

NDD

**Australian Commodore &**

# AMIGA

*For Professional and Home Users*

**Disaster  
Recovery**

How to rescue lost data

*Review  
Review*

**New CDs**

A guide to the latest

**Brilliance 2.0**

Paint in 24-bit on any Amiga



\* Recommended Retail Price



# SigmaCom

**Expert Advice  
Quality Service  
and Price**

**OPEN  
MON-FRI 9AM - 5PM  
SAT 10AM - 4PM**

## AMIGA MULTIMEDIA SPECIALISTS

### AMIGA HARD DRIVES

#### Fast SCSI-2 Drives

340Mb FAST SCSI-2	\$399
540Mb FAST SCSI-2	\$499
1.08Gb FAST SCSI-2	\$1199
1.4Gb FAST SCSI-2	\$1599
2.1Gb FAST SCSI-2	\$2299

#### IDE Drives for A4000

260Mb IDE	\$299
428Mb IDE	\$399
545Mb IDE	\$469

#### IDE Drives for A1200

40Mb 2.5" IDE	\$199
120Mb 2.5" IDE	\$399
120Mb Swap for 40Mb	\$299
200Mb Swap for 40Mb	\$399

#### Syquest Removable Hard Drives

Syquest 88Mb with Cart	\$649
Syquest 105Mb with Cart	\$699
Syquest 270Mb with Cart	\$829
44Mb Syquest Cartridge	\$149
88Mb Syquest Cartridge	\$149
105Mb Syquest Cartridge	\$125
270Mb Syquest Cartridge	\$129
250Mb Tape Cartridge	\$59



### HIGH SPEED MODEMS

**Maestro 28.8k \$499**  
**Maestro 14.4k \$399**

FAX and DATA modems.  
Includes GPFax Software.

### EPSON COLOUR STYLUS

**\$1199**



720dpi X  
720dpi  
24bit  
Colour

AMIGA DRIVER AVAIL.

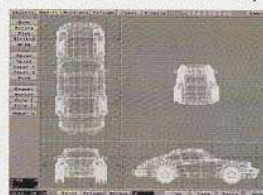
### LIGHTWAVE 3D - PAL The Professional Standard in 3D Rendered Graphics



LightWave 3D is an all-in-one photorealistic animation system. LightWave has been seen on TV shows like SeaQuest DSV, Babylon 5, Robocop, Star Trek: The Next Generation. Create objects with LightWave modeler. Lathe, extrude or Boolean drill. Use PostScript fonts to create 3D text objects. Add lighting effects and camera moves. No other 3D package offers this much power and flexibility combined with such an intuitive interface. LightWave comes with a free "LIGHTWAVE 3D ESSENTIALS" video tape to help you get animating fast. Lightwave 3D is the choice of professional 3D artists. There are other videos available that cover all aspects of LightWave 3D.



LightWave LAYOUT Screen



LightWave MODELER Screen



**\$Call**

Free Delivery Australia Wide!

### SCALA MPEG CARD MD100

**MPEG for your A2000, A3000, A4000. VideoCD & CDI support.**

Now you can include Digital Video in your SCALA presentations. The MD100 MPEG-1 card allows playback of 24bit, 25 fps video with 16bit stereo sound. Video quality up to S-VHS is supported. You can playback video from any Amiga partition or from an MPEG CD-ROM drive. Now you can play-back all the MPEG Movie titles and reference titles on you A2000, A3000 and A4000. If you put the MD100 card in an A3000 or A4000 with a video slot and Zorro slot inline. You can genlock on top of the MPEG video playback. The MD100 also features RGB, Composite and Y/C outs.



With the MD100 comes the MPEG Encoder. This allows you to convert anims or grabbed IFF's into MPEG video streams for real-time playback in 24bit colour.

**\$1399**

### GVP IV-24 SELLOUT EX-DEMO



The IV-24 is an all-in-one desktop video system. Flicker Fixer, Genlock, PIP, 16.8m Colours and Real-Time frame grabber. Its all there.

- Intergrated video genlock
- 1.5M 24bit colour frame buffer
- Real-time framegrabber/digitizer
- De-interlaced video flicker eliminator
- RGB, composite, S-VHS input/outputs
- Betacom, M-II input/outputs
- Picture inPicture display
- Digital and analog key inputs
- Video switcher transitions

**SPECIAL**

**\$ 995**

EX-DEMO

**PRICE**

### CHRISTMAS SOFTWARE SPECIALS



BRILLIANCE V2  
**\$99**



PAGESTREAM V3  
**\$399**



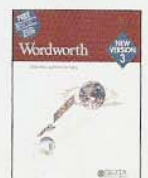
PRO DRAW V3  
**\$149**



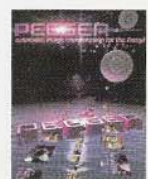
IMAGINE V3  
**\$459**



CINE MORPH  
**\$49**



WORDWORTH V3  
**\$149**



PEGGER  
**\$125**

**DISK  
EXPANDER  
\$69**  
**POWER  
COPY  
\$59**

**PEGGER**, The ultimate automated JPEG image compression software. Snoop allows PEGGER to compress the output of your 3D rendering or graphics program into a JPEG file automatically. PEGGER is the fastest JPEG program for the Amiga. PEGGER is designed to multi-task in the background using minimal system resources.

**AMIGA OS 3.1**

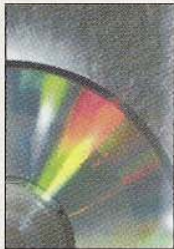
A500  
A2000  
A1200  
A3000  
A4000

**\$Call**



**MAGIC LANTERN V2** allow users to create, edit and display delta-compressed animations in up to 24bit colour. Most 24bit cards are supported. EGS, GVP SPECTRUM, RETINA Z2 & Z3, OPAL VISION and PICASSO II. Synchronizes sounds with animation playback. **\$139**

# CD-ROM DRIVES - CHRISTMAS SPECIALS



**NEC**  
**CDR-25**

**\$299**

External Portable - Single Spin  
Single Session - No Caddy!  
**FREE Driver Software**

**NEC**  
**CDR-210e**

**\$599**

External - Double Spin  
Multi Session - No Caddy!  
**FREE Driver Software**

**NEC**  
**CDR-210i**

**\$499**

Internal - Double Spin  
Multi Session - No Caddy!  
**FREE Driver Software**



## NEW AMIGA CD-ROM TITLES

- Amiga Grafik CD 1&2** Thousands of IFF image files **\$49 ea**
- Meeting Pearls** High Res Fractals, PasTex, NetBSD, Scene party **\$49**
- Aminet Vol 4** Latest from the Aminet archive **\$49**
- AMOS PD** 1600 Amos source files, 100 sprite banks, 800 samples **\$59**
- CD Exchange 1** Collection of music, games, utilities, demos etc. **\$49**
- Amiga Clip Art CD** 26 000 clip art files, EPS, ProDraw clips etc. **\$49**
- Imagine CD** Objects, attributes, textures, tips for Imagine **\$120**
- Raytracing 1&2** Objects, fonts, Imagine, LightWave, Real 3D etc. **\$69 ea**
- Syndesis 3D ROM Vol 2** 3D Objects for LightWave, Imagine etc. **\$159**

## ZAPPO CD-ROM FOR A1200



### Affordable CD-ROM Drive for your A1200

PCMCIA Interface, AKIKO chip emulation, Photo CD compatible. Comes with Photo CD and audio disk players. With **FREE** Aminet CD.

**\$599**

## TURBO CHARGE YOUR A1200

### NEW FROM DKB

### DKB Cobra - 40MHz '030

40MHz 68030  
Up to 64 Meg of RAM  
Space for 68882 FPU  
Connector for SCSI-2 module  
Real-Time Clock

**\$699**

**SPECIAL - Cobra 40MHz '030 + 4Meg RAM \$699**

### DKB Mongoose - 50MHz '030 50MHz 68882

50MHz 68030  
50MHz 68882  
Up to 64 Meg of RAM  
Connector for SCSI-2 module  
Real-Time Clock

### NEW FROM DKB

**\$995**

**SPECIAL - Mongoose 50MHz '030 50MHz '882 4Meg RAM \$995**

### GVP A1230 - 40MHz

40 MHz 68030  
Up to 64 Meg of RAM  
Space for 68882 FPU  
Optional SCSI-1 Kit

Real Time Clock  
2 SIMM Sockets

**\$799**

### GVP A1230 - 50MHz

50 MHz 68030  
Up to 64 Meg of RAM  
Space for 68882 FPU  
Optional SCSI-1 Kit

Real Time Clock  
2 Simm Sockets

**\$949**

## TURBO CHARGE YOUR A4000

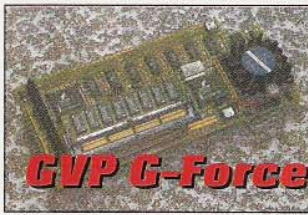


### Warp Engine

The Warp Engine is the only A4000 Accelerator that offers on-board SCSI-2, 128 Meg RAM capacity and 40MHz 68040 performance. The Warp uses standard 72 pin SIMM's in any combination. Also for A3000(T)

**\$1599**

*With trade-in of Commodore 649*



### GVP G-Force

The G-Force offers 40MHz 68040 performance at an unbeatable price. Space for 32 Meg fast 60ns RAM on-board with an optional 128 Meg RAM card. Also suits A3000(T) SCSI-2 module here soon.

**\$1249**

*With trade-in of Commodore 649*



### Commodore 68040

Ex-Demo Commodore 25MHz 68040 board for your A4000/030. 19 MIPs! at a special price.

**\$799**

## VIDEO FRAME GRABBERS



**VIDI 12**

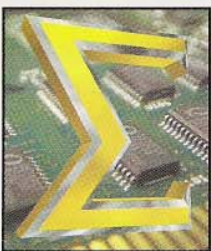
**\$169**

**VIDI 12 RT**

**\$399**

**VIDI 24 RT**

**\$549**



**SigmaCom**

**(02) 524 9846**

We Accept BankCard, Visa, MasterCard, AMEX, & AGC Credit.

**OPEN Mon-Fri 9AM-5PM SAT 10AM-4PM**

**Online Ordering - Call Labyrinth BBS (02) 580 5881**

**MOBILE: (018) 25 7471**

**FAX: (02) 540 4554**

**Suite 17, 20-24 Gibbs Street  
Miranda NSW Australia 2228**

Free Delivery Australia Wide!

# PERSONAL ANIMATION RECORDER

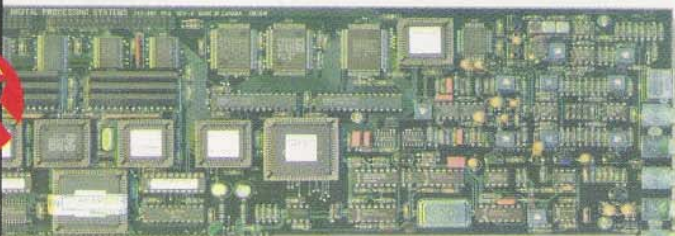
BROADCAST DIGITAL VIDEO PLAYBACK AND RECORDING



**\$ CALL**

With the new PAR it is now possible to playback full PAL resolution video at 25 frames per second. With the addition of the capture card you can also record 25 fps of video to the dedicated PAR hard drive. These revolutionary *AMIGA* cards allow the 3D animator and videographer the power to render frames directly to the PAR hard drive for instant playback. You no longer have to put your animation at the mercy of time-consuming stop-frame recorders. Since your animations are recorded in a component digital format, you can produce

an infinite number of first-generation tape copies. Plus, the PAR features outputs for true component video (Betacam®, MII®), composite and Y/C (Hi8®/S-VHS). The capture card features the same component, composite and Y/C type inputs. You can perform simple edits on your animations or captured video. By transferring frames from the PAR hard drive to an *AMIGA* partition, you can process frames with any Amiga image processing software. i.e. AdPro, OpalPaint, ImageFX, ImageMaster or Adorage. Convert streams of video to other motion formats like MPEG, AVI or CDXL. Perform effects on the video and transfer the files back to the PAR for real-time playback. If you have a SunRize AD516 digital audio card you can lock the recording and playback of audio to SMPTE timecode. Now, your imagination is the limit to what your *AMIGA* can do.



Y/C  
COMPOSITE  
COMPONENT  
REF in

PAR PLAYBACK CARD



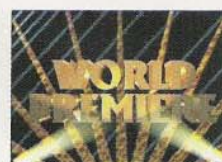
CAPTURE VIDEO, THEN CREATE AND PLAYBACK DVE TYPE FLY-INS.



PLAYBACK SPECIAL EFFECTS.

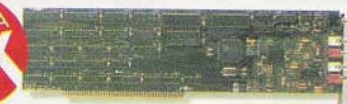


PLAYBACK STUNNING 3D ANIMATION IN 24BIT, 25 FRAMES PER SECOND, REAL-TIME.



## STUDIO 16

8 Track digital non-linear audio editing



Point and click, cut and paste, drag and drop. That's how easy it is to make your audio as good as what you hear in a movie theatre - when you work with Studio 16. Studio 16 gives you state-of-the-art digital non-linear editing, eight-track hard-disk recording, comprehensive SMPTE support, 16 bit CD-Quality sound and at an affordable price. If you know how to use a mouse, you know how to use Studio 16. All

your sound samples, meters, controls and functions are right on the screen under the direct control of your mouse. Editing eight tracks becomes a simple matter of cutting and pasting sounds together... dragging special effects to where you want them, then dropping them in... pointing to a button and clicking to introduce echoes, fades and cross-fades. Studio16's digital hard-disk editing lets you do things that are impossible with tape. Use your mouse to slice up and rearrange sound in seconds, mix tracks with no generation loss,



EASY TIME LINE EDITING

or zoom in on specific sounds for fine editing control. Lock the PAR and Studio 16 with SMPTE for full digital video and audio synchronisation. All this at CD sampling rates of 44.1 KHz. True broadcast audio excellence for your *AMIGA* 2000, 3000 or 4000.

## SCALA EX LIBRARY



**FILE FORMAT EX PACK:** These EX's allow exchanging picture and animation files with platforms like IBM PC® & Machintosh®. Imported files can be converted from and to IFF modes. Formats supported are: BMP, PCX, GIF, TIFF, YUVN, FLI, FLC & Datatypes.

**VCR EX PACK:** These EX's allow control of RS-232 capable VCR's.

**MD100:** This card and EX pack allows playback of MPEG video from your *AMIGA* hard-drive or MPEG capable CD-ROM drive. IFF files can be encoded into MPEG via Anim-Lab, VideoCD and CDI supported.

**Other EX's include:**

SunRize Studio16 \* PAR \* SCALA Echo \* Communicator II



**SigmaCom**  
AMIGA  
MULTIMEDIA  
SPECIALISTS

(02) 524 9846

FAX: (02) 540 4554  
MOBILE: (018) 25 7471

## Features



### 12 Brilliance 2.0

24 bit painting without extra hardware - power to the people!

### 17 Disaster Recovery

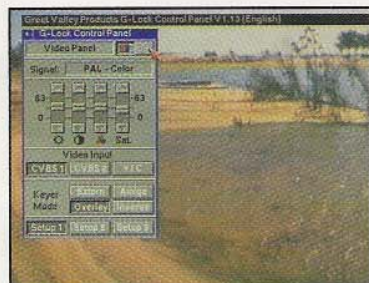
When in trouble or in doubt, run in circles, scream and shout. Or read this. Your choice.



### 22 Quark Express vs PageStream 3.0

How does the new kid on the Amiga DTP block stack up against the Macintosh brand leader?

## Articles



### 15 Money Matters

A cashbook for small business and home

### 26 G-Lock

GVP's software controlled genlock - an in-depth look.

### 42 Understanding Fonts

Which ones work where

### 50 CD Roundup

Amiga CD-ROM software - 16 new discs reviewed.

### 79 EasyLedgers

Professional Accounting



Cover created by Jarrod Pudsey  
Thanks Unitech for fixing my machine  
Image: 1500 x 3000  
Program: Lightwave  
Machine: A4000/040/40MHz

## Regulars

- 4 Editorial
- 8 Notepad
- 11 Media Watch
- 33 Help Line
- 36 Letters
- 87 Market Place
- 38 Reader Classifieds
- 69 Blitz Basic
- 60 Online
- 62 AMOS
- 58 C64
- 73 C Programming
- 88 Art Gallery
- 82 Entertainment
- 96 Ad Index





## The year that was

► December 1993 - Although a little shaken from the financial results of Commodore's previous year, the Amiga community was quietly excited. CD32 was new, with the promise of docking stations, an add on Full Motion Video card and mind-blowing interactive CD titles. Demos showing us 2D dinosaurs morphing into full 3D texture mapped giants made the CD32 look well equipped to blow anything Sega or Nintendo could offer into the junk yard. Commodore, it seemed to the casual observer, was moving in the right direction.

But it wasn't enough. By May, Commodore was in liquidation. Since then we've all waited patiently for the fabled winning bidder to march into town and announce that all is well.

While we waited, the promised docking stations arrived, Opal Technology went into a loop, Wordworth and Final Writer shipped impressive updates, Workbench 3.1 arrived and Pagestream kicked off the largest number of upgrades in the shortest space of time in the history of software publishing. Not bad, considering some pundits said the Amiga was dead two years ago. Looking around our office, you'd never know. We have all types of PCs here, and we all unanimously agree the Amiga is still the best machine to use.

A few weeks back I checked out Windows 95. I am happy to report that although it looks like Microsoft have finally cracked the multitasking demands of modern day computing, the interface remains poor. Icons are still unconnected to the actual files. The Program Manager is bigger and better, as is the File Manager, but they're both still clumsy. The luxury of the Amiga's multiples screens, snappy feel and easy

to manage desktop is still lacking.

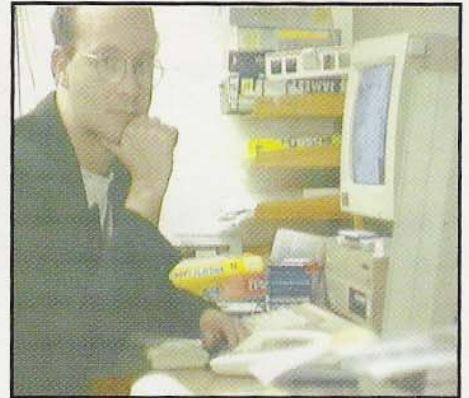
So where do we stand?

We produce Amiga and PC Review using Amigas running Professional Page 4.1. We use a 1200 to handle our accounts, using EasyLedgers. But we use PCs running ACT for contact management. ACT is an excellent program, but you can only get it for Windows. PC-Task 3.0 runs Windows and is billed to work quite fast as long as you've got a hootingly fast Amiga, so it's possible we could ditch the PCs and run everything on one platform.

The final catch still remains - who will buy the Amiga technology? The liquidator set a deadline of November 4 to settle things with Commodore UK, but that deadline came and went. Right now CEI and Commodore UK are heading for a bidding war that probably won't be resolved for another month.

Details are sketchy, but my best guess is that both parties are hoping the other will lay their bid on the table first so they see what it is they're up against. Just as the creditors want as much as possible for the Amiga technology, the buyers don't want to make a crazy bid. Unfortunately, the longer each waits, the better chance the other has of suddenly snapping the whole deal up. Indicators from the liquidator tend toward seeing the situation finalised by mid-December. That could involve an all-in boardroom showdown with all the bidders present. It should make interesting reading in a book about the Amiga in years to come!

Regular readers will note that there's no Hot PD column this month. This is because Daniel Rutter was struck by a 600 pound falling haddock. He will have recovered in time for next month.



*Publisher*  
**Storm Front Studios**

*Editor*  
**Andrew Farrell**

*Contributing Editor*  
**Daniel Rutter**

*Art Director*  
**Stuart Farrell**

*Production*  
**Jeremy Earl**

*Advertising*  
**Rachel Holthouse**

*Film and Imagesetting*  
**Access Graphics**

*Printer*  
**Hannanprint**  
*Distribution*  
**NDD**

*Subscription Hotline*  
**1 800 252 879**  
**SYDNEY 02 879 7455**  
PO BOX 288, Gladeville 2111

*Editorial/Advertising*  
**tel 02 879 7455**  
**fax 02 879 4236**

All articles appearing in this publication are copyright.

# Solutions Rendered

Pty. Ltd. ACN 057 923 645  
PO Box KL 906,  
Kings Langley NSW 2147



## We give you the complete solution!

Call Mike or Jon on (02) 838 0733 or fax your requirements to (02) 838 9376  
We are open 9-6pm Mon to Fri, 9-2pm Sat. How to order: We accept cash,  
cheques or Direct Deposit. Mail, fax or phone orders happily accepted!  
Showroom: 46 Shannon Street, Lalor Park NSW 2147  
Pricing subject to change without notice.

### November RED HOT Specials

Adorage - Not \$195, just ...	\$139
Amiback 2 - Not \$55, just ...	\$40
CanDo 2.5 - Not \$199, just ...	\$125
Distant Suns 4.2	\$40
DKB Cobra 68EC030 40MHz, FPU & SCSI options, no RAM	\$499
DKB Mongoose A1200 68030 50MHz, inc 50MHz 68882 FPU and 4Mb RAM	\$995
<b>CD-ROMs</b>	
17 Bit Collection	\$99
17 Bit Continuation	\$59
3D ROM II - 200 3D objects	\$155
Amiga Graphic CD 1	\$40
Amiga Graphic CD 2	\$40
Aminet 3	\$40
Aminet 4	\$40
AMOS PD	\$55
Art Connoisseur CD-ROM	\$69
Avalon - 3D archives from Internet	\$85
CD Demo Vol 1	\$69
CD Demo Vol 2	\$69
CD PD Vol 1	\$69
CD PD Vol 2	\$69
CD PD Vol 3	\$69
CD PD Vol 4	\$69
CD Exchange 1 - CD-32 title with lotsa PD	\$45
Clip Art & Fonts CD	\$69
Clip Art Warehouse	\$59
ClipMaster Pro - with book of samples	\$99
Corel Professional Photo-CD Sampler	\$39
Desktop Publishers Dream	\$60
Emerald Mines	\$59
EuroScene	\$59
Fractal Frenzy	\$60
Frozen Fish	\$45
Gifs Galore 2	\$45
Gold Fish - Fish disks 1-1000	\$60
Imagine CD V2.0	\$120
Insight:Dinosaurs	\$69
Lock and Load - heaps of games	\$59
Meeting Pearls	\$45
Micro R&D - Volume 1	\$119
Micro R&D - Volume 2	\$129
MultiMedia Toolkit - CD32	\$50
Network CD	\$45
Qwikforms	\$Call
Raytracing I - lots for Imagine,	
Real3D, LightWave	\$60
Raytracing 2 - more as above	\$60
SFX on CD ROM	\$59
Sounds Terrific - 2 CD's with IFF sounds, mods etc	\$60
Space & Astronomy	\$60
Swimsuits to the Maxx	\$39
Travel Adventure - 395 world travel images	\$CALL
Video Creator	\$80
Visions - 500 royalty free GIF images	\$CALL
World View - Aris	\$60
Australia - Corel Photo-CD	\$49
Commercial Construction - Corel Photo-CD	\$49
Fireworks - Corel Photo CD	\$49
Food - Corel Photo CD	\$49
People - Corel Photo CD	\$49
Predators - Corel Photo CD	\$49
Wild Animals - Corel PhotoCD	\$49
Island Designs - Aris	\$49
Majestic Places - Aris	\$59
Star Trek Collectables	\$59
Tropical Rainforest - Aris	\$59
<b>CD-Rom drives</b>	
NEC CDR-25 ext single spin - SCSI	\$299
NEC CDR-210 double spin - SCSI	\$699
NEC CDR-500 int triple spin - SCSI	\$899
NEC CDR-600 ext triple spin - SCSI	\$999
Zappo - Suit A1200 Ext. PCMCIA inc s/w	\$599
Internal IDE with cont & s/w - suit A2000/A4000	\$669

### Audio Digitizers

MegaMix Master	\$99
SunRize AD516	\$2250
GVP DSS 8+	\$169

### Hard disk drives

120Mb 2.5" IDE for A1200	\$399
200Mb 2.5" IDE for A1200	\$499
214Mb 3.5" IDE for A4000 or Tandem	\$359
260Mb 3.5" IDE for A4000 or Tandem, just...	\$339
340Mb 3.5" IDE for A4000 or Tandem	\$469
428Mb 3.5" IDE for A4000 or Tandem	\$395
545Mb 3.5" IDE for A4000 or Tandem	\$499
545Mb 3.5" SCSI Quantum	\$545
1.08Gb 3.5" SCSI Quantum	\$1095
1.4Gb 3.5" FAST SCSI Quantum	\$1595
2.1Gb Quantum	\$2245
Multi-Gig/Barracuda drives	\$Call

### Hard disk controllers

GVP 4008 SCSI	\$345
Alfadata Oktagon 2008 SCSI with Gigamem!	\$299
Alfadata Tandem IDE CD-Rom + HD cont	\$169
DKB 4091 - SCSI II	\$679

### Syquest removable hard drives

105Mb int SCSI 3.5"	\$549
270Mb int SCSI 3.5"	\$815
105Mb ext SCSI 3.5"	\$579
270Mb ext SCSI 3.5"	\$845
105Mb int IDE 3.5"	\$399
270Mb int IDE 3.5"	\$699
44Mb cartridge	\$135
88Mb cartridge	\$145
105Mb cartridge	\$129
270Mb cartridge	\$125

### Floppy Drives

Alfa Drive - external, slimline and quiet	\$165
High Density (1.76Mb) internal	\$275
High Density (1.76Mb) external	\$295

### Modems

Maestro 14.4k with GPFax	\$399
Maestro 28.8k with GPFax	\$599

### Monitors

MicroVitec - all AGA modes	\$799
Philips - suit A2000 etc - no AGA	\$499

### Scanners

AlfaScan 800, 800dpi, 256 greys hand scanner	\$299
AlfaScan 800 + OCR as above with OCR s/w	\$349
AlfaColour 400 dpi, 256k colour hand scan	\$699
Epson Flatbed 300/600 dpi	\$1435
Epson Flatbed 400/800 dpi	\$1949

### I/O cards

MultiFace III - 2 serial and 1 parallel	\$199
GVP IO Extender	\$279

### Video products

GVP Spectrum 2Mb	\$839
GVP TBC - no SMPTE	\$1249
GVP G-Lock	\$665
Vidi 12	\$199
Vidi 12 RT	\$399
Vidi 24 RT	\$549
Electronic Design Y/C Genlock	\$775
Electronic Design Composite Genlock	\$575
VLab Y/C Framegrabber	\$695
VLab external Framegrabber suit A1200	\$699

### Primera Colour Printer

Thermal Transfer	\$1995
Dye Sub - Photo Realistic	\$2495

### A1200 upgrades

DKB 1202 - no RAM - no copro	\$199
DKB 1202 - 20MHz 68882 - 0Mb	\$249
DKB 1202 - 20MHz 68882 - 4Mb	\$549
GVP A1230/030/40MHz/4Mb	\$989
GVP A1230/030/50MHz/4Mb	\$1349
GVP all others	\$CALL
Add a second hard disk drive	Cheap

### Misc Hardware

AlfaData MegaMouse - best mouse available	\$39
Emplant - Mac emulator - PC Real Soon!	\$795
SX-1 add HD, keybrd, floppy, mon etc to CD32	\$449
Quicknet Cards - not \$475, just..	\$375
Warp Engine, 40MHz 68040 - A3000/A4000	\$HOT

### RAM boards, chips & SIMMs

AlfaRam500 up to 8Mb for A500, 0Mb inc	\$149
DKB MegaChip - 2Mb chip RAM	\$349
1, 2, 4, 16Mb 72 Pin SIMMs	\$CALL
1Mb x 4 ZIP - suit A3000,	
Oktagon, AlfaRam500	\$CALL
GVP RAM	\$CALL

We can provide RAM at competitive pricing.  
As RAM pricing changes regularly, please call.

### Software

Adorage	\$139
Amiback	\$40
Amiback Tools	\$55
Art Department Pro 2.5	\$275
Art Depart Pro Control	\$89
Art Depart Pro Conversion	\$79
Art Depart Epson Scanner	\$195
B&P add-ons: Creativity Kit, Performance Tools, Power Tools, Pro Studio, MusicBox A or B,	
MultiMedia Kit	\$65
Brilliance 2	\$99
Broadcast Title 2 SHR, not \$359, just..	\$249
BT Font Pack 1 or 2, not \$199, just..	\$149
BT Font Enhancer, not \$199, just..	\$149
BT International Fonts, not \$99, just..	\$59
CanDo V2.5	\$199
Cinemorph	\$95
ClariSSA	\$195
Cocoon Morph	\$49
Cross DOS 5	\$59
CycleMan	\$69
Cygnus Ed Pro	\$109
Deluxe Music V2	\$185
Devpac 3	\$139
Directory Opus	\$105
Disk Expander	\$69
Distant Suns 5	\$95
Electric Thesaurus	\$55
Essence	\$70
Final Copy II UK	\$129
Final Writer 2.1 UK	\$170
Fontasia 300 CG fonts	\$75
Gigamem	\$159
Hoopy Music	\$60
Hoopy Paint	\$60
Hoopy Write	\$60
Hotlinks	\$79
Hotlinks Editions	\$159
HP Explorer	\$59
HyperCache	\$55
Imagine 3	\$599
KDV	\$25
Lightwave 3D YES, it's here and it's HOT!	\$899
Montage 24	\$429
Montage Font Pack 1	\$209
Montage PostScript Module	\$299
Montage PostScript Fonts	\$299
Morph Plus	\$289
Morphus	\$105
Pagestream 3.0 It's here and it's HOT!	\$439
Personal Paint	\$79
PowerPacker	\$39
Proper Grammar II	\$89
Rexx Plus Compiler	\$179
Scala MM300	\$440
Scala Echo	\$285
Scenery Animator V4	\$89
SoftFaces V1-4 each	\$89
Studio Printer	\$115
True Print 24	\$89
TypeSmith V2.5	\$209
Vista Pro V3	\$95

Call for a FREE disk catalogue

# EXPANSION SOLUTIONS

## Sound Samplers:

- GVP DSS 8+ \$ 169.00
- Clarity 16 \$ 259.00
- Sunrise AD 516 \$2249.00
- Toccatà 16 \$ CALL

## 24 BIT Display:

- GVP EGS Spectrum \$ 849.00
- Opal Vision 24 \$ 949.00

## Scanners:

- G/I Hand Scanner \$ 329.00
- Epson GT-6500 \$1439.00
- Epson GT-8000 \$1949.00

## Genlocks:

- E/D Pal / Comp \$ 575.00
- E/D Pal / Comp / YC \$ 775.00
- E/D Neptun (New) \$1279.00
- E/D Sirius \$1249.00
- GVP G-Lock \$ 669.00

## Video Capture:

- Rombo Vidi 12 *Special* \$ 179.00
- Rombo Vidi 12RT \$ 399.00
- Rombo Vidi 24RT \$ 519.00
- Personal Anim Recorder \$ CALL  
(P.A.R. on display in store)

## Ram Chips:

- 1 MB - 72 Pin SIMM \$ 50.00
- 2 MB - 72 Pin SIMM \$ 199.00
- 4 MB - 72 Pin SIMM \$ 285.00
- 8 MB - 72 Pin SIMM \$ 549.00
- A3000 4 MB Pagemode \$ 295.00
- 1 MB x 3 (2 MB total) \$ 150.00  
(Suit GVP A500, A2000)

## CD ROM Drives:

- NEC CDR-25 \$ 299.00
- Zappo CD ROM (Suit A1200) \$ 599.00
- Cheap SCSI CD ROM \$CALL

## Misc:

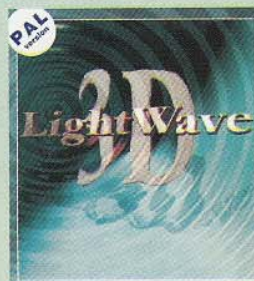
- Int. HD Floppy (A4000) \$ 249.00
- Int. HD Floppy (all Amigas) \$ 275.00
- DNA Fast MIDI \$ 84.95
- GVP I/O Extender \$ 229.00
- Multiface III \$ 199.00
- SX-1 (Suit CD<sup>32</sup>) \$ 399.00
- Quicknet (Per Node) \$ 469.00  
Suit A2000 / A3000 / A4000)

# PRODUCTIVITY SOFTWARE

Adorage AGA	\$195.00	Magic Lantern II	\$139.00
Anim Workshop V2	<i>Special</i> \$119.00	Money Matters	\$ 99.00
Art Department Pro 2.5	\$249.00	Montage 24	\$399.00
Bars & Pipes Professional 2	<i>Special</i> \$259.00	OS 3.1 Kits	\$CALL
Brilliance V2	\$ 99.00	PC-Task 3 (New Version Out Now)	\$CALL
Broadcast Fonts 3D Lightwave	\$ 99.00	Panorama V3	\$ 89.95
Calagari 24	\$349.00	Pegger V2 JPeg Utility	\$125.00
Can Do V2.5	\$169.00	Power Copy V3.03a	\$ 59.95
Clarissa V1.1	\$195.00	Professional Calc V2 AGA	\$149.00
Cygnus Ed Pro V3.5	\$109.00	Real 3D V2	\$799.00
Deluxe Music V2	\$139.00	SAS C V6 Dev System	\$349.00
Deluxe Paint 4.5 AGA	\$ 99.00	Scala MM300	\$449.00
Directory Opus V4.12	\$ 99.00	Super HP Desk Jet Drivers V3	\$ 59.95
Dir Work 2 & PC Task Bundle	\$ 99.95	Super HP Laser Jet Drivers V4	\$ 59.95
Disk Expander	\$ 66.95	Tapeworm	\$115.00
Distant Suns V5	\$ 84.95	TV Paint (Multi Card)	\$329.00
Final Copy II	\$139.00	Typesmith V2.5	\$199.00
Final Writer	\$179.00	Vista Pro 3	\$ 89.95
Imagemaster R/T 1.0	<i>Special</i> \$149.00	Wordworth V2	\$ 59.00
Imagine 3 PAL	<i>Special</i> \$CALL	Wordworth V3 AGA	\$139.00

*This list is not exhaustive. Please phone for any titles not listed.*

## Your One Stop Lightwave Shop



THE Amiga rendering Engine. We sell it because you need it!

### Sparks

The particle animation system that will allow you to generate rain, snow, the odd angry galaxy collision. A must have for any serious "Lightwaver".

**\$899-**

**\$199-**

## DKB Mongoose

- A1200 Accelerator
- 50 MHz 68030 with MMU
- Includes 68881 @ 50 MHz
- With 4MB 32bit RAM

**Only \$995-**

\*Other configurations please call

## Lightwave Tutorials

Everyone who has already purchased LW knows who Lee Stranahan is. For those of you who don't, buy Lightwave and immediately put your best companion on layby. This guy carries you through the entire learning curve of lightwave so well that you can seriously consider never looking at your manuals. If you have any doubts look at the "Layout" tutorial included with Lightwave. Video tapes are "PAL" and there are 5 to the set.

**Complete set (5 tapes) \$299-**

## The Multimedia Solution

**MD100** - Now the opportunity to expand your multimedia system. The MPEG compression card allows you to convert your live video (from you Personal Animation Recorder) into an animation ready for recompression at any time via Scala MM300. Convert your 100 meg OpalVision animation (that you can play at 3 frames per second from your hard drive) into a 25 frame per second animation straight off your normal hard drive! Seeing IS believing!

**\$1349**

Scala MM300	\$449.00	Scala Art Library No 2 or 3	\$ 85.00
Scala Echo (LAN-C editor)	\$285.00	Scala Ex Sunrise (for AD516)	\$169.00
Scala EX PAR (for your P.A.R.)	\$169.00	Gingseng Collection (Audio MOD)	\$ 49.95

# MVB

## Computer Supplies

LAY-BY  
Now For  
Christmas

Dedicated to the Amiga & its Customers!

Pty. Ltd.

### The AMIGA Specialists!

Ample Free On-Site Parking

506 - 508

Croydon,

Melway Ref. Page 51 A8





**FREE FREIGHT**  
Across Australia  
For orders over \$100



- Blindingly fast 24 Bit Display Card
- Zorro II or Zorro III operation
- PassThru for single monitor use
- Up to 1600 x 1280 in 256 colours
- Complete with 2 MB video RAM

**Only \$849-**



**Broadcast Quality you can afford !!**

- Time Base Corrector
- 24 Bit Framegrabber
- Video standards converter

**Only \$1299-**

## Hard Disk Mechanisms

- Quantum 270MB SCSI \$ 349-
- Quantum 540MB SCSI \$ 575-
- Quantum 1.08GB SCSI \$1199-

### A4000 IDE Drives

- Seagate 428 MB \$ 399-
- Seagate 545 MB \$ 499-

### A1200 2.5" Drives

- WD 200MB \$ 499-

## OS 3.1

- A500/2000 \$185-
- A3000 \$210-
- A4000 \$210-

## ED TBC Enhancer



A stand alone Time Base Corrector for all you A1200 users. Call for details.

**\$1699-**

## Cheap CD<sup>32</sup> Titles

Zool	\$34.95
Brutal Football	\$34.95
Sleepwalker	\$34.95
Nigel Mansell's	\$34.95
Lemmings	\$34.95
Fire Force	\$34.95
Donk	\$34.95
Fly Harder	\$34.95
James Pond II	\$34.95
John Barnes F'ball	\$34.95
Super Methane Bros	\$34.95
Total Carnage	\$34.95

*Call for any titles not listed!*

## Brilliance Version 2

### The Changes!

- Dongleless (They finally got rid of the security key.)
- "Magnify with True View" Allows the user to magnify an area without the problems of ham fringing.
- "Rub Thru" Merging two images rubbing through from the swap buffer to the current buffer.
- "Flip Book" View ranges or segments from your animation just like the traditional animators. You can flip both forward and reverse.
- Overall speed increases.

**\$99-**

## MAGIC LANTERN II

So you own a Retina, EGS Spectrum or Picasso card and go green eyed when you look at fancy 24 bit Opalvision animations? No More! If you own any of these or other 24 bit graphics devices (also Opalvision and standard Amiga modes) then you can render your animations and display them through your own card as well as synchronise your stereo audio track.

**\$139-**

## DKB COBRA

A1200 'EC030 @ 40 MHz from \$475-

## How to Order



**"It's Easy"**

### We Accept

Cash, Cheque, Bankcard, Visa, Mastercard, Money Order or Direct Deposit. Please call for current freight charges.



### How:

Phone, write, fax or come and see us in our showroom. Please include phone number when writing or faxing. All letters will be answered.

\*Please do not send cash through the mail

## Accelerators & RAM Expansion

### A500/600:

- A500 512k RAM Expansion w/ No Clock \$ 49-
- A600 1MB RAM Expansion w/ Clock \$ 119-
- A600 16bit PCM/CIA Credit Card RAM 2MB \$ 249-
- A600 16bit PCM/CIA Credit Card RAM 4MB \$ 425-

### A1200:

- GVP A1230 II/030/40MHz with 4MB \$ 929-
- GVP A1230 II/030/50MHz with 4MB \$1079-
- GVP A1230 II 40MHz Co-Pro \$ 189-
- GVP A1230 II 50MHz Co-Pro \$ 259-
- GVP A1291 (Suit A1230 II) \$ 139-
- DKB 1202 Clock & No Co-Pro 0MB \$ 199-
- DKB 1202 w/ 68882 @ 20MHz & Clock 0MB \$ 249-
- DKB 1202 w/ 68882 @ 20MHz & Clock + 4MB \$ 549-
- DKB Cobra EC030 40 MHz 0 MB \$ 475

- DKB Mongoose MMU030 50MHz w/ 68882 0MB \$ 749-

### A2000:

- GVP G-Force 040 33 MHz w/ 4 MB 60ns RAM \$1875-

### A4000:

- DKB 3128 Ram Exp up to 128MB 32bit RAM \$ 599-
- DKB 4091 SCSI-II Expansion Card \$ 679-
- GVP A4008 HardCard Up to 8MB 16bit RAM \$ 299-
- Fastlane SCSI II Expansion Card \$ 949-
- Commodore 25MHz '040 Card (as traded) \$ 799-
- GVP 40MHz '040 4 MB 32bit RAM \$1949-
- GVP 40MHz '040 16 MB 32bit RAM \$2995-

### A500/A2000 Chip RAM Expansion:

- DKB MegaChip board \$ 349-

\*This Ad was produced entirely using Amigas

\*All Prices Subject to Change Without Notice

**Dorset Road, Ph: (03) 725 6255**  
**Victoria 3136. Fax: (03) 725 6766**

Postal Address: P.O. Box 627, Croydon, Victoria 3136

E & O E

# Photogenics

Almathera have announced a new professional paint package for AGA Amigas. Photogenics can do simple image format conversion, but it's also got a lot of powerful paint tools - chalk, pencil, pastel, airbrush and so on. Photogenics doesn't require a 24 bit graphics card, though it produces 24 bit output it uses HAM-8 mode instead. This saves money and looks nearly as good as 24 bit, but it's a lot slower than using extra hardware.

*For more information, contact Don Quixote on (076) 391 578. RRP \$130.*



**An example of an image converted to a fresco painting**



**Multiple windows open in Photogenics**



**A simple still life drawn in Photogenics using the real painting tools**



**'Paint-on' effects in Photogenics**

## Wordworth 3.1

Wordworth 3.1 should now be shipping to dealers. The most important changes from v3.0B are landscape printing, EPS graphic support and greatly increased speed. Very cheap upgrades will be available to Wordworth 3.0B users, if they return all the original program disks.

*Contact Amadeus on (02) 652 2712 for more information.*

**I want your business and I am prepared to pay for it.**

**Commodore CD32 Titles**

Little Devil	60	Heimdall	59
Simon the Sorcerer	60	Nova Storm	60
Nigel Mansell	49	Cannon Fodder	59
Sensible Soccer	59	Putty	49
Morph	49	Seek and Destroy	55
Alfred Chicken	49	Trivial Pursuit	59
Arabian Nights	49	Trolls	49
Deep Core	49	Sleep Walker	52
Fly Harder	49	Total Carnage	49
Overkill/Lunar-C	49	American Football	59
Summer Olympics	46	Defender of the Crown	
Alien Breed/Owak	52	Genesis -	Soon
Bubba 'n' Srix	59	Golden Collection Comp	
Chambers of Shaolin	55	Grolier Encyclopedia	
Chaos Engine	59	Guiness Disk of Records II	
Chuck Rock	45	Humans I & II	49
D Generation	52	Insight Technology	69
Disposable Hero	59	Lion Heart -	59
International Karate	59	No Second Prize	59
Jambata	52	Ryder Cup Golf	49
James Pond 2	49	Soccer Kid	59
Labyrinth of Time	59	Treasure of the Silver	
Liberation	59	Lake	Soon
Lotus Trilogy	59	Winter Sports	Soon
Microcosm	99	Battle Chess	59
Nick Falco's Golf	59	Beavers	59
Pirates Gold	59	Last Ninja/Surf	59
Emerald Mines	49	Inferno -	Soon
Photo CD lite	77	Brutal Sports	59
Prey	59	Bubble and Squeak	Soon
Project-X/F17	59	Chuck Rock 2	59

Fire and Ice	58
TFX	
Ultimate Body Blows	59
Sensible Soccer	59
Impossible Mission	59
Donk	59
Fury of the Furnes	59
Fuzz Ball	60
Pinball Fantasies	59
Premiere	59
Zool 1 & 2 Each	59
Naughty Ones	49
Lemmings	39
Gunship 2000	59
Global Effect	59
Elite II -	59
Legacy of Sorasil	59
Gulp	Soon
Lost Vikings -	59
Flambo Quest	Soon
Games & Goodies	45
Utopia 2	Soon
That's what I call Games	
1 & 2 each for	45
Myth	59
Whale's Voyage	55
Exile	Soon
Super Methane Brother	59
Brian the Lion	59
Fire and Ice	59
CD Micro French	79

Little Devil	59
Banshee	59
Battle Toads	59
Photo Lite	89
James Pond III	59
Sabre Team	59
Second Samurai	59
Super Frog	39
CD Exchange 1	59
Striker	59
UFO	59
Arcade Pool	59
Brutal Soccer	59

<b>A570 Titles</b>	<b>\$</b>
17 Bit PD 1 + 2	90
17 Bit Continuation	45
CD PD *	45
CD PD 2	45
CD PD 3 *	45
CD PD 4 * NEW	45
Demo CD	45
Demo CD 2 *	45
Multimedia Toolkit *	45
Aminet CD Vol3	45
Lock 'n' Load *	45
CD Remix V2 *	39
Defender of the Crown 40	
Lemmings	39
Grolier Encyclopaedia	
AMOS PD CD	39
EuroSciences - 1	39
* Will Work on CD32	
Glamorous CD	39
LSD Collection	39
Assasin	39
Profents	39
Font and Clip Art	39
Gifts Galore	29
Space Astronomy	39
Fish 1-1000	60

**Current**

Inferno, Arcade Pool,	
Dizzy, Top Gear, Pinkie,	
Diggers, Jetstrike, K240	
Utopia, Bump and Burn,	
Top Gun, Fields of	
Glory, Alien Breed -	
Tower Assault, Beneath a	
steel Sky	

**SPECIALS**

Dangerous Street	39
Naughty 1	39
Dennis	29
Fire Force	45
Trolls	39
Castles 2	49

**Accessories**

CD32 Expansion SX-1 . . . . .	Call Plenty of stock
Networking CD32 to Amiga (cable only) . .	\$49
Communicator . . . . .	Call
Keyboard - White . . . \$35 - Black . . . .	\$75
External Drives . . . . .	\$149
4Mb SIMM 72 PIN . . . . .	\$239
2 1/2 inch IDE Internal HD eg. 200Mb . . .	\$399
Professional control pad SPECIAL . . . . .	\$49
Amiga 1200 40/60/120/200 HD . . . . .	Call
CD32 . . . . .	Plenty of stock
A1200 - CD Zappo . . Ring BestDeal in OZ . .	Call
Video Creator . . . . .	\$79
<b>3.1 Chip A500/2000/3000/4000 . . from</b>	<b>\$175</b>

**Full Motion Video on CD-ROM**

**ALL \$49 each**

Black Rain	Brian Adams
Bon Jovi	David Bowie - Video Collection
Ghost	Hunt for Red October
Indecent Proposal	Kate Bush - The whole story 94
Naked Gun 2.5	Patriot Games
Pink Floyd - Delicate sound of Thunder	
Queen - Greatest Flix I & II	
Star Trek VI	The Crying Game
The Cure	The Firm
The Krays	Tina Turner - Rio '88
Tina Turner - Simply the Best	
Top Gun	Waynes World

**CDI**

Andrew Lloyd Weber
Cartoon Carnivale
Space Ace - World of

**NEC CD ROM DRIVES**

CDR25 ext	\$395	CDR500 int 3X	\$765
CDR210 ext 2X	\$595	CDR400 port 3X	\$885
CDR600 ext 3X	\$885	CDR900 ext 4X	\$1599

**Modems**

Dynalink 14.4 Intd	\$240
Dynalink 14.4 Extd	\$285
GPFax Amiga	\$49
Maestro 28.8	\$589
Maestro 14.4	\$389

**Hard Drives**

IDE 210Mb	\$279
IDE 420Mb	\$379
IDE 540Mb	\$479
IDE 730Mb	\$679
SCSI HardDrives call	

**You'll never know how low I'll go!**

Prices as shown until February 1st 1995

**Computer Man**

611 Beaufort St. Mt. Lawley Perth WA 6050

Phone: (09) 328 9062 (018) 911 011 Fax: (09) 275 1010



## Media Watch Spottings

### ABC and SBS spottings

Lube Saveski, of Dianella, WA, spotted a few Amigas. There was an A3000 on one of the ABC's Microdocs, during a documentary on Cybernet, There's a Commodore monitor in the video clip for the recent track "Lucas with the lid off", and Lube also spotted a few Amigas on SBS's The Big Byte, during pieces on an art gallery BBS and on disc jockeys and visual effects.

### Various hopeful sightings

Joshua Pryor, of Belmont NSW, spotted a number of Amigas. On a program on the ABC called "The Space Age" which he said was hosted by Captain Picard (we hate to tell you this Josh, but Patrick Stewart's just an ACTOR. Star Trek IS NOT REAL), he saw a professor using a 2000 with what looked like a 1084 monitor. Also, in an AV Jennings ad, a 3000 was being used to generate pictures of buildings.

At the Civic Theatre in Newcastle, he saw two A4000s being used to control various lighting effects and sound mixing. In an admitted subscription-scoring attempt he also mentioned that Teralba Primary school has eight 500s and on 2000, and that Glendale Technology High, which he attends, has two A500s in the art department, running DPaint III.

He then tried some more you're wonderful and I love you stuff to suck a sub out of us, but he failed, because the competition, see below, was too stiff. But we will answer his question - yes, a flickerfixed 2000 can use a regular VGA monitor, since all the flicker fixer puts out is 31.5kHz no matter what the screen-mode.

### Line It Up With A Pole To See If It Moves Department

On the 28th of October at the "Making More Waves" exhibition at the University of Adelaide (an exhibition showcasing upcoming, talented mechanical engineers), I spotted a 3D raytraced animation showing the assembly process of the front panel of a Simpson tumble dryer, run entirely on an Amiga.

I know this because I did it; 33 frames, each one individually rendered with Sculpt Animate 4D v2 (!) [Ed: this is a Really Old Renderer, folks], then assembled into a HAM animation with DPaint 4, using an UNACCELERATED A500! On average, each frame took about two hours to render, plus an extra few minutes per frame to remap the colours.

If I can't get a subscription for the spotting, can I at least have one for stupidity?

Darren Foster, Seaview Downs SA

Ed: Yes.

**Send us your  
sightings and there's  
a small chance  
you'll get a free  
subscription!**

**By Mail:  
PO Box 288  
Gladesville  
NSW 2111**

**By Fax:  
(02) 879 4236**

## COMPU PARTS & Services

**101/2 BURDETT ST  
HORNSBY NSW 2077  
TEL: (02) 482 2582  
FAX: (02) 477 2755**

### SPECIALS

WB 3.1 COMPLETE KIT FROM	\$169
127MB 2.5" IDE FOR A1200 AND SX-1 NEW	\$229
QUANTUM 365MB 11MS SCSI NEW	\$329
NEC CDR-25 PORTABLE CD ROM	\$199
NEC CDR-600 EXT TRIPLE SPIN CD ROM	\$749
SUPER DENISE 8373 CHIP	\$19
SX-1	\$369
15" FLAT SQR SCREEN MONITOR	\$349
1024X768 NON INT .28DP WITH SOUND	
SUITS A3000 AND FLICKER FIXERS	
250MB TAPE CARTRIDGE NEW	\$29
WB 2.05 DISKS FULL SET	\$5

### HARD DRIVES

ALL NEW WITH 1 TO 3 YRS WARRANTY	
QUANTUM 270MB SCSI	\$319
QUANTUM 540MB SCSI	\$479
QUANTUM 270MB IDE	\$299
QUANTUM 420MB IDE	\$359
MAXTOR 540MB IDE	\$409
W DIGITAL 2.5" 200MB IDE	\$399
MAXTOR 2.5" 250MB IDE	\$399
SYQUEST 3.5" 105MB SCSI	\$399
SYQUEST 3.5" 270MB SCSI OR IDE	\$609
EXT SCSI BOX WITH CABLES	\$150
SYQUEST 105MB CARTRIDGE	\$105
SYQUEST 270MB CARTRIDGE	\$115
OTHER BRANDS AND SIZES ALSO AVAILABLE.	
USED DRIVES ALSO AVAILABLE	

### MONITORS

NEC 3D MULTISYNC EX DEMO	\$499
EIZO MULTISYNC USED	\$299
1084S/PHILIPS 8833 USED	\$190

### HARDWARE

A500 MOTHERBOARD FROM	\$50
A2000 POWER SUPPLY	\$80
A3000 POWER SUPPLY	\$90
A500/600/1200 POWER SUPPLY	\$50
A2000/A500 CASE	\$20
MOUSE NEW	\$20
A500/A1200 KEYPAD NEW	\$50
A500/A2000/A1200 INT FLOPPY	CALL
A2000/A500 2MB CHIP RAM KIT	\$285
AGNUS 1MB 8372A	\$40
CIA 8520	\$20
WB 1.3 ROM	\$30
WB 2.05 ROM AND DISKS	\$60
OTHER AMIGA CHIPS FROM	\$5
4MB 72PIN 32 BIT SIMM	\$250
1MB 44256/41000 DIP RAM	\$50
1MB SIMM 32 BIT	\$65
1MBX4 ZIP PER 1MB	\$65
A500 512K RAM CARD WITH CLOCK	\$50
A1200 MEMORY EXP WITH 4MB	\$420
1084 SCART (OR OTHER) CABLE	\$20
23/15 PIN MULTISYNC ADAPTER	\$30
GVP PRODUCTS FULL RANGE	CALL

PLEASE ENQUIRE ABOUT OTHER EQUALLY LOW PRICED PRODUCTS. ALL PRICES INCLUDE TAX.



# Brilliance 2.0

## *24 bit painting for the rest of us*

By Patrick Kirsch

► Brilliance! You get the feeling that Digital Creations has a pretty high opinion of their product. But is it justified?

Brilliance is a paint and animation program for Amigas without fancy graphics boards. Its only other genuine rival in this category is Electronic Arts' Deluxe Paint IV.

If you're trying to decide between Brilliance and DPaint, your specific needs and machine configuration will be the determining factors.

Brilliance is in fact two programs, Brilliance and True Brilliance. The former is described as "register based", meaning it uses a palette of 2 to 256 colours from a possible 4096 or 16.7 million, depending on whether you've got an ECS or AGA machine.

Brilliance's paint functions are similar enough to DPaint to make no real difference.

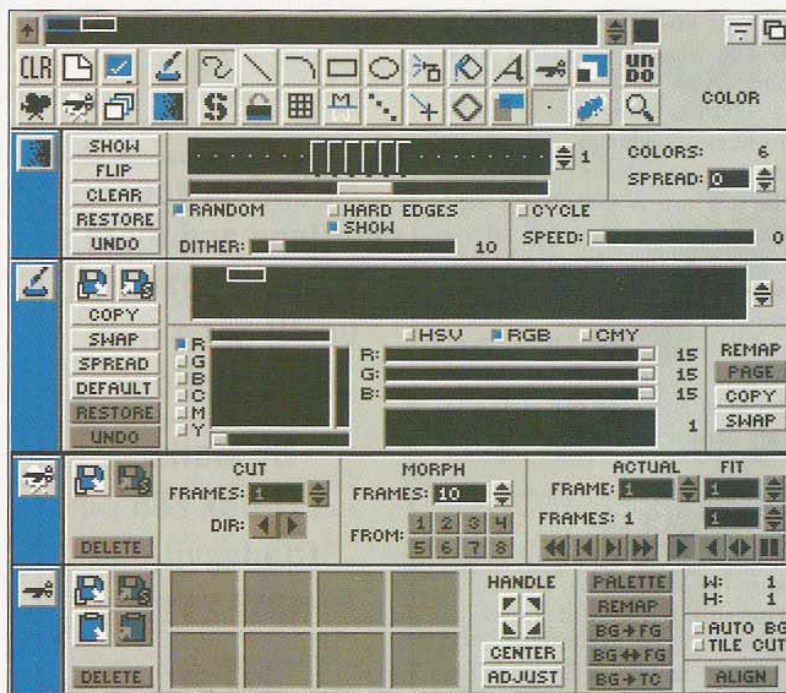
Its interface however is significantly different. Menus appear at the bottom of the screen and are stackable, much like professional paintbox systems.

They can be toggled on and off with the space bar, and combina-

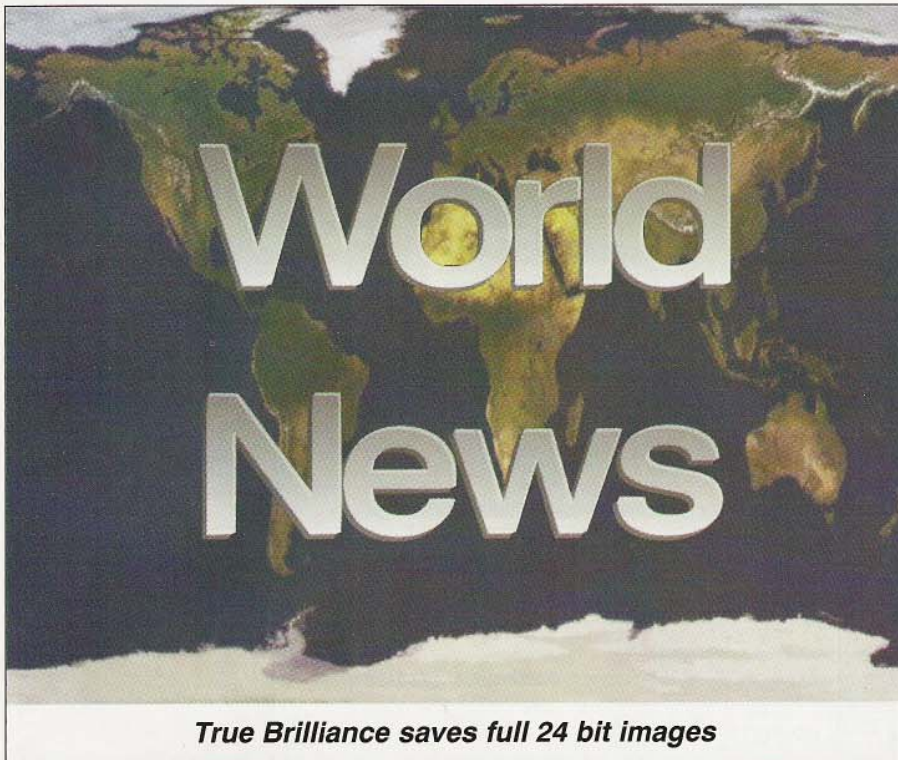
tions of menus can be allocated to hot keys on the numeric keypad. The effect of this, combined with multiple undo/redo, is a significant improvement in working speed. Score one for Brilliance.

True Brilliance is "true colour" based, able to maintain the image data as true 24 bit independent of your machine's chipset.

In practice, however, the painting operations themselves are



**Brilliance has stackable menus, like the big boys**



limited to HAM6 (4096 colours) or HAM8 (262,144 colours).

In the case of HAM8, this is no problem. For example, a gradient spread can have up to 30,000 intermediate colours (smooth enough for you?). Antialiasing, smoothing and transparency all work in 24 bit, begging comparison more to Opalpaint than Deluxe Paint.

On the other hand, HAM6 can only support a gradient of 4096 colours.

Worse still, its maximum viewable screen size on ECS machines is 368 x 566 (video overscan), meaning that full resolution 24 bit pictures (736 x 566) overrun the edges of the screen, requiring scrolling, their aspect ratio is distorted and paint operations do not have effect beyond the edge of the viewable screen.

One test I performed was to matte a 24 bit text brush (created with Montage24) over a 24 bit picture with antialiasing. I did the same with Opalpaint and DPaint.

The True Brilliance (saved as 24 bit) and Opalpaint versions were indistinguishable when viewed on Opalvision. Deluxe Paint crashed when I tried to load a 24 bit picture as a brush.

Eventually I succeeded in loading the text picture into the swap page and cutting it out as a brush, which then required palette remapping which resulted in an obvious stepped gradient on the text.

DPaint could only save the image as HAM8, thus further reducing the quality of the original image. Score another one for Brilliance.

### Animation

Again, there are many similarities between DPaint and Brilliance, but an obvious difference appears in cel and brush animation.

Cel animation on a computer is a contentious thing. Most animators will tell you they would not

---

## *True Brilliance gives you full 24 bit animation on a stock Amiga.*

---

dream of hand drawing cels on a computer, but rather draw them on paper, scan them into the machine, and then perform ink and paint and special effects.

If, however, you're game enough to try it (and I haven't met anyone yet who is), DPaint offers the better environment thanks to its "Lightbox" effect, where one or two previous cels are partially visible on the current cel.

In reply to this, Brilliance has added a "flipbook" feature in version 2.0.

This simulates the cel artist's technique of holding several cels and flipping them backwards and forwards to get a feel for the motion of the character they are drawing.

It does this by playing the last five frames of the animation back and forth at the touch of a hot key. Nice idea. Combined with a lightbox effect you might have a workable cel animation system, but DPaint wins this round.

Much more suited to a computer platform is brush animation, where a cutout brush is moved across a fixed background, rotated in perspective, squashed and stretched. Again, both DPaint and Brilliance offer much the same functions.

Both support anim brushes, and can create anim brushes by morphing between two different bushes. It is the control of the



brush that sets the two apart.

What DPaint calls the "Move" menu, Brilliance more appropriately calls the "Tweening" menu.

It gives you start and end positions and rotations for your brush, rather than just an increment value for each.

It allows you to set the number of frames for the movement you wish to perform, as well as the start and end frames of the tween.

But best of all, hit the "Adjust" gadget and you are presented with a screen with a "wireframe" of your brush which you can drag to its start position and rotation, then click "end" and drag to its end position and rotation.

You can also visually adjust the origin point and the lens focal length, which will affect how perspective works with rotations in the Z axis. When you're done, hit "Use", and you can preview the tween, readjust it if necessary, then draw it. It is much faster and more intuitive than DPaint's "Move" menu.

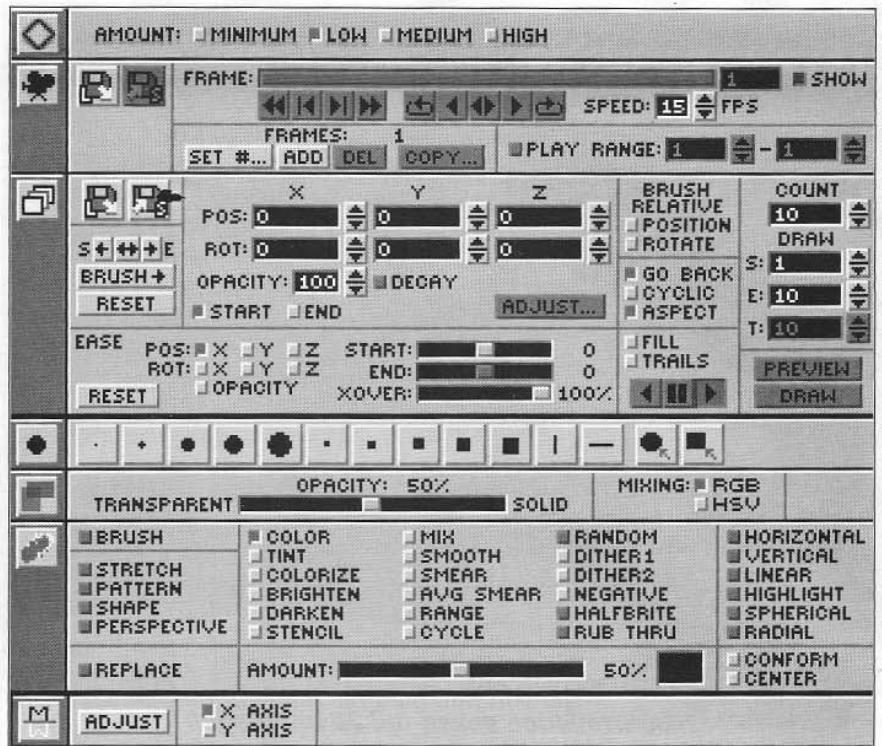
So DPaint and Brilliance seem pretty evenly poised coming into the final round, but Brilliance has the tie breaking point.

As a consequence of True Brilliance's 24 bit buffer, and its superior brush animation system, it offers something that not even Opal-paint can: 24 bit brush animation. 24 bit backgrounds and brushes can be loaded and animated, just like the big boys do with big bucks paintboxes.

You will of course need staggering amounts of RAM to do this, or you could use a good virtual memory system (should have been included in the program).

Don't expect to play these animations back in real time; these are for single frame recording or PARIing.

Sounds great, huh. So why oh why did Brilliance's writers not



provide the facility to save the animation as single 24 bit IFF frames, rather than just HAM8?

If you want a 24 bit save, you have to move through the animation one frame at a time, saving the frames through the picture save menu rather than the anim save menu, manually incrementing the numbers in the file name, and there is no AREXX interface with which to automate the process.

Once again I beat my head against the wall because of the lack of foresight on the part of software designers.

Why do they all assume users want to take the best quality images and degrade them to low res HAM6 in order to play them back at 6 frames per second on a vanilla A500?

Why put the word "Professional" on the outside of the box if you're not going to provide professional features? Am I ranting? It's been a long week.

So Brilliance is pretty darn good - for certain things. If you are more confused now than you were at the start, let me try to simplify things.

If you own an AGA machine, keep DPaint and buy Brilliance as well.

If you own an ECS machine buy DPaint, then buy an AGA machine and Brilliance.

And finally a quick word on the differences between Brilliance Version 1.0 and 2.0. Very little. Version 2.0 comes with 1.0's manual and a 15 page addendum. The main improvements are, firstly: no dongle (smart move guys), and secondly: a much better price.

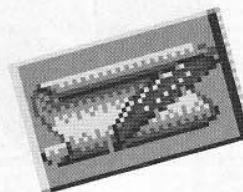
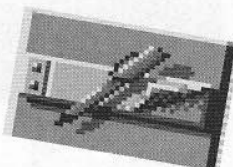
With a street price of only around \$100, Brilliance is a graphics tool everyone should have.

□



# Simple home accounts *with Money Matters*

By Owen James



Unless you're in business, using a computerised accounts system may seem like overkill. After all, EFTPOS, Bankcard and telephone banking is supposed to make our lives so much easier, right? The truth is that unless you have an adequate system for maintaining records of income, expenses and transactions, the user-friendly, super-convenient nineties will make your financial life a misery.

At its most basic level, Money Matters is designed to record details of banking transactions and present you with an up-to-date balance at every point. A five dollar analysis book from the newsagent could just as ably do this job, but Money Matters goes much further. Money Matters can also handle your budget, direct credits and debits, financial reports, charting and forecasting.

Money Matters isn't exactly a new program. It has existed in previous incarnations as Home Accounts and Home Accounts II. Those of you familiar with its predecessors will at once feel familiar with Digita's Human Interface Protocol (HIP). While the manual makes no mention of the improvements Money Matters has over Home Accounts II, there are enough to make the update worthwhile.

## Setting Up

Money Matters will run on any model Amiga with Workbench 2 or 3 and at least one megabyte of RAM. A hard drive is not required, but the number of transactions will be more limited on a floppy-based system. Money Matters is supplied on a single disk and may be run from floppy or installed to a hard drive via Commodore's excellent Installer program. After a small amount of disk grinding, and a once-only request for your name and registration number, you're ready to run.

Upon opening you'll find a screen not unlike Workbench. There are various icons and a trashcan which help make up Digita's HIP, which is based on the familiar concept of the desktop. Gold Disk used this style of interface well in their own Desktop Budget software. The first task is to add a series of accounts. Depending on your circumstances, you may have separate accounts for savings, credit card, and cash. These "accounts" do not have to correspond to a physical bank account. The cash account, for example, can be a simple home petty cash system.

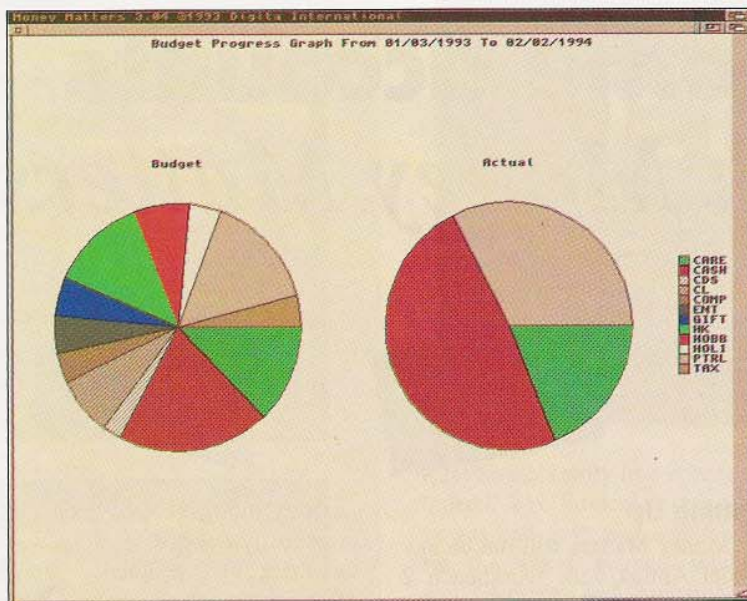
At this point you also tell Money Matters about any regular activities to expect with this account. For example, you may have

monthly mortgage repayments automatically debited, or your wage automatically credited. Money Matters can then assume these transactions have taken place in the future without interaction from the user. Of course, automatic transactions may be overridden or changed at any stage.

A budget can also be defined, and in future directly compared with actual transactions. Each month can have a varied budgeted value, allowing you to take into account an expected Christmas bonus, or even a mid-year holiday. With a little planning, young Hubert won't have to give up trombone lessons after all. Lucky Mum and Dad. The "What if?" command may be used to make financial projections well into the future. Simply enter the date to project to and Money Matters will, based on the data you've given it, calculate known income and expenses, warning of any potential problems.

## Interface

Digita's Human Interface Protocol (HIP) is more than just a cute acronym. This is one area in which Money Matters leads other accounting software, including System 3 and EasyLedgers. If you've gone part way into a transaction and realise you've forgotten an ob-



sure account number or transaction type, you're not forced to close the transaction, look up the number, and start again. Neither are you forced to use a slow and cumbersome pick list each time to enter data. The pick list is there in front of you at the press of a key, but if you're experienced and can fill in details without prompting, you're equally well catered for.

You can also attach notes to several types of transactions. The simple line editor leaves much to be desired, but this is one short-coming I can live with. There's on-line help for most functions, which provides enough information to keep an experienced user out of trouble. Reports may be generated at the click of a mouse button. You can define the report formats, but the most useful reports look similar to your bank statement and are used in reconciling accounts.

In addition to this, graphs can also be generated to allow you to visualise your impending debts in vivid colour. Thanks to AGA support, there can now be 256 degrees of "in the red". Thanks Digita. A variety of charting options are

available, including line and scatter graphs, pie charts, bar and 3D bar graphs, among others.

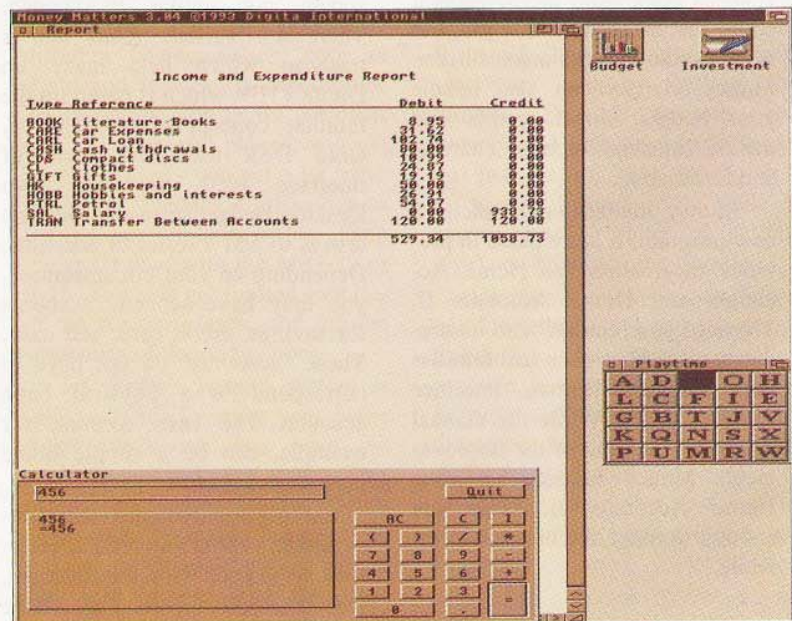
The Money Matters manual is excellent. At close to 200 pages, it provides enough information and examples to fully understand the program without becoming too bogged down with heavy terminology and theory.

Also included is a chapter devoted to general guidelines for bet-

ter managing your finances. These don't refer specifically to Money Matters (for example, why it's a bad idea to overstate your income when applying for credit), but are a welcome addition for general users. It's got a UK slant, but much of the information in this chapter is general enough to be relevant to Australians.

## Overall

Money Matters is an excellent program for managing your home accounts. It won't require a degree in accounting to make sense of it, yet it's powerful enough to genuinely do some good in maintaining your home budget and presenting information to your accountant. Although billed as a package suitable for small business, there are better packages for this task, including the soon to be released EasyLedgers 2. As a small business owner, I would prefer to have a package that can handle stock control, invoicing and more extensive reporting, including a balance sheet. But what Money Matters does, it does well. At \$129, it's a worthwhile investment. □



# A Complete guide to *Disaster Recovery*

By Daniel Rutter

► Computers can store an awful lot of data and manipulate it awfully fast. This also means they're eminently capable of throwing data away very quickly, with or without assistance from their operator. When this happens to you, and the operative word here is when, it pays to know what to do, and what not to. That's what this article is about - recovering from disasters, and also avoiding them in the first place.

## Accidental Deletion

How do disasters happen? There are infinite possibilities for data loss, but common failures fall into a few categories. First, there's the simple accidental deletion.

When you delete a file, it doesn't immediately get obliterated. Instead, AmigaDOS just changes the file header, the first piece of data read by the system when it looks at the file, to say that the area's free and may be written to. The file name is intact, as is all the data and its directory location; it's just been made invisible to standard DOS operations and the space it occupies may now be used by anything else. This means that if you delete a file, and want it back, you can always get it back perfectly as long as nothing's written over the disk space it used. So, if you delete something by



mistake, be sure to save nothing more to that drive or hard disk partition until you get the lost file back.

There are lots of programs which can handle basic undeleting; I'll get to them later. The simplest way to do undeleting is to use Kan, from Fred Fish's AmigaLib-Disk 694. Kan patches the DOS delete function so that when you tell the system to delete a file, it looks at the device it's deleting from and sees if there's a directory there called Kan. If there is, the file gets moved there, instead of deleted.

Every time you boot the computer, an extra giblet in your startup checks if midnight's rolled around since you last booted; if so, everything in a Kan directory gets properly deleted, unless the device it's on also has a Kan2 directory, in which case it gets moved on to

there. You can make as many Kan directories as you like - Kan directories up to Kan7 give you a one week grace period for all deleted files, during which you can recover them as easily as copying them from the Kan directory.

The disadvantage of Kan is that you don't get disk space back when you delete files until they're genuinely deleted. You can turn Kan off, of course, but if you're short on disk space you'll find yourself doing it all the time. Kan also encourages disk fragmentation, for much the same reason. Those niggles aside, though, Kan is a simple system that works well. I use it.

## Damaged Files

Another common source of data loss is interrupted writes. While your Amiga's READING from a device, you can safely



reboot or turn off the power. But if the computer's WRITING to a device, it needs to finish the write and update the disk's file structure before you can power down.

If you reboot or turn off or the system hangs before a write's complete, you'll end up with an unvalidated disk - the disk operating system's index of where things are doesn't line up with where they really are. Also, the file you were writing will be pretty much kaput. This doesn't mean you can't get back any of its contents, though - I'll get to that later, too.

Your floppy or hard disk activity light simply indicates data's going to OR from a disk - you can't tell if it's reading or writing unless you're familiar with the operation in progress. Basically, don't reboot or turn off with a drive light on.

If you do get an unvalidated disk, and you're using a version of Workbench before 2.0, you'll have to fix the problem with a disk repair program (see below). If, however, you're using Workbench 2 or higher, the operating system will revalidate the drive for you.

When you reboot, that drive will thrash like crazy as it pushes all the worms back into the can, and will eventually be right as rain, missing only the file it was writing to when the sky fell. If you boot your computer and it seems to take an inordinately long time to do anything, with frantic activity on one or more drives, this is what it's doing.

If you reboot again, you'll just mess up whatever file it was revalidating at the time and it'll start revalidating again. So when your computer's revalidating, leave it alone. A big hard drive can take quite a while to piece itself back together; go have a snack, or something.

## File Name Clobbering

Another way to kill a file - and a very effective one, at that - is to overwrite it with another file of the same name. You see, AmigaDOS can't tell the difference between a simple updating save, such as you do all the time when progressively building a document, picture or whatever, and an accidental overwrite of bear.txt, a treatise on the people's right to bear arms, with bear.txt, your three year old's ode to Teddy.

Run a recovery program and it won't find the old version of bear.txt; it's not possible for the operating system to see what used to be in a live, undamaged file.

In some cases, you can get around this. Some programs, for example ASDG's CygnusEd, do "safe saves". They save the file temporarily under a dummy name (in CED's case, "CygnusEdTempA.xxx"), and then delete the original file, and then rename the dummy file to the name of the original. This means that if the system dies while they're saving, you'll probably either have the older version of the file and a corrupt version of the temporary file, or no original file and the temp file with the silly name.

There's also a chance that the death occurred during the renaming, though, which can mess the disk up quite badly. The renaming takes less time than the saving (though probably a lot less, unless the file's very small), so overall it's a good deal.

## Deadly Don'ts

Do NOT work without backups, whether you're using a floppy or hard disk based machine. If you make backups regularly, the worst case scenario is losing the work you've done since the last backup, not losing the lot.

Absolutely positively NEVER

under ANY circumstances optimise a drive without backing up first. Optimisers, if something goes wrong, can Mess You Up Bad.

This is because optimisers, in order to work their disk-speeding magic, keep the data they're working with in RAM, and do all sorts of shoveling around to the drive while they work.

Imagine a juggler (the optimiser) with a stack of plates (the drive). Each plate's got a number on it, and they're out of order - but the owner of the kitchen (the operating system; bear with me here) has a list that says which plate is which. There's some really good reason why the kitchen owner has to know this. Shut up.

The juggler reorganises the plates by yanking out a few at a time, juggling them, and catching them and putting them back on the pile in the right order. After enough yanks and juggles, the stack is organised, and the juggler writes out a new list saying where all the plates are and hands it to the kitchen owner.

But if the juggler loses interest in the middle of the performance and wanders off to stare at a flashing red box on a computer screen, a number of plates will crash irrevocably to the floor and the kitchen owner's old list of plate locations will be wrong.

A simple optimiser with a small RAM buffer juggles only a few plates at a time. For maximum security, it can even update the plate list as it goes, giving the owner a new list every time it sorts some plates. But juggling plates in twos and hurling reams of paper at the owner is the slow way to do it.

This slow way is the one used by a number of MS-DOS optimisers, hamstrung by the antique operating system they're stuck with which requires the disk's File Allocation Table be

updated immediately whenever anyone does anything at all.

Faster optimisers save the list update till the end, and juggle more plates. The optimisers in Quarterback Tools and Amiback Tools behave like this; if the computer dies in the middle of an optimise you will lose a lot of data, but not all of it. Then there's ReOrg, a shareware optimiser you can find on Fish 716 whose act involves turning the air white with plates. Turn off without a backup and you might as well reformat the drive (although you CAN get data back... see below, if you're brave).

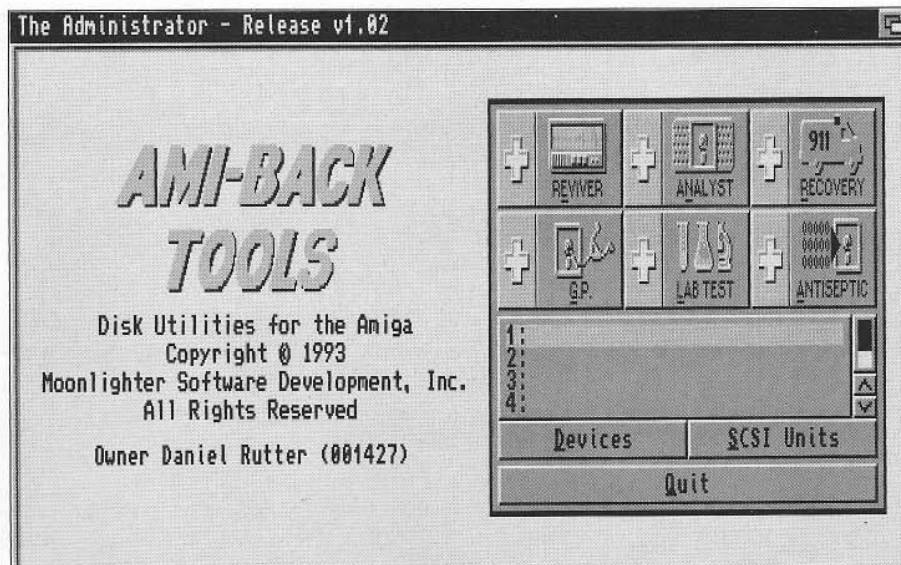
### Which Software?

Do not use Commodore's old Diskdoctor program. If you have it (it hasn't come with Workbench since version 2 came out), delete it, and ignore those stupid requesters that say you should use it.

The problem with Diskdoctor is that it reads from the disk, then writes anything it finds back, which means a disk that is physically damaged may not be helped at all. It will salvage deleted files, but Diskdoctor's woefully inadequate when it comes to recovering damaged data.

You can use Diskdoctor safely for simple undeleting, but don't. There are better programs out there. One, imaginatively titled Undelete, is on Fish 795. It works like the DOS delete command in reverse - simply type undelete and the filename from a shell and after a bit of disk thrashing you'll get the file back, unless something's overwritten it.

A more elegant program is ARestoure, on Fish 760, which has a nice interface and lists all the files you can undelete for easy selection. All full salvage programs can also do undeleting. Fish 891 contains Disksalv 2, a shareware salvage program that costs only \$US10 to register and is as



### Ami-back Tools - friendly disk manipulation

powerful a file recovery program as most people need - although all it does is recover files; it doesn't optimise, copy, wordprocess or do 3D rendering.

In the commercial arena, Ami-back Tools and QuarterBack Tools are the ones to go for. Ami-back Tools is just one lump, Quarterback Tools comes with a pile of little extras. Both do undeleting, optimisation and file recovery; both can blank disks if you're paranoid about people undeleting things you'd rather they didn't.

Quarterback can also encrypt floppies and do some other non-relevant things. Quarterback seems to be the more powerful of the pair, but this is hard to ascertain. To do a proper test, both programs would have to face exactly the same problem, and since it's since it's nigh impossible to get two really stuffed up drives exactly the same, that test will have to wait. Both Tools programs are very good.

### Recovering tiny bits

So far, I've dealt with more

everyday disaster recovery. But what if the above methods aren't good enough? What if we're talking not a car bomb, more of a nuclear holocaust?

Well, in many cases you can get back some of a file even if it's been saved over or mangled too badly for traditional recovery. If it's a program file and you can't get back all of it, forget it; erect a tombstone and move on. Likewise for pictures (unless you're a SERIOUS guru and a lot of other data formats that work in an all-or-nothing sort of way. But if it's a text file, you've got a hope.

A text file that's been saved a few times will have many fragments of its previous selves lurking on the disk. They're all labelled as empty space, but they're there and can be read. DOS can't do this, and neither can regular recovery programs, but a couple of specialised tools can.

My favourites for these sorts of really ugly jobs are DekSid (Fish 441) and TrackDOS (Fish 620). DekSid is a disk and file sector editor - you can load files or whole



Deksid v1.11 (c) 1990 Christian Warren

Blk 822293 / 041579 Trk 00058 Sec 45 Head 6

Device 1: IntviDump

Pos 000 Hex 00 Dec 000 Bin 00000000

S-Ascii	Type	File Header
S-Hexa	Header Blk	821915
Continue	Next Blk	821916
Write	Seqnum	000053
	Checksum	G 13CA052A

```

00000002 00005598 00000035 00000000 0000559C 13CA052A 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00005500 000055CF 000055CE 000055CD 000055CC 000055CB 000055CA
000055C9 000055C8 000055C7 000055C6 000055C5 000055C4 000055C3 000055C2
000055C1 000055C0 000055BF 000055BE 000055BD 000055BC 000055BB 000055BA
000055B9 000055B8 000055B7 000055B6 000055B5 000055B4 000055B3 000055B2
000055B1 000055B0 000055AF 000055AE 000055AD 000055AC 000055AB 000055AA
000055A9 000055A8 000055A7 000055A6 000055A5 000055A4 000055A3 000055A2
000055A1 000055A0 0000559F 0000559E 0000559D 0000559C 00000000 00000000
00000010 000068FC 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 000016C7 00000397 00000908 09496E74 75694475 60700000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 0000515F 00000000 FFFFFFFF
  
```

**Deksid - about as low level as it gets**

disk devices into DekSid and view them as hex and ASCII, doing search and replace operations and freeform editing.

Deksid thus lets you modify DOS and non-DOS disks in any way you like; doing this at random gives you about one chance in a squillion of not mucking up the disk.

But that's not why we're interested in DekSid here. You see, once you've loaded a device into DekSid and you know the above-mentioned text file on American constitutional rights is in there somewhere, you can do a search for, say, AK-47, a word you know is in it. Assuming the word has survived, you'll be able to jump to any disk block that contains it. The advantage of DekSid now is that it can track block links. In an intact file, there's a header block that tells the system what the file is, and then there are a lot of data blocks that contain the actual information. So that the system knows where to look for the next data block, each one contains a pointer to the next, whether it's immediately after the

current block or somewhere else.

A dead file has almost always lost its header block, but the block links may be intact. If they are, DekSid can tell you where they point and you can follow the chain by hand, saving as you go. Clumsy, but not nearly as clumsy as the last line of defence - TrackDOS.

TrackDOS is more of a brute force program, and not much use by itself. It lets you interchange data between memory, disk tracks and files freely. This means you can take the contents of RAM and turn it into a file (which you can then load into the beefy text editor of your choice and hunt for any bits of your text that are still hanging around there), or read every track from a floppy and create an 880k-odd file to peruse likewise, or, less usefully, drop raw track data into RAM or turn RAM into tracks, either of which will definitely cause a whole new disaster of its own.

Fishing through TrackDOS's output is excruciating, since there's always a lot of duplication and fragmentation, but if all else

fails and you absolutely positively can't recreate the file, it's worth a try.

### Mutilated Floppies

For the purposes of file operations, floppy disks behave just like hard disks, only slower. However, floppy disks aren't sealed in an airtight case like hard drives and thus are vulnerable to simple physical contamination, or mutilation. Despite the little metal door over the disk surface, floppies can still get dirt on the disk and can also be physically broken. Fortunately, there are ways to deal with these problems too.

The first thing to do in any case where the disk will still spin and has no projecting fragments is to make a copy and try salvaging from there with the software of your choice.

The second line of defence goes as follows. Slide open the metal door on the disk. Hold the edges of the disk, to stop the plastic case pinching in on the disk and stopping it from spinning. Now line up the disk surface so that a light source is reflected off the surface of the disk. Make sure you focus your eyes on the disk, not the light. Now turn the metal hub of the disk with one finger, and look for marks on the disk. They should be very easy to spot against the reflection. Remember to check both sides.

If you find a mark, look more closely. If it's a blob of something, or a smear of grease or some such, take a cotton bud, dip it in methylated spirit, and firmly wipe the offending muck off to the edge of the disk. Move the bud one way only, or you're just pushing the dirt around. If the mark on the disk refuses to move, it's a scratch and you're not going to get back whatever data's under it. Disksalv or one of the Tools programs will get back the rest of the contents.

What do you do with a smashed disk? You know - roll the ol' swivel chair back and crunch, there goes the disk! Often the cracked case on a broken disk is the extent of the damage - the floppy disk itself under the case is okay. It just can't be accessed because the case is busted.

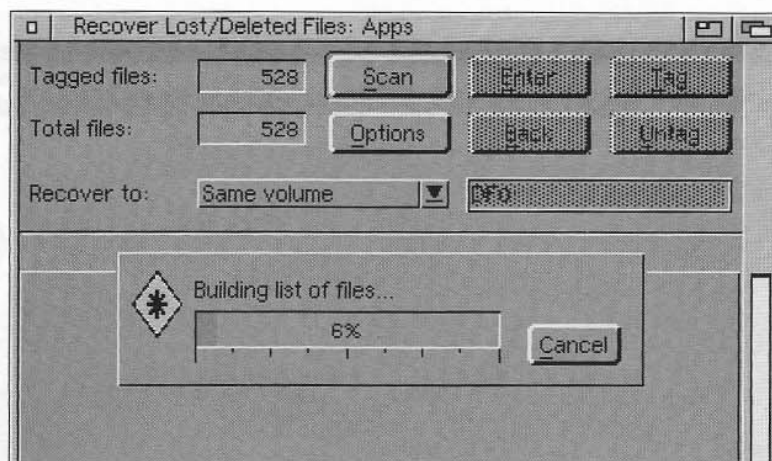
Get a fingernail under the metal door on the disk, bend it up, and zap! The return spring vanishes in a flash of silver into the corner of the room, never to be seen again. Never mind.

Stick something nonmagnetic - check your screwdrivers - into the crevice between the halves of the disk case, off to the right or left so as not to further mangle the edge of the disk where it meets the edge of the case. Twist. Ignore the splintering noises. Work your way around the case, until it falls into two pieces in your hand.

Grab the disk inside by the hub (fingerprints really don't make a lot of difference, but there's no need to complicate the issue), and lay it on something clean. Now repeat the process with a thoroughly dead disk, which nonetheless possesses an intact case. If you lack such an item, sacrifice a blank. This time, however, don't let it come completely apart - you need the connections at the bottom.

With your new, clean, shiny, beautiful case in hand, approach the offending disk and pop it in. Close the case. Don't bother with the metal door - the return spring's joined the pile in the corner, the metal's bent irrevocably, and all it does is keep dust out anyway. Now put the hybrid disk in the drive. You won't hear the usual "snick" of the door sliding back, for fairly obvious reasons, but the data may be salvageable.

As always, prevention's better than cure, and clean storage for your floppies is important - put them in boxes, and close the lids



when you're not using them. And clean your drive heads, either with one of the fibre disks supplied with overpriced bottles of carbon tetrachloride or, better, by hand with a lint-free swab. The second method is more finicky, but worth it - cleaning disks only clean the heads, and leave all the the grot in the drive right where it is. A long swab can get all the other stuff, but be gentle.

If the idea of dismembering disks sounds a little overspectacular for your problem, try just spinning the disk around. Floppies have cloth pads inside that are meant to collect dirt; see if they can solve the problem. You can try copying all the files on the disk to nowhere, or duplicating it to a spare blank, or anything that makes it rotate; there's a program back on Fish 297 called CLean that does the trick.

To accelerate the process, slide back the disk gate and add a couple of drops of methylated spirits - not enough to make the whole drive grind to a halt with an agonised whine, though. Remember to let the disk dry before reading it. It won't hurt the heads if you try to read a wet disk, but you won't get the data either, and any gunk on the heads will transfer itself to the disk.

### Boom!

There are other disasters that can happen to your computer which no software will help you with - but they're not always as bad as they look. The A1200 (yes, that's what it was) in the illustration with this article went through a house fire. Looking at it, you'd say it was unrecoverable, but when its proud owner, Mark Cocquio, cracked the case open and ripped out the innards, then re-potted them into a fresh case with a new keyboard, it worked fine. Only an extremely characterful floppy eject button suggests the ordeal the machine went through.

Two SCSI hard drives plugged into the machine also survived, though their cables didn't; the NEC Multisync 2 monitor died when a fire hose hit the scalding hot picture tube, but a Commodore 1084 on the far side of the room, though badly melted and rather unhappy, powered up and produced a picture.

This anecdote exemplifies one of the most important things to do when something goes badly wrong with your computer; don't panic. Many problems aren't as bad as they seem, if you know what to do. □

# Quark Xpress vs *PageStream 3.0*

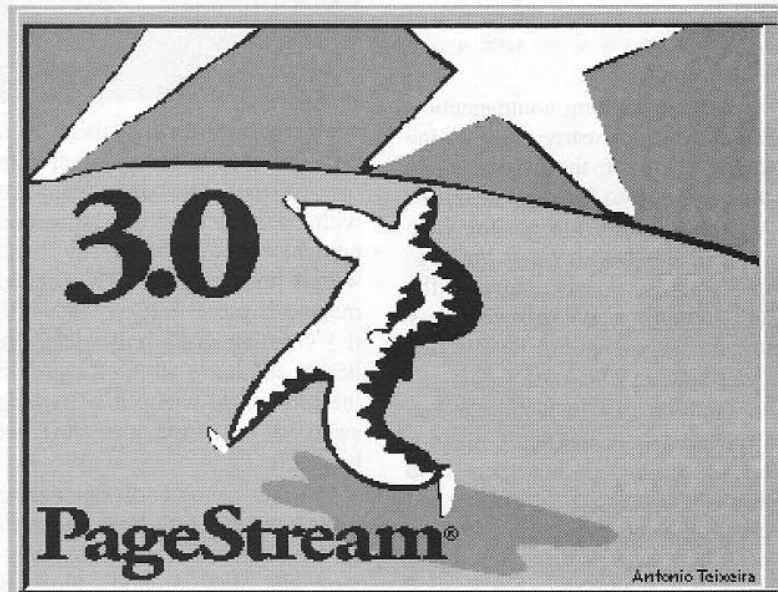
By Greg Schofield

► I've been waiting for something like Pagestream 3 for more than two years. I bought Professional Page and then later Pagestream 2.2, each time hoping that I could use them professionally - no such luck.

A feature by feature comparison between the Macintosh's leading DTP package, Quark Xpress and Pagestream 3.0 is really only useful to establish that the two products are in the same league. Which is not, in the world of publishing, big news. Based on functions alone, the Amiga has professional desktop publishing software which can be favorably compared with anything on the market.

Pagestream 3.0 has certainly got extra features, but there's nothing stopping XPress having them in a future version - some of the same drawing tools have just been announced for version 3.3.

Despite Pagestream 3.0 being incomplete and unreliable at the moment, even with the "b" update, the size and rate of upgrades (two in a month), if it continues, would mean that in another 4 to 6 weeks Pagestream 3.0 should be flying. If



you are serious about publishing on the Amiga I do suggest getting it as soon as possible and learning as much as possible.

As much as I like the Amiga, I make a living (albeit a poor one) in an industry dominated by Xpress and the Mac. The fact that the quality of the output from Pagestream 3.0 promises to be equal to Xpress is not, in itself, going to have very much impact. But simply because Pagestream 3.0 runs on the Amiga, and has been implemented well with full AREXX support, it has a very real advantage over Xpress.

The future of so-called desktop publishing software isn't about final output, now that software has reached a professional standard.

The critical question is one of throughput - allowing an operator to produce more output in a given time without compromising quality. It is not, as some believe, entirely a question of faster processors and more RAM, though naturally this is important.

To increase throughput, a DTP program should aim for three objectives.

1. The operator should become oblivious to anything other than the job in hand and the available software tools. Ideally, file handling and system management should be done automatically in the background. Even naming files should be a machine initiated task.

2. Anything repetitive and



predictable should be automated where this does not add extra complexity. No piece of information about the job should need to be re-entered. Establishing the type of job and the client should be enough to start the computer assembling the various tools needed (including job records and so on).

3. Anything which by its size or complexity creates processing delays should be done unattended in the background, during breaks or on a slave machine.

"Who" magazine is an example of Xpress at its best. From what I understand, "Who" uses an extensive array of plug-ins, including specially written code which automates every aspect of its publication. The magazine is produced in the US and sent via satellite to Australia and elsewhere, where extra articles and ads are "localised". "Who" is big enough to not only afford the bits and pieces, but more importantly represent a big enough market for software companies to design modules with their needs in mind.

I wouldn't hold my breath until the right module comes along for your needs. Quark Xpress as a generalised product can only improve in one direction - it must grow bigger and bigger, make more demands on the CPU and RAM and become more and more complex to use.

Many of Quark's features I use very rarely, some I have never found a use for and others would be fine if only I could do them another way. Alas, I also confess I have lost interest in learning more, of keeping up with new versions, for the simple reason that I cannot make the software learn from my experience.

I am the passive consumer of how someone else thinks the job should be handled; I cannot train my software to fit my

environment, my clients or my workload.

On the other hand, Pagestream 3.0 was designed for the Amiga and lets me maintain the quality of final output, with a much increased throughput. Furthermore, investing in the computer by adding RAM and processing power pays off more than it would ever do in the Macintosh. The stock standard Pagestream 3.0 gives you near enough to the best in the industry, but by putting in the effort to tailor it and integrate it into a whole work environment you can get a new world.

### Printing

It is a rule of the trade that when you're in the middle of a complex job some fool always wants an urgent laser proof of something else. No problem, of course, with the Macintosh's famous "background printing"; you simply stop what you're doing, open a file, go print and wait as Xpress writes the entire print file to a spooler, during which time the Mac is locked up (this is when I catch up on my reading). "Hurry up and wait" sums up working with Xpress, and printing is the break you have when you really can't afford a break.

By running two copies of Pagestream 3.0, it's possible to have an AREXX script to either load the file to print in the second copy or even invoke an autosave (which happens invisibly in the background) of the current document and have it loaded and printed by the second copy. By changing the task priority of the second copy of Pagestream you can have the whole process performed between your keystrokes.

This literally saves hours wasted by Xpress, and it'll be the first AREXX script I write when Pagestream 3.0 is completely functional.

### Improving Technique

I often have to follow designs which specify a number of aligned picture boxes between two points, with a given distance between each. It's a simple enough problem (size of picture box equals the length minus the gutter space divided by the number of boxes, and so on). In Xpress I have a number of ways to do this, but they all involve calculations and precise movement. This effort is irrelevant as long as the output looks OK.

In Pagestream 3.0, there's no specific feature to do this any better, but I can create a script that allows me to draw one box (to give the length, depth and point of origin) and then enter the number of boxes and gutter and watch the task get done automatically and accurately.

Sure, Xpress may add such a feature in the future. But let's just say that, from experience, a better way to handle the problem is to roughly position and size the right number of boxes, use the extreme boxes to establish length, and thus only be requested for gutter space. In Pagestream 3.0 I either write another script or modify the old one, but Quark can only add an even more complex feature or leave it out altogether.

The point is that I have the power to mold Pagestream to my needs and impart my experience to the software, and that's the best way to increase overall throughput.

### System Integration

Xpress, Photoshop and Illustrator all support DDE (Dynamic Data Exchange) publishing and so does Pagestream 3.0, with Hotlinks. I confess I have never used the system on the Mac (I couldn't afford the RAM). The idea is good, but it's generally easier to do different aspects of the



job at different times. This indifference is about to change - in fact my whole work method is going to change.

Because I can get different applications to work together and transfer information from one to the other via AREXX, and Hotlinks makes sure that the data flows to the layout, I have a lot more freedom in when and how I finish the job. For instance, bulky photograph scans be handled in ways just not possible on the Macintosh.

Let's assume a 35mm original has been scanned up to 18 megabytes (which will give you about all the detail that is available in that format), but the designer only wants a quarter of the original, and that has to be blown up to A4, and finally the printer needs to use a resolution of 200lpi.

In Photoshop I would open the file, crop it, apply at least an unsharp mask, probably reduce the contrast and increase the brightness and then scale it to size A4 x 400dpi (as a rule of thumb, scan resolution should always be at least twice that of the printer's lines per inch). Then I would have the file saved as a CMYK EPS image, and finally import into Xpress.

The whole operation, even on the fastest machine with unlimited RAM, is time consuming. And if after all this work someone decides that the cropped part should be a bit to the right, you may have to go back to the original and do it all again. If I was using Dynamic Data Exchange I would not have to do it in the same order.

On Pagestream 3.0, I could simply import and position the original. Through an AREXX script I would automatically create a scaled down version of the original, and on this do all the unmasking, contrast and brightness control until it looked

right, and have the script record the accumulated changes which it will later apply to the original, when I am doing other things.

In Pagestream 3.0, once everyone is satisfied with every aspect of the job, I have a script which reads the job lpi information, gets the cropping information and basically does the job without me. Hotlinks ensures the changes flow through, although a script needs to reinstate the new cropping in its position.

There is no way of estimating this sort of time saving. Whole aspects of such jobs can happen at night or be farmed out to other machines.

### File Management

A job arrives for client X, a simple A4 size gatefold brochure (1mm shorter in length than an A4 page) in CMYK colour. It includes their logo, a number of photographs (sent for scanning) and some supplied text (IBM format). Later I will find out the printer's lpi resolution and film requirements.

On the Macintosh I create a job folder, manually name it after the job number, move the scans into it (opening each so that it can be identified, renamed, modified and so on), move the text into the folder, open each file and begin cleaning it up, dividing and renaming. Then I begin the task of searching directories for the correct logo (and this on a big system can be its own form of nightmare), then I copy it to the folder (so that it can easily be sent with the final document).

In Xpress I may have previously made a template for such a brochure. It has to be two single custom pages with fold marks and each panel arranged in imposition order (i.e. page two is fine, panel 2,3 and 4 flow naturally, but on page one the first

panel is 5 followed by 6 and then the first panel). I save this as to the appropriate job folder.

When I have finished I print out laser proofs and fax these to the client for approval and changes.

So far four programs have been used (Photoshop, Nissus WP, Illustrator and Xpress) and in each I have to manually go through each step. If I have the RAM I can have all programs up and switch between them; otherwise I organise the job to open each only once (if possible) because of the time consumed while loading, which binds the whole system. If I make a mistake in naming or placing files, more time will be lost.

If you know the Amiga and are conversant with AREXX you will realise that with a bit of work just about every aspect of the job setup could be automated.

In Pagestream 3.0 I could have different sized pages in the same document (i.e. two pages with the crucial 1mm removed), work on the panels in the logical order and have them arranged into the printer's signature automatically. The time saving would be significant and the system would also be made relatively immune to silly mistakes.

### Improving Client Services

Clients are horrible people. They don't understand much and they want to change everything. Normally, all you can do is stop what you're doing and do whatever they want. But I have a plan for clients.

At each phase of a job I want the client informed that now is the time to change the text, and later is the time when the layout roughs need approval, and still later that the job is ready for their final approval. The trick is to have the machine automatically gather the right information, format it into



the appropriate forms, and fax or print out the results. Naturally, this can be automated.

### Conclusion

It is impossible to fully explore Pagestream 3.0 without spending time doing real jobs. There are no doubt many bugs and much to further improve in this package. Compared to Quark Xpress, Pagestream 3.0 seems capable of producing similar results. However, Pagestream 3.0 is potentially capable of much greater throughput than Xpress; in fact Quark Xpress is not even in the race.

There is one big feature Soft-Logik could add to Pagestream - it'd be wonderful if every docu-

ment opened should be its own addressable task (it would mean that Pagestream's code would have to be "pure", which may well be impossible); although no other publishing software does this, it is critical to further increasing the potential throughput of the program without the RAM overheads of running several copies.

There are some other improvements I'd like to see in PageStream, but only one of them is in Xpress (justifying, centering and sitting text within columns). Some of the things I would like to see are a better approach to style sheets in Pageliner, the use of better pattern matching in find and replace, and the ability to export text

files with only style names embedded in the text.

In general, I am of the opinion that along with its strengths in 3D animation, games and video work, the Amiga has the potential now to make as much impact on the publishing world - a point I would stress to the new owners of Amiga technology.

It is ironic that Commodore Australia, after I had asked who in the company was watching desktop publishing, had last year advised me to buy an IBM. Good advice, fellas; no wonder you went down the tube.

□



## Computer Affair wishes you a Merry Christmas and offers you our Christmas Specials



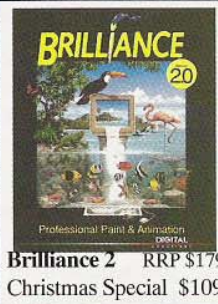
### CD<sup>32</sup> Console ... \$499

Definitely the last time we can offer this price. Includes Diggers/Oscar CD plus any one CD from our Special Bundle List.

#### CD<sup>32</sup> Special Bundle

\$40 each or 3 for \$99

Arabian Nights  
D/Generation  
Dangerous Streets  
Deep Core  
Donk the Killer Duck  
Fire & Ice  
Fire Force  
Fly Harder  
Fury of the Furries  
Global Effect  
James Pond 2  
John Barnes Football  
Lemmings  
Liberation  
Mean Arenas  
Morph  
Nigel Mansell  
Overkill/Lunar  
Pinball Fantasies  
Sensible Soccer  
SleepWalker  
Summer Olympix  
Super Methane Bros  
Total Carnage  
Trolls  
Whales Voyage  
Wild Cup Soccer  
Zool



Brilliance 2 RRP \$179  
Christmas Special \$109



AmigaDos 3.1  
A500/A2000 \$185  
A3000/A4000 \$210



Easy Ledgers 2 RRP\$399  
Christmas Special \$379

#### Amiga Games at Give Away Prices!

\$14.00 each	\$25.00 each
Zool	Brutal Football Big 100
Shadowworlds	Morph Overdrive
Qwak	Woody's World
Cardiaxx	Second Samurai AGA

\$39.00 each (RRP\$69)	
Super Methane Bros	Zool 2
Dangerous Streets AGA	Fire Force
Disposable Hero	Gnome Alone
Abandoned Places 2	Deep Core
Total Carnage AGA	Soccer Kid
Theatre of Death	Wiz'n'Liz
Second Samurai	Puggsy
Combat Air Patrol	Prime Mover
Bobs Bad Day	Globdule
Donk	SuperFrog

\$49.00 each Pack (RRP\$89)
<b>Sports Pack</b> - Graham Gooch Cricket
- Lotus III
- World Class Rugby
<b>Games Pack</b> - ShadowWorlds
- Assassin
- SuperFrog



SX-1 Unit \$449  
AT Keyboard \$49  
Floppy Drive \$169



Competition Pro Pad \$49

**RED HOT SPECIAL**  
NEC CDR25 SCSI CD-ROM  
Limited Qty only at \$199

We stock an extensive range of CD32, CDTV & CD-ROM titles.



337 Penshurst St  
Willoughby 2068  
Tel: 02-417-5155

Mon-Fri 9:30-18:00 Sat 9:30-13:00



# G-LOCK

## *Genlock plus Video Processor*

By Heiko Wynen

Video work is one of the Amiga's bread and butter applications, and a genlock is the basic requirement when graphics need to be mixed with video footage. As the Amiga puts out a standard video sync signal, genlocks for it are relatively easy to develop and produce. It therefore comes as no surprise that there are more genlocks for Amigas than for any other make of personal computer.

A wide choice of products always means fierce competition. Amiga owners are consequently in the lucky position of generally getting excellent value for their money, whether they select a low cost entry level unit or go for broadcast quality with all the bells and whistles.

### **Modest Looks**

GVP's G-Lock is a plain black metal box with a series of sockets along its sides and no knobs or buttons. It connects between the computer's RGB output and the monitor and can be used with any 512k/Workbench 1.x equipped Amiga. The G-Lock's modest, if not boring appearance was respon-

sible for many reviewers writing it off as a serious tool for professional or even semi-professional video work when it was first released. Especially, the lack of separate fade controls for video and computer graphics seemed questionable, when other genlocks for less than half the price (the Roc-Gen+, for example) had them.

While the G-Lock has become more affordable recently, it still hasn't got any mechanical controls.

But what many tend to overlook is a much more elegant implementation of fade effects than knobs and levers - the G-Lock is fully ARExx programmable. ARExx scripts not only guarantee extremely smooth, professional looking fades, but can also handle a large number of general and expert calibrations.

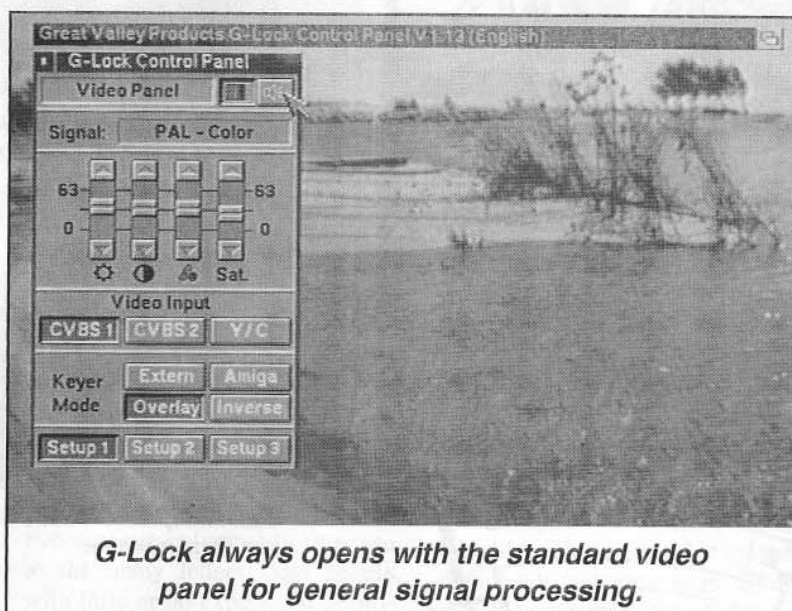
In practice this means the G-Lock combines a broadcast quality genlock with an equally high grade video processor, the latter offering a wider choice of adjustable parameters than many dedicated stand-alone consoles.

### **Sliders and buttons**

There's nothing negative to report about the G-Lock's output quality, which definitely meets even video enthusiasts' performance standards; do the controls measure up?

Unless the factory settings are changed, the G-Lock allows access to just two control panels, which contain the most important and, at the same time, easiest to understand and operate signal processing options.

The video panel automatically comes up first whenever the software is run. In its status field the user gets basic information about the incoming video signal - "PAL-COLOR", "PAL-B&W" or "SECAM-COLOR". Simple SECAM to PAL transcoding is possible, but not at broadcast quality. Although the G-Lock is optimised for the TV system in the country of purchase, Australian owners can process NTSC sources in good quality when running Workbench 2+, which allows you to switch the computer between PAL and NTSC screen modes without bashing the hardware.



Four sliding controls affect contrast, brightness, hue and colour saturation of the video footage. The level of adjustment (64 steps) is indicated in the title gadget at the top of the panel.

Three input buttons give a choice between one S-Video and two composite sources. As the switching is performed in software, and the 4-pin mini-DIN high-band socket is actually hard-wired internally to the CVBS1 (luma) and CVBS2 (chroma) RCA connectors, only one type of video signal should be present at any time to avoid interference - sync or colour loss and other distortions.

### Multiple outputs

In direct contrast to the input layout, the output is simultaneously available as composite (RCA), S-Video (mini-DIN) and RGB (23 pin) signals. The latter can also be switched (in software) to the professional YUV system if the appropriate equipment and cables are available.

The G-Lock displays the full, processed video on the Amiga's monitor, instead of just the computer graphics like many other

genlocks. This means an additional video monitor or TV set is not mandatory, though still preferable.

A cluster of four buttons determines the way the output signal is put together. In addition to video only, computer graphics only and a combination of both (computer images overlaid on video), you can also do an inverted combination for keyhole events (colour zero opaque, all other computer colours transparent).

Finally, there's a row of three buttons along the bottom edge of the video panel which allows you to save three different setups for instant access.

### Pathetic sound

There are actually two more buttons available on all panels, including the advanced options, for giving instant access to the standard video or audio controls.

The audio features are the only real disappointment in the overall picture of the G-Lock. Including sound in this type of equipment will always be questionable - too many compromises have to be made, which usually limits versa-

tility and performance. GVP's solution restricts the user even further by providing only "two in, one out" old fashioned mono.

Although there are quite a few applications for such a setup - for example dual channel commentary - the average video editor will have to buy a stand alone mixer anyway.

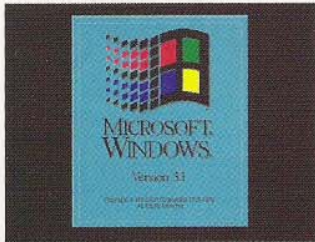
### Advanced options

Much more practical for serious work are the G-Lock's advanced options, which are unfortunately not available on pre-ECS machines. You make the advanced menus accessible by adding "MENUS=ADVANCED" to the G-Lock icon's ToolType window.

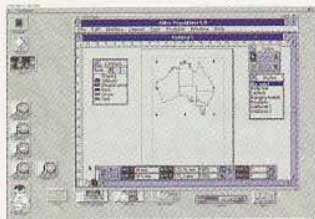
Some of these options are best adjusted with the aid of dedicated service instruments, but since there's a global factory reset provision, more experienced operators may try to improve results by visually assessing any changes. As usual it's best to evaluate the performance from tape after recording, to avoid any nasty surprises later. The first collection of processing tools are automatic/manual input signal selection for PAL/SECAM standards (not available in NTSC mode). A kill button removes the chroma subcarrier for forced black & white output.

Video output quality is strongest with a stable timebase, as supplied by a live signal from a camera. But since genlocks are chiefly employed for tape editing, at least in semi-professional and amateur applications, the G-Lock can be set to work with larger tolerances when connected to a VCR, which is also the default setting.

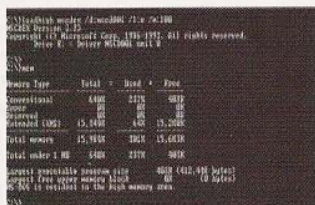
Three sliders control the Subcarrier Phase (+- 5 degrees), R-Y/B-Y gain balance (additional hue control) and R-Y/B-Y saturation balance.



With PC-Task 3 you can run Windows™ on your Amiga.



Run Windows™ applications in a window on Workbench!



PC-Task 3 can access up to 16MB of RAM on your Amiga.



Now you can multitask with MS-DOS games!



Play classic games like Castle Wolfenstein 3D.

# PC-TASK

VERSION 3



## Now you can run Windows™ on your Amiga® with no additional hardware\*

- The only software 80286 emulator for the Amiga
  - Runs on all Amigas with Kickstart 1.2 upwards
  - Use up to 16MB RAM under MS-DOS
  - Supports MDA, CGA, EGA, VGA & SVGA
  - Use up to 256 colours with AGA Amigas
  - Compatible with graphics boards (e.g. Spectrum)
  - Supports hard disk files & hard disk partitions
  - CD-ROM and high density floppy support
  - Run MS-DOS applications in a window
- \* Windows™ 3.1 requires 1.5 MB Contiguous RAM

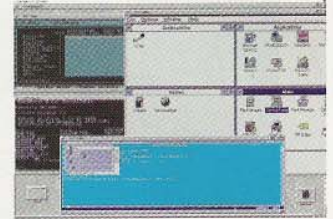
# QUASAR

DISTRIBUTION

P.O. Box 188, Southland, Victoria 3192  
Tel. (03) 583 8806 Fax. (03) 585 1074



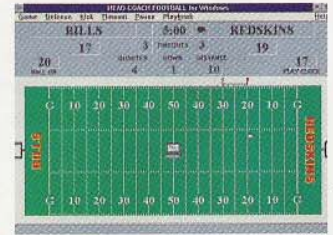
Access popular productivity packages such as Ami-Pro.



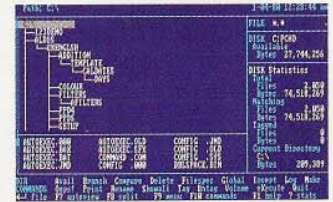
Run multiple PC-Task's on the same machine.



Run MS-DOS CD-ROM applications on your Amiga.



Access the world of Windows™ gaming on your Amiga.



Clean up your PC hard disk with programs like XTree Gold.

Available from all good Amiga stores or from Quasar Direct (03) 583 8806 RRP \$129.00

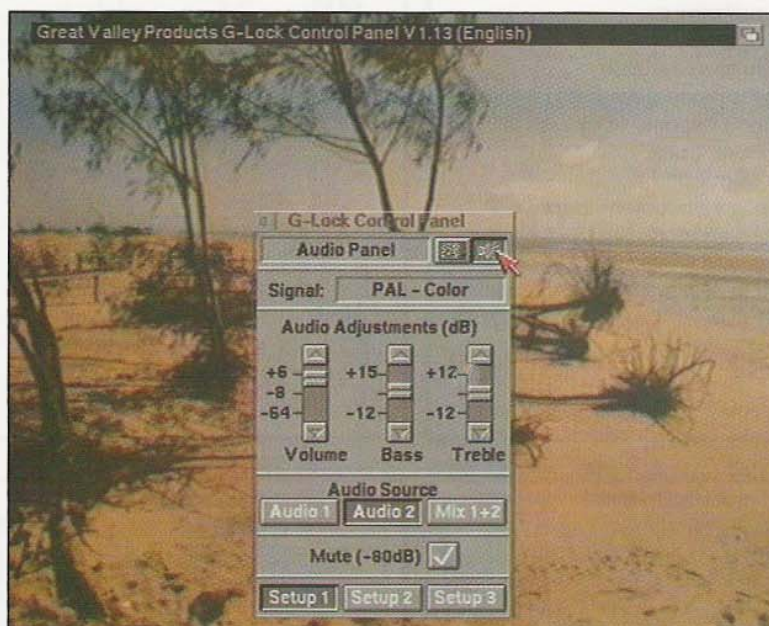
### Higher sharpness

The second "Proc.Amp" panel allows adjusting the saturation of Amiga graphics together with the live video. Normally only the video input is affected. There are also several levels of Luma Delay to cure registration problems (mono and colour parts of the image not correctly aligned), Luma Peaking for increasing the apparent picture sharpness and a Filter Trap to remove possible audio from the composite signal and thus avoid any interference.

The controls on the third advanced panel are largely for the professional user, as they give a choice between RGB and YUV colour processing and therefore require expensive additional equipment out of the reach of most amateur budgets. Of some limited interest for the average user may be the option to individually remove the red, green and/or blue components from an RGB signal for special effects.

### Chroma keying

In contrast, creative users will applaud the fourth panel, which gives control over the way Amiga graphics are displayed. Border Blank and Border Opaque determine whether or not a border will



**All Panels can be freely moved on the screen.**

surround the standard (text) display area. The first has the higher priority and decides if the strips around non overscan images are transparent or not. The second introduces an opaque frame even on overscan pictures.

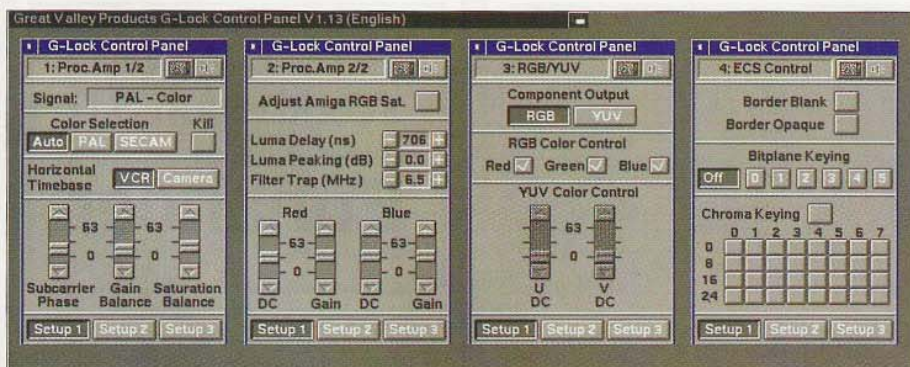
Bitplane keying allows to make all colours in the (one) selected bitplane invisible (transparent), while individual hues, up to 32 on ECS and 256 on AGA machines, may be chosen in chroma keying mode. Obviously, if all

colours are selected at once, there will only be the live video on screen because the Amiga graphic is completely transparent.

Amiga owners with a good knowledge of AReXX programming can take charge from inside other programs and control the G-Lock via scripts. This is extremely flexible and the major selling point, apart from the excellent image quality. A number of sample scripts are provided, including one to use the genlock as an electronic colour splitter for Digi-View type slow digitisers, via a cable connection to the joystick port.

In combination with a presentation package like Scala, even in the Home Titler incarnation, there is almost nothing the creative videographer can't do, including separate fades of the live video and/or Amiga graphics.

For its price, the G-Lock is a bargain and deserves a lot more attention than it has received. □



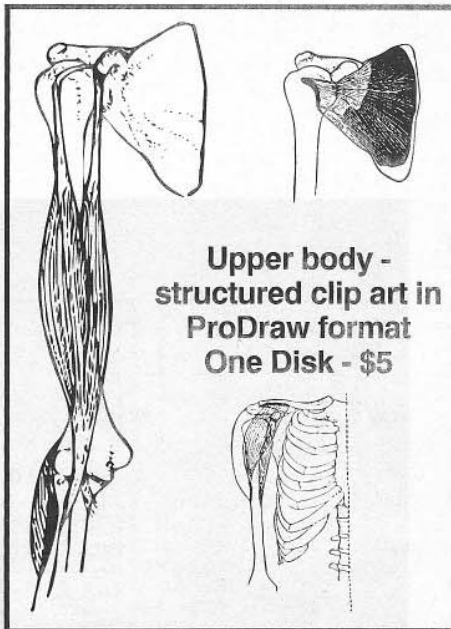
**Four additional control panels can be accessed after modifying the ToolTypes of the Workbench icon.**

## Term 4.1 - NEW

Four Disks • WB2.x or better required

- Many new features
- Many bug fixes
- Generally more reliable
- Improved upload/download handling
- Workbench deposit to upload list
- Better phone book
- More configurable
- AmigaGuide documentation
- Better screen mode support
- Better upload windows

Term 4.0 \$17.00  
hard disk recommended



Upper body -  
structured clip art in  
ProDraw format  
One Disk - \$5

## Latest AGA PD Games

ALL BRAND NEW TITLES

**Tetris Dual AGA** \$5  
*A two player version of  
the brilliant original*

A1200 AGA required

**Yahtzoo AGA** \$5  
*The original dice game  
goes digital!*

A1200 AGA required

## Klondike AGA

Three disk set • HD installable

### BRILLIANT Graphics

A classic AGA version of the popular  
patience style card game. Impressive  
playing cards in full AGA colour.  
Amiga 1200 or 4000 required.

We also have a number of other new  
strategy classic games, including  
Yahtzee.

Author	Title	Publisher	Year of publication
Adams, Douglas	Din, Gerry's Multi-Collective Agency	Pan Books Ltd	1988
Adams, Douglas	Hitchhiker's Guide to The Galaxy, The	Grafton Publishing	1986
Baum, L. Frank	Wizard of Oz, The	Mandarin Publishers Limited	1983
Berenford, Dick	Uncensored Boy's Own, The	Macdonald & Co Publishers Ltd	1990
Boardman, Tom Jr	Science Fiction Stories	Octopus Books Limited	1983
Burner, Frances Hodgson	Secret Garden, The	Octopus Books Limited	1983
Carroll, Lewis	Alice's Adventures In Wonderland	Octopus Books Limited	1981
Clarke, Arthur C.	2001: Odyssey Two	Granada Publishing Limited	1992
Clarke, Arthur C.	2001: Odyssey Three	Grafton Books	1983
Crichton, Michael	Jurassic Park	Random House	1991
Davis, Jim	Garfield: Here's Looking at You	Barbette Books Limited	1985
Davis, Jim	Garfield: Life And Laughs	Barbette Books Limited	1986
Davis, Jim	Garfield: We Love You Too	Barbette Books Limited	1985
Feinberg, Sir Arthur Conan	Lost World, The	Random Publishing	1986

### Database II

A collection of simple to use database  
programs for maintaining all sorts of lists -  
from catalogues to clients. Flexer -  
pictured above - is one of the new  
programs included on release II of the  
database compilation. Flexer's form-like  
display makes it ideal for beginners, and  
powerful enough for advanced users.

Workbench 2.x and 3.0

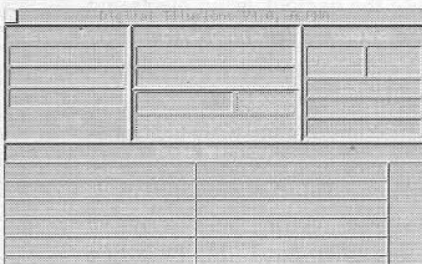
## Screen Blanker

SUPER DARK 2.1

### SuperDark 2.1 NEW

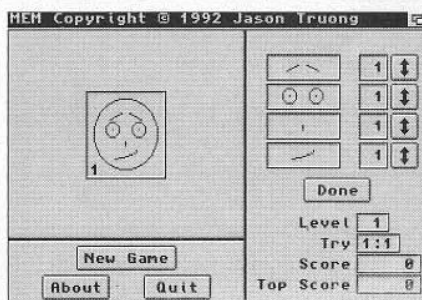
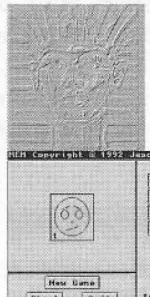
The ultimate screen blanker - complete  
with various modules offering a wide  
variety of blanking activities - highly  
configurable.  
Designed to avoid burn-in of static  
monitor images. Requires Workbench 2.x  
or better.

One Disk



### Image Processing

Digital Illusions is fully  
functional and allows  
impress image processing  
and animation functions to  
be executed on IFF  
images. Powerful AdPro  
style interface. One disk.  
(HAMLAB demo inc. too)



### Education #5

We now have a total of six disks of  
education software. Mem (a memory  
game - picture above) is from education  
#5 - one of five programs on the disk.  
Others include Maths Adventure,  
Division, Counting and Lemonade.  
Education 6 has an excellent puzzle  
game called OXYD.

NEW NEW NEW NEW NEW NEW

## Workbench 3.0

NEW NEW NEW NEW NEW NEW

## Enhancer

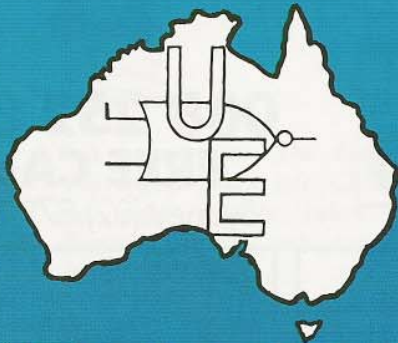
### WB3.0 Enhancer NEW

Numerous data types, viewers, utilities  
and enhancements for Workbench 3.x  
machines - such as the Amiga 1200 or  
Amiga 4000. Includes high-speed JPEG  
and GIF viewers.

One Disk







# UNITECH

ELECTRONICS PTY LTD  
 ACN 003 864 042 Established 1978  
 Celebrating 16 years in business!



**(02) 820 3555**

*For Friendly Courteous service Call Vickie or Jeff*

## AMIGA SALES SERVICE & SUPPORT

Offices, Service Centre & Showroom: 8B Tummul Place, ST. ANDREWS, SYDNEY, N.S.W. 2566  
 All Mail To: P.O. Box 150 Minto, Sydney, N.S.W. 2566. Dedicated 24 hours Fax: 02 603 8685  
 Trading Hours 9am to 5pm Monday to Friday. Sat Morning 9 am to 12. noon Mobile 018 466 928

## December '94

### WHITE HOT SPECIALS

Brilliance 2	\$95
Broadcast Titler	\$249
Pagestream 3.0	\$CALL
ZAPPO CD-Rom Drive	\$590
QUICKNET	\$CALL
Easy Ledgers 2	\$399

### CD32 Game Specials

TROLLS	\$49
MORPH	\$49
John Barnes Europe Football	\$49

### HARDWARE

AMIGA A1200 Hard Drive Cables	
C.01200 Dual HD Cable	\$39
C.01210 3.5" HD intrnl Kit	\$51
C.01220 3.5" HD extnl Kit	\$54
C.01230 2.5" + 3.5" HD Kit	\$59
C.01240 SX-1 xtnl 3.5" Kit	\$59
C.01250 SX-1 intrnl 2.5"	\$31
C.01260 2.5" 40mm cable	\$27
C.01270 3.5"(x 2) xtnl kit	\$65
C.75555 50 FIDC x 7 SCSI connector	\$39
C.04220 40W IDE H/D cable	\$19
C.03020 reverse 2.5" / Kit	\$65

### MONITOR CABLES

C.00929 9M - 9 F Extension	\$29
C.23984 9F-23F 1084S	\$29
C.01509 9M-15DF	\$29
C.88184 SCART/stereo	\$69
C.15066 15DM- Video-6 BNC	\$29
C.92384 9M - 23F 1084S	\$29
C.02384 23F-RCA only	\$29
C.62384 6DIN-23F 1084S	\$29
C.15215 15DM-15DF XTN	\$35
C.15923 15DM-23F/LOGIC	\$69
C.15223 15DM-23F	\$29
C.90003 9DMistubishi23F Logic	\$59

### MONITOR ADAPTERS

A.02315 23F to 15D with Logic	\$40
A.15023 23F to 15F No Logic	\$35
A.02329 23F to 9F with Logic	\$40

### ANALOG JOYSTICK ADAPTER

A.00159 PC TO AMIGA J/S	\$29
-------------------------	------

### Printer cables

C.36525 1.8metres	\$8
C.02536 5 metres	\$10
C.12536 10 metres	\$18
C.20536 20metres	\$33

### EXTENSION CABLES

C.23223 23M-23F 1.2M	\$19
C.25225 25M-25F 1.2M	\$19
C.92525 modem 350mm	\$18
C.25999 SX-1 modem	\$18
C.62525 Parnet +Disk.3.M	\$27
C.72525 Null modem 2.M	\$21

### SCSI-2 cables

C.52520 25MD-50Hi-D	\$69
C.86186 86SCSI-86SCSI	\$265
C.50050 50MCen-50MCen	\$49
C.50750 50MHi-D -50MCen	\$69

### SCSI (Std SCSI-1) cable

C.50925 50MCen-25MD	\$19
---------------------	------

### SCSI IDC Ribbon Cables

C.50555 50 F x2-> 50MCen	\$19
C.55555 50 F IDC x 3	\$17
C.50665 50 F IDC x 2 to 50 Cent	\$39
C.50885 50 F Cent-50 IDC	\$39

### 25way, 34way, 40 way IDC's

C.12525 25 MD-25MD.Rib	\$39
C.40240 40 IDC-40 IDC x2	\$22
C.34040 40IDC-40 IDCx3	\$29
C.40340 34way IDC x 3	\$20
C.12525 Vidi 12 Extn Cable	\$36

### IDE HARD DRIVES 3.5"

H.11260 IDE HD 260MB	\$CALL
H.11428 IDE HD 428MB	\$CALL
H.11528 IDE HD 545MB	\$CALL
H.22343 SCSI2 HD 343MB	\$CALL
H.22456 SCSI2 HD 456MB	\$CALL
H.33108 SCSI2 1.08GB	\$CALL
H.33321 SCSI2 2.1GB	\$CALL

18 types of Monitor Sw/Box from \$99  
 simply tell us your configuration and we  
 will do the rest.....not a problem!.....

EDUCATIONAL SOFTWARE TO SUIT  
 A500 up to A2000 requires 1Mb RAM  
 PRICED FROM \$24 a real bargain!

### CD32 & Peripherals

J.32032 Competition Pro Joypad	\$49
J.00032 FMV module(MPEG)	\$CALL
J.10032 SX-1 Module.(a must!)	\$399
J.10132 SX-1 AT Keyboard	\$49
J.90032 Communicator Lite	\$149
J.32222 CD32 Machine	\$CALL

### CD32 Video Titles from \$59

Andrew Lloyd Webber Collection.	
Black Rain, Bryan Adams , Bon Jovi	
David Bowie, Coming to America	
A Fish Called Wanda , Ghost	
The Hunt For Red October	
Indecent Proposal, Fatal Attraction	
Kate Bush, Naked Gun 1 & 2/1/2	
Patriot Games, Pink Floyd,	
Queens Greatest Flixs 1/2,	
Star Trek VI ,The Crying Game	
Sting, Sliver, The Cure, The Krays	
Tina Turner Rio '88, The Three Tenors	
Tina Turner Simply the Best ,	
Top Gun Wayne's World 1 or 2	
White Christmas	

Many titles are arriving weekly  
 Call to place your name on our mail  
 & phone info list . don't miss out !

### CD32 Games - Heaps in stock!

### CD32 Games From \$39 to \$129.95

Amiga Chips Also in stock \$CALL	
H.00003 Kickboard Plus3 R/Sharer	\$49
H.60000 1 Meg Exp A600	\$149
H.00512 1/2 Meg A500 Exp	\$79
H.12003 UK Speakers 2W	\$49
H.00132 CD32 Compatible mouse	\$39
H.10880 Xtnl F/Drive	\$165
H.21760 HiDensity Xtnl F/Drive	\$289
H.91760 HiDensity Int F/Drive	\$279
H.80880 Teac 880K Int F/Drive	\$165
H.30030 30W RMS Spkrs	\$159
H.44425 4 way Data Sw/Box	\$45
H.66336 Optical Mouse	\$69
H.12002 A1200 real time clock	\$55
H.12012 Vidi 12 RT12	\$399
H.00288 Maestro 28.8 modem	\$595
C.12000 A2000 K/B xtn cable	\$13
C.14000 A4000 K/B xtn cable	\$13

3.1 Roms Kits in stock for A500, A600 HD (no more searching for 2.05 37.350), A2000, A3000, A4000 (not for A1200) \$CALL. Omeros Accounting (600K) for A500/A600/A2000 (NOT AGA) Compatible Requires 20Mb HD with 4Mb free....\$89. A1200 Memory RAM expansion boards. YES! \$CALL.

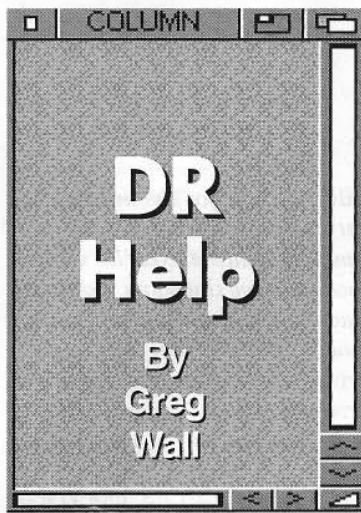
Memory RAM Chips & SIMM RAM Modules.....YES!.....\$CALL

**IF WHAT YOU WANT ISN'T HERE, WE'VE PROBABLY GOT IT - JUST GIVE US A CALL!**

Bankcard - Via - Mastercard (Min Purchase \$40) - Money Orders - C.O.D's (condition's apply)

We Courier Anywhere in the world. Prices do not include freight or insurance -

Prices are correct at the time of going to press. E&OE UEPL/ACAR-12/4



### What's blown?

Dear Helpline, first things first - you've got a great format going now.

The magazine has taken on a new, more refreshing and informative style which should guarantee its survival for many years to come. But enough of the sucking up. Here's my problem.

In September's Amiga review Helpline you gave a response to Joe Rosendale regarding connections to the Amiga when powering up ("Plug in danger").

You mentioned the danger of blowing solid state fuses on the motherboard, which would render the parallel port inoperative for digitizing, while still allowing the printer to function correctly.

This is exactly the problem I have with an inherited Amiga 1200.

Could you please describe to me the likely cause of the fault condition which you describe. I don't know whether I will be able to obtain replacements for board fuses, but if I know the area at fault I may be able to bypass it some other way.

Perhaps if you know of a fix you could also describe this. Once

again, thanks for a great mag.

**Terry Wahlen,**  
Warrimoo NSW

*Dr Help: Well to begin with, the most likely chip to have blown is the 8520 CIA (Complex Interface Adaptor) chip. These are located on the motherboard near the rear of the A1200. You can get them from Unitech Electronics on (02) 820 3555; they cost around \$42 plus freight. The other part that may have blown is one of the 4.7 ohm resistors behind these, classed more accurately as a "Fusible link resistor" and these are also available from above number or your local service centre.*

*As a suggestion, try opening up your A1200 and locate the CIA chips (they have the Commodore logo followed by the number 8520 stamped on them), and try swapping them around. If your computer still doesn't work properly, but doesn't work in a different way, you know one of the CIAs is at fault. It's possible that both of them are blown in the same way, but this is rare.*

*As mentioned in the September issue, make sure you power down before adding anything (this includes mouse, keyboard, joysticks, printers, monitors, modems and so on). In fact, power down before plugging in anything except the sound connections. Thanks for your positive feedback.*

### Startup picture?

Dear Helpline, Congratulations to Lynd Koh of W.A. on your letter (August issue) on "All you

wanted to know about Amiga, but were afraid to ask". It cleared some air for me. Jargon Busters are also a source of information.

I would like to put in an IFF picture into the user-startup to display while my machine is loading. How do I transfer an image from, say SCALA or DPAINT? I assume it's all done through the text editor. Does the command go on any particular line, and what is the correct "Amiga Pic" statement? Looking forward to next issue.

**Norm Dean,**  
Alexandra Hills, QLD

*Dr Help: On startup the Amiga has many tasks to do; the more you add to this list the longer it will take to load up. I have many things that run in startup, probably too many. There are many PD picture displaying programs available, these can be run from the cli or shell.*

*What you are looking for is a dedicated displaying program that's built to put pictures in startup, automatically getting rid of the picture when Workbench comes up. BootPic, a Workbench 2 or higher only program on Fred Fish's AmigaLibDisk 963, does this and can even play a MED format music module while it's at it! IFFBoot, a simpler but similar program that also needs Workbench 2, is on Fish 800. Either can be added to the list of startup commands run by the computer.*

*To clarify this, the user-startup is supposed to be where the user (you) puts any additional programs you want to run; you're officially supposed to leave the start-up-sequence alone so that if you*



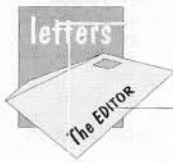
**WALL  
STREET  
VIDEO**

## AMIGA TRAINING

*Help, support and Advice for hundreds of programs.*

*Harddisk Installation, Printers setup, Workbench and Dos tutorials.*

*Ph: (02) 411-2108 for more info.*



upgrade your Workbench and the newer version overwrites the start-up-sequence you still keep all of your custom stuff in the user-startup.

But there's a problem here if you want the picture to be displayed at the beginning of startup. If you put the boot picture displayer in the user-startup, all you need to do is edit the user-startup in the s: directory and add the relevant command as described in the manual file for whatever displayer you use. However, this means you won't see the picture until the startup makes its way to the user-startup, which is called at the end of startup-sequence.

To make the program run earlier, you need to edit the Startup-sequence, and probably insert the command line just before the IPrefs. Warning - if you make a mistake editing this file and delete or change things, you may find that your Amiga will not start up correctly. Make a copy of the startup-sequence first, for safety.

The command to use for editing text files like the startup-sequence and user-startup is ED.

### Expanding A600

Dear Helpline, I have a slight problem with my Amiga 600. I bought one last Christmas, not knowing a thing about Amiga's. At the time, it seemed like good value for money, although now I wish I'd bought an A1200. I've been impressed with the 600's capabilities (apart from the fact that after having it only two months it

had a five month trip to Sydney for repairs under warranty), and now I wish to expand it.

I've bought a 40Mb hard drive, and had a friend install it. Unfortunately, I only have the KickStart 37.299 ROM Chip, and thus the Workbench won't recognize the hard drive. Furthermore, the only KS 37.350 chip (which I'm told is the one I need) that I can find is \$110. I was wondering why on earth Commodore would put the .299 chip in, when they knew full well it would stop the computer from being upgradable? The least they could do is make the 350 chip readily available.

If I do pay the extra \$110 for the KS 37.350 chip, am I likely to encounter any other barriers stopping me from getting my hard drive working? Would I be better off just buying an external drive (which I presume just plugs in the back), and running Workbench from that?

**Nathan Johnston,  
Port Hedland WA**

**Dr Help:** Why did CBM put a 37.299 chip in the A600? Who knows. Maybe it was cheaper. The problems with availability probably stem from the current situation CBM finds itself in - or doesn't find itself in, as the case may be.

You would not be better off just buying a second disk drive; the hard drive has much more going for it, as you will soon find out. Once you have owned a hard drive you would never want to go back to using any floppy based system. Finally, yes, an external drive does plug into the rear of your 600, but

leave it alone for the moment and get your hard drive up and running. Maybe you'll want a second drive later on down the track. You shouldn't run into any other problems as long as the drive is compatible, and it probably is.

### Locking drives

**Dear Helpline:** Please help! I own a A600 with 2Mb of RAM and a 40Mb hard drive. I have a problem in that my two little brothers (who have no idea how to use a computer) keep deleting stuff. I saw in one edition of ACAR that you could type in (Lock sys: on) to lock the hard drive, but this only works if you don't turn off your computer. Once you turn it off and then on again that command is no longer there! I also own Directory Opus if that helps.

I also own WordWorth 2, is there any way to upgrade to WordWorth 3?

Keep up the good work at ACAR.

**Steven Morris,  
Bowraville NSW**

**Dr Help:** To set your computer up so that it is locked when you turn it on, all you need to do is insert the lock command into the user-startup. I'll take you through it. Load up your computer and open a shell window. Type in "Ed s:user-startup" and press return. A new window will open up. If there is already information in there use the cursor keys to get down to a blank line and type in "Lock sys: on" and press return.



**WALL  
STREET  
VIDEO**

**AN INTRODUCTION TO THE AMIGA 1200 TRAINING VIDEOS**

See Full Page ads this issue for more bonus packs or contact

Wall Street Video on (02) 411-2108 for more details.

**P.S. Merry Christmas to all from Wall Street Video**

Next, type in "Lock work: on" and then hit the escape key, press x and then return. Wait until the disk activity finishes, and then reboot the computer. The user-startup will run and find your command to lock both partitions of your hard drive. Your 600 is now childproof. If you want to change something, just type in Lock (sys or Work): off and you're ready for action.

WordWorth is upgradable. For information regarding upgrades contact Amadeus Computers on (02) 652 2712. The upgrade cost is \$110.

### Monitor Choice

Dear Helpline, I'm hesitant about buying an appropriate monitor in light of the new AGA chipset. The main problem is the wide variety of Amiga screen modes, and whether or not particu-

lar monitors can display them all.

As far as I know, it mainly depends on the monitor's capacity for vertical and horizontal scan rates. On the 1084S, these rates are limited, causing the dreaded interlaced flicker in high Res mode.

The answer would appear to be a new 1940/42 Bi-Sync monitor. However, an ad in Amiga Format magazine says that these monitors can handle most screen modes, including the new Super HiRes AGA modes, but not the more common LowRes, as found in many games. Is this true?!

CBM's 1960 & other multiscreen monitors aren't the answer, as most comply with IBM compatible S/X/VGA standards. They can't accommodate all the Amiga screen modes, which tend to have much lower scan rates. Help!

P.S: Is it possible to patch both

an Amiga & IBM system into a single monitor? Ideally I'd like a single switch box to re-direct video & audio output.

David Rich

Caringbah NSW

*Dr Help:* Perhaps what you need is one of the new "MicroVitec" monitors from Amadeus Computers or Sigmacom (see ads this issue). They work in all AGA display modes and will also accommodate the lower scan modes found in low res games. They flicker if you use Super High Res laced, but that's a problem with the computer, not the monitor. You could also use a second hand NEC Multisync 2 or 3, but these are rare. See you all next month. □

# CD32 GAMES

**FINAL CLEARANCE SALE**  
**1500 CD32 GAMES**

Mean Space Arena	Fire-Force
Sensible Space Soccer	Deep Space Core
Summer Olympics	James Pond (Robo Cod)
Zool	Trolls
John Barnes Football	Pinball Fantasies
Liberation	Whales Voyage
Alfred Chicken	
D-Generation	

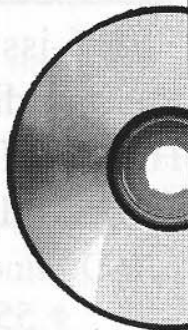
**\$20 each**

★ Quantity discounts available. Dealers Welcome ★

Contact: Adam Lovell (02) 622 9666

**H Hymans**  
THE AUCTIONEERS  
*Sold on success*

72-78 Tattersall Rd,  
BLACKTOWN NSW 2148  
FAX: (02) 831 1686  
PHONE: (02) 622 9666



## WarpEngine

for A4000 & A3000

Standard Features include:

Fastest 68040 available

40Mhz standard, 28Mhz or 33Mhz optional

up to 128MB of RAM

(64MB for A3000)

Standard 72pin SIMMs

Mix & match 4, 8, 16, 32 MB SIMMs

Fast SCSI-2 controller

uses NO Zorro III slots

Distributed by *Software Buyers Service*

(03) 808-8308 phone and fax

Dealer Enquiries welcome

## What's going on?

Congratulations on the updates made to ACAR. The magazine has finally closed the gap left by the passing of Professional Amiga User magazine. Well one and keep it up!

I have noticed that ACAR has become much larger, better laid out and contains more interesting articles ever since Commodore went broke. Weird, isn't it?!

The parent company goes for a tumble and our local magazine grows into a major publication (the same cannot be said of Amiga Down Under, which seems to have done just that - gone Down Under). Maybe Commodore should have shut its doors years ago!

Now for the most asked question in the last nine months. What's going on? Has Commodore UK got the Amiga, or are we going to have to wait for another

round of bids? I think the people running this fiasco just enjoy holding auctions.

If Commodore change their name to "Amiga International" (or something like that), what will become of ACAR? Australian Amiga Review sounds great, but AAR sounds like you've just left the dentist!

Seriously, the takeover must be completed before Christmas, if there is going to be anything left to market. Print the address of the people involved and we'll set up a petition.

**Ken Woodward,**  
New Lambton NSW

*Ed: Thanks for the encouragement, Ken; while the new improved ACAR might not be to everyone's taste we're definitely getting more positive feedback than negative.*

*For the latest on the Commodore saga and its implications, check out this month's Editorial. Essentially, it's still a case of hurry up and wait; the end's in sight, but it seems somebody tows it further away while we trudge towards it.*

*We've been calling the magazine Amiga Review for short for a while now, and might well change the name officially if an Amiga corporation emerged. In a market where the other magazines' acronyms are AF, AC and AS we don't feel AR would be too far behind.*

*Petitions aren't all that useful in a situation like this. The creditors, monster corporations like Prudential, wouldn't care if a million people proclaimed their love for the Amiga; they just want to get some money back. The liquidator is just working on behalf of the creditors, so he's not he one to go*

<b>Golden Gate</b>		
<b>486SLC2/50MHZ</b>		<b>\$1399</b>
<b>Bridgeboard A4000/3000/2000</b>		
A1200 and CD32		\$call
MultiSync Monitor		\$649
CD32 Communicator Lite		\$99
CD32 Paravision SX-1		\$375
<b>DKB New Release Call</b>		
<b>A1200 68030 40/50MHZ Versions</b>		
<b>Optional 128Mb RAM and SCSI-II</b>		
SyQuest	3.5" SCSI-II 270Mb removable	\$590
SyQuest	3.5" SCSI-II 105Mb removable	\$390
Quantum	3.5" fast SCSI-II 540Mb	\$449
Maxtor	2.5" IDE 250Mb	\$399
Maxtor	3.5" IDE 345Mb	\$299
Maxtor	3.5" SCSI 345Mb	\$359
W Digital	2.5" IDE 200Mb	2Y Warranty \$385
W Digital	3.5" IDE 700Mb	3Y Warranty \$549
Micropolis	3.5" fast SCSI-II 1000Mb	5Y Warranty \$999
External SCSI box incl. cable		\$149
Phone for our free pricelist on disk		
<b>Fonhof Computer Supplies</b>		
64 Cross Street, Baulkam Hills NSW 2153		
Phone (02) 639 7718 Fax (02) 639 5995		

**Disk Magazine  
Mail Order  
& PD**

*MegaDisc*

*FreePost ~ No stamp required  
when sending orders! Free Number for  
Contributors and Orders: 008 227 418*

*P O Box 759, Crows Nest 2065*

*Tel: (02) 959 3692 Fax: (02) 959 3525*

**New Price \$59 only!!!!**

for 6-issue subscription (1 year) to  
the best disk-mag, incl. 4 PD disks or  
Hints & Tips disk - **MD 41 OUT NOW**

Also available:

- ◆ Outline and Type 1 Postscript fonts
  - ◆ 5500 PD disks of all kinds
  - ◆ Fish disks and ROMs ◆ Educational software ◆ Clip art ◆ Theme packs
  - ◆ Mail order at low prices, discounts
- Call for a free Catalogue-disk now**

for. And Commodore UK and CEI already know there are lots of worried Amiga users out there, so you might as well save your paper.

**Where do you get it?**

I have received two disks I ordered (the Infra-Rexx software) and find I can't use them because I don't have the required tools. The disks need Amigaguide and Installer. I have checked with my local dealer, who does not know of them and cannot help. Could you please assist me in obtaining the necessary software - what does it cost?

**L. J. Varlet,  
Kenwick WA**

*Ed: It's odd that your dealer didn't know about Amigaguide or Installer - they're both part of Commodore's standard Workbench package, although many Workbench installations don't have them thanks to the 147 flavours of the operating system out there. You can get both of them on Fred Fish's AmigaLibDisk 870, available from any decent PD library for peanuts. A later version of Amigaguide is on Fish 920.*

*Amigaguide files can be viewed with any ordinary text displayer, or loaded into a text editor, word processor or what have you - you just have to put up with some hypertext formatting stuff mixed in with the text. Installer scripts only work with Installer, though.*

**Sorry tale**

I hope this letter helps other first time computer buyers. I recently saved up to purchase my first computer; I'm unemployed so it wasn't easy. I eventually had \$1400 saved and after a few enquiries about what was the best for what I wanted to do, I opted for an Amiga. I wanted to do paintings (as I currently earn a few bob doing my Aboriginal paintings), word processing and video work. I was told the Amiga 600 would do these things. I bought an A600 with only 1Mb RAM, no hard drive and nothing else, and paid \$698

for it (I'll leave it up to readers to decide if this was a good price...).

I also bought a Star LC-10 colour printer (\$445). I believed I'd have to spend nothing on the computer, so could soon save up for a monitor.

I soon found out that I needed an extra floppy drive, and reluctantly bought one for \$179 from the same place. Then I learnt about hard drives, and found out that I would have to change the 600's Kickstart chip to fit one. Further expense.

Also, the programs I was using would not work properly. I learned that to run most good programs I'd need more memory and a hard drive. I was not told this to start off with, and was under the impression that the 600 was totally upgradable if need be. It's not! I approached the dealer to get my money back within two weeks, and still have not had a refund. It's now in the hands of Business and Consumer Affairs. I'm trying to save enough to purchase a 1200, which will do what I want and is much more upgradable.

My message is - look around first, ask people like Amadeus, Wall Street Video and Amiga Review, and BE CAREFUL! This has really turned me off - I even had thoughts of buying a second hand IBM. I won't, though, as I know I just struck a shonky dealer (in my opinion, and not Amiga Review's). I think the 600 would be OK for games, but not much else.

Also, could you tell me why the 600's such a flop compared with other Amigas? Why, also, are they nearly impossible to upgrade?

Keep up the good work, Amiga Review, as I've learnt a lot from reading your magazine. Oh, by the way, if the dealer does refund my money I'll write and tell you.

**Trevor Miranda,  
Lithgow**

*Ed: Your story, while unfortunate, is hardly unusual. As has been happening in the used car industry for decades, novices are easy meat for any dealer*

who wants to pull a fast one.

*The price you paid for a floppy only A600 would just about cover a hard disk equipped 1200, five times faster with twice the RAM - if it weren't for the scarcity of machines at the moment. Nonetheless, you were ripped off severely on the computer, though the prices for the printer and drive weren't incredibly steep.*

*There's no law against charging high prices, but if it happened the way you say then the dealer falsely described the product, specifically by saying you could expand the 600, when all you can really do is put in up to two hard drives and some more RAM. You can't make a 600 faster, you can't add cards, you can't plug in a high resolution flicker free monitor, you can't add a SCSI interface - the list goes on. The 600's low upgradability is the main reason behind its orphan status, but it doesn't help that it's got a sawnoff keyboard and doesn't work with old, fussy games that want Kickstart 1.x.*

*The moral of the story is simple - shop around. If you don't you may get a perfectly good deal - or you may not.*

□

**Amiga CD-ROM**

**Specials:**

- GIF's Galore, FreshFish (Jul/Aug) and Aminet 2 bundle (3 CD's) \$ 80.00
- Fresh Fish 7 (Nov/Dec) \$ 45.00
- GoldFish (Fish 1-1000 on 2 CD's) \$ 60.00

**New:**

- Amiga Raytracing** \$ 60.00  
*A collection of objects, textures, fonts and more for various 3D programs including Real 3D, Imagine, Sculpt, Lightwave.*
- Imagine CD (v2.0)** \$ 120.00  
*A collection of objects, textures, hints and more for Imagine.*
- CD Exchange 1 (CD<sup>32</sup>)** \$ 45.00  
*Bootable with games, demos, utilities, fonts, music and more.*
- DTP Dream Disk** \$ 60.00  
*B&W clipart in PCX format and Postscript and TrueType fonts. Includes a 184 page book of thumbnails and font samples.*

**\* Aminet 4 now available \$ 40.00 \***

For more information on other titles or a free catalogue, please contact us at:

**Creations A.V.S.**  
PO Box 1138, Caulfield North, VIC 3161  
TEL: (03) 527 2278, FAX: (03) 527 2278

# Free Reader Classifieds

**Accelerator for the Amiga 1200, the A1230 Turbo+ Performance Series II, new, never been used \$850.** Phone Ken or Vanessa (089) 471850.

**AlfaScan800, 800dpi hand scanner for Amiga (B/W), near new-hardly used, \$180 or swaps considered.** Phone Jason at Blakehurst on (02) 546 7723 or at work on (02) 829 1050.

**Alien Breed II + Apache \$25. The settlers \$30.** Phone Dave on (06) 282 4934.

**Amiga 3000/040: 8Mb RAM, 100Mb HD, ext 3.5 & 5.25 drives.** Call Peter on (050) 345 213 or fax (050) 345 217.

**Amiga 500 (1Mb), Colour "Stereo" Monitor, Colour printer, Action Replay 3 cartridge, Manuals etc.** Buy this month and receive a mobile phone (brand new) FREE. Genuine ad, ring daytime only. Carlos (06) 266 6221. \$1500 ono.

**Amiga 600 for sale, 2Mb RAM, battery backed up clock, Zool, Jaguar XJ220, Magic Pockets, Race Drivin', Joystick, Mouse and 50 PD Games, Manuals, magazines.** Excellent condition. \$400 ono. (066) 425468 and ask for Anthony.

**Attention Amiga 3D artists! Are you into Imagine, Lightwave or Real3D? Then, AGASIE is for you.** Meet your fellow 3D gurus, exchange ideas, objects and information. We meet monthly in Kirrawee in Sydney. For more information, contact either Nik Vukovljak on (02) 805 0932 or Michael Williamson on (02) 545 4572.

**CD-ROM titles for sale, GIFS GALORE CD-ROM (October 1993 version) runs on all known CD-ROM equipped computers for \$45, and Psycho Killer, which runs on both IBM & Amiga computers for \$40.** Contact: Shane Robertson, 14 Sonoma Rd Budgewoi NSW 2262 or phone (043) 992 437.

**For Sale - 2Mb PCMCIA for A600 + 1200, cost \$260.00 sell 200.00, PC-Task 2.0 50.00, & MS-DOS 5.0 for PC-Task, only \$60.00.** Ph (076) 252 175 and ask for Joy.

**For Sale: A500/A530 40mHz system. 52Mb HD, 8Mb 32-bit fast RAM, 1Mb chip RAM. 68882 FPU. GVP PC286 IBM Emulator WB2.1 on 1.3/2.05 KS Switcher software with manuals.** Includes Deluxe Paint III, DigiPaint 3.0, Imagine

V2, Pagesetter and Wordworth V2. \$2000 ono. Trevor (03) 579 5586.

**For Sale: Amiga 4000/040. Workbench 3.0. 2Mb chip RAM, 12 Mb fast RAM. NEC Photo CD-ROM. 4008 SCSI Card. 450 Mb Seagate HDD. 1 x 3.5" high density floppy. MicroVitec Multisync 14" Monitor.** Includes installed software but no discs. Must sell \$6500 ono. Tel (065) 411 722.

**Laser printer for sale: NEC LC860+, 8 pages per minute.** \$780.00, or will consider swapping for an A2000. Also wanted, SuperBase Pro4. Phone Bankstown (02) 708 4403.

**NEC Multisync (VGA) monitor, will do all amiga resolutions.** \$350. Ring (07) 399 1843 ask for Ian.

**OPALVISION main board \$700 ono and Fastlane Z3, SCSI-2 controller \$600 ono (for A4000 only).** Both cards in excellent condition. Phone/Fax (02) 519 9102.

**Real 3D Version 2. Brand new, manuals etc. included.** Under Warranty. Cost \$800, sell \$550. Ph (03) 562 5187.

**Sell or swap, Amiga CD32 games, Whales Voyage, Oscar, Diggers & 3 Mag demo CD's.** Will swap for Banshee, or TFX, CD32 games or others. Phone Mick (057) 218 664. (Victoria).

**Vortex Golden Gate Bridgeboard 386 SX-25, 1Mb extra RAM \$700 ono, 8Mb RAM board - 2Mb populated \$150 will swap for: A2630 or internal doublespeed CDROM.** Phone Jason (09) 459 3701. Negotiate anything call and do a deal!

**Wanted - Old Commodore 2001 PET (the model with the built in cassette player and calculator style keyboard) for computer collection.** Call Nick (07) 343 7605.

**WANTED: An original copy of the Faery Tale Adventure as well as any Ultimas after Ultima IV.** Please ring Michael on (02) 579 5620 or emailu9162828eusw.edu.ad.

**Wanted: Roctec RocGen. Philip Moore. Ph (002) 231986.**



### Ads appearing for second month

**BARGAIN! BARGAIN! BARGAIN! King's Quest** 1,2,3 - \$20 each or 3 for \$50. Police Quest, Dragons Lair 2 - \$15 each, Turbo Outrun, Grand Prix Circuit - \$10 each. Will swap for any decent Amiga or CD32 games or swap lot for Skidmarks!  
CALL (08) 3362548, ask for Michael.

**1.2 gig SCSI hard drive not working \$100. Laser Printer DATA PRODUCTS LZR-PC-2001** no toner cartridge \$250. Commodore C64 with 1541 d/drive, Commodore 1802 Colour monitor, G2100 super sketch, box of games, \$340 ono. Power Copy 3 in box with Hardware and Manual \$40. Star Trek 25th Anniversary AGA Vers \$45. Fax RTTY Decoder D/Smith kit not assembled \$20. Ph 044 437190.

**80286 Emulator Bridgeboard suitable for A2000.** Including all manuals and software, 5 1/4" disk drive, MS-DOS, GW-Basic, 1Mb RAM. \$250 ono. Ph:(02) 907 0146.

**A-MAX - Plug-in Apple Macintosh Emulator** from Readysoft - \$80. Phone (07) 846 2233.

**A2091 Hard Disk controller suitable for A2000.** Includes manuals, software, 2Mb RAM. \$250 ono. Ph:(02)907 0146.

**A500 complete starter kit, plus 1Mb chip RAM,** 2Mb fast RAM, battery backed up clock, A590 20 Mb hard drive, External Disk Drive, A520 TV Modulator Mouse Joysticks. All boxed with manuals, software with manuals including DPaint III No Virus and other games \$750. Phone STEVE (043) 283691 Central Coast NSW.

**Amiga 1200, 40Mb HD, 2Mb RAM, mouse mat,** mouse, lots of PD utilities on HD including SysInfo, Disk Speed, Virus Checker, Viewtek, PPSHOW etc, never had a problem with the computer, all manuals and cables, lots of graphics on hard drive. Kris Sheather. Phone (052) 41 1171.

**Amiga 2000 HD with 380 MB SCSI II HD,** Internal NEC CD ROM, 2 x 3.5 inch FDD, 3 MB RAM, V1.3 & V2.04 ROMS Mouse bootable, 1084S Monitor, Manuals, Joystick & Flight Sim Joystick, Monitor swivel stand. Price \$1650.00 ono. Call Harry on (02) 905-9409.

**Amiga 2000, 50 Mb HD, 3 Mb RAM, 2 x 3.5"** floppies, DSS8 sound sampler, 2 x joysticks, TV Modulator, all manuals including Desktop Video, DOS inside and Boot. 200+ disks of the best games and utilities including Populous II, Flashback, DPaint III, Elite etc, too much to list. \$700. Ring (02) 997 6536 Newport. Ask for Peter.

**Amiga 500 Expansion board with 4Mb RAM.** Software and original box. Perfect working condition. \$300 neg. Call Andre on (074) 654 377 ah.

**Amiga 500, 1Mb expanded, 2 joysticks and** manuals and magazines. 20 disks of only the best games. This machine brings dangerously long hours of gaming fun. Ring (02) 997 6536 for the best value for money games machine around. Ask for Peter.

**Amiga CD32 mint condition includes Zool,** D-Generation, Microcosm, Sleepwalker, Oscar, Diggers, Liberation, & 2 demo disks. Price \$500.00 ono. Call Harry on (02) 905-9409.

**Amiga Vision, authoring system - create** Multimedia presentations and programs with interactivity. Has many features not found in SCALA - \$50 PH (07) 846 2233.

**AVTEK MODEM, Mega Modem 1234 2400bps.** Great efficient little machine for anyone. \$150 or offer. Wayne Hodges (02) 975 5526 after 6pm.

**Canon Ion still video camera. As new. All** accessories. R.F. unit, Battery charger, carry case. Cost \$1200.00, sell \$800.00 ONO. Phone (049) 974401.

**CD32 Box of Serial, lets you communicate** between Amiga and CD32 at speeds of 19200 baud, works as an Amiga device using Sernet software which acts the same as Parnet, better than the Communicator's clumsy non standard interface, Fish PD 1-660 CD-ROM containing sernet software and a floppy for the Amiga Are included, with this you can use the CD32 as a CD-ROM drive, Null modem cable included. Ring after 4.30 weekdays or after 7.30pm on the weekend. \$85. Kris Sheather. Phone (052)41 1171.

**CD32 Games - Microcosm \$65.00, Whale's Voyage** \$25.00, Dangerous Streets \$25.00, Trolls \$25.00, Fire Force \$25.00, Overkill and Lunar-C \$20.00, World Cup Soccer \$30.00. All new in boxes. Phone Greg (02) 7592494, after 6PM.

**Excellence 3, Word processor, high powered,** plethora of features and very easy to use. As new, manual etc - \$50 Ph (07) 846 2233.

**FastLane Z3 Fast SCSI-2 controller for A4000,** hardly used \$600. Ph (049) 252 533.

**For Sale - Amiga/Kawai Funlab keyboard with** extra software, power supply and foot pedal. Cost over \$1000, accept \$500 or exchange for good condition hard drive for A500. Phone (049) 469611. Cliff Hickman.

**For Sale C64 games - 40 titles, all on disk, no pirated stuff.** Includes 4 x SSI Gold Box D&D, SSI Buck Rogers, Wasteland + (clue book), original Elite, Microprose Soccer. Beat'm'up's, shoot'm'up's, text adventures. Send self addressed envelope to, Terry Baker, 3/5-13 Dellwood St, Bankstown, NSW, 2200 for a full listing and price's or phone (02) 790-5374.

**For Sale: Golden Image B&W Hand Scanner,** suit any Amiga \$220, also Prowrite 3.3 - \$50. All near new. Ph. (097) 572898, ask for Steve.

**Golden Image B-W Hand Scanner \$200,** Prowrite 3.3 \$50.00, Fast Eddies Pool and Billiards \$20.00, Chips Challenge \$20.00, Computer Hits Vol 2 \$20.00, Power Basic \$100.00, Golden Axe \$20.00. All is excellent condition and near new. Phone Steve (097) 572 898.

**Golden Image Grayscale Hand Scanner with TouchUp and Full OCR.** All manuals/originals box. Registrable. Perfect working condition. \$375 neg. Call Andre on (074) 654 377 ah.

**HST 14000 Standard modem, \$400 incl 110/240V transformer,** Amiga serial cable, JR-Comm software. Will free deliver for COD. Ph (067)210514, ask for Max.

**Kurta (is/one) graphic tablet - the best way to draw or trace onto DPaint, ProDraw, etc.** Brand new condition. \$600 PH: Brian (02)456 4491 Daytime.

**Netcomm E5 v32 modem. All speeds up to 12000bps.** Features include: Error Correction (MNP2-4), data compression (MNP 5). Excellent beginners modem. \$300 ono. Ph:(02) 907 0146.

**Opalvision V2, 24 bit display card, suit Amiga 2000, 3000, 4000.** Included box and Opalpaint 32 bit paint software, \$750. Call Justin on (03) 5838806.

**Original Games to sell or swap!! Various prices.** Syndicate, Combat Air Patrol, Heroquest, Damocles, Floor 13, Flight of the Intruder, Falcon and Mission disk, Camelot, Proflight, Stargliders 1 and 2, Jewels of Darkness, Thunderhawk, Fighter command, F-29 Retaliator. Call or write to: Ian Mitselburg, 3/12 Avona Ave. Ph. 02-660 6519 Glebe 2037

**Syquest 44MB removable Hard Drive, external , own power plus 3 cartridges \$400,** VidiAmiga 12 with built-in Megamix sound sampler with digitizing software (video + sound) plus Take 2 Animation software \$150. Phone Norm (042) 673861 After 6pm.

**Ultimate Public Domain Library disks only \$2.50.** Send \$2.00 for catalogue. Amiga PD Directory, PO BOX 492, St George 4487 QLD.

**Vidi Amiga 12 Real Time. Colour image capture and editing from video source.** Includes hard/software, power supply (and parallel cable) and manuals. Three weeks old, still in box, not wanted, must sell! Phone Glen, (059) 987376 after 5pm. \$380.

**Wanted for Amiga 2000 and existing 2090 controller.** Working low meg, preloved ST506 or SCSI hard disk, 3.5 inch internal. Phone Fred (06) 249 1206 or write 43 Harris St Hackett ACT.

**Wanted to buy: Hard drive and controller to suit A500.** Hard drive doesn't have to be big, 20Mb or 40Mb would be suitable. Please phone Carlos on (06) 266 6221, week days, 8.30AM to 4.30PM.

**Wanted: Amiga or IBM versions of Super Dispatcher, Super Track Builder, Northeast Corridor, Railroad Signals.** Phone Bill (042)297556.

**Wanted: Any A500 CDTV Disks. Not just games,** any, also cheap A500's games. Write to Andrew Robey, 4 Blackwood Cres, Morphett Vale, S.A. 5162 or call (08) 326-0142, any time.

**Wanted: Games for Amiga 600 such as, Defender of the Crown, Double Dragon 1, 2 or 3, Leisure Suit Larry 1, A-Train, Mortal Kombat, Lotus Trilogy, Battle Chess, Rail Road Tycoon and Body Blows.** Call Brent or Kerrie on (076) 541 678 or write to PO BOX 423, Charleville, QLD 4470.

**Wanted: Police Quest 2 or B17. Call (003) 449649** or write to Daniel McKenzie, 5 Morris St, Prospect, Launceston, TAS, 7250. Will consider all offers.

## READERS ADVERTISE HERE FOR FREE!

**By mailing your ad to:  
PO BOX 288 GLADESVILLE  
NSW 2111  
or by fax on:  
(02) 879 4236**

# Treat Yourself this Christmas With the NEW **EasyLedgers2** "More than accounting" Great for business

**Run multiple businesses! Run versions for different countries!** Australia, USA, NZ & Canada GST, UK VAT versions all on same disk. **General Ledger:** Optional account numbers. Updated automatically. Journal. Audit Trail. Trial Balance. Account history reports. Cash book. Profit and Loss. Balance sheet. Company performance ratios. New period may be started before current one is closed. **Debtors Ledger:** Open item or balance forward accounting methods. Multiple Invoice printing with automatic pricing, tax, discounts and totals. Statements. Address Labels. Sales analysis. Import Customer ASCII delimited database files. **Creditors Ledger:** Open Item or Balance forward. Enter supplier invoices, credits, payments etc. Import Supplier database from ASCII delimited files. **Inventory:** Stock Control and Price Book. Three price sales. Weighted average cost and part numbers up to ten characters. Fully integrated with other books. **Full Job costing** for Estimation and Quotation.

**94% Gold rating Amiga Format Mag**  
NOV 94

## Good for you

Beat the burglars or the house trash merchants. Make a hassle free insurance claim in the event of a bush or house fire. **Store details of your valuable items in the inventory** and save a copy to disk or printed paper to be stored in a safe place for the future. This convenience would pay for the program many times over should it ever be required. **Pay less in accountant's fees** at tax time! Have a better tax return. Don't rely on memory - enter details of your important purchases which can be used for a **tax rebate**. Start your own business.

Use **EasyLedgers2** to help other companies make quotations. Print invoices and statements for other small businesses or community groups. **Find a niche and make money using your computer. Teach the kids the value of using their pocket money wisely.** Let them set up their own account database and so they learn how to plan for the future. **Manage the family budget** - ideal for all members of the family to use.

## Current Users

Auto Electric, Cleaning Services, Desktop publishing, Youth theater, Parts Warehouse, Candle maker, Video maker, Steel supplier, Amiga retail store, Air conditioning installer, General Fabrication Engineer, Fudge maker, Graphic Artists, Fashion Shop, Precision Engineer, Desktop computing, Photocopier, Heavy machinery manufacturer and exporter, Helicopter pilot training school, Software distribution company, Trailer manufacturer, Household electrical service, Amiga Review magazine.

**Available now at your local Friendly Amiga dealer.**  
**Ask to see a demonstration**

Requires min WB2, 2Mb memory & HD

**RRP \$399**

EasyLedgers2, a product of Small-Biz Software

PO Box 24, Golden Beach QLD 4551, AUSTRALIA Phone: +61 (0) 74 91 9190 Fax: +61 (0) 74 92 6860



# Making sense of *Fonts*

By Andrew Farrell and Daniel Rutter

► The Amiga is not blessed with the most elegant of font systems. The ideal solution should be one which can be adopted by all applications, safe in the knowledge that is the best, and one suited to all kinds of printers.

Workbench 1.3 was limited to bitmapped fonts. Programs that needed the more sophisticated abilities and quality of outline fonts had to supply their own solution. The desktop publishing program Professional Page was the first. Others followed, and before long there were a number of different, incompatible solutions to make up for the lack of a built-in outline font engine.

All this confusion should have been done away with the advent of Workbench 2.1 with its own outline font engine, but Workbench 2.x has a clumsy and slow method of dealing with outline fonts, which doesn't really cater very well for owners of Postscript printers.

There were rumours that somebody in Commodore had their hands on a better alternative, but that a deal was done with a major software publisher - possibly the

people who make Final Writer. So instead of Workbench landing a solution that would have meant better fonts for everyone, it went to a single program.

By the time Workbench 3.0 turned up, we still had our original bitmap fonts, we had Workbench's outline fonts, TrueType fonts, Adobe Type 1 and 3, Gold Disk

metric and CompuGraphic, NimbusQ and Softlogik fonts. There may be others, but these are the main players.

## Types of fonts

All this fonting around might have you thinking there are a dozen ways to make a font. There are really only two - the many

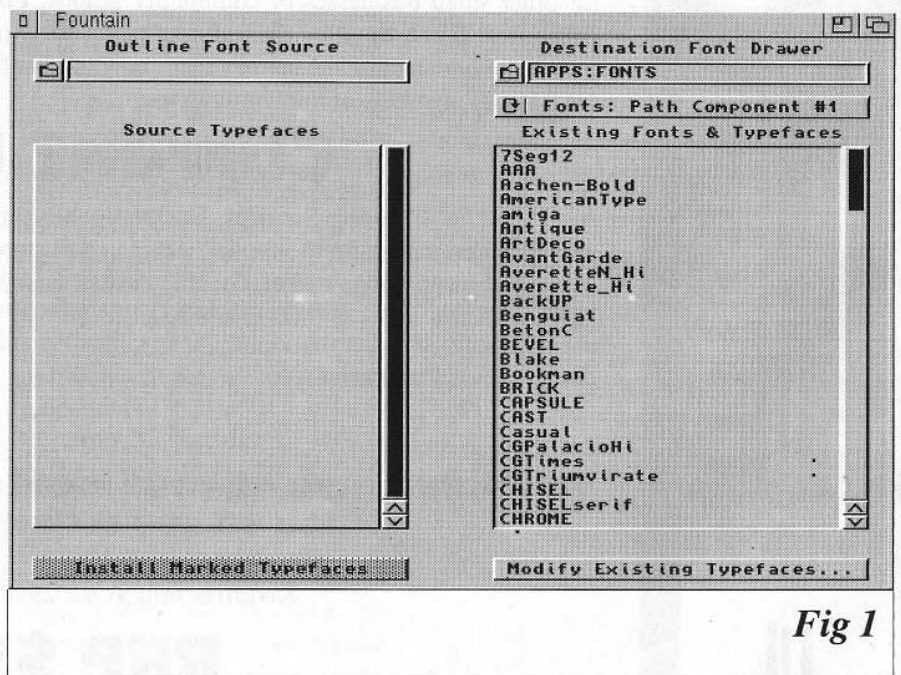


Fig 1

variations are just strange derivatives of these two basic methods.

The first and oldest is the bitmap font. This is a font where each letter is described as a matrix of dots. Make a character bigger, and angled lines develop a staircase appearance. Make it smaller and the detail is lost, making some letters hard to read. Bitmap fonts are simple, but they are not flexible.

Storing information about a bitmap font is very simple. Each dot in the matrix takes on a binary value. Add up the dot values in each row and you have a single number to represent the detail in that row. A simple 8 x 8 dot character can be stored as eight numbers between 0 and 255, using only a small amount of data.

Outline fonts, on the other hand, are described geometrically - as lines and curves. This description can be used to generate variations on the basic design both in size and style. This means you can scale them to any size, bold them, italicise them and so on and, screen or printer resolution permitting, they'll be smooth and legible.

But describing an outline font is a complex business. Not only does the description of each character require much more information, but a special engine (a small program designed to work with another program) is required to interpret the font description and render a version suitable for the output device.

The bottom line is, outline fonts give you better quality, more flexibility and are generally well worth the trade off in speed. The interesting part is just how much that speed variation can be.

The speed, or lack thereof, of handling outline fonts is partly due to the different way they're described. However, it's mainly be-

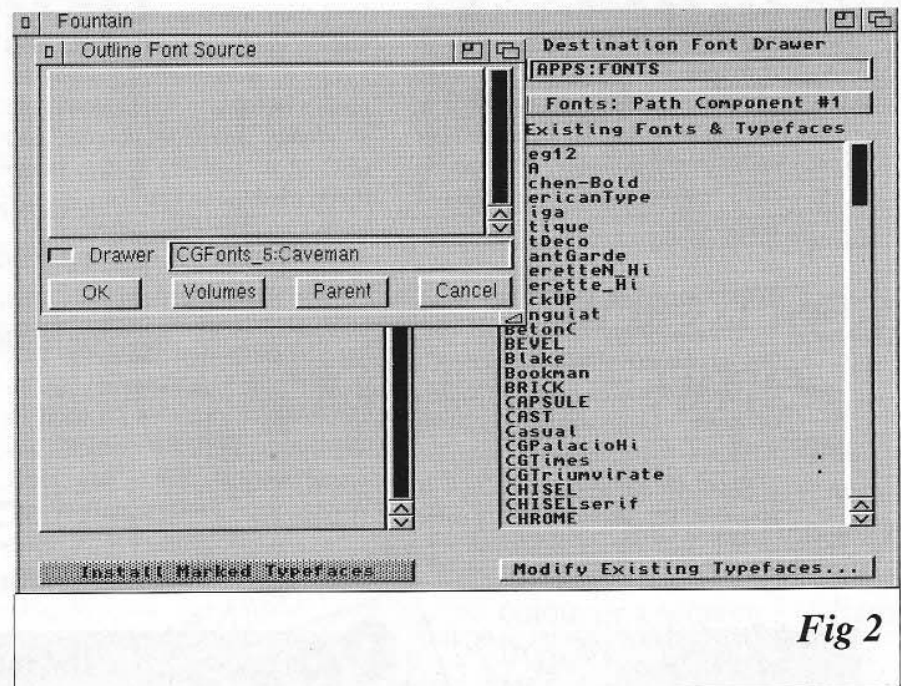


Fig 2

cause of the variation in performance of different outline font engines. Final Writer has a fast outline font engine. Workbench has a slow engine.

Another consideration is how accurately the outline description translates into a rendering to the screen or page. Professional Page has a program called CreateFont which makes outlines of a considerably better quality than you'll get on the fly out of Workbench. If you're into video titling and you need a big juicy 180 point letter O, it's well worth checking to see which program generates the best circles.

### Fonts and Workbench

On your Amiga, by default, you'll find the fonts available to Workbench in an iconless directory on your boot disk called "fonts". Your basic Workbench screen font is bitmap.

The one you probably see most is Topaz. This is a non-proportional font, which means each letter takes up the same

amount of space. There's no allowance for wide letters and narrow letters. This makes it easy to have columns line up under each other, and the size of a word is always predictable - the very thing you want when you're trying to create a fast, easy to manage interface.

Of course, if you want one that users can configure any way they want then you'll need much more complex font handling - which is where Workbench 2.x comes in.

If you check out your fonts directory with the shell, or (better) from a directory utility program like Directory Opus you'll see each font has a file ending in ".font" and a directory. Inside the directory are the actual bitmap images for each font size. The font file tells the Amiga what sizes you have and where they are.

Change anything without the Amiga knowing, and you'll need to run FixFonts to make sure the available font sizes match the list stored in the font file. What we really need is a good font manager,



but there isn't one! The best we can do is use a directory utility to shift the fonts around, and keep FixFonts handy - you'll find it in the System drawer on your boot disk; use the Leave Out option from the Icon menu to keep it visible.

### Workbench 2.x and up

Here's where things start getting confusing. Early Workbench 2's shipped with a program called Fountain. Later (officially with Workbench 3.x) this program changed its name to Intellifont. If you mix the diskfont.library files

from these versions of Workbench, your system will crash. There was a copy of Workbench 2.1 doing the rounds in Sydney which contained a dodgy diskfont.library and resulted in a severe system bomb if you tried to run Fountain.

Whichever program you use, they both work the same. They let you install outline fonts, and create bitmap versions of outline fonts, but you can't view the fonts. This shortcoming is rather annoying. To view outline fonts you'll need to use an application which has access to that font - say Final Writer or Professional Page.

Trouble is, Professional Page, like a lot of applications, needs its outline fonts to be in a special directory - in this case the CG-Fonts directory. Pro Page cannot look at normal Workbench outline fonts. However, Pro Page's CG-Fonts can be installed as Workbench fonts - although they change format in the process. It's all a bit messy. I've found myself with the same font in half a dozen formats for use by as many programs. There must be a better way!

## CRAZY SALE!!!

We have massive amounts of new and used parts for all Amiga computers! These are ex-shop stock, liquidation merchandise and parts as traded. For example:

Various 286, 386 bridgeboards from...\$200  
(1) NEW 486SLC50 Bridgeboard...\$1250  
A2000 Accelerator cards from...\$300  
Various SCSI Hard Drives from...\$125  
Genlocks - basic \$150, studio from...\$400  
All types of memory chips (per Mb)...\$50+  
A3000 ZIP 4Mb 1x4 8 chips from...\$295

FOR ANY REQUIREMENTS ON HARDWARE  
CALL US - 054 415018  
or AH mobile 015 349 194

## BUY WITH CONFIDENCE

We have been in business for 6 years servicing and selling IBM and Amiga equipment. We are Original Equipment Manufacturers and source parts from the Authorised Importers.

LICENCED SECOND HAND DEALER

We are taking subscriptions for all overseas magazines including CD32 & IBM to you within two days of release.

☎ CALL NOW ☎

### Peripheral Specialists

We have extensive experience and spares for Hard Drive repairs and data recovery. We will buy and trade unwanted hardware. Call for latest pricing on 2.5" to suit A600/A1200. Sizes from 40-250Mb. We also install data/power cables for Hard Drives - delivery ANYWHERE!

- ☆ BEST Buys: 260Mb (trade A4000 120Mb) - \$175
- 420Mb (trade A4000 120Mb) - \$295
- 540Mb internal upgrade kit for A1200 - \$595
- ☆ Various sizes SCSI/SCSI-II up to 9GiG!
- ☆ Delivery anywhere.
- ☆ Removable media also available
- ☆ Bernoulli / Syquest / CD ROM / Seagate BARRACUDA

### ☆ AMIGA TOWER SYSTEM ☆

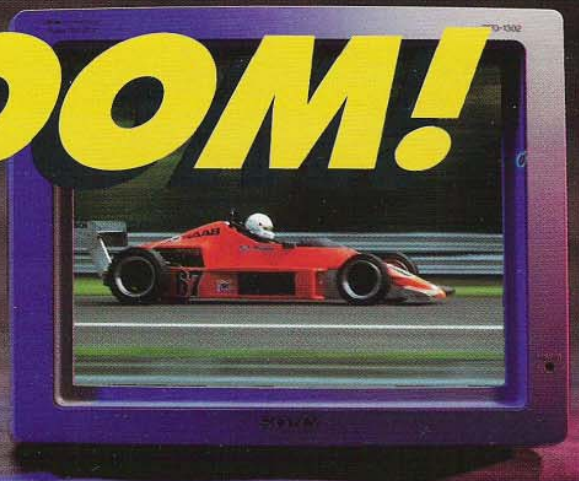
We will transform your A2000/3000/4000 into a sexy 230 watt floor standing heart pounding system with provisions for 8 internal 5 1/4" or 3.5" devices. Prices start from \$395!!!

Peripheral Repairs Corp P/L  
ACN 051 956 211  
Shop 2 - 176 Lyttleton Tce  
Bendigo VIC 3350

Tel 054 416 054  
Fax 054 416 277  
AH 051 349 194



# VROOM!



## For cutting edge audio editing, make tracks for Studio 16™ 3.0

Studio 16 is the state-of-the-art in audio for video editing. So simple to use, you'll find yourself listening to your new music tracks, Foley effects, and voice-overs in no time. In fact, with Studio 16 3.0's highly intuitive time-line based cue list, audio production is as easy as point and click.

With automatic fades and cross fades, you can try as many different combinations as you'd like, without worrying about altering original audio files. Frame by frame accuracy gives you precise control over the placement of every audio edit.

The power of digital, non-linear audio editing and hard disk recording adds all of these incredible capabilities to your Amiga and Video Toaster. Just imagine the power of eight tracks of CD quality, sixteen-bit stereo playing off your computer's hard drive in real time. All for just \$1495.

Better yet, Studio 16 3.0's multiple card support can give you up to twelve tracks of simultaneous audio playback† with assignable channel inputs and outputs.

Want more? The ARexx Track gives you

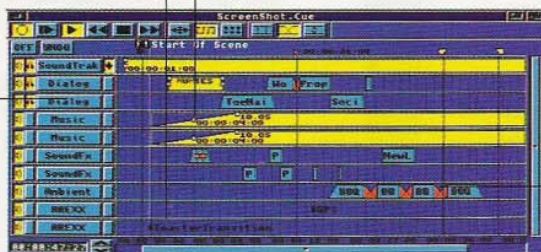
complete control over all your ARexx compatible devices, locked to SMPTE time code, from within Studio 16 3.0's time-line cue list. Automated mixing allows you to pre-program the volume and pan levels. Plus, Studio 16 3.0 has third party integration with AmiLink, Bars & Pipes Professional, the Personal Animation Recorder, SCALA, and T-Rexx Professional.

Before you edit your next video, find out how Studio 16 3.0 will bring you to the cutting edge of the digital audio revolution.

Call today for a free information packet, (408) 374-4962, or fax us at (408) 374-4963. Get the complete digital audio solution—Studio 16 3.0.

**ARexx Track** makes triggering ARexx events a snap.  
**Adjust fades** easily and quickly using your mouse.

**Name tracks.** Listen to all tracks simultaneously or individually.



Automatic fades and cross-fades by dragging and dropping.

Studio 16 3.0's feature packed time-line based cue list allows you to see exactly how your production is shaping up.

*Studio 16 2.0 users – call about our special prices on software upgrades.*



Distributed by:  
**Natdisc**  
 Dealer enquiries welcome

Phone: (044) 738 862  
 Sydney: (02) 544 1874  
 Fax: (044) 739 222

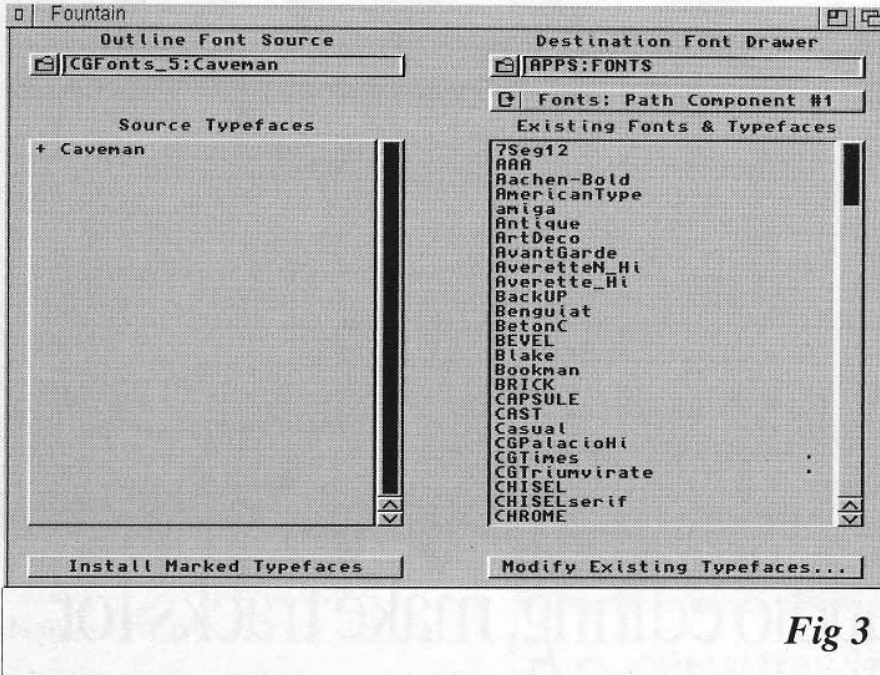


Fig 3

## Professional Page vs Pagestream

Thankfully, Pro Page 4.1 has the ability to preview fonts. But, like Workbench, jiggering with the fonts ProPage has on hand requires quitting the main program to run the utility CG-Update. Without doing this, new fonts won't show up. Pagestream 3.0 is much more elegant. Different fonts, in different formats, stored in different places, can be added to the available font list in Pagestream using the built in Font Manager. I can't wait for it to be fast enough to justify using.

## Using Intellifont

Fountain and Intellifont are very useful programs, but they're covered poorly in the Amiga manuals. Using them to modify existing fonts isn't very hard, but importing new ones is more confusing. Here's how to do it, step by step.

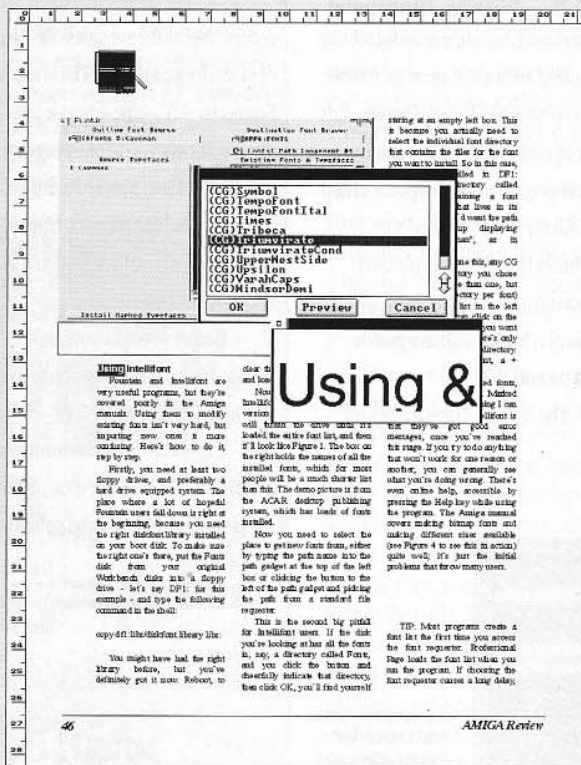
Firstly, you need at least two floppy drives, and preferably a hard drive equipped system. The place where a lot of hopeful Fountain users fall down is right at the beginning, because you need the right diskfont.library installed on your boot disk. To make sure the right one's there, put the Fonts disk from your original Workbench disks into a floppy drive - let's say DF1: for this example - and type the following command in the shell:

```
copy df1:libs/diskfont.library libs:
```

You might have had the right library before, but you've definitely got it now. Reboot, to clear the old library out of RAM and load the new one.

Now run Fountain, or Intellifont, depending on what version

Professional Page V4.1 ©1993 Gold Disk Inc.



Pro Page can preview fonts, but it'd be nice to have the feature integrated in Intellifont.



you have. The program will thrash the drive until it's loaded the entire font list, and then it'll look like Figure 1. The box on the right holds the names of all the installed fonts, which for most people will be a much shorter list than this. The demo picture is from the ACAR desktop publishing system, which has loads of fonts installed.

Now you need to select the place to get new fonts from, either by typing the path name into the path gadget at the top of the left box or clicking the button to the left of the path gadget and picking the path from a standard file requester.

This is the second big pitfall for Intellifont users. If the disk you're looking at has all the fonts in, say, a directory called Fonts, and you click the button and cheerfully indicate that directory, then click OK, you'll find yourself staring at an empty left box.

This is because you actually need to select the individual font directory that contains the files for the font you want to install. So in this case, with a disk called in DF1: containing a directory called CGFonts\_5, containing a font called Caveman that lives in its own directory, you'd want the path box to end up displaying "CGFonts\_5:caveman", as in Figure 2.

Once you've done this, any CG fonts in the directory you chose (there can be more than one, but often it's one directory per font) will appear in a list in the left window, and you can click on the names to select the ones you want to install. In Figure 3, there's only one font in the Caveman directory. When you select a font, a + appears before its name.

To install your selected fonts, simply click the "Install Marked Typefaces" button. One thing I can say for Fountain and Intellifont is

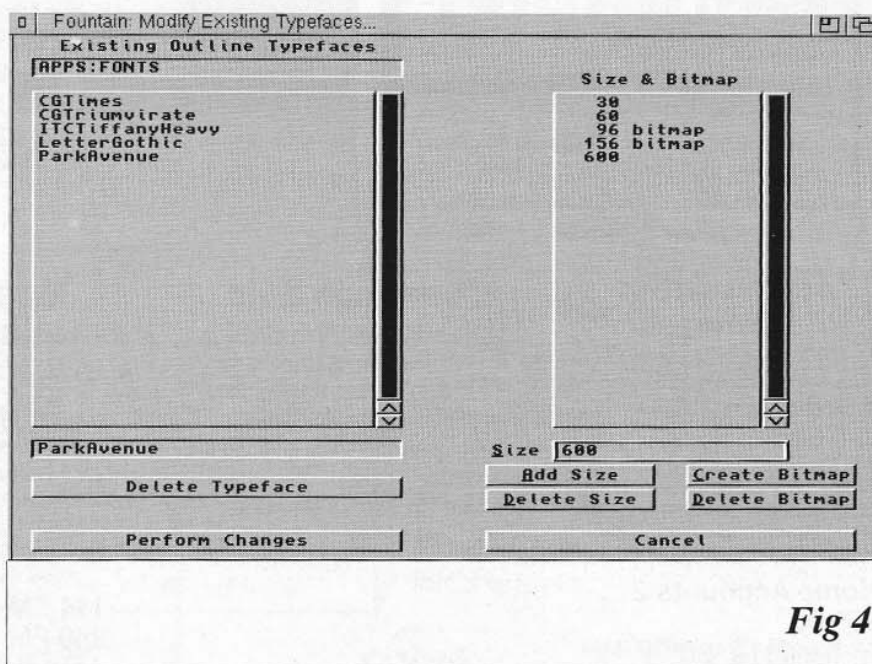


Fig 4

that they've got good error messages, once you've reached this stage. If you try to do anything that won't work for one reason or another, you can generally see what you're doing wrong.

There's even online help, accessible by pressing the Help key while using the program. The Amiga manual covers making bitmap fonts and making different sizes available (see Figure 4 to see this in action) quite well; it's just the initial problems that throw many users.



## TIME SAVER

Most programs create a font list the first time you access the font requester. Professional Page loads the font list when you run the program. If choosing the font requester causes a long delay, it could be time to delete some fonts or move those you rarely use out the way. You can also get public domain font list cache programs, that buffer the entire font list in RAM so font list checks after the first one are much faster. Call your local PD software library for more information.

**Typeface:** The basic shape of a character set, for example Times or Helvetica.

**Style:** The weight (how thick the lines are - Bold, Heavy, Light) and slant of the characters (Regular or Roman, Oblique or Italic).

**Font:** A particular typeface and style of text, for example Times Bold.

**FixFonts:** A program, included with Workbench, which goes through your fonts directory and makes sure all the font description files and the font sizes actually available agree with each other. With lots of fonts this can take a long time, since there's no way for FixFonts to know which fonts have been changed.

# Amadeus Computers

**FREE CALL: 008 808 503**  
**Sydney: (02) 652 2712**  
**International: 612 652 2712**  
**Fax: 02 652 1515**

34 Tecoma Drive, Glenorie NSW 2157

## Home Office Software Prices Slashed

### Wordworth 2 AGA \$59.00!

Workbench 1.3 or higher, 1.5MB RAM and 2 Floppy drives or a hard drive. A power word processor at a very low price. Upgradeable to Wordworth 3.0B.

### Home Accounts 2 \$59.00

Workbench 1.3 and 1MB RAM. Manage your home and small office finances the easy way. Upgradeable to Money Matters.

### Wordworth 3.1

**\$149.00** The new standard for Amiga Word Processors. Now with Landscape Printing, EPS support, significant speed increase for most functions. Drag and Drop Text Editing, Text Effects, 50 Fonts. 3 MB RAM, Workbench 2 or higher.

### Money Matters \$99.00

Manage your finances quickly and efficiently with this easy to use package from Digita. Requires Workbench 2 or higher.

### Wordworth Clip Art Packs

WW 1, 2 or 3 IFF Clip Art \$35.00  
 WW 3 and 3.1 CGM Clip Art \$35.00  
 WW 3.1 EPS PD Clip Art \$19.00  
 (per Volume)

Volumes include, *Cartoons, Sport, Science and Nature, Dinosaurs, Geography and Transport.* call for details.

### Agfa CG Fonts

'Pride and Presentation (20 fonts) \$59.00  
 Classic Collection (25 fonts) \$79.00  
 The Reference Library (50 fonts) \$149.00

Upgrades from 3.0B available to registered users for \$25.00. Send all your original program disks to Amadeus with Registration Number. Upgrades from WW 1 or 2 \$110.00.

## Christmas Sale

### Amiga Reference Books

Bruce Smith Books  
 \$29.00 to \$39.00

Abacus Reference Books  
 going cheap from \$19.00

Ideal Christmas presents.  
 Call for list of titles

## Gift Suggestions

Directory Opus 4.12 \$104.00  
 Art Department 2.5 \$249.00

## Children's Software for Christmas - All \$59.00

### For the under 8's

Noddy's Big Adventure  
 Noddy's Playtime  
 Mickey's ABC Kid Pix  
 Hoopy Paint Hoopy Write  
**Any two for \$99.00**

## New From Digita Datastore \$149.00

Available from Mid December is this feature packed Database Program. Workbench 2 or higher, 1MB RAM. At last a genuine relational database at an affordable price backed by Digita and Amadeus for total user support. Share Data with Wordworth and other programs, free format design, unlimited records, mail merge with Wordworth. Multiple file editing, On-Line Help, sophisticated search and query functions.

## Amiga 1200 Christmas Bundles

All with 12 month Australian warranty.

- Amiga 1200 with 120MB Hard Drive **\$1,299.00**
- Amiga 1200 with 120MB HD, 4MB Fast RAM and Clock **\$1,699.00**
- Amiga 1200 with 120MB HD and the Zappo CD ROM Drive with 3 CD ROM's **\$1,849.00**



Optional Software Bundle available with any A1200 or SX 1 Purchase

Wordworth 2 and Home Accounts2 Bundle \$99.00

Word processing and home office software to get you started.

## Maestro Fax/Data Modems Prices slashed yet again! Now you can really afford a 28,800 modem.

2 Year Warranty, Austel Approved and Australian Made at a new low price! Both with GP Fax and Serial Cable. IBM or MAC software also available.

**144 FM \$399.00**  
**288 FM \$499.00**

## EGS Spectrum \$849.00

24 Bit Display at an economical price for your A2000, 3000, 4000.

## Lightwave 3D \$899.00

*PAL Version*

## Workbench 3.1 Upgrades

A500/600/2000 \$199.00  
 A3000/4000 \$209.00  
 Kit includes new ROM/S, Software and Manuals. CD ROM support, RTG Board Support, New Screen Modes, Accelerated Graphics Rendering, Datatypes, On-Line Help, Read, Write, Format PC disks including High Density with HD Drive.

## Personal Paint 6.1 \$99.00

Now shipping the latest version of the world's easiest to use paint, image processing and now ANIMATION software. You asked for it and now Cloanto delivers. Easy to use animation features plus virtual memory, stereograms, faster processing and much more. Load and save IFF, GIF, PCX and C files, Screen Grabber, Full AGA support with powerful image processing features. Unbeatable value for Christmas buying. Upgrades from Personal Paint 4 available for \$39.00 from Amadeus. Send in your original disks.

## Amiga 1200 Expansions

120MB Seagate \$399.00  
 200MB Western Digital \$499.00  
 Trade In your old drive.  
 Call for a quote.

Amiga RAM Expansions  
 32 Bit RCA RAM Expansions  
 1MB with clock \$249.00  
 4MB with clock \$449.00  
 2MB with clock \$349.00  
 8MB with clock \$749.00  
 Add \$50.00 for a 68882 Co-Pro

## Amiga 1200 Accelerators Go VERY FAST for VERY LITTLE MONEY with these new Accelerators

Turbo Charge your A1200 with the new TRA1200 a 28Mhz 020 Accelerator.

Expect a 350% speed increase over a standard A1200. For not much more than the cost of a standard RAM only expansion.

TRA 1200 with Clock and 4MB RAM only \$549.00.

Call for Co-Pro and other RAM Options.

2 New Accelerators from DKB. perfect partners for your A1200 at a surprisingly low cost.

Option 1 - DKB Cobra EC030 40 Mhz \$499.00 With 4MB RAM \$749.00  
 Add \$100.00 for a 33Mhz 68882 Co-Pro

Option 2 - DKB Mongoose 030 MMU 50Mhz with 50Mhz Co-Pro and 4MB \$999.00!

SCSI 2 Adaptor coming soon.

# FREE Delivery • Call Line • Disk Catalogue

Hundreds of Amiga Products • 30 Day Money Back Guarantee  
 We Accept BankCard, Visa, MasterCard and AMEX. Cheque, Money Order, Direct Deposit or COD • Lay-By Available

## VIDI 12 Christmas Special

Vidi Amiga 12 \$179.00

Vidi Amiga 12 RT \$399.00  
Vidi Amiga 24 RT \$549.00

Economical, easy to use  
colour digitising from your  
VCR, CD 32 or Camcorder.

*Digitising has never been  
cheaper or easier!*

### Christmas Accessories

A1200 Clocks	\$39.00
Banx Boxes	\$29.00
Keyboard Skins	\$39.00
Logic 3 Joysticks from	\$49.00
Monitor Covers	\$39.00
Monitor Speakers	\$49.00
Swiftly Mouse	\$49.00
External Floppy Drive	\$169.00
High Density Floppy	\$299.00
MIDI Interface	\$69.00
GVP DSS 8 Plus	\$139.00
MegaMix Master	\$89.00
GVP 4008 SCSI Controller	\$299.00
Optical Mouse	\$79.00
1MB A600 RAM Expansor	\$129.00
2MB PCMCIA RAM	\$199.00
4MB PCMCIA RAM	\$379.00

### Bible Study Aids

Bible Reader Pro \$149  
Bible Scholar \$199

## Pagestream 3.x \$439

At last you can use the  
world's most powerful  
DTP package. Our  
version comes with  
Australian Registration  
and Support.

### Entertainment software

Value packed Compilation  
packs for Christmas  
Sim Classics Pack

Sim City, Sim Ant and Sim Life \$79  
Beau Something Pack \$79  
The Settlers, Chaos Engine,  
Terminator 3 and ???  
Sports Pack \$79

Many other titles carried. Call for  
availability and cost.

## Zappo CD ROM Drives

At last an affordable CD ROM for  
your A1200. Simply plugs into your  
PCMCIA slot. Plays CD 32 Games,  
Music CD as well as normal CD  
ROM software. Price includes a CD  
ROM Disk and a CD 32 Game to  
get you started.

**\$599.00**

### Hewlett Packard Printers

**Hewlett Packard 540 \$649.00**  
Latest version supplied with Super DJ Amiga  
software for optimum results  
Optional Colour Kit \$100.00

**LaserJet 4L \$1299.00**

Low cost quality laser printing. Includes Amiga  
Explorer Software for optimum results.

### Video

Scala MM 300 \$449  
Scala Home Titler \$129  
Scala Echo Module \$285

Electronic Design Y/C  
Genlock \$799  
Electronic Design PAL

Genlock \$599  
GVP G-Lock \$669

Perfect for use with Scala.  
Produce professional looking  
videos in no time at all.  
TBC Plus \$1299

For the professional or serious  
home user. Perfect video  
productions with this fine  
unit. Time based corrector with  
more. Frame Grabber and Format

### Tabby Graphics Tablet

Low cost graphics  
tablet - mouse  
replacement - \$199

5 1/2 by 6 1/2 inches.  
With special Amiga drivers.  
Ideal for paint and drawing packages.

## Microvitec Multisync Monitor \$799



At last Amiga owners  
can have an affordable  
Multisync Monitor. In stock now and  
ready to ship. Will display all  
A1200/4000 modes, .28 Dot Pitch for  
outstanding picture sharpness and a  
full 12 month Australian warranty.  
Optional speakers for \$49.00.  
**Monitor trade ins welcome.**

## Professional Accounting - Easyledgers 2 \$399

Now Shipping! At last you can use your Amiga  
for ALL aspects of your business. Easyledgers  
will perform all of your accounting tasks  
including Invoicing, Stock Control, Job Costing  
and Ledgers. Its easy to use but very powerful.  
We know we use it ourselves. Call for a Demo  
Disk. Workbench 2 or higher, 2MB RAM and a  
hard drive required.

## SX1 Expansion

with Goldfish PD Collection  
**\$399.00** - Turn your A1200 into  
a powerful multimedia  
computer. SX 1 includes RGB,  
Parallel, Serial, Hard Drive,  
Floppy Drive, AT Keyboard and  
RAM ports. Call for RAM, Hard  
Drive and Keyboard Options  
and prices.

## SX 1 Amadeus Christmas Bundle \$1299

includes SX 1 Unit, AT Keyboard,  
Mouse, Floppy Drive, 200MB Hard Drive,  
1MB Fast RAM and Wordworth 2, Home  
Accounts 2 and Personal Paint 6.1 as  
well as the Goldfish Collection.  
**All you need to turn your CD 32  
into a powerful multimedia  
computer.**

## CD ROM Software

Aminet 2 \$29.00  
Aminet 4 \$49.00  
Goldfish \$59.00  
17 Bit 2 CD \$99.00  
17 Bit Continuation \$49.00  
Euroscene \$49.00  
AMOS PD \$59.00  
Multimedia Toolkit \$59.00  
**Micro R & D Volume 3  
from \$69.00**

### CD32 Titles

Insight Dinosaurs \$89  
Word Construction \$89  
Art Connoisseur \$89  
Jetstrike with Video \$69  
Frontier Elite \$69  
Simon the Sorcerer \$69  
More Titles arriving daily. Call  
for latest.

### CD-ROM Drives

**NEC CDR 210**

\$499.00 internal  
\$599.00 External

**CD32**

2 Games \$699.00  
12 Month Warranty

Authorised  
Australian &  
New Zealand  
Distributor for:  
**Microvitec, ROMBO,  
Cloanto and Digita  
Products -  
Dealer Enquires  
Welcome**

**FREE Call Order Hotline**  
**1 800 808 503**



# Amiga CD-ROM *Roundup*

By Daniel Rutter

► The Amiga is not as well off as the PC as far as CD-ROM software goes. There are far fewer CD equipped AMigas than PCs, and hence not as much incentive for software producers to come up with CD products. Nonetheless, retailers report unprecedented demand for Amiga CD software; the many CD32, CDTV and A570 owners out there are networking their CD machines to more powerful Amigas, and many others are buying CD-ROM drives.

Dedicated Amiga CD-ROM applications are rare, but there are a lot of other discs Amiga users can access. There are plenty of Amiga-specific freely distributable software compilations, and a lot of non-machine specific PC discs that Amiga users can get value from, too. A selection of the most recent is the subject of this article.

## **Sound Effects \$60**

This disc, which dates back to 1992 and comes from Sound Ideas, a company that's produced a lot of other sound effect stuff, is not an Amiga specific disc. It contains 300 stereo WAV format sounds, which can be converted to IFF with a program like SOX, in

the public domain. The WAVs are sampled at 22.05kHz, precisely half the sampling rate of CD, and hence don't sound too fabulous, though they'd be fine for most applications.

Sound Effects is actually meant to work with Windows with a built in sound browser program whose interface looks quite good - but fortunately it's easy to find sounds without it, since there's an accompanying booklet that lists them all by reference number. If all there was were these WAV files it'd hardly be worth the money, but fortunately you also get all the sounds in ordinary CD audio tracks, so you can digitise them yourself at whatever sample rate you like.

Because CDs with 300 tracks make players unhappy (you can only have 99), the sounds share 98 tracks; since they're organised alphabetically, this makes for some odd bedfellows. Dentist drill next to doorbell, geiger counter before "gun, hand" and so on. There's a wide selection of realistic, synthesised, serious and silly sounds here; if you need a modest effects library or just want to clown around, this disc isn't a bad choice.

## **Meeting Pearls \$49**

It may be early days, but this is definitely a genre in the making - the Potpourri Disc. You name it, it's here; pictures of various flavours, SoundTracker modules, PD disks, installed programs... the list goes on.

The oddly named Meeting Pearls hails from Germany, and contains about 600Mb of stuff. On a bootable CD you get to start with AMOK PD disks 98 to 106, and 147 huge 256 colour fractal GIF pictures.

There's about 17Mb of MODs (168 of them), and a plethora of business, utility, entertainment, communication and other programs, all set up and ready to go. This makes this disc an excellent starter for people just getting into CD and not too comfortable with setting everything up themselves, and makes things very convenient for old hands too.

There's tons of text, most in English, and mainly on computer-related topics but with some other weird stuff thrown in. Interestingly, you can view all the text contents of the disk and some other unrelated stuff using the HTML hypertext system, which is like

AmigaGuide only better. There are also a lot of very, very boring pictures of European Amiga meetings, which are basically halls filled with Amigas and sallow Teutonic Amigoids.

You get the complete distribution of NetBSD, the Amiga UNIX-in-development for people with at least 68030, coprocessor and memory management unit. It's archived, but this stops the uninitiated playing with it and stomping their system. Still more a curiosity than a real operating system, but getting there.

There's also the full, unexpurgated, 88Mb fully installed distribution of the PasTeX desktop publishing system. This is DTP for people who think a mouse is for wusses; WYSIWYG it is NOT but powerful it IS. TeX has been around for yonks on various platforms; if you're used to friendly desktop publishers then stay a long way away, but if you're a programmer who wants to produce a nifty document, this is for you.

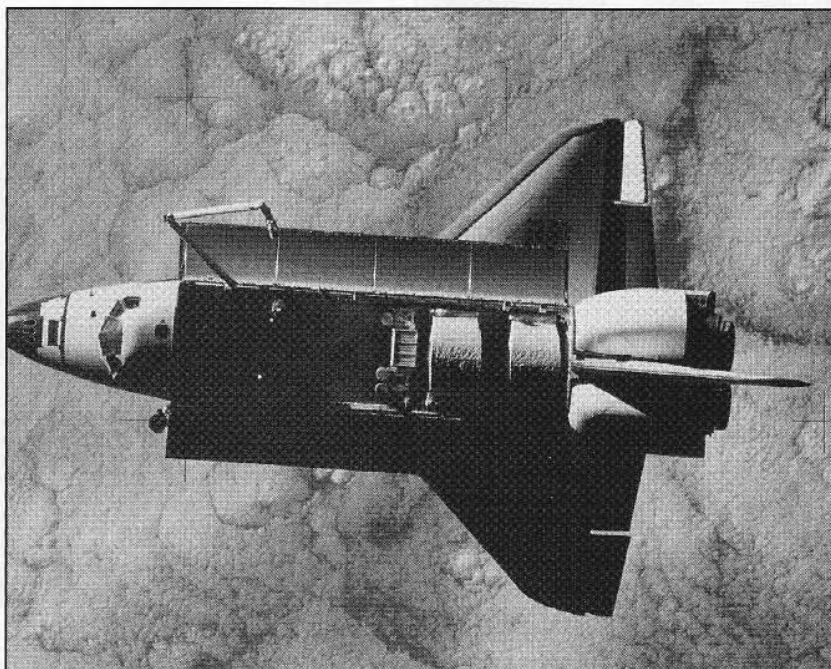
The Meeting Pearls disc doesn't work properly if you use fast directory searching. If your CD driver software has this option, turn it off.

Overall, Meeting Pearls is a bit disorganised but great fun to meander through at your own pace. Take it easy. See the sights.

#### **EuroScene \$39.95**

Another garage sale disc, this one centres around the various European Amiga coding groups, who of course spend all of their time creating funky pictures, demos and SoundTracker modules, and never pirate software. Never, ever. Not them, officer. Uh uh.

Be that as it may, this is a disc stuffed with OK to brilliant demos, excellent pictures and music ranging from the odd to the memorable. There are quite a lot of pointless pictures - group logos



*A picture from the Space & Astronomy disc.*

and the like - but there are plenty more proper artworks, the bulk of which don't need an AGA machine to display. If you're into "scene" stuff, get this disc. Very slick.

#### **Desktop Publisher's Dream Disk \$79**

Another one aimed at IBM and Mac users, for Amigoids this disc is a repository of a very great deal of PCX format clip art and TrueType (convert them with TypeSmith) and Postscript fonts. There are HP downloadable, Deskjet, First Publisher, Adobe Type Manager and Windows screen fonts too, but these aren't much use on the Amiga. There's still 3974 clip art images and 608 fonts, though, so it's still a good deal. You get a book with the disc that shows you all the clip art.

#### **Space & Astronomy \$49**

This is a disc for the telescope aficionados. There's some DOS

and Mac software of no use to Amigoids, but the vast bulk of the disc is space related data, mainly in GIF and text format. There's loads of pictures - artistic, earth, lunar eclipses, galaxies and stars, Hercules Still Camera images, Jupiter, Kennedy Space Center pictures, Mars, the moon, Neptune, Saturn, rockets, satellites, Space Shuttle pictures, Uranus, Venus, and many more. There are a few WAV format sound files, and a load of text; asteroid information, astronomical catalogues, NASA Daily News from November 92 to August 93, fact sheets, JPL releases from June 1962 to March 1992, the JPL UNIVERSE paper, Shuttle related information, Space Digests from volume 8 to 17, the Space Power Journal, SPX Bulletin, SSEOP Image Database info, Space Station related info, Space Telescope Institute reports, the Space Transport System Mission press kit and, of course, more. Stargazers will be rapt.

# JETSTRIKE

- AMIGA, AGA, CD32

"Despite fierce competition, Jet Strike has to be the most boisy video game ever.

"...for arcade fans this is a dream come true.

- Stuart Winn, CD32 Gamer, October 1994



\$ 69.95



JetStrike now contains no less than 60 different aircraft, 60 different weapons systems (including a nuke), 150 linked combat missions along with numerous Training and Practice missions and a 1 - 8 (multi-)player Aerolympics section. Includes a free video - "Flying Tigers".

# CLOCKWISER

- AMIGA CD32, AGA \$49.95

"Before you start playing Clockwiser I would advise you to take a week or two off work (or school, or whatever you do for a living) and get ready for a big electricity bill."

- James Attwood, Amiga Power, August 1994



Clockwiser is an unashamed puzzler. You have to rotate rectangles of blocks to make one side of the screen match the other - sounds simple, doesn't it? Floppy based versions contain 110 puzzles; you get 250 on the CD-based versions. There's also a puzzle editor, so you can create your own. Like all the classics, it's easy to start but hard to stop.

**Don Quixote**

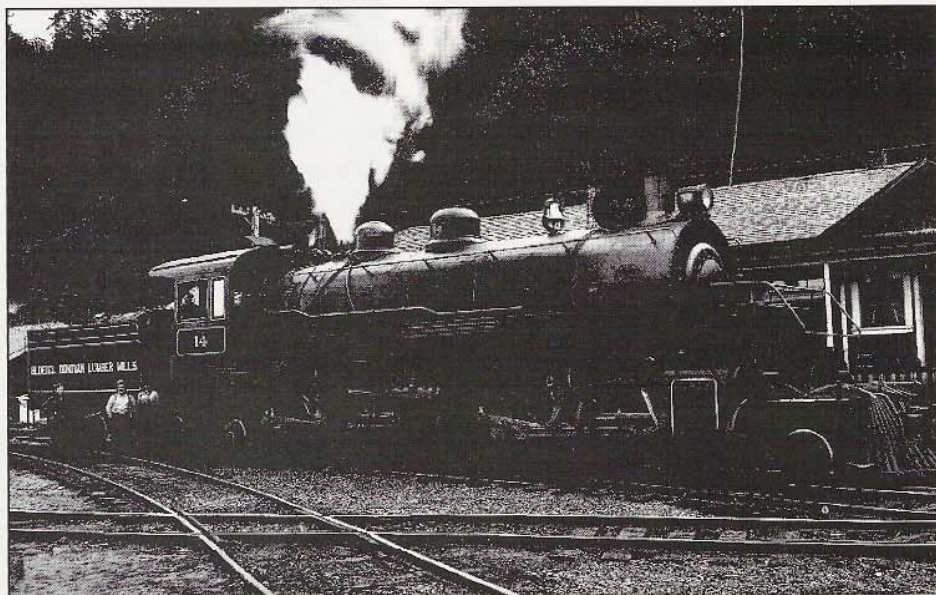
**POBox 786**

**Toowoomba QLD 4350**

**Ph: (076) 391 578**

**Fax: (076) 320 195**

**Dealer enquiries welcome**



One of Micro R&D Vol. 1's many train pictures.

## Emerald Mines \$39.95

Do not buy this disc. If you do, there's a good chance you'll discover that you rather like playing Emerald Mine, a quite nice Amiga version of Boulderdash. If you do like it, and you play every level on this disc, and it takes you about 20 minutes to finish a level, and you play for an hour a day, you'll have gotten through them all in a bit more than ten years.

Then you can go on to the two player levels.

There are precisely 188 Mines on this disc, and a total of more than 19,000 levels, counting the two player ones. If shipwrecked with nothing but a solar generator and a CD equipped Amiga, this is most definitely one of the CDs I'd choose. Importantly, this disc works on CDTV, CD32, and all models of regular Amiga, quite an achievement with the generally temperamental Emerald Mine.

## NetworkCD \$55

This 450Mb disc's aim in life is to instantly give you a load of

files useful for networking Amigas, along with a pile of other stuff.

You get a full bootable Workbench, Parnet set up ready to go, the older and clunkier SerNet, Terminus 2.0 (NOT Term, as the directory name and documentation suggest), TwinExpress (a very useful program to hook up Amiga and IBM for high speed DOS-like directory-aware transfers), Emit (a high speed null modem transfer program), ParNFS to beef up Parnet's file system, NetFS for TCP/IP equipped Amigas (not many), NComm 3.0, and a couple of PhotoCD image converters and a loader for ImageFX, OpalVision and PPM conversion.

For image format conversion, a useful thing for anyone networking to odd machines, you get the dated Wasp GIF converter, JPEG makers and viewers, the very useful Rend24 batch converter, a Targa converter and the nearly six year old PBMPlus package which is of little interest to non-geeks.

You also get Fred Fish's public

# VIDI Christmas Special!

## Vidi 12

Digitise from any still video source - YUV or composite - at 320 x 256 in full 24-bit (16.7 million colours). Ideal for desktop publishing, sourcing images for modification in any paint program. Add Personal Paint and create your own still video montage.

**FULL AGA SUPPORT**

## Vidi 12 Real Time

Capture up to 360 x 576 in full 16.7 million colours in real time from YUV (Super VHS or Hi-8) or composite video. Better than VHS quality images, ideal for animation in HAM modes - create special effects, do time lapse photography, with easy editing of captured sequences.

**\$179**

Req 1Mb RAM

**\$399**  
inc. power supply

**Amadeus Computers**

**FREE CALL: 008 808 503**

Sydney: (02) 652 2712

International: 612 652 2712

Fax: 02 652 1515

34 Tecoma Drive, Glenorie NSW 2157

## Vidi 24 Real Time

The ultimate 16.7 million colour real time video capture device. Grab single images at up to 720 x 576 in brilliant colour or a sequence of frames from YUV ( Super VHS or Hi-8 ) or composite input.

**\$549**

# Personal Paint 6.1 now with animation at \$99.



- Full animation, Stereograms, Virtual Memory
- Load PCX, GIF, IFF or Datatypes directly
- Load IFF24, PCX24, HAM and HAM into 256 colours
- Print with full UCR and gamma corrections
- AGA 256 colour support
- Retina, Picasso and full RTG support
- Nine brushes • Clipboard support
- Handles text • 32 special effects • Stencils
- Dithering • Encryption and much more...
- Fast, robust - Europe's favourite!

**Ask your dealer or call Amadeus on 1 800 808 503 or Sydney 652 2712**

• dealer enquiries welcome • upgrades \$39.00 from PPaint 4 send original disks to Amadeus •



domain disks from 801 to 975; the library's moved on a bit since then but there's a lot of useful software on these discs, which are presented straight, with no annoying archiving. There's also AMOS PD disks 471 to 590, a subset of the AMOS CD (see below) contents. But wait, don't call yet, because you also get TBag disks one to 74, taking you right up to the heady days of 1990.

The Images directory contains 480 images in various categories, from Star Trek to famous people to the usual collections of pretty girls; all are 256 colour and all are quite elderly. All but a load of fractal pictures (rather nice) are 640 by 480, and are obviously old converted GIFs. Not crummy quality, just old; many carry dates around 1990. There are icon-driven slideshows for each of the 22 categories, which use ViewTek to display the pictures and so work on ECS and AGA machines - but look a lot better on AGA.

None of the stuff on NetworkCD is unique to it or especially well put together, but as a quick and dirty way to get any CD based Amiga hooked up to another machine by hook or by crook it's useful. It'd certainly take the average user a while to get all the networking software together, and all the rest is a nice bonus. Worth a look.

### **The Official AMOS PD Library CD \$49.95**

From the same makers, the AMOS disc is indispensable for CD-ROM equipped AMOS programmers. More than 1600 source code files, 100 sprite banks, 250 CText banks, 800 samples, hours of music banks and tons more. Again, Workbench, SerNet and ParNet are included.

The 621 AMOS Disks on the CD (the library up to the 11th of July, 1994) can't run directly from it thanks to the enlightened system-compliant way AMOS

works (NOT!); users will have to get used to dumping files to floppy if they want to tinker with the the innumerable games and other programs. If you're not an AMOS user, this disc is not so attractive - a lot of the programs are very forgettable, and all the resource stuff is worthless to a non-programmer. But if you're into AMOS, you need this disc.

### **Multimedia Toolkit \$55**

Another one from Weird Science, this contains over 10,000 files for use by people putting together Amiga based multimedia presentations. There are more than 500 good looking original pictures, all with 24 bit, HAM-8 and HAM-6 versions so users of any machine won't have to muck about with image conversion.

The categories are a bit odd, though; aircraft, birds, Britain, carnivores, classic cars, Corfu, Cornwall, females, fractals, London, males, mammals, Mansell (20 pictures all for him!), motorcycles, Minorca, paintings (Old Masters), places, Pompeii, racing (with yet more Mansell), reptiles, Venice, Vista Pro images and, of course, 17 pictures of those singularly photogenic chaps from the World Wrestling Federation.

You also get over 1300 colour clip art images and over 2100 mono (varying in quality from average to excellent), 120 ordinary bitmap fonts, more than 100 colour fonts, more than 100 Adobe fonts, 80 further Postscript and Compugraphic fonts and some scalable clip art in Pro Draw format. There are 750 alphabetically arranged SoundTracker modules, most lousy but some very good, and you also get more than 2300 categorically filed sound samples (some repeated and not all IFF format but generally useful), a lot of rather old icons, and utilities to view all the stuff. Simple, and a

massive space saver for people who are cramming their hard drives with miscellaneous gear in hopes that it'll come in handy.

### **Fractal Frenzy \$49**

Here's a simple one. 2010 1024 by 768 256 colour fractal GIFs, all very nicely done, and the same files again only in 640 by 480 resolution. A few accompanying texts. Nothing more to say, really; if you like fractals (and can display 256 colour images; HAM6 conversion ain't that great), check it out.

### **Amiga Grafik CD 2 \$39**

Another monster picture disc, this time stocked with IFFs of many and varied varieties, all 256 colour. The only thing they have in common is their file names all start with D, E, F or G, and they're arranged accordingly. Basic boot/ParNet gubbins is included.

### **Amiga Raytracing 1 and 2**

**\$69, \$69**

Two discs for 3D image freaks. On the downside, they're both all in German. But they contain a load of resources for renderers; PD 3D objects, 3D fonts, textures, backdrop images of various scenes; specific support for LightWave, Real 3D 2.0, Imagine, Maxon Cinema, Caligari and Sculpt and DXF files. The second disk also contains animation reflection maps, 500 attributes for Imagine and the Maxon Cinema 4D demo. There are, of course, quite a few rendered images on the discs, but these aren't picture discs; they're aimed at people using rendering software. If you are, give them a good look.

### **CDPD IV \$55**

The CDPD series is the cleaned up, better educated cousin of the disorganised Aminet discs (another Aminet will be coming



along Real SOOn Now and I'll review it when it does). CDPD doesn't have such an eclectic collection of peculiar and wonderful files, but it's much better organised and the disks are much more complementary - when you get a new Aminet disc, it duplicates a lot of the files on earlier ones, as you'd expect it to because the Aminet discs are after all just snapshots of the Internet Aminet archive.

CDPD 4 is aimed at covering the areas the compilers didn't hit with previous CDPD discs. You get Fish disks 891 to 1000, with the KingFisher catalog system and indexes for all previous CDPDs. KingFisher 1.40 is supplied for most users, with 1.15 thrown in too because 1.40 explodes on CD32s, for some reason.

There's a load of Amiga-relevant text including excellent reviews and announcements from the relevant comp.sys.amiga Usenet areas, another batch of classic novels (all cut into 400k-odd chunks so you can view them on machines with 1Mb of RAM), Internet guides and documentation (including a quite recent version of the most excellent Jargon File which now runs to 1.4Mb and is presented in AmigaGuide format which makes it much friendlier), and among other text you also get most of Dan Barrett's Usenet humour, which is better experienced than explained.

Raytracers will be interested in the many data files on CDPD 4. You get objects, attributes, textures, utilities and reference manuals for Imagine, as well as a lot of very good raytraced images and animations, plus the PD raytracer Persistence of Vision set up and ready to go. CDPD4 also contains every edition of the AM/FM music disk magazine from issue 1 to 18, and all the special disks too. AM/FM contains a lot of sound modules, but also text on Amiga

and MIDI music, hardware reviews and so on.

The extra disks contain more modules, and also a lot of very good instrument samples. There are a lot of networking files, too. You get complete TCP/IP, SLIP and UUCP installations with full E-Mail, FTP, Telnet and UseNet News, with support utilities, and of course full ParNet and SerNet support.

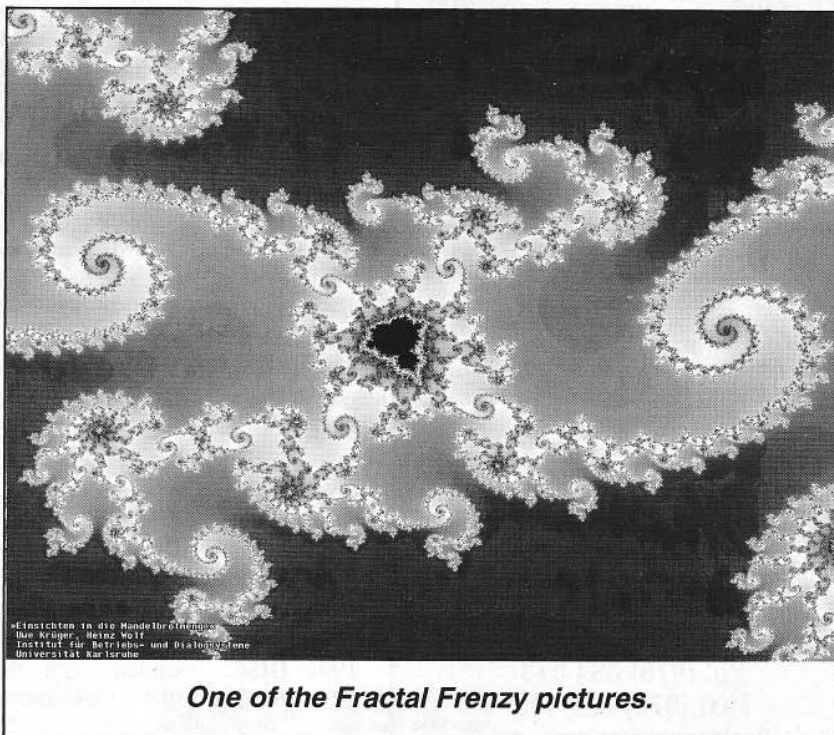
There are hundreds of shareware, freeware and PD Postscript and bitmap fonts, and also the complete PasTeX system, although without as much extra stuff as you get on the Meeting Pearls disc so it only (!) takes up 32Mb.

The complete GNU C Compiler v2.5.8 is included; this compiles C and C++ code and has a bunch of Unix-style utilities included and the official licensed CBM Includes and tools. There's also a complete installation of E, a much younger language than C but easier to learn. In case you don't know about the other CDPD discs,

CDPD1 contains Fish 1 to 660, a load of music modules and network support for ParNet and SerNet. CDPD2 has Fish 660-760, Scope PD Disks 1-220, some Just Amiga Monthly (JAM) disks, and assorted other freeware. CDPD3 contains Fish 760-890, clip art, fonts, books, utilities, applications and more.

### Micro R&D CD-ROMs Vol 1 and 2 \$119.95, \$139.95

The Micro R&D discs have a wide assortment of files, too. Volume 1 of this series of two (so far) contains various animations, some so old as to have historical value, a few decent MODs, many OK sounds samples though nothing I haven't seen on other discs before, more books, including Stoker's Dracula, works by Oscar Wilde and many more, a few OK disk tools, almost 500 CompuGraphic fonts and almost 450 Postscript fonts, more than 1400 EPS clip art files, a collection of 3D rendering related tools, many game demos of



One of the Fractal Frenzy pictures.

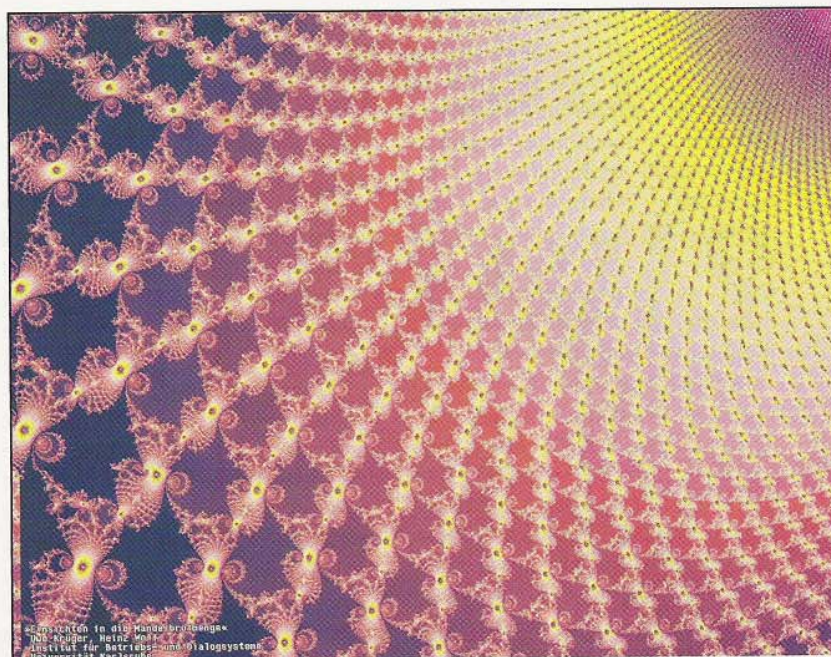
## Who says you can't get software for Amigas?

17BIT 2CD	94.95
17BIT CONTINUATION	44.95
17BIT CONTINUATION 2	44.95
*1869	69.95
A BUN FOR BARNEY	69.95
A LONG HARD DAY AT THE RANCH	69.95
*ADRENALINE FACTOR	69.95
ADVANCED MILITARY SYSTEMS	89.95
AIR WARRIOR	69.95
AKIRA	69.95
ALFRED CHICKEN	69.95
ALIEN BREED/QWAK	69.95
*ALIEN BREED 2	69.95
ALISTAIR IN OUTER SPACE	59.95
ALL DOGS GO TO HEAVEN	40.00
ALL TERRAIN RACING	69.95
AMERICAN HERITAGE DICTIONARY	40.00
AMERICAN VISTA ATLAS	09.95
*AMIGA CD FOOTBALL	69.95
AMIGA DESKTOP VIDEO	39.95
AMINET	45.00
AMINET2	45.00
AMINET3	45.00
AMOS CD	?????
ANIMALS IN MOTION	30.00
ANIMATED COLOURING BOOK	55.00
ARABIAN NIGHTS	69.95
ARCADE POOL	69.95
ASSASSIN SPECIAL EDITION	69.95
ASTERIX & SON	69.95
ASTERIX ENGLISH FOR FRENCH 1	69.95
ASTERIX ENGLISH FOR FRENCH 2	69.95
ASTERIX FRENCH FOR ENGLISH 1	69.95
ASTERIX FRENCH FOR ENGLISH 2	69.95
*B17 FLYING FORTRESS	69.95
BALDY	69.95
BANSHEE	69.95
BARNEY BEAR GOES CAMPING	69.95
BARNEY GOES TO SCHOOL	69.95
BATTLECHESS	69.95
BATTLECHESS (re release)	69.95
BATTLESTORM	59.95
BATTLETOADS	69.95
*BAZOOKA SUE	69.95
BEAVERS	69.95
*BENEATH A STEEL SKY	69.95
*BENETTON RACING	69.95
*BIOSPHERE	69.95
*BODY BLOWS	69.95
*BOOT	69.95
BRIAN THE LION	69.95
BRUTAL SPORTS FOOTBALL	69.95
BUBBA N STIX	69.95
*BUBBLE & SQUEAK	69.95
*BUMP N TURN	69.95
*BURNING RUBBER	69.95

and that's just A - B...

Call for Free Catalogue

**Don Quixote**  
**POBox 786**  
**Toowoomba QLD 4350**  
**Ph: (076) 391 578**  
**Fax: (076) 320 195**  
**Dealer enquiries welcome**



**Another Fractal**

advanced age, a lot of game patches and hints including a 1992 ACAR hint disk (!), a lot of fairly dodgy old PD games, more than 200 generally very good GIF pictures of trains (if you're after train pics, this is the disc for you!), 344 other GIFs varying from the good to the awful, hardware hacking text and utilities, and many IFF pics. You also get the Transition image conversion package, which does file format conversion (IFF, GIF, JPEG, PCX, PBM, Windows and OS/2 BMP) and also basic image processing - and can do batch conversions.

The thing that struck me most about this CD (besides all those trains) was that a considerable proportion of its content was lifted from Aminet. Now, there's nothing wrong with that; the Aminet archive exists so that people can glom Amiga freeware easily. But this disc has a load of stuff taken directly from the Aminet March 1994 DISC, complete with the CD's FILES.BBS description

files! This, along with quite a few obvious duplicate files (something Aminet suffers from too) detract from this CD's appeal.

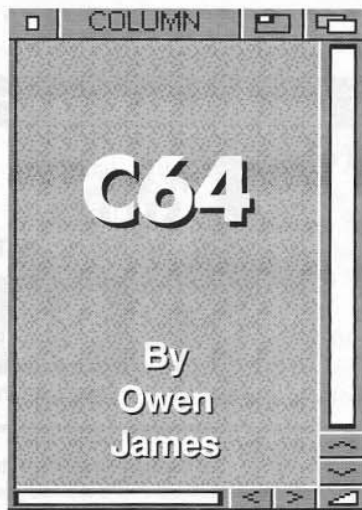
Micro R&D Volume 2 has a load of space pictures, which include just about everything on the Space & Astronomy disc with quite a few more.

You also get the entire collection of Nature's Backdrop pictures from Infinite Solutions, totalling more than 140 16 and 24 bit texture files and assorted brushes. These come in IFF, JPEG, GIF and TIFF format for maximum compatibility. Much less scope on this disc than in volume 1, and it's better for it; if you're after a load of textures this is a good place to look.

*Thanks to Don Quixote (076) 331 561 and Amadeus (02) 652 2712 for supplying the discs in this comparison.*

□





► This month in The C64 Column I continue to look at the most frequently asked questions concerning the C64.

### What's PD?

PD is short for Public Domain. In this context it refers to software without any copyright; this software may be freely copied and distributed amongst friends, contacts and customers, and may be modified by anyone with the skill to do so. There is a bit of confusion between true PD software and shareware. Software designated as shareware is similar to PD in that under normal circumstances it may be distributed freely, but the author generally keeps the copyright and may thus impose restrictions on how it may be copied, modified or used. Generally, also, shareware is the basis for a "try before you buy" system. If you enjoy using the software and regularly use it, the author asks for a contribution.

The C64 has a good supply of public domain and shareware software available for it, with material covering business, games, music and utilities. There are several PD and shareware suppliers in Australia willing to provide such software on disk for a small fee.

### What's a null-modem cable?

A null-modem cable is, quite simply, a regular serial cable that

has been modified to allow data to be sent between two nearby computers. For example, if you have a C64 and an Amiga sitting side-by-side, or a C64 and a PC, or an Amstrad NC100 Notepad and an Amiga, they may be linked via a null-modem cable and data can be transferred between them. I'm writing this now on an Amstrad Notepad, and my article will be transferred to an Amiga via a null-modem cable when it's complete. It's useful for users with more than one computer.

To make use of a null-modem cable you'll usually require terminal (communications) software running on each machine, and each machine must have an RS232 (standard) serial port. Files are "uploaded" and "downloaded" just as you would with a regular modem.

### What's GEOS?

GEOS has been the subject of many articles over the years, but for a quick recap, it's an acronym for Graphic Environment Operating System. GEOS is a replacement operating system designed to make using your C64 easier. Much like the Macintosh, Windows and Amiga Workbench, operations are performed using a mouse and a series of windows, rather than just the keyboard.

Included in the main GEOS system is geoWrite for word processing, geoPaint for graphics, and several desktop utilities including a calculator, notepad and clock. Add-on modules are available including a spreadsheet, desktop publisher and chart maker. Overall, the package is an excellent addition to your C64 software library.

### Can I connect my C64 to a PC hard drive?

Surprisingly, yes. The software

package to do this is called 64Net, and to use it you have to build a special cable. Unfortunately the hard drive must also be connected to a PC, so forget any ideas of just buying a cheap IDE drive to dispense with your storage problems. The good news is that ANY PC drive may be accessed from the C64, including a CD-ROM drive - though not much CD-ROM software will be of use to a 64 user. Any PC, from a bargain basement \$50 XT, will suffice.

64Net comes in two flavours; the freely distributable version available on most BBSs or a commercial version. The difference is that the commercial version allows the user to write to the PC hard drive as well as read. Check your local BBS or PD software supplier for more information.

### Can I use a modem with my 64?

You bet. These magical little boxes connect between your computer and telephone line, converting computer signals into tones and vice versa. "Modem" is actually a contraction of the words Modulation and Demodulation, which describes this process.

There was a time when modems designed specifically for the C64 were in abundance, but these days you'd probably only find them second-hand. A more practical alternative would be to use a standard modem, as used with an IBM or Amiga, and an interface unit. CMD produces a suitable interface, called the Swiftlink, which connects to your C64's cartridge port. The advantage of Swiftlink is that you can use modems that run at speeds of up to a respectable 9600 baud, thus reducing both online time and your telephone bill.

The second requirement is some form of communications software. For the C64, there's

quite a range to select from. The most popular amongst communications fanatics is NovaTerm, which is an easy to use, yet powerful, shareware offering. With the addition of a telephone socket, you should have everything needed to communicate with the outside world.

### My printer won't work!

A common complaint, unfortunately with no simple answer. First and most obvious is to check that the printer was actually designed to work with the C64. Most modern off-the-shelf printers won't plug in directly. You may require an interface.

Second, try adjusting any interface and emulation switch settings. Many printers have a set of small toggle switches ("DIP switches")

for changing these settings.

Finally, check the printer driver itself. If using GEOS, ensure the correct printer driver has been selected. If you're using a printer that doesn't seem to correspond to any of the drivers, select the standard Commodore driver. Also, experiment with other printer drivers and emulation settings on the printer. Other software may not have such a wide selection of printer drivers, so just select the one that most closely matches your printer.

Just before we finish up this month, Sandra Kuchta would like to hear from any user willing to sell their old Xetec or Xetec Jr printer interface. If you can help Sandra out, please write to her directly at 2 Dabee Rd, Kandos 2848. □

**Feel free to write to me care of**

**The C64 Column,  
PO Box 288,  
Gladesville NSW  
2111**

**or via**

**Fido Netmail to  
3:713/888.999.**

### Amiga Monitors

1084S (trade) **\$200**  
Phillips CM8833 **\$499**  
MicroVitec **\$799**  
Nec 3V Multisync **\$985**

### Mouses & Mats

ColourMouse **\$19.95**  
Axmouse **\$29.95**  
GI700 Cordless **\$42.95**  
GI6000 Optical **\$64.95**  
Graphics Tablet **\$199**

### Seagate HardDrives

for the A1200's  
128 Mb 2.5" IDE **\$399**  
340 Mb 2.5" IDE **\$749**  
455 Mb 2.5" IDE **\$889**  
for the A4000's  
260 Mb 3.5" IDE **\$329**  
428 Mb 3.5" IDE **\$428**  
with 2 Years warranty

### Mastering Amiga Books

Amiga Beginners **\$45**  
Amiga Amos **\$45**  
Amiga Dos2 vol 1 **\$49**  
Mastering C **\$45**  
A1200 Guide **\$39**  
Ordered in, on request

### Amiga Machines

A500 (trade) **\$135**  
A600HD (trade) **\$450**  
A2000HD (trade) **\$550**  
A1200 **\$935** CD32 **\$699**  
A1200+127HD **\$1299**  
A1200+210HD **\$1645**

### Software

Wordworth 2 **\$59**  
Wordworth 3 **\$149**  
Money Matters **\$99**  
Home Accounting 2 **\$59**  
Easyledgers 2 **\$399**  
Personal Paint 4 **\$79**  
Personal Paint 6.1 **\$99**  
Personal Font Maker **\$99**

### Quantum HardDrives

170 Mb 3.5" SCSI 2 **\$334**  
340 Mb 3.5" SCSI 2 **\$414**  
**540 Mb 3.5" SCSI 2 Special**  
**1.08 Gb 3.5" SCSI 2 Special**  
with 2 Years warranty

### CD32 Games & Movies

We have a large selection of games for the CD32 as well as film and music videos.  
Ordered in, on request

### Removable Hard Drives

Syquest 44Mb 5.25" SCSI **\$399**  
Syquest 105Mb 3.5" SCSI **\$499**  
**Syquest 270Mb 3.5" SCSI Special \$700**  
Syquest 105Mb 3.5" IDE **\$370**  
Syquest 270Mb 3.5" IDE **\$695**  
Syquest 3.5" external casing **\$209**  
Syquest 5.25" external casing **\$218**

### Audio & Video

Vidi Amiga 12 **\$199**  
Vidi Amiga 12<sup>SV</sup> **\$259**  
Vidi Amiga 12<sup>RT</sup> **\$379**  
Vidi Amiga 24<sup>RT</sup> **\$529**  
Rombo Sampler **\$89**  
GVP DSS **\$175**

### Maestro Modems

14.4K data only **\$379**  
14.4K data/fax **\$399**  
28.8K data/fax **\$599**  
GPfax **\$35**  
**\$1 Per Meg**

### Repairs

We provide a full inhouse repair and upgrade service. With most repairs completed in 24 hrs

### Memory Expansions

A601 1Mb with clock **\$99**  
2Mb PCMCIA card **\$265**  
4Mb PCMCIA card **\$399**  
1Mb Dip ram chips for A590/A2091 **\$80**  
DKB1202 ram card with clock **\$189**  
DKB1202C with 68882 copro **\$225**  
DKB1202C with 68882, 4Mb ram **\$515**  
DKB1240 CPU 030EC 40Mhz **\$625**  
DKB1240C with 68882 copro **\$725**  
DKB1240C with 68882, 4Mb ram **\$915**

### NEC CDROM Drives

CDR-25 External Single spin **\$299**  
CDR-210 External Dual spin **\$699**  
CDR-500 Internal Triple spin **\$990**  
CDR-600 External Triple spin **\$1099**  
Xetec cdrom driver software **\$149**

### Serving Sydney's West

## Shareware Access

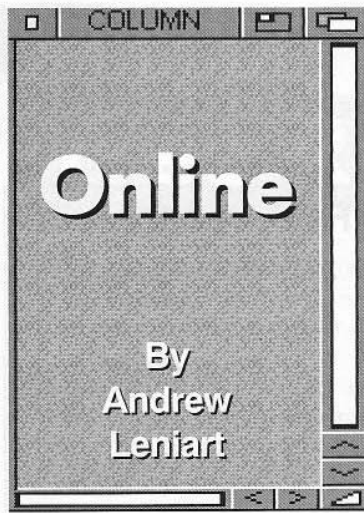
Suite 11, 9 Abel Street, Penrith 2750

Open 9am-6pm Mon-Sat

Phone: (047) 222-893

Online support and weekly specials Call Planet X BBS (02) 832 2776





► Welcome back to Online. Last month I pointed to MacInsanity as a great value for money Internet access provider. That was great news for Melbourne readers, but what of the rest of you?

As promised, this issue I'll be giving you information on yet another Internet provider with great access rates, that people in most other places should be able to benefit from as well. This issue also starts my series of articles explaining Internet for beginners. But first:

### Commercial BBS roundup

To everyone that's been pleading for reviews of commercial BBS software, complaining about there being no way to try the things before you buy, here's what you've been waiting for.

I've approached the authors/support sites of the following commercial BBS software packages: MebbsNet, DLG Professional, XenoLink Pro, Excelsior BBS, Recoon and CNet.

MebbsNet, Recoon and Xenolink have already arrived and I'm told that the others are on the way, so next month will see the first reviews, starting with the popular Xenolink Pro and a different package reviewed each month after that. The reviews will appear as separate feature articles.

### Dialix Internet Services

I searched far and wide for

many months, looking for an Internet access provider that gave good Internet access at a reasonable cost. Most providers I found were out of my price range, demanding high membership fees along with monthly charges and even a charge per minute of online time.

MacInsanity was great value, but I was also looking for a provider which I could pass on, that our readers all over Oz could benefit from. I believe I've found an excellent one and find myself using the Dialix service as much, if not more than my MacInsanity Internet account.

DIALix Services are currently a Net Service Affiliate Member of AARNet. AARNet is the body that supplies the backbone communications services to the academic and research communities in Australia.

DIALix offers e-mail and newsfeeds to individuals and small companies who are unable to obtain or afford a direct Internet connection. TELNET, IRC and FTP services etc, are now available at all sites listed below.

Users connect to DIALix through multiple dial up lines on 300/1200/2400 and 9600/14.4 modems to send and receive e-mail or browse newsgroups and post news items. Trunk callers are encouraged to ask about the cost of a trunk connection for e-mail, as 20k can be transferred for the cost of a local call at economy Telecom rates. UUCP feeds are especially catered for.

### Modem numbers are:

Sydney (02) 948-6918  
Melbourne (03) 562-2399  
Canberra (06) 251-3811  
Brisbane (07) 889-0799  
Adelaide (08) 231-6822  
Perth (09) 244-3233

The general public are actively sought to participate in reading

newsgroups, posting to local newsgroups and e-mailing other DIALix and/or Internet users. Clubs and organisations are catered for with special interest newsgroups and free login during club meeting hours (fortnightly or monthly).

Schools and special interest groups can even have their own newsgroup so members and staff can have a "customised" bulletin board without the need for a local person to maintain the equipment and service.

Net write access is provided to users who meet the requirements of the AVCC ("some benefit to the higher education and research sector"), with each applicant being considered on their merits. Users who have write access may have that access terminated at any time if they abuse the resources of the AARNet (or Internet). A commercial traffic service is now available between the major capital cities that does not use the AARNet backbone.

### Charges for DIALix are:

- 1c/min online time.

- 1c/1,000 bytes for non-DIALix traffic in or out (AARNet/Internet). Usenet news in or out is NOT "byte" charged.

All accounts are paid in advance with a minimum of ten dollars.

Storage space of 1Mb provided with each account at no charge. Additional space at 1c/Mb/day.

- \$10 (once off) for UUCP setups.

- \$50 (once off) for TCP-IP/PPP setups (when available).

Visa, Bankcard and Mastercard are accepted via E-mail or phone. Cheques, etc. to the postal address given below. You can choose your own login name which is then unchangeable. It must be unique on DIALix and lower case letters and numbers beginning with a letter. Write to the address below or phone to arrange your login.

## What's it all mean?

Basically, DIALix is a cheap and effective way to experiment and figure out what all this Internet stuff is about. I know of no other Internet provider that will allow you to establish an account of this type for a measly ten bucks, and then allow you to use all services immediately.

Most, as I said earlier, require an initial joining fee in the vicinity of \$50 and then sting you extra charges for online time and so on. I've no hesitation in personally recommending the DIALix service.

Since joining the service, I've found them to be prompt and professional in establishing an account for me and helping me to get started. I've also found that the support they provide for is absolutely excellent. To obtain support, you simply post an e-mail message to "support" from your DIALix account and ask your questions. Within 24 hours (sometimes even quicker) a reply is waiting for you.

DIALix can be reached via modem at the number given above, but you can also give Jeff Johnson a voice call (all hours) on (09) 244 2433 for more information. Alternatively, write to:

DIALix Services  
 P.O. Box 153  
 Doubleview 6018

## IRC for beginners

Internet Relay Chat (or IRC for short) is a system which allows you to have conversations with other people all over the world via your computer keyboard.

To understand what this means, you can easily liken IRC to CB radio. It works on pretty much the same principle, except that you type on your computer rather than talk into a microphone. There are even different channels in IRC,

just like there are on a CB.

Type something on your computer and it's instantly relayed around the whole world to whoever happens to be on the same channel as you. There are literally hundreds of channels to choose from, each with its own designated topic, and you can create your own channel if you can't see one that interests you. Then simply invite others to join your channel, or just wait until people pop in.

There are channels on specific computer related topics, night-clubs, cars and many others. If you want to talk to others in a language other than English, there are channels for most languages.

A great way to make new friends and pen pals all over the world, chatting to them for hours and all for the price of a local call. There are literally hundreds of participants in IRC at any given time, so there are always many people to chat to.

Like card games? You can play poker on IRC as well, using pretend money and playing in real time against people from the USA, Germany, Finland, Japan and so on. Get the picture? It all happens via a programmed robot on the IRC called a "bot" and it's just like the real thing. Great fun!

## How do you get it?

Nothing could be simpler. From the the prompt at a DIALix account, you simply type IRC and hit enter. The system takes care of the rest; within a few seconds you're in. Once in IRC, you'll naturally want to find out how to drive it all. Simply enter the following command when in IRC:

/help

and you'll get a list of IRC commands for which there is a

help file. You'll also get a topic: prompt. Type the subject or command you want to know about and hit enter again.

Two other IRC commands useful for the beginner are /LIST and /QUIT. Note that all IRC commands are preceded with a forward slash character.

/List gives you a list of all available and active channels. The list is likely to be HUGE, so turn on your terminal capture before issuing this command to ensure that you will be able to review the whole listing once it's done.

/QUIT ends your IRC session.

It probably all sounds harder than it really is, but I can assure you that once you've had a couple of goes you'll get the hang of it and before you know it, you're addicted.

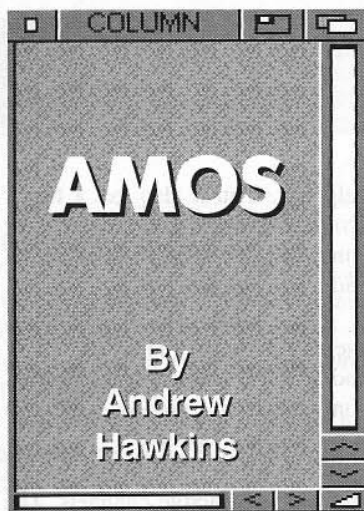
## A final word

Before logging into ANY Internet service provider, ensure that you are using a terminal program on your end which is capable of VT100 or preferably VT102 terminal emulation. Other emulations are likely to cause display problems.

I've personally found the freeware comms package TERM version 4.1 to give excellent VT102 emulation and can recommend it.

That's about all I have space for this issue. Next month will see some more hints and tips for new Internet users about sending and receiving world wide Email, along with a possible review of the latest version of Foozle.

Till the next time, feel free to log onto my own BBS "Andy's Attic" on (03) 749-4897, or when you have your internet account, send Email to aleniart@ mel-bourne.dialix.oz.au and say hi. □



It is surprising that there are so few AMOS 3D games out there. The main problem is that by the time you've got all the objects you need in your game, and you start checking every one to see if it fires and check for collisions and so on, there's so much overhead that the game chugs along at an embarrassingly slow rate.

So that's what this article is about - using AMOS 3D to build FAST 3D games. This is the first instalment of a four part tutorial, and at the end you will have the basic knowledge to continue to program optimised routines for AMOS 3D. You will also have a full game to play in the style of T-MEX, or for nostalgia fans, Battlezone.

Make sure you save the routines as you go.

### Let's go

First of all, let's deal with the environment, or 3D world. Get some graph paper to work out what you want in a plan view something like Fig 1. The genre of this game is a Battlezone shoot-em-up, so we need one tank for the player and one for the opponent. To make matters simple, start with the tanks facing each other. Generally speaking, you want the action to take place in front of the player anyway.

Okay, now we have a basic plan. First, set up a screen to handle the 3D objects.

( See listing 1 )

The first lines define variables for later in this tutorial. Next we open an AMOS 3D compatible screen and double buffer the display, effectively using twice the memory for a single screen but allowing smooth updating. Autback is set to 0. This sets any text to display at the fastest speed. TD SCREEN HEIGHT is set to 200, so that you can use the bottom of the screen for the score, radar and so on - it also increases the update speed. The next FOR/NEXT loop creates 10 ground dots for later.

Next you need to translate the planview to the computer. To do this, you must locate the 3D objects stored on disk and create object instances of them.

( See Listing 2 )

The directory may change depending on where you've stored your objects. The basic format is:

```
Td Dir "<disk name>:<disk
drawer>"
```

The directory must point to the disk and drawer where the 3D objects are located or you'll get a "File not found" error. Also, when creating the object in the modeller you must save it to a drawer, not the root or parent directory, thanks to a bug in AMOS, so the statement should look like

```
Td Dir "Df1:ObjectDir"
```

TD LOAD will now load up the object descriptions. Don't have any objects? See the appendix at the end of this article to create the tank and the laser shot.

You will notice "bullet" is loaded as well. We'll use that later. TDOBJECT will create an instance of the tank, but it's not enough to just load the object, you have to put it into the game domain. This is a single instance

of the tank object, but you could have 20 tanks in the domain if you wanted. Let's just stick to one.

I guess you'll want to see the screen, so type:

( See Listing 3 )

The REPEAT/UNTIL loop will loop forever. TD ANGLE REL refers to the object instance of the tank; it's a relative rotation, which means it will add 1000 VLU's (Voodoo Length Units) to object 1's B attitude every cycle, giving a smooth rotation to the tank.

TD REDRAW shows the picture of the tank. SCREEN SWAP will display the next refreshed frame of the tank rotating and WAIT VBL synchronises the drawing process so you get a smooth picture.

This is the basic MAIN loop. From here you will later jump to move the enemy tank, check the player's moves and so on. At this point I've introduced a lot of commands, and it may help to check your manuals to find out exactly what each command is doing.

For more speed you can purchase the TURBO extension for AMOS (available from Pactronics, and reviewed earlier this year). This is invaluable for 3D as it adds a lot more commands and reduces the processor time. If you have TURBO installed,

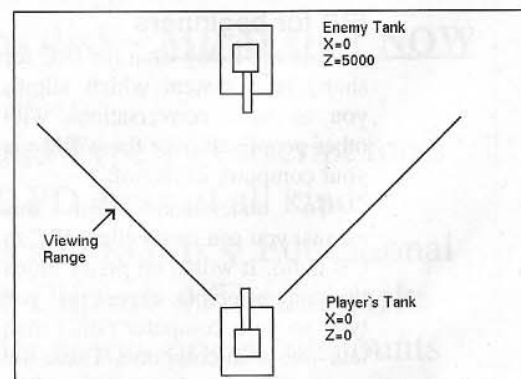


Figure 1.0 Using graph paper, make a plan view of where you want all your 3d objects. Then translate the coords to your program.



substitute WAIT VBL for VBL WAIT 200, as you only need to draw up to line 200 to see the tank. See the appendix to install TURBO.

Run the program now. You should see something like Fig. 2.0 on the screen, with the tank spinning around on one axis. If it isn't rotating horizontally, check the TD ANGLE REL 1 syntax.

The next thing you'll want to do is shoot the enemy tank, right? It's really easy to do this. You do several things to create a bullet object. In later tutorials I'll show you how to maximise the use of 3d calculations for sprites as bullets, but for now let's keep it simple. The basic technique is to create a 3D object at your position, point it straight ahead and move it.

Now we need to get into a bit of structured programming. Here's an example of is the way you should structure your program. Don't type this in, this is just a guide to the overall structure of the code.

( See Listing 4 )

For the firing routine, you will make a procedure called FIRING \_ ROUTINE. In it you need to check if the player has pressed fire, and if so initiate a bullet. Once the bullet is going you'll need to check it to switch it off when it's out of range.

First of all, include the procedure call FIRING \_ ROUTINE after TDCLS, but before TD REDRAW in the REPEAT/UNTIL loop. This may be a little confusing for people who have no experience with procedures.

This is the basic syntax. When you call a procedure you just type in its name. So, in the next line after TD CLS, just type FIRING \_ ROUTINE. Next you must define the routine and what it contains.

You do this by heading the routine with Procedure FIRING \_

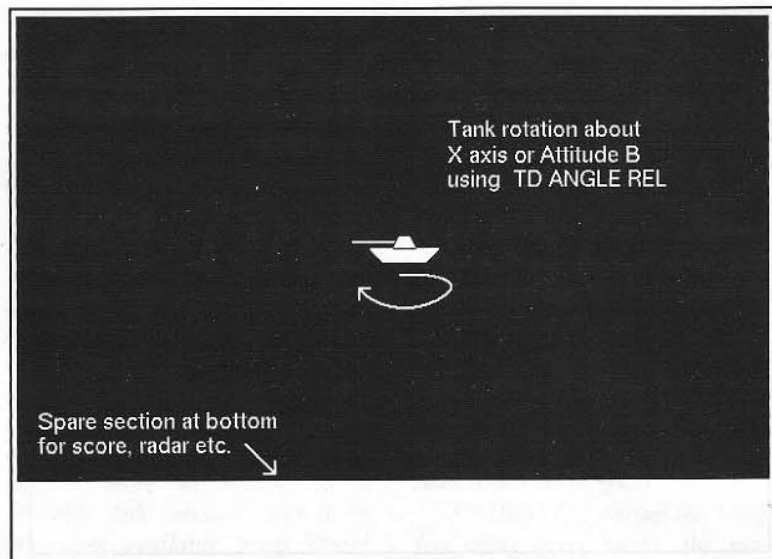


Figure 2.0 Running the program now, you should see the tank spinning around the horizontal axis X.

ROUTINE and typing in the contents. Once you have defined the routines in the procedure, you end it by typing ENDPROC last. Here's the routine, so you can start firing straight away:

( See Listing 5 )

The first line is a calculation that will allow you to fire no matter which way the joystick is positioned. Next it checks a variable called BULLET for its status. Initially it will be set to 0 and will continue into the IF/END IF condition if the fire button is pressed. The bullet is switched on (BULLET=1) and a sound effect (SHOOT) is initiated (we'll change this later for a better sound). The TD OBJECT command as used before uses object 20 (this is important later on) and the object description is "laser2", stored with "turret" in your objects drawer. The bullet object is pointed straight ahead and all is set.

The next IF/END IF condition checks first whether the bullet is switched on. If so it moves the object forward 1000 VLU's. This is structured this way for two rea-

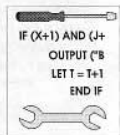
sons. Firstly, it stops you using object 20 more than once, which would result in an error, and secondly, it allows the object to continue to move once initiated. That's where INC BULLET comes in. The variable BULLET will increment until it is greater than 10, effectively giving a firing range of 10,000 VLU's.

At this point I'd like to tell you why you should use INC instead of BULLET=BULLET+1. INC uses internal registers for fast integer arithmetic. Other commands that use the same method of arithmetic are ADD and DEC, but we'll talk about those later. So the need for speed continues.

The next IF/END IF condition will switch off the bullet if it's out of range (ie BULLET exceeds 10), by switching variable BULLET to 0 and killing object 20.

Running the program now, you can fire a bullet, which will speed off toward the rotating tank. It doesn't hit the tank, though, because there's no collision detection routine yet.

After the procedure call FIR-



PROGRAMMING

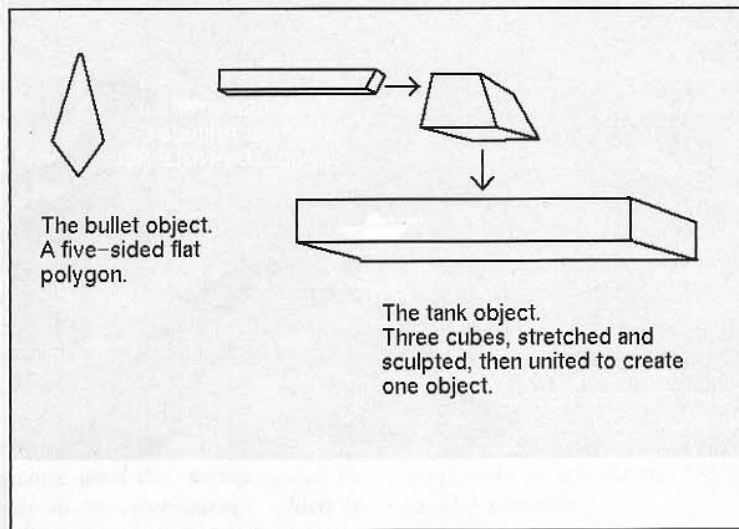


Figure 3.0 Using the Object modeller, it is easy to create objects for your game. More advanced user can create complex objects.

ING \_ROUTINE in the MAIN loop, type in the procedure call KOLLISIONS (K because Col is an 'AMOS instruction). Here's the KOLLISION routine. It's a little longer than the other procedure, so make sure the syntax is correct.

( See Listing 6 )

Now things are starting to get interesting. The first IF/END IF condition checks to see if the bullet's been fired (BULLET=1), and this condition avoids error with the next command, TD RANGE, which checks the proximity of the bullet to the enemy tank. I've set it to 500.

This is quite a large hit area, but it's really set for playability, and also to stop the bullet from passing through the tank as it's travelling quite fast. Variable \_KILL \_TANK is switched on so that it can use the other features of the procedure. Variable BULLET is switched off and object 20 is killed so that the player can fire again.

From there it POP PROCs. Why? The need for speed. Don't worry; the next cycle it will blow

the object up, but when it comes to nanosecond timing you don't really need it. The strategy for speed here is to make sure the CPU has very little to think about per cycle, because the 3D objects take a long time to draw anyway.

When you think about it, it makes sense. Who cares if the tank explodes 5 VBLs later than when it was hit; this is only a tenth of a second!

The next IF/END IF condition is effected the next cycle round, but because \_KILL \_TANK is now set to 1, the first range test is ignored (speed again). BOOM is a sound effect (we'll change this later) and the next 3 lines are interrupt strings to animate the tank.

The first TD MOVE Y has five parts to the animation. The first part sends it up quite quickly, the second slows down, the third starts going down, and the fourth and fifth speed it up before it hits the floor, giving a realistic gravity effect.

The next two TD ANGLE strings rotate the tank, and are relative moves so the tank appears to tumble as it goes up, then down.

So what you'll see is the tank being thrown into the air when you shoot it.

Finally, \_KILL \_TANK is INCed and the routine POP PROCs. This is a speed strategy. By using the interrupt strings on 3D objects, you can be checking other things in the game while the CPU is animating the object. The need for speed continues.

The final IF/END IF condition in the KOLLISIONS procedure ignores the first two conditions (range testing and animation) because in the next cycle, \_KILL \_TANK is set to 2. Like the bullet object, \_KILL \_TANK is incremented to allow time for the tank to move. The next IF/END IF condition waits for another 8 cycles before killing the tank. When \_KILL \_TANK exceeds 10, it will create a sound effect and initialise a new tank. \_KILL \_TANK is then reset to 0 so that the KOLLISION routines are ignored. Using TDOBJECT a new object instance of the tank is generated, and the last three TD commands initialise the animation strings so that the tank no longer tumbles.

Running the program now you can kill tanks forever; this is fast and fun but offers little variety. Before spicing things up, let's check your structure. FOLD ALL of your procedures (Left ALT + F8). Your program should look like this.

( See Listing 7 )

Nice and neat and easy to read. Now two more procedures to spice things up; one to move the enemy tank and one to move the player's tank. First, let's move the enemy. Include the procedure call MOVE\_TANK after KOLLISIONS in the MAIN loop, and type in the procedure below.

( See Listing 8 )

**Figure 4.0**

The first line aborts the procedure if the tank is being destroyed (ie. `_KILL_TANK>0`). The next two lines load variables OX and OZ with the position of the tank in the game domain. The following line randomizes a number between 0 and 10, effectively giving the tank an 60% chance of moving.

Note that the following two lines, OX and OZ range testing, are separate. Why? You guessed it, speed. A complete one line command incorporating the randomizer, OX and OZ range testing would take too long to process every cycle.

It is designed like this so that if at any point the condition is false it will stop processing the condition. Separating them stops the testing early and wastes the minimum amount of time.

If all the conditions are true it will move the tank and then POP PROC out of the routine. The range testing is designed to make sure the tank stays somewhere in front of the player, but it can move left and right a small distance. This makes the tank difficult to target, but it tank stays in visible range.

Running the program now, you will see the tank moving around in front of the player's tank, but the only time you can shoot it is when it is directly ahead. So you need to be able to move the player's viewpoint.

Include the procedure call `MOVE_PLAYER` before `FIRING_ROUTINE` in the MAIN loop and key-in the following procedure. (Fig 5.0)

( See Listing 9 )

The first instruction tests the joystick once and loads the value into the variable J. The first IF/END IF condition tests a number of combinations of joystick positions, with a bias towards the left position to add

playability. If the joystick has a left bias the viewpoint's (object 0) attitude or angle is adjusted anti-clockwise by 100 VLU's. Next, the attitude of the viewpoint is loaded into variable BP.

The following range test with BP makes sure the player can only turn 40 degrees left of centre. If the player's tank turns beyond 320 degrees the tank is stopped at that angle and set with TD ANGLE. This is for playability, and keeps the enemy tank in view. From here it POP PROCs, because the rest of the routine should be ignored.

The next IF/END IF condition tests a number of joystick positions with a bias to the right joystick position, and will turn your tank clockwise 100 VLU's per cycle. Again there is a range test to make sure the player can only turn to 40 degrees to keep the enemy in view.

Running the program now, you can move left and right and fire at the randomly moving tank. At the last moment I decided to add a ground detail routine, so that you could get a sense of depth and position. Include the procedure call `GROUND` after `TD REDRAW` in the MAIN loop and key-in the following:

( See Listing 10 )

Running the program now, you'll have a rough guide as to where the ground is and a true indication of your movements.

Well that's it for this tutorial; I hope you're enjoying making 3D games so far. Next edition I'll get more into making a game out of the routines, to include a radar, score, intelligent enemies and much more. If you have a compiler, compile this week's routines and check out that speed!

### Creating the tank and bullet objects

The bullet object is a flat

polygon and is easy to create. First load up OM (object modeller) and have a disk ready with a directory to save the object to. You'll need the OM reference card for this. Click means left mouse button. RMB is right. System shelf is the top row of objects, user shelf is the row below this and left and right windows are the big editing areas below the user shelf.

1. Click on RESET OM and click on the tick. Click on the left window, highlighting it. Click on the five pointed object. Click on the left window. Click on COPY tool (see reference card).

2. Click on ZOOM. Click on ADD BLOCK TO GROUP. Points should appear.

3. Click and drag the HORIZONTAL STRETCH tool to make the object about 2-3cm wide onscreen.

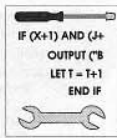
4. Click on POINT (block level commands) to select the top left point on the object. Click and hold on the top of the PULL TOOL in the block level commands (you should see an equation onscreen). Now drag left until the selected point is moved to the centre of the top of the object.

5. Click on POINT to select the top right point. Click on the PULL TOOL at the top and drag right until the point is moved to the centre of the top of the object.

6. Click on the FACE tool (block level commands). You won't see the object change with flat objects, but be assured that the face you can see is the face selected. RMB on XZ tool next to ZOOM, and the object will change its orientation.

7. RMB on PRECEDENCE/CULLING tool.

8. RMB on FILE/QUICK tool. You will now see the file access window. Click on the top window, which should read "OM:OM". Backspace over this and change it to the name of your save directory



## PROGRAMMING

and press return. The directory will appear below left. Click on the right window below the directory name and type in BULLET.

9. Click on the OBJECT to DISK icon (this is a square with an arrow pointing to a disk). Your object is now saved.

### Creating the tank

This is a little more complex. The basic design of the tank is an elongated and flattened cube as the base, a trapezoid sculpted smaller cube for the turret, and an elongated thin cube with the end angled so that it fits neatly onto the turret, which is the barrel.

### Creating the base

1. Click RESET and click on the tick.

2. Click on the left window to highlight it. Click on CUBE (rightmost object on the system shelf). Click on left window. Click COPY.

3. Click ZOOM. Click on ADD BLOCK TO GROUP. The cube's points will be highlighted.

4. Click and hold VERTICAL STRETCH, and shrink the cube so that it is about 1-1.5 cm onscreen.

5. Click the FACE tool (block level commands) to select facing surface. Click the XZ tool (next to ZOOM). You should see the top of the cube.

6. Click and hold the VERTICAL STRETCH tool and shrink the top so that it makes an elongated cube. This is the base, so imagine the tank is facing left and you are looking down on it, and size it accordingly. It should be about 3-4cm high.

7. Click ZOOM. Click on leftmost USER SHELF and click COPY. You should have a copy of the base in the USER SHELF now.

### Creating the turret

8. Repeat steps 2 to 6, except the turret must be smaller than the base, so at step 6 make it about 2.5-3cm high.

9. Click and hold the HORIZONTAL STRETCH tool and shrink the sides of the cube so it looks square.

10. Click and hold the ROTATION TOOL (movement tools) and drag down until you can see the top and front surfaces of the cube.

11. Click and hold the ROTATION TOOL and drag left until you can see the top, left side and front surfaces.

12. Click on the FACE tool to select the left side surface. Double click on the LINE tool (block level commands) to select the left side's top line.

13. Click and hold the PULL TOOL at the very top (the equation should start with "1:") and drag up until the last part of the equation is 25. The top line of the left side surface should now angle back.

14. Double click FACE to select the front surface. Click LINE to select the front surface's top line.

15. Click and hold the top of the PULL TOOL, pushing up until the end of the equation reads 25. The front surface should angle back now.

16. Click and hold the ROTATION TOOL and drag up, until you can only see the left and front surfaces. RELEASE Click. Click and hold the ROTATION TOOL and drag right until you can see the right surface.

17. Click FACE to select the right surface. Click LINE to select the right surface's top line.

18. Click and hold the very top of the PULL TOOL and push up until the last part of the equation is 25. The right surface should now

be angled back.

19. Click and hold the ROTATION TOOL and drag right until you can see the back surface.

20. Click on FACE to select the back surface. Click on LINE tool to select the top line.

21. Click and hold the very top of PULL TOOL and drag up until the last part of the equation is 25. Now all surfaces should be angled back.

22. Click on ZOOM tool. Click on 2nd left most user shelf. Click on COPY. You should have a copy of the turret next to the copy of the base.

### Creating the barrel

23. Repeat step 2 and 3.

24. Click and hold the VERTICAL STRETCH tool until the cube is very thin, about 3-4mm onscreen.

25. Click on FACE tool. Click on XZ tool next to ZOOM. Click and hold the VERTICAL STRETCH tool until cube is extremely thin and long. This is the shape of the barrel.

26. Click and hold the ROTATION tool and drag so that the end of the barrel is facing you.

27. Click FACE to select this end. Click LINE to select this end's top line.

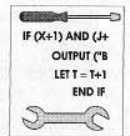
28. Click and hold the very top of the PULL TOOL and drag down until the equation ends in 15.

29. Click ZOOM. Click on the third left user shelf and click COPY. You should now have a copy of the base, turret and barrel ready to paste together.

### Sticking it together

30. Click on the leftmost user shelf, the base. Click on left window. Click on COPY. The base will be in the left window now.

31. Click on FACE until the facing surface is selected.



32. Click the second leftmost user shelf. Click the right window. Click COPY. You should have a copy of the turret in the right window. Click ZOOM and click FACE to select the facing surface of the turret. Note you must select the wide bottom, not the apex. Click ZOOM.

33. Click the right window. Click the left window. Click UNITE. Click PRECEDENCE. In the left window you should now see the turret on top of the base.

34. Click the third left user shelf. Click the right window. Click COPY. You should now have a copy of the barrel in the right window.

35. Click ZOOM. Click and hold the ROTATION TOOL and drag right until you can see the angled end facing you. Click FACE TOOL to select this face. Click ZOOM.

36. Click the left window. Click ZOOM. Click BLOCK (block level commands) to select the turret. Click FACE until the left surface of the turret (looking down) is highlighted. Click ZOOM.

37. Click the right window. Click the left window. Click UNITE. Click PRECEDENCE. You should see the tank with the turret and the barrel, but the barrel sticks out at a weird angle.

38. Click ZOOM.

39. Click and hold the ROTATION TOOL and drag up so you can see the tank side on. Click and drag the ROTATION TOOL left until the tank faces you square on. Click BLOCK to select the barrel.

40. Click ADD BLOCK TO GROUP to select the barrel's points. Click BLOCK to select the turret. Click FACE to select the turret's facing surface.

41. The idea of the next step is to rotate the barrel so it points toward you but ends up off centre of the turret. Try one of these two

methods if the barrel doesn't point towards you; click and hold the FACE ROTATION tool in the groups section and either drag right until the barrel is off left but pointing ahead, or drag left until the barrel is off right but pointing ahead.

42. Click and hold the FACE SLIDE tool and drag right or left so the barrel's in the centre, but at the top of the turret.

43. Click and hold the FACE NORMAL tool and drag left until the barrel is in the centre of the face of the turret.

44. Click and hold the ROTATION TOOL and rotate the tank until it is facing to the left but square.

45. Click and hold the AXIS ROTATION in groups tools and drag right until the barrel is squared and pointing left.

46. Click and hold MOVE XY PLANE in groups tools and drag the barrel left until its end touches the left side of the turret.

47. Click PRECEDENCE. RMB on PRECEDENCE. Click and hold the ROTATION TOOL and drag until the tank faces away from you but is square.

48. RMB on FILE/QUICK tool. Click "OM:OM" if it doesn't contain the name of your save directory then change it to the right path and press return. Click on the file window to the right of the directory and type in TANK. Click on OBJECT to DISK to save tank. This icon is the square with the arrow pointing to the disk.

Well done. You have made your own tank and bullet. These are very simple, but with this knowledge I'm sure you could create some very convincing looking objects.

## APPENDIX B Installing TURBO 1.75 extension for AMOS.

First, purchase the extension

from Pactronics; it costs about \$5. Reboot your Amiga and insert the TURBO update disk. Follow the on screen instructions to install the extension on your language disk. Don't use your originals, make backups.

Reboot and load up AMOS and then load the CONFIG1\_3.amos program. Run this. Select load default configuration from the menus. Select LOADED EXTENSIONS MENU. Move the mouse down to line 8, click on it and type in :AMOS \_ SYSTEM TURBO.LIB and press return. Select quit from this screen and then select SAVE CONFIGURATION. Once it has saved and the disk light goes out, reboot your AMIGA. When AMOS boots up, in the list of extensions you should have at the bottom TURBO EXTENSION 1.75.

□

```
Dim GND(10,2)
Global GND()
Global _ KILL _ TANK
Global BULLET
Screen Open 0,320,256,16,Lowres
Double Buffer
Autoback 0
Td Screen Height 200
For P=1 To 10
  GND(P,0)=5000-Rnd(10000)
  GND(P,1)=-200
  GND(P,2)=1000+Rnd(10000)
Next P
```

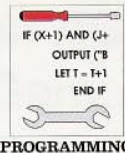
### Listing 1

```
Td Dir "df1:objects"
Td Load "tank"
Td Load "bullet"
Td Object 1,"tank",0,0,5000,0,0,0
```

### Listing 2

```
MAIN:
Repeat
  Td Cls
  Td Angle Rel 1,0,1000,0
  Td Redraw
  Screen Swap
  Wait Vbl
Until GAME=1
End
```

### Listing 3



```
DIM <variables>
GLOBAL <variables>
Repeat
    Procedure calls
Until
End
Procedure Xn
Procedure Xnl
...
```

### Listing 4

```
Procedure FIRING_ROUTINE
    If Joy(1)-16>-1
        If BULLET=0
            BULLET=1 : Shoot
            Td Object 20,"bullet",0,0,0,0,0,0
            Td Angle 20,0,Td Attitude B(0),0
        End If
    End If
    If BULLET>0
        Td Forward 20,1000
        Inc BULLET
        If BULLET>10
            BULLET=0
            Td Kill 20
        End If
    End If
End Proc
```

### Listing 5

```
Dim GND(10,2)
Global GND()
Global _KILL_TANK
Global BULLET
Screen Open 0,320,256,16,Lowres
Double Buffer
Autoback 0
Td Screen Height 200
Td Dir "df1:objects"
Td Load "tank"
Td Load "bullet"
Td Object 1,"tank",0,0,5000,0,0,0
For P=1 To 10
    GND(P,0)=5000-Rnd(10000)
    GND(P,1)=-200
    GND(P,2)=1000+Rnd(10000)
Next P
MAIN:
Repeat
    Td Cls
    FIRING_ROUTINE
    KOLLISIONS
    Td Angle Rel 1,0,1000,0
    Td Redraw
    Screen Swap
    Wait Vbl
Until GAME=1
End
Procedure FIRING_ROUTINE
Procedure KOLLISIONS
```

### Listing 10

```
Procedure GROUND
    For P=1 To 10
        SX=Td Screen X(GND(P,0),GND(P,1),GND(P,2))
        SY=Td Screen Y
        If SX>-1 and SY>-1
            F Plot SX,SY,1
        End If
    Next P
End Proc
```

```
Procedure KOLLISIONS
    If BULLET>0 and _KILL_TANK=0
        If Td Range(20,1)<500
            _KILL_TANK=1
            BULLET=0
            Td Kill 20 : Pop Proc
        End If
    End If
    If _KILL_TANK=1
        Boom
        Td Move Y 1,"(1,100,5) (1,50,5) (1,-20,3) (1,-50,3) (1,-150,5)"
        Td Angle A 1,"(1,1000,25)"
        Td Angle B 1,"(1,500,25)"
        Inc _KILL_TANK : Pop Proc
    End If
    If _KILL_TANK>1
        Inc _KILL_TANK
        If _KILL_TANK>25
            Boom : Td Kill 1
            _KILL_TANK=0
            Td Object 1,"tank",3000-Rnd(6000) ,0,5000+Rnd(2000),0,0,0
            Td Move Y 1,"(0,0,0)"
            Td Angle A 1,"(0,0,0)"
            Td Angle B 1,"(0,0,0)"
        End If
    End If
End Proc
```

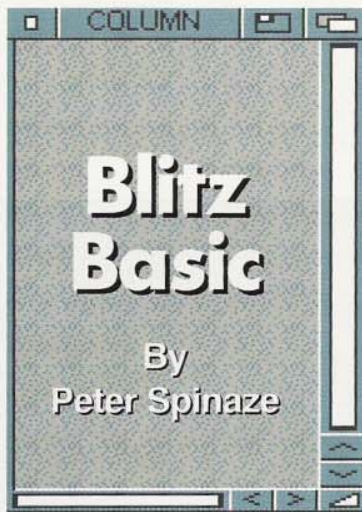
### Listing 6

```
Procedure MOVE_TANK
    If _KILL_TANK>0 Then Pop Proc
    OX=Td Position X(1)
    OZ=Td Position Z(1)
    If Rnd(10)<6
        If OX>-30000 and OX<30000
            If OZ>1000 and OZ<50000
                Td Forward 1,100
                Pop Proc
            End If
        End If
    End If
End Proc
```

### Listing 8

```
Procedure MOVE_PLAYER
    J=Joy(1)
    If(J>3 and J<8) or(J>19 and J<24)
        Td Angle Rel 0,0,-100,0
        BP=Td Attitude B(0)
        If BP>180*182 and BP<320*182
            BP=320*182
            Td Angle 0,0,BP,0
            Pop Proc
        End If
    End If
    If(J>7 and J<11) or(J>23 and J<28)
        Td Angle Rel 0,0,100,0
        BP=Td Attitude B(0)
        If BP<180*182 and BP>40*182
            BP=40*182
            Td Angle 0,0,BP,0
            Pop Proc
        End If
    End If
End Proc
```

### Listing 9



## A-Maze-ing Recursion

Welcome Blitz Coders! The Blitz Column is back on the air after a brief respite. In future articles, I'll be splitting the action into two separate columns. In response to the many letters from people with little or no experience in programming, I'll be running a monthly tutorial for beginners. But fear not, intermediate and advanced programmers! I'll still be passing on some interesting ideas and tips each month to improve your code. This month I'm giving you something meaty to bite into, an application showing the power and eloquence of recursive programming.

## What is recursion?

Simply put, recursion is what happens when a piece of code calls itself. In Blitz, functions and statements are fully recursive, which means they can call themselves. You can't do this with normal code, so any recursive code should be within a function or statement (from now on, when I say function, I mean statement or function).

Recursion is used for many things; sorting, searching and examining lists, arrays and lumps of data. In this example it will help us find the shortest way out of a maze.

I read in a programming textbook once that anything you can do using recursion you can also do

using normal control loops and iteration. Whether or not that's true I can't say, but it's hard to imagine the code looking as neat or as eloquent.

Obviously, for recursion to be useful, there has to be an external method to stop the function calling itself until the end of time or the three finger Armageddon. In this example, this external control comes in the form of global variables.

## Local and global variables

Inside functions, all the variables used are called "local" variables. This means that they are completely separate from all the variables outside the functions; they are "local" to the function. That means that the variable *x* is completely independent of the *x* in your main body of code. In fact, you might use the same variable name *x* hundreds of different times in your program listing, and Blitz keeps them all separate for you outside of the functions they live

in. You can, however, change this system, and tell Blitz to use the same variable both inside and outside the function. This variable is then called a "global" variable. The command for this is the "shared" command, and an example of making the *x* variable global is to declare it "shared" at the start of the function's code, like this:

```
Function DRAWMAP {tx,ty}
Shared x,y,map()
WLocate tx,ty
Nprint Map(x,y)

End function
```

Note that you can pass a complete array as a global variable by naming it and putting empty brackets after the variable name. This tells Blitz you want the whole array to be shared between the function and the rest of your code external to the function.

Without further ado, here's this

```
File: ACAR.bb
DEFTYPE .I
NoCli
Dim map,b(26,20)
Dim scan,b(26,20)
Dim scanvector,w(26,20)

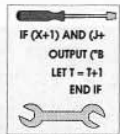
Screen 0,11
Window 0,0,10,640,240,51800,"",1,0
: create map 26*20 blocks, each block 24*12 pixels
For x=0 To 25
  For y=0 To 19
    If Rnd(0,8)/5 Then map(x,y)=1
    WBox x*24,y*12,x*24+23,y*12+11,map(x,y)
  Next
Next

.selectstart
WTitle "", "Select Starting block "
ClickMouse
x=NMouseX/24:y=NMouseY/12
If map(x,y)=1 Then DisplayBeep_0 : Goto selectstart
WBox x*24,y*12,x*24+23,y*12+11,3
fx=x:fy=y

.selectfinnish
WTitle "", "Select finishing block"
ClickMouse
x=NMouseX/24:y=NMouseY/12
If map(x,y)=1 OR (x=fx AND y=fy) Then DisplayBeep_0 : Goto selectfinnish
WBox x*24,y*12,x*24+23,y*12+11,3
fx=x:fy=y

WTitle "", "Looking at maze..."

Line:1 Column:39 Largest Mem (K):2167
```



PROGRAMMING

## Listing 1

```
DEFTYPE.1

NoCli

Dim map.b(26,20)
Dim scan.b(26,20)
Dim scanvector.w(26,20)

Screen 0,11
Window 0,0,10,640,240,$1800,"",1,0

; Create map 26*20 Blocks, each block 24*12 pixels
For x=0 To 25
  For y=0 To 19
    If RRnd(0,8)>5 Then map(x,y)=1
    WBox x*24,y*12,x*24+23,y*12+11,map(x,y)
  Next
Next

.selectstart
WTitle "","Select Starting block "
ClickMouse
x=WMouseX/24 : y=WMouseY/12
If map(x,y)=1 Then DisplayBeep_ : Goto selectstart
WBox x*24,y*12,x*24+23,y*12+11,3
sx=x : sy=y

.selectfinish
WTitle "","Select finishing block"
ClickMouse
x=WMouseX/24 : y=WMouseY/12
If map(x,y)=1 OR (x=sx AND y=sy) Then DisplayBeep_ : Goto selectfinish
WBox x*24,y*12,x*24+23,y*12+11,3
fx=x : fy=y

WTitle "","Looking at maze... "

For x=0 To 25 : For y=0 To 19 : scan(x,y)=100 : Next : Next
Statement SCAN {x,y}

  SHARED scan(),scanvector(),map()

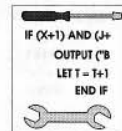
  ; checks adjacent four squares for better path

  c=scan(x,y)+1

  If y>0
    If map(x,y-1)=0
      If c<scan(x,y-1)
        scan(x,y-1)=c : scanvector(x,y-1)=x*100+y
        SCAN {x,y-1}
      End If
    End If
  End If

End If
```





PROGRAMMING

```
If y<19
  If map(x,y+1)=0
    If c<scan(x,y+1)
      scan(x,y+1)=c : scanvector(x,y+1)=x*100+y
      SCAN {x,y+1}
    End If
  End If
End If

If x>0
  If map(x-1,y)=0
    If c<scan(x-1,y)
      scan(x-1,y)=c : scanvector(x-1,y)=x*100+y
      SCAN {x-1,y}
    End If
  End If
End If

If x<25
  If map(x+1,y)=0
  If c<scan(x+1,y)
  scan(x+1,y)=c : scanvector(x+1,y)=x*100+y
  SCAN {x+1,y}
  End If
  End If
  End If

End Statement

scan(sx,sy)=0
SCAN {sx,sy}

cost=scan(fx,fy) : WTitle "", "Shortest Cost="+Str$(cost)

If cost<100
  x=fx : y=fy
  While x<>sx OR y<>sy

    WBox x*24,y*12,x*24+23,y*12+11,3
    WLocate x*24+4,y*12+3 : Print Str$(scan(x,y))

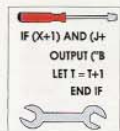
    v=scanvector(x,y)

    x=v/100 : y=v MOD 100

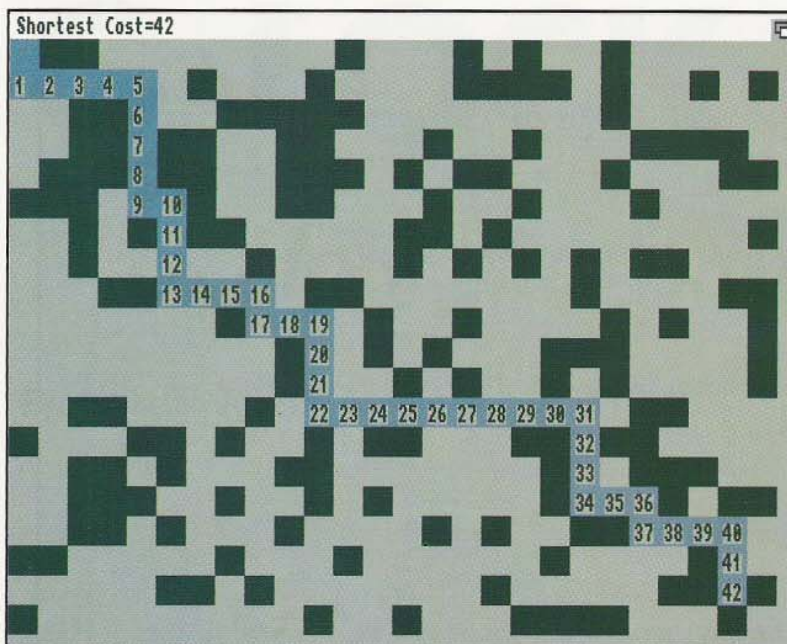
    Delay_ 15

  Wend
End If

While Joyb(0)<>2 : Delay_ 1 : Wend
End
```



**PROGRAMMING**



month's example program, ready for you to type in and run. (See Listing 1)

**Explanation**

The program starts by defining all variables as long types (4 byte integers). A NoCli command is issued to tell Blitz not to open its default window, since we will be opening our own Intuition screen and window.

Next, the three main data arrays are dimensioned. Map() holds the data for the maze (1 means wall, 0 means open space). Scan() and Scanvector() are going to be used to hold the scanned information about the paths through the maze - more about that later.

Now the program opens a hires 8 colour screen, and a full sized window to draw the maze graphics onto. A simple series of For...Next loops creates a basic maze. I know there are better ways to create a maze, but not in a few short lines of code, OK? A random series of blocks is scattered throughout the maze, a 1 being stored in the array to represent a block, and the maze is drawn as it is created. Selectstart

and selectfinish are two identical segments of code to prompt the user to select a block to start and finish any path through the maze. Some error checking makes sure two valid squares are selected.

Now we come to the business end of the code. The function Scan{x,y} recursively calls itself given a starting coordinate. The purpose of Scan{} is to create a map of valid movement vectors throughout the accessible areas of the maze, originating from the given starting location.

Starting at the first square, Scan{} checks each square around it, up, down, left and right, to see if the cost (in moves) to get there is lower than the cost already stored there. Each square Scan {} moves from the starting position, it adds one to its internal move counter, so that it always knows how many moves it took to get to any given square in the maze.

Scan(x,y) holds the cost in moves to go from the starting square to this square. ScanVector(x,y) holds the square from which Scan entered this square in its search, in the format x\*100+y

so that we can store two coordinates in the one variable. It's important to store the path or vector used to get to the square, since you don't only want to know the smallest amount of moves to get to the square, but also the path to follow (Electronic breadcrumbs in a virtual maze?).

You'll notice Scan() is initialised to 100 moves for each square, so the program can determine whether valid paths exist to certain squares. If the cost is 100, then Scan{} never made it to this square.

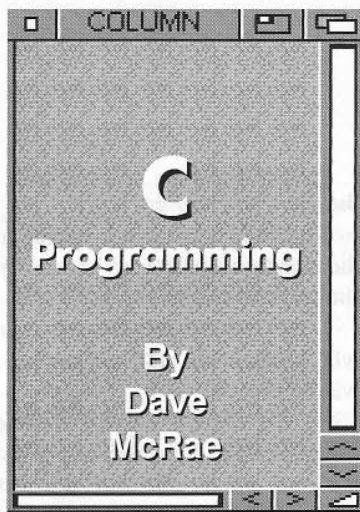
So the Scan{} function spreads out through the maze, checking all adjacent squares to see if the current path being followed can get to a given square in a shorter number of moves than is currently stored in the data arrays. As it checks each adjacent square, it calls itself again and again to check each of those adjacent squares.

This could go on for ever, were it not limited by the borders of the maze. If Scan{} strikes a border square, it doesn't continue to recurse in that direction.

After Scan{} has finished with the maze, the shortest point between the two squares can be looked up in the location of the ending square, and the shortest path followed backwards to the origin square using the information stored in Scanvector(). The final piece of code just displays this path and counts down the squares along the escape route. Hit the right mouse button to exit the program.

This concludes this month's tutorial. I hope the more experienced coders found it refreshing to have a tutorial aimed at their level. Next month I'll start the beginners' column, so if you didn't quite follow this month's example program, hang in there! Blitz on!





## Inter-Process Communications

Hi there, and welcome to another excursion into C programming on the Amiga. Last time we had a butcher's at tasks and how to display various parameters associated with them. This month it gets even more arcane!

Inter-Process Communications and, in particular, message passing are important aspects of the Amiga's operating system. Message ports are the rendezvous point for messages. Devices require a message port to inform a task when a command has completed. This could be a read or write to disk, for example. When the command has completed, the device posts a message to the message port for the task. Once the message has been received, it should be replied to by the task. This lets the device know the message has been received and that the device can now safely reuse the message.

OK, so what does this program do? Well first off, this is an unusual program in that it has dual personalities. It's a case of "Roses are red, violets are blue, I'm schizophrenic and so am I".

The first time you execute this program, it installs itself as a receiver and waits for a message. All invocations after this will take the argument supplied and send it to the receiver, where it will be printed. If the first four letters of the message spell "QUIT" (no quotes,

case is unimportant), the receiver will shut itself down. Typing "control c" (Ctrl key and c at the same time) in the receiver's window will also shut down the receiver.

As an example, double click on the IPC icon. This will open a small window on the Workbench and display the message "Message receiver ready". Now in the CLI, making sure to be in the same directory as IPC, type "ipc 'Some sort of message'" without the double quotes. The single quote is necessary, otherwise only the first word will be printed. Almost magically, the argument you supplied will appear in the receiver window. Amaze your friends, hours of enjoyment for the entire family. NOT!

I'm afraid this is a bit of a non-event in the "programming excellence" stakes. Its only real reason for existence is to demonstrate message ports and passing messages. And so on to the listing.

IPC was compiled with SAS/C version 6.5 using the following options:

```
STRINGMERGE
ERRORREXX
OPTIMIZE
LINK
SMALLCODE
SMALLDATA
VERBOSE
STRIPDEBUG
GLOBALSYMBOLTABLE=
GST:LIBS _GST
```

Lines 1-24 are just a comment header to describe what this code does and other relevant information.

Line 25 defines a macro called `__USE_SYSBASE`. This instructs the compiler to perform some voodoo when generating any calls to the Exec library. It speeds up the calling process on Amigas with

68020 and greater processors.

Lines 26-33 include the header files needed by this program to compile successfully. These header files include information on the structures internal to the Amiga operating system, as well as letting the compiler know any values that may be used.

Line 34 includes a separate prototypes file. This file contains forward declarations for the compiler and looks like this:

```
ULONG SetupMsg_Port(char *);
void RemoveMsg_Port(void);
void main(int, char **);
```

Lines 35-39 set up a version string which can be displayed using the `C:version` command. The header file `IPC_Rev.h` is generated by a program called 'bumprev' which is in the public domain.

`IPC_Rev.h` contains the following:

```
#define VERSION 1
#define REVISION 1
#define DATE "14.10.94"
#define VERS "IPC 1.1"
#define VSTRING "IPC 1.1 (14.10.94)r"
#define VERSTAG "\0$VER: IPC 1.1 (14.10.94)"
```

The IPC program uses only the `VERSTAG` macro.

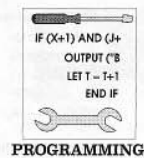
Lines 40-49 define the message structure and a couple of port names. The port names are used to find the port by its (hopefully) unique name.

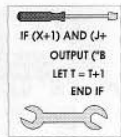
Lines 50-55 declare the message port and message structure.

Lines 56-59 define the library base used in the program. IPC only uses calls in the Exec library.

## The SetupMsg\_Port() routine

Lines 59-68 create a message





## PROGRAMMING

port with the name supplied as an argument to this routine. If the message port is created successfully, the signal bit of the port is returned as a mask, otherwise zero is returned.

### The RemoveMsg\_Port() routine

Line 76 declares a local variable. This is a pointer to the message structure and is used to empty any messages that have been queued to the port before the program deletes the port.

Lines 80-86 first check to make sure there actually is a port. If there is one, loop getting messages into the local variable until there are no messages left in the queue. If the message is of type NT\_MESSAGE, it also requires a ReplyMsg(). In the case of a transmitter, the message appearing at the port is the receiver replying to the message. The type of this message is NT\_REPLY\_MSG and doesn't need further action. When all outstanding messages have been removed from the port, we delete the port.

### The main() routine

Lines 92-94 are local variables used in the main() routine.

Lines 95-98 open exec.library.

Line 103 is where the program decides which personality to assume. They call the Exec function FindPort() with the name of the port you wish to find as the argument. If the port already exists, the result of this if test will be true, so the program sets itself up as a transmitter.

Lines 104-138 are the transmitter section of the code. At line 108 it allocates a message port. This will be used to receive a reply message from the receiver program.

Lines 112-119 allocate the message structure and initialise

some of the fields. These are the node type, NT\_MESSAGE, the length of the message structure and the address of the reply port. The program then checks if an argument was supplied and if so, sets the ipc\_Str field in the message structure to point to the argument. If an argument was not supplied, the ipc\_Str field is set to NULL. This is probably unnecessary, since the entire message structure is cleared during allocation, but it's here just to make it clear what's going on.

Lines 120-126 are the important bit. First they call Forbid(). This is an Exec call that turns off multitasking but unlike Disable(), which I used in my last article, Forbid() leaves interrupts intact. We next find the port again, (just in case it has gone missing by now) and send the message to the port. The program then Permit()s multitasking again. The reason for turning multitasking off during this is that there is a possibility that the port could be removed from the universe after the program's found it but before it sends the message. This would be bad, and would encourage an appearance by the Guru.

Line 131 puts the program to sleep and waits for a reply to come from the receiver program. When the receiver has finished with the message it will ReplyMsg() the message, which will send a message to the reply port and wake the program up.

Lines 132-133 delete the message port and free the memory allocated for the message. The program then falls through to line 168 where it calls exit() and ends the transmission section of the program.

Lines 139-167 are the receiver section of the code.

Line 142 sets up the receiver message port. This is the port where messages will arrive from

the transmit programs.

Line 143 displays a message in the window to let you know that the receiver is active.

Line 144 begins the loop, which will loop until the variable waiton is false.

Lines 145-149 are where the program waits for a message. First it checks to see if a message has arrived already. If not, it Wait()s on two signals, the signal for the port which indicates a message has arrived and a "control C" signal which says "the user just typed "Ctrl C" and probably wants to exit the program or something...". If the signal was a "control C" signal, it sets waiton to false. The continue statement then sends the program back to the beginning of the while loop, and a test of the waiton variable is made again. If the user typed "control C" the test will fail break the loop. Otherwise the program gets the message and goes to line 153.

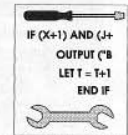
Lines 153-157 checks to see if the string in the message to print contains the word "QUIT". If it does, set the variable waiton to false and execute a continue instruction again, to return to the test at the beginning of the while loop.

Lines 158-163 print the string to the receiver window and reply to the message, letting the transmitter program know the receiver's finished with the message. It then continues back to the beginning of the while loop, and waits for the next message.

Lines 164-166 shut down the receiver. First they remove the message port, then display a message to let the user know the receiver is no longer active. They then fall through the bottom and exit the program.

That's it. Not particularly extraordinary, but it shows how to use message ports. Until next time, see you!

□



```
Line No.      Source
1      /*****
2      /*
3      /* $Filename:   Work:Dev/C-Saws/ACAR/IPC.c $
4      /*      $VER:    1.0 $
5      /*      $Date:    20 Oct 1994 $
6      /*
7      /*
8      /*-----*/
9      /*
10     /*                      Legal Stuff
11     /*
12     /* This code is placed in the public domain and may used by anyone for anything.
13     /* No warranty is issued or implied. This code may or may not do what it is
14     /* supposed to do and anyone using it does so at his/her own risk. So there...
15     /*-----*/
16     /* $Description: Example code to demonstrate Inter-Process Communications $
17     /*
18     /* $HISTORY:
19     /*
20     /* <1>    20 Oct 1994 18:03:46
21     /*      Initial Coding
22     /*
23     /* End of Work:Dev/C-Saws/ACAR/IPC.c header
24     /*****

25     #define _ _ USE_ SYSBASE

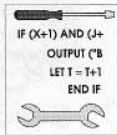
26     #include <proto/exec.h>
27     #include <exec/types.h>
28     #include <exec/memory.h>
29     #include <exec/ports.h>
30     #include <libraries/dos.h>
31     #include <stdio.h>
32     #include <stdlib.h>
33     #include <string.h>

34     #include "IPC_ Protos.h"

35     /*
36     *--- Set up version strings
37     */
38     #include "IPC_ Rev.h"
39     UBYTE vers[] = VERSTAG;

40     /*
41     *--- Set up our message port name and message structure
42     */
43     #define IPC_   RECV"IPC_ PORTRECV Port"/* Public port name */
44     #define IPC_   XMIT"IPC_ PORTXMIT Port"/* Public port name */

45     struct IPCMsg {
```



## PROGRAMMING

```
46     struct Messageipc_   Msg;
47     char                  *ipc_   Str; /* Pointer to string to display */
48 };

49 #define IPC _ MSGSIZE sizeof(struct IPCMsg)

50 /*
51  *--- Message and port declarations for IPC
52  */
53 struct MsgPort          *ipcport;
54 struct IPCMsg          *msg;

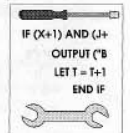
55 /*
56  *--- Define Library Base
57  */
58 extern struct ExecBase      *SysBase;

59 /*
60  *--- SetUpMsg _ Port() - Create our message port
61  */
62 ULONG SetUpMsg _ Port(char *portname)
63 {
64     if (ipcport = CreatePort(portname, 0))
65         return( (ULONG)(1L << ipcport->mp_   SigBit)
66     else
67         return(0);
68 } /* SetUpMsg _ Port() */

69 /*
70  *--- RemoveMsg _ Port() - Delete the port created in SetUpMsg _ Port().
71  *--- Also reply any messages queued at the port before actually
72  *--- deleting it.
73  */
74 void RemoveMsg _ Port(void)
75 {
76     struct IPCMsg      *m;

77 /*
78  *--- Clean up port first before deleting
79  */
80     if (ipcport) {
81         while (m = (struct IPCMsg *)GetMsg(ipcport))
82             if (m->ipc _ Msg.mm _ Node.ln _ Type == NT _ MESSAGE)
83                 ReplyMsg((struct Message *)m);

84         DeletePort(ipcport);
85     }
86 } /* RemoveMsg _ Port() */
```



```
87  /*
88  *--- Main routine
89  */
90  void main(int argc, char **argv)
91  {
92      struct MsgPort*port;
93      ULONG portsig;
94      BOOL waiton = TRUE;

95  /*
96  *--- Open Exec Library
97  */
98      SysBase = (struct ExecBase *)*((ULONG *)4);

99  /*
100  *--- Check to see if we are already here, if so send message in argv[1] else
101  *--- set up port and wait for incoming messages.
102  */
103      if (port = FindPort(IPC _ RECV _ PORT)) {

104  /*
105  *--- Port already exists. Make ourselves a transmitter and send message in argv[1]
106  *--- Set up a message port for us to receive a reply to our message from.
107  */
108          if (portsig = SetUpMsg _ Port(IPC _ XMIT _ PORT)) {

109  /*
110  *--- Allocate a message and fill in appropriate values
111  */
112          if (msg = (struct IPCMsg *) AllocMem(IPC _ MSGSIZE, MEMF _ PUBLIC|MEMF _
CLEAR)) {
113              msg->ipc_Msg.mn _ Node.ln _ Type = NT _ MESSAGE;      /* Make up message ... */
114              msg->ipc _ Msg.length = IPC _ MSGSIZE;              /* Including reply
port */
115              msg->ipc _ Msg.mn _ ReplyPort = ipcport;

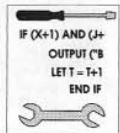
116              if (argc > 1)
117                  msg->ipc _ Str = argv[1];
118              else
119                  msg->ipc _ Str = NULL;

120  /*
121  *--- Turn off multitasking and send message.
122  */
123              Forbid();

124              if (port = FindPort(IPC_RECV _ PORT)) /* Make sure port is still there */
125                  PutMsg(port, (struct Message *)msg);

126              Permit();

127  /*
128  *--- Message sent, now wait for receiver program to reply our message
```



## PROGRAMMING

```
129  *--- so wee can safely deallocate memory etc.
130  */
131          Wait(portsig);
132
133          RemoveMsg _ Port();
134
135          FreeMem(msg, IPC _ MSGSIZE);
136      } else
137          puts("Could not allocate memory for message!");
138
139      } else {
140
141      /*
142      *--- Message receiver not present. Set up and wait for signal from transmitter
143      */
144
145          if (portsig = SetUpMsg_ Port(IPECV _ PORT)) {
146              puts("Message receiver ready");
147
148              while (waiton) {
149                  if ((msg = (struct IPCMsg *) GetMsg(ipcport)) == NULL) {
150                      if (Wait(portsig|SIGBREAKF _ CTRL _ C) == SIGBREAKF _ CTRL _ C)
151                          waiton = FALSE;
152                      continue;
153                  }
154
155                  if (strnicmp(msg->ipc _ Str, "QUIT", 4) == 0) {
156                      waiton = FALSE;
157                      ReplyMsg((struct Message *)msg);
158                      continue;
159                  }
160
161                  /*
162                  *--- Output string user typed then reply to the message.
163                  */
164
165                      puts(msg->ipc _ Str);
166                      ReplyMsg((struct Message *)msg);
167
168              }
169
170          RemoveMsg _ Port();
171          puts("Receiver shut down");
172
173      }
174
175      exit(0);
176
177  } /* main() */
```

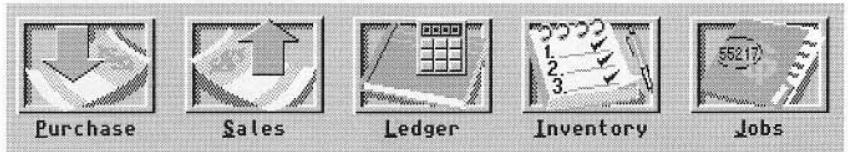




# Easy Ledgers 2

## *First Impressions*

By Andrew Farrell



EasyLedgers is not a new program. It originated with a company called Sybiz, who saw fit some time back to abandon the Amiga version in favour of their lucrative Macintosh and MS-DOS alternatives.

Sybiz once admitted the Amiga version was the best of the three, but the software needed updating to work reliably under Workbench 2.x. There was also some room for improvement. At a time when some Amiga software publishing concerns were moving the tent pegs in, GP-Software went on the acquisition trail and landed the rights to the program.

Greg Perry (yes, the GP in GP-Fax, GP-Term and GP-Software) wasted no time giving EasyLedgers a major overhaul. Small-Biz Software was formed and the new EasyLedgers Mark Two entered the fray of Amiga accounting packages. Since then, GP has teamed up with another famous pair of Amiga initials - JP. DirOpus - the file management utility found in more startup drawers across the world than its author Jonathan Potter cares to imagine, has joined the GP stable. All this bodes well for users of Ea-

syLedgers. Choosing an accounts package is not a decision to be taken lightly. If you're serious about your business, you'll know the value of financial information. Cash flow projections, profit and loss statements, liquidity ratios and accounts receivable summaries - the life blood of every good manager. The right accounts package should generate information to make managing your business easier. It should also be easy to use, and able to cope with the requirements of your business. In all these areas EasyLedgers scores reasonably well. But it's not perfect.

We use EasyLedgers here at Amiga Review, and have enjoyed several months of relatively trouble free operation. EasyLedgers lives up to its name. It sports a very easy to use interface that follows Commodore's style guidelines reasonably closely. You can use keyboard shortcuts, pull down menus or an assortment of buttons and gadgets. To run the program you'll need 2Mb of RAM and Workbench 2.x or better. You'll also need the program dongle - an electronic key - plugged into the joystick port. Without it, EasyLedgers will not run.

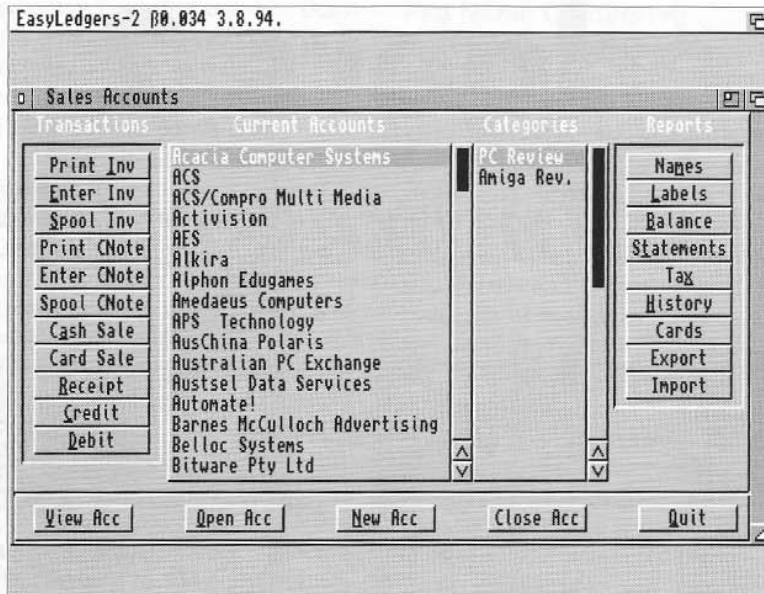
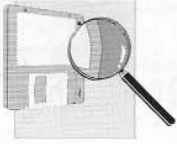
### Getting Started

Experimentation is the best teacher. With EasyLedgers you can have many different sets of accounts - for different businesses of course. So it's easy to set up a practise set to start tinkering. Each account has several levels of password protection so a person doing straight data entry can't cause major damage. What would have been nice is a few standard sets of Ledger accounts, set up for particular types of businesses.

EasyLedgers' manual assumes you don't know anything about accounting. Debits and Credits are explained, and everything involved in setting up the system is organised into step by step instructions.

The program is arranged into books - Sales, Inventory, Purchases, Ledger and Job Cards.

Getting information into these books is where EasyLedgers has been considerably improved. If you already have a database of clients, for example, it should be reasonably simple to get the information into EasyLedgers using the import option in the Sales book. The same function is available in



Inventory and Purchases. Getting a list of products or clients back out of EasyLedgers is just as simple.

### The Sales Book

EasyLedgers can track sales tax, discounts and sales according to staff and work with an open item or balance forward method of invoicing. Each account can also have one of three price scales, and you can store credit card details - fast becoming a more popular way of paying for small accounts. Invoices can be printed on the fly, or stored for printing as a batch. Non-inventory invoice lines can be entered, and invoices can be quickly generated from quotes prepared in the Jobs book. Separate shipping details are allowed, but these are not stored with each account.

I would like to see the option of printing statements that simply show an amount due and an amount overdue - not the usual 30, 60 and 90 days - which tend to give some customers the feeling you're happy to extend credit for up to 90 days. It would also be handy to create a to-do list from the receivables report to ensure slow payers are chased up.

A nice touch is the way accounts in most parts of the program can be organised into groups - although there doesn't seem to be any way of moving a client from one group to another. In the Sales Book you might divide up your sales according to each state, or perhaps by the source of the client or whether they are retail or wholesale. You decide on the category names. Within each group, the listing is automatically alphabetically sorted. There's no need to remember strange account codes for anything.

### Job Cards

Easyledgers can track work involving labour or a combination of labour and inventory. The Job Card section is normally only found on quite expensive accounts packages. If you're a tradesperson who prepares many quotes, or work in a service based industry, the Job Cards section could be just what you need. Job Card invoices may follow a letter style, a letter style with a detailed breakdown or a commercial style invoice with an itemised list of materials and breakdown of labour charges.

### Printers and Stationary

Although any Amiga Preferences printer is supported, EasyLedgers includes a special driver for LaserJet compatibles. This solves a slight quirk with the Commodore drivers' inability to deal with 132 column pages and condensed print. It works. We use it. Postscript was not as successful. Don't try it. If you prefer preprinted stationery to your own, EasyLedgers can take advantage of various Rediform invoices and statements. A form designer to make it possible to customise the layout is in the works.

### Wrap Up

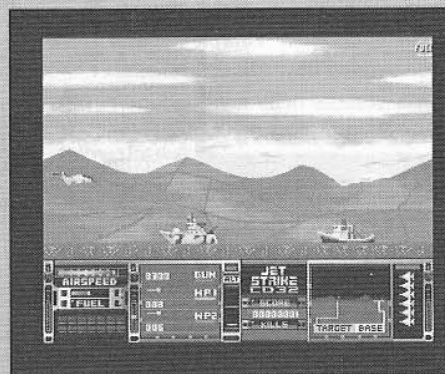
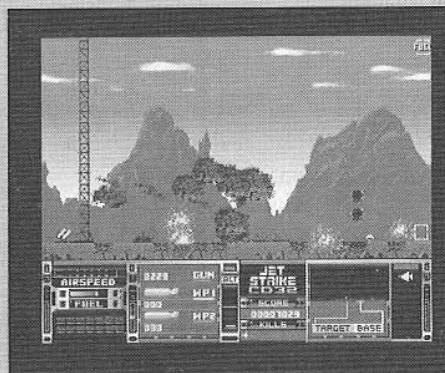
The manual is reasonably good, although there are no screen shots and the index is a little bit light on. Lots of handy tips and notes are included, which I found a big help in finding the best way to use the program. Like any accounts package, at the end of the day you have to be prepared to learn the jargon if you hope to get the most out of your software. Although the documentation starts off with a softly softly approach, before too long you're up to your eyeballs in credits, debits, journals and ledgers.

I have not yet found time to try out all of EasyLedgers. It is possible to run just part of the program, to just do accounts receivable for example - and this is what we're currently doing. Soon, we'll be switching over to using all of EasyLedgers' features and I'll report more on how well the package performed once we've had some more first hand experience.

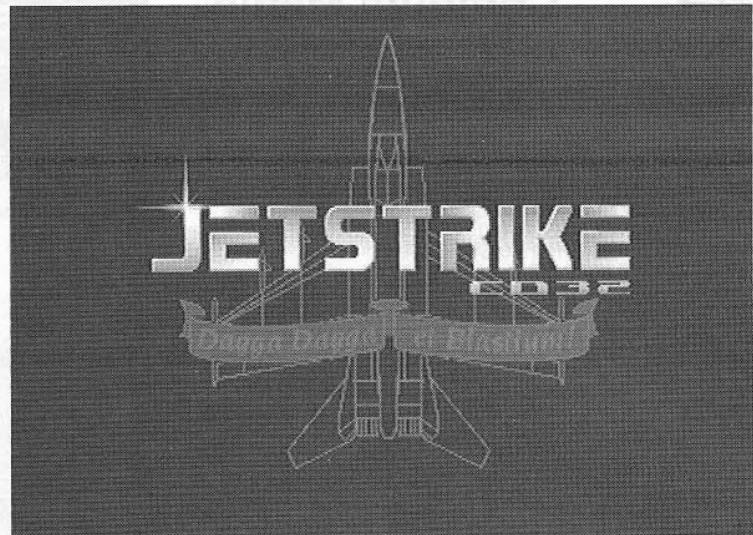
*For more information contact Small-Biz Software on (07) 491 9190 RRP is \$399.*







**Jet Strike**  
**ECS disk version,**  
**AGA disk version and**  
**CD32 version all:**  
**\$69.95**  
**Don Quixote**  
**(076) 391 578**



Jet Strike's story line is very silly indeed. The farcical secret agents versus bad guys plot sets the tone for the whole manual, which is well written and amusing - a change from the super-slim afterthoughts that come with most games these days.

You get tons of planes to choose from. When flying regular missions, you can pick from up to 39 aircraft in the disk versions of the game and even more on CD32; trainers, jet fighters, attack planes, historical planes from World Wars II and I, and even a fire-breathing dragon for when you're feeling silly (don't get excited - one hit and it's toast).

The planes all have noticeably different characteristics, both in flight and in weapon capabilities. To encourage you to fly the older and less powerful planes, you get score bonuses - you get a lot more points for finishing a mission with the Fokker triplane or the hang glider (!) than with the MiG-29 or F-16. You also get limited supplies of the funkier planes, and infinite stockpiles of the dodgy ones.

Jet Strike's control system is idiosyncratic. To make your plane rotate clockwise, you push the stick down, and vice versa. This means that when you're flying rightwards, up makes the plane go up and down makes it go down. But turn around, and the stick

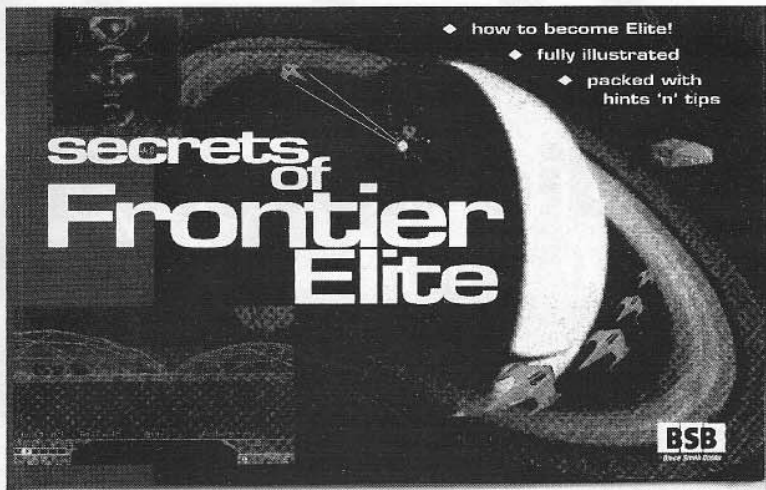
works the other way around. I had some difficulty getting my head around this concept, and in moments of stress tended to push the stick the wrong way and plough a furrow. There are plenty of other control options, which are easy to use from keyboard but a bit cramped on CD32 joystick.

One of the best things about Jet Strike is the Aerolympics, where you and your friends can take turns doing a variety of missions - pickups, dropoffs, bombing, flying through gates and so on - to see who's the top gun. Crash and you get no points.

Jet Strike's actual plane behaviour gives only a passing nod to realism; you can do the old S-shaped altitude gaining takeoff, you can land by cutting the throttle, floating towards the runway and kicking a little speed on just before you touch, and recovering from horrible stalls is usually just a matter of getting level and punching the throttle.

Despite the simplified handling, this is not an easy game. Landing consistently takes practice, hitting things with bombs is tricky and some of the missions are very demanding indeed. But don't let that hold you back - if you've got some time to devote to a game, this is a great one to go for.



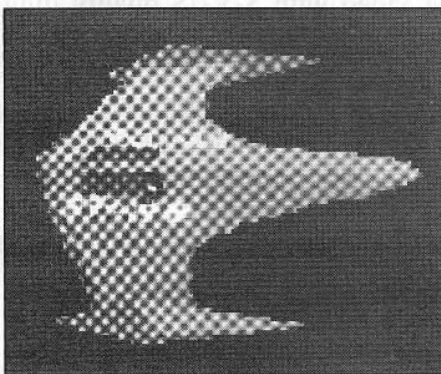


► This nifty little hint book comes from Bruce Smith Books, normally purveyors of less amusing books on programming and related Amiga system gubbins. This time it's the classic space epic, Frontier, that gets the treatment, from a 128 page half-A4 black and white book with loads of illustrations.

Secrets contains hints for everyone from beginners to experts. It takes you from the basics of landing, docking and working the game screens through combat, mining and trading all the way up to juicy stuff like how to get the Mirage, the most powerful ship in the game, and how to cheat for infinite money.

There's a well annotated list of all the ships

The book covers most aspects of Frontier, but it's not perfect. For



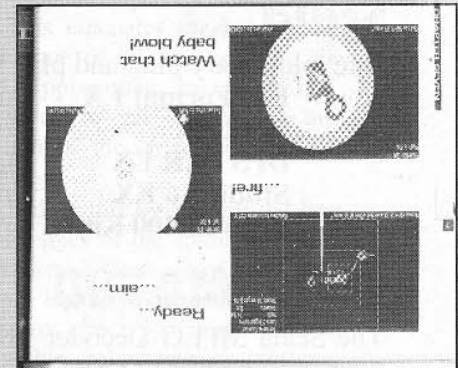
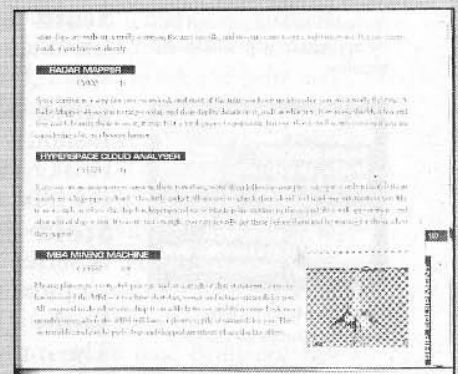
example, it describes the gigantic Panther transport ship as an easy target for pirates, and doesn't mention that you can easily make a Panther functionally indestructible by loading it with about a hundred shield generators and all other mod cons.

In this kit, a Panther can park outside a station, shoot it and let all the resulting police ships simply ram into it, for negligible damage; you can only die by ramming a planet.

Frontier, however, doesn't reward pilots of such tricked up Star Destroyers; they're too slow to do any of the missions.

The book also doesn't tell you about the more important military missions, except for passing references to nuking cities; it says that's spoil the surprise. It doesn't seem to care about spoiling the surprise of the Mirage, or the old 660 light year hyperspace bug, though.

But this is nitpicking. Overall, this is an excellent guide to getting the most out of the blockbusting sequel to Elite. Get it if you're a beginner; have a flip through first if you're an expert.



## Secrets of Frontier Elite Hintbook

**Distributor: Hotpoint**  
**Phone: (02) 634 6499.**  
**RRP: \$29.95.**

# SCALA

## The Multimedia Revolution



Many exciting wipes are included in MM300 and can be applied to pages, text and brushes.



The Edit Menu includes tools for structured drawing.

### Scala MM300 (Amiga)

Whether you require video titling, training, business presentations, interactive use or any multimedia combination, Scala MM300 is the only solution worth considering.

#### Scala Wipes

More than 80 amazing smooth and professional transitions.

#### Scala Sound

Enhance your presentations with voice-over, music and special sound effects.

#### Scala Shuffler

Instant viewing of your whole presentations. You can see up to 112 pages at one time. Simply shuffle them around with the mouse. You can even use the shuffler when loading files.

#### Scala Snapload

A series of advanced techniques make Scala load and display pictures and animations faster than any other package!

#### Scala Lingua

The multimedia language Lingua with its close link to AREXX puts the advanced control in the hands of the user.

\* Scala MM300 requires a minimum of 3MB RAM, more RAM and an accelerator recommended



Brushes can be cropped and resized freely.



With the optional Echo EE100 IR/LANC interface you have freedom to add titles and captions to your video creations.

### Scala EX

A revolutionary plug and play system for Scala MM300. EX's available include:

<b>File Format EX</b>	Import and export BMP, PCX, GIF, TIFF, YUVN, FLI, FLC & DataTypes
<b>VCR EX</b>	Control Panasonic AG5700/7330/7350, Sony U-Matic with RS-232 and more!
<b>DPS PAR EX</b>	Playback Full Motion Video from the DPS PAR system
<b>Studio 16 EX</b>	Control playback of 16 bit audio from within Scala presentations
<b>Echo EE100 Kit</b>	LANC and infrared control for easy editing and titling with Scala MM300

### Scala MD100

The Scala MPEG Decoder MD100 makes it quick and easy to add digital video (MPEG-1 standard) to your presentations. Scala MD100 makes the new compression technology for sound and motion picture information available on your Amiga. You can now replace analog video with S-VHS quality digital video. From the well known Scala HumanTouch interface you can easily access digital video.


#### The Scala MD100 package consists of:

An MPEG decoder expansion card for the Amiga 2000/3000/4000 capable of playing back MPEG-1 audio, video and system stream. The video module card has composite, Y/C and RGB output. A Scala EX software module controls all the functions of the card. With the Scala MPEG EX you can play MPEG video streams with digital sound from CD-ROM or hard drive with the functionality of a video recorder.

The Scala MPEG software encoder also creates MPEG-1 bitstreams from your animations and digitised images in any formats supported by Scala MM300 or the File Format EX.

*For any further information or current pricing and availability please contact your local Amiga dealer.*

Distributed in Australia by:

**Peripheral World** 

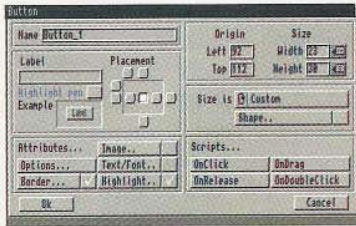
506 Dorset Road, Croydon, Victoria 3136, Australia  
Phone (03) 725 3233 Fax (03) 725 6766

# What have you done for your computer lately? How about making it smarter!

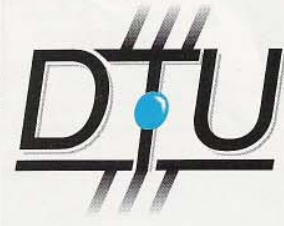
With the CanDo software authoring system, you can create your own purpose-designed software without resorting to hours of coding in a language you don't understand. That's because CanDo is object-based, and its underlying programming language is both extremely powerful and easy to learn (it's based on simple English!).

- Learn to program in minutes!
- Fastest, easiest way to create software.
- Achieve professional results with minimum effort.

A new battery of tutorials shows how. CanDo is the right tool for designing interactive kiosk applications, graphics-based training programs and multimedia presentations and more.

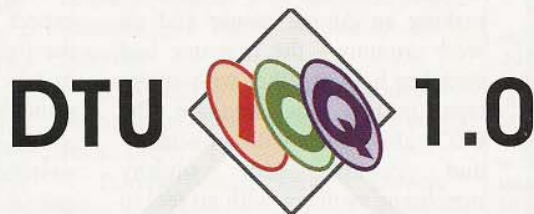
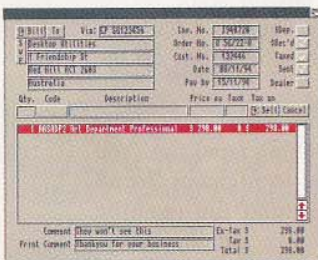


**CanDo 3.0: SmartSoftware**  
Now released from Inovatronics!

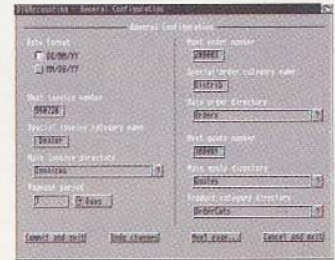


Also Now Available...  
**The New CanDo Debugger**

**Affordable invoicing, ordering, account handling - RRP \$99**



Write yourself an IOU -  
Get DTU-IOQ!



## Invoices

- DTU-IOQ provides for Bill to / Ship to addresses
- Point-and-click flagging of payments received
- Special check box for wholesale sales etc
- Sales tax support included
- Sent check box to indicate goods sent or service provided
- Automated data input using category files



## Queries and Reports

- Scan between any dates for items
- Use search patterns for selective listings of clients
- Flags let you list all invoices, or unpaid or paid ones or both
- Flags allow distinction between payments received and payments banked



## Orders

- DTU-IOQ supports point-and-click flagging of payments sent & presented
- Special check box for wholesale purchases etc.



## Stock Control

- Supports wholesale and retail price setting
- Supports user-defined price breaks based on quantity
- Built-in provision for sales tax
- Generates category files to help automate invoice data input



## Quotes

- Check box for quotes accepted
- Accepted quotes become invoices
- Sent check box to indicate the quote has been sent to the client

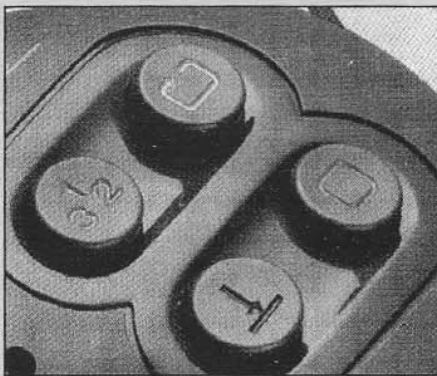
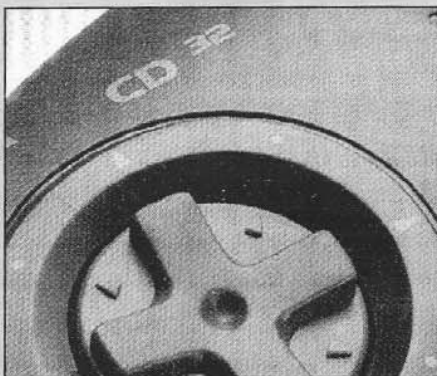


## Hot link to Contact

- Use DTU's personal contacts manager for instant insertion of address details

More Information → See your dealer or call:

Desktop Utilities, PO Box 3053, Manuka ACT 2603  
Tel (06) 239 6658 • Fax (06) 239 6619 • BBS (06) 239 6659



## Competition Pro Super CD32 Controller

**Contact: Unitech**  
**Phone: (02) 820 3555**  
**R.R.P: \$25**

# Competition Pro Super CD32 Controller

Commodore had a habit making groovy computers with lousy input devices. They had three goes at making an Amiga mouse and all were crummy - the first one had switches held together with sticky tape. In this great tradition, the CD32 also comes with a distinctly dud control pad; squishy membrane switches with no feel to speak of and, of course, that brilliant little rubber thing that sticks onto the thumb pad and falls off five minutes later.

To fill the gap, you can now get the Competition Pro Super CD32 Professional Control Pad, which grandiloquent name is attached to a souped up, solidier version of the Commodore pad.

The Competition Pro pad has the croissant shape of a Sega controller, and the same rubber membrane switches, which don't have the definite click of a microswitch but do have enough spring that you can feel when you've pushed them; they last pretty well, too. All the buttons are in the same places as the original, but they look different.

The thumb pad itself is much the same as the little rubber thing, only made of plastic. The four colour buttons are grey and all the same size, with their function

printed in the appropriate colour on top. The fast forward and rewind buttons are much as you'd expect them, but for some reason the pause/play button's been split in two; both sub-buttons do the same thing.

There are also six little switches for setting rapid fire. You can set autofire (continuous fire all the time) and turbo fire (autofire only when you've got the button down) independently for all four colour buttons and the forward/back buttons too.

There's also a slow motion switch, but this works by applying autofire to the pause button and hence doesn't work very well; you can't react any quicker because the machine's freezing and unfreezing continuously, and if the game you're playing use the pause key for something else (Jet Strike uses it for eject!) the option's not much use.

The Competition Pro pad feels genuinely good - not just better than the Commodore one. At only \$25 (about the same price as a replacement Commodore controller), it's a recommended buy. □





## COMSERV ELECTRONICS

Local supplier of  
Hardware, Software and  
Peripherals.

66 Aralla St Nightcliff

**D A R W I N**

**482500**

Facsimile 48 2511

Mobile:015229776

## Market Place

To advertise here contact  
Rachel Holthouse on  
(02) 879 7455  
or  
(02) 817 5849

## FELINE SOFTWARE

Virus-free Amiga Public Domain and Shareware  
Over 4000 disks including Fred Fish, 17 Bit,  
TBAG, Assassin Games, and our own quality  
collection. Just send 2 x blank disks & S.A.S.E  
& Amiga model for catalogue to:  
PO Box 1003, Dee Why, NSW, 2099

First-Class service: Member of the Public Domain Association of Australia



## XMAS SPECIALS !

AMIGA2000 from \$450  
AMIGA 2000, 52MbH \$750  
A2000 with MONITOR \$1000  
A2386 Bridgeboards (A2000) \$499  
CITIZEN GSX220 24 PIN PRINTER \$599

Also large range of Amiga  
software CD32 titles

Mail Orders • Master Card • Bank Card  
WELCOME

## House of Computers

45 Ryrie St GEELONG 3220  
Tel: (052) 242 722 Fax: (052) 242 720

*This space is  
yours for only*



## COMMODORE 64 SOFTWARE

Large range of disks for the C64  
Games, Utilities, Word Processors, Geos PD,  
Demos and more.

Write now for a Free Catalogue

**Brunswick Publications**

PO Box 745, Campsie NSW 2194

Ph: (02) 759 7343



## Amiganuts

PO Box 9001, Wilsonton, Toowoomba  
Queensland, Australia 4350  
Phone / Fax 076 - 331172

For all your Amiga Public Domain & Shareware programs.  
Send \$6.00 for our three disk catalogue, Mention this  
advertisement and we will include a FREE games disk.

IN STOCK NOW & FULLY GUARANTEED

## AMIGA 1200

With 40MB Harddisc \$999

Amiga 600 \$349

1084S Monitors \$Call

ACORN MultiScan Monitors \$749

Hi-Res Low-Radiation suit A1200/4000

USED AMIGAs 500s, 600s, 1200s

All Tested & Warranted

## Maxwell Computer Centre

-Australia's oldest AMIGA Dealer-

162-164 Nicholson Street Abbotsford Melbourne 3067

Ph: 419 6811 Fax: 419 0160

OPEN: Mon-Thu 8.30-5.30, Fri-7pm, Sat-5pm

## Code One

For all of the latest in...

Graphics Software • Games • Utilities

Business Software • Hardware

Scanners • Accessories • Digitisers

Printer Ribbons • Touch Screens

Mice • Programming Languages

Reference Books • Modems • C64

Public Domain • Deja Vu Software

What else do we offer?

- Friendly, reliable service
- Full backup and Support
- Latest software releases
- Competitive pricing
- After-hours sales and support
- Laser Printing
- Typesetting & Print Services

For a **FREE** catalogue detailing  
our products and services,  
simply call, write or fax.



PO Box 192,  
Katoomba NSW 2780  
Tel/Fax (047) 57 3982  
Mobile 018 670 874

## Memory & Disks

ex tax prices at September 1st

1Mb x 1 - 80ns	8.00	<b>PCMCIA Memory</b>
4 x 256 - 80ns	8.00	2Mb V2BAT SRAM 380.00
1Mb x 4 ZIP - 70	27.50	2Mb V2FLSH RAM 380.00
1Mb x 8 - 80	54.00	<b>SEAGATE 2.5" IDE</b>
4Mb x 8 - 80	198.00	128Mb 16ms 64K 340.00
		455Mb 16ms 128K 892.00
<b>64 PIN</b>		<b>SEAGATE 3.5" SCSI</b>
1Mb x 32 - 60GVP 300.00		1050 4ms 256K 1075.00
<b>72 PIN</b>		<b>EXT Floppy</b>
4Mb 1M x 32 - 70 225.00		Sony 880k 125.00
8Mb 2M x 32 - 70 420.00		
16Mb 4M x 32 - 70 745.00		

Please phone for the latest prices. Sales tax 21%  
Overnight delivery, credit cards welcome

## PELHAM PTY LTD

Tel (02) 980 6988 Fax (02) 980 6991  
1st Floor, 100 Yarrara Rd, Pennant Hills 2120  
PO Box 382, Pennant Hills 2120

## Amiga PD & Shareware

Why pay high prices for your Pd?  
We can supply you with the latest disks  
for only \$3.00 each, from a range  
of 1000's Games, Utilities,  
Aga, Graphics plus much more.  
\$5.00 for the four disk catalogue

## COMPUPAL

PO BOX 7014 Karingal Centre  
Victoria 3199  
Phone 03 789 1906

## Fat Agnus PD

24Bit Specialists

Now you can access more than

## 7000 DISKS!

17Bit, United PD, Fish, TBAG and many  
more. Heaps of 24Bit textures/pictures  
and objects for Imagine & Real3D.

Send \$5.00 for a 4 disk catalogue:

PO Box 296 Kalamunda 6076

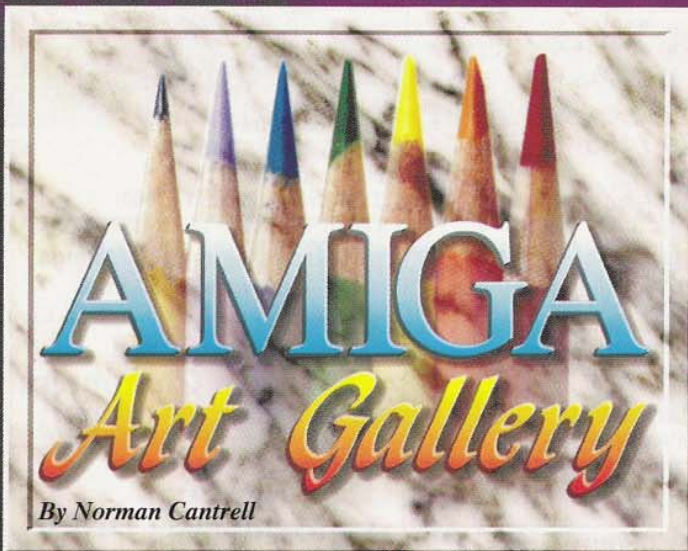
Western Australia

## Scarlet Amiga PD Software

PO BOX 458  
Doveton VIC 3177

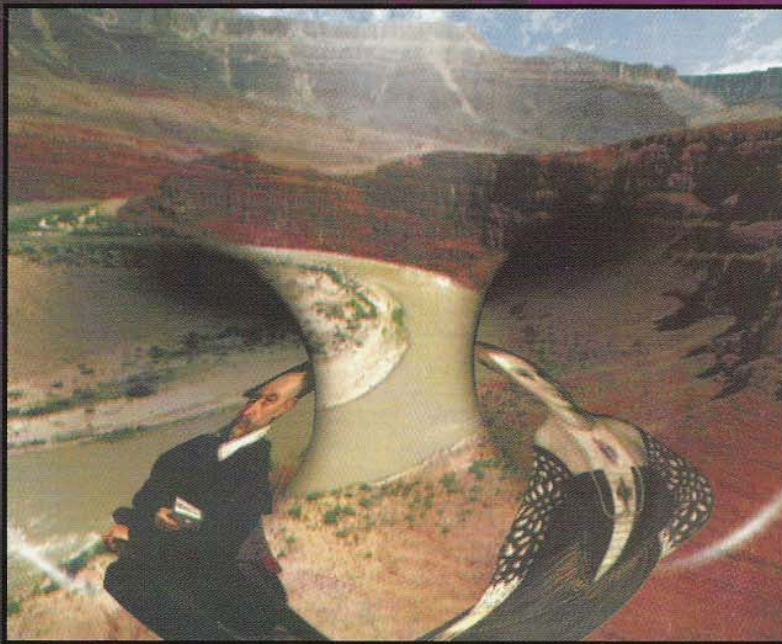
**(03) 793 3814**

Phone for  
Catalogue Disk  
Open 9am - 10pm

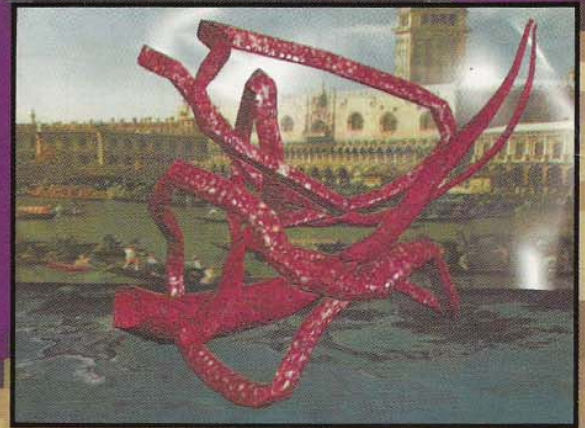


Welcome to the Amiga Art Gallery. This month sees more great Australian rendered and hand drawn art-works. The new year should bring great things for our Amigas! Happy holidays. So, if you have some graphic art to contribute, why not shoot us a disk - or modem the file to our simple BBS on (02) 816 4714.

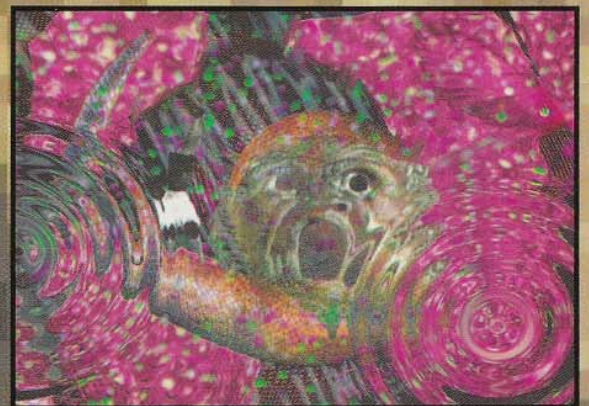
Please include your name, tel no and how you created the image, in a text file.



736 x 566, 24bit, Created with OpalPaint.  
By Paul Borderi.



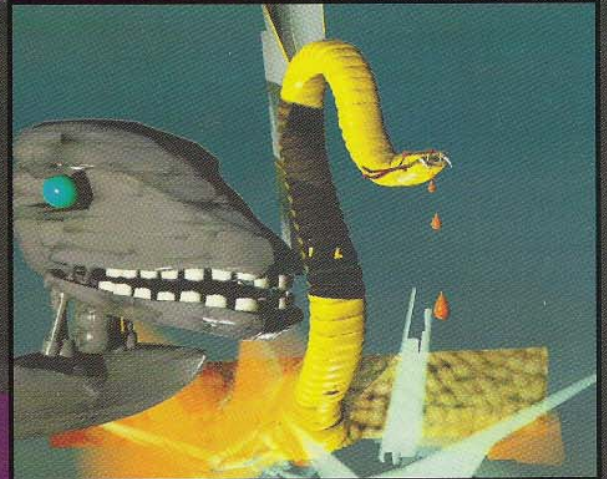
736 x 566, 24bit, Created with Imagine V3.  
By Paul Borderi.



736 x 566, 24bit, Created with Opal Paint.  
By Paul Borderi.



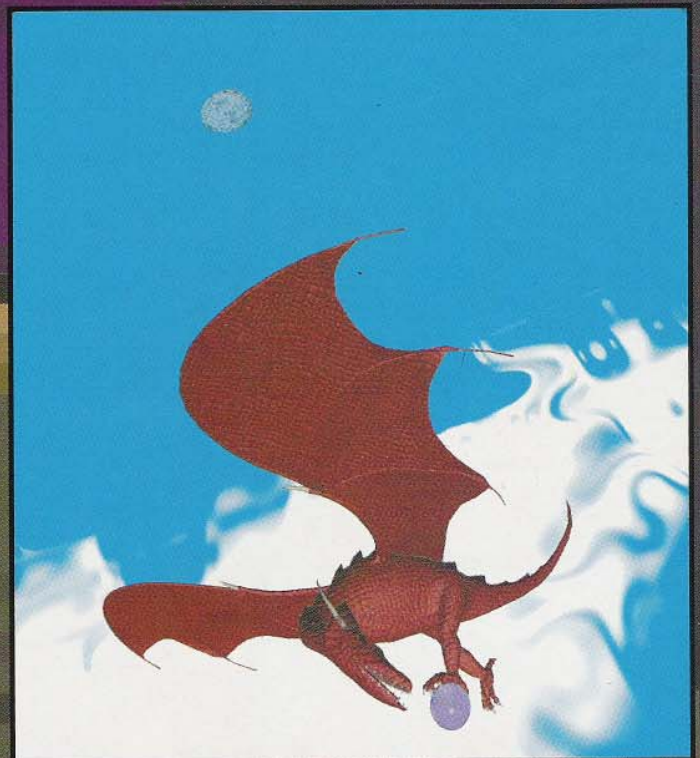
640 x 480, 24bit, Created with Imagine V3.  
By Andy Condliffe.



640 x 480, 24bit, Created with Imagine V3.  
By Andy Condliffe.



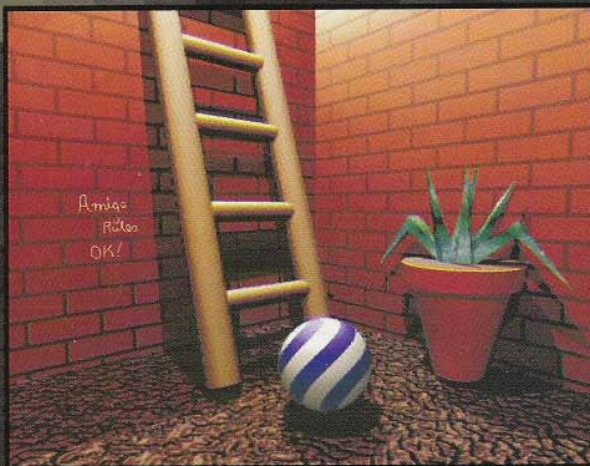
736 x 576, 24bit, Created with Imagine V3 and Opal Paint.  
By Manfred Thul.



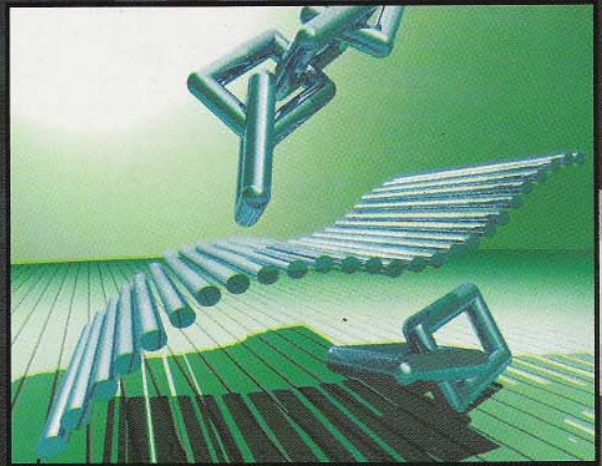
684 x 1024, 24bit, Created with Imagine V3.  
By Greg Searle.



640 x 512, 24bit, Created with Real 3D V1.3.  
By Sandra Caldwell.



640 x 512, 24bit, Created with Real 3D V1.3.  
By Sandra Caldwell.



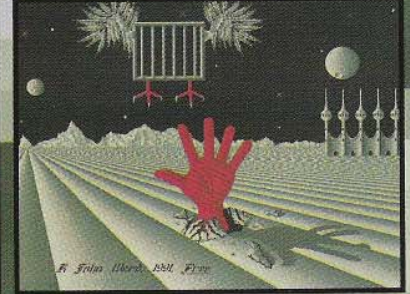
640 x 512, 24bit, Created with Real 3D V1.3.  
By Sandra Caldwell.

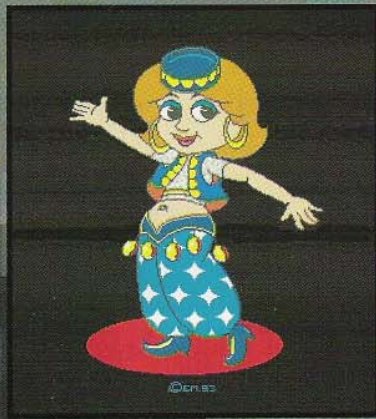


640 x 512, 24bit, Created with Real 3D V1.3.  
By Sandra Caldwell.

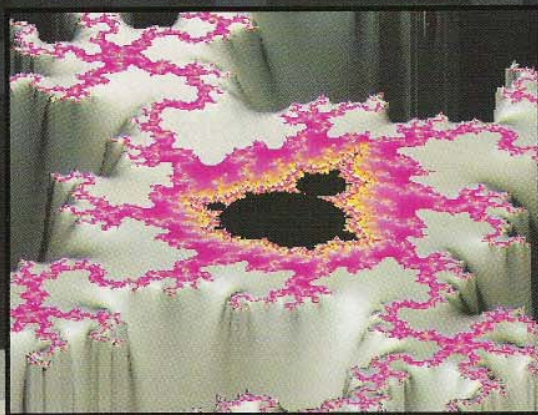


640 x 512, 16 colour, Hand drawn in DPaint  
By Robert John Ward.





320 x 256, 32colour, Hand drawn in DPaint  
By Eddie Van Der Madden.



320 x 512, 32colour, Created with Mandel Mountains  
By Leigh Murry.



736 x 572, 24Bit, Created with Imagine 3.  
By Manfred Thul.



736 x 576, 24bit, Created with Imagine 3, Image FX, VIDI 24.  
By Manfred Thul.



736 x 576, 24bit, Hand drawn in DPaint.  
By Yvonne Thul.

# EMERALD *Creative*

## New Digita Products!

### Wordworth 3.1

**\$CALL**

Wordworth just got faster, friendlier, and even more powerful. Join the 175,000 Wordworth users worldwide.

### Wordworth 3.1SE

**\$CALL**

Most of the power of Wordworth 3.1 but needs less memory and only one disk drive. No need to upgrade your hardware.

### Home Bundle

**\$99**

The perfect home office bundle. It includes Home Accounts, Day by Day, Mailshot Plus and DGCcalc all for the one low price.

### Datastore

**\$99**

This new database from Digita is set to be the most popular and the cheapest yet.

These full featured, professional three dimensional design and draughting tools are suitable for draughtsmen, designers, engineers and indeed any creative person wishing to make the most of their Amiga. Load and save AutoCAD DXF files. Upgrades from XCAD 2000 to XCAD 3000 are available. Please call for current upgrade pricing.



**XCAD 2000 OEM \$180.00**  
**XCAD 3000 \$450.00**



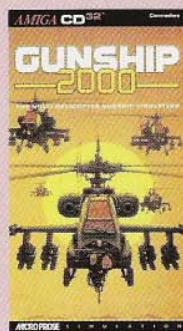
### CD Titles

3D ROM II (3D objects)	\$155.00
Aminet 4	\$ 45.00
AMOS PD CD	\$ 59.00
Avalon 3D Object CD	\$ 85.00
CD Sounds Terrific (2 discs)	\$ 59.00
ClipArt CD	\$ 45.00
Clipmaster Pro CD	\$ 99.00
Fonts CD	\$ 45.00
Fresh Fish (Jul/Aug '94)	\$ 45.00
Fresh Fish (Sep/Oct '94)	\$ 45.00
GoldFish (Apr '94 - 2 discs)	\$ 50.00
Insight Dinosaurs	\$ 99.00
Media Clips bundle	\$ 65.00
Meeting Pearls	\$ 45.00
Multimedia Toolkit	\$ 50.00
Network CD	\$ 45.00
Publishers Dream CD	\$ 65.00



### Hot CD<sup>32</sup> Titles

Banshee	\$ 69.00
Elite II	\$ 69.00
Heimdall 2	\$ 69.00
Lemmings	\$ 49.00
Microcosm	\$ 89.00
Nick Faldo's Golf	\$ 59.00
Seek & Destroy	\$ 69.00
Ultimate Body Blows	\$ 69.00



## Our Policies

**Free shipping on ALL orders within Australia!**

Please call for current rates to New Zealand. Orders received before 2pm shipped for next day delivery where available.

### Trading Hours:

8:30 am - 5:30 pm Monday - Friday  
10:00 am - 1:00 pm Saturday

### Postal Address:

P.O. Box 33  
Southland, Victoria 3192

### Street Address:

Shop 3 / 268 Balcombe Road  
Mentone, Victoria 3194

**Payments:** We accept Visa, Mastercard, Bankcard, Personal and Bank Cheques. Please make cheques payable to Emerald Creative. If paying by credit card include expiration date and billing address.

**Problems:** Faulty products will gladly be replaced or repaired within 30 days of purchase. Phone us and we will tell you what to do. We will refund if we cannot repair your faulty product. Retain your invoice as proof of purchase. E. & O. E.

**Customer Support:** For customer support and enquiries please call (03) 585 2055.

**Toll Free  
Order Hotline**

**1 800 639 273**

For Customer Service and Enquiries Please Call (03) 585 2055

Orders and Enquiries may be Faxed to (03) 585 1074

# EMERALD *Creative*

Vidi Amiga 12 is the ultimate low cost colour digitiser for the Amiga. There are no filters and no separate RGB splitter. Colour images can be captured in less than a second.



**\$199-**

Vidi Amiga (12) RT is a perfect multimedia video tool for A1200 users. Offering real-time colour image capture in all Amiga modes including 256 colours, Ham-8 and 24 bit.



**\$400-**

If you're looking for real-time, colour image capture and editing, then look no further. Vidi Amiga (24) RT offers you features and specification unmatched by any rival.



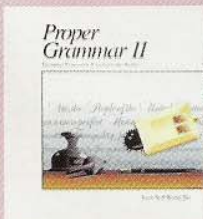
**\$550-**

*Includes power supply*

This month Emerald is offering a special bundle of Final Copy II and Proper Grammar II for a super low price. One of the finest word processing packages available, Final Copy II is still compatible with Workbench 1.3 and doesn't require a hard drive.



Proper Grammar II is a grammar correction system which detects 95% of all writing errors, making it a valuable proofreading tool.



**Only \$199**



Take advantage of this limited offer. We only have limited stocks of Imagine 3 OEM. What is the difference with the OEM version? Ours has no box! But with a saving of at least

\$299.00 who's complaining! This offer is just too good to miss! If you want to visualise, animate, walk through, or simply create for the sake of art no other package does so much for such a small price!

**Only \$300.00**

And as a special we are offering Imagine 3 OEM bundled with either Essence Volume I or Volume II. This library of algorithmic textures (defined in three dimensions) is the perfect compliment to Imagine. Included with Essence is Forge, a program which allows you to preview, edit, animate, and render the textures for use in any 3D program.

**Both for Only \$380**



After 2 years of constant development PageStream 3 is finally here. This is without doubt the most advanced publishing program you are likely to see on a personal computer. All the tools you need to start laying out pages are included with PageStream 3.0. Select from over 60 included fonts and a variety of clip art when designing your pages with PageStream 3.0. Latest patches and updates are available to all Emerald customers. Don't miss out on your copy of this great product.

**Only \$439.00**

**Toll Free  
Order Hotline**

**1 800 639 273**

For Customer Service and Enquiries Please Call (03) 585 2055

Orders and Enquiries may be Faxed to (03) 585 1074

# EMERALD Creative

## Utilities

Cygnus Ed Professional V3.5	\$109.00
Directory Opus	\$105.00
DirWork 2	\$ 85.00
Disk Expander	\$ 69.00
Final Copy II	\$139.00
Final Writer	\$170.00
Gigamem	\$110.00
Maxon Magic Screen Saver	\$ 69.00
OS 3.1 (Amiga 500/2000)	\$185.00
OS 3.1 (Amiga 3000)	\$210.00
OS 3.1 (Amiga 4000)	\$210.00
PC-Task 2.03	\$ 50.00
PC-Task 3	\$CALL
Pegger	\$115.00
Pegger II	\$125.00
Personal Fonts Maker	\$ 99.00
Personal Write 4	\$ 49.00
Plants for all Seasons	\$ 70.00
PowerCopy 3.03a	\$ 69.00
Proper Grammar II	\$ 89.00
ProText V6	\$269.00
Wordworth 3.0b	\$149.00
Wordworth 3.1	\$CALL
Wordworth 3.1SE	\$CALL
X-Copy Professional	\$ 50.00

## Business Software

Arena Accounts	\$200.00
Cashbook Combo	\$150.00
Datastore	\$ 99.00
Day By Day	\$ 69.00
DG Calc	\$ 99.00
Digit Home Bundle	\$ 99.00
Mail Shot Plus	\$ 99.00
Mini Office	\$ 99.00
Money Matters V3	\$ 99.00
NoteBook	\$ 69.00
Superbase Pro 4 V1.3	\$339.00
System 3	\$ 79.00
System 3E	\$ 99.00
TurboCalc v2.0	\$149.00

## Childrens & Educational

ADI English	\$ 49.00
ADI English 11-12	\$ 49.00
ADI English 12-13	\$ 49.00
ADI English 13-14	\$ 49.00
ADI French 11-12	\$ 49.00
ADI French 12-13	\$ 49.00
ADI French 13-14	\$ 49.00
ADI French 14-15	\$ 49.00
ADI JNR Counting 4-5	\$ 49.00
ADI JNR Counting 6-7	\$ 49.00
ADI JNR Reading 4-5	\$ 49.00
ADI JNR Reading 6-7	\$ 49.00
ADI Maths 11-12	\$ 49.00
ADI Maths 12-13	\$ 49.00
ADI Maths 13-14	\$ 49.00
ADI Maths 14-15	\$ 49.00
Answerback Fact500 Math	\$ 49.00

Answerback Fact500 Spelling	\$ 49.00
Answerback Junior	\$ 49.00
Answerback Senior (12+)	\$ 49.00
French Mistress	\$ 49.00
FunSchool 4 5-7	\$ 49.00
FunSchool 4 7-11	\$ 49.00
FunSchool 4 under 5	\$ 49.00
FunSchool Special: Merlin Math	\$ 49.00
FunSchool Special: Paint/Create	\$ 49.00
FunSchool Special: Spelling Fair	\$ 49.00
German Master	\$ 49.00
Italian Tutor	\$ 49.00
Kid Pix	\$ 59.00
Maths Adventure	\$ 49.00
Megamaths	\$ 49.00
Micro English	\$ 49.00
Micro French	\$ 49.00
Micro German	\$ 49.00
Micro Maths	\$ 49.00
Micro Science	\$ 49.00
Micro Spanish	\$ 49.00
Noddy's Big Adventure	\$ 59.00
Noddy's Playtime	\$ 59.00
Paint Pot 2	\$ 49.00
Primary Maths (3-12)	\$ 49.00
Reading/Writing (3+)	\$ 49.00
Spanish Tutor	\$ 49.00

## DTP & Design

PageStream V3	\$439.00
TypeSmith 2.0	\$169.00
TypeSmith 2.5	\$209.00
XCad 2000 OEM	\$180.00
XCad 3000	\$450.00

## Graphics & 3D

Adorage 2.0	\$195.00
Alternative Textures 3D	\$ 99.00
Alternative Textures 3D Vol 2	\$ 99.00
Brilliance 2	\$ 99.00
Clarissa	\$195.00
Deluxe Paint 4.5 AGA	\$139.00
Essence V2 Vol. 1	\$120.00
Essence V2 Vol. 2	\$120.00
Imagine 3 OEM	\$300.00
Lightwave 3D 3.5 PAL	\$899.00
Magic Lantern II	\$139.00
Map Studio (Vols. 1-6)	\$ 59.00
PhotoworX	\$150.00
Pixel 3D Pro	\$150.00
Real 3D Classic	\$150.00
Real 3D V2	\$799.00
Scenery Animator 4	\$ 89.00
Take 2 Animations	\$CALL
TV Paint 2.0 (Multi)	\$349.00

## Image Processing

Art Department Professional 2.5	\$260.00
ADPro: Abekas Driver	\$200.00
ADPro: Epson Scanner Software	\$195.00
ADPro: Lasergraphics Driver	\$CALL

ADPro: MorphPlus	\$230.00
ADPro: MultiFrame	\$125.00
ADPro: Polaroid Driver	\$200.00
ADPro: Pro Control	\$ 79.00
ADPro: Pro Conversion Pack	\$ 79.00
ADPro: Sharp JX 100 Driver	\$135.00
Image FX V1.5	\$429.00
Migraph OCR Software	\$ 99.00
True Print 24	\$ 89.00

## Multimedia

Helm	\$150.00
Montage 24	\$399.00
Scala Background Vol. 2	\$ 85.00
Scala Background Vol. 3	\$ 85.00
Scala Echo EE100	\$285.00
Scala File Format Pack	\$169.00
Scala Hometitler HT100	\$129.00
Scala MM300	\$440.00
Scala Sunrise EX	\$189.00
Scala VCR Pack	\$169.00
The Ginseng Collection	\$ 49.00

## Music

Bars & Pipes Professional	\$399.00
B&P: Creativity Kit	\$ 69.00
B&P: Internal Sounds	\$ 69.00
B&P: MultiMedia Kit	\$ 59.00
B&P: Music Box A	\$ 69.00
B&P: Music Box B	\$ 69.00
B&P: Pro Studio	\$ 69.00
B&P: Rules for Tools	\$ 72.00
Deluxe Music Construction Kit V2	\$149.00
One Stop Music Shop	\$CALL
Super Jam V1.1+	\$159.00
SynchPro	\$CALL
The Music Librarian	\$ 69.00
The PatchMeister	\$119.00
Triple Play Plus	\$CALL

## Programming

Amos 3D	\$ 65.00
Amos Professional	\$ 99.00
Amos Professional Compiler	\$ 70.00
Blitz Basic 2	\$CALL
CanDo 2.5	\$209.00
DevPac 3	\$120.00
DICE	\$CALL
Easy Amos	\$ 50.00
Hisoft Basic 2	\$130.00
Hisoft Extend	\$ 79.00
Hisoft Pascal	\$189.00

## Virtual Reality Labs

Distant Suns V5.0	\$ 84.00
Makepath	\$ 49.00
Terraform	\$ 49.00
Vista Pro Lite	\$ 69.00
Vista Pro V3	\$ 94.00
VRL Bundle	\$159.00

**Toll Free  
Order Hotline**

**1 800 639 273**







For Customer Service and Enquiries Please Call (03) 585 2055

Orders and Enquiries may be Faxed to (03) 585 1074



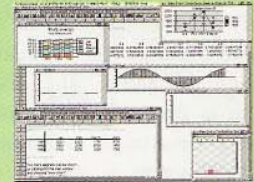
# EMERALD *Creative*

## Bruce Smith Books

	A1200 Insider Guide	\$39.00	
	A1200 Next Steps	\$39.00	
	Amiga Disks and Drives	\$39.00	
	Assembler Insider Guide	\$39.00	
	Mastering Amiga Amos	\$49.00	
	Mastering Amiga Arexx	\$49.00	
	Mastering Amiga Beginners	\$49.00	
	Mastering Amiga Dos 2 Vol 1	\$49.00	
	Mastering Amiga Dos 2 Vol 2	\$49.00	
	Mastering Amiga Dos 3 Ref A-Z	\$49.00	
	Mastering Amiga Dos 3 Tutorial	\$49.00	
	Mastering Amiga Printers	\$49.00	
	Workbench 3 A-Z Insider Guide	\$39.00	

TurboCalc 2.0 is the unique software solution that defines a new standard to spreadsheet application on the Commodore Amiga. Some features are:

- size of sheets limited only by memory
- more than 100 arithmetic and financial functions
- all common chart types supported
- more than 120 macro language instructions
- integrated database with numerous data definition and retrieval options
- can also load MS Excel, Professional Calc & CSV/ASCII
- automatic macro recording & tracing-mode
- works on all Amigas



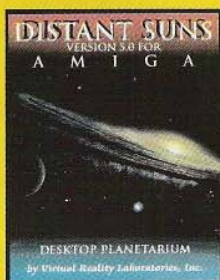
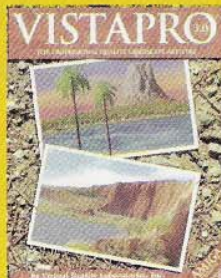
**Only \$149**

## Virtual Reality Laboratories Bundle

Check this out for an unbeatable bundle deal exclusive to Emerald!

Includes :

- Vista Pro 3
- Makepath
- Terraform
- Distant Suns 5



Create and explore new worlds and visit distant solar systems. These exciting packages would cost you over \$270.00 if you bought them separately.

**Now Only \$159-**

The most recent powerful applications for the Amiga require more memory than is available or possible to integrate. GigaMem is a program which simulates up to 1 Gigabyte of extra memory, which swaps onto any mass storage system (i.e. hard disk). This program requires an MMU.



**Only \$110**

EasyLedgers 2 is a fully integrated accounting system suitable for home or small business. It includes General Ledger, Debtors Ledger, Creditors Ledger, Stock Control and Price Book and full Job Costing for Estimation and Quotation. This is the only accounting package you will need.



**Only \$399**

**Toll Free  
Order Hotline**

**1 800 639 273**

For Customer Service and Enquiries Please Call (03) 585 2055

Orders and Enquiries may be Faxed to (03) 585 1074

# Subscriber Information

Australian Amiga Review changed publishers as of the July '94 edition, but our editorial team has remained much the same. The magazine is now 100% produced using the Amiga, and it is 16 pages bigger.

We've been working on ensuring subscribers receive their copies of the magazine before it goes on sale at newsagents. Unfortunately, we've faced two problems in achieving this. Firstly, Amiga Review didn't change hands

until late June, so the July edition was not printed until late July.

We've caught up by doing this combined November/December issue, so that problem's been overcome. We've also had some problems with our shipping arrangements. These have now changed and we hope the problem has been fixed. For more information call (02) 879 7455.

# FREE Reader Classifieds

For Reader Classifieds see pages 38-40

Yes, I want to take advantage of Andrew Farrell! Give me some FREE space in Amiga Review and fill it with the following words:

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Run until notified  Run once

Send to: Amiga Review Reader Classifieds,  
PO Box 288, Gladesville 2111 or  
Fax: (02) 879 4236

# A D I N D E X

Amadeus	48,49,53	Fonhof	36
Amiga Tech	10	House of Computers	87
Amiga Nuts	87	Hyman Auctioneer	35
Amuse	81	Romedia	81
Bruce Smith Books	57	Maxwell	87
Brunswick	87	Megadisc	36
Code One	87	MVB	6,7
Compuparts	11	Nat Tech	OBC
Compupal	87	Pelham	87
Computer Affair	IBC,25	Peripheral World	84
Computermagic	81	Quasar	28
Computer Man	9	Scarlet	87
Comserve	87	Shareware Access	59
Creations	37	SigmaCom	IFC,1,2
Desktop Utilities	85	Small Biz	41
DiskOTech	44	Software Buyers	
Don Quixote	52,56	Services	35
Emerald	92-95	Solutions Rendered	5
Fat Agnus PD	87	Sunrize	45
Feline Software	87	Unitech	32

# Contributors WANTED

Now that Amiga Review is bigger, we're looking for writers. Even if you've written for other Amiga magazines, we promise to give you a chance!

Plain English explanations, in an entertaining style, offering intelligent information on getting more out of the Amiga are preferred. Any wordprocessor format is acceptable, although straight ASCII is preferred. IFF images should include captions in a separate text file (or on the end of the main text file).

You can forward your contributions on disk or modem them to us by calling (02) 879 7455 first and then, once okayed, ringing back on our modem line on (02) 879 4236. Alternately, send them to The Editor, Amiga Review, PO Box 288, Gladesville 2111.

We do pay for contributions, starting from \$50 per 1,000 words up to \$150 for really good stuff. Please don't send your original disk, as we cannot guarantee safe return.

o o o

## NEXT MONTH:

- Workbench 3.1 reviewed
- HotPD returns

### LightWave 3D .. \$899

The ultimate 3D graphics & animation software. The power of Hollywood is in your hands!

Come in for a demonstration of this user friendly software.

#### LightWave Accessories

- \* Training Videos
- \* Add-On Software & Objects

### Video Hardware

Personal Animation Recorder & Video Capture Card .. \$Call  
 DPS Personal TBC II .. \$2399  
 DPS Personal V-Scope .. \$2099  
 Rack Mounting System .. \$Call  
 GVP TBC Plus .. \$1399  
 Neriki & E.D. Genlocks .. \$Call  
 Video Digitisers from .. \$199

### EMPLANT Mac Emulator

Emplant Emulator Card ... \$799  
 586DX Add-on Option ... \$279  
 AMIA Floppy Interface ... \$119

*\* Does not include Mac Roms or System 7*

### Maestro

#### Data/Fax Modems

144FM 14400 baud ... \$399  
 288FM 28800 baud ... \$550

*Modems include Cable & Software*

### BUREAU SERVICES

- \* Colour Image Scanning
- \* DeskTop Publishing
- \* 3D Rendering/Animations
- \* Amiga CD-ROM Mastering

We can produce 2D & 3D Graphics and Animations for your Desktop Video & Multi-Media requirements.

### Warp Engine Accelerator

68040 28Mhz SCSI-2 ... \$1740  
 68040 33Mhz SCSI-2 ... \$2240  
 68040 40Mhz SCSI-2 ... \$2499

*\* Amiga 3000 & 4000 Compatible!*

GVP 40Mhz 040 Card ... \$1999  
 GVP EGS Spectrum ... \$849  
 DKB4091 SCSI-II Card ... \$679  
 High Density FDD Ext ... \$299  
 SCSI Tape Drives from ... \$499



### New Products

Pegger v2.0 - JPEG Sys .. \$129  
 Magic Lanten v2.0 .. \$149  
 Easy Ledgers v2.0 .. \$399

A1200 DKB Accelerators  
 Cobra 40Mhz EC030 .. \$499  
 Mongoose 50Mhz 030 .. \$999

### Christmas Specials!

Don't miss our half page advertisement elsewhere in this issue of ACAR



337 Penshurst St  
 Willoughby 2068  
 Tel: 02-417-5155  
 Fax: 02-417-5542

Mon-Fri 9:30-18:00 Sat 9:30-13:00



DTP & Bureau Services



CD<sup>32</sup> Titles & Consoles



DeskTop Video & Graphics

At Computer Affair we don't only say we support the Amiga!



Amiga Computers & Access



Sales, Service & Support



Books, CDs & CD-ROMs

# AlfaData

Bringing you Affordable Quality Hardware

**NEW** Hardware Just In from ARCHOS France

## Affordable Quality Scanners



### AlfaScan800 \$349

Hi-Res 800 dpi 256 Grey scale hand-held. Includes OCR and Merigeit touchup Software

The ONLY Colour scanner under \$700



### AlfaColour

Quality 400 dpi, 256,000 full colour hand scanner. Includes OCR and Merigeit touchup software & printer pass through. **\$699**

### ATurbo 1220/28

**\$329**

Internal 32 bit RAM Accelerator Board with Motorola 68020 28Mhz processor Battery Backup clock, Maths Coprocessor & 72 pin memory socket

### Overdrive Combo CD + Zappo (CD32 CD ROM Drive)

**\$1199**

A PCMCIA & CD ROM Controller with a (Zappo CD32) CD ROM. With 270 EIDE WD High Speed Hard Drive, PCMCIA expansion for A1200/A600. Allows up to 3Mb/sec transfirs.

### Amiqwest

**\$229**

A removable 2.5" PCMCIA HD Controller for A1200/A600 Plug in & remove while Amiga is running - Contrioller Only

### Overdrive

**\$335**

PCMCIA HD Controller for A1200/A600. Takes HDs to 560Mb - Contrioller Only With 560 Mb IDE **\$929**

Available exclusively through Natdisc.

## Affordable SCSI

### OKTAGON2008

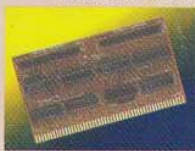
Zorro II, SCSI 2 card with room for 8Mb RAM **\$299**



See ACAR October for review.

## Affordable IDE Tandem

Internal CD ROM and IDE disk drive interface!



Suits the Amiga 2000 -A3000 & A 4000. Supports most IDE drives including IDE Sytquest removable media.

**\$169.**

## Affordable High Speed Ser & Par

### MULTIFACECARD III

An extra high speed parallel port and two high speed serial ports

**\$199**



### EMPLANT

Emplant Mac	\$799
Emplant PC	\$999
Emplant 486 PC upg'de	\$199
Emplant AMIA	\$199

## Affordable Mice

NEW Just in



Ball & Optical Pen Mouse

**\$59.95**

**\$65.95**

### MEGAMOUSE



High quality 400 d.p.i. optical-mechanical mouse.

**\$39.95**

### Alfa Optic



High quality 300 d.p.i. optical mouse. - includes mat.

**\$69.95**

## Affordable FDD

### Alfa Drive



High quality External 3.5" slimline Floppy Disk Drive

**\$169.95**

## CD ROM Drives



NEC 25 S' Spin \$399  
NEC 210 D' Spin \$699  
NEC 500 Triple Spin \$899  
3.1 Wb Upgrade full kit \$199

## Amiga Cards

### Accelerators GVP A1230 4/40 '030 Only \$1195

CSA 12 Gauge from \$850  
The ULTIMATE A1200 Speed up board. Choose from 33 or 50Mhz '030 processor plus Co-pro., RAM & SCSI.  
CSA Derringer '030 25mhz fro A500/A2000 **\$745**

A4000 GVP Exchange '040 40Mhz board **\$1300**

### SPECIAL

Commodore A4000 Exchange '040 40Mhz b'd Only **\$799**

## Audio Cards



Sunrise 1012	\$995
Sunrise 516	\$2295
GVP DSS	\$175
DSS GVP	\$395

## Monitors

Multiscan Monitor	\$399
Suit A1200 & A4000	
1084 S New	\$295
1942 multiscan	\$695

Once Only

**A500s for \$150**

We have a small number left BE QUICK.

Mail order: Natdisc. PO Box 343 Cronulla NSW 2230  
Information: (044) 738 862 For your nearest dealer -  
Orders Outside Sydney FREE Call: 008 622 389

Call our FREE Support BBS (02) 544 1428



Dealer enquiries-Welcome - Call 044 738 862