. It's done like this:

```
move.l seglst_p,d1
beq.s .no_seglst ; is a seglist still allocated?
CALLSTS @Unloading_@0Base
move.l @0Base,gs:seglst_p:seglst_pointer
```

Having done that we make a call to `LoadSeg()`, identify the base of the new image structure and change the window to an appropriate size (see listing 1).

## THOSE OFFICIAL INCLUDE FILES

Commercial Assemblers like `Devpac` come with the official Commodore (now Amiga Technologies) include files which provide a mass of Amiga-specific system definitions. You can, of course, type in any required definitions for yourself by looking them up in, say, the Addison Wesley Amiga ROM Kernel Reference Manuals (listings are given in the `Includes & Autodocs` volume). This approach, for all but the simplest of programs, would, however, be nothing short of a nightmare since even the slightest of errors in system structures and definitions could cause havoc when you try to assemble your programs.

Because of this, almost everyone who is serious about low-level Amiga coding either ends up buying an Assembler like `Devpac` or they purchase the system files separately for use with programs like `Charlie Gibb's a68k assembler`. The official includes are available from Amiga Technologies on a disk set known as the `Amiga Developer Update disks` (currently release 3.1) and the price is £30.

```
move.l seglst_p,d0
lsl.l #2,d0
addq.l #4,d0
move.l d0,tag_p:preserve_image_pointer
move.l d0,x1

move.l window_p,d0 ;resize window to
moveq #OFFSET7,d0 ;suit image size
moveq #OFFSET7,d1
move.w 1,g_width(a1),d2
add.l #OFFSET7+OFFSET2,d2
move.w 1,g_height(a1),d3
add.l #OFFSET7+OFFSET2,d3
CALLSTS ChangeImageBox_IntuitionBase
```

Listing 1: Code fragment which performs the window resizing

```
include exec/memory.i
include intuition/intuition.i
include libraries/dos.i
include libraries/asl.i
include libraries/gadtools.i
include exec/exec.lib.i
include intuition/intuition.lib.i
include graphics/graphics.lib.i
include libraries/dos.lib.i
include libraries/asl.lib.i
include libraries/gadtools.lib.i
```

Listing 2: Use this start to the example if you have the official Amiga includes

```
include exec/memory.i
; include intuition/intuition.i
; include libraries/dos.i
; include libraries/asl.i
; include libraries/gadtools.i
; include exec/exec.lib.i
; include intuition/intuition.lib.i
; include graphics/graphics.lib.i
; include libraries/dos.lib.i
; include libraries/asl.lib.i
; include libraries/gadtools.lib.i

include seglst.i
```

Listing 3: Comment out the system includes and use the `seglst.i` file if you haven't got the official Amiga files

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Paul Overaa offers some tips on converting existing Basic programs to run under ARexx



# Making changes

**W**hen Amiga Basic was given away free as part of the Amiga's software, there was an almost in-built incentive to take Basic programs written on other machines, and convert them to run on the Amiga. New users coming to the Amiga nowadays do not have this opportunity so, unless they go out and buy say Amos or HiSoft Basic, they may well have previously useful Basic programs written for other machines now lying unused.

One option is to translate such programs into ARexx form and surprisingly this, in many cases, is not difficult. Some changes are obvious: Remark lines, which in Basic are written either as Rem statements or end-of-line remarks, need to be changed to ARexx's /\* ... \*/ style comments. Basic variable

## ARRAYS

The fact that ARexx does not provide conventional arrays might lead you to think that array conversion could be a potential trouble spot. It isn't – because such array variables translate almost directly into ARexx compound variables. For example the array X(i%,j%) becomes X.i,j and a loop such as:

```
FOR I=1 TO N
  FOR J=1 TO M
    X(I,J)=I*J
  NEXT J
NEXT I
```

can be written as:

```
do i=1 to N
  do j=1 to M
    X.i,j=i*j
  end
end
```

Basic arrays have to be set up using Dim statements, eg Dim X(15,20). With ARexx this is not necessary, so Dim expressions can be eliminated altogether. What you do need to do, however, is initialise the stems used to represent numeric arrays (especially if there is any chance that any elements are likely to be referenced before a real value is assigned to them). Remember that ARexx automatically initialises unused variables (including stems) to the name of the variable itself. This means that uninitialised elements in, say a numeric array X.i,j, would by default be set to the letter 'X' and this would cause an error if such values were subsequently used in arithmetic expressions.

type indicators (% integers, & long integers and so on) can be dropped. Gosub statements used to execute subroutines will need to be changed to ARexx's function call scheme (remember, incidentally, that routines that provide return values do not need explicit call statements).

With Basic Print commands, the easiest idea is to convert them into ARexx Say statements. ARexx's Say instructions, however, always generate linefeeds, so if your code contains Print commands that have terminal semicolons to suppress linefeed generation, a better alternative is to replace all Print X type commands with Write(Stdout, X) function calls. In this latter case you can always include an explicit linefeed character when you need one.

Formatted output based on Print Using instructions can be handled in much the same way – just incorporate the appropriate ARexx string handling function (eg Left), to mimic the Print Using field



Display formatting like this can often be achieved using console device control character strings

```
GOSUB SOURCE=>-----> Get file
PRINT PROMPT1$
IS=""
WHILE LEN(IS)=0
  GOSUB WCOUNT:"GET WORD COUNT"
  GOSUB SPELLCHECK:"CHECK SPELLING"
  FOR I=1 TO N:G(I)=X(I)-WORD.B(I):NEXT I:Adjust X() word values
  PRINT PROMPT2$:INPUT X$
WEND
END".... End of program!
```

Listing 1: Some example Basic code

```
call Source() /* -----> Get file */
Write(Stdout,PROMPT1)
Input$=""
do while Length(Input$)=0
  call Wcount() /* Get word count */
  call SpellCheck() /* Check spelling */
  do I=1 to N
    I,X,I-WORD.B,I /* Adjust X() word values */
  end
  Write(Stdout,PROMPT2): Input$=Read(In$)
end
exit /* End of program */
```

Listing 2: The ARexx conversion of Listing 1

## Loops

For/Next loops need to be converted into ARexx do/end loops and if a step value is being used the 'by' keyword needs to be included in the equivalent ARexx version. For example a Basic loop which reads:

```
FOR J=1 TO N STEP 2
  [ body of loop ]
NEXT J
```

needs to become...

```
do i=1 to N by 2
  [ body of loop ]
end
```

Similarly, While/Wend loops need to be changed to the ARexx do-while/end

equivalent and here, some of the exit expressions used may need altering. Basic's '<=' (not equal to) operator, for example, will need to be written as '<=' in the ARexx form. Other conditional test statements within the code may also need such alterations.

All these translations tend to be straightforward because in reality they do not affect the overall structure of the program.

The thing to do is experiment – make a preliminary translation tackling the easy areas first. Once you have introduced a recognisable ARexx flavour to the code you will find it easier to deal with any more difficult statement conversions that remain.

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Phil South starts a series of tips on how to make your Web sites look and work better



# Adventures on the Web

## part 1

It is so easy to get published on the Web these days, it's hardly surprising that so many people leap into it without first giving a little bit of consideration to what it is they are supposed to be doing. More importantly, they rarely give any consideration to the people who are going to have to read what they put on there and make some sense of it.

With this in mind, I thought it was time there was a definitive guide to what you, as an Amiga user, can do to make the Web a nicer place to be. Sadly, although we have very good Web browsers on the Amiga, most, as yet, don't comply with the latest version of HTML. This doesn't mean you shouldn't cater for users of your Web site who have the misfortune to be running something other than an Amiga. By all means, put in things which make your site look good, and make the best use of text and graphics.

Obviously the whole point of using the Web rather than a text-based system is that it can do text and graphics, and most people use this as an excuse to go haywire. In fact, the less you do in the way of graphics, the more people will like your site. Sounds stupid doesn't it, but it's more important that the quality of the graphics are up to scratch rather than the

amount or size of them. Take a bit of time to create your graphics. (Note: AMosaic will only show inline images on AmigaDOS 3.0 upwards, so the following chat about inline graphics will only apply if you use an AGA Amiga.) Make your graphics with Dpaint by all means, or better still a program with a lot more filters and effects like Art Department or Photogenics. Save all your pictures as GIF or jpeg and only use jpegs very sparingly for big colourful pictures which need to have all the colours of the rainbow in them.

One clever trick is to use the LOWSRC command in HTML to load a low resolution black and white (that's two colour) GIF picture first so the user can see what you're getting at before the picture is fully loaded. That way, if they like what they see they can wait, and if they get the idea they can click and move on to the next page. Use it like this:

```
<IMG SRC="bigpic.jpg" LOWSRC="bigpics.gif" alt="Big Logo">
```

The b/w picture loads first, then the big colour one. The "alt" option means that if for some reason the

## SEARCH ME!

Okay, have you ever wondered how to add a searchable index at another site which is accessible from your own page. For example, say you wanted to add a search form for Yahoo into your own pages. All you need to do is add the following HTML into your code:

```
<!-- Begin Yahoo Search Form -->
<FORM METHOD="GET"
ACTION="http://search.yahoo.com/bin/search">
<INPUT SIZE=30 NAME=q> <INPUT TYPE=submit
VALUE="Yahoo! Search">
</FORM>
<!-- End Yahoo Search Form -->
```

and there you are, a form which searches Yahoo direct from your location. Simple, innit?

picture doesn't load, the dude who logged onto your page still has some idea of what should be there.

Finally, take note: on browsers based on other platforms, interlaced GIFs "resin", and non-interlaced don't. Interlaced GIFs can give you an idea of what is going on in the picture before it is fully loaded, but saving interlaced GIFs is a little bit tricky on all but the most pro spec image treatment programs.

Oh yes, and experiment with the ALIGN command too, when placing pictures. If you put this in:

```
<IMG SRC="bigpic.jpg" LOWSRC="lowpic.gif" align=right alt="Massive Logo">
```

then the text will flow down the left-hand side of the page and your graphic will be on the right. Change right to left in the command and the reverse will be true. It's a small trick but a very powerful one.



The LOWSRC image on the left can stand in as a proxy for the more modern-intensive colour image on the right



## TEXT OPTIONS

Although the Web is a graphics heaven, it's hell for some poor suckers, because they are wholly text based. If you don't have a direct link to the Internet, then you are looking at text through some third-party Lynx look-a-like. Always give a text option, like using "alt" in your picture definitions, and always give the links in text, rather than merely as a picture. Don't put any text on your screen as a graphic unless you back this up with a little bit of on-screen text somewhere.

Also, do you have plain text throughout or do you use too many italics and bolds? Don't overuse the emphasizers, make them work for you. Use italics to show emphasis or to describe a title of something, or better yet put " around titles. Use bold to emphasise headings and other important stuff. That way your pages won't look like they've been gone over with a typographical lawnmower.

Take your lead from other people's pages, and look at magazines and how they use typography. When do they use italics, when do they use bold, when do they use CAPITALS, how many different sizes of text do they use? All these things are important to design, and play a part in how easy your pages are to read. Or how amateur and hasty they look. The choice is yours.

## THAT'S ALL

Okay, enough already. So you can't access a lot of HTML tags in your own browser, but that's no reason why you can't put things in for other users to see. There are developments afoot to bring Amiga Web browsers up to the current standards in HTML mark-up, and I'll be covering these in the next instalment. See you then. In the interim if you like you can e-mail me at:

south@cix.compulink.co.uk  
phil.south@ukonline.co.uk

and ask me anything about HTML or the Internet. Any of the best tips I get will be printed in a future issue.





Printing your pictures isn't as easy as it first appears. Frank Nord explains why



# Pixels for print

It's happened to me recently. I started a project to create an advert for print in a magazine, but when I looked at a chromalin of the finished article, it was all blocky. And why? Because I hadn't paid enough attention to the smallest of matters – the pixels that made up the image.

Now, my first attempt at creating images for print came some time ago, and I swiftly realised that the pixels that make up an image aren't necessarily square. PAL pixels aren't too bad, but NTSC pixels are only about 85 per cent as wide as they are tall. This doesn't matter onscreen, you just run an NTSC screenmode and view your picture – it looks great. The trouble is that pulling your artwork into a DTP package will mean you have to rescale it to make sure it looks the same in print as it does on the screen. The DTP packages we have on the Amiga don't really care about things like pixel aspect or PPI (pixels per inch), but if you're planning on taking your image to a printers to have it output, their software almost certainly will.

When printing you won't be using ppi, but lpi and dpi. Dpi (for dots per inch) is the hard physical resolution that a printer can output. If your printer can print at 720dpi, it doesn't mean it will also be able to print at 720lpi. Lpi (for lines per inch) is the number of halftone dots that will fit on a line one inch long. Most home printers can manage an lpi rating of between 65 and 100lpi, but the number

of colours they can produce at higher lpi levels may be reduced.

So how big do you have to create your image? Well, because the halftones are created from your image data algorithmically, it is best to have two pixels per halftone dot. This means that to get the best results on a 65lpi output for a full page image (we'll use letter size as the figures for A4 are more complicated), you'll need to multiply 8.5 inches across by your lpi setting, giving a total of 552.5 pixels. Next we'll check how high the image should be, so we multiply 11 inches x 65lpi to get 715 pixels. So we now have an image of 553 x 715 and we'll double that to be sure of the best quality output possible at this resolution to a figure of 1105 x 1430. Of course, if you are planning on creating an image to be printed at full page size in a magazine, you should be aware of the fact that magazines like ours tend to use a screening process at 133lpi or even higher. This means that the same image for a magazine would have to be 2261 x 2926 – much larger and harder to fit on a floppy.

The process might finish there for you as the originator of the artwork, but it's not enough for print. Since printers work on a four colour basis, the image also needs to be in CMYK. This will increase the size of the file even further. You will probably find it difficult to change your file's format to CMYK on the Amiga, certainly I'm not aware of a program that can do it for you. Most printers will be able to cope if you supply them a 24-bit IFF file though.

Obviously, even the most visionary artist is going to find it hard to create a masterpiece in DPaint at these sorts of resolutions, so this advice is mainly geared towards people using a 3D package and/or ImageF/X (or something similar). If you are using a 3D package to create these files, you will need to pay far more attention to your modelling and surfacing than before. Edges which seemed smooth in a screen resolution image will appear very polygonal in print, and single point or flipped polygons will be very apparent.

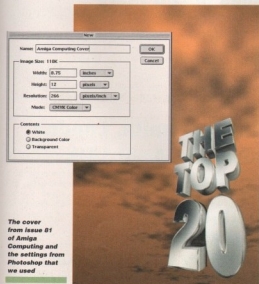
Hopefully, this should help guide you through the minefield that is pictures into print.

FRANK NORD

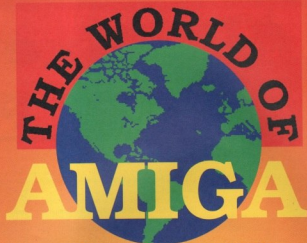
## PAGESTREAM PROGRESS

It finally arrived, and arrived and arrived. Late in January I received a copy of PageStream 3.0i from Softlogik, followed by a newer version and another newer version. I've now got the latest copy installed on my machine and there's no doubt, PageStream 3.0i is now as stable as PageStream 2.2, their last commercial release. Whether you think that's bad or good will depend on your experience with PageStream 2.2, but in my mind, it certainly isn't bad. The overall feature list for PageStream hasn't improved, but the number of bug fixes and implementations is pretty large...

- Text: ..... Style tags now fully implemented  
Font caching implemented
- Object: ..... Pen Tool now completely implemented  
Reshape tool completely implemented  
Fixed problems with Scale, transforming and resizing
- Files: ..... Opening a PS2 doc will bring up a requester to help you use PS3's formatting tools so that your doc most resembles its original state
- Printing: ..... Arrow heads now print properly on Postscript printers Added HP310, 320, 600C and the new 850C to the printer model list and implemented the resolution enhancement technology used on the newer printers  
Changed the Epson driver and added a whole bunch of new XPD driver files (There are loads of them!). Printing should be faster on most Epson printers and the microwave function has also been implemented
- Miscellaneous: ..... As stated last month, PageStream now works on a CyberGfx screen in up to 24-bit resolutions Changed some ARexx commands and the macros that use them.



The cover from issue #1 of Amiga Computing and the settings from Photoshop that we used



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Phil South looks at options for creating interesting multimedia with Amos



# When the bell tolls

## part 2

Last month we talked about using animations and sound with Amos and how you can make a multimedia application using our favourite coding engine. Okay, let's get specific now. Multimedia programs consist of graphics and sound, and are interactive. This means you must interact with the objects on the screen, therefore you must be able to click on icons and buttons to make things happen in the program.

To give you a good grounding in making multimedia buttons which perform an action when you click on them, try this simple program for size. Firstly, you have to reserve a set of zones. Simply work out how many buttons will be on the screen. (This is okay as you can always change it all later, should the need arise.) In this example we have three buttons:

Reserve Zone 3

Now we have to indicate which zones we want to make sensitive to mouse clicks, and then build buttons on them. The three zones will be from 10,10 to 30,30, button 2 from 35,10 to 55,30, and button 3 which will be from 60,10 to 80,30. Remember that screen co-ordinates are horizontal then vertical, with 0,0 being the top left of the screen. This means our buttons will be in a little neat row at the top of the screen. So we set the zones up using the sizes of the buttons as a guide:

Set Zone 1,10,10 To 30,30 Set Zone 2,35,10 To 55,30 Set Zone 3,60,10 To 80,30

and we now need to draw the buttons. Of course, you don't have to draw buttons, but in the examples in this column I try to make them as standalone as possible, without any external graphics etc., otherwise it makes it hard to follow the text if you don't have the cover disk to hand. You could, of course, substitute a picture of a button designed in DPaint, or a digitised picture of a face - anything that you might want people to click on. In fact, you can make

## WRITE STUFF

If you have any other Amos programs or queries about Amos, then please write to the usual address, which is: Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP. Please send routines on an Amiga disk with notes on how the program works on paper, not as text files on the disk. Make the routines short enough to appear in print, i.e. no more than about 30-40 lines of code, and if possible make them use no external graphics, or if they can't be used without them then be sure to provide them on the disk in native IFF format, and the same goes for sound files. Follow these guidelines and you'll be sure of making me a happy man if nothing else.

©1995 Ideas Imaging

### ABOUT



You can have your cake and eat it when creating multimedia with Amos

any area of the screen clickable, so why not make a whole console? (I'll be featuring a little program to help you map out mouse zones easily in a future issue of this series.) Okay, back to making some simple bas relief buttons. Firstly we clear the screen with black:

Cursor Off : CLS 0

then we draw in the buttons:

```
Ink 2 : Bar 10,10 To 30,30
Ink 8 : Bar 35,10 To 55,30
Ink 7 : Bar 60,10 To 80,30
Ink 2 : Bar 35,10 To 55,30
Ink 8 : Bar 37,12 To 53,28
Ink 7 : Bar 37,12 To 53,28
Ink 2 : Bar 60,10 To 80,30
Ink 8 : Bar 62,12 To 80,30
Ink 7 : Bar 62,12 To 80,30
```

You'll notice that I've made the buttons with three Bar commands - one for the white highlight at the top and left of the button, one for the dark shadow, and one plopped in the centre for the colour of the button. Next we add a line of instruction:

Pen 2 : Paper 4 : Locate 0,0 : Print "Click the above buttons to make a noise."

and we're ready for the main program loop. The loop basically checks the zones to see if the mouse is over any of them, and also checks the

mouse button to see if it has been pressed. An AND has been used in the test to only cause a reaction if the mouse button is pressed whilst the pointer is over a button. Click the pointer anywhere else on the screen and nothing happens.

The loop is a standard DO/LOOP affair, and firstly it assigns variables to MOUSE\_ZONE and MOUSE\_CLICK:

```
Do
  I:Mouse_Zone
  C:Mouse_Click
```

Next we check to see if the conditions have been satisfied for the mouse and any of the buttons:

```
If C<0 and I=1 Then Bell
If C<0 and I=2 Then Boom
If C<0 and I=3 Then Shoot
```

Loop

and if any of the conditions are met, the appropriate sound is heard. If you click on button 1 you hear the standard bell sound, if it's button 2 you hear the boom, and on button 3 it's the shoot sound. You could, of course, replace the standard Amos sounds with samples from a sample bank, but that's for you to play with.

Right, that's multimedia buttons dealt with. Next month I'll go into how to make animated buttons, plus more hints and tips on making multimedia with Amos.

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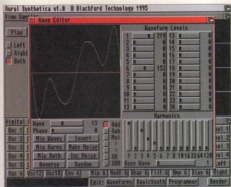
Paul Overaa looks at  
a brand new sound  
synthesis program  
from Blachford  
Technology...



# Aural Synthetica

**A**ural Synthetica is a sound sample creation program which uses a synthesis approach best described as the software equivalent of an analogue synth with modern digital waveform generation. Modern synthesizers, of course, are based around oscillators which generate a set of fundamental sounds, filters which cut or boost different frequencies, envelope generators that can change the volume of the sound components over time, and so on. Mix all that hardware together and add a keyboard, memory, Midi, touch buttons that can store and retrieve sound combinations from memory instantaneously, and you end up with a typical piece of modern kit.

In the early days (long before Midi was even dreamed of), synthesizers used much the same sort of elements, but they were not connected by electronic switching – they used almost bread-board-like connecting leads to 'patch in' (i.e. route) signals around. As far as signal routing is concerned, these early connection arrangements



Synthetica's options provide immense flexibility, but is it too much?

## FILE FORMATS

The initial result is always a 16-bit sound that can be saved in one of five formats – SAFF (the format introduced in Synthetica's sister program Aural Illusion), AIFF, the 16-bit file format used on the Amiga and Apple Macintosh (also turns up on the PC as .AIF), Windows (PC) WAV, MAUD (for WaveTools sound card users), and (with a corresponding decrease in sample quality) 8-bit IFF 8SVX format. Once saved, incidentally, you may need a touch of editing to remove clicks or other glitches which tend to appear at the beginning and end of Synthetica-generated samples (any sample editor can be used for this).



The main Aural Synthetica display

were actually more flexible than those found on many synthesizers today, and it is in these early 'modular' signal routing arrangements that Aural Synthetica's methods of working are based. You link oscillators, envelope generators and so on together in order to define a sound.

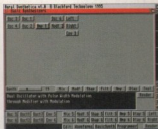
The top part of the main Synthetica screen is a window which lets you view and play the resultant sounds. Beneath this is the so-called DMS (Digital Modular Synthesizer) window, most of which is taken up by the buttons for accessing the sound generation and sound shaping modules (there are 66 modules in all and each one of them has a button). All the other sample control facilities, namely the Wave Editor, the Basic Synthesizers window, and the program's Patch Programmer, are also reached from the DMS window.

## SOUND GENERATION

To generate sounds the oscillators can use either the 12 basic waveforms or up to 24 user-defined ones. Six sliders controlling waveform, amplitude, delay, note, octave, and detune facilities are available for each oscillator, along with two check boxes which turn the output of an oscillator upside down or reverse its output. In addition to this you can add waveform, phase shift, pulse width and frequency modulation effects.

The waveform editor similarly allows you to create an almost infinite number of waves. You can do things like brighten up a waveform by increasing the number of harmonics in it, or change the harmonic content with time, and there are all manner of waveform modification options. You can reverse, invert, add varying amounts of noise and so on. The patch programmer window is full of buttons which allow the user to arrange the various oscillators, envelopes, filters etc., in any way they choose. There are also a large number of 'basic synthesizer' presets which provide immediately accessible starting points for users.

Aural Synthetica is an interesting package and it's obvious that an immense amount of work has



Preset synthesizer patches provide good starting points for program use

gone into it. The program is clearly capable of producing some excellent results, although whilst experimenting I found it all too easy to produce results that, to put it mildly, were not so good. Sample rendering, even on an A4000/040, frequently took a minute or so (sounds are generated by large numbers of calculations), and one shortcoming of this first release is that once you start a sample playing you can't stop it, you must wait for it to finish. This is a pain if you've generated a large sample and needs to be corrected in later versions.

There are plenty of good points, though, including the fact that you have full control over where the rendering output will go (left, right or both stereo channels) – this makes it possible to generate samples with totally different left/right stereo components!

One thing that was apparent right from the start is that Aural Synthetica provides a nigh-on overwhelming array of controls including some rather odd functions (like Exclusive ORing of waves) that I'm sure will mean little or nothing to most prospective users. If I have any worries at all about this program then it is that the average Amiga musician may feel there are too many options and too many variables available!

## Bottom Line

<b>Product:</b>	Aural Synthetica
<b>Price:</b>	Price: £30 (+ £0.50 p&p)
<b>Supplier:</b>	Seasoft Computing
<b>Phone:</b>	01903 850378

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Implementation  
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Overall

7  
7  
7  
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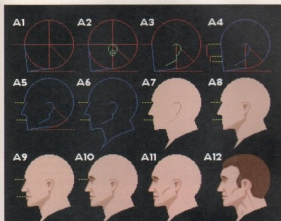
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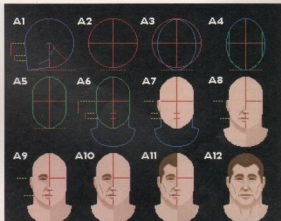
Steve White explains  
how you can breathe  
life, bone and  
muscle into your  
life forms



# Head hunters



**SIDE PROFILE** - designing real-life forms can be difficult but with an understanding of bone and muscle structure the task is made a great deal easier



**FRONT PROFILE** - creating a front profile can be difficult because of the way light falls on bone and muscle structures casting complex shadows

**D**ue to popular demand I have decided to take a two issue time-out from animation in order to explain some important concepts for designing human figures, after which I shall return to animation. The human form is one of the most common elements in artwork, whether hand or computer generated, and therefore an understanding of this subject is essential.

In this month's article, I shall be explaining how you can create realistic looking human heads from a side and front profile. Each image has been broken down into the different stages required for head design, and while they may look complicated at first, once the techniques have been mastered they will become second nature.

If you take a look at the side profile, stage A1, you can see that the head originates from a simple circle.

The circle is cut in the vertical and horizontal and then the bottom-right section is cut in half once again with a diagonal line. Stage A1 is then finished with the front line of the face and the chin line, both marked in blue.

In stage A2, we can begin to add an ear. The ear is made up of two overlapping circles, the smaller one for the lobe, both indicated in green. By stage A3 the left half of the circles is removed to reveal the ear, from which we can then draw a rough jaw line. We can also dot the eye line which runs from the centre of the circle to the left edge. The red line that extends from the centre through the ear to the bottom of the circle can then be used to find the exact positions of the nose and the mouth.

Grobbing the red line as a brush, halve it in the Y axis. The result is the length of the nose from the eye line. By halving the line again you then have the

distance from the bottom of the nose to the mouth which is indicated in stage A4. Now that you know where the nose is, you can add it to the profile, shown in stage A5, remembering to dip the brow inward slightly between the eyes. Using the diagonal line which halves the bottom-right section of the circle as a reference, you can locate the point at which the back of the neck meets the head. The front of the neck joins to the chin line just below the jaw line in stage A6.

By stage A7 the base flesh colour has been added and in A8 you can start to get to work more on the actual features of the head - here the ear has been enhanced and the jaw line made more prominent with shadow cast from the jaw bone. The mouth and nose detail is added in A9 using the yellow guidelines as a reference and by A10, with the eye inserted, the side profile head is almost complete.

A rudimentary understanding of muscle and bone structure is essential in adding the final touches to a head or figure, and there are plenty of good books dedicated to this subject which will help you in your quest. Although at stage A10 the head has all the main features, it still looks flat, and it is simply the addition of shadow under the cheekbone in A11 that really gives the image a realistic and 3D feel. Shadow is a great way of conveying bone and muscle structure, but you have to be anatomically correct otherwise it just won't work. It's either right or wrong - there is no in-between.

In the final stage, A12, the hair is added as well as the main neck muscle which runs from the ear to the shoulder. The side profile is now complete and we've ended up with a perfect head from a just a simple circle.

## IN PROFILE

The front profile can be designed in exactly the same way as the side profile, the only differences being the ellipse for the shape of the head (A3) and the jaw bone profile (A4, A5). In fact, if you want to animate the head, you can easily use one profile as a template for another. Although there are two sides to the front profile, it's simply a case of drawing one half and then flipping it to the other side.

However, although this is perfectly okay you should make appropriate changes in accordance

with shadow. As an example, imagine the light source was coming from the left side of the front profile head. The nose would cast a shadow on the right side. But remember - the shadow would also be warped because of the shape of the cheekbone it is falling on. This is why it is important to have a fair understanding of bone and muscle structure - everything has a cause and effect. Obviously, if the head you are designing is small you won't be required to add as much structural detail as you would for a large head.

Paul Austin takes the pain out of spline patching

# 3

3D graphics

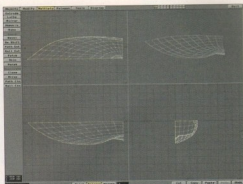
# Simple splines

**S**pline patches have always had a bad press, due in part to fairly poor explanation in the part of the LightWave manual. Ask most LightWave users if they're happy with spline modelling and you'll often get a rather non-committal response. This basically means they've had a bash in the past, it went horribly wrong, and they grudgingly went back to metaform in the firm conviction that spline patching simply isn't worth the effort.

But take my word for it, it is! Once you've got your head around the basic principles, spline patches are a doddle to produce and in most cases offer a much more accurate, efficient and occasionally even quicker method of generating complex organics.

Okay, I've dug a hole and jumped in it. LightWave's basic tutorial is a non-starter – in my humble opinion. So here's an alternative guide to the sticky problem of spline patching.

As you're probably aware, a spline patch is made



Remember, basic spline cages are nothing more than three dimensional elastic bands

up of three or four connected curves which share the same start and end points. Fine, but what does that mean in English, and how do you translate this vague overview into an actual object? The first thing is to get a mental picture before you begin. Essentially, a completed spline cage is nothing more than a three dimensional loop made up of three or four segments all connected end to end. Think of it as an elastic band which has moulded into a particular three dimensional shape. To keep things simple I'll base the tutorial on a spline made up of three connected curves. However, the same principles apply to four curves, the only difference being that four curves generate sheets rather than triangular shapes.

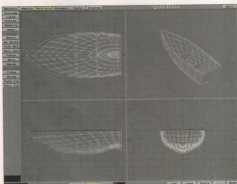
The inherent confusion surrounding spline construction is mainly due to the two dimensional nature of the X,Y,Z views in modeller. An empty spline cage shown as a screen shot simply looks weird – and therefore it's hard to visualise where the connections are.

The first step is to go into point selection mode and select the points option in the polygon menu. In the top view, and working from bow to stern, mark out the

outer edge of half our boat hull as a line of points. When you've added the last point hit the Ctrl P key, or the create curve button – you've just made the first section of the cage. Now this is the important bit. While still in point creation mode, place the point creation cross-hair – left mouse button – on the first point in the existing curve. Now check in the other two dimensions that the cursor occupies exactly the same point in space as the original.

When you're certain it's positioned correctly, create a new point in the face view – using the right mouse. It's absolutely vital that this point is precisely the same point in space as the point in the original curve. The reason for this is that these points must be merged later prior to creating the patch.

Assuming the initial point in the new curve is in the correct position, you can carry on in the face view, adding a line of points which form profiles of the bottom of the boat. Once all the points are in place, hit Ctrl P or the create curve button to create the second curve. At this stage you should have two curves connected at the bow end of the boat.



The completed boat courtesy of a mirror command, a few extra polygons and a boolean operation

## TAKING A BOW

The final task is to close the loop. To do this make sure the point creation cross-hair is bang-on the last point in the first curve you created – remember check all the views. Now add a new point in the side view, continue to add points to form a half-profile of the boat, making sure once again that the final point you create is exactly on the last point on the second curve, and hit Ctrl P. Your cage is complete.

Enter polygon mode and select all three curves, ensuring the longest one is the last you select. Now click on merge in the tools menu

to fuse the three together, then click on the patch tool to create your finished spline patch. At this point you'll be given the opportunity to define the number of vertical and horizontal polygons that make up the patch. For now, stick with the defaults – you can always undo and alter things if necessary.

To finish the job, mirror the patch to create a complete hull – don't forget to merge the duplicated points running along the keel. Now use the hide function to isolate the bow end polygons and then select them in series and create a new polygon, using the Make

command or P key. As a finishing touch, create another polygon along the top of the boat, copy the whole thing to another layer, scale it down slightly, position it as a background layer, and then use Boolean subtract to carve it out of the original, thereby giving the sides of the ship some depth. If you like, you could even add struts by cutting them out of the carving layer before you perform the Boolean to the hull.

Voilà! A perfectly respectable dingy in a matter of minutes, as opposed to hours by any other method.



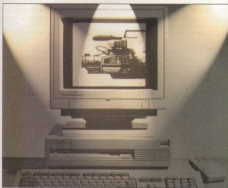
Gary Whiteley  
explains the  
principles of  
video signal  
formats



# Message in a...

Last month I looked at the various television standards which predominate in different parts of the world. This month I'm going to examine the different video signal formats which are commonly used for playback and recording in domestic, industrial and broadcast situations.

As you may already be aware, there are quite a few different types of video system on the market, all vying to be the one you choose for your video productions. You are no doubt already familiar with VHS, and possibly SVHS, Video8 and Hi8 too. If you have a strong interest in video, you'll probably know about Betacam, and perhaps MII (pronounced 'M Z') as well. On the other hand, you might not be too sure of the differences [other than the physical tape format] between each of these video systems, and indeed even why there is such a range of systems to choose from. But first we need to travel back in



## HOME VIDEO FORMATS

So what about SVHS or Hi8? Again, these are component video formats, but not quite so sophisticated as the Betacam/II YCrCb format, since SVHS and Hi8 use only Luminance (Y) and Chrominance (C) in their two-wire YC signal. In many ways YC is a budget Betacam, though, of course, neither SVHS nor Hi8 can actually achieve Betacam quality. On the other hand, YC signals are generally suitable for 'industrial' videos and are becoming ever-more popular with the home video enthusiast and professional alike, both for the portability of the cameras and the relative quality of the pictures they produce, not to mention the savings to be made over buying Betacam kit.

New video signal formats are still being developed and as digital video and disk-based camcorders are increasingly developed there will no doubt be further upheavals and more improvements in quality. Some signal formats will be usurped by new rivals and others will just fade away. With video technology still being less than 30-years old, who can say what will happen over even the next ten years?

time... Before the days of home video, there was really only one video signal which everyone had access to, and that was the signal which was broadcast from the television transmitter to be picked up by your TV set at home. In the early days of television, when the picture was just black and white (monochrome), it was decided the simplest way of transmitting television was to encode both the sound and vision parts of the programme into a radio frequency (RF) signal which was both compact and could be transmitted over long distances at relatively low power.

This type of RF signal is still in use today (with the addition of colour information) and is what our TV aerials pick up, or our cable providers send direct to our homes. When it reaches our home TV or video recorder, the RF signal is decoded electronically by circuits within the video equipment into the sounds and images we subsequently see on our TVs or record off-air on

our video tapes. Unfortunately, RF is a compromise because it has to cram all its information, both sound and vision (which in turn is made up of colour, brightness and synchronising information), into a single signal, thus causing some loss in quality for the sake of being able to deliver the best overall signal to the home in the simplest possible way, and requiring the use of only a single wire to connect equipment together.

In true video applications (such as recording or editing) RF is very rarely used, except by amateurs copying videos, or for playing back off-air or pre-recorded video from tape to a TV set.

## CONTACT POINT

Gary Whiteley can be e-mailed as  
dgaz@cix.compulink.co.uk

## COMBINATION TRICK

The most basic video signal used for true video recording is 'Composite' video, which is a compound signal comprising combined luminance (Y), chrominance (C) and the requisite synchronising pulses. This is solely a video signal - sound is recorded synchronously via separate inputs - so there is more 'bandwidth' available to carry the picture information and, hence, composite video is a step up in quality over RF. Composite video is what VHS and Betamax (remember that?), Video8 and 3/4" U-matic tape recorders use as standard for their video inputs. Most serious cameras and camcorders have a composite video output, even if they also have a component output (e.g. YC).

However, there came a time when composite video was no longer regarded as a suitable signal for professional use so, eventually, along came Betacam with its component (as opposed to composite) video signals. It was realised that the picture quality could be improved by keeping the constituent parts of the video signal as separate as possible, though even to this day it has still proved impractical to work with just RGB and sync information because of the vast amount of information which would have to be recorded to tape. Instead of RGB, another compromise was worked out, but one which offered much better performance than composite video.

Sony's Betacam system (and later Panasonic's rival, MII) both use a three-wire video signal format called YCrCb which keeps the luminance information (the monochrome picture) separate from the colour information. In fact, you'll notice that there are only two colour components (Cr for Red and Cb for Blue values), since green is produced by subtracting the red and blue values from unity. Such component signals, coupled with high-quality Betacam tape and top-quality lenses, allow for reasonably small, relatively light-weight, portable camera/recorder combinations capable of producing broadcast-quality pictures anywhere in the world.





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