

# AMIGA

## COMPUTING

Let  
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be  
light

A mouth-watering look at Lightwave PAL  
the software responsible for Robocop the  
series – PLUS all its essential add-ons

**PageStream 3.0 Exclusive:**  
The DTP package the Amiga  
world has been waiting for

### Product reviews

**MainActor** - Vital software  
for any Amiga animator  
**Retina III** - The next  
generation in Amiga graphics  
**CES Report** - The latest  
games news from the States  
**Home Studio** - Essential  
info for any musician  
**Blitz Basic** - The start of  
our comprehensive tutorial

**SYSTEM**  
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guide to Amiga gaming



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\*Indi recommend the use of an additional power supply if more than 2 expansion options are anticipated

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Amiga CD32 Comes with 2 **GREAT GAMES** Microcosm and Chaos Engine and whilst stocks last Oscar, Diggers and Wing Commander. CD32 will play your favourite Music CD's

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\* Turbo fire and Auto Fire  
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\* Amiga 1200 \* Frontier Elite II  
\* Batman Returns  
\* Wordworth AGA  
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**£319.99**

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80 Mb Hard Drive Pack **£489.99**

120 Mb Hard Drive Pack **£519.99**

170 Mb Hard Drive Pack **£579.99**

12 Months At Home Warranty from ICL

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### THE NEW ZAPPO SMART STOR

The New Zappo Smart Stor provides games and data portability never before available to the Amiga 600 and 1200 owner. Simply slip into the PCMCIA Slot on your Amiga and you have access to 20Mb of Smart Storage. Want to run your Stored Games or Data on a friends Amiga, no problem, simply unplug the Smart Stor and you have Total Portability.

**\*20 Mb**

**\*30 Mb**

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**£169.99**

\* Fully configured \* Superfast Access  
\* 12 Months Warranty

"...for its impressive price tag and the sheer convenience of being able to plug in and go, the Smart Stor deserves to do very well indeed"  
"Smart Stor is a genuine godsend". Amiga Format July 1994

# SX-1

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We said it would be good - we were wrong, it's amazing. The Amiga CD32 now comes of age with full Keyboard Floppy Drive, Hard Drive, Printer and Full Motion Video compatibility. Simply plug into your CD32 and the world of real computing begins. No longer a mere console this is what new technology is all about. \* Real Time Battery Backed Clock \* Serial Support \* Parallel Port \* RGB Interface \* External Floppy Drive Port \* IDE Interface Port \* AT Keyboard Interface. Up to 8Mb 32 bit memory expansion (subject to FMV) \* 2.5" IDE Internal HD Expansion

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- Colour Ribbon
- Black Ribbon
- Mouse House
- Mouse Mat
- 500 sheets A4 Paper
- Wordworth Word Processing Software

**£189.99**



- Fast Printing Speeds: 192 CPS draft, 64 CPS LQ and 32 SLQ.
- Colour Printing: 7 Colour palette (blue, red, green, yellow, violet, magenta, black)
- Quiet printing: Super quiet 43.5-46 dba sound level (most matrix printers are typically in excess of 60dba)
- 7 Resident Fonts: Over 152,000 type styles using Super LQ/Courier Prestige, Bold PS Roman, Script and San Serif fonts.
- 24 Pin Diamond Shaped Printhead
- 1 year Warranty

High performance and high quality output, for total peace of mind

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- 100 sheet, multi purpose paper tray (A4, letter, legal and executive)
- 38 internal bi-magnified fonts
- HP laserjet series IP
- 1 Mb Ram expandable to 5 Mb
- 1600 copies per toner.
- 1 Year On Site Warranty

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**£449.99**



#### Panasonic KX - P5400

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#### Panasonic KX - P2023



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- 4 Resident Fonts: Courier, Prestige, Bold PS and Script
- 2 Paper Paths: Top and Rear
- 1 year Warranty: for total peace of mind

~~£217.00~~  
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FREE Autocut Sheetfeeder whilst stocks last Recently reviewed by Amiga Format "A fine 24-pin dot matrix printer at a reasonable price."

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#### Panasonic KX-P4430 Laser Printing



- 8 scalable fonts, 28 bitmaps fonts
- Optional 2nd input bin (total printer capacity 2X 200 sheets)
- Optional memory expansion to 5Mb (1Mb as standard)

**£649.99**



#### SPECIFICATION

- Satinprint (optimum resolution technology)
- 5 pages per minute
- HP laserjet III emulation, PCL 5

WORDWORTH SOFTWARE COMPLETELY FREE WITH KX - P 4430

#### Printer Accessories

- 1) Printer Dust Cover: Specially tailored quality dust cover for the KX-P4400 printer  
INDI PRICE £12.99
- 2) Printer Stand: Heavy duty stand  
INDI PRICE £5.99
- 3) Paper Rack: 500 sheets of quality A4 paper  
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- 4) Continuous Paper: 1000 sheets 1 inch wide paper  
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INDI PRICE £5.99
- 6) Panasonic Colour Ribbon: Colour ribbon for KX-P2123  
INDI PRICE £12.99
- 7) Panasonic Black Ribbon: Black ribbon for KX-P2123  
INDI PRICE £6.99

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*The Phantom*

A J. K. ROWLING NOVEL  
BY MARK

**IMPORTANT - PLEASE NOTE**  
 NOP = will not work on A500  
 Plus, A600 or A1200  
 NO12 = will not work on A1200  
 1 MEG = requires 1 MB of RAM  
 + = NEW Item

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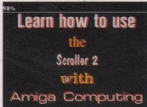
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for details of the new Amiga books offer available when you subscribe to Amiga Computing

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## Programming

### HiSoft BASIC 2

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HiSoft BASIC 2 is the new BASIC system for your Amiga, fully compatible with all Amigas from an A4000 tower system running Workbench 3.

This exciting package sets new standards for BASIC programmers on the Amiga with full AGA and Workbench 3 support through the use of extensive and complete libraries.

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The HiSoft BASIC 2 package runs on all Amigas with 1Mb of memory or more and includes an extensive, 640-page user manual with tutorials, many examples and a complete reference section.

Upgrades are available from HiSoft BASIC version 1 and Power BASIC - please call for details.

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## Utilities



### Maxon Magic

The Maxon Magic screen saver works in all modes, even with graphic cards, and offers you a choice of 20 different amusing and entertaining modules such as Aquarium, Flying Breakfast, Fireworks, Crazy Worms, Messages, Click etc.

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Videomaster AGA works on the A1200 and A4000, connects via the PCMCIA slot for extra speed and freedom to use other peripherals, allows high quality stereo sound and supports HAM6 and HAM8 up to 640 x 512 resolution for stills.



ColourMaster is a new electronic colour splitter which works in conjunction with Videomaster for stunning colour stills.



Clarity 16 is our premier sound sampler allowing rates up to 32KHz in 16 bit stereo and up to 48KHz in 16 bit mono on an A500; accelerated machines can handle faster sampling rates. The software provides extensive features including full edit control, a MIDI keyboard emulator, a sample sequencer, many special effects and FFT analysis. Version 1.5 has an up-to-date Workbench 3 look, in its own window and is fully compatible with faster Amigas.



MegaSound is the new 8-bit, stereo, direct-to-disk sampler package; the software is packed full of easy-to-use editing features, special effects and extras such as the ability to print waveforms and sample information. The package allows sampling up to 84KHz mono and 56KHz stereo to memory and up to 21KHz stereo to hard disk on an A1200. Supplied with a hardware volume control and an extensive 144-page manual, MegaSound is impressive value at only £34.95.



## Simulation



### ProFlight

The classic Tornado simulator that works on all Amiga computers and provides maximum realism while being tremendous fun to play.

ProFlight is one of the most accurate, and therefore most flyable, aircraft simulators currently available for home computers - everything is there from the correct effect of the tailplanes, elevators and rudder through complete navigational aids with auto-pilot up to sophisticated weaponry such as Sidewinder missiles and fly-to-line bombs. The accuracy of flight is top-notch, try this test with your other favourite simulator - turn the aircraft on its wing tips; most will continue to fly straight and level - the ProFlight Tornado will lose altitude, just like the real thing.

ProFlight comes complete with a professional, ring-bound, 190-page flight manual detailing all aspects of flying this exciting aircraft including a full tutorial and a history of the Tornado with archive photographs.

## Limited Special Offers

As a very special offer to Amiga Computing readers we have some amazing bargains, available only until 31 July 1994 while stocks last. Only by phone or by mail and quote AC794QZ when ordering; please add £2 P&P.

Clarity16	£79.95
Videomaster A500	£49.95
Videomaster A500	£59.95
Videomaster A500 RGB	£89.95
Videomaster AGA RGB	£99.95
ColourMaster	£49.95
ProFlight	£10.00

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# Dixons dissent

Dixons, owners of the electrical chain stores, have pulled out of the Amiga market indefinitely. With the uncertain future of Commodore, it would appear that the retail company is waiting to see the outcome of any potential buyouts before deciding to restock.

"The situation is up for review as with any range, but the situation with Commodore is somewhat unusual", said Nicola Marsden, corporate affairs officer for the retail company.

On questioning Dixons about their future plans for the Commodore home computer and console range, Marsden added: "I couldn't give any commitment either way at this stage."

At Commodore's UK headquarters, David Pleasance, managing director, commented on Dixon's move: "It's very typical - Dixons have always been fine when they're friends with any manufacturer."

"Unfortunately, they have a nervousness about what is going to happen to the Amiga, so they sell off what they have in their stores and hold their breath, waiting until something happens. When the

situation is good again, they return to the scene."

While, in the immediate future, Dixons' move may not bode well for Commodore's image in the eyes of the consumer, David Pleasance is confident about the eventual outcome: "I can't say I'm happy about what they are going to do... but I think it's a short-term situation".



David Pleasance: "... it's a short-term situation."

## Changes at the top

Following the downturn in Commodore's fortunes and its subsequent liquidation, it was revealed that Medhi Ali, president of Commodore International, has left. While other key figures have been relieved of their jobs by the administrators brought in after the bankruptcy, many have been re-employed as advisors.

According to David Pleasance of Commodore UK, Medhi Ali has left the company "because his services were no longer required". The two individuals selected to replace him are Hock Tan and Ed Goss.

There is also some speculation at the moment suggesting that Commodore's litigation against FMG and Steve Franklin, the former director of the UK division, are being dropped. This however was strongly denied by David Pleasance.



Medhi Ali: Now the former president of Commodore International

## Commodore to save Commodore?

After months of waiting for a buyer to step in and rescue Commodore, Computer Trade Weekly, an industry paper, has revealed that a surprise buyout package created by current and former Commodore management may well be the business' most likely future.

The buy-out is said to have been formulated by lead figures in management, R&D employees in the US and a component manufacturer. If they succeed in buying the company, it is unlikely that that Commodore's subsidiaries will survive.

The end result of such a deal is that the once American business would operate and be registered in Britain from Commodore's UK offices in Maidenhead. Hopes are that the management buy-out would see a more stable and small company structure emerging from the ashes of bankruptcy.

## Success for SyQuest

SyQuest Technology, suppliers of removable Winchester disk cartridges and associated drives, has settled its litigations with Iomega Corporation and Nomai S.A.

Under a definitive settlement agreement, SyQuest will receive royalty payments from the two companies in exchange for a licence of certain intellectual property rights relating to SyQuest 44MB and 85 MB 5.25in cartridges.

Also, according to SyQuest, hardware produced by Iomega and Nomai is being passed off by certain resellers as genuine SyQuest cartridges.

In some cases, Iomega and Nomai resellers have advertised what appear to be genuine SyQuest cartridges, sometimes with the logo or pictures of SyQuest cartridge packing.

However, when customers examine the cartridges sold, they turn out to be Iomega and Nomai cartridges instead.

To assist customers who have experienced damage to their SyQuest SQ555 and SQ5110 drives caused by the Iomega or Nomai cartridges, the company will honour its warranties on the drives if Iomega and Nomai pay for the cost of the repairs.

As a final sting in the tail, SyQuest will also sell its drives and cartridges to the two companies, who will be able, in turn, to offer dissatisfied customers suffering from damage by Iomega and Nomai cartridges genuine SyQuest products as replacements.

"We're pleased to settle these litigations on such a favourable basis", said David Everett, SyQuest's executive vice president of sales and marketing. "Iomega and Nomai have clearly recognised the superiority of SyQuest's Winchester technology."

"Our consistent legal position has been that manufacture and sale of cartridges by Iomega and Nomai illegally infringed SyQuest's intellectual property rights. Our position has now been vindicated."



SyQuest: Litigation finally resolved

## NEWS BRIEFS

## ICPC membership

The Independent Commodore Products Group is offering half year membership for six months up to the December 31 1994 for just £12 for potential UK members.

The 16-year-old group offers a wide range of services including a journal concerning Commodore and PC issues, free public domain software, regional groups, technical advice, bulletin boards and discounts.

For more information, contact John Bickerstaff at ICPC on 081-651 5436.

## Show stoppers

The European Technology in Learning Show is appearing for the first time at the NEC and is targeted at both business and educational sectors. Running from the 16 to 18 November, the exhibition will cover a variety of subjects from the information superhighway to virtual reality classrooms.

For further details, call Julie Smith on 0254 676025.

## Live

Live '94, the consumer electronics show, is being held at Earls Court from 20 to 25 September. The exhibition looks at not only computer games but television, video, photography and music equipment and more.

Tickets cost between £4-7 and can be pre-booked on 0891 500103.

## Sweet talk

Dragonheart Press have announced the 1994 Poetry Competition with the winning collection being published in an edition of the Internet-based journal *Living Poets*.

Budding technobards should write to Sean Woodward at 11 Menin Road, Alfreton, Derby, DE3 2NL for an entry form.

## Big bash

The BBC's Big Bash exhibition is coming to the NEC in Birmingham between the 6th - 9th October. Featuring a series of six distinctively themed "worlds" for the visitors to walk through that include fashion, sports and entertainment, the BBC are promising the event to be "the ultimate interactive show".

Contact the ticket hotline on 021-767 4111 for entry prices and bookings.

John Loader: "Yet again, in one of these raids we have referred material to police anti-pornography departments."



## Private prosecution for piracy

The Crime Unit recently created by ELSPA to combat software theft has had its first success, with a private prosecution brought against pirate Philip Richards. A private investigator working for the association discovered that Richards was illegally copying and selling games software.

The prosecution was brought following a visit by the investigator to Richards' home in December 1993. There, Richard copied and sold the ELSPA man four programs for the Amiga 1200. Police later raided the house and seized both computer equipment and over 2000 computer disks.

The magistrates at Kettering Magistrates Court in Northumberland found Richards guilty of breaching section 107 of the Copyright, Designs and Patent Act 1988. He was fined £75 for each of the four copied programs he attempted to sell, and was charged £250 costs.

Other successes are three raids carried out netting pirated CD software worth £10 million.

John Loader, chief investigator for the Crime Unit, said: "We warned that new low-cost CD-R copying equipment could potentially lead to huge losses for UK software producers and could lead to the distribution of high quality pornographic material on CD."

"The retrieval of £10m worth of software on just 500 CDs perfectly illustrates the enormous threat posed to the commercial software industry."

Members of the public with information on illegal software should contact ELSPA on 0386 833810. All calls will be treated in confidence.

## Blue ribbon pledges

Stateside company Blue Ribbon, makers of music and multimedia hardware and software, have promised to continue their support for Amiga owners in response to Commodore's recent liquidation.

Melissa Jordan Grey, Blue Ribbon's president stated: "I encourage [users] to get the most out of [their] Amiga investment. Our mutual support will ensure a bright future for the Amiga long after Commodore's issues have been resolved."

Blue Ribbon Pledging their support for Amiga owners in the future



## Video toaster and Robocop join forces

The new television series detailing the continuing adventures of metal law enforcer Robocop has recently finished its production cycle of 20 episodes.

Many of the visual effects within each show were created using a video toaster and an Amiga 4000. The graphics rendered and drawn include the interactive computer read-outs on the monitors in the Robocruiser, in the Metro South squad room, and in the laboratories, among others.

"We also create the imaging in Robocop's visor for targeting, computer feeding and diagnostics," explains Lee Wilson, visual effects supervisor for the production, "as well as the backgrounds for Diana's trip through Robocop's neuro-nets, and the original computer animation of the helicopter."

In a merging of the two systems, the helicopter was built and animated in the computer using the Toaster and Lightwave 3D program and flown over Delta City."

Stephen Downing, executive producer of the series, explains how the Amiga 4000 ended up as part of the crew on the most expensive series produced in Canadian television history:

"Shortly into production Lee came to us and asked if we would buy this incredible piece of computer equipment. It was not in our budget, but we talked it out and SKYYVISION decided to support the department, hoping the added computer would pay for itself."

"A few days after the toaster arrived I came into work to find the entire visual effects crew still in the department after pulling an all-nighter. The outstanding work they delivered saved the production time and money, creating elements we didn't have to sub-contract to other companies."

The series itself has already been syndicated to 110 countries worldwide and, for British Robocop followers, the intention at the moment is to release the series straight on to video and then to sell it to television.



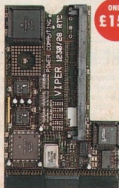
Robocop: Amiga technology at the cutting edge of television production



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Warning: Enriching LED's on your disk drive mean that the drive has not been modified by Sony for IBM Amiga compatibility.

All prices include VAT and are subject to change without notice. Prices correct for month of publication only. Delivery extra. E & OE.



Power Computing Ltd  
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## Compuserve services and membership are growing

According to details released by the American-based on-line service Compuserve, membership in Britain is growing at the rate of more than 1,000 per week and is currently in excess of 48,000.

"More and more people are finding out what we early on-line members know - on-line services are key resources," said Cheryl Currid, who monitors the on-line services market for Currid & Company.

"It doesn't surprise me to see the masses discover the benefits of on-line services. I just wonder why it took them so long."

After the announcement of further services specifically aimed at the UK market, the PA News wire is now available providing, up-to-the-minute news in several categories including general, financial, sports and parliamentary, law and royal reports.

At election time PA On-line will include a special category for results of local and national contests.

Clive Marshall, sales director of PA News added: "Every national newspaper and broadcaster uses the PA service of news and sports information. Now Compuserve users can access that service directly and read stories that broke just a few seconds ago."

The on-line service has also introduced the Video Game Publishers Forum and Video Games Forum. Through these new services, Compuserve members can see previews of new games for the CD32, talk strategy and receive hints, tips and shortcuts on their favourite games.

The Video Games Publishers Forum provides an opportunity to interact with publishers such as Accolade, Spectrum Holobyte, Konami and Data East.

Customer support representatives and game designers will be on-line to provide news, product announcements, game codes, screen samples, sound files and more.

The Video Games Forum is a special interest group of players using the CD32 and other consoles. Here, the players can discuss the merits of various hardware and exchange reviews, commentary and playing tips with their fellow enthusiasts.

"There's a lot of excitement in the gaming world about inter-console connectivity," said Compuserve product marketing associate Jim Pascua.

"By participating in our forums, players can get the latest news on this and other subjects, as well as make the most of the gaming technology they already have."

For further details, call Compuserve on 0800 289378.

## CompuServe

Compuserve: Widening its horizons

## Amiga user wins multimedia prize

A 17-year-old school pupil, Mark Holmes from Dundee, has won an Individual Award in a national competition organised by the NCET (National Council for Educational Technology) for his Amiga-based animation work. Holmes's submission consisted of a hand-drawn animated title sequence, introducing the subject of surrealism.

The work was produced on a 1200 with the aid of Deluxe Paint 4. Holmes added: "Buying an Amiga is a good choice. It's an excellent tool within the price range of a novice or amateur."

The reward for his artistic efforts is a Philips CD-I that will be given to the Kirtan High School where he studies.

## Protext improvements

To celebrate Amor's 10th birthday, the company is releasing Protext 6.5, an upgraded version of their successful word processing package. The highlights include a graphical print preview, improved spelling checker, Auto-Correct spelling and an automatic expansion of abbreviations among others.

The price of the Protext 6.5 has been reduced by over 50% to £99 and owners of the previous versions, can upgrade at a reduced rate. Contact Amor on 0733 68909 for more information.

## Premier prices

Premier Vision has announced the arrival of the Premier Nevada and Premier Nevada Plus Broadcast Systems. The former gives full non-linear digital audio eight-track recording with broadcast quality video for £5,999 and features a 1.5Gb hard disk and 6Mb of RAM.

The Nevada Plus has the addition of Lightwave 3, the award winning Bars and Pipes Pro 2.5B, Multiframe and Art Department Professional. The package retails at £6,999 and includes one day of training.

Finally, Premier Vision has announced a reduction in price for the Sunrise ADS16 non-linear hard disk audio recording board from £1299 to £999.

The ADS16 board provides automated cross fading, instant on-screen editing and full drag and crop cue list manipulation.

For further details, contact Andy Bishop or Andy Gould on 071-721 7050.

## Networking for your CD

Weird Science is releasing a networking system that enables users to connect either a CD32 or CDTV to another Amiga. By setting up a Sernet link between the CD32 and an Amiga, or a Parnet link between a CDTV and another Amiga, the CD-ROM is configured to provide a Workbench environment allowing the transfer of data from it to a master machine.

Also included is a set of software to start the user off - PD Photo CD, the latest batch of Fred Fish and

A HISTORY OF

SURREALISM

Individual award: Winning Amiga-based entry in national competition

## Purchasing promise

Indi Direct Mail has launched a purchasing scheme to entice consumers and existing users into the Amiga market. Indi says that any customer who buys any product with a value of £100 or more can use it for six months and then pay the price without any interest charges.

"The only criteria for this amazing scheme is that our customer fills in a credit application form, selects a payment period and passes our normal credit checks." Commented the mail order company.

Indi Direct Mail can be contacted on 0543 419999.

## Blittersoft developments

Blittersoft is now shipping the new Picasso Video Encoder, PABLO, with all cabling supplied, as well as a full version of the MainActor animation software. The package is retailing at £149.95.

Also available is the Ariadne, a fast ethernet Zorro II board that offers two additional parallel ports. Costing £249.95, the system is compatible with SANA II and comes supplied with the Commodore licensed ENVOY software.

Two upgrade kits are available for owners of the Amiga who wish to upgrade to the official Commodore 3.1 ROM. For the A500/1500 and 2000, users can expect to pay £84.95 and for the A3000/4000 kit, £94.95.

For further details, call Paul Lesur at Blittersoft on 0908 220196.



Amos PD disks, 74 utility disks, over 500 images in 256 colours and more.

The introductory price is £29.99 for both the Network CD and CD32 cable combined. The Parnet cable for CDTV owners costs £9.99. For further details, contact David Law on 0533 340682.

NEW

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After months of conjecture the product that Amiga owners have demanded is here. The Zappo Smart Drive simply slots into the Amiga 1200 CD-ROM slot and launches Amiga software into the exciting world of CD.

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# Evolution of an image

Denny Atkin explores the powerful potential of ImageFX



**H**ot on the heels of ASDG's major ADPro 2.5 upgrade is ImageFX 2.0 from the folks at Nova Design. Although the program doesn't look that different on the outside, the underlying engine has been souped up considerably.

It's like putting a 5.0 litre Mustang engine under the hood of an Escort – it doesn't really look different, but it's likely to leave competitors in the dust.

I've had the opportunity to play with a beta test version of the program and am quite impressed. Keep in mind that as this was written it was still over a month from release, some of these features might change, and other features could be added at the last minute.

Memory permitting, you can now work with multiple image buffers. Thanks to ImageFX's virtual memory support, you should find it easy to work with multiple 24-bit images simultaneously.

Both common and esoteric graphics formats are now part of ImageFX's repertoire, including PICT (bitmap and vector), PhotoCD, PIC, Sunraster, Silicon Graphics, X-windows, Wavefront, GL and DL animations, and even C64 Koala!

A Datatypes loader is also planned for AmigaDOS 3 users. Animators will be ecstatic to learn that ImageFX 2.0 will include an MPEG digital video player, decoder, and encoder. (This is the format used by the CD32 FMV module.) Support is also planned for limited loading and saving of QuickTime animations.

The program's painting abilities have been greatly improved. Paper textures let you make it appear as if you're painting on canvas or a textured surface, similar to the effects available in Fractal Design Painter for the Macintosh.

This effect is heightened when using the new water-colour, crayon, chalk, and colour-mixer draw modes. The air brush is improved, with real-time response,



increased size and the ability to control fading in and out. New gradient fills are also available, including brick tile, swirl, and wheel fills.

You can preview a number of effects, such as Convolve, Twirl, Rotate, and Apply Texture using the new thumbnail feature. Other effects, such as Relief Map and Transform, have been greatly improved, with better interfaces and more AFex control.

New effects include Jiggle, Pebble, RampEdge, Lightning, Spherize, 3-D Rotate, and Stray.

## CROPPING

Selecting portions of an image is now easier thanks to the addition of moving, "crawling-ant" outlines. There's a fantastic new outcrop feature – just select the edge colour and the program will crop the edges of the image until no more of that colour remains.

Colour correction between NTSC and PAL systems is now provided, which will come in handy if you're creating professional output to be sent over seas.

Text capabilities are greatly improved. First and foremost, you can actually enter multiple lines of text

ImageFX 2.0 supports texture effects that let you simulate images on textured paper or canvas. This P-40 fighter was originally a digitized photograph. ImageFX 2.0 was used to crop it, then the OilPaint filter was applied and a paper texture added to the resulting image.

instead of having to create text a line at a time. You can justify text, and anti-aliasing will eliminate jaggy pixel edges around fonts.

The update should be available about the time you are reading this. Pricing wasn't available as this went to press, but if you're currently an ImageFX user you'll find this update worth whatever price Nova Design asks.

You may remember that ImageFX 1.0 and 1.5 were released by GVP. When the contract came up for renewal, Nova Design, who created ImageFX, and GVP agreed to let the rights to the program revert back to Nova.

Nova will still support GVP buyers and offer upgrades to those users. In fact, Nova's Kermit Woodall promised that the company will endeavor to offer better technical support for ImageFX, and that they have some hot plans for the program's future despite Commodore's current situation.

IFX 2.0 should be available soon after you read this. Nova hadn't firmed up UK distribution at press-time, so check with your local dealer, or contact Nova via e-mail at [kermit@cup.portal.com](mailto:kermit@cup.portal.com) via Internet.

## Sidewinders in Texas

One of the best ways to show off your Amiga to your non-computer friends is to play some MOD music files for them. But sometimes it's hard to get them to even come over to the computer to listen.

Thanks to one of America's premier Amiga MOD maniacs, you can now clandestinely impress them by popping some Amiga music into your CD player. Let them dance to a few tunes, then tell them they were created on your favorite computer. Future Shock 2, is the first CD from San Antonio, Texas-based Eric Gieseke. The 25-year-old musician is better known to Amigans who've heard his MOD music files as Sidewinder.

All of the tunes on the compact disc (which is purely an audio CD – no computer, CDTV, or CD32 required) were created on an Amiga 2000 with 3MB of RAM and a Perfect Sound sound sampler.

You'd never know it listening to the songs, though. The fast-paced, crisp, digitally-mastered music sounds as good or better than many of the techno or rave titles you'd pick up at the local Virgin or HMV shop. Most of the songs, such as

After Shock and Reflects, are eminently danceable, while a few, such as the atmospheric Rainy December, slide you more into the smooth intricacies of his composition than into the beat. (Sidewinder calls his music style "techno+rave+tribal+synth+jazz.")

At \$12.95 + \$5 airmail shipping and handling, Future Shock 2, is a heck of a deal. How many Amiga-related products can be used to show off your computer's capabilities, provide wonderful background atmosphere for your computing, and can be danced to as well?

To order, send a money order to Sidewinder Productions, 8611 Cape Valley, San Antonio, Texas 78227 USA. If you have questions, you can e-mail Sidewinder at [c.gieseke@genie.geis.com](mailto:c.gieseke@genie.geis.com) or call him at (210) 675-7592.



Sidewinder's Future Shock compact disc features this Amiga-generated cover by Zak Jarvis.







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## THE HEAT IS ON



GREY-TRONIC

Over the years Amiga Computing has always tried to keep Commodore at arm's length as far as editorial content is concerned – unlike some of the opposition.

Admittedly, during the first 18 months of my involvement with the magazine this wasn't particularly difficult, thanks to Commodore's total ineptitude in the PR department.

During this period we received a tiny handful of press releases, no product pictures or transparencies, and certainly no machines or official Commodore add-ons.

It's true that with the arrival of Kelly Sumner and the ubiquitous Mr Pleasance, the tide did appear to be turning. However since the big bang, Commodore seem happy to sit back as both users and third-party developers head for a watery grave.

As I write this particular piece Commodore have already been officially out of business for eight weeks. As you're probably well aware, during this period the rumours have been flying with Phillips, Samsung and Hewlett Packard all in the frame for a take-over.

However not a single word from

# Back to basics

*As Commodore languish in liquidation  
Paul Austin asks why are the people who  
made the Amiga being treated so poorly*



Commodore. Obviously negotiations can be tricky, so it's not totally surprising the big C are keeping their cards close to their corporate chests.

But even so, what about the people who made the machine a success in the first place? Surely a bigger effort could be made to reassure the users and third-party developers who've carried the Amiga over the years.

After all, who manufactures the machine isn't really the issue, it's the uncertainty that's destroying confidence. Since Commodore's demise we've received just one faxed press release – and I can only assume the same is true for other magazines.

Obviously, for those sitting in the comfy chairs at Commodore's head office this probably isn't of any great concern – especially as Mr Pleasance has stated that there won't be any redundancies.

Great news for the old boy network, but what about the people at the sharp end, such as developers and retailers who quite rightly are terrified at the prospect of continuing Amiga development or investing in new stock.

Once these sort of people start to lose faith in a machine we're all in real trouble. Any machine is only as good as the people who support it, and if confidence goes, the machine goes with it – the ST being a prime example.

The really infuriating point is that the machine itself wasn't even developed by Commodore. In truth, the basic technology was bought and subsequently marketed

under the Commodore name.

In reality it is fair to say the Amiga made Commodore and not the other way around. As a result, I think it's high time that the company who've made millions with the Amiga return some of the customer loyalty which has paid for so many company cars and executive lunches.

Strange as it may seem I'm still optimistic about the future, and with an injection of cash and a fresh management approach I'm sure the future for the machine will be secure.

The basic technology is still very ahead of the opposition and according to Mr Pleasance, prior to big bang the AAA chipset was already on test.

Combine the existing technology with the most enthusiastic user base on any platform and you have all the main ingredients for continued success.

In fact, it's a testament to Commodore's incompetence that they actually managed to go under. In the end I'm sure that the recent turmoil will be seen as a blessing.

After all, if Commodore can take on the machine and make millions, the potential for someone like Hewlett Packard or Samsung would appear almost unlimited



## Fond farewell

Before reading too far into this particular box take a quick glance at the bottom of the page. If you've never really taken much interest in what's affectionately known as "the flannel panel" it's unlikely you'll notice anything.

However there's one all important name missing among the motley crew that make up the Amiga Computing editorial team. Alas, after two years of inspired leadership, Stevie Kennedy's name no longer gets a mention.

During a period spanning almost four years, Stevie has been the key player in the development and subsequent success of the magazine, transforming what was a struggling publication into the one by which all others are judged.

Unfortunately for us his talents haven't gone unnoticed, and as a result he's been abducted and will now be editing one of our key PC titles. Obviously, it's always difficult to lose such an important member of any team, but with a little luck we hope to maintain the tradition of quality that's been the trademark of the "wee man" himself.

On behalf of myself and the rest of the team all that remains is to say bon voyage to a great editor, an inspired journalist and a true friend. All the best mate, and good luck – not that you'll need any...



Paul Austin  
Editor

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## De-archiving applications - Workbench 2.0 and above

Always boot from your CoverDisk when de-archiving applications. The installer programs can be located via the install icon with the appropriate name in the WB\_283\_Only drawer.

The de-archiving procedure has been much improved and now combines the power of the official Commodore installer program with that of Workbench 2.0 and 3.0.

The installer program is designed to be powerful yet simple for the beginner and features a user-friendly interface allowing you to de-archive programs with a minimum amount of fuss. The installer programs for Workbench 2 and 3 users can be located via the icons named:

Install[program name]

eg:

Install.PFM

To run, simply double click on the icon which will load up the installer program.

### Using the installer

Ignore the buttons that appear when the installer program boots up and simply click on the Proceed button. The program will then copy the necessary files to RAM.

Once this has finished it will inform you that it is about to format a disk in DF0. Click



Don't worry about the installer options. Simply click on the Proceed button



The Workbench 2.0 and 3.0 installer icon

## De-archiving applications - Workbench 1.3

Always boot from your CoverDisk when de-archiving applications. The installer programs can be located via the install icon with the appropriate name in the WB\_1.3\_Only drawer.

Install[program name].1.3

eg:

Install.PFM.1.3

When you load up the 1.3 installer the program will first prepare itself ready to de-archive the program to a



After inserting a blank disk press y to continue or 'n' to abort

Don't forget to insert a blank disk at the prompt and before pressing Proceed



Don't forget to insert a blank disk at the prompt and before pressing Proceed



Any commands that need to be added to your User-Startup can be done with the press of a button

The Files drawer contains all the utilities set up so that you can use them from the CoverDisk. A Games drawer is also provided so that you can play these immediately. If you want to install the games make sure you copy all the necessary files across as listed in the CoverDisk pages.

## getting started

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

We have now managed to fix the problem with AmigaDOS displaying a "disk is write protected" requester when a write-enabled disk is inserted. Just make sure you insert a blank disk when the installer programs tell you - and not before or after.

### Installing utilities

The procedure for installing utilities is much the same as installing applications, except that you can boot from your hard drive or Workbench disk. As utilities don't need to be de-archived, you are asked to specify a directory on your hard drive or Workbench disk where you would like to install them.

If you don't want to install to the default directory you can change it by clicking on Change Destination. The Show Drives button will allow you to select a new device and directory. You can create a new drawer for your utility to go in by clicking on the Make New Drawer button and typing in the name.

You can also make a utilities disk by running the MakeUtilitiesDisk1.3 program located in the WB\_1.3\_Only drawer and installing your utilities to here. At times you may be asked if you want to install a utility's documentation. A tick box indicates that the documentation is selected for inclusion, but you can click on the box to ignore it or simply click on the Skip This Button.

The utility installer programs can be found in the appropriate program drawer in the WB\_283\_Only drawer.

You can easily install documents and create new drawer thanks to the installer's user-friendly interface



## Loading Scroller 2

You are not required to de-archive Scroller 2 because we have supplied it to you in its original form. To load Scroller 2 simply insert the disk into DFD and then re-boot your Amiga.

The Scroller 2 disk is not an AmigaDOS therefore you will not be able to copy it or install it onto a hard drive.

The addition of Fast RAM will not make any difference to the program as Scroller 2 uses only Chip RAM. Obviously, the more Chip RAM you have the more fonts will be loaded when Scroller 2 loads.

You do not need to keep the Scroller 2 disk in DFD at all times as the program is loaded into memory.

# The Cover



**W**elcome to Scroller 2 from The Soft Alternative. You now have the ability to create stunningly attractive text displays which you can genlock onto your favourite video, whether it be a wedding, birthday party or home movie (interesting).

Not only does Scroller 2 allow you to add text to videos but also to scroll it in all directions, as well as add a wide range of special effects for that professional touch.

The following tutorial will teach you how to use the interface, create a text display and scroll it.

Once Scroller 2 has loaded you will be presented with the main options window. It is from here that you create scrolling text displays which you can genlock onto your videos.

## ABILITY

Every button also has a keyboard shortcut which is displayed on the button. If you would like to see what Scroller 2 is capable of press the F1 key and Scroller 2 will run through the demo script which is always in memory when the program is first loaded.

When you have finished watching the demo press the Esc key to get back to the main menu. If you press F2 you will see the Scroller 2 logo scroll on from the left and split into two sections. This is because the demo script is not designed for use with the horizontal scroll option.

In this first tutorial we will produce a set of

# That professional feeling

*Add a truly professional touch to your video productions with the complete Scroller 2 from The Soft Alternative*

credits for a video production and then save them onto a Scroller 2 data disk. You will need to have a blank disk handy.

To select any of the options in Scroller 2, press the function key that corresponds to it. For now we shall take the third option, F3 - Edit Text.

When starting a new title F3 is usually the first option you will use. If you haven't done so already, press the F3 key now and

Scroller 2 will display its Edit Text screen.

This should be a black screen with 00% displayed in the top left corner, with a thin line beneath it and the Scroller 2 logo in the middle of the screen.

Press the left Alt key if there is no status bar visible. You should also see a flashing cursor indicating text input.

The Scroller 2 logo you can see is part of the demo script which is always loaded on start up. So, your first step whenever you begin a new project is to clear this script from memory.

## FUNCTIONS

If you can't remember which key calls a particular function, remember that the Edit Text screen has in-built help available. The Help screen will appear if you press the Help key.

Do this now and you will see, amongst all the other information listed, that you must press Shift and Del together to clear all the text. However, before you can invoke the



Scroller 2 allows you to create smooth scrolling text displays which you can genlock onto videos

When entering text you can call up the help page simply by pressing Help. This page will show you all key commands and their results

Arrow keys: move cursor 1 character.  
Shift left & right: move cursor 1 word.  
Shift up & down: move text 1 line.  
Shift del key: clear all text.  
Keyboard: popup, popup, home, end.  
F1/F2: set colour of subsequent text.  
F4: ascii selector. F5: shadow on.  
F6: shadow off. F7: full justify.  
F8/F9/F10: left, centre, right justification.  
L shift/F11/F12: select font from bank A.  
R shift/F13/F14: select font from bank B.  
\_ search for text. Shift + repeat search for text.  
\_ search & replace. Shift + repeat S & R.  
Left alt: Hide cursor & status bar.  
ESC to return to the editor.



# r Disks

clear command you must return to the Edit Text screen. So, as instructed at the bottom of the Help screen, press the Esc key.

Incidentally, the Esc key is always used to exit from the current level of the program to the previous one. If you pressed Esc again you would move back one more level from the Edit Text screen to the Main Menu.

Clear the demo script by holding down Shift and Del together. Scroller 2 will double check that you really meant to do this by asking Delete all text Y/N. In this case hit Y and you will be returned to an empty Edit Text screen ready to start receiving your text.

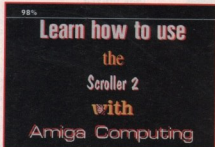
You will find that the Edit Text screen works similarly to a word processor – with a few added bells and whistles. Before we start to type in our titles we must to set up a couple of options.

## JUSTIFY

For this project we would like our titles to be centred. Scroller 2's default is to make all the text left justified – meaning that each line of text starts flush with the left margin.

To make the text centre justified we must press the F9 key which you can find on the Help screen. Once you have pressed F9 you should see that the flashing cursor jumps to the centre of the screen, indicating the position where text will appear when we start typing.

We also want our text to have a drop shadow so that it will stand out from the background, so press the F5 key to turn the



Entering text couldn't be simpler using Scroller 2, as it emulates all the functions of a professional word processor

shadow on (Scroller 2's default is shadow off).

Finally, select a big, bold font by holding down the left Shift key while pressing F10. There are 19 other fonts that you can select using the Shift and function keys. They come in a variety of sizes and styles and you can also load extra fonts from additional fonts disks. We can now enter text.

Type the word Camera and you will see it appear in the centre of the screen in large white text with a red drop shadow. If you make any mistakes you can delete them using the Backspace and Del keys in combination with the cursor keys which move the flashing cursor around the text.

To enter a new line press the Return key and the cursor will move onto the next line.

You are now ready to type a name, but first press the F2 key. Now type Joe Bloggs and you will see that it prints in yellow rather than white. By pressing F2 we instructed Scroller 2 to use Colour 2 (yellow) for subsequent text. Before we enter the next credit press Return twice to make some space beneath the first credit, and then F1 once to select Colour 1 (white). Now type in Sound to begin the next credit, followed by one press of the Return key. Next, press F2 to select colour 2 and type Dave Smith. Carry on in this fashion until you have a list that reads:

Camera  
Joe Bloggs

Sound  
Dave Smith

Lights  
Sarah Jones

Producer  
Nigel Green

(This four line space is intentional)

Director  
Stella Adams

For reasons that will become clearer later on make sure that you have four blank lines before the Director's credit. You can tell how far through your text you are by looking at the percentage figure on the Status Bar. 00% means you are at the bottom, 50% in the middle and 100% at the top.

Now that we've entered our titles we can scroll them to see how they look. Press Esc to return to the Main Menu and then F4 to set the scroll parameters.

Scroller 2 has two scroll modes – Single and Continuous. When Scroller 2 scrolls in Single mode it stops and leaves a blank screen when your titles have finished.

In Continuous mode it will start again

Midnight

Author: Imagine Software  
Workbench 2 and above

Midnight is an excellent screen blanker program that allows you to choose from ten different blankers.

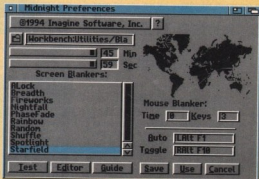
On loading the program you will be presented with the tasteful Midnight interface. Everything you will need to run the screen blankers is present on this interface.

In order to test each blanker, select one from the list gadget and then click on the Test button just underneath. You can also edit the way in which each blanker works by selecting one and then clicking on the Editor button. Each editor screen is particular to the selected blanker.

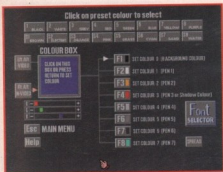
If you want to have Midnight run every time you boot your Amiga you will need to copy the BPrefs program into your WBStartup drawer, the Midnight program into your Prefs drawer and the Blankers and manuals anywhere you like.

Of course, the program will not be able to locate the blankers until you specify the path using the requester below the Imagine Software logo.

This is a demo version of Midnight but if you register to the full version you will be able to define your own blanker modules using the random option, as well as select others not included in this version. It's up to you.



Yes, I know I'm using MagicWB. Midnight is certainly the best collection of screen blankers available for the Amiga



Scroller 2 comes complete with pre-defined colours but you can edit them if you wish to create your own

from the beginning as soon as it reaches the end, which is why this mode is frequently used for informational displays. Continuous mode is the default setting.

However, for this example we need to use Single mode, so press F1. You should see the arrow move from Continuous to Single. Leave the other options as they are and press Esc to return to the main menu.

At last, we're ready to scroll. Press F1 to select Vertical Scroll. The text you have just typed in should start scrolling very rapidly up the screen. To control the scrolling speed you can use the numeric keys or those on the numeric keypad. The higher numbers correspond to higher speeds, all the way down to zero which is stop.

Speed five gives a nice, smooth scroll at a medium speed so select it by pressing the number 5 key. If all the titles have already scrolled past, press Esc to return to the Main Menu and then F1 to start the vertical

## SMenu (Silicon Menus)

Author: Greg Cunningham  
Workbench 2 and above

SMenu is an excellent utility that will allow you access to the Workbench windows simply by pressing the right mouse button anywhere on the Workbench screen.

If you wish to use the Silicon Menus option where you can specify how SMenu will run, you will need to alter the SMenu icon's default tool. You can do this by simply clicking on the icon once and then selecting Information from the Icons menu.

Change the line:

W300=OFF

to:

W300=ON

Save the changes and when you next click on the icon you will see the ButtonFly menu where you can toggle certain attributes about SMenu.

What follows is a brief explanation of each button, starting from left to right, top to bottom.

**Iris Menu** – the menus appear on screen until you press the right mouse button a second time

The menus will totally change the way you navigate around your Workbench



**Centred** – centres menus vertically

**Sub arrows** – arrows indicate sub-menus

**Qualifier** – pops the menus up only when the qualifier has been pressed

**Kill pgm** – exit Silicon Menus

**Use opts** – run Silicon Menus with the selected options

If you aren't too keen on running the Button Fly every time you can set the options in the Tool Types. Here are descriptions of the Tool Type commands:

scrolling along. Try pressing 0 when the Director's credit is in the middle of the screen. Wait a few seconds and press 5 again. The Director's credit will pause in the middle of the screen for a moment and then continue on its way.

The extra space we put around the Director's credit allowed us to pause it in the middle of the screen on its own. Scroller 2's scrolling speed can be controlled interactively like this with great ease.

We can now save this tutorial to disk by returning to the Main Menu and pressing F8 to select the Disk Menu.

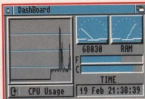
## DISK DRIVES

Across the top of the Disk Menu you will see images of four disk drives labelled DF0, DF1, DF2 and DF3. The picture of drive DF0 has a disk in it and its light is on, indicating it is the currently selected drive.

We want to save our titles but first we must format a Data Disk to prepare it for use with Scroller 2. Press F4, at which point Scroller 2 will ask you to insert the disk to be formatted into drive DF0. Take the program disk out, insert your blank disk and then press F1, at which point Scroller will start to format the disk.

Your Scroller 2 Data Disk is now ready for use. Press Esc to return to the Disk Menu and then select F2 to save your text. Scroller 2's file requester will appear, allowing you to select the name of the file you want to save.

Seeing as we have only just formatted our data disk it currently has no files on it. Type in Tutorial1 which will appear in the box labelled Filename. Press Return and the text will be saved to the disk. This concludes our first tutorial with the Scroller 2.



Find out what your Amiga is up to at all times with this excellent monitor program

## Dashboard

Author: Marat Fayzullin  
Workbench 2 and above

Dashboard is an excellent little program that displays essential system information about your Amiga.

When run it will display the current time (if you have a clock), the amount of Chip, Fast and total memory and CPU activity. All of these are displayed using highly informative graphs and speedometers.

Also supplied is Dashboard Jr which is a cut-down version of the full program. Jr displays just the amount of Chip, Fast and total memory.

For a more detailed description of the display check out the annotated diagram.

IRISMENU=ON/OFF

Enable or disable Iris mode

SUBARROW=ON/OFF

Enable or disable sub-item arrows

CENTER=ON/OFF

Display menus vertically centred

QUAL=ON/OFF

Standard menus if ALT, SHIFT, AMIGA or CTRL are not pressed

WINDOW=ON/OFF

See above

HOTKEY1=A-Z

Set the hot-key. Only A to Z is permitted

DOUBLEBORDER=ON/OFF

Enable or disable doubled menu borders



At least, all you rookie experts can keep with the automatic gears but race against far superior opponents than the defaults

## F1 Grand Prix Editor



Not only can you set the skill level of the other drivers but also edit their car and helmet colours

Author: Steve Smith

If anyone had to nominate the best computer game on the Amiga there is no doubt that F1 Grand Prix from Geoff Hammond would receive serious consideration.

However, most players have shied away from the high performance levels of F1GP due to the fact that it's damn hard driving with gears. Most are content to race on the rookie levels with maybe the destructible function switched off.

The only drawback of racing on rookie level is that you eventually improve so much that F1GP fails to be a challenge anymore.

This is where the F1 Grand Prix Editor steps in. Mimicking the look of the game, F1GP-Ed allows you to alter all the attributes associated with the game and save them as either a separate file or into the actual F1GP program. Everytime you load the game the defaults will be the same as you created in the editor.

You can improve the skill of opponent teams and drivers, turn players on or off, change helmet designs and best of all edit the colours of the cars using a simple but effective colour picker.

Using the F1GP-Editor is very simple - most of the buttons and windows are self-explanatory. Steve Smith has kindly included three example files which you can load into the editor and save to the F1GP executable.



## ZXSpectrum

Author: Peter McGavin

The Amiga is a very powerful machine, so powerful in fact that it can quite easily emulate other computers, including the ZX Spectrum - that classic 8-bit computer that really set the computer industry moving.

There are two versions of ZXSpectrum on the CoverDisk - a 68000 version for the A500, A500+ and A600 and a 68020 version for A1200s and above.

The good news is that if you own an accelerator ZXSpectrum will still function, taking advantage of any additional hardware.

As it stands, the 68000 version will be very slow unless you own an accelerator. Even the 020 version can't quite emulate the Spectrum speed, but with an 030 you'll be looking for the rubber keyboard and reminiscing about the good old days.

So that you can step back into those funky 8-bit days we have also supplied you with a Spectrum game called Batman - an isometric 3D game in which Batman must collect parts of the Batmobile in order to save Robin.

When you first load ZXSpectrum you will be greeted with the familiar reset screen. By pressing

down the right mouse button you can select a variety of options from the main menus.

Select Load and you will be able to load in the Batman snapshot file. You can even save any programs you have written with the Save snapshot facility.

There is a file missing from the ZXSpectrum pack and this is the help page. Unfortunately, there was just not enough room to get this on the disk.

When you press the Help key a picture is displayed showing the Spectrum keyboard. If you want this file write in and tell us and it will be included on a later CoverDisk.

A standard Amiga joystick can be used by plugging one into port 2 and selecting Kempston as the control method in any games you play.

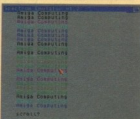
The Settings menu allows you to load any Spectrum game through a sampler and store it as a snapshot file. You can load in games by connecting your data recorder to a sampler and playing the data through it and into the program.

ProSound and Rombo samplers are directly supported but almost all samplers that are capable of a least 20kHz and plug into the parallel port will work.



There are plenty of other games available for the Spectrum emulator. If you want to see more write in and tell us

This is the best Spectrum emulator you're likely to find. Just look at those glorious colours



## Faulty CoverDisk

If you subscribe to Amiga Computing and your disk does not work, please return it to:

Amiga CoverDisk, Europress Direct, FREEPOST, Ellesmere Port L65 3ED

If you bought your copy from a newsagent and find that your CoverDisk is faulty, please return it to:

PC Wise, Dowlais Top Business Park, Dowlais, Merthyr CF48 2YY

## MTV

Author: Adam Dawes

This is intended to be a fun program which, when executed, displays the familiar MTV logo in the top-left corner of your Workbench. Over time the logo spins, flips and rotates, just like the real thing.

The MTV program does not have an icon so you will need to run it from the CLI or Shell. Use the CD command to change directory to the MTV drawer and then enter MTV.

The program does not interfere with other programs and can easily be switched off by holding down both mouse buttons for a few seconds.

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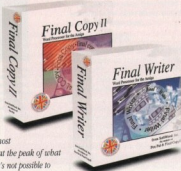
Final Copy II (upgradable to Final Writer as your needs grow) and Final Writer are the only word processors that

give you **PerfectPrint™** - a unique printing advantage giving silky smooth Industry Standard Adobe™

Type 1 or Nimbus Q scalable outline fonts direct to any printer (even dot matrix and ink jet), in both landscape and portrait. Others use a restrictive and unnecessary jumble of different fonts with complex driver programs for outputting to various printers. The launch of Final Copy II introduced **FastDraw™** - a special set of structured drawing tools for constructing lines, borders, arrows, circles etc. directly on the page.

### "What the Papers Say..."

**Amiga Shopper...** "Final Writer is the closest thing to Microsoft Word to appear on the Amiga" **Amiga Computing...** "Final Copy II is the best DTP Package" **Amiga Shopper...** "If ever there was a good reason to buy a hard drive for your Amiga, Final Writer is that reason" **Amiga World** "Processing has come of age with Final Writer" **Amiga Format...** "Final Copy II is 'The Best Word Publisher'" **Amiga Pro...** "In comparison to the Wordworth 3.1, Final Writer 2 is slick, solid and reliable and... is a damn site more usable" **Amiga User International...** "Final Writer is a powerful program that produces excellent results" **Amiga Computing...** "Final Writer is 'really the most configurable Amiga WP ever'" **CU Amiga...** "Final Writer is the 'most powerful WP ever to grace the Amiga'" **Amiga Format...** "I'd go for Final Writer over Wordworth 3.1" **Final Writer is a joy to use!**



### Final Writer, extending innovation...

Now, as others are just starting to add similar features, saying they're 'revolutionary', Final Writer extends the innovation further with **FastDraw Plus™** - adding even faster and more functional options, including a new rotate command. Final Writer Release 2 is again leading the way with the introduction of **TouchTools™** and **PowerUser Bar™** technologies. These features give the user a definable area at the top of each document window where up to eight 'one-touch' button strips can be configured. Each strip contains easily customizable sets of functions giving instant access to all the major commands/features - with a simple click of the mouse! There is even a set of buttons allowing 'one-touch' selections of font size and size plus variations including Plain, Bold, Italic and Underline! It's no wonder we've received top reviews, ratings and awards from all the leading magazines...

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### Final Copy II Release 2

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Final Copy II offers the perfect balance between the two require-

ments... Ease and speed of use, with total control over the perfect printed presentation.

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It's features like these that explain why there are some professional magazines, with 200+ pages, that are produced entirely with Final Copy II! Publishers, and many others, have quickly discovered that...

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# The second

**A**s one unfortunate Amiga magazine prematurely put it last year, "It's here!" Yes, LightWave 3.2, the software we've all been baying for has finally been unleashed by its NewTek masters in a PAL-friendly form without the Video Toaster or the need for expensive and quality-reducing standards conversion.

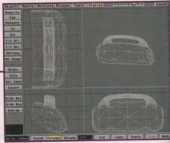
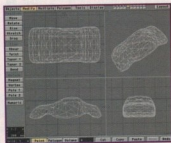
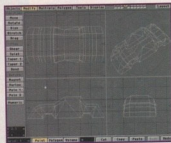
For so long the exclusive property of those lucky North Americans, LightWave has quickly built itself a reputation in the US and Canadian visual media as

one of the best and most cost effective graphics packages available on any machine. Now it's available to videographers in Britain and Europe, and it's even better than before.

A host of improvements and tweaks have been incorporated at the request of users such as RoboCop's Lee Wilson and his team, the results of which give LightWave an impressive edge on the competition. Just about every menu and screen has seen some sort of change, small or large, but proba-

bly the most exciting for the future is LightWave's new modular design.

Referred to by NewTek as "Plug-In Technology", the modular approach means that third party developers can integrate their own products with version 3.2. Everything from display cards to new object formats can be catered for and, with the size of the US LightWave third party industry which has spawned an entire range of add-ons, it won't be long before users are plugging in all sorts of new features.



## A fistful of features

LightWave 3.2 incorporates several important changes over 3.1. Some of them, such as the use of sliders to control numerical values like luminosity levels, are cosmetic and designed to improve the program's user friendliness, but others are far more solid.

Values assigned to surfaces and textures can now be between -399 and +400 per cent; camera field of view is now represented graphically in the layout screen; motion graphs have been improved; Bones have been given a great deal more flexibility, the list goes on. As most, if not all, changes have been made through prompting from professional users, they add increased flexibility and performance to many aspects of LightWave 3.1.

Modelling from scratch has never been easy with any 3D package, but LightWave 3.2 makes it easier to create smooth, realistic objects from crude, faceted blocks through the metaform option. This is a new method of subdividing existing polygons and is much more effective than the old smooth option. In

*LightWave's new Metaform subdivision option makes it easy to create smooth, organic objects from bulky, faceted beginnings and is one of the best of the new features*

the screenshots shown here an effective car model is quickly constructed from a very rough frame using metaformed polygons.

The Bones feature is another which was never as good as it could have been, and a couple of important changes have addressed its shortcomings. When adding a Bone to an existing hierarchy it is no longer necessary to

scale, position and group the new bone - tedious task at the best of times. LightWave now takes care of this automatically, making it a lot easier to construct complex skeletons.

Once built, these skeletons are now made more flexible through the introduction of limited range option. Using this it is possible to set exactly which areas of an object can

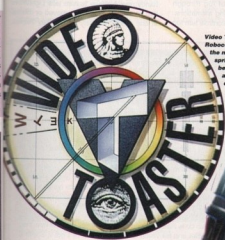


From cars to RoboCop to planets and skeletons - the package is now even more versatile

# Wave

Video Toaster and Robocop - just one of the many partnerships springing up between the Amiga and production companies

*With the PAL standalone version of LightWave 3D finally hitting our shores, Stevie Kennedy looks at the biggest Amiga 3D event in years and the latest wave of TV magic to cross the Atlantic*



be affected by any one bone. Whereas before the range of influence of a bone was infinite, now each can be told to restrict itself to a particular limb or area of the object, giving the animator much more control over objects with skeletons.

Lights and their associated lens flares have also seen a couple of changes. Best of these is the automatic fading of a lens flare with distance, which removes the need to use an envelope to give the impression of a light fading as it travels away from the camera. Nominal distance (where the light is at its normal intensity) can be set, and LightWave will then increase or decrease the lens flare effect as the light moves relative to the camera.

## GLOW

In addition, there's a new setting to enable lights to glow behind other objects. This glow or halo around a light isn't the same thing as a lens flare, which only occurs when a light is in front of the camera and unobstructed by other objects, and will add another touch of realism to those images in which it is used.

It is in the camera menu, however, that European users will find what they have been looking for. The old preset NTSC resolutions are still available on a pop-up menu, but the Custom Size button enables the user to set any desired height and width for the finished

image. Sizes range from 16 to 16,000 pixels, so there should be a resolution in there to suit everyone, and PAL video settings (736 by 566 on maximum overscan) have jumped off the wish list and onto the screen.

To improve preview rendering times, there's a new limited region feature so that only a small part of a scene need be rendered. This is very useful if one surface out of twenty or so has been altered and the user doesn't want to render every other object in the scene just to see how the changes affect the outcome.

Pixel aspect ratios are fully configurable so that images rendered for print – rather than video – can use completely square pixels, and to speed up some animations the motion blur and depth of field effects will now work

only with low anti-aliasing rather than 3.1's insistence on the slower medium or high settings.

Effects haven't missed out on the fun either. Non-linear fog, one of the best tools for adding a touch of realism to a scene, is now much more configurable. Instead of a simple minimum and maximum fog distance, the user can now change fog density using an envelope so that it can be made to thin out during an animation, and the maximum amount of fog blending – previously set at 100 per cent so that objects eventually disappeared altogether at distance – can be set to any desired amount.

Proper use of the new fog features make it possible to create clouds of fog through which an object can fly during animations. With a little practice, the new controls turn fog

## The story teller



Lee and his team took real life scenes and used LightWave models over them. The Jeep, laserbolt and explosion are all from LightWave

Visual effects supervisor Lee Wilson is the man behind the light fantastic on SkyVision's RoboCop series, and it was his long term interest in the Amiga and Video Toaster which resulted in the show's use of LightWave imagery for much of the 3D scenes we will see when the series opens in the UK.

It was an introduction made by Lee and destined to become very productive. Initial use of LightWave on the two-hour pilot movie was restricted to a shot of RoboCop's helicopter flying over the city, but by the later episodes Amiga-generated graphics had become a major part of the production.

By the time SkyVision shot the "Heartbreakers" episode half way through the series, LightWave was being used to put together over 20 shots per show, including a continuous 3 1/2 minute scene from inside RoboCop's cyberspace "neuro-net". "We got a lot of bang for the buck out of this department," explained Lee.

It is a department many Amiga enthusiasts would kill for, equipped with 14 Toasters, one of which runs the seventh Raptor accelerator to come off the production line. This new card utilises two R4400 Risc chips as found inside Silicon Graphics machines to give the Amiga a rendering speed to match the best available anywhere else.

"A frame which would have taken seven hours to produce would take only ten minutes with the Raptor," claimed Lee. "It's like having forty toasters in a box, and we can buy ten Raptors (at about \$14,000 a piece) for the cost of one big SGI machine."

Lee is no stranger to the use of top level effects in TV and movie productions. His first use of LightWave for TV came in the Maniac Mansion show, but

Speed freaks with deep pockets will no doubt welcome the all-in-one Screamer! menu, a new set of options enabling LightWave to use faster add-on processors.

into more of an animated design object just the background aid it once was, and further enhance its use there's a graph representation of the fog settings showing how the effect works across the scene.

On the layout screen's options pane handy new AutoKey feature tells LightWave that whenever an object is moved or rotated one of its previously created key frames

European readers will know him best for his work with award-winning director David Cronenberg. From being co-designer of computer effects on the cult movie Videodrome, he moved on to supervise effects on The Fly and most recently was in charge of the more subtle, less visible trickery employed in Dead Ringers.

However, though his background is in optical effects, Lee insists that the story is everything. Despite the use of LightWave plus the Toaster's paint and character-generation software, and even the employment of DPaint and Brilliance for backdrops, he has a healthy disregard for effects which hog the limelight.

"I don't want to watch a show where the story halts while you look at a couple of minutes of effects just for the sake of it. In Dead Ringers we used a lot of effects which you never even notice. It's not the effects, it's the story."

"The value of the work is in the animator or artist and you see some pretty big stuff when this is forgotten. One of the most common mistakes and the easiest thing to fix is bad use of lights and textures which people use just because the can. This breaks the realism, and the only way to get good results is to use real world measurements and real world images as much as possible."

So what advice does he have for aspiring animators?

"The best thing you can do is watch TV and movies and ask yourself how they did that. I grew up with film and television and when I was 14 I got a Super 8 camera and tried out the effects and techniques with no money or special tricks. Just look and see what's out there and really pay attention."

"You can use a 35mm camera to take pictures of a city street, have them put on Photo-CD in high quality resolution, then drive your 3D car down a real street. You have to take measurements and think about camera pitch, angle, the relative scale of objects and if you work with real images and real dimensions everything will look a lot more realistic. If you've got the passion for it there's nothing to stop you."





the user needn't hit the Create Key button. Automatic creation of new key frame settings removes the frustrating practice of continually hitting Create Key and also the risk of forgetting, which results in the loss of all edits when you move to another frame.

When finally rendering an image, the record menu shows the first use of LightWave's modular design. A render display pop-up menu offers the user the choice of Toaster framebuffer or Picasso II display cards for viewing the frame in full 24-bit colour as it renders. European users of cards such as OpalVision, Retina, EGS Spectrum, or Harlequin surely haven't long to wait before third party modules make it possible to render direct from LightWave to these devices.

Speed freaks with deep pockets will no

doubt welcome the all-new ScreamerNet menu, a new set of options to enable LightWave to use faster add-on processors. Primarily designed to use the R4400 processors of the Screamer and Raptor cards running on a Windows NT network, this menu will be the first pressed into use by professional animators.

## PROCESSORS

ScreamerNet software is sold separately with the Raptor card and is used across an ethernet LAN to enable LightWave to make use of remote processors offering many more millions of instructions per second (Mips) than the Amiga's fastest CPU, the 68040, could ever manage.

Up to eight processors can be called upon to cut rendering times to a small fraction of

the original and boost LightWave's performance on an Amiga up to and above that of Softimage, Wavefront, and Alias packages running on a Silicon Graphics machine. With this sort of performance and such a price tag, LightWave only needs to break down the computer snobbery barrier to make the same impact here as it has in the States.

This has been a quick rundown of the most important new features found in LightWave 3.2, but there are so many improvements that it hasn't been possible to carry out our usual in-depth evaluation, particularly of a package which arrived just before we went to print. Once we've managed to drag Mr Austin away from the program long enough to draw breath, have a meal and a bath, we'll bring you an update of how the new features shape up to intense use.

## Why LightWave?



LightWave shows off its marvellous texture control

Amiga Computing resisted the temptation to drool over LightWave for a long time because until last year there was no viable way of using the package on this side of the Atlantic. Buying the NTSC-only Video Toaster just to use LightWave was akin to paying \$2000 just for the hardware dongle, but when the third party LightRave dongle appeared and put the first cracks in LightWave's NTSC armour, we knew it was only a matter of time before NewTek got the PAL message.

We rave about this package because anyone who has seen it in action, enjoyed the delights of using it to create animations, or seen the output of which it is capable, can fully understand why it has been one of the Amiga's biggest selling points in the US for the past few years. Put simply, the only way to better LightWave as an animation tool for TV, film, or video is to spend tens of thousands of pounds on a Silicon Graphics machine and another £10,000 or so on the accompanying software.

No desktop software on any other machine, whether Mac or PC, can hold a candle to LightWave, and when compared to Autodesk's powerful 3D Studio software - £2500 worth of excellent software hampered by a typically Windows-dominated front end - the Amiga's £600 package comes up smelling of roses. So there.

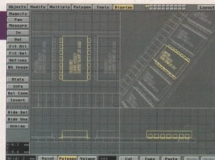
## What is LightWave?

If you haven't yet figured out what all the fuss is about, mention of this wonderful LightWave program might be leaving you cold, so a little explanation is in order.

Originally released as one element in a package of programs designed to work with NewTek's Video Toaster 'TV studio on a board', LightWave quickly grew into something of a legend. It is a 3D modelling and rendering package split into two main sections: the modeller and the layout screens.

In the modeller, a range of advanced tools including taper, shear, bend and so on can be used to create 3D objects in stunning detail. It is here that certain parts of the object are assigned 'surfaces', the life blood of any LightWave object.

From the modeller the raw object, complete with named but blank surfaces, is passed to the layout section where surfaces can be edited to the heart's content. Luminosity (brightness), colour, bitmap textures, lens flares, procedural textures (such as bump maps), and all the other paraphernalia of the 3D world are added in layout.



First build your model and assign surfaces...

animations are created and the final image produced. The reason LightWave is a 'must have' is the extreme ease with which animations can quickly be built up and previewed in real time using a system so elegant and easy to use that making an aircraft go through a complex sequence of aerobatic manoeuvres, something at which one would balk using other packages, is a complete doddle. Coupled with the program's excellent photorealistic output and speed of rendering, this ease of animation puts LightWave ahead of any package in its price range, and many beyond it.

For years, LightWave has run only on machines equipped with the Video Toaster, a combination of chroma-keyer, switcher, and video mixer which, though superb, has never appeared in a PAL-compatible form. Years of staring at US images and animations with green eyes and a grim smile are about to end with the release of LightWave 3.2, so if you haven't got the message yet, don't worry - you soon will.

...then add lights, camera and action

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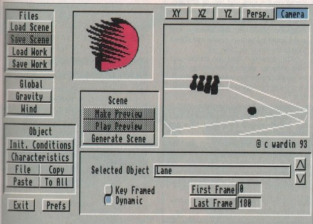
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## Peripheral parade

The cottage industry which has built up around LightWave in the US has seen every kind of add-on under the sun, from disks full of objects and textures to programs designed to augment the package or provide features not found in the original. The LightWave invasion is bound to be accompanied by many of these excellent and inexpensive add-ons, so we've taken the trouble to ship a few over for your perusal.



Set the scene in DMM and make use of gravity or wind...

### Dynamic Motion Module

Of all the modern 3D features found in LightWave, one is conspicuous by its absence: dynamics. This is the name given to a program's ability to take real world attributes and forces such as mass, gravity, wind and elasticity into account when rendering a scene. The Silicon Graphics machines can do it, and so can Real 3D v2, so why not LightWave?

Positron Publishing decided that it was high time they added such features to LightWave, and the result is their Dynamic Motion Module. Installing the same directory as LightWave, DMM is designed as an aid to layout: first load a scene created in LightWave then add the magic ingredient. Each otherwise ordinary object in the scene can be assigned a mass, initial velocity, and elasticity, and can be set to be affected by wind and gravity.

The DMM user is then able to roll a bowling ball at a collection of skittles and have them career and bump around as they would

in real life without every motion having to be set manually. DMM takes care of collisions, bounces, gravity and so on to produce a very believable real world reaction to the effects of other objects and global forces like wind and gravity.

When the scene is completed to the user's satisfaction it can be saved out again as a standard LightWave scene for later use in the layout section. The resulting scene appears much more lifelike thanks to the invisible hands of those real-world forces we experience every day of our lives but take for granted.

Simulating the action of a cue ball hitting a triangle of reds on a snooker table would take an age using keyframe animation, but with DMM it is easy. Just set the mass and elasticity of the balls (you can do this once and copy the attributes to the other balls), and the initial velocity of the cue ball, then sit back while DMM does all the work.

The program's only real limit is that collisions are only detected where a point collides with a polygon which often means that objects have to be given extra points in the area of the expected collision, but this is a small price to pay for DMM's performance. Again, previews can be very slow to generate, as can the final scene data from the in-progress work file, but the results are worth the wait.

As angular velocity (rotation), drag factor and elasticity can be set for each object at the beginning of a scene, it should theoretically be possible to set up any kind of real-world collision you like before saving the scene to LightWave. Any serious animator will want to get his or her hands on this software as soon as possible.



...then load the scene into LightWave for rendering. Simple

### Wave Writer

Despite LightWave's excellent use of PostScript Type 1 fonts to produce smooth spline-based, rendered text, the use of fonts in the program is a little limited. In response to this, DBA Unli Graphics have produced Wave Writer, a program dedicated to the sole task of producing three dimensional text for use in LightWave scenes.

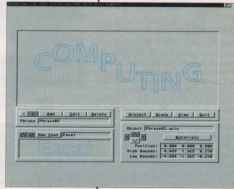
The program has an easy-to-use interface and a simple approach to its task, but there are plenty of options lurking below the surface. Users can add text by default as the usual horizontal lines, but they can also fit the text to an arc of a user-defined degree, pin text to a sine wave, write it vertically, rotate the letters at varying angles, and all this in any one or more of the three axes.

Carrying out this sort of operation in LightWave would of course be possible, but much more time consuming. Wave Writer takes the time and the tedium out of the process, and is therefore ideal for those who create a lot of flying logo-style anims.

In addition to creating the text objects, Wave Writer can be used to add bevel effects and set the basic attributes of the various surfaces on each letter, so by the time a piece of text is loaded into LightWave it can be ready to use straight off the bat.

Fairly close control is offered over scene settings such as the number of lights used, their type, position, colour and intensity, and the same with back-drop colour. When saving from Wave Writer, the user saves all these settings in a scene file which can be loaded for instant rendering in LightWave.

Wave Writer is a fairly specialised package and perhaps not for all LightWave users, but those who make extensive use of text, whether for corporate logo or general animation work, would be well advised to give it a whirl.



Creating complex text phrases and effects is easy with Wave Writer



Surface Pro's bricks and wood textures put to good use

## Surface Pro

This is one of those packages which, like Essence for Imagine users, can transform the look and feel of any rendered image. Surface Pro surfaces mostly based on pre-defined surfaces with the package and augmented by various scene and object files to demonstrate their use.

OK, so what? You can create your own surfaces after all, so what's different about this lot? Well, anyone who has experimented with creating a new surface from scratch in LightWave will know just how tedious the process can be and how much time and effort is required to get something looking just right.

Surface Pro takes all the work out of this by offering 60 surfaces, all high quality, and all using seamless images so that when tiled the edges don't show. To use them you just load them up and slap them on an object. Particularly impressive are the work-a-day surfaces such as wood and brick, flagstones and so on, but there are also enough spaceship textures to keep Trek fans happy.

Apart from a bit of editing here and there to set scale and orientation to the proper levels for each object, Surface Pro surfaces work well and they work instantly. However, they can be even more useful with just a bit of messing around.

As most surfaces use seamless images to create their effects, the use of texture velocity settings can give animated fire or water without daft gaps appearing, and mixing some of the high quality image maps supplied with the package can have interesting results.

Whether used as a bank of stock surfaces or as the starting point for experimentation, Surface Pro can add new life to animators' work.

## Shareware bonanza

Where do I start? The existence of a vibrant LightWave community in the USA also ensures the existence of a huge base of freeware and shareware objects, images, surfaces, scenes and just about everything else the new LightWave owner could want, much of it available through bulletin boards or shareware libraries.

One collection which stands out for closer examination is that put together by Thomas Dawson and currently doing the BBS rounds under the name TDTXTR.lha. This compilation of four reflection maps, two bump maps, and 19 surfaces has obviously had time and loving attention lavished on it by its creator and the quality shines through.

## IMPRESSIONS

From the new reflection maps, which add a much needed air of variety to the fractal reflections image supplied with LightWave, to the complete surfaces, Tom's textures are well worth a download or a phone call to a shareware library.

Most impressive of all is the fire texture which uses simple techniques not unlike



Tom Dawson's flame, organic armour and marble surfaces in action

## Conclusion



those employed in Surface Pro to create a believable flame effect. A fair amount of editing is required to get the most from some of the surfaces, but they are inventive enough to provide food for new ideas as well as being ready for instant use.

Commodore's future shape may still be in flux, but one thing is certain: NewTek are going from strength to strength. With the opening of another huge market in the form of Britain and Europe, LightWave is sure to confirm its place as the premier desktop rendering and animation system.

PC snobs can waffle all they like about the charms of the over-priced, over-dinky 3D Studio, but for functionality, ease of use, features and price point

LightWave simply has no match. RoboCop, Star Trek TNG The Movie, Star Trek VI, SeaQuest DSV, and Babylon 5 are just the beginning, and as the ultra expensive world of videography and special effects wakes up to the potential of a LightWave system used either as a modeller or as a rendering system with the Raptor card, you can expect to see Amiga outfits vie with the mighty Industrial Light and Magic for a slice of the big screen pie.

## Contacts

### LightWave 3D:

NewTek Inc  
1200 SW Executive Drive  
Topeka  
KS 66615  
Tel: (0101) 913 271 3000  
Fax: (0101) 913 271 3001

### Dynamic Motion Module:

Positron Publishing  
1915 N. 121st Street, Ste. D  
Omaha  
NE 68154  
Tel: (0101) 402 493 6280  
Fax: (0101) 402 493 6254

### Wave Writer:

Unil Graphics  
143 Lorraine Avenue  
Pittsburg  
CA 94565  
Tel: (0101) 510 439 1580

### Skyvision:

Robocop Productions Limited  
Partnership  
49 Ontario Street  
3rd Floor  
Toronto  
Ontario  
Canada  
M5A 2V1  
Tel: (0101) 416 364 4388

### Surface Pro:

Visual Inspirations  
809 West Hollywood  
Tampa  
FLA 33604  
Tel: (0101) 813 935 6410

### Tom's Textures:

Thomas Dawson  
1268-B Auto Park Way  
Suite 508  
Escondido  
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Long have I wished for some way to beef up my Amiga 3000T's animation capabilities. I bought a Picasso card, but although I could display pretty pictures in all their 24-bit glory, I still couldn't get them to move.

But now there is a shareware program called MainActor, a sort of ADPro for animators, but a lot cheaper.

MainActor follows ADPro's principles of Loaders and Savers quite closely, with directories for Anim\_Loaders/\_Savers and Pic\_Loaders/\_Savers.

Also, like ADPro, MainActor has Universal loaders for automatically sensing the type of animation or picture to be loaded.

One important point to note about MainActor's Universal loaders is that they come in several flavours to support the best-known graphics boards.

Thus there is a Universal\_Retina loader, a Universal\_Picasso loader and one for the Merlin card. An EGS loader has yet to be created, but it is on the author's To-Do-List.

The reason for separate loaders for these boards is that, unlike the Amiga graphics chipset, these cards use the same sort of graphics chips that are used in high-end VGA cards, and are thus more suited to chunky pixel animations (see boxout).

In fact, trying to play a normal ANIM-5 animation that took ten seconds to play back on the Amiga took nearly 13 minutes to play back on the Picasso!

MainActor supports several different ANIM formats from ANIM5 to ANIM8, as well as older variants such as ANIM3 and ANIMJ. In common with clariSSA, animation palettes can change from frame to frame which certainly will help animators on a limited colour budget.

Other animation formats MainActor

## No shareware!

The author of MainActor has decided to make it a shareware package rather than a commercial offering, although it is good enough to be one.

As it comes from your local PD library, MainActor is not crippled in any way. You can still create, convert and play back animations in various formats, and as you save an anim you will get a requester appearing every five frames asking you to register your copy.

This, to my mind, is the fairest way of ensuring registration of a shareware package, because although you might think that having a requester pop up every five frames is a big deal, if you have a 350-frame animation to save it will be popping up often enough to get you really frustrated.

I know a lot of people complain about registering shareware, especially when it is of foreign origin, but it really isn't that hard. And in MainActor's case it is definitely worth it.

# Animation antics

*Still animations are a thing of the past.*

*MainActor brings life and meaning to your screen.*

*Frank Nord explains how*

supports consist mainly of types best-known on the PC, including DL, FLI, FLC and AVI.

DL is a pretty old format, but there are thousands of FLI and FLC format anims available in the Public Domain. AVI is a much newer format developed by Microsoft, mainly to enable movies to be played in a window on the screen.

The AVI format has several different flavours, but as yet MainActor can only load 8-bit AVIs and can't cope with the sound-track.

## SAMPLES

Talking of sound, MainActor has the ability to attach an IFF sample to each individual frame of your animation. Nothing could be simpler. You just tell MainActor which frame to attach the sample to, which channel to play it through and that's it.

MainActor then creates a file called ANIMNAME.snd where ANIMNAME is the name of your animation, and then whenever you use MainActor or MainView - the standalone anim viewer - to show your animation, it automatically plays the sample for you.

The one slight difficulty is that only the path and name of the sample is kept with the anim, which means that you might have

problems if you move your samples drawer.

Creating an animation in MainActor from single frames is a very easy process. Just get all your frames generated by, say, Imagine or Lightwave, set your loader type to Picture and IFF, hit the load button and get the entire picture list. Then choose Select All from the menu and choose your animation saver type.

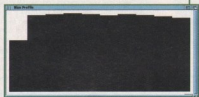
If you are creating an anim to be played back on the Amiga select one of the ANIM formats, and if you want to give your work to a friend with a PC or graphics card, choose FLI or FLC. Then just hit Save.

MainActor will ask whether you want a Palette-per-frame animation or one with a locked palette and then it will start saving. And just as you can save single frames into an animation, you can also save an animation back out as single frames, in case you want to do some post-processing or just get that one frame to keep as a still.

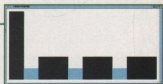
Converting one sort of anim into another follows the same sort of rules and is just as easy.

There is one additional animation format that hasn't yet been discussed. Because of the Author's close association with Village Tronic, the creators of the Picasso! graphics card, MainActor will also create Picasso format animations which can be in either 8-bit, 16-bit or 24-bit.

MainActor will automatically dither 24-bit



In case you're wondering how big those deltas are from frame to frame...



Oh-oh, I've got decompression problems on all the frames that are represented by black bars. The blue bars represent OK decompression times

images down to 16-bit if you want it to, but 8-bit anims have to have their 24-bit frames rendered down to 256 colours using some other package, such as ADPro.

Playback speeds using this Picasso format are very impressive and the quality is outstanding. The file size isn't actually as enormous as you think it will be either.

A 350-frame anim I created as a 256 colour FLC is about 3MB in size, while its 16-bit Picasso counterpart is only 5.5MB. Not bad for all those extra colours!

One of the buggers with animation is normally having to either draw or render heaps more frames if you want your animation to pause for a while on a particular frame.

With MainActor this isn't necessary. You can set the timecode for each frame individually, showing the first frame for three seconds, for example, and the last for two seconds.

This isn't possible with the PC anim formats as they don't have a provision for time-coding, but it works just fine with all the ANIM variants and the Picasso format.

## PLAYBACK

Once you have made all these amazing 256-colour anims, you might look at the file sizes and notice that you don't actually have enough RAM to load them back into MainActor and play them back. You can't even play them back through MainView. What next?

Well, MainActor has a facility to play anims back from hard disk. It might not be a perfect solution but how else are you going to play a 40MB animation?

And as a matter of fact, MainActor is no slouch when it comes to playback from hard disk. With most of the animations I have created, playing back from hard disk still gives me about 10 frames per second on average.

MainActor has a host of other little features that you might not notice at first because of its amazing ability to make all these anims from your stills, but the fact that you can have up to five animation projects open at any time is a boon, as is MainActor's ARexx interface.

In terms of information gathering, MainActor provides you with a size and time profile to help fine tune your anims. The size profile shows graphically just how large each frame of your animation is, while the time profile shows where potential problems might

## Are your animations chunky enough?

When the Amiga was first dreamt up, its designers saw fit to use a biplane method of screen representation. That's to say, your four-colour Workbench screen is made up of two biplanes and the combinations of the two biplanes give four different colours.

This is an extremely cost-effective way of doing things when the colour count is low, say up to 32 colours (which is five biplanes). Any more than that and things really start to slow down, which is obviously not acceptable for animation (or a decent operating system, for that matter).

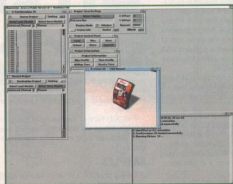
The originators of the VGA standard on the PC decided to go another route and head straight for a

256-colour screen format. Now, as we all know, 256 colours can be represented by eight biplanes, but it's fairly slow, as anyone with an AGA machine who has tried to run their Workbench in that many colours has found out.

If 256 colours is eight biplanes, then each pixel on the screen could just as easily be represented by a single byte (or eight bits), rather than representing the whole screen as eight rather unwieldy biplanes.

This has advantages and disadvantages. Firstly, it means that a two-colour chunky pixel screen is as slow as a 256-colour one, and that it's a lot harder to do things like parallax effects or scrolling. But by the same count it is a lot easier to do stuff like scaling and rotating.

The advent of the CD32, with its Akiko chip responsible for converting chunky pixel information to biplanes, should mean that sometime in the future we should see Amigas capable of dealing with both sorts of graphics easily.



MainActor even lets you play animations back in a window on the MainActor screen

lurk in the time taken to decode each frame of the animation.

Any black bars in this graph show that those frames are taking too long to decode and need to have changes made.

In conclusion, I would say that MainActor is probably the best piece of software to go on my hard drive this year. It has improved immeasurably since I first started using it when it was version 1.2 back in November last year, and I look forward to the same amount of improvement when I get version 2.

One man on his own has put together a package that beats various commercial packages hands down, and has released it as a shareware product whose registration fee is less than most commercial pieces of software, and is worth a lot more.

In the future I would like to see the developments that the author talks about, such as MPEG loaders and savers, along with improvement to the ARexx interface and the

ability to do more with the framelist & la clarsSA.

I would also like to see the ability to load AVIs completely, including soundtrack, and more importantly, to be able to save them back out.

All in all, this is an admirable effort by a superb programmer who deserves to have great success.



## SYSTEM ESSENTIALS

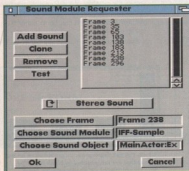
RED = Essential BLACK = Recommended



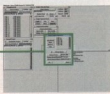
## The bottom line

Supplier: Marcus Moenig - Shareware.

Price: \$50 for registration with a full printed manual, \$25 for registration with electronic docs.



In space no-one can hear you scream, unless of course, you've got MainActor





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# Entertainment

Chicago, Illinois USA, or more specifically, the McCormick Place on 22nd and Lakeshore Drive was the setting for the Consumer Electronics Show this year.

The exhibition hall was not only crammed with neon, lasers and a strong turnout of the US games industry market leaders, but also a welcome reprieve from the 90°F temperatures that besieged it.

The Amiga presence at the show was somewhat disappointing, but when questioned about their European operations, many present had the Amiga machines as an integral part of their marketing game plan. Armed with a spotlight, electrodes and thumbscrews, I set about interrogating the software industry armies.

Ocean has shoals of new releases within its depths. The press pack I was given was as stuffed as a piranha at a diving contest. First out of the box is an Amiga rendering of the adventures of Mighty Max. Based on the popular (if not ubiquitous) toy character, this game takes inches off your waist and feet off your height.

At only one inch tall, your earth-saving mission is to beat Skull Master (and with a name like that, you can be sure he's not on your side) to the 400 components of one of those doomsday weapons (you know, the ones that come in packs of 10) scattered about the globe. To aid your quest for world peace, the programming deities have bestowed upon Max the gift of teleportation. The split-screen, two-player mode offers

the ability to make this game a social event. You and a friend, or closest approximation thereof, can search for different components while thwarting each other in the process.

The game has five scenes, each with five levels, and promises much in the way of entertainment and longevity.

"Devastation is the name of the game." Remember this and you will win—at least if the description of Kid Vicious is anything to go by. This game is designed for those hardened game players who do not understand defeat, will not tolerate failure and all that other gung-ho ranting.

## EMOTIONS

Remember those moments when you're gripped in the throes of humiliation, having just been trounced by an adversary no bigger than your thumb nail.

That animal desire to pick up your machine and heave it against the hardest object in sight (usually a wall) and then jump up and down on it, until all of a sudden, next time you play the game, you miraculously win.

These are exactly the emotions required to win this game. Kid Vicious is an ex-easy going Neanderthal since usurped from his mundane sabre-tooth tiger-infested life. Kidnaped by evil scientists for use in 21st century experiments, Kid V. has to smash his way home armed only with his club.

This platform game, programmed by



Mutant League Hockey rears its genetically engineered head on the Amiga

the Magnetic Fields team, comprises of five worlds with four sections per level. The object is to find the missing link and figure out how to get back home.

Your chances of success are greatly enhanced by smashing up everything in sight, for the only way to exit a level is to cause a pre-determined amount of damage.

Recall that scene in Back to the Future where Mike Fox is hitching a ride on the back of a jeep while on his skateboard? Ocean have brought this pastime to you via Skitchin', originally an Electronic Arts Mega Drive title now primed for an Amiga conversion.

For years now, people have been bombarded with the phrase "do not try this at home." Well now you can, and I would encourage you to not only try it, but be creative with it too in the safety-conscious computerised version of the "sport".

This race-style game awards points for 360° turns, twists and backflips while being towed behind a vehicle at reckless speeds on a crowded road.

While encouraged to take as many chances as possible, heed should be paid to the oncoming traffic, liberally scattered obstacles and your opponent—if playing in two-player mode. One to keep an eye out for.

Finally, Ocean has solved the age old question of what do you get when you cross ice hockey with a good healthy

## Par for the course

Never has a game had such an influence on people as golf. It can transform them from the placid dul tones of today's business attire, to throwing caution to the wind and dressing up in some serious pimp gear. Also being converted across from another Electronic Arts' Mega Drive title, PGA European Tour is soon to make an appearance on the Amiga fairway.

Golf simulations are nothing new, so when asked what the big deal about this one was, Ocean were only too pleased to point out its features.

Foremost, the game offers five world class courses: Wentworth (England), Crans-sur-Sierre (Switzerland), Le Golf Nationale (France), Valderrama (Spain) and

Forest of Arden (England).

Should you not feel confident, even in the privacy of your own home, about the daunting challenge posed by the world's top courses, there is the option to practice strokes on either the driving range or putting green.

The excuse of rain stopped play cuts no ice here—it is possible to change the weather conditions to suit your tastes via the game's many options.

The social trend of computer games is carried a little further in this incidence, for not only can you compete against the computer (with varying skill levels), but also up to three other players can play with you.



## t USA

*From the sundrenched, football fevered city of Chicago, Matthew Phillips reports on the entertainment show of the year*



dose of radiation (within government safety limits of course) and the non-human cast of Alien I, II and III combined: Mutant League Hockey.

This isometric 3D game features goal posts that turn into monsters in time to devour any opposing player that gets too close. Not only are your opponents equipped with the usual hockey kit, but lasers and other anatomically detrimental devices too.

If you're tired of those tediously tame games where fouling is frowned upon and penalised accordingly, this is for you. To win the player has to play dirty, be mean and if possible, mutate a little too.

You can choose from a team of robots, aliens or trolls. Before you choose the team, I would suggest going for the one with the best weapons as opposed to the superior hockey skills. The game features a hard rock intro sequence and plenty of lively animation sequences.

## CREATIVITY

The CES event was an open arena for all involved in the gaming industry to show their creative muscle. Aside from the games software houses, there were plenty of other companies trawling the show for business. Their products tend to be a little more generalised in so far as they are targeted at multiple platforms.

They say image is everything and when it comes to gaming software, nothing could be further from the truth. In fact, the graphics have become such a critical part of the game design process that there are companies out there who either sell purpose-built equipment or provide a service that caters for the game player's thirst for graphic perfection.

Two such companies include Alias Research Limited and Wavefront. Not only were they represented by a phalanx of designers and PR people, the companies had set up shop on the floor and were giving slick demonstrations to spell-bound audiences, with the aid of their Unix-based Silicon Graphics Indy workstations. Within seconds the overhead

screen was filled with skeletal images being rotated, flipped, squashed and blown up, all at the flick of the wrist and press of a button.

This graphics manipulation technology has been around a while, but now with the addition of ray tracing, surface texturing and surface texture interaction, new dimensions in graphics' development are now being realised.

First the designer will create the skeleton of the object they have visualised. Once deemed game-worthy, the skeleton will be given the digital equivalent of tendons.

These are very similar to human design, in which the middle of one 'bone' is joined to the other via a line (tendon). This technique is important, for it dictates how the skin/texture covering a join will flex and move.

With the tendons now in place, next comes the skin. Several more quick clicks and button presses instantly cover the entity with a fresh coat of new, life-like skin.

For those of you wondering whether your machine will do justice to the many graphic masterpieces now possible, fret



From left to right clockwise - *Skitchie*, a skateboarding racing game, *Jurassic Strike*, the classic *Mega Drive* shoot 'em up, *NHL Hockey '94* and *PGA European Tour*, both superior sports titles, are all games making their debut on your machine in the future

## In reality

Note of interest: Wavefront's software was used in the making of such films like *In the Line of Fire*, *Lawnmower Man*, and *Aliens III*. Lucas Film's Industrial Light and Magic, the movie special-effects gurus, enlisted the help of Alias Research software in the production of *The Flintstones* - keep an eye out for *Dino*.

Ever wondered what it would really feel like to be on the receiving end of a 10,000 watt laser discharge. Now you can buy devices that not only help you beat up your on-screen opponent, but will happily beat you up too. Aura Systems Inc, taking the virtual reality concept to the extreme, have come up with virtual pain (although not quite so virtual).

A device that wears like a ruck sack enables the player to feel every kick, punch and laser beam of their favourite game via a large speaker pressed against their back. It will work with any machine that puts out sound and this masochist's fun factory is scheduled for release around Europe in September.

not. The software employed in the creation of these pseudo-lifeforms is aware of possible target platform limitations and will effectively optimize the graphics produced accordingly.

The good news here is that since the optimization process is all built in and therefore simple to apply, it will be a good while before your machine is not eligible for these visual assaults.

Despite being a US show and not wishing to appear overtly nationalist (just a little proud), it was good to witness a strong British presence. Pursuant to many conversations, it was clear that these companies rated the Amiga as strongly as Sega, Nintendo or equivalent, and had every intention of its continued support and development, regardless of its popularity in the States.

Britain and its support for the Amiga range has for a long time been setting the pace in the recreational computing world. The Consumer Electronics Show and its participants gave me cause to think this will continue for a long while to come.

AC



With the advent of CD32, A1200 owners have been crying out for an adapter that will allow them access to the vast world of CD-ROM.

Gasteiner has answered the call with a PCMCIA CD1200 Controller that allows the user to connect any Mitsumi LU005 or the new DoubleSpeed FX001D to their A1200.

The kit provides the owner with a somewhat cheap but effective PCMCIA controller which is easy to fit. However, connecting a drive is more of a challenge. The instructions on connection are fairly sparse and incorrect in certain areas.

The single page manual states that the ribbon cable must be fitted with the coloured edge on the right. This is incorrect and must actually be fitted with the coloured edge on the left – quite a drastic and time consuming mistake!

Gasteiner also provide an installer disk which will allow you to install the necessary software in order to allow your A1200 to communicate with your CD drive.

This includes necessary devices so that

# CD1200 Controller

your Amiga can understand the CD drive device and the excellent JukeBox program which allows you to control music CDs with great ease.

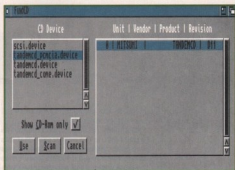
Obviously, any music CDs will not be able to be diverted through the A1200 and must be connected to an amplifier or stereo via the headphone socket on the particular CD drive you are using.

Using the JukeBox program you can play, pause, forward, rewind, search for specific tracks and shuffle tracks – in fact, all the things you can do with a professional personal CD player.

Considering the poor documentation, the actual installer software is very easy to use and contains all the programs you will need in order to get your CD drive up and running.

The main program is called FindCD and automatically searches for a suitable CD drive. The user has to do very little as the program performs all the difficult setting up procedures itself.

So what is the major advantage of having a CD drive connected to an A1200? Certainly the most important advantage is the ability to access large amounts of data without the restrictions of a hard drive or more importantly a floppy disk. Files that take up large



The FindCD program supplied with the CD1200 Controller takes the strain when setting up communication between your A1200 and the hardware

*The world of CD-ROM  
comes to the A1200 with  
the CD1200 Controller from  
Gasteiner. Steve White  
puts it through the ringer!*

warehouses. Performance wise, the PCMCIA adapter is fairly slow, mainly due to the 16-bit architecture, but it is adequate for most users.

As for software, there is a wealth of PD disks that offer a wide selection of programs and utilities on a single CD. Unfortunately, most of these disks are poorly put together and in tests carried out, many of the programs crashed when run.

CD32 also offers a great deal of software, although any that rely on the internal hardware specific to CD32 will not work. There is no auto boot option for disks, so running games can prove a problem.

Users will need to study startup-sequences as it is necessary to run the contents of game disks via Workbench. This could cause problems for those A1200 owners not totally proficient with AmigaDOS.

The fact that the disks do not auto boot means that the contents of game disks can be easily accessed and copied to a hard drive. To test this we managed to install Body Blows CD32 onto a hard drive.

It did take up 14Mb but it ran successfully without the need for the CD. Obviously, we deleted it immediately.



There are plenty of CD PD disks available. Unfortunately, most are poorly compiled and crash regularly

## Verdict

The bottom line here is whether or not it is worth forking out £89 for the Controller and an extra £150-£250 for a compatible CD drive. There really isn't enough Amiga application software on CD and the material that is available isn't of a great quality.

The fact that you can now buy a CD32 with software for only £299.99 really doesn't make the purchase of an A1200 CD drive set-up a financially sound investment – not at the moment anyway.

If an A1200 CD drive is something you definitely want, it would probably be wiser to wait for the Zappo Smart Drive from ZCL as it promises the compatibility of the CD1200 Controller plus an external power supply, all for the price of £199.99.

The Zappo also uses software to emulate the Planar chip which should give A1200 owners total access to all CD32 software, something the CD1200 Controller doesn't offer.



JukeBox allows you to control music CDs with the same flexibility you would find with a dedicated personal CD player

amounts of storage space such as computer fonts, clipart, jpeg images, textures and 3D objects can all be accessed in great numbers from CD.

Musicians also benefit considerably from the storage capacity of CD as sound samples, one of the most storage-hungry file types around, can easily be fitted onto CD in vast amounts and of a high quality.

However, if you want to power the drive you will need to purchase a standard power supply. These can be found in most hard drive kits although they can be bought separately from most reputable electrical

## The bottom line

Product: CD1200 Controller  
Supplier: Gasteiner  
Price: £89  
Tel: 081-345 6000

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



I'd like to utter a few words concerning Commodore and their future. Let's start with the basics, will there be one?

Looking abruptly away from Commodore's corporate capers – which are worrying indeed – what are they doing to keep the Amiga afloat? Their move of discontinuing their PC manufacturing was just a smoke screen wasn't it?

After all, they don't really need it when they've got the Amiga department – which can be set to making PowerPCs running WindowsNT – do they? At the very least, Apple kept System 7 as the main OS of their PowerMACs and left Windows as a software option.

"We're developing a chip of our own" Mr. Pleasance blurted – ha! I'll bet you whatever you've got, CBM's thrown a few nickels into Intel's and IBM's joint PowerPC project. That would certainly fit in with the "other well known companies" he spoke of.

So, when the new Power Amiga arrives next spring, it looks like Commodore's about to loose at least one user.

I don't want a PC and I never wanted one. Tell you what, if CBM's dropping the Amiga OS and all the other things that make the Amiga unique and the greatest – if overpriced in the higher range – all-round computer ever built, why not let me take care of the bits they abandoned, I'll do it, no charge.

As far as the Amiga's future is concerned there's still no fresh news at this stage – check the news pages for late breaking info.

But essentially the ball is in the buyers court. In my opinion the best possible outcome would be for the new owners to licence manufacture of the Amiga to anyone willing to subscribe to a franchise deal.

That way development could continue courtesy of the revenue generated, the word would be spread far and wide, third-party developers would be inspired, and the machine would finally

# How Suede it

be given the opportunity that the PC has enjoyed since day one.

The ability for anyone with the means to build PCs is the only reason that this particular technological dinosaur has attained and maintained its position as the most widespread computer platform on the planet.

As for your concerns about Windows NT, I think you're slightly confused.

According to our sources, Windows NT is going to be an option and not a complete replacement for the Amiga's own OS.

As for your hatred of other platforms, frankly I think you're being a little naive. As Britain may discover at its cost, European unilateralism isn't a viable option in a rapidly shrinking world – and the same is true in the microcosm of the computer industry.

The one thing that's kept the Amiga in the minor leagues in a corporate sense has been its inability to assimilate easily into big business. If adding support for additional operating systems can remove this particular obstacle it can only be a good thing.



Getting Blitzed?

## A readers opinion

Concerning the new layout; so you've replaced the coloured boxes with coloured frames and added a few connecting lines (would you believe, I first thought that you'd included an electronics CAD package on the disk?) Fine with me, but why

have you ditched a timeless logo for a definitely mid-80s one?

As for the masthead I'm afraid it's a classic case of taste, you don't like it, most people do, that's life! Democracy in action.

However it's worth putting the question of design into context. The entire redesign of Amiga Computing was achieved in less than a month. Something which in my opinion was a near miracle.

Personally I think the man responsible, namely Tym Lecky – our resident art editor – can't be praised highly enough. I suggest you glance around the magazine and count the number of unique design elements – the ESP logo being a classic example – then ask yourself was this petty criticism really justified.

## Annoying adverts

I know that advertising makes a major component of the stuff that flows through a magazine's veins, but do you really want any part with people whose ads say things like:

"Women should stay in the kitchen" – and here's a manual on how to get 'em back in there. "How to get a one night stand." "Better get some muscles kid" or "Hey, get hold of our totally opaque shades, with flashing lights on the inside – recommended by the Playboy magazine."

These dubious messages are obviously created by people who have stereotyped Amiga users as pimply teenagers who say a prayer to plumber Mario every evening before hanging up their anoraks. I for one don't feel worthy of

I am writing this letter to you because I for one would like to see a tutorial on Blitz Basic 2 in your magazine.

Other magazines have had tutorials on Blitz Basic 2 but they were on how to make games. What about the other side of programming like application programs such as the one on last month's magazine Phonel.

I know there are a lot of readers besides me out there who would like to see a tutorial on applications.

Many would-be applications programmers have turned their noses up at Amos simply because it is not possible to write programs that communicate with the user through intuition windows and gadgets.

During my attempts to master Amos it's become clear that all the books are geared towards putting games together. I feel I am the only one trying to develop applications.

Why are all books and mag tutorials on "How to put games together?"

Also, are there going to be any books on Blitz Basic 2?

K. Winspear, Hartlepool

Your prayers are answered. In this very issue we embark on the first of a six-part tutorial hosted by Mike Milne and dedicated to Blitz Basic 2. But perhaps more importantly, the new series is geared exclusively to the development of applications.

As for your Amos comments, it's true the language isn't particularly au fait with intuition. However, if you check out last month's Amos insight you'll discover an add-on for Amos designed specifically to incorporate elements from intuition into Amos programs.

As for a third-party reference manual for Blitz Basic, I'm afraid the news isn't quite so good. As far as I'm aware there aren't any plans, however the program does have an official UK distributor who may be able to help. Contact Guildhall Leisure Services on: 0302 890000.



## Full of compliments

During the last month I have dealt with two "advertisers" in your excellent magazine; Deltatrac PD and Mr J Pritchard (author of Epochmaster).

Both responded by return of post and in both I also had to seek further help which was an equally speedy and helpful service.

If you have any spare room in your mags, I'd be

grateful if you would publicly praise these two.

Mr WJ Hill, Somerset

We always have space for the occasional bit of praise – especially if it's directed towards an advertiser. Our usual mail in this area tends to be less than complimentary.

having such propaganda aimed towards me.

Basically I couldn't agree more. But to be honest there's little that can be done from the editorial standpoint.

During my time with the magazine the editorial content has always been guarded fiercely and has never succumbed to pressure from advertisers.

As a result the magazine has lost a lot of revenue in the form of ads and promotions. With this in mind, it's hardly fair or correct for editorial to suddenly start dictating to the advertising department.

Censorship isn't something to approach lightly, regardless of the moral or intellectual arguments. A possible answer would be to abandon our principles and adopt an advertorial approach to fill the pages.

But that ain't going to happen. So I'm afraid you'll have to suffer the Arthur Daley's until they realise not all Amiga users are pre-pubescent sexist.

## Freebie or not freebie.

About the "full price packages" you include. I can see two options: either leave them out completely, or do so for a couple of months at a time and save up.

You see, we don't really need crappy, second, or even third-rate software like Fusion paint or Cinemorph. It's clear to all of us – or so I hope – that CoverDisk "freebies" are just a way to squeeze the last drops of juice out of an obsolete or vastly inferior piece of software.

I can put imagine how many sales GVP lost to ASDG in the morphing combat, their effort was truly pathetic and rather comparable with VMorph – written in Amos. Admittedly there have been many gems; Maxiplan4, SBase, Protext and Bars&Pipes2r spring to mind.

This is what we want. Even if these two are old versions (I don't include B&P there) and the upgrade offers usually available make less than a difference from full price, it's too bad the save-up option is unrealistic.

Truly, the publishers aren't likely to let go of their premium software, no matter what you offer them, but it would certainly have been a jolly one.

This leaves us with dropping the "freebies", or carrying on like you've done so far – most likely, since you've got a reader's survey to lean back on. But at least do

me one favour. Stop lavishing lousy software with astounding superlatives, praising them and rising them to the skies, stop printing what they sold 13 years ago and please, once you've had say a word processor on the disk, don't come later with another one which is of the same, or even lower standard.

Jonny Johansson, Sweden

In reference to your CoverDisk queries, I'd tend to agree. In an ideal world we'd always bring you the latest and best software. But alas fierce competition and the availability of suitable software doesn't always make it possible.

However your opinion does raise an interesting point. Firstly commercial CoverDisks are killing the Amiga – there's no argument there. Ideally we'd abandon the practise entirely and return to strictly PD and Shareware.

In an attempt to do exactly that, our ex-editor Steve Kennedy sent an open letter to all our competitors asking for a

I am trying to follow the tutorial for assembler by Mark Jackson, but I am not quite sure what it is I am supposed to do.

Firstly, do I print the source code from the cover disk then type it in to the assembler that I managed to get hold of at the start of this tutorial, or can I load the source code from the coverdisk directly into my assembler? I have tried this but I just get a lot of jumbled letters.

Secondly, where is the source code located on the CoverDisk of June 94 issue?

And for something completely different, the new look mag. My May issue came with pages 99 to 130 upside down and back to front. Now that's what I call a new look!

Mr G Wood, Cheshire

As for your source code problems there's no reason why you shouldn't be able to load the code into the assembler direct from disk – that's why it's there.

However, if you're printing the code first there could be problems. Like any programming language syntax is everything, and if the code is being reformatted prior to printing there's a good chance the syntax is being altered and the subsequent program corrupted. Now for a mixture of

Got something to say through the pages of AC? Ezra Surf is our mainline dedicated to reading your letters and selecting the most interesting for publication. Drop him a line at: Ezra Surf's Postbag, Amiga Computing, Atlington Park, Maclesfield SK10 4NP. Please don't enclose sales as Ezra just doesn't get enough paper to reply personally. He might also have to shorten your letters, so you don't be offended if you end up getting the chop.

## Code loading

good and bad news. The good news is that you shouldn't have any more problems with Mark Jackson's tutorial – and now for the bad news – as it's being discontinued.

The reason for this rather drastic step has been the unreliability of Mr Jackson. Although we would love to continue the series Mark has already missed one issue entirely and has proved impossible to contact ever since.

However, now for the really good news. As a replacement for the assembler column, Paul Overa kicks off a six part Devpac tutorial.

Unlike Mr Jackson, Paul is a professional journalist and programmer who's already published a variety of programming reference manuals through Bruce Smith Books.

As a result you couldn't be in safer hands. And better still, Paul has agreed to supply additional info boxes which should enable the tutorial and source code to be used on a variety of assemblers and not just Devpac.

As for the unique design concept of your particular copy, I'm afraid that's something of a mystery. If anyone else has suffered the same problem please get in touch – it could be time to have a word with the printers.

# WE MUST BE MAD !!!

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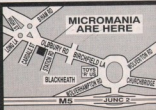
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## Workbench worries



I am fairly new to computing and only recently bought myself an A1200 with a 64Mb hard drive. I am extremely pleased with the machine and am feverishly lapping up your AmigaDOS tutorial.

My hard drive is partitioned into two drives - Work: and DH0:. I have successfully installed Workbench 3 onto the Work: partition and am now busily installing games to DH0:

Everything was working beautifully up until two days ago when my Workbench kicked up an error requester displaying the following:

Error validating Workbench  
Block 161423 used twice

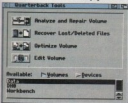
The hard drive continues to whir for about another two minutes before stopping. I really don't know what has happened but fear I may have broken the hard drive. Is there anything I can do?

P White, Cambridge



I'm glad you are enjoying working with your Amiga and you needn't worry too much about the problem you have described as it is not permanent - provided you have the right software to correct it.

The program you really want is Quarterback Tools Deluxe from Central Coast Software. This is an incredible piece of software and has all the functions you will ever need in order to keep your hard drive healthy and functioning.



If you want more information on QTD you can call Meridian Distribution on 081-543 3500 who will only be too happy to help you. To avoid further problems such as validation errors, make sure when you are copying stuff to and from your hard drive that copying has finished before you eject the disk - the F.Disk light will go out when this has happened

Keep your hard drive and floppy disk healthy  
with Quarterback Tools Deluxe

## Install incidents



I have an Amiga 1200 with a 4Mb RAM expansion, maths co-processor and 185Mb hard drive. I have successfully installed Heimdall 2 AGA onto a partition named DH2.

The game loads onto the first screen but when I move through to the next room I get the following message:

Unable to load the file: DH2:  
Heimdall2\world\dl1.dat.

After this the screen goes blank and I get a guru message:

00000005 00280410

Incidentally, I have checked with Directory Opus and the file in question has been installed.

A Bemarscone, West Sussex



To test this problem I installed Heimdall 2 AGA on my own A1200 and although it crashed my Amiga after installation the game played okay. The problem you describe

Yet another mixed bag of  
computer worries comes  
under the surgeons knife in  
time for a speedy recovery



**acas**  
AMIGA COMPUTING ADVICE SERVICE

could be a clash with your maths co-processor and it may be wise removing this and trying the game again.

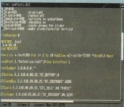
However, I find the AmigaDOS error report a little strange. Try checking the size of the main.d1.dat file which should be 225056 bytes.

If all else fails your best bet is to send

**Blitz blitzes out!**

gadgets and the GadTools in the same window. This means you won't be able to use ShapeGadgets either.

Sorry I can't be more helpful, but only Acid Software can clear up the bugs which doesn't seem very likely at present.



Blitz Basic 2,  
an excellent  
Basic  
programming  
language  
partially let  
down by bugs



I noticed in the CoverDisk pages of a previous issue of *Amiga Computing* you were asking people if they could send in their votes as to whether a Blitz Basic 2 tutorial would be welcome. I have already sent my vote - yes!

I have had quite a few problems with Blitz and constantly find myself coming up against problems I can't seem to get round. The most frustrating problem at the moment is when combining old gadgets with the new GadTools. They seem to work fine at first but crash soon after.

The manual says you can combine the two together, so I can't be sure if this is an error in Blitz or a mistake being made by myself. If there's anyone who can help it would be greatly appreciated.

D Lavans, Cornwall



Do you want the good news or the bad news first? The good news is that the problem you have described is not a fault of your programming skills. The bad news is that it is a bug in Blitz Basic 2.

This language seems fraught with problems, a sad fact considering it is certainly the best Basic programming language available on the Amiga.

Acid Software are apparently having major problems with the differences between OS 2 and OS 3 and look likely to support only OS 3.0 AGA users in the near future. I'm not entirely convinced of these problems or that they would cause the kind of bugs Blitz users have had to endure.

The GadTools suite was a major cock-up and there are quite a few bugs in this library as well as in other areas of Blitz. The only answer to your immediate problem is to avoid combining old

## Installation frustration



I have just finished writing a small program that allows users of Workbench 2 and above to select a find option in the Tools menu.

The user selects the find menu option and a requester appears asking for a file to locate. The user types in the file name, selects the device and clicks okay, at which point the program searches for a file with the same name as the one entered.

The program works perfectly and I want to release it into PD with an option to register for a newer version.

The program and necessary files are now on an auto-booting disk but I am considering a hard drive installer program so that hard drive users can copy the program with the minimal amount of fuss.

I would really like to use the official Commodore installer but don't know where I can get it and how I should use it. Please could you shed some light on this program.

J Dorin, Berks

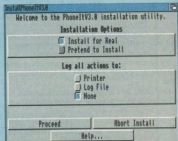


The Commodore installer is a wonderful program but is fairly difficult to learn how to use. The actual program is called installer and you can find it easily enough in the C directory of our CoverDisks.

However, before you use the program you need to write a script file using the dedicated installer language. This language is not easy to learn and is certainly not easy to debug, as it relies heavily on the use of parenthesis ().

Before you use the installer you are requested to register with Commodore who will license you to use the product. We had to do this at *Amiga Computing* although we never received a reply. With the problems Commodore are having at the moment I would imagine no one would pick you up for using it without a license.

The best way to learn the language, if you haven't got a manual, is to hack through other developer's installer script files. You



Installing programs couldn't be easier using the official Commodore installer but learning the language isn't easy

should be able to produce a fairly competent hard drive installer simply by editing their scripts.

I may even consider running a tutorial explaining the installer language so that readers can become proficient with it in its entirety. I hope this has been of some help.



your disks back to Core Design who will send you a new set. You can then re-install Heimdall 2 and see if the problem you describe re-occurs. If it does happen again write in and I will call Core Design to see if they can shed any light on the problem.

## Surf defector



I know this letter should really have been addressed to Ezra Surf but I am desperate for someone to help with a problem - bugged Amiga games.

I eagerly awaited the release of *Beneath a Steel Sky* from Virgin and as soon as it hit the store shelves I rushed out and bought it. Imagine my horror when I realised it crashes every five minutes. This game is rendered totally useless to me due to the constant crashing.

I know I can save the game, but by the time I have switched my A1200HD off and then on again, booted the hard drive, located the BASK drawer and loaded the program my enthusiasm is severely dented, especially as I know it will crash in another five minutes.

I also have *Brian the Lion* AGA which I have installed on my hard drive after much frustration, but when I load it there is no Brian graphic - he's gone.

I have hardly touched this game and feel very cheated by gangster software houses.

I am desperate for a solution to these problems. The software houses fobbed me off with a load of pre-written crap so I am writing to you to see if you have any ideas.

K Leamer, Cardiff



I'm sorry you have had such a poor response from Virgin and Psygnosis but I'm not really surprised. It surprises me that so little was

You got problems too? Then drop a line to Amiga (computing) Advice Service, Europa House, Adlington Park, Macclesfield SK10 4HP and we'll move heaven and earth to help in these columns. But sorry, we cannot reply personally, so save those SMS

mentioned about the bugs in *Beneath a Steel Sky* because on an A1200 the game is a total waste of time and money. The problem you described is the same problem I had with my copy and indeed the System copy.

I'm afraid there isn't a solution, but in my opinion I would be more wary of Virgin products in the future.

I do have some good news regarding



A friend of mine recently lost a lot of software due to a virus that infected his disks and - damaged them. He managed to get hold of Virus Checker on your CoverDisk and subsequently destroyed all the viruses he could at the expense of many commercial games.

He can't understand how the virus infected his disks because he always keeps them write protected. Can a virus infect a write protected disk?

M McCauley, Glasgow



There are only a few viruses I know that will write themselves to a copy protected disk. However, there are no viruses that can attach to a write protected disk, therefore your friend can't have protected all his disks.

I can't stress how important it is for Amiga owners to arm themselves with a suitable Virus Checker - John Veldhuis' being the most up-to-date checker there is.

There are fewer viruses being written these days due to the excellent virus killer programs, but

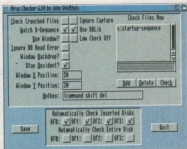
Brian the Lion though. Only a few days ago a Mr Tim Hart sent me a disk on which he and his unemployed programmer friend (maybe he should be writing the games) had written a patch for the missing Brian sprite.

Tim states that the problem is due to Fast Ram which proves that Psygnosis simply couldn't be bothered to test this product.

If you send a disk to ACAS marked Brian Fix, with Tim's permission I will send you a copy. My advice is, be wary of Psygnosis products as well as Virgin.

## Arm yourself

there are still a lot of ancient disks floating around and these may contain viruses. You have been warned - arm yourself!



John Veldhuis' Virus Checker is the Amiga's premiere virus killer. It comes with an extensive virus database

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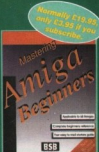
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Zool 2 is suitable for any machine, though A1200 owners can choose an enhanced version (see order form).



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# The great

**S**oft-Logik's PageStream has come a long way. The desktop publishing program that started life as a buggy port of an Atari ST program at version 1.5, eventually grew into version 2.22, a strong competitor for then-market-leader Professional Page.

But Soft-Logik wasn't content to try to be the best on the Amiga — no, they seem to want to be the best on any computer.

The forthcoming release, PageStream 3.0, isn't targeted at the stagnant Professional Page. No, Soft-Logik has its sights aimed at Quark XPress, the industry standard desktop publishing program that runs on the Macintosh and Windows.

That's a lofty goal for a small, Amiga-only company to set for itself. But if the beta versions of PageStream 3.0 I've been working with for the past few months are any indication, the full-blown program will give Amiga users a tool that will make their Mac- and Windows-using publishing friends green with envy.

PageStream 3.0 has been delayed quite a bit from its initial release — I first heard talk of the program at the World of Commodore Show in 1992.

As this was written in early July, Soft-Logik promised they would ship the program in early August, so it should be available by the time you read this.

The initial release will be feature packed for sure, but the company isn't going to stop there. As if a completely revamped interface and hundreds of new features wasn't enough, Soft-Logik has some more ideas

## Help and more

PageStream 3.0 includes a comprehensive help system that uses Commodore's AmigaGuide to provide context-sensitive hypertext explanations of various commands.

Everything's there, from basic operation to full ARexx command documentation. There's also an introductory tour sequence, and a window that pops up when you load the program and offers various tips on using PageStream's features.

There are a number of other features in this totally rewritten program that are new to PageStream and unique to any Amiga desktop publishing program.

These include revision control numbering, timed saves that don't interrupt your work, automatic backups, undo and redo limited only by available memory (another feature that by itself is worth the price of admission), dot leaders, object nudging, and full support of the Amiga's clipboard.

on how to improve the program and promises a free update with even more features a few months after the initial release.

At first glance, long-time PageStream users might not recognize the new version. The familiar floating toolbar is still there, as is the page layout window.

But there's also a Quark XPress-like context-sensitive edit palette at the bottom of the screen, a row of control gadgets at the top of each editing window, and optional colour, font, style, macro, and page selection palettes.

## GADGETS

Three-dimensional effects on the page outline and surrounding moveable rulers help set them off on the screen, and Amiga User-Interface Style Guide-compliant gadgets and windows make the program easier for new users to pick up.

The edit palette should help make you much more productive. It's context-sensitive and its functions change to fit the tool you've currently selected.

For instance, if you select the oval drawing tool, the palette displays the X and Y coordinates of the centre of the oval, as well as the width and height of the object.

Shift to the text tool and the palette presents you with gadgets for altering the current font, style tag, text attributes, size, width percentage, tracking and leading.

In addition, a toolbar at the top of each editing window lets you perform document-oriented commands such as Go To Page, Change Magnification, Undo, Redo, and clipboard operations.

No more hunting through the menus for commonly used functions — now they're usually only a mouse-click away.

One of PageStream's best features has



View your page layout in thumbnails to see how they fit together

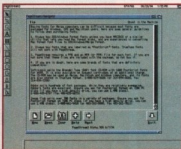
always been the ability to have multiple documents open simultaneously, each in their own window. In release 3.0, you can also open multiple windows on a single document.

This comes in handy in a number of ways: If you need to move an article from page three to page 50, for example; or if you want to view a thumbnail of the current page at 33 percent magnification while you edit details at 200 percent zoom.

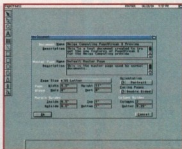
When you're not working on a window but plan to use it later, just hold down the Alt key and click the close gadget — it automatically confines into a title-bar sized window that won't get in your way.

The view inside those windows looks a lot better, too. PageStream now displays bitmap graphics in full colour, instead of as a muddy black-and-white outline. Graphics display in up to 256 colours if you have an AGA Amiga or a graphics card.

You can open PageStream in any screen mode supported by your Amiga, including resolutions added by graphics cards such as the Picasso II or EGS Spectrum; the boards just have to add their resolutions to the standard AmigaDOS ScreenModes



A complete in-built guide is provided for ease of use



Define a new document to your exact requirements



Imported graphics may be resized, scaled and changed

*Denny Atkin previews the new improved version of PageStream and discovers why it could challenge for the top spot in the DTP charts*

# divide



PageStream 3.0 has taken a long time to arrive...

requester list. (You can also run PageStream on the Workbench or any other Public screen.) The program looks fantastic on a 1280x1024x256 Picasso screen on a 17-inch monitor.

In addition to supporting higher resolutions, PageStream 3.0 also supports opening screens larger than the current display, so you can work on large pages using the Amiga's ultra-speedy screen scrolling to move around quickly.

## VIEWING

If your page is larger than the current window, holding down the right Amiga key and pressing the left mouse button turns the pointer into a hand that you can use to drag the window around until you're viewing the part you want to work on. (If you have a three-button mouse, you can use the middle mouse button to do this.)

In earlier versions of PageStream (and all the other Amiga publishing programs), you treated your entire document as a series of pages.

This was fine for short publications that shared similar formats, but made long documents that varied in format a pain to



...but the wait has been worth it

create - you spent much of your time just redesigning various pages.

PageStream 3.0 lets you divide your documents into chapters, and those chapters into subchapters. You can have different format defaults at the document, chapter, and subchapter levels.

PageStream 3.0's master pages feature lets you create basic page layouts - with objects like page numbers, headers, and repeating graphics - and have those layouts automatically repeat for all pages that use that particular master page.

Automatic table of contents and index generation macros further bring PageStream into the realm of professional publishing.

Even little details like page numbering are surprisingly powerful now. You can set the page numbering system at the document level, as well as whenever you insert a new page.

Chapters can be numbered, you can define chapter lengths, whether you want chapters to begin on odd or even pages and can insert the actual page count as well - which isn't always the same as the page number.

PageStream 3.0 now supports display of both bitmap and structured graphics in up to 256 colours.

If you're creating a magazine or newsletter, you'll appreciate the ability to view page spreads. Just drag two pages together in the page palette window.

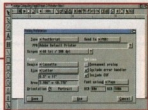
You can not only view the facing pages but also bleed objects across the pages. Both horizontal and vertical spreads are supported.

As I mentioned earlier, PageStream 3.0 now supports display of both bitmap and structured graphics in up to 256 colours. Like earlier versions, PageStream 3.0 imports a wide variety of graphic formats, including BMP, EPS, GIF, IFF, MacPaint, PCX, Professional Draw, and TIFF.

New to this version is the ability to export graphics as well. You could import a GIF picture into your document and save it out in PCX format.

When placing bitmapped graphics on the page, you can tell PageStream to ignore the background, allowing you to automatically flow text around irregularly shaped bitmapped pictures.

Some Encapsulated PostScript (EPS) images have preview images encoded in



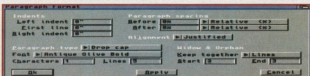
Elements are user definable - from printing...



A variety of different graphic formats can be used from TIFF to PCX. Shame there's no JPEG



...to tab control...



...to paragraph layouts

## Under construction

This preview was based on a late beta-test version of the program, so there's always the chance that some features could change at the last minute and new features might be added before the program ships.

The manual was in the final editing stages when we went to press; Soft-Logik promises it'll be the best manual they've done yet, with five tutorials, thorough topic coverage, and a complete index.

We'll take a hands-on look at the manual and the other features included in the shipping version of PageStream 3.0 in an upcoming issue of Amiga Computing.

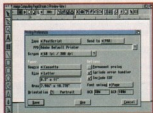
them in TIFF (PC) or PICT (Mac) formats – PageStream can display both of these preview formats.

Unlike most programs, PageStream not only lets you display, resize, and crop graphics, but edit them as well.

Outline graphics formats can be altered using the built-in drawing tools; bitmaps are sent using the built-in HotLinks protocol to the bundled BME graphics editor.

BME is greatly improved over the initial release which was part of the now-included HotLinks Editions package. The new version supports colour display, has sophisticated ARexx capabilities, and does a great job automatically tracing bitmapped images and saving them in outline formats.

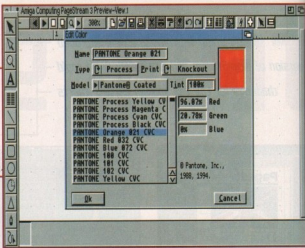
The beta version I tested didn't indicate



PageStream offers a wide range of printer drivers



The PANTONE process is fully supported in the package.



any plans to add support for JPEG graphic import and export, which is the only serious omission in PageStream's graphic support.

If you're going to be creating professional colour output, you'll appreciate PageStream's support for PANTONE process and solid colours.

## SUPPORT

You can specify the angle and frequency for individual pictures and for each plate. PageStream supports user-definable trapping (spreads and chokes) for objects, and you can choose whether to overprint or knockout a particular ink.

PageStream supports Preferences printers, but includes custom drivers for Hewlett-Packard, Epson, Canon, and PostScript printers for better results.

Dozens of PostScript Printer Description (PPD) files are included, so PageStream can take full advantage of your printer or

imagesetter's capabilities.

Industry-standard PPD files are used, so if you purchase a new model printer you can use the PPD file included for use on a PC or Macintosh. You can also output your pages as EPS files or bitmap graphics.

Along with the ability to load and convert PageStream 1 and 2 documents, PageStream 3.0 also supports loading documents in Professional Page 3 and 4 formats.

Gold Disk has suspended development of Amiga products, so Soft-Logik wanted to offer ProPage users the option to upgrade to a still-supported program, without losing access to all their old documents. To aid in the transition, PageStream 3.0 includes an AmigaGuide help document that lists Professional Page commands and their PageStream equivalents.



PageStream 3.0 supports the original custom PageStream font format, as well as Compugraphic and PostScript Type 1 font formats.

Unlike Professional Page, there's no practical limit to the size of fonts you can use in your documents. (PageStream's size limit for Compugraphic fonts is 50,000 points – that's 57 feet tall!)

Along with the usual text styles such as bold, underline, and italic, PageStream also supports generation of small caps and reversed text.

A particularly neat addition to version 3.0 is configurable styles. You can change the colour, thickness, and style of an underline, for instance.

Text characteristics are configurable as well. If you want to create a garish headline font with a three-point-thick outline and an orange-red gradient fill, PageStream will let you do it. PageStream 3.0 should ship with approximately 50 fonts.

Widow and orphan control lets you keep paragraphs from being split across columns, or make sure that a certain number of lines at the beginning or end of a paragraph are kept together.

Conditional breaks protect a section of text from being broken across two columns. This is useful for keeping headlines from being separated from their articles.

Various character-level improvements can make your text look a lot better. You can enable automatic ligatures, which can merge characters to create smoother-looking combinations.

PageStream 3.0 can convert dashes and inch-mark quotes into en- and em-dashes and smart quotes automatically when you import text.

PageStream supports placing text in defined frames on the screen, but it also lets you type freeform on the page. Frames can now contain more than one column of text. This makes changing page layouts much easier if you discover you need to increase or decrease the number of columns on a page.

Just select the frame and change the columns setting – this is a lot easier than redrawing column guides on the screen and relinking and reflowing text boxes.

Also, if you resize a frame, the columns

contained within are resized as well. Frames don't have to be boxes, either – PageStream lets you draw any shape using its drawing tools and flow text into it.

When you're editing large amounts of text you'll appreciate the fact that Soft-Logik is now bundling the PageLiner text editor with PageStream. It won't replace your word processor, but it beats trying to edit on the page layout screen.

The initial release of PageStream 3.0 will import text from most popular Amiga word processors, including Final Writer, WordWorth, WordPerfect, and ProWrite.

Although the formats may not be included at initial release, Soft-Logik hopes to add support for popular PC word processor formats such as WordPerfect 6.0 and Word for Windows.

This will make life easier for newsletter editors whose authors send in their work on PC disks. The word processor filters now support both reading and writing, so you'll be able to use PageStream, for example, to convert text from WordPerfect to Final Writer format.



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# ALL

When I was asked to produce an article on setting up a home studio, my initial reaction was to wonder how much hate mail I would receive having sacrificed that sacred cow, the personal opinions of every body who has bought an instrument or piece of equipment for their home studio.

Either way here it is and no matter what I suggest, you should of course use the musicians best friend - ears. This particular studio setup is based around the Amiga 4000-30 in conjunction with Bars & Pipes pro 2.5 and the Sunrise Studio 16 hard disc recording system.

However, most of the advice included is applicable for smaller Amiga setups, right down to the now humble A500.

The choice of B&P pro as opposed to KCS 3.5 or Music X is based on my experience in using all three systems. Of all the systems I have used, and this includes Atari and Mac-based systems, B&P pro is the most powerful by far.

If I had the space I would tell you why, but I don't so I won't - here comes the first mailbag.

I have put together four systems, in most cases a progression on the previous

set up and each based on the ability to be expanded in a logical manner, without the need to discard previous purchases.

So many mistakes are made by compromising and buying a cheaper alternative that ends up getting sold later. It is better to wait a few months until you can buy the item you need, that is of course if you can resist the temptation to buy there and then.

Another common problem area is monitoring. Do not buy cheap speakers and a cheap amp - it gives you a false representation of the music and subsequently results in a poor mix.

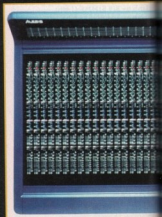
## SPEAKERS

A big studio will have very large speakers and a small cheaper pair as a reference, but all the main mixing will be run through the large speakers.

This does not mean you have to buy a big pair of speakers capable of rearranging the furniture, but allow a decent amount of the overall budget for good monitoring.

If you can't afford the speakers you would like, buy a good set of headphones for around £100 to £150 to cover you for the short term. These will still be extremely useful in the future for recording at night and checking the mix.

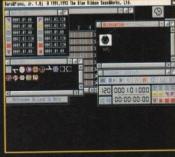
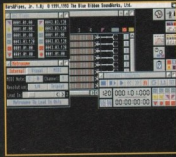
My personal choice are Sennheiser headphones, such as the closed back



HD 250 linear 2 or the HD 560 Ovation 2, though once again you should use your ears.

I would also recommend buying a separate keyboard controller rather than a keyboard with a sound source built in. Initially it may seem more expensive, but normally the big keyboard synths are not the greatest controllers and if something should ever go wrong with the keyboard, you have lost both.

There are loads of Keyboard controllers available but at the lower end I would recommend the Roland PC200 as a reliable controller for about £200 -





# that jazz

*Ever wanted all the sounds and spectaculars of creating music in your own home? Experience it all with this in-depth guide from Andy Bishop*



*The Motif 1202 may be a little too small for most people, but ideal for those on very restricted budgets.*

however this does not have aftertouch.

Yamaha have a similar keyboard for about £300 which has a slightly higher spec – either of these would be ideal.

## PLANNING

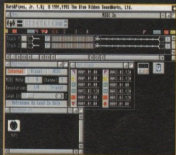
Yet another rule is to give yourself a long-term plan. Create your system so that you can build it in stages. Draw a map of the final long-term studio – from here you should be able to decide the order of buying. I have given below an example of such a plan, but first here are a few tips.

1. One instrument does not need a mixer, but the moment you buy a sec-

ond instrument you do. Therefore, your first instrument should be a fairly big one like the TG500 because the next purchase will involve having to get a mixer and subsequently will be fairly costly. So the first instrument will need to last a while till you can afford the next stage.

2. If your second instrument has no on-board effects, such as the Proteus 1 or a Roland R8 drum machine, you will also need to buy effects units. Once again you will ideally need to buy a good quality unit first time round, such as a Sony R7 or Yamaha SPX990.

Cheaper units can be very useful but generally handle multiple sound input less well than the bigger units. You can think of it like the CPU in your computer – a 68000 processor can handle a lot less data than



*Rare & Pipes Inc. - One of the best music creators for the Amiga range*



*Korg X3R, one of many good choices as a secondary sound module, however does not sound as good as the older O1W.*

3. 68040.

When you buy a mixer you may only envisage needing six inputs (three stereo inputs) plus two band EQ and maybe two effects sends for that R7 or SPX 990. However most people, when setting up a studio, end up having between three and four instruments and at least two effects units.

In theory the six input mixer seems okay. However, if you have a good drum machine you will want to EQ each sound individually, i.e. cymbals snare, bass drum etc, so you will use the individual outs of the drum machine, which will have up to eight outputs – the same applies to the synths. An example is listed below:

R8 drum machine – eight outputs;  
TG500 – six outputs; Korg O5W – two outputs  
Total inputs needed = 16

So once again we have to plan ahead. This will, at times, make things seem impossible, but if you go in blindfolded you will simply have to sell some of your equipment at a large loss, making the overall plan all the more difficult to achieve.

As mixes get bigger EQ is needed more and more to make different bits stand out against other bits. I recommend a minimum of three band EQ ideally, with mid sweeps (what the hell is a mid sweep I here you cry, well believe me if I had the space I would explain it, however all I can say is you need it – trust me).

*Alteco Monitor One Speakers, perfect low cost monitoring and surprisingly accurate.*



4. It is very important to decide what your musical aims are. If you are building the studio around songs, you will have to choose a mixer capable of handling tape returns to go to the Sunrise board or at least calculate the inputs needed including the Sunrise option.

A typical mixer of this type would be a Mackie 8 bus mixer, which range from 16 inputs to 32 inputs, and have eight record sends. These mixers are expensive for the home studio, going up to £3999 for the 32 input desk.

However, if you want to produce music that does not need live recording, then perhaps something like the Yamaha 01 Promix would be more applicable, giving 16 inputs with three band parametric EQ, two dedicated effects units, three compressor/limiters and full midi controlled automation (£1899 inc VAT).

These prices may seem expensive,

but if your synths are costing up to and around £1000 and are of excellent sound quality, doesn't it make sense not to degrade them with inferior mixers that may add noise.

That said, Mackie do make a superb 16 input mixer for £899 called the 1604 and it has an automation upgrade supported by Bars & Pipes pro 2.5b, but of the down side the automation does add a lot of noise. Anyway back to the plan.

Below is the basic plan in five stages. Each of these five stages is sub-grouped with suggested instruments, effect units, speaker options etc:

1. Your Amiga, B&P pro, Sunrise Board and leads etc.  
2. Synth 1, headphones, controller keyboard.

3. Synth 2 and 3, mixer, effect unit 1, microphone (optional).

4. Good speakers and amp maybe another synth, DAT recorder (optional).

5. Effect unit 2 maybe 3, single-ended noise reduction, graphic EQ.

In turn this should be accompanied by a diagrammatic of the current section, with the inclusion of the previous stages and a financial plan and budget of each section.

It is important to read as many reviews as possible to give you a general idea of what to look for. However, reviewers do not always get it right, so at the end of the day trust your ears.

## Stage two - part three of the plan

This is the really heavy bit – lots of cash needed here. You should choose one of the mixers highlighted below, along with one of the effect units listed.

I have also put down a few suggestions on second synth modules. You could of course pick an instrument from the list in stage one. However, try to buy a different make of instrument than the one purchased in the earlier stage.

Individual makes tend to have their own sound, i.e. most musicians can tell an EMU Proteus sound or a Roland sound.

You may wonder why I recommend only one low-cost microphone. Well it's simply because it stands out as particularly good value against the rest, though others, such as the Shure SM57/SM58, might suit you better for stage work.

Mackie 1202 & Mackie 1604: these mixers are extremely good value and will fit most peoples needs. They are true studio quality and in the case of the 1604 it offers 16 line inputs, three band EQ, six studio quality balanced XLR microphone inputs and a great multi-functional aux effects system.

The Mackie 1604 has a good EQ but no mid sweeps – however, I would still highly recommend it.

Price: Around £500 for the 1202 and £899 for the 1604.

Mackie 8 bus series: this mixer would be the mixer of choice – however, its cost may be too prohibitive for most home studios. That said, its specification is astounding in a mixer of this price.

Specification: between 16 and 32 mic/line inputs, four band EQ with two mid sweeps, six effects sends and 12 returns, optional full meter bridge, stunning noise specification, up to 32 tape returns and a mix B option which doubles the number if inputs on mix down.

The desk also features full in-place solo and individual channel mutes, along with really smooth faders and of course an eight channel recording bus – stunning.

Price: 16 - 8 - 2 = £1600 approx; 24 - 8 - 2 = £2400 approx;  
32 - 8 - 2 = £3500 approx.

## Stage one - part two of the plan:

Choose one of the following instruments in conjunction with items mentioned in the overall system overview relating to stage one:

**Yamaha TG500 Specification:** 64 note polyphony; 16 part multi-timbral; six outputs; two multi effects units built in. Price: RRP £1099, can be purchased for as low as £799.

**Comment:** Great as a first instrument and as part of a bigger set up. As with most instruments it will take a while to learn how to use, but with 64 note polyphony it should enable you to put together multi-timbral pieces without running out of notes.

**Korg 05W Specification:** 32 note polyphony; 16 part multi-timbral; two outputs; two multi effects units built in. Price: RRP £599.

**Comment:** Excellent sounding half rack unit with really big sounds. However, the 05w has only two outputs which could be a bit limiting in the long-term, though as part of a bigger system would not cause too many problems.

The 32 note polyphony may be a little limiting for those bigger pieces. In some ways I prefer the sound of this unit to the TG500, but the Yamaha

instrument gets ahead on multi-timbral-ity and the six outputs and the sounds are still very good.

**Proteus FX Specification:** 32 note polyphony; 16 part multi-timbral; two outputs; two multi effects units built in. Price: £500

**Comment:** Wow the proteus - still here, still cool. This new version, updated with inbuilt special effects and sounds from the Proteus 2, has about the best sound samples around - ideal for real instrument sounds, though it includes synth type sounds as well.

In a big multi-timbral setup it is a fantastic asset, offering a certain realism to the mix. However, the proteus has a unique sound and may be a little easier to recognise when it stand alone.

This said, I have a Proteus 1 & 2 as part of my set up and would highly recommend it. They are also the easiest synth modules to program I have ever used.

**Overall stage one comment:** This system is very basic, but gives you a good base on which to build your studio. There are, of course, other instruments worth considering such as the Roland Sound Canvas and Yamaha TG300. (Also included in this set up is the Roland PC200 and Sennheiser HD 560 Ovalation 2 headphones).

Stage one budget (excluding Amiga B&P pro and Sunrise Studio 16 & MIDI port & MIDI leads) includes one sound module, a controller keyboard and headphones, totalling around £1110.

**Yamaha Promix 01:** for the musician who does not need the live recording flexibility of the Mackie, this mixer represents absolute state-of-the-art mixing at an incredibly low price.

I would go as far as to say this is a revolutionary mixer that is going to change the face of home studios for ever. An absolute must for anybody who wants total midi control over all mixing parameters on mix down.

**Specification:** 16 channel inputs with six balanced microphone inputs, full digital internal processing and 105db of headroom to work in. 36-bit three band parametric EQ.

Four effects sends built in, two of which are hard wired to two SPX 990 quality effects units all working in full 24-bit. Three dynamics processors built in. Full motorised faders on each channel.

A digital output for mastering to DAT. All inputs use 20-bit A to D converters with 64 times over sampling and 20-bit eight times over sampling on the way out - in a word gobsmacking.

**Price: £1699.**



**Mackie 24-0.2, the perfect choice for those who need tape sends**

## Special effects units

**Sony R7 reverb unit:** opinions on reverbs vary dramatically but the Sony R7 really is an excellent unit. This reverb is incredibly smooth and powerful and is my first recommendation for a major reverb.

The Sony R7 has been overlooked by many people in preference for more established manufacturers in special effects, such as Yamaha and Lexicon. However, having used it fairly extensively in the last year, I would say that it is quieter and more flexible than other similar-priced units.

**Price:** £900 approx.

**Lexicon LXP15:** a classic reverb sound at a reasonable price. Also included in this range is the LXP1, the predecessor to the LXP15. Either of these would be a good choice, though they are both noisier than the Sony.

**Price:** Approx £799 for the LXP15, approx £399 for the LXP1.

Cheaper alternatives could include the Boss SE70 or perhaps the Alesis range of reverbs, including the classic Quadraverb.

**Microphones:** well actually microphone, because I will only recommend one, the AKG C1000s. While there are many microphones that are better, such as the Beyer MC740, the AKG C1000 has the most accurate sound of any microphone under £600 and subsequently has to be the overall microphone of choice. It is great for vocals, speech, and even acoustic instruments.

**Price:** £229 RRP.

Other instruments worthy of recommendation are the Alesis Quadrasynth, Korg X3R, Roland RB drum machine and the Ultra Proteus, all of which I do not have space to write about.

**Price:** Wavestation SR approx £990; Roland RB approx £499.

## Heading required

### Studio One

Yamaha TG500 Sound Module	£800
Sennheiser HD560 Ovation headphones	£110
Roland PC200 Controller Keyboard	£200
<b>Total</b>	<b>£1110</b>

### Studio Two

Yamaha TG500 Sound Modul	£800
Korg Wavestation SR Sound Module	£990
Roland R8 Drum machine	£499
Mackie 1604 Mixer	£899
Sony R7 Reverb unit	£900
Sennheiser HD 560 Ovation headphones	£110
Roland PC200 Controller Keyboard	£200
AKG C1000s Microphone	£230
<b>Total</b>	<b>£4628</b>

### Studio Three

Yamaha TG500 Sound Module	£800
Korg Wavestation SR Sound Module	£990
Roland R8 Drum Module	£499
Proteus FX Sound Module	£500
Mackie 8 bus mixer	£2400
Sony R7 Reverb unit	£900
Lexicon LXP 1 Reverb unit	£399
Sennheiser HD 560 ovation headphones	£110
Audiolab 8000A Amplifier	£450
Alesis Monitor One Speakers	£399
Symetrix 511A Noise reduction	£350
Alesis MEQ 230 dual 30 band EQ	£230
Sony TCD D3 DAT player	£450
Roland PC200 Controller Keyboard	£200
AKG C1000s Microphone	£230
<b>Total</b>	<b>£8907</b>

The Alternative Studio (based around the Yamaha Pro Mix 01 and my personal choice)

### Studio Three

Yamaha TG500 Sound Module	£800
Korg Wavestation SR Sound Module	£990
Alesis Quadrasynth	£1499
Roland R8 Drum Module	£499
Proteus FX Sound Module	£500
Yamaha Pro Mix 01	£1899
Sony R7 Reverb unit	£900
Sennheiser HD 560 ovation headphones	£110
Audiolab 8000A Amplifier	£450
Acoustic Energy AE1 Speakers + stands	£1200
Symetrix 511A Noise reduction	£350
Alesis MEQ 230 dual 30 band EQ	£230
Sony TCD D3 DAT player	£450
Roland PC200 Controller Keyboard	£200
AKG C1000s Microphone	£230
<b>Total</b>	<b>£10307</b>

## All for a price

### Amplifiers and speakers

Choosing an amp and speakers is always a difficult thing – should I buy a Quad, or should it be a Yamaha or perhaps a Carver. Well here goes another sacred cow.

My choice of amp is based around two factors. Firstly, the amp does not need to be extraordinarily powerful for the home studio and secondly, it does need to be flexible and accurate in sound.

For this reason I have chosen the Audiolab 8000 A amplifier. It of course can be used as part of a HiFi set up, but more importantly it gives a superb sonic performance in the home studio set up – incredibly accurate.

For the speakers I would choose the Alesis Monitor One, a great sound at a good price point and they are very well made.

While these would be my choice for a home studio, the more ambitious studio might look towards the Acoustic Energy AE1, or the low end Genelec speakers.

I would not on the other hand recommend Yamaha NS10s. They might be alright as secondary speakers, but they are unsuitable for main monitoring.

**Alesis Monitor One – price: approx £399 a pair.**  
**Audiolab 8000 A amplifier – price approx £450**

As for any further instruments, I would recommend any of the sound modules I have mentioned earlier. DAT players on the other hand fall into two categories – those with SCMS (Serial Copy Management System), these are generally designed for the home market, and those without SCMS, that are primarily designed for the pro market.

If you read a lot of HiFi magazines, your opinion might be that DAT is not that great – these magazines even suggest that it is not as good as CD – wrong.

DAT is used for mastering most of the CDs you hear today, so that scuppers that argument. The only thing wrong with DAT is that it will show up any hiss in the audio chain, as it is inherently silent.

My choice would be to go for a Sony portable DAT like the TCD D3 or D7, it



The Wavestation SR my personal favourite of all today's synths.



Alesis MEQ 230, an essential item at the end of the recording chain.





The Mackie 1202 may be a little too small for most people, but ideal for those on very restricted budgets.

may have SCMS, but it makes no difference to the mastering quality whatsoever and sounds fantastic.

#### Sony TCD D3 - price: £499

As for part five of the plan, this really is the luxury department. Once again I would choose one of the effects mentioned earlier, but for critical equipment still needed, I would have to recommend the following items - Symetrix 511A or Drawmer DF320 Noise Reduction Units.

Both of these units are absolutely essential finishing touches to the home studio. They are both single-ended noise reduction systems and subsequently do not need any decoding, unlike Dolby A,B,C and S noise reduction systems.

Both are fairly easy to use and make a massive difference to the finished mix. Price: between £300 and £450

#### Alesis MEQ 230 dual 30 band EQ.

Often, even with the best of equipment and control rooms, EQ is still needed and can be great for adding that extra bit of punch and sparkle. As with the noise

reduction units, I would highly recommend one of these units to be used at the end of the recording chain, just before the DAT player.

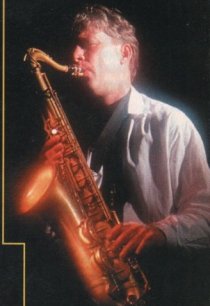
Well that's it then - my recommendation for the perfect home studio (if there is such a thing). As with all these items, personal preferences will play a part in your buying decisions, but hopefully this article will serve as a guideline and, if nothing else, get you thinking.

No one person's view should be treated as gospel, so try out these suggestions and don't listen too much to the salesmen. Finally, whatever you do, remember to have fun, because at the end of the day, that is what it is all about.

All prices are based on magazine prices and not necessarily on RRP's.

All items should be found in most good music shops around the country. Bars & Pipes pro 2.5 and the Sunrise AD516 & Studio 16 hard disk recording system are available through Premier Vision on 071-721 7050.

For a limited time only, the Sunrise Board will be offered at £999 inc VAT - its RRP is £1299. Bars & Pipes Pro 2.5 can be purchased at £199 inc VAT - its RRP is £299.



Often, even with the best of equipment and control rooms, EQ is still needed and can be great for adding that extra bit of punch and sparkle.



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# Biting the bullet

**I**t's a regular and unfortunate business practice - glossing over the truth. On the edge of bankruptcy? "Never mind, just a setback, sales are excellent, we've achieved record figures this year."

While viewing sales figures publicly through rose-tinted spectacles is exceptionally important for the PR success of any industry, there's always one group of people who are left behind in the aftermath of a failed company, licking their wounds and wondering what can be learnt from the expensive experience.

This group, a sometimes overlooked and underestimated clan of different genders, colours and creeds, are the buying public. Bought a CD32 recently? Feeling a little worried that your hard earned cash might have been more useful flushed down the toilet?

When any company sinks into financial obscurity, it has a knock-on effect throughout the industry - customers lose faith and decide that the original nagging doubts about buying a pricey piece of hardware were well placed after all. Subsequently, they don't want to invest any more and everyone loses out.

But in Commodore's case, what if you're a potential buyer of a 1200 and a CD drive - is it really a wise move to buy one of the company's machine?

What about existing owners? Have they really wasted their money on a computer with no future? The Devil's Advocate winged its way down to the company's headquarters to talk to the UK's managing director, David Pleasance.

*With Commodore filing for bankruptcy, everyone is wondering what will happen to the once great company. Adam Phillips talks to David Pleasance about the past, present and future*

**Q** After the recent collapse of Commodore, can 1200 and CD32 owners feel confident in buying future Amiga equipment and receiving full support from the manufacturers?

**A** I don't think support is an issue because we do have very good arrangements, particularly with the likes of ICL who are doing a tremendous job of supporting our products.

As we stand at the moment, it is our belief that Commodore will be purchased

**“The launching of products like the 500+ and 600 virtually on top of each other were not good decisions”**

as a going concern. Therefore, if anything, the prospects for Commodore will be infinitely better than they have been for quite some time.

**Q** What do you feel brought about the downfall of Commodore?

**A** I believe we should never have gone into the DOS market and the decision to get out of it came after we had had two years of really losing money. I think we needed to have a more logical and coherent product development strategy than we had.

By that I mean the launching of products like the 500+ and 600 virtually on top of each other were not good decisions. I think it was the general direction of the company and also the investment made in trying to enter markets that were not ideal for Commodore - these have all contributed to the position where Commodore lost a lot of money.

**Q** Do you feel that Commodore UK played a part in the company's financial demise?

**A** The UK market for Commodore has been a profitable operation for several years now - in fact, one of the most buoyant markets for Commodore. During periods of last year and six months of the year before, the UK branch was the biggest contributor to Commodore world-wide.

So, in terms of us playing a part, I'd say definitely not.

**Q** What are your plans now for Commodore UK?

**A** As far as I am concerned, it's business as usual. I've had the fortune of being with Commodore for virtually 11 years now and I've been through some bad times as well as good times. I see this as a small hiatus - it's not a major setback. I genuinely believe



David Pleasance, MD of Commodore UK, the eternal optimist. "I've been through some bad times as well as good and for me, this is a small hiatus - it's not a major setback"

that if Commodore is purchased it will be the best thing for the company, because there is no doubt that we are now significantly leaner and meaner than ever before.

If the right partners are involved in Commodore and are prepared to listen to the people in the subsidiaries that have survived, then I think our opportunities and future prospects are particularly bright.

My personal belief is that the UK company is currently in the best shape it's been in for many years. I think we are poised for a tremendous Christmas period and it really all depends on getting a company to buy Commodore as a going concern and to enhance the manufacturing facility.

Once that happens, I will be very confident. As far as the personal situation is concerned, at this moment in time – foolishly or otherwise – I'm not looking for other work.

**Q Who are the potential buyers for Commodore?**

**A** There are three or four serious contenders. My belief is that one of those is a clear favourite and it could even be in the next 48 hours or so. I can't possibly comment on who it might be – it's very unfair to any potential purchaser to speculate because it can definitely have an adverse effect on any negotiations.

The last thing I want to do is upset any opportunity for this company to be bought which will therefore secure the jobs for the people who work here.

**Q Who would you like to see buying Commodore ideally?**

**A** Me, I can't afford it, but I would love to be able to run it though. Ideally, I'd like to see a company that is in the consumer electronics business but not in our market. One that has good manufacturing facilities, good R&D and that has some channels to market.

I think the benefits that any company would get from the purchase of Commodore are (a) adding a whole new range of products to their portfolio and (b) taking advantage of what is probably the best distribution channel in Europe.

Take the UK alone. If you walk down Slough High Street – that's ten minutes from here – you'll find Commodore products in 30 shops. That's the kind of marriage I would be looking for in terms of a buyer of the company. However, that's the ideal position and we may not always get our ideal situation. I really believe the Amiga technology is far too good and far too well supported to be lost over the next few weeks because of a company that's got itself into financial trouble.

For sale: CD-based console with one previous financially-clumsy owner



**Q If there is a buyer in the pipeline, how long before 1200s and 4000s are back in production?**

**A** They would get back into production very quickly. I would envisage us getting supplies in time for the September season. There is a pool of products available to the subsidiaries at the moment – you've got Commodore UK, Germany, Italy and Scandinavia. Between all of us, we're looking after all the European countries.

We also have a pool of products available and are selling as when we need them. My belief is that we can last until September when new product supplies arrive and, at present, we're taking advantage of the fact that this is the quiet period. I think we'll be okay...

**Q How do you feel about the new 1200 CD Drive? There have been rumours that you're not entirely happy with the lack of FMV.**

**A** While I'm still not happy about the lack of FMV, it's something which is technically not possible to do. The PCB on the 1200 doesn't have the gate array that's on the CD32 PCB, so there is no way of running full motion video. My concern has always been that while, at present, most 1200 owners will say "it doesn't matter about full motion video", I believe that as soon as the first fully-interactive game is released that uses FMV, the owners of the CD1200 will then say "they, this doesn't work, we're not happy".

**Q Do you feel that FMV-specific game development will be hampered because of the CD1200? Why develop for FMV which is a relatively small market at the moment when you can develop for both the CD32 and CD1200?**

**A** I agree with what you're saying except we already know what is under development. I'm certain some companies are

already starting to port their PC development on to CD32 because, unlike most Amigas, the machine was designed to be able to take the graphics from a PC and display it in the chunky planar mode.

These products under development will become more and more available, but I guess, in some ways, it could be perceived as a drawback to the developers that the CD1200 doesn't support full motion video.

I think they will realise that the CD32 is a big market in its own right and FMV, even without the interactive games content, is going to be a huge market.

It's going to be a bigger market than the games market anyway – we believe very strongly that music video CDs will be an enormous success.

**Q Finally, are there any promises you'd like to make to existing Commodore machine owners?**

**A** The only thing we can say to them is that we are totally aware of the development schedule that the software publishers are currently undertaking. It's pretty extensive – between now and September, there will be 60 more titles absolutely guaranteed.

This is not just hear-say like when we first launched the CD32. We've actually seen work in progress and there are definitely 60 titles coming out plus an additional 40-odd FMV titles.

From these products which have been developed specifically for the CD, there are some super 1200 products coming as a direct derivative. I guess the only promise I can make is that the software support has in no way abated and I don't see it abating for quite some time yet.

Thank you for your time.

If you have any comments or opinions on this month's interview then send them into the usual address for the Devil's Advocate's attention.

Software support has in no way abated and I don't see it abating for quite some time yet





On the past there have been few attempts to bring a powerful yet easy language to the Amiga – the most widely known being Amos. But up until now they all seemed to have good points and plenty of bad points, such as not supporting Workbench windows.

Thankfully there is a new competitor on the scene and although the developers behind it are not widely known, this new contender has caused such a stir to the extent of being accepted world-wide by Amiga users with outlets in America, Europe and Australia.

Because of this, and your response to last issue's insert, we are going to bring you as much support for Blitz Basic 2 as we can muster, and at the same time spread a little light on the rather incoherent yet necessary manuals.

## BASICS

Throughout this tutorial I will be working on the assumption that you know how to load up Blitz, load and save programs written in Blitz and compile them. If you are unsure about any of these or have problems following this tutorial then please write in.

In this first tutorial I will go through the basics of programming the Workbench screen, addressing the subject of screens, windows, gadgets, menus and events.

The principal behind the Workbench system is a complex system of libraries, messages, ports, packets and devices. Nearly everything you program that makes use of screens, windows, menus or gadgets will in some way interact with this system.

Thankfully Blitz handles all but the simple things for you, thus allowing you to concentrate on making your program professional and worthwhile. Lets open a window in our first program (please refer to the Ref Manual if you are unsure to the syntax or use of any of the commands):

WBStartup

Important if running on Workbench:

CloseEd

Saves us a bit of memory:

NoClt

We want our program to be displayed on the Workbench screen:

ev:=0

A 'long' var to hold our events:

WorkbenchToFront\_

# Blitzing on the

Create your own user-interface  
in this first instalment of the  
new Blitz Basic 2 Amiga Guide

## How do I get help?

If you have any questions that you need addressing from reading this column, you can write to me, Michael Mine at:

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(NB: Please state what machine you are using and any peripherals that you have)

Pull the Workbench screen to the front (Oooh a library call!):

WorkbenchToFront\_

Assign the Workbench screen a number:

Use Screen 0

Lets make use of the Workbench screen:

Window 0,120,70,200,40,\$1000!\$8,"My Window",1,2

The window:

repeat  
ev=0

Just to make sure there is no confusion:

ev=WaitEvent

Get an event:

until ev=\$200

Keep looping until our window is closed:

CloseWindow 0

System friendly method of closing the window:

End

Terminate program.

After you have typed this in, save it and then choose the Compile/Run option from the compiler.

Hey presto! Your window will appear on the Workbench screen and will stay there until you click the left mouse button on the close gadget!

The first seven commands set up our program to work in the Workbench screen without any interference. It does this by pulling the Workbench screen to the front of the display and assigns it with a screen object number (see Chapter 7 of your User Guide about objects).

After this we make sure that our window will appear on the Workbench screen by telling our program to use it (note how we

address the relevant screen with its object number we gave it earlier!). We are now ready to open our window (See your Ref Manual P.25-1 for the syntax).

Notice that in the flags parameter we have put: \$1000!\$8. The '!' operator is known as the logical 'AND' operator and basically acts in the same way as adding the two values together, i.e. \$1000!\$8 = \$1008. All the flags are listed in your Ref Manual on P.25-2 and you can 'AND' as many as you like.

After the opening of our window, we then needed to know when the user used the close gadget so that we could close the window and terminate the program. We can determine whether or not the user has closed our window by the use of events.

## EVENTS

Events are basically messages sent from Workbench when a user does something to interact with a program. The 'WaitEvent' command allows us to wait until Workbench has something to report to us (NB: it is important to remember that the value returned from Workbench through 'WaitEvent' is a 'long' value which is why we have to declare 'ev' as 'ev.l').

From looking at the event codes table in the Ref Manual (P.25-5), we can see that \$200 is returned when the user has closed a window. Therefore we continue looping until \$200 is returned, after which we can close our window and terminate our program!

Now that we can open and close a window let's add some interaction to our program – lets do an adding program.

Again we will first need to set-up our program to run in Workbench and we will also want a window. So let's use the above code and add the extra code below to handle all our input and output:

WBStartup

Startup for Workbench:

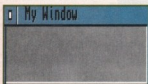
CloseEd  
NoClt  
WorkbenchToFront\_  
WorkbenchToFront\_ 0  
Use Screen 0  
Window 0,120,70,240,40,\$1000,"My adding program V1",1,2  
WindowOutput 0

Directs text output to our window:

WindowInput 0

Directs text input to our window:

Repeat  
InnerClt



This is what our window should look like

# Amiga

Clears our window:

```
Window 0,0
```

Positions the cursor at the top left corner:

```
Print "Press 'q' to quit!"
Print "Enter value 1:"
```

Prompt:

```
sb=edit(5)
```

Obtain 5 chars from user:

```
If (sb="q" Or sb="Q") Then Goto quit
```

If it is a 'q' then jump to 'quit':

```
Print "Enter value 2:"
```

Repeat as above for second value:

```
sb=edit(5)
If (sb="q" Or sb="Q") Then Goto quit
until (sb)
```

Convert string values to numbers:

```
b=Val(sb)
NPrint "
```

Print an empty line:

```
NPrint a,"+",b,"=",c
```

Print sum:

```
NPrint "
```

Another empty line:

```
Print "Press return to continue!"
sb=edit(1)
```

Wait for return:

```
Forever
quit:
```

This is where we jump to if the user enters a 'q':

```
CloseWindow 0
```

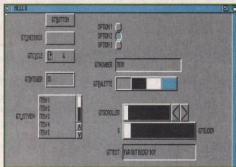
Close our window:

```
End
```

and terminate program.

This time we cannot accurately find out if the user has used the close gadget on our window or not. This is because the command 'Edit' holds up your program, while we are getting an input from the user.

During this time all we can do is wait until the user has hit return, therefore we have no way of testing whether the user has hit

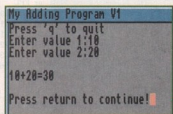


Using Blitz Basic 2 you can produce professional-looking intuition interfaces with ease

our close gadget. That's why we also didn't need to put a close gadget on our window (represented by \$8).

As you probably know, the above program is a simple adding program which continuously picks up two values from the user and then prints out the sum until the user enters a 'q'.

The first two commands simply clear the window and replaces our cursor to the top left of our window. Then we print a simple



New things are starting to look good

**The screen** – the screen is the very foundation of the Workbench display. It acts like the drawing board for all your visible operations which the user will see. The screen is used to display all your windows and gadgets, without which there would be no display.

Unfortunately screens are not very flexible. They can only be pushed to the back of the display, but are nonetheless very potent.

Blitz allows you to make one of three choices when programming screens – use the Workbench screen, open your own screen or grab someone else's.

Once you have done one of these you will have a screen number assigned to that screen which can then be used to reference it for your various operations.

**The window** – although you can use a screen to do all your input and output on, the window is the much preferred friend of the system programmer. This is because it allows for a more stylish and easy-to-use display, allowing for the use of gadgets and menus.

The window, as the name suggests, is like an opening, giving the user a view. Of what? Well, whatever the programmer wishes the user to see! But unlike the screen, the window is completely flexible and with the right programming it can be re-sized, moved around, pulled to the front and pushed to the back. They can now even display pictures inside themselves (As long as you have OS 2.00 or higher!).

Just like screens, each window has their own unique

message to the user and wait for the user to put in the first value.

If you are unsure as to the difference of the 'NPrint' and 'Print' commands, the 'NPrint' does the same as a 'Print' but returns the cursor to the beginning of the next line after printing.

Notice that in the Ref Manual there are two 'Edit' commands, and that the normal 'Edit' command is ideal for only accepting numbers. We haven't used this because we still need to check whether the user wishes to quit.

It is easy to do this by obtaining their input in a string format ('Edit\$'). Check whether the user wishes to quit – exit if the user does – and then, if it is a value, convert it to a number and continue with the sum. This is why we have two sets of variables to hold both the strings and the numbers.

The 'Forever' in the loop does just as it says – repeats the loop forever!

It's time to wrap up this first tutorial. But remember, the only way you are ever going to be a competent programmer is to practice, so try playing around with the window – even try opening two or three windows (don't forget to close them all).

Look out for the next issue where I will explain opening your own screen and menu programming to add that professional feel to your programs.

On the next issue's CoverDisk will be the first UK Blitz User Disk Magazine, so don't miss out, reserve your copy today!

## A brief description

number and because of this you are allowed to open more than one window on any one screen, addressing each one by its identifying number.

**The gadget** – gadgets are the next simplest input/output from basic text input. They can display messages, hold text strings or numbers, be used as scroll bars, even cycle through a list of different options!

But there is a limitation of using gadgets – they can only be displayed from within windows. This is because the operating system was designed to handle them this way, so you can have multiple windows open and find out which gadget was hit in which window, thus allowing for more flexible and open programming.

Gadgets also have their own unique identifying numbers so that you can determine at any time whether or not a specific gadget was used.

**The menu** – menus are another way of obtaining interaction with the user. They can sometimes be preferred to gadgets due to their simple orderly composition, but can also be used in conjunction with gadgets to produce flexible applications.

When programming menus there is generally one purpose for which to use them, and that is to offer the user a selection of options. Thankfully the system will handle most of the interaction, allowing us to pick up the users choice and crack on with the request.

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# Seeing is

*A 24-bit graphics card  
compatible with all applications?*

*Frank Nord grasps his specs*

*and peers into Retina III*

**O**t was with great delight that I opened the parcel containing my review Retina BLT Z3. I thought "Great! ZorroIII performance, 4MB Display RAM and Workbench emulation."

Now, I already know a bit about Workbench emulation courtesy of my PicassoII card, where setting a screenmode is an absolute breeze. Picasso creates new standard Intuition screenmodes that can be set in any Screenmode requester, so, as you can see, I was hoping that Retina's would be as transparent and easy to set up.

I opened the box that Retina came in and ready I was frowning. MacroSystems have a deserved good reputation for creating solid hardware, vis VLab, and I had hoped that this was going to be no exception. I have to say I was disappointed.

First off, the Retina isn't a full length card — it's just as long as it has to be to plug into the Zorro slot. I would much rather have seen a full-length card that was easier to plug in, because it was guided in at both the front and back of my machine instead of wobbling around as I pushed it in.

## MONITOR

Next, I knew that the original Retina only had one monitor output port on it, so if you wanted to see Amiga screens you had to run two monitors side-by-side, but I had heard that the Retina Z3 was going to be equipped with two instead of the single port I found (most of the other RTG graphics cards on the market have a monitor input port to provide a pass-through of the standard Amiga video signal when the card is not being used).

I had also heard that video output was to be included as standard, and looking at the board it seemed that my suspicions were confirmed as there were two video ports, one composite and one Y/C, on the back of the board.

But it turns out that to use them you are required to buy an extra PAL encoder card which fits onto the Retina board. So why bother going to the expense of putting ports onto the card that potentially few people are going to make use of?

My third initial complaint concerns the rather skimpy manual that is provided. MacroSystems are well-known for writing dense, hard-to-understand manuals, but they usually have some depth to them.

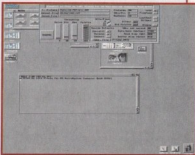
The Retina manual is only 43 pages long. It doesn't go into enough detail on a lot of topics, and leaves out any details whatsoever about the rather dire paint package

included called VDPaint. There are no warnings in the manual about the Retina Z3 only working in machines equipped with ZorroIII slots (the 3000 and 4000 series) and as I haven't got a machine with ZorroIII slots to check it in, I couldn't find out if it automatically detected the difference between ZorroII and ZorroIII slots and changed its method of working accordingly.

Retina's method of retargeting Workbench is not exactly friendly. Firstly, there is a program called Retina-ScreenMode which opens a window showing a whole load of different monitors. I would say you are fairly likely to find your monitor, or at least one very like it, mentioned in the list.

Once you have selected the monitor you own, a list of screen "groups" appears on the right-hand side of the window. These groups can be expanded to show all the various screen modes contained therein.

Thanks to the execrable manual, I am still not overly sure what relevance these different screen modes actually have in the running of the Workbench emulation, as



Spot the cryptic interface!

## What was RTG again?

RTG is an acronym for ReTargettable Graphics, a mythic Commodore standard for incorporating other people's graphics cards into the Amiga system.

The idea is that a user can plug a graphics card into the machine and then use all the software on that card as though it were normal Amiga graphics.

To be able to do this several things need to happen first. One is that software designers have to obey the rules when it comes to creating the interfaces for their programs.

Requesters and windows should be font-sensitive and programs should offer the user a screenmode requester to choose the mode most suitable for his or her needs.

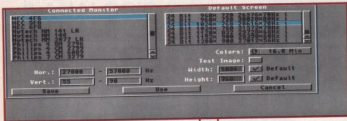
The other is that Commodore needs to define an RTG standard so that the software and hardware developers have something to aim for instead of all the conflicting systems that are currently in use.

they are all also listed in the program called RetinaEmu which you run next.

RetinaEmu is really the heart and soul of Retina's RTG effort. When you run a program you haven't run since you got the Retina, it makes a note of it in its list. You can then pick that program's name from the list and choose a Retina screen mode to run it under.

Few programs seem to mind this rather cavalier attitude to their screens, but programs like VistaPro and DeluxePaint, that have custom interfaces rather than sticking to using proper intuition screens (naughty!), don't really like promotion at all.

Once you are satisfied that all the normal



The first window you should pursue. Look at all those ScreenModes!

software you tend to run works OK under Retina's aegis, you start to want to play about a bit with the programs that come with Retina.

There's a whole bundle of stuff to look at. First up is the rather cryptic MakeRACE program. It has a massive six and a half pages of manual devoted to it and is an animation creation tool.

It can create anims in 8-, 16- or 24-bit and will automatically either your frames down to the required number of colours using the Floyd-Steinberg technique.

## METHODS

Personally, I would rather have seen it use the Random method as used in ADPro, which stays in the same place every frame giving you less deltas than Floyd-Steinberg.

As with the rest of Retina's software, MakeRACE seems over-complex, but its complexity ensures that you will be able to create the best possible animations with it.

Anims that are created with MakeRACE can also have a soundtrack applied to them which can be in 8SVX format or MacroSystem's own Toccata or MaestroPro formats for 16-bit sound quality.

Once the animation has been created (a rather drawn-out process even on a 4000) you will need to load one of RACE's ancillary programs, PlayRACE or CopyRACE.

PlayRACE plays back the animation from

RAM and CopyRACE does the same but from hard disk.

Next up is AnCoS Jr. which is a sort of Retina version of FRED the frame editor that comes with ADPro.

No graphics card worth its salt is without some sort of picture viewer and Retina is no exception. If you own a copy of ImageMaster or ADPro the installer will load viewers for those programs onto your hard disk.

However, there is also a standalone file viewer that, thanks to Retina's multi-library (a sort of Universal loader used by all the Retina software), will show files in a wide range of formats including all the IFF variants, VLab (obviously!), BMP and JPEG amongst others.

It has an Appwindow interface allowing you to just drag and drop picture icons onto its window to show them. It can also be run from the Shell and this is suitable for integration into file managers like Directory Opus or DiskMaster2.

## TWEAKING

In case you weren't confused enough by RetinaScreenMode and RetinaEmu, we now come to a little utility called DefineMonitor that allows you to tweak the screenmodes so that they fit nicely on your monitor.

Once you have messed around with them all, you can then append your newly-tweaked list to the original list, resulting in twice as many screenmodes to choose from!

To finish off the complement of programs, there is a Retina screen blander that doesn't do anything interesting like putting

all 16.7 million colours on the screen one after the other, it just shows a black screen which is obviously the best way to keep your monitor from burning out - but it is a bit boring.

Retina's Workbench emulation is actually outstandingly fast once you get past the hassle of setting it all up. Even running a 256-colour Workbench at 1024 x 768 was zippier than a four colour Hi-Res Workbench.

Windows snap open and fill with icons, lists of files scroll smoother than a baby's bottom and moving from screen to screen is nigh on instantaneous.

Best of all, MacroSystem have got around the old CHIP RAM-copying problems that plagued the original Retina by doing pretty much everything using Retina Z3's built-in blitter, which leaves your CHIP RAM free for more important things.

## CONCERN

I think it's a shame that a product with such potential should receive such a poor overall review. If MacroSystem had bucked their ideas up a bit and given the Retina Z3 two monitor ports, a decent manual, readme's in English as well as German (especially worrying when I recognise words like *Achtung!* in the price), included the video encoder in the price and most importantly, completely revised their system of RTG, I would have been a lot happier.

I first saw the original Retina card as a prototype in Germany in 1992 and was amazed at what MacroSystem were trying to do: a 24-bit graphics card that could be used with all applications, not just paint packages.

However, it seems that they have not really looked at all the competition that has sprung up around them in the shape of EGS and Picasso which offer better usability with comparable facilities.

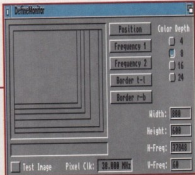
What else is out there?

There is a wide range of graphics cards available for the Amiga, from AVideo and OCTV through to Harlequin and G2's Imagica system, but probably of most interest are the so-called RTG cards.

There are three main offerings: the Retina in ZorroII and ZorroIII versions, Picasso and the wide variety of EGS boards. I have played with them all in my time and I currently own a PicassoII card.

The reasons for my purchase were that Retina's system for RTG was unwieldy and (unnecessarily) complex and I didn't like the fact that EGS seemed to be happier replacing intuition rather than complementing it.

Certainly there are boards that give the extra speed that ZorroIII confers, and some have 4MB of display RAM to allow you higher resolutions, but none is as easy to configure as Picasso and none is as transparent as Picasso when in everyday use.



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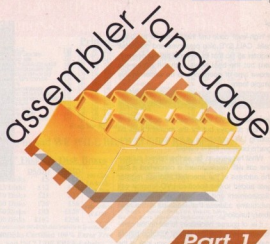
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CHIP RAM	FAST RAM	
A3000 or A4000		
4 Mb	2 Multi scan monitor	
FAST RAM		

## The bottom line

Product: Retina BLT Z3  
Supplier: ACE  
Tel: 0896 870 583  
Price: 1 MEG £412  
4 MEG £540

Ease of use	5
Implementation	7
Value	7
Overall	7





## Part 1

# Devpac delight

**O**ver the next six issues I'll be using Devpac to build an Intuition program that is able to display text files. This may not sound like an earth-shattering goal, but you will be learning about a whole range of useful things like using the ASL file requester, detecting menu events and so on and it'll all be done using Release 2 (and upwards) compatible code.

I'll be spending quite a bit of time explaining the underlying ideas and first on the agenda are some details about how you actually create an assembly language program.

Step one is to use an editor to prepare something known as a source code file. All this means is that you use a text editor to create a plain ASCII text file containing the program instructions.

Devpac has its own editor and the editor window appears as soon as Devpac starts. Once the program instructions have been written, the next step is to convert the source to the appropriate 680x0 instructions.

With Devpac there are two ways of doing this but the easiest way, which is ideal for simple programs that involve just one

*If you are keen to join the ever-increasing number of Amiga 680x0 coders, then this new series from Paul Oueras is sure to set you on the right track*

source file, is to let Devpac produce an executable (runable) program directly. This is what we shall be using during the early instalments.

The Amiga's multitasking Exec supports a library system that exists quite separately from the applications programs which run. Since our program will be making extensive use of a number of these libraries, some preliminary explanations are in order.

Programs tell Exec that a library is needed by attempting to 'open' it using an OpenLibrary() function. It's important to know that the OpenLibrary() call was

successful and this is done by checking that the returned address is non-NULL (ie non-zero).

**Function Name:** OpenLibrary()  
**Description:** Open an Amiga run-time library  
**Call Format:** base\_address=OpenLibrary(library\_name, version);  
**Registers:** D0 A1 D0  
**Arguments:** library\_name: Address of a null terminated string version - a library version number  
**Return Value:** base\_address - the address of the base of the library. If the library cannot be opened a NULL (zero) value is returned.

**Function Name:** CloseLibrary()  
**Description:** Close an open library  
**Call Format:** CloseLibrary(base\_address);  
**Registers:** A1  
**Arguments:** base\_address - the library base address  
**Return Value:** None

OpenLibrary() is an Exec library function and having said that the first stage in using a library is to open it by using the Exec OpenLibrary() function - you may be wondering how you open the Exec library in the first place.

The simple answer is that you don't need to - the Exec library base address is permanently available and stored in the long-word at memory location 4 (called AbsExecBase).

Amiga library functions are accessed using indirect addressing coupled with an offset value called a library vector offset (LVO) - this identifies which library function is involved.

By convention we place the base address of the library in register a0 so the code for an OpenLibrary() call will look like this:

```
move.l AbsExecBase,a0    get base address
of Exec library
jsr    _LVOOpenLibrary(a0) make the indirect subroutine call
```

I'll be using a macro called CALLSYS to create

## Assembling and running the code

I actually wrote this example with Devpac 3, but armed with an advance copy of the de-archived Devpac2 cover disks (which by now you also will have) I was able to test the code with the Devpac 2 package as well. These Devpac 2 instructions should work with all machines (even single drive ones).

First, copy this month's AC1.s example code to the ram disk, insert the Devpac AM1 disk into d0: and make d0:c the current directory by typing CD d0:c at a Shell window.

Now type Genam2 to load Devpac and then use the Project menu to load the source from the ram disk. Select 'Assemble' from the Devpac Program menu and choose the 'Output to memory' option to assemble the program (because then you'll be able to run it directly from the Devpac2 Program menu).

Once you're happy that it works you can reassemble it using the 'Output to disk' option to store a permanent copy.

The example code should also assemble without error with other assemblers but do note that, at the moment, the code **MUST** be run either directly from Devpac or from a Shell window - it will NOT run from the Workbench because we've not added any startup code (this comes later in the series).

a "high-level" code unit that I'll use for all library calls. CALLSYS also preserves and reinstates register a6 (so that its contents are not overwritten) but the best news is that it allows the above type of operations to be written in this simple form:

```
CALLSYS OpenLibrary, _AbsBase
```

Incidentally, LVO values can be acquired in a number of ways but for the moment I'll be putting LVO definitions at the start of the programs because this is easiest.

What happens as far as the indirect subroutine call with displacement is concerned is that the address in the specified address register gets added to the specified LVO function call displacement and this produces a destination subroutine address that leads us to the right library function.

It is, of course, necessary to set up the parameters needed by the library function before making the call. If, for example, you look at the OpenLibrary() function box out you'll see that it needs a pointer to a library name in register a1, and a version number in d0.

I'll be setting d0 to zero because this tells Exec that any library version will do.

Closing a library is just as easy as opening it. You use the same type of indirect subroutine call, but specify the CloseLibrary() function instead:

```
move.l _AbsBase, a6      base address of
Exec Library             library
jar _LVC(CloseLibrary(a6)) indirect subroutine
call
```

## A plan of action

We'll be explicitly opening the DOS, graphics, intuition, gadttools, and all libraries, so the appropriate text strings representing the name of the libraries need to be included in the source via dc.b pseudo-op statements.

Note that NULL (zero) bytes are used at the end of the real text characters to identify the end of the string (a common convention), like this:

```
dc.b "dos.library", NULL
```

We also need some labelled long word locations to store the base addresses of the libraries we open and here we use the ds.l pseudo-op in this fashion...

```
ds.lbase ds.l 1
```

As far as opening libraries is concerned we've got to load the address of the Exec library into register a6 then, for each library we wish to open, set up library name pointer and version details before making an OpenLibrary() call.

If the values returned in d0 are not zero then the libraries will all be open. How do we test d0 to check whether it contains a zero or not? It's easy - we use a move instruction to copy the contents of d0 to the location that we've set up to hold the library pointer, and as the move occurs the processor's zero flag will be set to reflect the zero/non-zero status of the result.

If the libraries do open successfully we'll need these pointers in order to perform the CloseLibrary() operations before the program terminates.

Because of the number of libraries being opened I have coded the opening and closing operations using loops. Pointers to the first library name and base are

loaded into registers a2 and a3, and d3 is loaded with a count one less than the number of libraries to be opened (this is because the automated dbeg instruction counts down to -1 if the loop goes to completion). Here are the setting up operations:

```
_main      lea     lib_names, a2
           lea     _AbsBase, a3
           move.w  #15-1, d3      loop counter
```

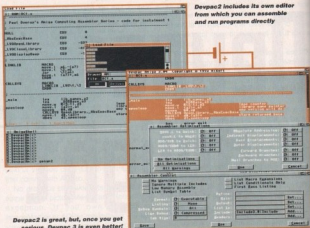
and here is the corresponding loop code that actually opens all the libraries:

```
openloop  move.l  (a2)+, a1      library name pointer
           move    d0, d0        any version will do
           CALLSYS OpenLibrary, _AbsBase
           move.l  d0, (a3)+     store returned base
           dbeg    d3, openloop
```

Notice how I've used indirect addressing with autoincrement instructions when copying the library names and returned library base pointers. With a2 for instance, which starts off holding the address of the first library in the list of library names (dos.library), this is what happens.

The move.l (a2)+, a1 instruction copies the DOS library name pointer to a1 (this is in readiness for the OpenLibrary() call). After this occurs register a2 is auto-incremented by 4 so that a2 then points to the next library name to be used. The same autoincrement idea is used when storing the returned library bases.

The loop terminates either with d0 holding the last valid open library pointer and d3 holding -1 or, if an OpenLibrary() call failed, with d0 holding 0 and d3 holding a loop count value between 4 and 0.



Devpac2 is great, but, once you get serious, Devpac 3 is even better!

Again I use the CALLSYS macro to do this and write:

```
CALLSYS (CloseLibrary, _AbsBase)
```

At the moment our program is relatively short and consists of these five sections:

1. Equate definitions for constant values used by the program
2. A couple of macros for making library calls.
3. The main program code.

Devpac2 includes its own editor from which you can assemble and run programs directly

4. A subroutine which handles the library closing operations.

5. Space for library bases, names, and a library name pointer list.

Incidentally, I have included a couple of instructions in the program which make an Intuition DisplayBeep() call so that the program does something visible when run.

● Next month I'll be adding some window opening code to this framework.

The important point with all this, which you'll see if you trace through the loop code, is that as soon as a library open error occurs the loop quits with register (a3) pointing to the base of the library that failed to open!

To close any previously successfully-opened libraries, all we need to do is use a backward reading loop to collect the valid library pointers already stored in the library base variables.

When you examine the code on the cover disk you'll see that the library closing loop has been written as a subroutine.

This is because the code can be called under two different situations - when the program has run without error and all five libraries need to be closed, or when there has been a library opening error and four or less libraries need to be closed.

By testing the zero flag at the end of the library opening loop we can tell whether an error occurred, so a conditional bge instruction allows us to select either a normal or an error pathway like this:

```
beq      error_exit

; here's where the rest of the
; program code will go!

normal_exit  lea     lib_names, a3
           move     #15, d3      library count
           jar      CloseLibs    close libraries
           move     #0, d0        clear d0 for bge
           rts       and terminate program
           #5-1, d2

error_exit  move     #0, d0
           sub       #1, d3
           jar      CloseLibs    close libraries
           move     #0, d0        clear d0 for bge
           rts       and terminate program
```



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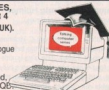
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Amiga 1000/6000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/7000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/8000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/9000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/10000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/11000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/12000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/13000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/14000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/15000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/16000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
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Amiga 1000/21000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/22000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/23000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/24000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/25000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/26000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
Amiga 1000/27000	1.40	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50
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## public



## sector

*Tina Hackett digs deep to bring you the latest offerings from the PD scene.*

**S** This month we discover all kinds of strange delights in the Aladdin's Cave of Public Domain. From horse racing to flying circus acts, you'll find it all within these pages....

## Kung Fu Charlies

Available from: Scribble PD  
Disk No GO93

Another simple idea well executed, Kung Fu Charlies is a mixture between a platformer and a beat-'em-up. You are a Kung Fu ninja character (as the title suggests!) and must make your way through the levels of plat-

Ninja platformer with beat-'em-up type fun



## Nightbreed 4, AGA

Available from:  
Jorvik Public Domain  
Disk No SSO315

PD slide shows frequently fall victim of originality, churning out air-brushed pictures of mythical creatures and warriors.

Nightbreed, fortunately, is a breath of fresh air. Although the show is not particularly long, the pictures used are unusual and of high quality. Its name is slightly misleading - it has nothing to do with the horror movie or for that matter little to do with the night, with the subjects varying considerably from strange lizards to cacti.

Most of the pictures use reflections in some way to create some brilliant effects. One of the most outstanding is of what looks like a piece of bronze with the outline of a face moulded into it. Other pictures include the Terminator, a car with a beach scene background, and an electric bed - strange!



An unusual choice of pictures provide an interesting slide show

forms while defeating the many enemy ninja characters that appear.

You are able to carry out quite a few moves to effectively defeat the baddies, such as a crouch down kick, or a straightforward front kick.

Graphically, the game is rather primitive but the cartoon-style characters are quite appealing and reasonably detailed. The amusing Ninja yells add appeal and work well. Two-player mode gives the game another angle - the second player takes the form of a strange clown-looking ninja, and you both take the same side against the ninjas.

This all adds up to some very basic but fun beat-'em-up action. It certainly isn't First Samurai or anything of that quality, far from it in fact, but it does have gameplay and is fun while it lasts... for however long that may be!



## Scorched Tanks (v1.77)

Programmed by: Craig Holmes  
Available from: C Holmes

This is the latest offering from C Holmes and is the updated version of the brilliant game, Scorched Tanks. The aim is simple. Up to four tanks are placed on a hilly landscape and the idea is to bomb the living delights out of each other!

It's kill or be killed time here and using the range of weapons at your disposal



Cheer your horse to the finish

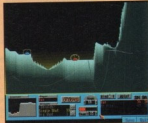
## Steward's Enquiry

Programmed by: Alistair Duncan  
Available from: Roberta Smith DTP  
Disk No BGA079

Is your idea of fun yelling and jumping around madly for the first horse past the finishing post? Do you enjoy the excitement of placing your hard-earned cash down at the bookies? If the answer to



A classic PD game made even better!



you direct where you want your bombs to land through plotting angles and how much power you wish to fire them with.

You win cash for accurate hits on the



these is "yes" but you're strapped for cash, well, fear not because you can have all the fun of the fair, well race track, through Steward's Enquiry and without spending heaps of cash.

The game allows you and up to eight other like-minded gamblers to place as many bets as you want and you also get to take on the role of the owner buying up stables.

Starting off with £3000 to play with, you can view the stables on offer and decide whether or not to invest £1000 of it in one. Buying a stable occasionally reaps financial rewards, but at the end of the game whoever's stable has the largest number of wins gets a prize bonus of £5000.

Once you've got the practicalities of stable-buying over with, you can get onto the fun part of frittering your cash away and placing your bets. Over a maximum of 20 races you can bet away until your money runs out (bankrupt players are excluded from this session).

Simply pick a horse by weighing up the odds, decide how much and take a note of the colour of the rider's jacket (so you'll know which to cheer for, of course!).

The race track continues over two screens so you can't actually see the finishing post. Horses line up for the off and you view the race side-on as the screen scrolls horizontally.

A random event screen sometimes appears before a race and will effect the game in some way – some are helpful some or not.

Another angle to it is the Steward's Enquiry. If more than one horse crosses the finishing line at the same time then a Steward's Enquiry will take place and the computer will decide at random who is the winner.

enemy which enables you to buy more weapons for the next round. Choose from a vast array of ammunition from mega nukes to slingshots. This new version now contains around 60 weapons.

The game looks good with colourful backdrops and clear presentation. Effects such as the hill crumbling away with the force of the hit and the crater maker bombs, for example, look quite spectacular. Sound effects also work well with explosions and bouncing bomb noises going off everywhere!

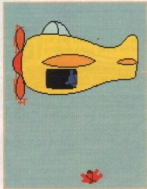
This is a brilliant title, especially with two or more players, and with this updated version containing new elements, such as save game options and changing the IQ and starting money of the players, it has more depth. Gravity, terrain and the amount of wind can also be altered to vary the game.

Highly recommended.

The enquiry may also decide that the jockey has been mistreating his horse. It would be assumed that he was acting under the owner's instruction and would be penalised.

The game finishes when all races are over or when all players are bankrupt.

This is a brilliant, fun title and although the concept is very basic and the graphics hardly stunning it is great for a laugh, especially if you drag a few friends into the game.



Although rather a basic concept, it does have charm

## The Incredible Flying Zambini Bros

Programmed by: Tom Werber

Available from: Jorvik Public Domain  
Disk No ANO 217

Although this offering by Tom Werber is nothing complex or particularly ingenious, it is a nice demonstration of how something so simple can work so well.

Drawn in a style similar to Bob Godfrey's Henry's Cat, this animation shows the attempts of the Incredible Flying Zambini Brothers to perform their flying circus tricks.

The comedy is based around the fact that the smallest member of the troupe always ruins the trick. Although none of the members have features or even faces (they are in fact blobs of colours with a vague body shape) they do seem to have a fair amount of character.

They convey their characteristics merely through body size and how they move. The green Zambini brother is the smallest of the bunch and you can't help feeling a certain amount of sympathy for him as he fails all the tricks the others manage so successfully.

This is a surprisingly long animation containing three separate stories. The first is Perilous Parachute Problems and the little green character again falls victim to the trick going wrong – the others safely fall out of the plane and open their parachutes. When it gets to his turn the chute

## Calling all PD libraries....

...and individuals with anything remotely worth my while having a peek at. If you want something released as PD, or you're a library with stacks of hot new stuff that you haven't seen reviewed yet, why not drop me a line with a copy, full documentation and everything clearly labelled? I promise I'll at least look at your work.

Tina Hackett, PD Submissions, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.

falls to open and he falls to the ground. As if all this wasn't bad enough, the plane then lands on him!

The other three – Terrible Trapeze Tricks, Traumatic Tightrope Tantrums and Trampoline Trials and Tribulations – all speak for themselves really as to what they're about, with the same outcome of the trick going wrong.

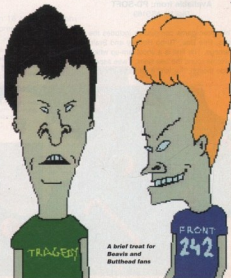
They're all comedy basics but do work well. The jaunty accompanying tune adds to its charm. The line drawings and primary colours look good and the whole thing seems to get nicely, providing a quality animation of a very reasonable length. Recommended.

## Fatal Morgana AGA

Coded by: Claw

Available from: Jorvik Public Domain  
Disk No DMO 291

Demos are hardly few and far between these days and with most verging heavily on the mediocre side, it's not surprising



A brief treat for Bowie and Butthead fans

that whenever another demo arrives in the post it's usually met with moans and groans and a cynical chorus of "ha, ha spinning cubes again."

So on the rare occasion we get something a little different then it is a joyous day in the Amiga Computing offices.

Fatal Morgana, brought to us by Tragedy, is a mixture of the two – it would have been a pretty fine demo but it was spoilt with the obligatory spinning cube sequence.

Starting off with your usual rave tune and swirling zig zag patterns, the demo then moves on to a circle orbiting a smaller circle. Not mind-blowing stuff admittedly, but still rather effective.

The next image is of a woman dancing in front of a moving flowery backdrop. The dancing looks smooth and flowing and works well with the rave tune.

Next up is a stippled picture of a swans head and then the swan starts raving – yes, a raving swan – unusual and creative.

Things then get really wild when the sequence repeats itself, the music speeds up and the images gets faster, flashing across the screen at a fair rate. Everything builds up into a crescendo and then it's all over, well almost.

After recovering from all this mind-warping stuff you are treated to an animation of the headbanging duo, Beavis and Butthead. The usual antics of the twosome are included, such as a few seconds of headbanging and their manic laughs. It's all finished off with one of them stating "This demo sucks."

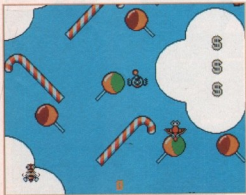
Well, it doesn't, especially if you like Beavis and Butthead and fast rave demos.

## Assassins Games Disk

Available from: PD-SOFT  
Disk No ASS169

This three game compilation includes the titles, Pee Bee, Turbo Hockey and Brain Damage. The first is a shoot-'em-up which revolves round the bee twins. Two aspect aside though, this isn't a bad little title that

*Although Pee Bee isn't very original, it looks good and plays well*



## The Rainy Day Disk

Programmed by: Gina Mears  
Available from: F1 Licenceware

Gina Mears seems to have a knack for creating great disk compilations for children. The last one I had the pleasure of reviewing was her Pick 'N' Stick game – an idea similar to Fuzzy Felts – and this one is of the same high standard.

Included is a Word Search game where the child must find the words relating to a particular topic hidden in a scramble of letters. These have been well-chosen and would all be familiar to a child.

The Scribble Pad is basically a blank note pad which enables the child to create as many pictures as they like – it saves searching round for scrap paper and the messy paints every time.

Different thicknesses of pens are available and a variety of shapes can be used to create the patterns. Different colours can also be chosen.

The next section is a collection of stories including Henrietta Hen, Frank Frog, Bertie Bee and Ferdie Frog. These short stories are accompanied with some nice

involves flying along a vertically scrolling screen shooting baddies.

The levels are based rather nicely around themes. For example, the backdrops are made up of sweets and the baddies are lollies and the like.

As well as avoiding the nasties and firing at them, you have to find your way through small gaps in the platforms. This is more difficult than it sounds as the screen is scrolling vertically and quite fast – if it touches then it causes damage.

Although this is fairly basic game play the graphics are of a particularly high quality. Many colours have been used to create the background, making for a very professional-looking game indeed.

Turbo Hockey is another fairly simple idea but works well. Two-players compete on an ice rink with goals at either end and the idea is to get control of the puck and blast it past your opponent's goal. It won't astound with great graphics or anything but it is very playable.

The third, and by far the best, is Brain Damage, a puzzler which requires you to move the various objects into a pattern around a chequered board.

The board consists of 8x8 squares, some containing objects that are moved around using the arrows surrounding the board. This makes it incredibly difficult as you have to move an entire row or column.

You can set the difficulty from Moronic to Average. (The registered version goes on to include more levels plus an ingenious stage – it also contains a save and load game option.)

The more difficult the level, the less time you have to complete the puzzle in and the less moves it must be done in. The game is also affected by being able to Rotate, Transform and Bomb certain parts of the pattern.

This is all very taxing and if Rubics



*The painting book part of the program is bound to entertain a young child*

illustrations. They are quite short and are easy enough for a young child to read.

Another part to this is the colouring-in section. This is your usual line drawings left blank for the child to colour in using the paint box icons at the top of the screen.

Overall this is a great, entertaining disk ideal for a young child.

## Lay your hands on me

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Here is a real performance comparison using the Mac program Speedometer. It shows an Amiga 4000 with Emplant, matched with a Quadra 900, 68040 at 33MHz!

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# SYSTEM

Your essential guide to the world of Amiga gaming

Under the system's  
spotlight this month

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## SYSTEM ANALYSIS

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## Once upon a time...

*Sierra return with the sixth  
fairy-tale installment of the  
King's Quest series*





Coming in October is All Terrain Racing, created by the guys who were responsible for Body Blows, Qwak and Nitro

## Turbo-powered Team 17

The Wakefield-based software house is lining up a whole host of releases which will be coming your way over the next few months. The first is the budget re-release of Overdrive. Featuring 20 circuits, power-ups and a serial link-up for two player challenges, this budget release, at £10.99, is sure to be an essential buy.

Team 17 also has an original full-price release due in October. All Terrain Racing promises to be packed full of bump 'n' collide racing mayhem. The graphics are by Danny Burke of Body Blows fame, while the coding is being handled

by Jamie Woodhouse, the geezer behind Qwak and Nitro.

All Terrain Racing features three different vehicles and a simultaneous two-player battle mode. The game will be available on the A500/600, A1200 and the CD32.

System have also managed to obtain screen-shots of Team 17's forthcoming shoot-'em-up sequel spectacular, Super Stardust. The game, scheduled for release in September, has been completely re-designed and now features 256 colour graphics.

## system online

It's all quiet on the gaming front, but come autumn you won't be able to move for games. System does the rounds to see what's coming soon for your Amiga...

## Daze on the ball

On The Ball is the UK version of an extraordinarily successful German football game called Anstoss, which has been at the top of the German software charts for practically the whole of this year.

A development team of 20 took on the task of creating the game, including such features as live running commentary and a four-player mode.

One of the key factors of On The Ball is its strong graphical presentation. The animated TV-style coverage was produced by two experienced illustrators from German television.

Together they spent over three months illustrating the action sequences. Over 420 individual animations sequences, including shots at goal, corners, penalties, fouls and goals, all viewed from different angles were produced.

The final result is over 45 minutes of "live" animated action, compressed onto one disk so that no disk swapping is needed in the middle of a match.

On The Ball - World Cup Edition should be out by the time you read this, while the League Edition will be brought out at the end of August.

This will be completely updated for the new season and features the full Premier League and the First Division. The price is still unconfirmed, but Daze says it will be around the £29.99 mark.



## Going for goal!

The World Cup is now over and I bet you've been as surprised as System at the amount of football games sitting on the shop shelves. You'll not have been able to afford all of them, but Empire have come up with what is surely the best-ever football compilation pack.

Empire World Cup Year '94 contains Sensible Soccer, Goal, Championship Manager '93 (plus it's '94 data disk) and Striker. For football aficionados this is surely a compilation sent from heaven, but I suppose the majority of games players have got at least one out of the four games.

If you haven't got any of these games then this is your lucky day, because Empire World Cup Year '94 costs only £25.99 which works out at about £6.50 per game.



## A dip in the Ocean

Electronic Arts has just signed a deal with Ocean that enables the Manchester-based software house to bring many of EA's current console range of games to the Amiga.

The full line-up includes Skitchin' - the recent Road Rash variation on

roller skate - Jungle Strike - the sequel to the highly popular Desert Strike - NHL Hockey, Mutant League Hockey, PGA European Tour and Shaq Fu, the forthcoming beat-'em-up based around the NBA superstar, Shaquille O'Neal.



A screenshot of the breath-taking Super Stardust and I guarantee that your jaw will drop open when you see this little baby in motion



If you're feeling the need for speed then Overdrive, Team 17's next budget release, should interest you



## The gorgeous Gremlin goody bag giveaway competition



Those incredibly generous people at Gremlin Graphics, responsible for such amazing game titles as Lotus and Zool, have all clubbed together and given System ten goody bags.

These bags include all manner of Gremlin paraphernalia such as stickers, badges and T-Shirts, but, more importantly, they contain a brand spanking new copy of Gremlin's brilliant strategy space game, K240. All you have to do to win one of these fine Gremlin goody bags is answer the three questions correctly

on the competition form, scribble your name and address down and send it into:



System Gremlin Goody Bag Giveaway, Amiga Computing  
Europress Publications, Europa House  
Adlingdon Park, Macclesfield SK10 4NP

## Gremlin Goody Bag Giveaway

Name: \_\_\_\_\_

Address: \_\_\_\_\_

**Q1. Which of these games was not created by Gremlin?**

- ☐ Lotus 3  
☐ Hero Quest 2  
☐ Banishee

**Q2. Which dimension was Gremlin's Zool from?**

- ☐ Third  
☐ Ninth  
☐ Fifth

**Q3. K is the symbol for which element?**

- ☐ Potassium  
☐ Iron  
☐ Carbon

The closing date for the competition is: 25th August 1994

## System Technology

The world of computers is ever-changing and System is here to keep you aware of what else is happening throughout the industry.

- Phillips has revealed its new re-styled, lower-priced CD-i unit. Called the CD-i 450 and aimed specifically at the games market, the machine made its debut at the Summer CES show in Chicago and is now on sale in the US. The European launch of the machine is scheduled for September, but Phillips have refused to comment, as yet, on a UK price for the CD-i 450.

- Nintendo has rejected the name "Project Reality" for a new official monicker of Nintendo Ultra 64. They stressed that Project Reality was always just a code-name for the forthcoming machine. Nintendo has also signed up Acclaim as the first official third-party publisher for the machine, which is being produced in conjunction with US computer hardware firm Silicon Graphics.



- Although only 2000 units have been introduced into the United Kingdom, the Jaguar has become an instant hit and sold out of stocks in "most places". The limited stocks have been allocated exclusively to independents through SDL, with fellow distributor ZCL and chainstore Rumbelows expected to take deliveries of Atari's machine very soon.

- Panasonic's plan to launch the 3DO in the UK at under £400 could be under threat from an EC import duty of 14 per cent. Panasonic is lobbying in Brussels to overturn the machine's classification as a video cassette recorder, which carries the awful tariff.

With the UK's VAT rate of 17.5 per cent, Panasonic is facing a total tax charge of 30 per cent. The company wants to launch at £399 but is, at the moment, avoiding a final decision.

# System Selections

Out of touch with the latest Amiga games scene? These elite selections from the last few months should put you back on the right track

## Beneath a Steel Sky

Revolution Software has surpassed the amazing Lure of the Temptress with their latest adventure and I congratulate them on making such a fine adventure game.

Everything about it just oozes quality and over the last couple of weeks it's been a real

pleasure to play. The graphics are good enough to marry and have children with and the gameplay and actual storyline are first-rate. If it doesn't go to the top of the software charts then I think there is simply no justice in this world.

## Darkmere

This must surely rate as one of the best 3D isometric adventures ever to appear on the Amiga. It possesses a haunting style that is completely unique and seldom achieved in many computer titles.

Darkmere really is a pretty classy title. The

graphics create such a mood that it gives the adventure an immediate head start over everything else it competes against.

It's contained in a huge playing area and includes objectives and puzzles that will hold your attention for a good while.

## Arcade Pool

Arcade Pool can now be added to the list of Team 17 budget successes.

The game may have very nice graphics, but it's in the playability department where it excels.

There are so many different game styles

that you'd be hard pressed to become bored with this piece.

For just under a tenner it is an amazing bargain, especially when you consider that it has actually been in development longer than most full-price games.

## James Pond 3

Highly original it might not be, but fans of the previous games and platform lovers will be absolutely besotted with the third instalment. For sheer enjoyment and lastability, you'd have to go far to find a better platform

game than Millennium's tasty third fishy adventure. If you're yearning for some fast, frenetic platform jumping fun, then I suggest you splash your cash on James Pond 3. You will not regret it!

## Benefactor

Benefactor is the best thing Psynopsis has released in a long time. It feels like a montage of Flashback and Psynopsis' very own genocidal pets, the Lemmings. Both the graphics and sound have been implemented very well. The variety of both location and puzzle aspect of Benefactor make it an engrossing challenge.

Benefactor is the type of title that will keep the most devout platform freaks and puzzle lovers alike twiddling well into the wee hours.



## Banshee



I do like this game and the weirdest bit is, I've never been a fan of shoot-'em-ups! They usually bore me to bits, but Banshee has that elusive quality that drags you in. Each level demands new challenges which are genuinely tough, and the learning curve is just right.

This is an intense and extremely satisfying game that should tempt any games fan with an ounce of adrenaline in their veins. The Harvey Keitel of shoot-'em-ups.

## The scores on the doors

System has a different scoring system than any of our competitors, so before you continue reading the mag, glance at the words below to find out exactly how it works.

I'm sure many of you are now familiar with our new scoring system, but for those reading Amiga Computing for the first time and those who might have forgotten exactly how it works, here is our guide to the System scoring, err system.

In our opinion, review scores have lost their content as a percentage, some products receiving scores which were only a few percentage short of being the "perfect" game, when in truth they were only marginally above average.

OK, so the scores might seem unnaturally low at first, but that's only because other scoring systems tend to be on the high side and perhaps not as comprehensive or honest as they could be.

In the long run you'll receive a more concise and reader-orientated review that's geared towards the consumer.

0-20 This is given to the lowest of the low

21-30 An all-round poor game that may have a single saving grace

31-40 Just below the average, perhaps let down by a few indiscretions.

41-55 Games of this score are roughly average with 50 being a perfectly average score.

56-66 This is an above average game and is worth buying. For this reason it would be awarded the BRONZE award.



67-77 A game of high quality that you as a reviewer would have no reservation in recommending. Anything of this ilk would be awarded the SILVER award.



78-89 A brilliant title. Definitely worth buying and almost the definitive of its kind. This type of game would receive the GOLD award.

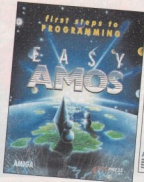


90-100 The best in its genre. This benchmark title receives the PLATINUM title.





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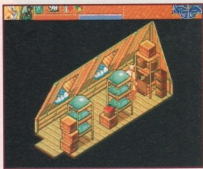
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AMOS Compiler	Compatible			Incompatible	Compatible	Upgradable
AMOS 3D	Compatible			Incompatible	Compatible	
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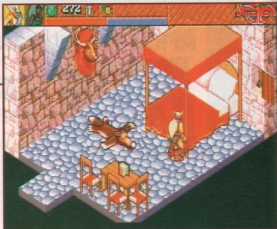
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Hidden away at the back of a cupboard, the circlet



The secret button which reveals the cygnet ring

# beat the system

Are you tired of running around the fjord's of Scandinavia like a headless chicken? Well, in that case read on for some welcome relief of the Heimdall 2 kind

**Y**ou start as Heimdall himself in the Hall of Worlds, so the first thing you should do is switch to Unsha and walk over to the bow and arrow.

After you've equipped her with the bow and arrow, remember to use Unsha especially on dangerous tasks because if she perishes you can continue, whereas if Heimdall is killed the game is over.

Move to the only entrance that darkens when you



The first of five pieces of the Ro'Gold is discovered

towards the rear of the room and you will find the circlet inside.

After this, proceed towards Rurick's hut and speak to him. He'll tell you about Eadric and ask for your help. From here, leave Rurick's village, head to the map screen and steer a course for Eadric's village.

Go to Eadric and offer him the circlet as a peace offering. He'll give you a letter to return to Rurick, confirming the peace. Now, enter the pub for some intoxicating conversation about your quest, and re-live a moment from the original Heimdall game.

Return to Rurick's village and give him the letter offering peace. In return he'll give you a pass which will allow you entry past the guard into the king's castle.

Give the guard the pass and enter the castle. Once you're in the main hall take the right exit and enter the kitchen. Climb the stairway and talk to the serving girl - she'll tell you what to do next.

Follow her instructions and go to the corridor with the large picture whose eyes follow you. Push the painting and the door should slide back to reveal a passageway.

Go into the bedroom, collect the rune book and press a fairly well-hidden button on the right-hand side of the four-poster bed. The button will release a catch which opens a secret hatch in the wall that

contains a signet ring.

Take the ring and go to the guard who is blocking access to the stairway. Give him the ring as formal identification of the King and walk down the stairs. A Hakrat, who seems especially awkward to kill, waits in the next location.

At this point in the proceedings you have two choices - attempt to kill the Hakrat using some cunning, or travel to the Giant's Isle and use a little bit of cheating to strengthen Heimdall.

If you wish to use this technique, jump ahead to the sub-section dedicated to the Giant's Isle. The cunning way to defeat the Hakrat is to fire an arrow into

## Ah, you've Rune'd it

MPM#

Slow enemy

YN

Shield 1

BPF

Cure poison

SA

Fire bolt

B

Lesser heal

B#M

Mass heal

BN

Heal

YP

PF poison

QK

Disintegrate

SA#

Fireball

ANS

Shield 2

\*PF

Make invisible

YS

PF fire

the room beyond. Hopefully he'll follow it in, and, as the room is booby trapped, he'll be minced.

However, if for some reason your arrows miss and he bears down on you into a position where he'll never follow the arrow, you'll have to slug it out with him, and that could be dodgy.

Once you've killed him (by whatever means), approach the two prisoners. One of them is the King's brother - he'll give you a letter to take to the King.

When you visit the King's chamber his adviser will vanish as he realises that his deception has been uncovered. At the same time a forcefield blocking access to a passage at the top of the stairs will disappear.

A little warning - don't drink the bottle of beer that's left on top of the King's table as it's poisoned.

Climb the stairs and enter the next location. You'll see that the path is missing and access is blocked. Shooting your arrows into the three holes will fill the path and allow access to the next room.

Touching the statue releases a skull which is the first piece of the Ro'Geld. Leave the island and sail to the Fisherman's Isle.

Once on the Fisherman's Isle, enter the fisherman's hut and pick up all the objects available. Walk to the rear of the hut and open the wardrobe door. You'll



# Heimdall 2

discover the fisherman who'll tell you about the plight of his daughter.

At Loki's shrine walk in to the portal when it's the correct colour - the fisherman will inform you which is best, so pay attention to what he says.

When you've rescued his daughter she will give you a talisman which will grant you access to Utgard, the second world.

Once in Utgard, on the Dwarven Isle, speak to the dying man at the foreground of the battlefield and he will tell you to meet him in the half-world. Shoot an arrow into the circle of fire by the standing stones and you'll enter the half-world.

Return to the man and talk to him again and he will tell you how to get into the castle using his armour and will give you a letter. Go back to the circle and shoot another arrow into the fire - you'll now be back in the normal world.

## PROTECTION

Walk to where the man lies and pick up the armour that sits by his side. Put it on and enter the castle. Find the King's chambers and give him the letter. In return the King will give you another letter.

Search the castle and pick up the Rainbow ring which is on a table at the top of the stairs. Find the shop and buy yourself the large axe as it's the best weapon available presently for hand-to-hand combat.

Leave the castle via the main lobby's far-right exit, rather than the one which leads back to the battlefield, and you'll reach the Utgard map.

If you read the earlier part of this guide then



The world of Utgard

you'll remember that I mentioned travelling to Giant's Isle to strengthen Heimdall.

Being extremely brave you must attack the giants that guard the rooms. They are very difficult to kill, but do uprate your attack strength.

At this stage of the game your attack strength

should be about nine or ten, but by continually striking blows with the axe at the giant you can eventually reach the highest achievable strength of 99.

If at any point your own health bar drops to a risky level, leave to the safety of the previous room (the won't follow) and cast a healing spell on yourself.

1

Anyway, you should benefit from this extra muscle from here on. To get past the Giant's Isle you must first enter the ice god's room and fill your flask with water.

Then, go back into the fire god's room and throw the water into the fire – an ice bridge will appear across the water in the ice god's room.

Kill the second Hakrat (be careful, everytime you kill one they return, but you should make mince of them by now with your enhanced brawn) and throw the cygnet ring into the sphere of light.

Be careful when throwing that you get it right, because if you don't the ensuing Hakrat could pick it up.

In the giant's HQ, use your dexterity to avoid the fire-balls as you make your way along the path. Once over, push the candle over, pick up the talisman and return to the Hall of Worlds.



Guide Heimdal through the flame spitting path

2

As soon as you journey to the Lost Clan Isle of Utgard 2 you'll be thrown into a cell. Fortunately, there's a piece of bread that has been conveniently left around.

Push the bread and the rat will come over to it. As a token of his gratitude he'll open the cell door for you. Jump into the sewer and follow it to the next location.

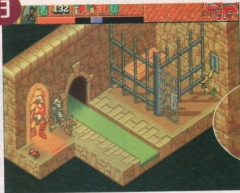
Ignore the bottle as it's a booby-trap and proceed into the dwarven King's chamber. Give your letter to him and he'll return the favour and give you yet another letter.

Go down the stairs on the right and take the second piece of the Ro'Geld from the skeleton you saw earlier on the other side of the sewer.



The next piece of the Ro'Geld is recovered

3



Return to Utgard 1 and give your latest letter to the King. As seems the normal in these lands, he'll give you another talisman. This time your destination is Her'Ker'Yn, so you'll have to return to the Hall of Worlds.



A new area of the Hall of worlds is revealed



4



What a Melody – spiky balls

At the Druid's grove speak to the Druid, then speak with the entity that appears. You'll now know a little more about the overall scheme of the game. Find the map screen for Her'Ker'Yn and head for the Dakta village.

When your boat docks at Dakta village ignore the Dakta who stands at the jetty and walk on – while this might seem pointless now, it'll be vital when you come to be judged.

Find the armoury and kill the Dakta who is giving the prisoners a hard time. Then, speak to the man who is crafting a sword and he'll give it to you.

Find the pub and kill the Dakta who is sitting around. Then, move on to the next room and kill the two Daktas who are in charge of the village. After the carnage is over, return to the map screen and proceed to the Dakta HQ.

Here, your first task is to get passed the spike ball. You can afford to get it wrong a number of times, although it does sap some of your power.

Getting it right calls for good timing because you've to jump down and then slide into the far alcove. Inside the alcove is a switch which, when pressed, makes the steps appear.



5

Enter the room with the mound of gold in it. Now's not the time to be greedy – get too close to the gold and you'll end up taking a nasty poisoning from something that resides inside the pile. Instead, go to the top of the screen and click on the map on the front of the wall. An entrance will open up for you – go through it.

You'll have to defeat the mirror image of yourself (careful, he's pretty tough) and the Dakta. After this duel to death, take the talisman.

On the ??? island walk into the cave and wait for the first spider. Don't be put off by their size, they can only take about one hit if you've uprated your strength on the Giant's isle and are using the sword from the Dakta village.

Once you're past the spiders, your next task is to negotiate the tiles. You must use the clues on the scroll to work out the route across them.

You'll know you've achieved this as the pile of rocks diminishes as you get closer. Hopefully, when you reach the other side a passage should be visible.

CLUE – The first verse refers to the runic symbols for fire, lightning and healing.



Try getting this design from MFI



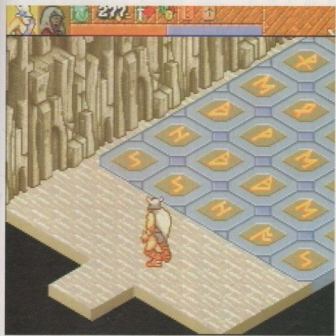
## A rune with a view

SFV	Fire storm
YFVS	Full combat boost
NFF	Call lightning
FN	Create object
BF	Mass lesser heal
NA	Lightning bolt
YK	PF magic
BA	Extra heal
MFF	Teleport
BF	Resurrect
BAF	Mass extra heal
KFFN	Hall portal
YFS	Physical combat boost
YKS	Magical combat boost

6

Once through, shoot the arrows into the three mouths to fill in the missing pieces of path. Be careful, take your time and avoid the flame. After you've completed the pathway, enter the next room and collect your prize – the next section of the Ro'Geld. Now return to the Hall of Worlds. Tal Ker'Yn is the Hall of the Gods. After talking, enter the room on your first right. This is the death goddesses room – be careful. Firstly, kill Heimdall and Ursha by walking into the statue.

When they are both dead a light will appear and you should be able to walk a dead Heimdall through the light. Take the crown and the holy symbol, then walk the characters out of the room to reincarnate them.



The hall of the gods

7

Now, enter the room directly opposite. This is Siri's chamber – the god of judgement. Place the crown on his head and await judgement. If you've done as instructed you should be fine. When I said earlier not to kill the Dakta on the jetty, it's for this reason.



Oh no, not five years in chokey your honour

8

After you've been successfully judged, take the holy symbol and move on. Next enter the air goddesses cloud room which is located to the left of Siri's chamber.

Walk into the lightning to teleport yourself around the room. Pick up the shield, armour and helmet. Discard the helmet on the floor and a bridge should appear. Take the holy symbol and move to the next location.



The oh so floaty hall of Angel Delight.



9

Directly across from the air goddesses chamber is the god of the weak. Enter and kill him. Kill the other man that appears and take the holy symbol.

Move to the location at the top left and enter. This is the light goddesses room. Here there is a very tricky tile pattern to complete - be careful as you can wind up dead on this section. Once over, take the holy symbol and leave.

Next move into the top-right location. You should be in a room that resembles a garden. This is the nature god's chamber. To complete this section, take seeds from the three plants.

Drop them on the patch of grass (the plants you need are to the right of the grass with the big red buds) and a holy symbol should appear - take it and leave.

Go to the closed door at the end of the corridor and place the holy symbols on the spaces on the floor. After this, place the shield in front of the

laser and take the final piece of Ro'Geld.

Return to the garden where Ander is and take a further symbol, then return to the Hall of worlds. Journey to the druid's grove on Her'Ker'En, give him the holy symbol, then walk through the gate in the trees.

Walk on to the turtles back and take the fire sprite - doing this will get you teleported back to the hall of worlds.

Leave the hall and enter Mill'Heim. Walk towards the lava onto the fire boat and take the dragons teeth. Walking on, you'll get to Loki's daughter.

There's a secret door to her right and beyond this three heads. Fire arrows at the heads and then walk through the door. Next, place a dragon's tooth on each red circle on the floor. Then walk into the main circle to be teleported.

NOTE - To separate the teeth, pick them up with the left mouse button and separate them with the right button.



Walk by the dragon's head and exit the room. Now kill the chief of the Hakrats and go into Loki's room. When you get teleported into Baldu's room, Ander will teleport you back to the Hall of worlds.

Definitely save the game when you get to Sho Ker'Yn. Now, make your way across the tiles and kill the doppelganger Heimdal and Ursha. Walk beyond the gate and you will find a Ro'Geld and the shadow of a character.

To retrieve the Ro'Geld, turn around so that the shadow is facing the Ro'Geld and press fire. Leave this section and into the room where you'll find a Dakta.

Destroy the Dakta, chop the rope on the wall and walk across the wooden plank into Ashok's room. Ashok is invisible so all you can do is throw the Ro'Geld at him.

Then comes the final confrontation with Loki. Defeating him will reward you a place in Valhalla



This would have put the nearby fisherman in danger, but because you refrained the innocent man still

Heimdal 2: Judgement day

FISTSMASHIN'HEAD  
STOMPIN'BLOODLET  
TIN'GOALGETTIN'B  
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**T**here is nothing like a frantic beat-'em-up for a quick aggression-letting bout with a joystick. The premise is simple: beat the living delights out of your opponent.

A wealth of fine quality beat-'em-ups have hit the Amiga in recent

## INTRODUCTION

times and the more violent the better. But now Finnish software house, Terramarque, are breaking the mould with a new non-violent-type beat-'em-up involving cute elves. But will this concept take off?



Being a less violent game, the coin meter replaces a life meter if it runs out and you lose the fight



The graphics brilliantly conjure up the atmosphere of the magical land of Muhmullandia



Seeing double - match the same players for a true contest of equal strengths

## STORYLINE

According to the ancient magical laws of Muhmullandia (the Land of the Elves) whoever challenges the Crown to an Honour Fight, and wins, will gain control of the country. Another, even greater prize also awaits. This is the mystical Dragon Fan which will reveal the secrets of the Universe.

It is a prize worth fighting for but you must give the king reason to fight, and to do this you must hire your own fighters to conquer the Champion Fighters - representatives of the King.



This character is well-protected by his flab and is a tough one to beat

# Elfmania

Tina Hackett is away with the fairies as she dons her pointy ears and green jerkin to explore a magical land of the elves in **Elfmania**.





## GRAPHICS

Graphically, Elfmania is absolutely stunning. The attention to detail paid in creating the backdrops is amazing. The scenes actually look three dimensional and with the backgrounds realistically fading into the distance, the overall impression of the setting is well conveyed.

Small details show the care with which the graphics have been made. For example, in each scene there is an animated object or character in the background. Doors open and spectators blink or move slightly.

Although only subtle details, which at first do go unnoticed, they work well, and unlike some games that try this approach it doesn't go over the top and distract from the gameplay.

70%

Publisher: Renegade  
Developer: Renegade  
Bites: 2

Price: £24.99

Genre: Beat-'em-up

Hard disk install: No

Control: Joystick

Supports: All Amigas with 1MB+  
Recommended: 6800 onwards



Get onto the bonus stage to build up your finances

## FLASHBACK

Many beat-'em-ups have been released for the Amiga and in my mind Body Blows Galactic still reigns supreme. Granted, it may be more violent, but you do have a good choice of moves and characters available and graphically it looks superb.

Mortal Kombat, employing a different style altogether, also has more to it than Elfmania with regards to the action. Elfmania doesn't seem to pack quite the same punch as other games of this nature or give the same sense of satisfaction after a round well fought.

It does have a certain charm though, and if you're looking for a beat-'em-up that has a strategic angle without the blood and guts then it's definitely worth buying.



The detail in the backdrops is stunning



Watch this guy - his sword is lethal

## SOUND

Music accompanies the fight scenes but it isn't particularly astounding - it's not one of those irritating, grating tunes but it doesn't really conjure up any atmosphere either.

A more fitting choice of soundtrack could have really enhanced the theme of the game and evoked more of an atmosphere.

The usual shouts and yells that fit in with the moves are included and quite realistically convey the action. All the characters have catch phrases which they use at the beginning or end of a fight. These work well and do create the feeling of the tournament spirit.

54%



The hammer-wielding king shows no mercy - especially towards elves

## OPINION

65%

While it is a nice idea having a 'less violent' beat-'em-up by using cute elf characters, it is at times a bit too twee and everything is a bit too nice.

Beat-'em-ups bring out the more aggressive style of playing and when your opponent is a smiling elf it can become rather frustrating. The game redeems itself when you meet the tougher fighters later on and gets the real fighting feel back into it.

More moves would have benefited the game as they are quite limited. All the characters have very similar moves and although this results in a simple control system that is easy to get to grips with, it does become rather repetitive after a while. The special moves also take a fair amount of joystick bashing to get to work. And what can't be forgiven is all the

disk accessing. The game is not hard disk installable and unless you have an extra drive you will be constantly plagued with swapping between disks after each fight.

It's not all bad though, far from it in fact. The game does have a lot going in its favour, such as an artificial intelligence system which means you can't just find one successful move and use it throughout the fight because the computer susses out what you are up to and will avoid your hits.

The control system is easy to get the hang of and the coin idea is excellent. When you hit your opponent he releases coins - you can then hit them back at your opponent to cause additional damage.

Two-player mode is also quite fun and you can choose from all of the six fighters available (in a one-player game they only become available when you have earned enough coins). The strategic angle is a

nice touch. The country is divided into 36 counties and via the magscreen you must conquer six counties in a row to win.

But it's up to you whether to go straight ahead and try for the six in a row or build up your cash by defeating the easier opponents and going on to the Bonus Stage.

So, despite its 'cutesy' appearance and limited amount of moves and characters, this is a surprisingly playable and addictive title. The sprites are solid and well animated, the backdrops absolutely superb and the extra features add a novel aspect to it.



H

ow do you make your new footy game stand out from the billions of other footy games clamouring for your World Cup USA business? Easy! Insert a fantasy theme, weapons and abolish all the rules.

At least you do if you're the cheeky tinkers who gave us Brutal Sports Football. Polish down your swords, load your guns and take to the pitch for a match that would even make Vinny Jones flinch.

## INTRODUCTION

And that doesn't mean what you might think



Millenium's latest entry in their Brutal Sports series aims to put the violence back into footy. Daniel Whitehead kicks it in the head with studded boots on.

# Wild Cup



Well it's more use than an Adidas tracksuit...

Publisher: Millenium  
Developer: Terranorpe  
Units: 2  
Price: £25.99  
Genre: Sports sim  
Hard disk install: No  
Control system: Joystick  
Supports: All languages  
Recommended: 64000 upwards



A splintering tackle sends blood everywhere

## GRAPHICS

Good and bad in this department. The progression from Brutal Sports Footy manifests itself most obviously in the isometric viewpoint, which gives the game a much more fleshed-out feel.

There are also improvements in the addition of pictures of whichever player has control of the ball. The more battered they get, the more their portrait bleeds from its nose and mouth.

Icky, tasteless but very handy when you want to finish off a weakened opponent. The violence is nicely handled as well, with showers of blood coming from every collision, and the occasional decapitation from a well-timed flying tackle giving a new meaning to taking a header.

The downside comes when you try and actually control what is going on. The viewpoint counts against the game when you try and carry out anything even remotely involving precision or skill, as the ball is often lost in the midst of the players.

51%

Of course, you  
needn't even  
score to win.  
Just kill the  
other team!



## PLAYABILITY

Oops. This is where the game falls down a bit. The marriage between sports game and beat-'em-up is a bit shaky, with neither aspect coming out any the better.

The sport gets in the way of the violence, and the violence gets in the way of the sporting action. Too often the game degenerates into a frantic waddle-fest as you just hit fire repeatedly to duff up the opposition.

Every now and then there's an opening at the goal (usually if the otherwise invincible goalkeeper islobbered) and you remember that there's a ball involved in this game and hoof it goalwards.

There's just no feeling of control over the action. Every time you score you know it was down to sheer flukiness rather than any premeditated tactics paying off.

The isometric view also causes problems by making it difficult to see where other players are in relation to yourself, so any precise passing is ignored in favour of the "boot it up the field" approach.

There are also some power ups to be collected, usually by accident, and matches that are drawn result in a penalty shoot-out using real guns.

The trouble is that there are so many good ideas and neat touches struggling to peek out from beneath a rather unplayable game, and this gives you a glimpse of just what the game could have been like.

# Soccer

## SOUND

Sound is, for the most part, functional. There's a pleasant enough tune that somehow sounds like every other football-related tune you ever heard. The in-game sounds are just your basic kicking noises and some crunches when players thunder into each other.

With the violence aspect I expected some more excruciating sounds to compliment the breaking of bones, but chances are you won't notice the sounds anyway as you'll be too busy scrabbling for the ball.

47%



It could be difficult for  
Estonia in Group A, Brian...

## FLASHBACK

While violent sports games are a pretty obvious idea, there are surprisingly few that spring to mind - unless you include rugby. The most obvious, and probably best, are the Speedball games by the saucy Bitmap Bros.

Viewed from above, it's a sort of basketball with fists combination. As with Wild Cup, you can collect power-ups to cripple the opposition and then punch your way to their goal before hurling the ball in.

The simplicity works in the games favour and it's easy to get straight in there and start scoring even for a beginner.

Other contenders include Smash TV which was more in a shoot-'em-up vein. The original Brutal Sports Football follows very similar lines to Wild Cup, but it looks rather flat and suffers from the same sense of "what is going on?" that mairs its follow up.



Not what you'd call a winning move



The poor old rabbit team are starting  
to look a bit the worse for wear

## OPINION

50%

It's all a bit disappointing really. The idea is sound and the implementation almost pulls it off, but the clumsy controls reduce the game to a random mess of punching and occasionally making a run for goal.

The most annoying aspect is that there is so obviously a very good game lurking in here, but all you ever get are tantalising glimpses of how good it could be.

For example, the players not under your control are aggravatingly useless. You

make a run for goal with another member of your team in tow. Ideally he would sort out the goalie while you score, but what tends to happen is that he stands by while the goalkeeper smacks your head in and the opposing team thieve the ball and leg it.

All in all, a good game that suffers due to it's annoying quirks. Practise might well allow you to get past the obstructive melee of frantic joystick waggling, but the sad truth is that you shouldn't need to practise just to enjoy the game.

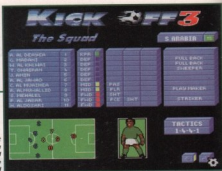
With so many other footy-related games out at the moment, there's no need to struggle with this one, which is a pity.



The excellent practice mode allows you to perfect your skills. Guide the balls through the cones and shoot



The best tactics to suit the country's playing style is pre-selected but can easily be changed



## SOUND

Abysmal is one of the more polite words I could use about the sound. The poor excuse for a 'crowd noise' is hardly worth mentioning – unless of course to stress how atrocious and annoying it is. There is no cheering when you make a break with the ball and when you actually score it is met with silent silence.

One crowd chant is used throughout which is pretty much indecipherable and is merely a half-hearted mumble. And as for the necessary sound effects that should convince you that you've given the ball a good wallop, or that you've skidded at full pelt down onto the pitch, well they too are a sorry case.

Enough said, I think. Buy it and play with the volume switch down by all means but then you'd miss the essential atmosphere, the build up of match tension, the euphoric cheer of the crowd as your shot hits the goal...

20%



## GRAPHICS

Anco have really developed a good-looking game and with regards to pitch view and sprite size they have come up with a winner. Viewed from a side-on, slightly elevated position, the game is clearly seen with none of the action being missed.

Sprites are in proportion to the ball and the stadium, giving an overall impression of realism. There are some nice animations, such as when a player scores, and the crowd and stadium are very detailed and nicely drawn.

73%



The sprite size works well and actually looks as though you are dribbling the ball



Some players will have higher attributes than others from vision to flair, pace or agility

**T**he Kick Off series set new standards in football gaming as we knew it. Boasting top-quality graphics and superb playability they amazed the games-playing public.

Then Cambridge-based software house, Sensible Software, came along and started off what can only be described as a fierce battle between these soccer

legends and their hot new offering, Sensible Soccer. And now, when all the wounds are barely healed, the war is about to start up all over again with both companies intending to bombard the shops, promising even bigger and better games. Kick Off 3 goes into battle.

## INTRODUCTION

**Fouled by football?  
Want to give soccer  
a sending off? If not  
read on as Tina  
Hackett referees  
the latest  
contender in the  
computer football  
world cup**

# Kick Off 3





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**S**o there's this rabbit, see? And as all his woodland friends have suddenly turned into slaving beasts, he's feeling a bit put out. So he stops day-dreaming about the foxy she-rabbit from the Cadbury's Caramel advert and hops off to dispense the long ear of the law to his violent ex-friends. It's a platform game, obviously.

## INTRODUCTION



Through yonder door lies the clock you must collect to finish the level



Quik looks on in disgust as Secret Squirrel skulks below

He's speedy, furry and blue [sound familiar?]. Daniel Whitehead hunts him down like an animal



Reach the top of the level and avoid the eagle's grasping claws

# Quik The Rabbit



## SOUND

As befits a cute rabbit game, the tune is all bouncy and cheery. It probably wouldn't sound out of place on a kids' TV programme, like those quite terrifying Tiny Toes creations.

However, as is the case with pretty much every game tune ever, it has the ability to irritate you to the point of violence after about 10 minutes, so thank goodness for the chance to prod 'M' and switch it off.

Unfortunately, this shows up how sparse the sound is. A few FX for the enemies would have added greatly to the grooviness of the game. A squawk from the birds or a howl from the coyotes would be most pleasant. Inoffensive, but lacking real bite.

**68%**



This bizarre young lass is the game's only concession to its French origins



Quake before my games progress as I discover yet another secret room

## GRAPHICS

There are two sorts of platform games, the normal sort and the cute sort. With a blue rabbit as its main character and various other furry animals as baddies, guess which sort Quik is. Yep, it's a cute-o-rama. And it looks really rather pleasant.

The scrolling is smooth enough and the backgrounds and platforms are clearly defined and a pleasure to jump on. The best graphical aspect of Quik is the great variety of enemy sprites, all suited to their respective zones, and each animated with individuality and flair.

It's also one of those games where bonus rooms and secret routes are tucked away but easily found. You know the sort of thing – conspicuous walls just begging to be jumped through. Some you'll find by accident and others you can unearth by using gamer's intuition.

All in all it looks good and solid. All the platform requirements are there and it handles like a dream.

**81%**



## GAMEPLAY

Make your way from one end of the level to the other, jumping on plat...stop me if you've heard this before won't you? To be fair though, despite its generic appearance Quik is a very playable little game.

He can spin into enemies to kill them in a quite hedgehog-tastic kinda way, and then collect whatever power-up is left behind. Being a rabbit, Quik requires constant carrot and water refills to prevent a trip to bunny heaven.

You can also collect hearts to keep your energy up and potions to enhance his natural bunny skills (no, not those rabbit skills). The potions come in two flavours, red and green, and allow him to jump extra high or to zoom along at thunder-like speeds.

While under the influence of the super speed beverage, our hero is impervious to damage from enemies but can eas-

ily lose his power by crashing into a wall.

At the start of each level you'll be told what you must do. Some levels simply require a speedy exit, whereas others demand that you find a clock before making an exit.

Clocks can be found through spooky doors that take Quik back in time to a sub-game where you must clamber to the top of a themed screen (prehistoric, medieval etc) platform by platform to claim the clock. The only trouble is that there are rolling boulders and a fiendish bird that keeps dragging him back down the screen.

Trampolines, secret passages and ladders are all present and correct to assist him in getting to the sub-game, and at the end of each zone there's a labyrinth section in Quik's burrow where you must first locate and then destroy an end-of-level baddie.

Three similar, but refreshing gamestyles, all wrapped up in a playable chocolate coating then.



Work your way through the labyrinth to meet the end-of-level baddie



The first big baddie you'll meet is this rather tragic rock-loving wolf

# Thunder

The rabbit has a charming face  
It's private life is a disgrace  
I really dare not name to you  
the awful things that rabbits do

'The Rabbit', 1925



The third level takes place in the ocean, and Quik displays his ability to hold his breath for ever

Publisher: TMS	Developer: In house	Box: 3	Price:	Score: Platform	Hard disk install: No	Control system: Joystick	Supports: All languages	Recommended: 60000 upwards
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## OPINION

80%

Casting aside all previous platform games, Quik is really a perfectly funky little game. Admittedly, my first reaction to a platform game about rabbits was not printable in a family publication, but I was won over by the sheer professionalism of it all. The difficulty level is spot

on, so with just enough effort you can get through the first three or four levels. Probably more suited to younger players, due to its simplicity and coddling approach, but despite every aspect of it screaming "cliché" it comes across as a very fun game.

It even stands up well alongside the competition. Highly recommended, much to my surprise.

## ADDITIONAL INFO

Quik may very well be a speedy little chap but by far the coolest rabbit ever was Bugs Bunny, created by Bob Clampett in 1938 for the cartoon "Porky's Hare Hunt".

He was not, however, very funny until Tex Avery came along and transformed him into the epitome of wisecracking, sarcastic Brooklyn attitude.

By 1962 he'd appeared in a staggering 159 cartoons and received an Oscar for "Knighty Knight Bugs". His characteristic New York draw was provided by Mel Blanc, who sadly died recently. Mel was also responsible for pretty much every cartoon voice ever, as well as Twiki the robot from Buck Rogers. A veritable star.

Classic Bugs Bunny moments include his frequent cross-dressing (thus proving himself to be a rabbit in touch with his feminine side), his immortal routines with Elmer Fudd and Daffy Duck (which always resulted in Daffy's beak being blown off by Elmer), and one brilliant cartoon where he goes head to head with Wile E. Coyote.

With Bugs you always know that he's going to outwit everybody, and as such he remains a super-cool, suave sex symbol with more star quality in his teeth than all of Disney's sickly efforts put together. Bugs, we salute you.

Over the years Sierra have built up a reputation as the software house famous for its adventure games. Leisure Suit Larry, the Space Quest and Police Quest series of games, and Willy Beamish: the names of great Sierra-produced adventures just roll off the tongue.

Sierra haven't had an adventure on the Amiga for a while now, but cue clap of thunder and bolt of lightning because they're back! King's Quest 6 is here and I, for one, have been drooling over it ever

since I saw some early screen-shots.

The tale of Princes, Princesses, Kings, witches and dragons is being spun out once again. The King's Quest series of games have all been very much like a set of fairy-tales and I guess that's why they're so popular.

In these times where games must contain violence or aliens or both to succeed, King's Quest makes a nice refreshing change.

## INTRODUCTION



A shot from the brilliant-rendered 3D introduction and the Prince has taken to the seven seas to find his lost Princess

**Sierra are back and clutched in their mitts is the sixth instalment of their fairy-tale adventure. Come with Prince Jonathan Maddock as he takes trip to the Land of the Green Isles to find his Princess.**



The inventory is basic and very easy to use and can be accessed from the menu bar at the top of the screen



Prince Alex enters the Realm of the Dead to try and gain an audience with the Prince of Darkness

## STORYLINE

Once upon a time there was a prince called Alexander who lived in a kingdom in Davenport. The Prince was very unhappy because he had lost Cassima, the girl of his dreams. While moping around the castle, Alexander experienced something very strange - his mirror began to speak to him.

Inside the mirror was Cassima who had, apparently, got lost in the Land of the Green Isles. Alexander did not know where this land was, but being rather clever noticed a set of stars in the mirror. By using his superb astronomical navigating skills he could now find where Cassima was.

Jumping onto his ship, the Prince and his crew set off for a journey over the seven seas and beyond. When they finally spotted land, disaster struck!

The seas began to turn violent and a major storm broke out. When Alexander next opened his eyes he found himself lying on a beach, with bits of ship strewn about everywhere and without his crew. This is where the "real" adventure starts, as you take control of the Prince and must complete his quest of finding his lost love.



# King's



The start of the King's Quest adventure and Prince Alex finds himself all washed up on the beach



Just look at the quality of these graphics! Just one of the many screens in King's Quest 6 that'll make your eyes drop out... probably

## GRAPHICS

Sierra were planning to do a 256-colour version of King's Quest 6, but they were so pleased with what the 32-colour version looked like that they shelved the idea.

I'm in agreement with Sierra's decision because the graphics look absolutely gorgeous and the 256-colour version might have slowed the game right down.

The introduction to the game is rendered in 3D and features some excellent morphing techniques. The sprites, which range from guard-dogs and minotaurs right down to

the devil himself, are well-drawn and very well animated. The icon bar at the top of the screen is very basic, but helps the game flow along and makes it easy to understand for first-time adventure gamers.

The only quibble I have is that some of the objects are just too small for the eye to see and you quite often find yourself walking past them.

The backgrounds in King's Quest 6 are almost too good! They set the atmosphere perfectly and you could almost believe you are walking around in a fairy-tale.

Sierra's adventure, graphics-wise, is on a par with Monkey Island 2 and The Fate of Atlantis. You can't get a higher recommendation than that!

**85%**

## FLASHBACK

You'd obviously have to compare King's Quest 6 to adventures like Monkey Island, Simon the Sorcerer and Beneath a Steel Sky.

All these games contain some high-quality graphics and have an almost unrivalled amount of playability. King's Quest 6 is as good as just about every other adventure I have ever seen.

This is the sixth King's Quest adventure and although it is undoubtedly the best, I'd also suggest you try and get your hands on a copy of some of the previous ones.

They don't quite match King's Quest 6 in the graphics department, but the playability and addition is still there in abundance.



Walking into the Minotaurs and fair and insulting his mother isn't perhaps the brightest idea you've ever had

## SOUND

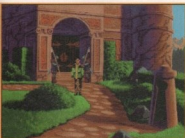
What surprised me the most about King's Quest is its brilliant little "olde" medieval tune that plays while you play. More often than not, adventure games suffer because of their abysmal tunes that play throughout your quest and have you reaching for the volume switch on your monitor.

There are a number of sound effects within the adventure and even though they're fairly sparse, the quality of them is worth shouting about. If you could only take a listen to the waves lapping onto the beach on the very first screen, you'd know just how good they are.

Sound-wise, I can't really fault King's Quest 6 because what's in there is adequate enough to please the average gamer.

70%

# Quest 6



At the palace and Prince Alex bumps into the guards. Give them a bowl of Winalot and you'll probably be able to walk past them

Publisher: Sierra  
Developer: In-house  
Disks: 10  
Price: £34.99  
Score: Graphic Minutiae  
Hard disk install: Yes  
Control System: Mouse  
Supports: A500/A600/A2000  
Recommended: 80000



Hubble, bubble, toil and trouble! Just one example of the superb static screens to be found in Sierra's adventure

## OPINION 86%

Adventure fans will be delighted that Sierra have finally decided to release the sixth adventure in the King's Quest series onto the Amiga.

After such a long time away from Commodore's machine Sierra might have been weary of going back to it, but they needn't have worried because, hopefully, King's Quest 6 should get the recognition it deserves from the general public.

The game comes on 10 disks, so you'd think that a hard drive is pretty much an essential piece of kit. Well it is, but for those non-hard drive owners the disk swapping is kept to an absolute minimum and for this little factor I applaud Sierra.

As far as adventure games go, they don't get much better than this. With its brilliant graphics, a fairy-tale of a plot, superb playability and a level of addiction that will keep you coming back for more and more, King's Quest 6 is an adventure that should have a place in everyone's games collection.

Buy it or you'll regret it, maybe not today...

## ADDITION INFO

There have been a lot of famous "Kings" over the years. I'm not talking about monarchy, but here are my two favourites.

BB King is a US blues guitarist, singer and songwriter and was one of the most influential electric-guitar players of the 1960's. His albums include Blues is King (1967), Lucille Talks Back (1975) and Blues'n' Jazz (1983).

Martin Luther King Jr was a US civil-rights campaigner, black leader and Baptist minister. He was one of the organisers of a protest in 1963 where 200,000 people marched to Washington DC to demand racial equality.

An advocate of non-violence, he was awarded the Nobel Peace Prize in 1964. King was assassinated four years later by James Earl Ray in Memphis, Tennessee.



Among the many attractions in this particular Theme Park is a superb haunted house which looks as though it's been robbed out of a Scooby Doo episode

# Theme

## system preview

Grab your candy floss, win a goldfish and come and join Jonathan Maddock as he rides the roller-coaster that is Theme Park, Bullfrog's forthcoming and eagerly-awaited business simulator

Looking back at Bullfrog's softography, all I can see are high-quality pieces of software. Games like the Populous series, Powermonger and more recently Syndicate, have all been tremendous successes, but coming your way very soon is perhaps Bullfrog's finest creation yet.

Along with Ocean's TFX and Inferno, Theme Park is being tipped, by those in the know, for the game of the year award. Who knows, perhaps if there was one Bullfrog could even walk away with a game of the decade award! OK, I could be blowing Bullfrog's trumpet too soon, but I have high hopes for Theme Park.

### HYPE

It could just be a case of good 'ol fashioned computer industry hype that's making everyone go Theme Park crazy. I cite Street Fighter 2 as one example which had an advertising campaign that was better than the actual product.

Bullfrog haven't advertised Theme Park though, so why is it so eagerly awaited? The answer is simple. Word of mouth. The only game on everyone's lips within the games industry is Theme Park.

Take a look at Bullfrog's first software sensation,



When queues start to form you must do something to keep the agitated crowd of visitors happy. Why not dress a man up in a chicken suit, it always cheers me up!

Populous. An original and addictive title that arrived amongst a sea of mediocre shoot-'em-ups and platformers. It completely changed the way games were perceived by the people who bought them and more importantly by the people who created them.

Theme Park could well have the same effect over the computer games world that Populous achieved five years ago. The software industry is leaning slightly towards the production of licensed platformers and shoot-'em-ups because these types of game sell incredibly well with the general public.

I know it is hard to come up with ideas for original

products because everything seems to have been done before, but it's still no excuse. It's this originality that will, hopefully, turn Theme Park into a raging success story.

You take the role of a nephew who has inherited a fortune from his rich, but eccentric Aunt. However, there is a catch involved - he must build the world's biggest and most profitable theme park.

### SIMULATION

Bullfrog have combined all the fun of creating your own theme park with a business simulation. Theme Park is the first game in Bullfrog's "Designer Series" and the aim is to broaden the traditional appeal of simulation programs by combining accurate simulation



The queues are getting bigger and it's probably all down to your all-new space shuttle ride. A firm fave with the kids!



One of the rides that's user-definable is the roller-coaster. That double-loop is sure to upset a few stomachs



# e Park



## Park life

There are a couple of different ways to play Theme Park. The first, Sandbox, is the most basic. This involves the creation of a park and all you have to do is make sure the visitors are happy and safe.

For those who fancy a bit more of a challenge there is the Business Simulation option. This full-blown business simulator challenges you to not only build a park, but run it as a successful business, incorporating marketing, forging contracts and negotiating staff wages.

There are 32 purpose-built rides to choose from, and six user-definable rides that include race car and helter-skelter rides. You can add corkscrews, loop-the-loops and decide on the speed of the rides. Each ride will have its own "wow" factor and the visitor's reactions will give you a clear idea of how successful your rides are.

Positioning a chip shop too close to a ride that is too fast could end up with visitors regurgitating their last meal, or even being thrown off the ride.

If incidents like the aforementioned one continue then the park's reputation will suffer and it'll start attracting hordes of thugs. These vicious louts will beat up the visitors and vandalise the rides. However, to combat this menace, security guards can be employed to evict any unwanted visitors.

As well as security, you can hire maintenance men to repair the rides, handy men to pick up litter and entertainers who can be dressed in a variety of costumes to keep the queues happy and contented.

I guess this is one of Theme Park's biggest attractions. There is no blood, no evil aliens from the planet Zarkion, no platform jumping cutesy creatures - there is only the job in hand of keeping your visitors merry.



The Chicken man "entertains" the kids while they wait to go up and down on the plane-ride

entrance fees and salaries, but you have to determine things such as how much salt to put on the chips in the chip shop.

There is a reason for all this seasoning malarkey because the more salt you put on the thirstier the visitors will become, therefore they will start to buy more of your cola.

Theme Park is a highly original product and for me that counts for a lot in today's current games climate. It's already received an abundance of high review scores from the PC games magazines and I'm in no doubt that it'll achieve the same kind of success on the Amiga. Theme Park will arrive in this office next month and already I've got a smile on my face.

technology with gaming elements.

Top dog at Bullfrog, Peter Molyneux, explains why Theme Park is the beginning of a new era in gaming "While the Designer Series has its roots in techniques refined and honed over our previous releases, the business simulation side is a new direction for Bullfrog.

"We are confident that it is better than anything comparable currently on the market, so we intend to use it as a basis for a series of programs."

Your theme park must compete against 40 other parks and as your park becomes more profitable, these competitors will attempt to buy shares in the park and try to take it over, thus finishing your career.

Just to give you a brief example of how in-depth Theme Park is, not only do you have to decide on



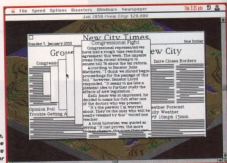
One of the essential sections of your park is the area where all the food emporiums are situated



Oh no, disaster strikes! The sun has gone away and so have your Theme Park visitors



The terrain on which you must build your new city



The press are, allegedly, the people's voice for you as mayor to listen to

# system preview

Fancy your chances at playing mayor? Do a good job and they erect a statue to you, cook the books and you'll end up in a car-park scandal. Simon Clays becomes Derek Wattan for the day

**T**own planning, who'd do it? At school once we had a guy who studied with the single intention of becoming one of those elite fabrication gurus.

The excitement, apparently, lay in the planner's ability to create a Narnia in housing form as opposed to constructing concrete riots in a tenement curcubule.

It was never established what happened to this acquaintance of mine, but the last thing ever to be heard of him was that he'd met a girl who had just given birth to his third child in as many years. All of which were unplanned - the irony, huh?

Well, very soon all you budding town planners need

not go through this physically demanding and financially draining practise to establish your ability as a town planner and budding mayor.

In fact, if you are on this self-destructive trail stop now, because Maxis, the company who have brought you every other conceivable SIM title, are returning to the Amiga as a game platform. Their latest foray into the world of simulating every day life is Sim City 2000.

While there's little information available on the Amiga conversion, you only have to take two facts into consideration. One, a back catalogue of simulated realities that no one can better - Sim City, Sim Life and Sim Earth to name but three.

Secondly, the Apple Macintosh version of Sim City 2000 is currently burning into the pockets of employers far and wide, as addicted workers turn off their spreadsheets and turn their attention to planning that condo.

Sim City 2000 begins by asking you a time zone in which to commence. You can place yourself at the turn of the 20th century or zip ahead to more futuristic zones, post 2000AD.

Establishing the time period will automatically determine your first decision, power. Every city, whatever time it might have been born into, needs a source of power. The Amiga version gives you limited choices at the turn of the 1900's, like oil and coal fossil-powered

generators. But, playing in future times allows the luxury of more environmentally friendly forms of power. For example, your cities could benefit from wind, wave or hydro-electric power. On the other hand you might opt for the highly risky nuclear energy - whatever your preference the choice will be yours.

## DECISIONS

When making the decision you'll have to bear in mind such things as pollution and the health risks generated (nuclear power seems to have a habit of mutating the genes of the local inhabitants).

After you've dealt with this mind-wrenching decision, you can move onto the hand-rubbing business of building your city.

Before you commence building, it'll probably be a good idea to have a talk to the different departments under your control. You'll have to set budgets for fire, police, education, transport and other council-funded departments. Clicking on icons allows you to interact with the different departments and even ask advice from them.

After you've made those important rate capping, tax



The beginning of your new metropolis

# Sim City



You'll need a good head for figures to balance the budget every year

## Happy heads

One of your tasks is to keep your populace smiling. Their feelings are reflected through newspapers, which as well as informing you of events occurring in neighbouring towns, will keep you abreast of feelings in your own metropolis.

To keep a grin firmly in place you'll be able to build parks and small wooded areas of land to create a feeling of space. You'll also have an option on parks, zoos and other stadium-orientated pastimes.

But, how are you supposed to encourage people to move to your new town to play in the parks and zoos and work in your factories? Well, you'll be able to connect your city with other cities via road, rail and eventually via the air.

Once your population starts to boom and your central business districts begin to take off, you'll have to start injecting money into educational institutions such as colleges, museums and libraries.

increasing decisions you'll be set to send the bulldozers in. Some of the first operations you'll be set to perform are to make sure your would-be city has an ample water and electricity supply.

As you build different industrial complexes and housing estates, each has to be connected to your main grid - failure to do so will mean that little will be built.

As well as ensuring that power reaches your lucky populace, you'll need to ensure that a road or rail system is in effect so that your population can move to work and back (rat race syndrome reaches computer games).

As you've probably gathered, Sim City 2000 is going to capture just about every reality conceivable to city life. But, it will begin to speculate about society once you proceed past the year 2000.

The game should then start featuring massive city blocks which house thousands and include their own environment and feature waterfalls and forests.

Also included should be the disaster option. This will give you an option of including natural and man-made disasters into the equation. These could vary as widely as floods and tornados, through to plane crashes and

alien monsters attacking your city.

Viewed isometrically with the illusion of the player looking from quite a height, the Amiga versions should differ very little to their PC or Macintosh counterparts. The graphics on the latter machines were small but incredibly sharp and accurate, with many animated sections.

## EFFECTS

For example, trains should trundle towards their destinations and the cars will swarm up and down the highways like many ants.

The games control is entirely mouse driven with the user clicking on and off icons and menu bars. This should make play easy to manipulate and quick to

respond. It seems from other versions that have been released that Sim City is shaping up to be a massive hit with Amiga owners. CD32 owners could well be in store for even dizzier heights if the conversion features the footage that the CD-ROM version includes.

I, for one, am looking forward to creating sprawling condominiums of the future and wait with industrial gloves and builders jeans sliding down my rear quarters for its imminent release.



Using the zoom facility you'll be able to make a closer inspection

Meanwhile, underground the plumbing needs to be attended to



# 2000

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# US Gold World Cup

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Answers the four questions and send the form in to the usual Amiga Computing address before the 25th August 1994 and you could be the winner of all these splendid World Cup USA '94 prizes.

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### COMPETITION FORM

#### Questions

- Q1.** Which footballer won the Golden Boot Award in the 1986 World Cup?
- Q2.** Which team was beaten 1-0 by West Germany in the 1990 World Cup Final?
- Q3.** Germany beat Bolivia in the opening match of the 1994 World Cup, but which state was the match played in?
- Q4.** Who scored for Ireland against Italy in their opening game of World Cup USA 1994?

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Answer 1: \_\_\_\_\_ Answer 3: \_\_\_\_\_

Answer 2: \_\_\_\_\_ Answer 4: \_\_\_\_\_

The closing date for the competition is 25th August 1994

**US GOLD**

Amiga Computing  
SEPTEMBER 1994



## Cruiser £10.99

The Cruiser is rapidly becoming a firm favourite with games-players. There are two styles of Cruiser; one is decked out all in black while its brother is perhaps the brightest joystick you could ever buy.

Pastel shades of green, yellow, blue and pink cover the joystick and even though it might make the average gamesplayer regurgitate his/her last meal, it certainly performs well.

This is down to the unique three-way power control dial situated at the bottom of the shaft. This makes the shaft looser or stiffer and can be varied depending on the type of game you're playing. The stick and its buttons are fully micro-switched and

respond well. The body of the joystick is slightly longer than most sticks and the fire-buttons seem to be further away, but the Cruiser fits snugly into your hand and after a while you forget it's ever there. A highly recommended buy and one of my favourite "sticks" of all-time.



Company:	Power Play
Appearance:	5
Response:	5
Feel:	4
Overall:	5

## system

## essentials

# Stick

One of the most essential pieces of hardware that a dedicated games player must have is a decent joystick. The System team get to grips with and check out the best selection of joysticks available for the Amiga.

## Zipstik £14.99

Quite possibly the most popular joystick ever created. Just about everyone I know has got one and that's simply because it handles like a dream.

No matter what type of game you're playing, the Zipstik puts in a startling performance. Whether it be a shoot-'em-up or a flight simulator, the Zipstik is guaranteed to serve you well.

OK, so it might not look like the world's best with its rather drab black and yellow colours, but it responds well and fits perfectly into your game mits. The Zipstik is the top-selling UK manufactured



joystick. It's fully micro-switched and has a robust steel shaft so it's not likely to break too easily.

If you're going to get a joystick then I recommend you at least take a look at this one before you make a decision on your purchase. A good all-rounder which won't let you down... ever.



Company:	Power Play
Appearance:	4
Response:	5
Feel:	4
Overall:	5

## Competition Pro Extra

£13.99/£16.99

The first thing that strikes you about the Pro 5000 is how solid and sturdy it feels. It has a rather short handle with the two fire buttons located on the thick rubber base.

On a game like Road Rash it felt a little too unresponsive, having to push it rather fiercely in the right direction. But for the beat-'em-ups it proved excellent, letting you carry out the moves more precisely.

Also available from the Competition Pro Series is the Competition Pro Extra. This is a transparent version of the Pro 5000 which, normally, is coloured the standard black and red. The Pro Extra contains the additional feature of an auto-fire button giving mega-blast rapid fire, short rapid burst or single shot.



Company:	Power Play
Appearance:	4
Response:	4
Feel:	3
Overall:	4

The two large fire buttons provide ease of use for both right and left-hand operation. For some with smaller hands though, it becomes quite a strain to keep your thumb stretched onto the stick. Both joysticks are good all-rounders that promise durability.

## Where to buy

Although some of the joysticks in this feature are from various manufacturers, all of them can be obtained from Power Play who can be contacted on 0457 876705, or the majority of sticks

are available from any good computer stockist. The only exception is the Cheetah Mach 1 which can also be found in almost any good computer stockist.

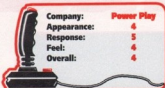
## Cruiser Turbo

This is very much like its cousins, the Cruiser Multi-Colour and the Cruiser Black, but it has one distinct advantage and that is the turbo/rapid auto-fire option.

This little beast is only really useful when playing shoot-'em-ups for that little bit of extra and faster fire-power, but for this type of game it really is a god-send.

The Cruiser Turbo is very comfy, fits in the hand nicely and responds very well, thanks to its eight-way micro-switches. The Cruiser Turbo also has the ever-so useful three-way variable tension control.

Apart from the auto-fire option, this Cruiser isn't much different from its counterparts, but if fast fancy firing is your "thing" then I guess this is the joystick of your dreams - but bear in mind that it does cost you a little more.



**£13.99**

# it to 'em

## Cheetah Mach 1 £10.99

This is quite a large joystick but very easy to use nevertheless. The long, gripped handle fits nicely into the palm of the hand, with comfortable ridges to place your fingers round. The two fire buttons are located conveniently at the very top and around the side of the stick.

An additional two buttons are provided on the base and the eight directional microswitched control feels light and very responsive.

The auto-fire button is placed on the base but it sometimes seems to fall halfway between the two without even

touching it. The joystick also makes a worrying metal on plastic clicking noise when you're playing a game that requires fast joystick work.

Games that require a fast response but don't need absolute precision will benefit from this joystick as it is very light on the controls. It is comfortable to hold but doesn't really feel as though it will last.



## Speed King

**£10.99**



Along with the Navigator, the Speed King has its joystick shaft placed directly on top of its main body. This style of joystick might not go down too well with the computer purist, but I think you'll be more than happy with its overall performance.

The Speed King is ergonomically designed to fit snugly in your hands. It's fully micro-switched and thus responds well to your joystick movements. The fire-button is ideally situated on the side of the joystick body and can be easily accessed whenever it is required.

The Speed King won't suit everyone's tastes and it isn't the most beautiful joystick out on the market, but it's so easy to handle and has such a brilliant name that I heartily recommend it.

## Navigator £15.99

Perhaps the most unusual looking joystick out of this little batch and even though it looks like something out of Star Trek, it does work surprisingly well. This stick has been specifically ergonomically designed so that it ensures a perfect fit, no matter how big or small your hands are.

It is unlike your average joystick and it will take a while before you get into the swing of controlling it. It is perfect for shoot-'em-ups as the fire-button is placed right next to your trigger finger.

The Navigator is fully micro-switched and has a, and I quote,

"unbreakable" robust steel shaft. It certainly won't appeal to every gamer, but I expect that most of you will be pleasantly surprised at how well it performs.

The Navigator is one of those sticks that you're either going to love to bits or hate to death and I seriously recommend that you try it out before you buy.





Core Design's Skelton Krew contains strong characters with a distinctive image

Characters are often developed around requirements in the game. In Core Design's *Bubble 'n' Tite*, Sile developed a personality to fit the gameplay.



## system



The games character – a necessity of most computer games that can make the difference between whether a title makes it or breaks it. But what factors decide the nature of a character? Tina Mackett investigates...

## analysis

guidelines: "The audience must be able to believe – no matter how far they stretch their imagination – that this character identifies with them."

"For example, Zig and Zag are aliens, but they have the attitude of two boisterous young boys. Beavis and Butt-head are two teenagers who have slightly more adult appeal. You have to look at the intended audience and say 'Does this have natural appeal?'"

Simon McCormack of Codemasters sees it like this: "For a game aimed at younger players, the character should be simple and fun, more magical than streetwise. Characters for older players need more

about them, elements of humour, slapstick, pie in your face, the way enemies are disposed of, a hip attitude, a bit of destruction, explosions, speed, a quest. Hopefully, the player sees him/herself as the character – identifies with it."

Whatever shape the character takes on, from simple blobs to beautifully animated creatures, they must be believable and have a personality. Whether it is

Although Dizzy is quite basic-looking, he has developed a personality and character that makes him successful

# Out of

a cool, streetwise attitude or cute and loveable, personality is vital.

"Character is the fundamental basis for a good design – unless you actually want something bland and two-dimensional. Stance and expression have to be explored to show the qualities you want to portray," explained Toby Gard of Core Design.

This is one way in which bought licences have an advantage – their personality has already been established, usually in a cartoon, for example.

They also have an established market but cost the software house a great deal of money in royalties and can restrict development in trying to stick closely to the original to keep fans of the character happy.

Getting back to humble beginnings though, it's the case of the Chicken and the Egg – well, more precisely the sprite and the game. Which comes first? Where does a company start on the road to designing a sprite? Is there a strong character in mind from the start or is it built to fit the concept of the game?

Core Design's Guy Miller states: "Invariably, the characters evolve as the game progresses, sometimes so much so that the original character sketches bear little or no resemblance to the finished product."

Paul Green, designer and graphic artist for Gremlin points out: "You can't just produce a game based on a few sketches of the main character, neither can you have a game idea and plonk any old character into that realm. It's a fine blend of both, which must be refined and sorted time after time until you've got the mix completely right."

### MARKETING

Even when the end game is looking good, marketing is crucial and could make the difference between success and failure. It's obviously easier to market an existing character like the cartoon characters, but for a new character it is important that they are strong enough to sell the game.

"A good, strong character can be an excellent hook on which to market the game and I think it's vital that the game has good, strong characters because, initially at least, the punter may only have these to go on – the characters as shown on the box cover," explained Guy Miller. Once a company has the successful character – the vital ingredients

that make it a winner – and the game has been well marketed, then what? Should they sit back in the satisfaction of a job well done or go further, stretching their character and





# character



*The unlikely character of a fish has proved incredibly successful for Millennium*

pushing it into other fields?

On the one hand, if you have a good character and another company want to use it to endorse their products then all is well and good – both parties reap rewards from the deal and sell more of their products. But on the other hand, in the extreme it could have a detrimental effect on the minds of the young.

Views within the industry on this are mixed to say the least. Simon Phipps of Core Design stated: "We must make the choice as to whether we wish them to grow up as individuals, capable of making informed choices, or whether they will grow up the eternal prey of the marketing men." According to Paul Green from Gremlin: "You have to capitalise on the market. It may sound cut-throat but after all, every company is in existence to make money."

"Why can't game characters become commercial property in other fields? Twelve years ago you couldn't move for 'Six million dollar man' merchandise, and eight years ago who could ignore the Smurfs or the Wombles?"

"Everyone is up in arms because we are guilty in their eyes of polluting children's minds but it's only the medium that's changed. Instead of cereal packets it's now computer games," said Keith Smith of Millennium. Taking all these aspects into account it is apparent that software houses have huge obstacles to overcome in design-

ing games characters. They are up against an increasingly choosy public and have to compete against all the other releases that hit the shelves. They have to be spot on every time, especially in a market where mistakes prove very costly, and must move with the times and with current trends which change constantly.

Giving an inanimate picture a personality and making it come alive is fundamental in producing a good character and they must achieve this in their design. All these are pretty tall orders and take great time and thought to get exactly right. So, next time you pick up a game it's worth considering just what has gone into the design of the character.



*Gremlin's Zool has become an incredibly popular character whose appeal reaches all age groups*



*Even an unlikely egg shape has become successful*



*Pinkie – a character for the nineties*

## Success stories

Who better than the people in the know to give us their insights on what they believe to be their big success stories.

"Codemasters' Dizzy is a simple character, yet very successful, and has been adapted to play in every type of game. He has a personality and a background which help to bring him alive in the game, yet his simplicity means he is adaptable to many forms." – Simon McCormack, Codemasters.

"James Pond obviously was successful. Here we have a game that stars a secret agent that is a Cod. In James Pond 3 he is running around the Moon, which stretches the realms of belief right to the limit. Pinkie has already proved himself to be a good property, because he reflects nineties values." – Keith Smith, Millennium.

"The Battletoads were incredibly successful in the states – probably because they rode on the backs of the Turtles phenomena, which was much bigger in the US than over here.

"It was just a matter of being in the right place at the right time with the right well-designed characters in their own well-designed game. Success in this business is largely down to luck – that and having lots of money to begin with – to get the product to as wide an audience as possible." – Guy Miller, Core Design.

"Rick Dangerous, well, I'm pleased with him, he made it to a sequel and across six formats. He was likeable, funny and the game had plenty of twists and turns that made you go back to it for just one more go." – Simon Phipps, Core Design.



*Gremlin's Little Devil again seems to hold that magic 'appeal'*



The Hall of Worlds where Heimdall's adventures begin



The map screen

00000

# system

# essentials



Another month and another chance to have a sneaky glance at the best budget titles and the odd CD release.

Simon Clays snoops.

## Eye of the Beholder 2

Treading down the precarious RPG dungeon-type footprints of its older brother comes Eye of the Beholder. Obviously a sequel, Eye of the Beholder starts where its relative left off.

The story places you at the foot of a forest on your way to a temple controlled by a religious cult. Once you're inside the temple of Darkmoon the cult send you on a mission to find someone in the forest.

The forest section is well animated and gives your



Lost in the forest, and dancing with wolves, why?

characters chance to build their strengths up a little. Once your four adventures have completed this little task you can go for a romp in the dungeons that lie below the temple.

So far as play is concerned, Eye of the Beholder 2 is little different to many other RPG titles. It employs similar systems to Dungeon Master for magic, combat, view and just about every other control you could think of.

This doesn't make for a poor game though, because Eye of the Beholder 2 is a quality bit of slashing and swaying. The graphics are very well drawn, if a little juddery, and the effects, while limited, are extremely clear and concise.

Perhaps a minor criticism might be that it's a little linear and restrictive, and doesn't really allow you to explore without finding something and knocking hell out of it.

But, aside from this, Eye of the Beholder 2 is a classic investment for any lover, neigh admirer even, of this genre.

## Heimdall 2 CD32

Hot on the tail of the floppy format (reviewed Amiga Computing issue 76), Core Design have pressed the play button on the CD32 version.

The storyline remains the same - it's the age of Ragnarok. Odin tells of a place called the Hall of Worlds where you can travel from one dimension to the next via portals.

While in one of these worlds, Odin is presented with a talisman which freezes the wearer. Unfortunately, Odin smashes the talisman and throws it into four different portals.

Heimdall, hero of the piece, is selected to try and find the pieces, and thus freeze the ever mischievous Loki.

While the storyline's the same, the graphics have been spruced up. Now resplendent in 256 colour, the CD32 version rather obviously outshines its floppy counterpart - and this is saying something because the normal A500 version is colourful enough. The other significant difference is the musical accompaniment. This has been

totally revamped for CD format and sounds brilliant. It's a kind of movie montage where Spartacus meets Robin Hood (Kirk Douglas meets Errol Flynn, interesting - Ed) and adds loads of atmosphere.

Heimdall 2 is filled with playability and blends a nice combination of puzzles, combat and magic with Norse mythology - which makes a pleasant change from orcs, hobbits and all Tolkien's other Middle-Earth bores.

If I had a criticism it would be directed towards the control system. You can't really single Core out as responsible for this though, I'm afraid the guilty finger points towards Commodore.

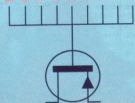
In designing a joy-pad - all pad and no joy - that would have Prince Charles screaming carbuncle, Commodore have rendered it impossible for software houses to produce easily playable games.

Anyway, that aside, Core Design have released a highly enjoyable, if tricky, 3D isometric adventure. CD32 owners haven't had much to shout about yet, Heimdall 2 should at least raise those voices an octave or two.

80%



Publisher: US Gold  
Developer: US Gold  
Boxes: 4  
Price: £15.99  
Genre: Role play adventure  
Hard disk install: Yes  
Control system: Mouse  
Supports: A500, A500+, A1000/A1000+  
Recommended: N/A



85%



# Alternative 3D Textures



Volume 3 of the Alternative 3D Texture library is now shipping. Our new approach to textures now means that using JPEG compression we can supply over 100 stunning images in this 12 disk set. Each image is supplied at full 24 bit broadcast resolution (768x576).

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The second part of a six monthly series in which Gary Whiteley explains how to mix in graphics in your home movies



# HOW TO

## Start a home office

### Frequently asked questions

#### Q How do you arrange a PO Box number?

**A** The first step is to call your local Post Office and ask for the number of the local district Customer Services Dept. They will give you the number and you can then call Customer Services and get a run down of the current conditions and charges. It used to be £80 per year.

#### Q Is it worth getting VAT registered?

**A** You are not liable for VAT until your earnings have reached a certain level, and quite a high level at that. You can register for VAT before you reach that level but it's not advisable as you then have to charge VAT to your customers and get VAT receipts, plus you have to do your VAT returns every three months.

It's a messy business and best left alone until it becomes necessary. Your accountant can advise you on this subject.

#### Q Should you get an accountant?

**A** Yes. They cost very little and save you huge amounts of tax money. Not only that, the tax office is more likely to believe your accountant than you haven't earned any money this year than they are you.

Getting an accountant costs nothing, you only pay when they do your accounts, and all through the year before and after that they are on hand to give you advice whenever you get a scary letter from the TAX or DHSS people. Accountants are worth their weight in money.

#### Q Where can I get advice on designing my business plan?

**A** Any high street bank will have a financial advisor who will be happy to advise you on any aspect of starting and running a business.

# Setting up

**T**he world is changing every day and more people are taking the hint that new technology could transform their lives. Some of them are setting up offices at home, so they can spend a more relaxed time working from home once in a while. It takes the stress out of high pressure jobs and boosts productivity.

For those in high pressure jobs which don't allow working from home, the option to go freelance (and the hell with 'em) is a nice way out. But can you do this using your Amiga, and how do you start to put together a home office? Well, I can tell you because I did it.

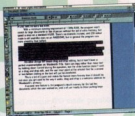
Working from home sounds like such an idyllic thing to do, doesn't it? The fridge is only a few steps away, full of cool beers and that nice ham you got from Sainsbury's the other day which would sit beautifully on that crusty bread.

You can step out in the fresh air for a second if you like, sit with your feet up on the desk, play Nuclear Trouserspans Invaders until the cows come home, right? Well, okay so you have to do work too, but you can choose when and where you do it, right?

The thing is that working from home is a blessing and a curse. You can do all of the above and more, but you also have to find work, do work, issue invoices, chase money and then start the whole degrading process



The Hewlett-Packard range of printers offers good print quality coupled with value for money



Wordworth - one of many powerful and vital word processing packages available for the Amiga



over again. Plus you have to find the time to do your accounts, pay your tax and national insurance, maintain your equipment, figure out how much you're getting paid and if that's more or less than your outgoings, think about the future of your business and how to make it grow, and occasionally you might get a weekend off.

So let's take this slowly. First question: What do you need?

Well a computer would be nice. Oh look, I've got an Amiga, will that do? Of course it will, methinks. It's the finest (and cheapest) graphically stunning, fast, multitasking computer that money can buy.

Well, that's that then, job done. Now where's the newspaper... Hold on, what if someone wants to send me a fax? Offices have them, you know.

Fax modems are all over the place, and this kills two birds with one stone. First it gives you fax capability very cheaply. Secondly it gives you a nice fast modem, which is the key tool if you wish to be a work-at-home bod or a telecommuter.

Fax modems are just like normal ones

except they have a special chip set which allows them to be used (with appropriate software) as a fax machine.

The two really worth looking at are either the US Robotics Sportster 14,400 or the Supra 14,400 Fax modem. You get a brilliant fax plus a sprightly 14,400 baud modem, and both are now under £150. It is definitely worth shelling out the extra, as slow modems cost you money in the long run.

### VOICE MAIL

It's worth mentioning the GVP PhonePak, as this solves a number of problems in one easy card that slips into a Zorro Slot. It's a fax machine, but it's also an answering machine and a fully configurable voice mail system. With it you can create voice mail boxes, or a fully-automated help line, for use with touch tone phones.

One of the next things you will need is a printer for sending letters, printing out headed paper and doing artwork for business cards etc. In this day and age a dot matrix just doesn't cut it as the all round

## If only I knew then

I've been running my own business now for about five years and I had to learn all this stuff from scratch. So what advice would I pass on if asked? It's hard to know where to start, really.

Okay, first and foremost: Tax and NI contributions. Pay them. Don't mess and think you'll get the money together somehow later on. Pay your NI contributions by Direct Debit (thurs less that wage) and get an accountant.

He will tell you to put 25% of everything you earn in a building society account until it's time to pay the tax man. Usually when you pay up you'll have some money left over.

Work out a monthly budget. Write down on a sheet everything you need to pay out every month, then you'll have an idea how much you have to earn and still have some pennies left over to buy essentials like food and compact discs.

Then when you go out to get work you'll know how much you have to get in every



# a home office

printing engine.

OK, so they aren't too bad in colour, but now the price of colour inkjets is coming down you really don't have to think about them. If you want a black and white printer, go for either a Canon BubbleJet BJ20 or Hewlett Packard DeskJet 550.

In colour go for either the Canon BJ or the HP DeskJet colour inkjets, or even the A3 models from the same makers. After that you're in laser printer territory, and I hate to say it, but the Apple Personal Laserwriters look very nice for the price.

Ah, but is a big box machine necessary? A lot of this stuff seems to run on Zorro cards and the like, so do you need a 2000, 3000 or 4000 to run a home office. No, not really.

Most of the applications are just as happy in a base level Amiga as they are in a top-of-the-range workstation. You can run just as good a business on a 1200 as you can on a 4000.

Once you get started with software it's hard to know where to stop. For example, do you need a DTP program like Professional Page, or will a word publisher like Wordworth or Final Copy do?

It depends really on what you have in mind. Most word publishers will be okay for correspondence (especially with a nice inkjet printer), and perhaps a simple newsletter, but for magazines and more advanced textual flipping and juggling, you'll need the services of a DTP program.

One tip: if you do use a DTP program, limit yourself to two fonts – one for headlines and one for main texts. (This is an Amiga Computing Instant Design Sense Tip: just add water.)

On the more serious side, spreadsheets and databases are used by a lot of home-based businesses to keep tabs on the accounts and products, if indeed you actually make something to keep tabs on.

Both the major pieces of software, Kspread 4 and Superbase 4, incorporate the ability to



Phone-Pak – a fax, answering machine and voice mail system all in one package

import and export files to and from the industry standard programs on other platforms, like Lotus 1-2-3, dBase and Excel.

This means whatever systems are installed at the site you are working for, you can pretty much send and receive data from them. Obviously the level of compatibility only extends to a limited range of commands, but for most purposes this won't present too many problems.

## GOING ON-LINE

For example you don't use EVERY word in the English language all the time, do you? So why would you use every SQL term or 1-2-3 command?

So is it worth being on CIX and CompuServe? Being part of an on-line service is invaluable for two reasons – being able to talk to people when you're stuck at

home working all day, and for getting contacts for work. Although CompuServe is a trifle more expensive than CIX, it's worth being on CompuServe if you are in business consultancy, PR or marketing, because of the wealth of up-to-date information you can buy on all these topics.

CompuServe costs \$8.95 per month (as it's based in the US), and there are on-line charges during the day until after 7pm when the basic connect time is free, and on top of that you have to pay for anything other than basic services on an hourly rate.

CIX has a £25 registration fee, plus a connection charge of £2.50 per hour off peak and £3.60 per hour peak rate.

It's worth being on Demon Internet too, as this has a registration fee of £12.5 plus a flat rate of £10 per month. This allows you full access to all the Internet resources and

Phil South looks at the perils and pleasures, the pitfalls and problems of taking all your work home to an Amiga

## Up and running



UserNet News in a friendly and cost effective way.

Once you've got all the hardware and software together, the rest is up to you. The business you are in can be anything, but your Amiga will be able to help you stay efficient and cost effective.

It costs you nothing to feed your Amiga and allows you to produce a huge amount of productive work. That's the basis of a sound home office.

## what I know now

month to hit your target. Ignore this advice at your peril, as you will go under in a couple of months unless you are hitting those targets.

Make work plans. Figure out how much time each job will take and stick to it. Don't leave jobs till the last minute. Keep everything, especially receipts for stuff you buy for the business. This will stand you in good stead when you come to do your accounts.

Write down all your ideas in a big notebook. If you don't write them down you will forget them, and ideas are money in the bank.

Get an answering machine and use it! If people can't get hold of you they won't give you the work.

And finally take notice of health issues. Sitting at a computer all day is bad for you. Take regular breaks, make sure you're sitting comfortably at the computer and that there is enough light in the room so you don't develop a squint.



For under £150, the US Robotics Spotstar offers fax and modem capabilities running at 14,000 baud



10

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☐ **Other** \_\_\_\_\_

- |   |  |                           |
|---|--|---------------------------|
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| 00131 POSITION CROWN LINDSAY (part 1/2) | 001047 TUKNO 3 (2 disks) Rapschmoo           | 0010501 TEN PIN SCULPTING |

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Last month we looked at the Amiga and some of the software tools needed for desktop video production. Now our attention turns to those peripherals which are essential for getting images in and out of your Amiga.

I'm fully aware that the Amiga 1200 we are taking as our example machine has both composite and RF video outputs available, and pretty good they are too.

If you simply want to record graphics from your Amiga to video tape – or just watch them on TV – then there's no reason to start worrying about buying a genlock, because you obviously don't need one.

It's when you want to start putting computer graphics over video images that you should start thinking about genlocks and, short of investing in a pretty heavy-duty vision mixer and timebase corrector (TBC) setup with good keying facilities, there's no easy way to overlay Amiga graphics onto video without one.

In order to mix graphics with video it is essential that the timing of the Amiga's video display is matched exactly to that of the incoming video signal.

This is a major part of a genlock's [short for Generate Lock] function, and works by extracting timing information from the video signal and then sending corresponding pulses to the Amiga via its external clock input in order to synchronise the computer to the video signal.

Many better-constructed genlocks don't necessarily require a video input to be present (a genlock can also be used to 'encode' the Amiga's RGB output into a

# Picture in

Gary Whitely continues his home video escapades by showing you how to mix in the graphics

signal which can be recorded by a VCR) because they have what is known as a free run mode.

However, it is usually better to feed the genlock with video so that it really does get the proper timing signals. Cheaper, and less well-designed genlocks require a video signal to be constantly present – which can be a pain if you don't otherwise need to have one available.

Once the Amiga is locked to the video signal the next operation a genlock performs is to overlay the Amiga's graphics onto the incoming video images.

## KEY COLOUR

This is done by "keying" – in other words by replacing certain areas of the Amiga graphics with video images – usually by using a designated colour as the key colour.

The most commonly-used key colour is palette Colour Zero – the first colour in any Amiga colour palette. This is the default background colour in Deluxe Paint and most other graphics and presentation programs, and is often black or dark blue (though the actual hue doesn't matter in the least).

A genlock reads the information coming out of the Amiga's Zero Detect line, and every time it finds that a pixel contains Colour Zero it quickly switches the output signal to the video image, rather than the non-colour Zero Amiga graphic which would otherwise be output from the genlock.

This switching occurs very rapidly as the complete video screen is scanned from top to bottom every 1/25th of a second, and results in the Amiga graphic being keyed (or, more correctly, key switched) over the video images. More sophisticated genlock

effects are also possible, and circuitry can be incorporated to produce Inverse Keying (video only shows where non-colour Zero graphics occur), user-controlled fading between graphics and video, and also the ability to select palette colours other than Colour Zero to be the key colour.

Some genlocks even incorporate simple wipe patterns, but to my mind these are mostly relatively expensive gimmicks which have little or no artistic value.

One important aspect of choosing a genlock is to ensure that it is compatible with both your Amiga and your video equipment. As far as the A1200 goes it is only possible to use external-mounting genlocks with it, ruling out those models

which mount internally into the box-shaped Amigas – the 1500/2000/3000/4000 ranges.

If you have S-VHS or Video 8 equipment you should obtain a genlock with Y/C connections in order to obtain the best possible quality. If not you'll probably end up with a composite-only one which will tend to degrade your video images, making them muddier and hence somewhat less viewable.

I guess there have been times when you've wondered how you can capture an image and then use it in an Amiga graphics or animation program.

In fact, there are a couple of different ways of doing this – namely video digitising



## Making the connection

Connecting up a genlock is easy, but you need some extra video equipment to use one. Obviously the kind of genlock you buy depends as much on what you have to spend as the quality and features you wish to obtain.

Of the cheaper, composite video genlocks, the only one I would recommend for less than £100 would be Lola Electronic's L500 MiniGen. If you need something a bit more flexible take a look at the E149 L100 MiniPRO (again from Lola).

I know that the RøGen genlocks are quite popular, but I wouldn't personally recommend them as I've always found their quality and operation to be inferior to comparably-priced (or sometimes cheaper) devices.

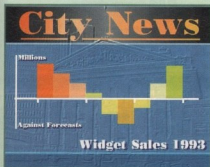
As far as Y/C genlocks go, check out GVP's G-Lock (around £290) or Electronic Design's Y/C Genlock (£399), both of which offer pretty good value for money nowadays. Of course there are also other models available.



Once upon a time...  
An Englishman's home was his castle.



# and picture out



Grabbed images can be used in graphics, animation, 3D, presentations and even DTP work. Here a background image has been embossed and incorporated as a background.

and image scanning. As we are particularly interested in capturing from video I'll just mention that scanning involves reading a printed image with a device somewhat akin to a reversed photocopier which converts the image into digital data that a computer can understand.

A good flat-bed scanner, along with the software to drive it, can easily cost over £800, so scanners aren't likely to be a popular item amongst story broke video makers.

## DIGITISERS

On the other hand, while quite cheap, hand-scanners are unlikely to provide either the image size or quality needed for video work, so the only viable alternative is a video digitiser.

Like genlocks, digitisers come in a range of flavours and prices. The cheapest ones start at well under £100 and offer reasonable-looking grabbing (as it is often known), but at the expense of quality and speed – and they

require a video deck with a rock-solid freeze-frame.

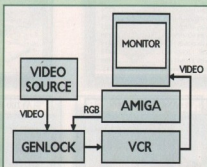
However, not everyone needs top-quality images and with an AGA machine such as the A1200 the results can still look excellent. So if your budget is tight, and you want V/C compatibility, consider Rombo's Vidi Amiga 12 as a good bet.

If you want better quality (and you should think about adding more RAM to your A1200 if that's the case – then a fast scanning, high-quality digitiser should do the trick.

Fast scan digitisers can grab a whole frame of video in real-time because of special memory incorporated into them, whereas slow scan models only grab a chunk at a time.

Rombo offers two fast scan models – the Vidi Amiga 12RT (£199) and the 24RT (£299), the main difference being that the 12RT cannot grab in interlaced modes.

Again, with an A1200 this probably doesn't matter much and you'll save £100 by



Connecting a digitiser is no problem. But you do need a good video source, particularly when using slow scan digitisers.

buying the 12RT. There is also an external version of MacroSystem's Vlub card (the Vlub PAR – £302) which costs a bit more than the Vidi Amiga 24RT but doesn't have a Y/C input.

The better digitisers can also grab sequences of frames, though not at full speed, so if you want to do effects such as automatic time lapse then these are for you.

The Vidi software includes image processing and format conversion routines to help knock the images into the size and look you require. Once you've grabbed an image you can incorporate it into any of your graphics work, provided it is saved in a suitable format.

All the digitisers mentioned above can save IFF files as standard, so this shouldn't be a problem. You could import the image into DPaint and incorporate it into an anim (though this will most likely require extra RAM), or use it as the basis for a video title screen.

If you have a program like ADORage you can make a neat animation by chopping the image into little bits and reassembling them automatically after putting them through some very fancy moves.

Captured images can also be used in desktop presentations and DTP (maybe you'll want to print some videocassette sleeve inserts for your finished tape), as well as output through your Amiga/genlock setup back to tape as part of your video production.

Well that's all for this month. Next I'll be looking at what you need to get started on the home video trail.

● Gary Whiteley can be contacted by e-mail on [orgaz@bcx.compulink.co.uk](mailto:orgaz@bcx.compulink.co.uk).

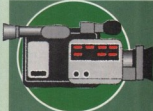
## The costs

Last month we costed a basic Amiga setup as follows: Amiga 1200, £290; RGB monitor (e.g. Commodore 10845, £200; second disk drive, £50. Total around £540.

Additions this month: Genlock – from £70 to around £400; Digitiser – from £70 to around £400.

Next month we'll be adding some video equipment.

## Home video Part 2



## Jargon buster

**Composite Video:** a 'single wire' video signal containing all the necessary brightness, colour and sync information in one combined signal.

**Pixel:** the smallest 'building block' of a computer graphics screen. Pixel size varies according to the screen's resolution.

**RF Video:** a combined video and audio signal such as that which arrives at your TV through the aerial cable or from the modulator output of your Amiga.

**RGB Video:** the Amiga's internal video format, consisting of the three colour components that make up an image. RGB has to be converted (encoded) into standard video signals by either a genlock or encoder for use in the outside world.

**Y/C Video:** a superior quality video signal where the colour and brightness information are kept separate to provide better-looking pictures. As used in S-VHS and Video 8 systems.



Typically, a genlock allows you to overlay graphics onto video images, as illustrated here. A text image is mixed with a video image, resulting in text on video!









One of the great things about word-processors and text editors which have *ALeX* interfaces is that it's possible to create sophisticated search and replace facilities by building the appropriate macros.

You might for instance have some documents that contain dimensions and weights which need to be converted to their metric equivalents, weights in lbs to kilos for example and this would mean not only changing the 'lbs' units to 'kilos' but also altering the numerical values by dividing each weight by 2.205 (since  $2.205 \text{ lb} = 1 \text{ kilo}$ ).

Feet/inches to centimetres, pints to millilitres etc., there are hundreds of situations where similar types of conversion can be useful.

Moreover, when you have documents that include, say, tables containing a whole set of values that need converting, then it is obviously better to have the process automated because the chance of errors being introduced is eliminated once a tried and tested conversion macro is available for use.

It is, however, only worth creating macros to do this sort of thing if you can write the macro quickly enough to make it an economic proposition time-wise.

The trick here is to have ready-made fragments of code available that you can copy and modify to do particular jobs and the example code this month is just such a piece of code.

## PATTERN

It's a procedure called *ModifyBlock()* that can be given a block of text along with the units to be changed, the name of the replacement unit and an appropriate conversion factor, and it will return the block with the desired changes in place.

Once you've got the general idea, creating your own specialised procedures for doing this type of thing is not hard because the guts of the routines tend to follow the same pattern.

Split the text up into words, search for the word or words that you are interested in, convert them, and then reassemble the text block. If the conversion to be performed is not straightforward enough to be written with a few lines of code, it is probably better to write a separate procedure for the conversion function and then call that from the generalised code that isolates the individual words.

Don't forget that compound variables, such as *word\$* and *word\$j* in the example routine can always be used as parameters for other procedures.

You could, if desired, extend this month's example code by passing and collecting the isolated number and unit values using these types of statements:

```
word$.i:=ChangeWord(word$.i)
word$.j:=ChangeWord(word$.j)
```

Isolating the conversion-specific code is actually quite a good idea because you don't then have to make any changes to the structure of the parts of the routine that identify the required words in the text.

# Macros built for change

If you were a teacher with a whole series of maths tests on disk involving conventional base 10 arithmetic and you wanted to create a macro that could automatically convert all the test paper sums and answers to base 2 or some other base, the idea would be to pass the identified numbers to a specialist routine that returned the converted value like this:

```
word$.i:=ConvertNumber(word$.i)
```

For illustration purposes I've just coupled the *ModifyBlock()* procedure to a short test program that passes some example text containing a couple of 'lbs' values and gets the values converted to kilos.

In your own programs you would, of course, use your editor's (or word-processor's) own *ALeX*-specific instructions to collect lines or paragraphs from the document being edited.

Incidentally, don't get thrown by the dollar (\$) signs at the end of some of my variables - this is just a convention that I use on those occasions where variables are clearly used for

text strings. The variable used to hold a block of text is therefore labelled *block\$*, whereas the variable used to hold the value for unit conversion (conceptually a number) is called *conversion\_factor*.

*ALeX* variables are, of course, typeless and internally *ALeX* treats all such values as strings anyway. Nevertheless, I find that adding a little pseudo-type information serves as a useful purpose during the development of *ALeX* code and you'll see this convention used in all the code I write.

Talking of code, you'll see that I've chosen a very obvious way of looking for values to change in this month's example. Look for a number and then check to see whether the subsequent word indicates the correct units.

It works but there is one improvement that can cut the execution time of the routine in half. If you like puzzles then have a think about the current version of the code and see if you can spot the change to be made before the next issue let's you in on the secret!

ALeX



Paup Overaa gives a few tips on how to create easily modifiable search and replace *ALeX* macros

## Value changing

```
/* ----- */
/*Block() procedure in action */
mytext$="I have 2 lbs of apples and 10 lbs of onions please"
say mytext$
mytext$:=ModifyBlock(mytext$,"lbs","kilos",1/2.205)
say mytext$
exit
/* ----- */

ModifyBlock: procedure
    parse arg block$,unit$,new_unit$,conversion_factor
    numeric digits 4
    number_of_words:=Words(block$)

    do i=1 to number_of_words
        word$:=Word(block$,i) /* extract words from block */
        end

        do i=1 to number_of_words-1
            if Btype(word$.i,"W") then
                do
                    j=i+1
                    if word$.j=unit$ then
                        word$.i:=conversion_factor*word$.i /* more complex conversions */
                        word$.j:=new_unit$ /* could be done using */
                        end /* further procedure calls */
                    end
                end

            block$:=word$
            do i=1 to number_of_words
                block$:=block$ word$.i /* rebuild block */
                end
            end

        return block$
/* ----- */
```

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**M**ost videographers assume that if an image is to appear on video it has to be animated. In fact, like any other artistic exploit, DTV productions can always benefit from a little light and shade.

If a project is solely comprised of a constant stream of ever-changing animated images, it can become rather monotonous – a brief glance at the average low-budget music video is testament to that.

If you're trying to make a point, during a documentary for example, stills are an excellent way of adding an authoritative news feel. Also, if you're an animator stills can be a very convenient method of stretching the production without forcing your system to expend a huge amount of effort on additional animated sequences.

Another obvious bonus is that stills often provide the only opportunity to display your creations as they really are, rather than being forced into a compromise – as is often the case when imagery is compiled into an anim format.

If you're the lucky owner of one of the many 24-bit display boards, stills may be the only method you'll ever have to show your work at its best.

Obviously some of the modes offered via the AGA come pretty close, but even with the best efforts of Hamill there's still a noticeable difference between the two.

As I'm sure you're aware there are countless methods of importing images into the Amiga, but basically the process invariably boils down to either scanning or frame grabbing.

In the case of frame grabbing the conversion from live video to a still is relatively painless. As you're already dealing with a video legal image, there's no palette adjustment necessary to avoid the dreaded colour bleeding so often associated with composite video.

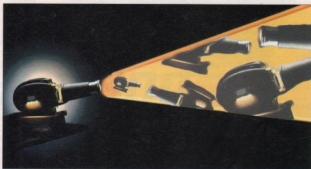
This is a regular problem when you're employing scanned images which contain colour saturations that exceed 192 or approximately 12 within the Amiga's colour register.

In simple terms this means you must be careful during selection. If you suspect an element of the image is over saturated check it out in a paint package and make the necessary adjustments before you compile.

Ideally it's always best to run rendered or scanned images through an image processor such as ADPro or ImageFX. Both packages allow you to apply broadcast saturation control operators which will ensure perfect results.

Even though the saturation levels are within the correct levels it's sometimes worth adding a

# Light and shade



keyline – especially to brightly coloured logos and text to ensure they don't bleed in later tape generations.

This can be done very easily via DPaint's outline function which applies a user-defined outline in the colour of your choice around the selected brush. If you do decide to use this option always opt for a dark – preferably black – outline colour.

## BLUERING

Even though video grabs are "colour legal" it doesn't mean they're completely free from harm. One of the most frequent grabbing disasters is image blur, a phenomena which is usually accompanied by a horrendous amount of interlace flicker.

This happens all the time when dealing with fast action. Fortunately there is an answer, which although not ideal is a lot better than the migraine-inducing effect of a particularly flickery grab.

All the main image processing programs such as ADPro, Image Master and ImageFX offer a

de-interlace option as standard – and it's also fairly likely that the software used to grab the image will offer a similar feature.

Because all video images use two alternating fields to effectively double the resolution of the image, interlace flicker is something you have to come to terms with.

In effect, de-interlacing divides the two signals into their respective fields. As a result the flicker between the two is removed – but alas this inevitably means you lose half the original resolution.

Therefore, always remember to double the height of a de-interlaced image before adding it into a sequence.

If we assume the images are ready for video and in the correct proportions – interlace with maximum overscan – it's time to add them to the production. There are several ways to achieve this, with perhaps the most impressive being Scala – which can introduce stills with a variety of wipes and fades.

If your finances won't stretch to Scala you could employ a PD picture viewer or, even better, load them into View 3.6 – an excellent anim player and picture viewer which is widely available in the PD.

With this program it's possible to compile several images into an anim and play them back frame by frame thanks to the program's single frame advance feature.

When a series of stills are combined with a genlock the results can be stunning, especially if the stills are from the actual video on display. Now you can employ the classic TV trick of "echoing". How often do we see a still frame flashback of an athlete frozen for posterity while titles or information pop-up on-screen...

You can do the same, constantly flashing back to the high spots of any event, perhaps with a voice-over adding to the atmosphere.



Paul Austin  
explains how  
to inject some  
style with the  
occasional still.

## Listen to me

Narration is another great reason to employ stills. If you have a mixture of live video, computer graphics and music it's very difficult to add a voice-over without confusing the viewer.

Once again the still can provide a quiet moment where an important voice-over can be introduced and, more importantly, absorbed by the viewer.

Apart from sporting flashbacks, perhaps the best place for such effects is within documentary-style productions. If you're working for a client who wants to establish a corporate ID, nothing impresses more than the occasional still of the boss or a panoramic wide-angle shot of the new offices.

Finally, no matter what the subject or style of your show, a genlock is a near essential for a professional finish. Although direct exposures are useful – echoes being an example – the option to fade stills up or down through live video really adds to the production.

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**P**ercussion instruments include everything from bass drums and tambourines, right through to the more obscure instruments such as the cabasa. Namely everything you 'bash' to play!

One might think that creating a drum accompaniment for a song played on a multi-timbral synth would just involve selecting suitable drum sound voices.

In fact it isn't quite that straightforward because, set up in the conventional way, a multi-timbral synth would only be able to play one voice per channel.

Even if you only wanted a bass drum, a snare drum, open and closed hi-hats, a couple of toms and a cymbal, you'd use seven channels and a large chunk of your multi-timbral capabilities.

The solution involves adopting an arrangement whereby all percussion events are sent on just one channel, with the note value being used to indicate which particular percussion voice should sound.

Some synthesizers and expanders have a special drum channel assigned for this purpose but if you take the hardware that can do this, add some touch-pads which act as drum keys, incorporate memory for storing drum patterns and finally add some software which permits the creation and editing of rhythm patterns, you end up with a unit called a drum machine.

Why mention these? A great many synthesizers, especially those slightly older models, do not have any special drum/percussion facilities. Because of this, you might need a drum machine in order to add drum/percussion sounds to your song arrangements.

As far as the recording and playing back of percussion tracks is concerned, it is much the same as recording or playing back ordinary synthesizer data, although there are a couple of things to bear in mind.

## TRANSPOSING

Firstly, you must not transpose drum channel data because if you change the note values you'll change the actual percussion voice being played.

The effect of inadvertently transposing a drum part will sound disastrous on playback – recorded bass drums might turn into cymbals, the snare drum might vanish and so on.

Obviously it is something that is easily fixed by re-transposing the data back into its original key, thereby restoring the original note values. Some sequencers (Dr Ty's KCS for instance) allow you to 'protect' a specified Midi channel from transposition for this very reason.

The second thing which needs to be pointed



Be wary if buying a second-hand drum machine. Some, like Yamaha's RX21, cannot have their voice settings reconfigured

# An editing nightmare!

out is that drum machines (or integral synthesizer percussion facilities) vary enormously in the number of different percussion sounds they can provide.

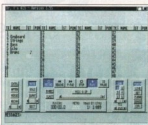
Up until fairly recently, there was little standardisation between different manufacturers as far as which note numbers would represent which drum sounds.

General MIDI (GM) has improved matters here because it has defined a set of standardised note-drum-voice correspondences that are always used on Midi channel 10 (the GM designated percussion channel).

If you've been involved with Midi for some time and have built up a large library of sequence material, there's a potential problem looming.

In order to make the most of commercially arranged song and sequence library material, you need to have your drum machine set up for the GM drum note correspondences because most of this material is provided in GM compatible Midi file format nowadays.

However, in order to play your existing material, you will still need your percussion unit



Dr Ty's KCS allows you to 'protect' a specified Midi channel from transposition

set up to provide the drum note correspondences that you originally used.

What can you do? Firstly, you can opt to keep changing the drum note correspondences you use. Secondly, you can remap all the GM sequence material that you obtain so that it corresponds to your original drum note mappings. Or lastly, you can remap all your existing sequence data so that it then conforms, as near as possible, to the GM arrangements.

Obviously the best long-term solution is the last one because this will bring your Midi set-up into line with what has now become a firmly established voicing scheme.

Incidentally, many older drum machines (such as the Yamaha RX21) have fixed note drum-voice correspondences which you cannot alter.

Avoid these like the plague when searching for second-hand bargains and whatever you decide to buy, do make sure that the drum machine's notedrum-voice settings can be re-configured.

MUSIC



Paul Overaa explains about an Amiga drum and percussion sequence editing horror that's rattling some Midi users

## Can you help?

Most Amiga sequencers provide editing facilities that can be used to remap notes on a particular channel, but when you've got possibly hundreds of sequence files this sequencer editing approach to drum part remapping is both time consuming and error prone.

Moreover, many people nowadays tend to store their sequences in Midi file form, so what we really need is a 'reconfigurable' drum track remapping utility that can work directly on Midi files using sound and destination drum map information supplied by the user.

I've never been able to find a utility like this, so at this point I'm asking two favours. Firstly, write and let me know if you've ever come across such a utility so that I can tell everyone else about it.

Secondly, write and let me know if you would find such a utility useful – if there's sufficient interest I'll write one and put it on the cover disk.

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Even the seasoned Internet Navigator gets lost from time to time. At such times you really need something to reach for — a bucket would be nice — especially if you've been on the Usenet alt.asterless newsgroup for too long.

No, I'm thinking of a reference guide, something which would tell you all the stuff you need to know and fill in the gaps in places where you learned only what you had to know to get the job done.

Okay, so there are some online texts, like the Big Dummy's Guide to the Internet from EFF and Brendan Kehoe's Zen and the Art of the Internet, but they are pretty technical, and if you don't know where they reside how can you get them and read them?

Fortunately for you and I there are some books around which give you a comprehensive guide to what's what, and I've been scouting around for some good ones.

Most Internet books, in common with a lot

# Navigation bearings

COMMS

of computer books, are American and dry as old toast. They are big thick books with 16 billion pages and full of lists of arcane UNIX commands, most of which you wouldn't ever need, unless of course you intend setting yourself up as an Internet service provider.

## Duplicated

I did happen across two books which were readable, even funny in places, and full of information. Sadly, as they are written by the same guys, a lot of the information is duplicated in each book, so it's an either/or situation. Buy one or the other, not both. The books in question are The Internet Yellow Pages and The Internet Complete Reference, both by Harley Hahn and Rick Stout.

To be sure, The Internet Complete Reference (TICR) is a forbidding sight, all 818 odd pages of it

and about an inch and a half thick. It looks like the sort of book you wouldn't like to enter without stout walking boots and a full pack of sleeping gear and noah. Surprisingly however, from the first page you are drawn in Harley Hahn's little world within the Internet. The style is warm and friendly, and yet not lacking in technical detail.

This is the technical detail book, and is where you can learn to hot-wire the Internet from scratch using only a simple terminal program.

Obviously things have moved on since then with a lot of graphic user interfaces coming along in the last six months, so a lot of this stuff is academic.

But you know, I like to know this stuff in case I ever find myself without my Amiga and a copy of Amiga Mosaic. You never know. And it is the complete reference after all, so if you ever need to know how to set the maximum number of hits in an Archie search, and don't want to look a dork on the Net by having to ask, you can look it up here. (Chapter 17 p337, if you must know.)

As for The Internet Yellow Pages, now this is where it gets interesting. The second half of TICR is a catalogue of resources on the Internet, and some bright spark thought it would be swell to peel that off the book and sell it as a new book — suitably rewritten and augmented of course.

This, like most bright spark ideas, was a flipping blinder, as this is one of the best books about the Internet you can buy. It's funny, interesting, occasionally mind blowing, but always readable and useful.

It's solved a few of my immediate problems already, like how to find an e-mail address when you can remember it (p159), where is the locksmithing newsgroup on Usenet (alt.locksmithing), and where can you get a high grade source of dirty limericks (quartz.rutgers.edu).

It's a great book and one which is never far away from my hand. It's that rare thing, a reference book you also read for fun.



Phil South looks at two new books on the Internet from Osbourne/McGraw Hill.

## Which to buy

If you only buy one of these books then go for the Yellow Pages, but if you want technical info and can find your own resources, then go for TICR. If you're rich and want to have everything that's the best in it's field, then buy both.

## Internet watch

For those of you that don't have, or intend to buy, the Internet Yellow Pages, (poor misguided souls) here is this month's dip into the Internet. I've been spending the last month looking up friends I only ever talk to via e-mail. One such figure is Steve Roberts, tech nomad. You know, the guy who used to ride around America on his recumbent bike loaded down with Sparcstations and Macs?

Well, Steve's next project is the MicroShip, an ocean-going version of his computer bike. To get updates on the MicroShip project, which is drawing to a close, use a World Wide Web server or client program to access:

21 = microship.ucsd.edu

or:

http://w1craship.ucsd.edu

Steve has put some text and pictures of the project for all to see.

Our second service station on the infohahn is outer space. Yes folks, if you need to know how to make your own flying saucer it's all here on the Internet. Simply FTP to:

ftp.spies.com

and go to the directory:

/Library/Tringa/info/build.ufo

There you will find all the info you need to make your own mode of transport that not only gets you from A to B faster than the speed of light, it also makes nifty crop circles as it takes off.

And finally, do you have a question on a range of subjects as diverse as disk picking, comics, Disney, roller coasters and how to make vodka? You need a frequently-asked questions listing. All the FAQ lists from Usenet can be found either by joining the:

alt.answers  
misc.answers  
news.answers

and other similarly named Usenet groups, or download your favourites by FTP from:

rtfm.alt.edu

in the directory:

/pub/usenet/news.answers

and then you don't have to wait for each list to be posted to the group!

## Contacts

See your local bookseller for both these items:

### The Internet Yellow Pages

(Osbourne/McGraw Hill 1994)  
By Harley Hahn and Rick Stout  
ISBN 0-07-882023-5

### The Internet Complete Reference

(Osbourne/McGraw Hill 1994)  
By Harley Hahn and Rick Stout  
ISBN 0-07-881980-6

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making Amos programs that really sing off the screen at you has always been problem numero uno. Regular correspondent and Amos hacker Malcolm Lavery has come up with this neat idea which deserves a look, and it's all about the making and using of 3D buttons. Let's go through his listing with a fine toothed comb.

Firstly we round up the usual suspects, setting up the screen and palette nonsense:

```
Screen Open 0,640,256,16,Hires
Palette
$0,$FFF,,,CCCC,EEEE,9999,3333,888F,$A00,$800,$40
$80,$80,$80
Gara Off : Cls 0 : Flash Off
Limit Mouse 0,0 To 640,500
```

The limit mouse thing is to stop the mouse co-ords screwing up, and if you intend doing any mouse co-ords stuff I recommend you reset them first before use. Next we need to reserve some zones:

Reserve Zone 10

Obviously there is one zone for each button you wish to create. Then we call the 3D Button procedure to create our buttons:

```
_3D_DISPLAY,0,640,10,0,0
_3D_BUTTON,1,1,640,250,0,0
INK 0,0
Text 1,7,"FILE:R10:3D_buttons_demo"
_3D_BUTTON,2,20,230,10,0,"PRESS",0,0
_3D_BUTTON,3,20,250,10,0,"And press here!",0,0
_3D_BUTTON,4,20,460,20,0,"Any size buttons can be drawn",0,0
_3D_BUTTON,5,20,470,150,0,"BIG BUTTON",11,0
_3D_BUTTON,6,220,225,100,20,0,"QUIT",0,0
```

How this works is detailed later on. Then of course we set up a control loop, testing for mouse clicks and routing the info to the buttons:

```
Do
TESTMouse Zone
TESTMOUSE Key
If TESTMOU=1 and TEST=1 _3D_BUTTON,1,20,230,10,0,"PRESS",0,0
Bell
Wait 10
_3D_BUTTON,1,20,230,10,0,"PRESS",0,0
End If
If TESTMOU=1 and TEST=2 _3D_BUTTON,2,20,250,10,0,"And press here!",0,0
Bell
Wait 10
_3D_BUTTON,2,20,250,10,0,"And press here!",0,0
End If
If TESTMOU=1 and TEST=3 _3D_BUTTON,3,20,460,20,0,"Any size buttons can be drawn",10,0
Bell
Wait 10
_3D_BUTTON,3,20,460,20,0,"Any size buttons can be drawn",0,0
End If
If TESTMOU=1 and TEST=4 _3D_BUTTON,4,20,470,150,0,"BIG BUTTON",12,0
Bell
Wait 10
_3D_BUTTON,4,20,470,150,0,"BIG BUTTON",11,0
End If
If TESTMOU=1 and TEST=5 _3D_BUTTON,5,20,520,225,100,20,0,"QUIT",0,0
Bell
Wait 10
_3D_BUTTON,5,20,520,225,100,20,0,"QUIT",0,0
End If
If TESTMOU=1 and TEST=6 _3D_BUTTON,6,220,225,100,20,0,"QUIT",0,0
Bell
Wait 10
_3D_BUTTON,6,220,225,100,20,0,"QUIT",0,0
End If
Loop
```

# Buttons galore

The tests check each button and if the test is true then the text on the button will change. Usually a bell will sound to indicate that your button has been pressed.

Finally we have the procedures which create and use the buttons. \_3D\_BUTTON gives you a zone number, x,y co-ords for the top left corner, height and width from that corner, IN\_OUT which is a flag to see if the button is in or out, the text to be inserted on the button, and the background and ink colours. It's a comprehensive little proc, and very well done to Malcolm for figuring it out.

```
Procedure
_3D_BUTTON, ZONENUMBER, X, Y, WIDTH, HEIGHT, IN_OUT,
TEXT, FILL, INK
```

First we test the length of the text:

```
LET=Text Length(TEXT)
X,TEXT=X+WIDTH*2
Y,TEXT=Y+HEIGHT*2+1
```

This next bit is the flag for the in or outness of the button in question:

```
If IN_OUT=0
HIGHLIGHT=5
SHADOW=7
End If
If IN_OUT=1
HIGHLIGHT=7
SHADOW=5
End If
```

Then we draw the shadows and highlights:

```
Ink HIGHLIGHT
Draw X,Y To X+WIDTH,Y
Draw X,Y To X,Y+HEIGHT
Ink SHADOW
Draw X+WIDTH,Y To X+WIDTH,Y+HEIGHT
Draw X+WIDTH,Y+HEIGHT To X,Y+HEIGHT
```

And fill the button:

```
Ink FILL
Bar X+1,Y+1 To X+WIDTH-1,Y+HEIGHT-1
```

Then we insert the text as graphic text:

```
Gr Writing 0
Ink INK
Text X,TEXT-LE/2,Y,TEXT,TEXT
Gr Writing 1
```

and finally set up the zone:

```
Set Zone ZONENUMBER,X,Y To X+WIDTH,Y+HEIGHT
End Proc
```



System legal file requesters for Amos are no longer a dream

Next we have the \_3D\_DISPLAY proc, which provides 3D backgrounds for your 3D buttons. No need for zones here, as these are simply static boxes.

```
Procedure
_3D_DISPLAY,X,Y,WIDTH,HEIGHT,IN_OUT,FILL
If IN_OUT=0
HIGHLIGHT=5
SHADOW=7
End If
If IN_OUT=1
HIGHLIGHT=7
SHADOW=5
End If
Ink HIGHLIGHT
Draw X,Y To X+WIDTH,Y
Draw X,Y To X,Y+HEIGHT
Ink SHADOW
Draw X+WIDTH,Y To X+WIDTH,Y+HEIGHT
Draw X+WIDTH,Y+HEIGHT To X,Y+HEIGHT
Ink FILL
Bar X+1,Y+1 To X+WIDTH-1,Y+HEIGHT-1
End Proc
```

And there it is. A simple program, illustrating a few cardinal rules of Amos. Make a small program which automates a task and work onwards from it. Although I'm still not sure about Procs from the standpoint of larger programs, in small programs they are no slower than taking the sub-routine route, so it's good either way.

Once again a neat proggy from Malcolm, and thanks for that.

Any more brilliant Amos code heads out there would be welcomed with our genius? Hmm, I thought so.

AMOS



Phil South looks at 3D buttons and how to construct them.

Write stuff

If you have an Amos question, or a routine you'd like to share with the world, then please write to Phil South, AMOS Column, Europa Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.





Last month we set up everything to do with paragraphs for an entry in our Final Writer style sheet. Now we'll complete the style by adding tab settings and the type details.

Load the document we saved at the end of last month's article and get the Main Styles requester on to the screen by selecting Layout/Define Style/Main.

In the Style Names list, click the Body style we created previously and then the Define gadget under the Tab Settings heading over on the right.

At the moment there are no tab settings. If you don't need tab settings for this style, then you don't have to worry about this requester; Final Writer has a default tab distance of half an inch, and you can alter this in the Project/Preferences/Document Items requester.

The important fact to remember about tab settings is that the position is measured as a distance from the left-hand margin setting, not from the exact left of the page.

To set up a tab position, first hit the New gadget, decide what type of tab it is, then enter the position. You can have as many of each type of tab as you like, but be careful not to specify the same position for two types – for example, if you have a left tab set at 2.0 and a centre tab set at 2.0, then a second one in the list will never be used.

Notice that as you enter position figures, the list automatically sorts itself into left-to-right order of distance across the page.

Select OK to accept your tab settings, then select Define under the type settings heading. This requester is where you get to choose a typeface and type style.

Hit the select gadget under the typeface name heading. Final Writer will put up its font requester which defaults to its own PFWFontSW/FonS drawer. You may alter this in the Final Writer icon's ToolTypes). Select a font and click OK.

Beneath the typeface name gadget is the colour list. You'll probably want the main body to be black, but for other styles you may want to select a colour. If you don't own a colour printer you will need to experiment with these colours to see how they print

# The style council

in mono. Despite what they say, size is important. Body copy is normally anything between eight point and 11 points. Magazines, for example, are generally set in 9 or 10 point, books are usually 11 point, or perhaps 12 point if the typeface is a 'small one'.

For good readability leading should be about 120% of the point size – so 10 point text is good with 12 point leading (written down as 10/12pt). Note that the leading size includes the size of the typeface, so 10 point text with 12 point leading means there is two points of space between the lines.

## NEW SLANTS

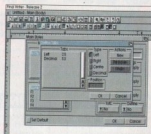
The Width gadget enables you to condense or expand a typeface. For body copy it is better to buy a typeface which has been specifically designed as condensed or expanded, but for quick special effects – in headings for example – make good use of the Width gadget.

Likewise the Oblique gadget. You shouldn't really use this as a replacement for a proper italicised typeface, but it is very useful for adding a new slant to your document.

Over on the right of the type specs requester you can select superscript or subscript from the position drop-down menu, and beneath that you may select All Caps or Small Caps.

Small capitals are upper case letters where height matches the height of the lower case letters in that point size (the 'x-height'). If a word has an initial capital, then that is left at its full height and only the subsequent letters are put into small caps.

Finally we come to Style, which is



Be careful not to position different tab styles at the same position

a rather confusing name for what is merely a drop down menu that enables you to select some underline options. Underlines make a document look amateurish; use them sparingly.

Everything selected, hit the OK gadget in the type specs requester, then the OK gadget on the main styles requester. Our style is now set up.

If you select Paragraph/Font/Style Strip from the View menu, the body style should appear in the gadget at the top left of the screen. Select View/Show Style palette to get the body style gadget into a floating window if you prefer. Remember, to save the style you must save the document.

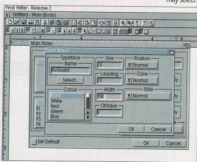
To the casual user this must all seem like a hell of a lot of work just to get some text on the screen in a particular typeface and size. Indeed it is. And you don't have to do it this way.

However, the advantage is that which you have to set up your styles once, after which any style is literally one mouse click away. Without styles you would have to manually set all the parameters every time you wanted to change style.

Once you get used to the idea, I'm sure you'll find it a much more productive way to create documents, particularly if you want your documents to have a consistent look to them.

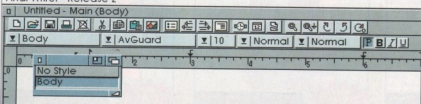


A document must have words. Ben Pointer shows how to add a bit of flair to your text



A good 'default' for leading is about 120% of the type size

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After setting up styles you may select them from a button strip from a floating 'palette' window

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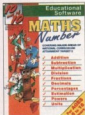


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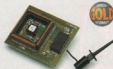
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