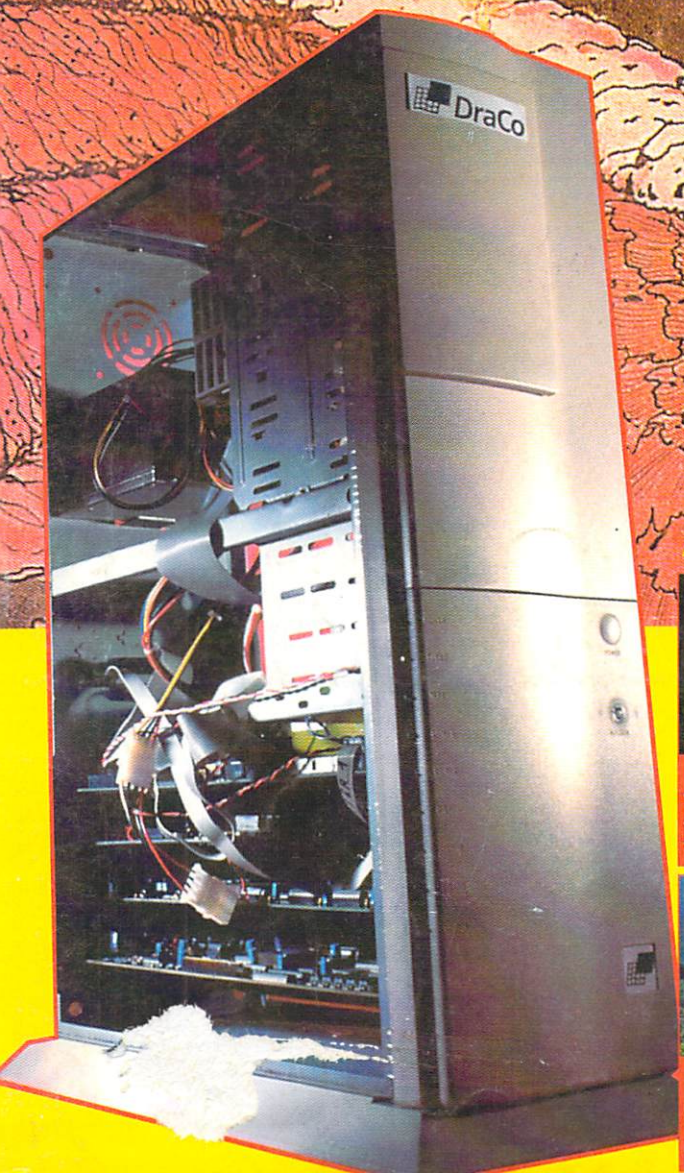
Issue 4

AMIGA COMPUTING

US EDITION

DRACO!

The Amiga at the heart of a monster



Also in this issue:

HOT SEAT
Tough questions for the UK Amiga Technologies team

NEW WORLD
Jason Compton reports on the state of the Amiga in the US

ZIP DRIVE
Check out the 100MB successor to the 1MB floppy drive

MULTIMEDIA
Does the Amiga still have a multimedia future? We find out

DOUBLER
Double the speed of your A4000-040 in one fell swoop

PLUS

- CD Write
- Mpeg card
- Wacom Artpad
- PD reviews

IDG MEDIA

Info 610-586-5703
Tech 610-586-5704
FAX 610-586-5706/6416
Hours: Mon-Fri 9 to 6
Sat 10 to 4 - Eastern

Orders 800-932-6442 Software Hut

CD-ROM/CDTV/CD-32 SALE

Disks will work w/CDTV, CD-32, A-570 and any Amiga model with a CD-ROM drive and appropriate driver software. Purchase 4, or more, & receive FREE SHIPPING.

3D Arena	$45.00
17 Bit 2 CD Collection	35.00
17 Bit Continuation CD	25.00
17 Bit Phase 4	25.00
17 Bit & LSD Comp. 1 or 2 (Spec)	25.00
A Long Hard Day on the Ranch	9.00
Advanced Military Systems	10.00
All Dogs Go to Heaven	9.00
American Heritage III. Dictionary	12.00
AmiNet Share 4	14.00
AmiNet Set 1	36.95
AmiNet (Specify 5 or 6)	17.00
AmiNet 7	19.00
AMOS PD Library	25.00
Assassins Games	28.00
Audio Plus	18.00
Barney Bear Goes to School	8.00
BCInet (Specify 1 or 2)	16.00
Beauty of Chaos Fractals	21.95
Bible & Religion	24.00
Case of the Cautios Condor	9.00
CD Boot	45.95
CD Caddy	6.00
CD PD 1	8.00
CD PD (Specify 2, 3 or 4)	24.00
CD Write	49.95
Cinderella: The Original Fairy Tale	9.00
Classic Board Games	10.00
Clip Art & Fonts	12.00
Clipart Warehouse	18.00
Clipart Warehouse 2 - TIFFs	18.00
Club Toaster	24.00
Cookbook Heaven 2	19.00
Curse of Ra - CDTV ONLY	9.00
DataMix	16.00
de Capo Mods & Sounds	27.00
Demo CD 1	24.00
Demo CD 2	24.00
Desktop Video	31.00
EuroScene	15.00
Eyes of the Eagle	9.00
Fantaseas	44.00
Fractal Pro Image Library	42.00
Fresh Fish (Specify 8 or 9)	18.00
Fresh Fish Vol 10	19.95
Fresh Fonts Vol 1	16.95
Fresh Fonts Vol 2	24.00
Frozen Fish 8/95	19.00
Fun School 3 - Ages 5 and under	10.00
Gateway	21.95
Game"s Delight	34.00
Games & Goodies	24.00
Garden Fax: Fruits, Vegs, Herbs	9.00
Garden Plants	9.00
Indoor Plants	9.00
Gardening Handbook	18.00
GIF Galaxy	26.00
GIF Gallery Vol 1	27.00
GIFs Galore	12.00
Gold Fish 1	19.95
Gold Fish 2	19.95
Graphics Plus	18.00
Grolier's Encyclopedia 2	24.95
Guiness Book of World Records	14.95
Gutenberg Project	19.00
Hottest 4	27.00
Hound of the Baskervilles	8.00
Illustrated Works of Shakespeare	14.00
Insight: Technology	14.95
Internet's Avalon CD-ROM	44.95
Light ROM (Specify 1 or 2)	34.00
Light Works	32.95
Logical - CDTV ONLY	8.00
Magic Illusions 3D Stereograms	19.00
Meeting Pearls (Specify 1 or 2)	13.95
Mega Media 2	18.00
Micro R&D Volume 1	25.00
Micro R&D Volume 2	40.00
Micro R&D Volume 3	19.00
Micro R&D Volume 4	17.00
Mind Run - CDTV ONLY	7.00
Moving Gives Me a Stomach Ache	9.00
Moving Textures 100	169.00
Mud Puddles	10.00
Multimedia Mega Bundle	24.00
Music MODs & Sound Samples	18.00
Network CD by Weird Science	25.00
Network Cable CD32 to Amiga	30.00
New Basics Electronic Cookbook	15.00
OnLine Library	26.00
Our Solar System	18.00
Paper Bag Princess	10.00
PhotoCD Manager CD32	33.95
Power Pinball	10.00
Pro Pics	34.00
Psycho Killer	8.00
Raffles	9.00
SFX Volume 1	29.00
Snoopy: Case of Missing Blanket	12.00
Solar Heaven v2	18.00
Sounds Terrific	25.00
Space & Astronomy	21.00
Strip Poker	14.00
Super Fonts	19.00
Syndesis 3D ROM v1	89.00
Syndesis 3D ROM v2	89.00
Ten on Ten (10 CDs)	59.00
Texture Gallery Vol 1	39.00
Texture Heaven	25.00
Texture Heaven 2	48.95
That's Games 1	25.00
That's Games 2	25.00
Thomas' Snowsuit	8.00
Time Table of History: 1991 Editions	
Business, Politics & Media	15.00
Science & Innovations	15.00
Town of Tunes	18.00
Town With No Name	9.00
Visions	24.95
Visual FX 1	109.00
Visual FX 2	109.00
Weird Science Clip Art	14.00
Weird Science Fonts	14.00
Weird Science Animations	25.00
Weird Science Demo Mania 1	20.00
Women In Motion	9.00
World Info	45.95
World of Clipart	19.00
World of GIF	22.00
Wrath of the Demon	10.00

CBM Service Manuals & Books

ARexx: Your Amiga's Turbo	$29.00
A1200 & CD-ROM Need to Know	29.95
Amiga Shoppers PD Directory	26.00
Internet, Modems & Comms	29.95
A1200 Insiders Guide	25.95
A1200 Insiders Guide, Next Steps	25.95
Amiga Disk Drives Insiders Guide	25.95
A to Z Workbench Insiders Guide	25.95
Assembler Insiders Guide	25.95
Mastering Amiga Program Secrets	31.95
Mastering AmigaDOS 3 Tutorial v1	31.95
Mastering AmigaDOS 3 Ref. v2	31.95
Mastering AmigaDOS Scripts	29.95
Mastering Amiga C	29.95
Mastering Amiga Beginners	29.95
Mastering Amiga Printers	29.95
Mastering Amiga System	34.95
Mastering Amiga ARexx	31.95
Mastering AmigaDOS 2 v2	29.95
Amiga User In'face & Style Guide	24.00
ROM Kernel: Devices 3rd Edition	27.00
ROM Kernel: Inc. & A'docs 3rd Ed.	36.00
ROM Kernel: Libraries 3rd Ed.	35.00
Exploring Lightwave 3D	52.99
Complete Post-Prod. w/B. Wilson	24.95
A500 Service Manual	19.95
A2000 Rev 4.x Service Manual	22.95
A2000 Rev 6.x Service Manual	22.95
A3000 Desktop Service Manual	24.95
A3000 Tower Service Manual	26.95
1084S D1 Service Manual	14.95
1950 Service MAnual	19.95
2091 Service MAnual	12.95
Prog's Guide to ARexx w/Disk	14.95
A2060/A2065/A2232 Serv. Man.	12.95
A590 HD Service Manual	14.95
CDTV Service Manual	14.95

CD-ROM Adults Only

69 XXX	$14.00
Adult Sensations XXX	14.00
American Girls (Spec 1 or 2)	29.00
Ameteur Models (Spec 1 or 2)	25.00
Asian Hot Pics	14.00
Bangkok Beauties	18.00
Biker Babes XXX	29.00
Body Language XXX	14.00
Busty Babes (Spec 2 or 3)	35.00
California Beauties	32.00
Celebrity Nudes	26.00
Cheeky Chics XXX	14.00
Climax XXX	14.00
Dirty Duo XXX Bundle	23.00
Electric Lust XXX	22.00
Elite Euro Models (Spec 1 or 2)	23.00
Elite USA Models (Spec 1 or 2)	23.00
Erotic Wave XXX	14.00
Erotik Gigant	24.00
Eruption XXX	14.00
Exotic Extasy XXX	14.00
Extreme Delight XXX	26.00
Extreme Hot Girls XXX	25.00
Extreme Hot Leather XXX	25.00
Fao XXX (Spec 1, 2 or 3)	26.00
Fao Gold XXX (Specify 1, 2 or 3)	35.00
Girls of Paradise XXX	14.00
Girls of Risque	26.00
High Volume Nudes	29.00
Hot Pics	24.00
Hot Pix 5 XXX	14.00
Hot Pics Vol Sex	14.00
Hot Super Models	23.00
Hooter Heaven XXX	26.00
Luscious Lips XXX	14.00
Moody Nights XXX	14.00
More Northern Delights	31.00
Naked Dragon XXX	22.00
Northern Delights	31.00
Party Time XXX	14.00
Pink Passion	26.00
Pixel Playmate XXX	22.00
Plain Brown Wrapper XXX	12.00
Pussy Galore XXX	14.00
Red Hot XXX	14.00
Sex & Games XXX (Spec 1, 2 or 3)	14.00
Sex Foot Slut Pack (6 CDs)	45.00
Sexual Debutantes	26.00
Sexual Fantasies XXX	12.00
Shaved Pink	26.00
Sheer Delight	12.00
Smooth Lips XXX	14.00
Spicy Pics XXX	14.00
Steamy Window XXX	22.00
Swimsuits 2 the MaXX	21.00
T&A 2 the MaXX	21.00
Tight Panties XXX	14.00
Top Heavy XXX	14.00
Tropical Heat XXX	14.00
Underground Adult Ref. Library	26.00
Venus Models w/VHS Tape	29.00
Wet Dreams XXX	14.00
White Underware XXX	14.00
Wild Wendy XXX	14.00
Your Privacy Assured	25.00

M-TEC Germany

MTec AT 500 No HD	$149.95
MTec AT 500 w/40Mb HD	229.95
MTec AT 500 130Mb HD	269.95
MTec AT 500 213Mb HD	299.95
MTec AT 500 540Mb HD	369.95
MTec AT 500 1.08Gig HD	499.95
2Mb RAM for AT 500 unit	88.00
8Mb RAM for AT 500 unit	298.00
MTec A500 2Mb RAM Module	139.95
MTec 68020I Turbo A500 0K	99.95
MTec T1230 42Mz CPU+FPU	244.95
1Mb RAM for T1230 or 68020I	49.95
4Mb RAM for T1230 or 68020I	165.00
8Mb RAM for MTEc T1230	319.00

Productivity - Utilities

Address It! 1.5	$26.95
AmigaVision Clips v1 SFX	8.95
AmigaVision Professional	49.95
AMOS Pro	45.00
Anim Workshop 2	74.95
ARexx Cookbook	49.95
Art Department Pro 2.5	149.00
Art Dept. Pro Conversion Pack	46.95
Artworks Clip Art Library	22.95
Batch Factory	49.00
Blitz Basic 2	**69.00**
Brilliance 2.0	**69.00**
Caligari 24	139.00
Checks & Balances	38.00
Cinema 4D	259.95
City Builder	84.95
Cross DOS v6	46.95
Cross MAC	79.00
Decision Maker	199.00
Deluxe Music Construction 2	99.95
Deluxe Paint 4 v4.5	79.95
Deluxe Paint 5	124.95
Desktop Magic	28.95
Desktop Magic Sound/Art Pack	14.95
Directory Opus 5	79.00
DirWork 2	69.95
Disk Expander	37.95
Disk Magic	56.95
DiskSalv 3.0	34.95
Distant Suns 5.0	54.95
Easy Ledger 2	179.95
Epson Scanner Driver Pack - ASDG	99.00
Epson Stylus Color Driver	34.95
Family Connections	34.00
Fiber Factory	79.95
Final Copy 2 Rel 2	59.95
Final Data	59.00
Final Writer Rel 4	119.95
Forge/Essence (Specify 1 or 2)	89.95
GameSmith Development System	99.95
Gigamem 3.x	58.95
Home Front	34.95
Homes	69.00
Humanoid (Specify LW or Imagine)	159.00
Hypercache Pro 2.0	48.95
Image F/X 2.1	**239.95**
Imagine 3.0	239.00
ImageMaster R/T	69.00
InfoNexus 2 w/DataNexus	79.95
Interior Construction	69.00
Interior design (Spec 1, 2, or 3)	38.00
Invoice It 1.2	34.95
Lightwave 4.0 Unbundled	789.00
Magic Lantern v2	94.00
Mavis Beacon Teaches Typing 2	34.00
MaxDOS 2.5	79.00
Morph Plus	114.95
Motion Master LW (Spec v1 or v2)	114.95
Multilayer (Spec ADPro or Image FX)	79.00
OctaMED Pro v6	59.95
On the Ball v1.5	35.00
Pegger 2.0	59.95
PC-Task v3.0	129.95
Personal Paint 6.1 w/Fonts Maker	79.95
Photogenics	109.95
Pixel 3D Pro 2.0	74.95
Power Macros/Lightwave	99.95
Pro Vector 3	179.00
Pro Textures Combo	39.95
Rollem	41.95
SAS/C 6.51	159.95
SCALA MM210	89.95
Scenery Animator 4.0	65.00
Snap Maps: Building Materials	124.95
Snap Maps: Fields & Foliage	124.95
Sparks	119.95
Studio Printer 2	99.95
Super HP-DJC 3 or HP-LJ4 (Spec)	37.95
Surface Pro	65.00
Swipes	89.95
Toaster 4.0 Upgrade - Floppies	494.95
Toaster 4.0 Upgrade - CD-ROM	524.95
Top Form	34.95
TurboCalc 2.0	39.95
TVText Pro	19.95
Twist 2 Relational Database	109.95
Upper Disk Tools	25.95
Virtual Reality Studio 2	69.95
Vista Pro 3.05	54.95
Wave Link	69.95
Wave Maker 2.0	189.00
World Construction Set	169.00

Don't see a title? Then please call for availability and pricing.

HOT & NEW

Games for Amiga and CD-32

Aladdin AGA	$32.95
ATR ECS/CD32	36.95
Beau Jolly Compilation ECS	39.95
Civilization AGA	24.95
Colonization	36.00
The Clue (CD-32)	22.95
Defender of the Crown 2	16.95
Dungeon Master 2 AGA	46.95
Elite 3 ECS/AGA/CD32 (Spec)	39.95
F1 World Champ Edition ECS	39.95
Gloom AGA/CD32 (Spec)	38.95
Jungle Strike	32.95
Kingpin ECS/CD32 (Spec)	22.95
Last Ninja 3 CD32	12.00
Lemmings, All New Worlds of - AGA	28.95
Lion King AGA	32.95
Lords of the Realm ECS/AGA (Spec)	47.95
Mavis Beacon Typing 2.0	29.95
Overlord ECS/AGA	39.95
Pinball Illusions AGA/CD32 (Spec)	39.95
Sensible World of Soccer	34.95
Shadow Fighter CD32	39.95
Sim Citu 2000 AGA	29.95
Sim City Classic ECS	22.95
Sim Classics ECS	49.95
Super Skidmarks ECS/CD32 (Spec)	39.95
Super Stardust AGA/CD32 (Spec)	34.95
Syndicate CD32	44.95
Viro Cops ECS/AGA (Spec)	33.00

Please call if you don't see what you want!

GVP DSS 8 Plus
3.0 Software Upgrade
Many NEW features & enhancements!
$29.95

Free Gift Pack

To the first 500 who call , or write, we are giving a package that includes F40 Pursuit, Mastertype, Infofile, Ports of Call, Who What When Where, & a Joystick. Please include $8.95 for shipping & handling. Sorry, no CODs on this.

Our Policies

No waiting for your orders to ship. Orders in by 2PM go out the same day. Second Day & Overnight shipping is available. International orders ship by Air Parcel Post or UPS Express. Domestic orders ship by UPS or Airborne Express.

• All orders are subject to credit card verification •

VISA MasterCard DISCOVER

Due to ad schedules, all prices are subject to change. We accept Visa, Master Card, American Express, & Discover with NO service charge. We also ship COD, accepting Cash, Certified Check, or Money Order. Minimum COD order is $50.00. Software and accessories shipping is $6.00. Hardware shipping is $6.00 for small items, $15.00 for Monitors. Call for larger items. COD add $5.00. Canadian, APO, & International orders are welcome. We will bill only for actual shipping charges & insurance at time of order. 15% re-stocking fee on all returns not exchanged for another item. Shipping charges are NOT refundable.

© Copyright 1995, tonyAntonuccio gFx, All Rights Reserved

Software Hut

Commodore AMIGA

Folcroft East Business Park 313 Henderson Dr Sharon Hill, PA 19079

Info 610-586-5703
Tech 610-586-5704
FAX 610-586-5706

Orders 800-93-AMIGA

Hours: Mon-Fri 9 to 6
Sat 10 to 4 - Eastern
FAX 610-586-6416

• Thank you for shopping with Software Hut. Because of limited ad space we can not advertise all of our huge inventory. Please call if you do not see what you need •

Modems, Networking, & InterNet

Amiga InterNet Software Package
Complete w/8 disk set to easily connect your Amiga to the InterNet. Includes FREE Amiga Mosaic software to access the World Wide Web. Requires Amiga DOS 2.04 or higher.
$27.95

Connect Your Amiga Book
Features full info on connecting your Amiga to networks and the InterNet
$27.95

Amiga InterNet Bundle
Buy BOTH the Book & InterNet Software
$49.95

Cardinal 2400 Baud External	$39.95
Sportster 14.4 FAX Modem	134.95
Supra 14.4 FAX Modem LC	129.95
Supra 28.8 FAX Modem	209.95
Sporster 28.8 FAX Modem	199.95
Cardinal 28.8 V.34 FAX Modem	189.00
JR Comm Terminal Software	5.00
Termite	42.00
GP Fax Software - Class 1 & 2	59.95
A2060 ArcNet Board	59.95
Hydra Amiganet Ethernet Card	269.00
Ariadne	299.00
Liana Network	89.95

A1200 Peripherals

PCMCIA Card 600/1200 2Mb	$135.00
PCMCIA Card 600/1200 4Mb	229.00
IDE Cable & Software - 600/1200	20.00
M1230XA Accelerators - All Configs	Call
Dataflyer XDS	84.95
Dataflyer SCSI+	94.95
Squirrel SCSI-2 PCMCIA Card	98.95

Hi-Density Dell Drive

Dell didn't buy Commodore but they did make 7500 hi-density external floppy drives. These are black, ultra-slimline (.5" high) and compact for easy placement anywhere. Full support for OS 2.1 and higher. No software patches necessary. 3 Month Warranty
$119.95

We also carry Power Computing's hi-density floppy drives from the UK. Compatible with OS 2.1 or higher.

1.76Mb XL Ext. Drive	$134.95
3.5Mb Super XL Ext. Drive	209.95
1.76Mb XL Int. for A4000	124.95
1.76Mb XL Int. for A2000	124.95

CBM Parts

A1000 Mouse from Commodore	$14.95
A1000 Internal Floppy Disk Drive	69.95
A1000 Case w/all shielding	19.95
A1000 Keyboard	49.95
A2000/A3000 Keyboard	79.95
AIR A2000 Internal Floppy Drive	69.95
A3000 Internal Floppy Drive	69.95
A3000 Daughterboard	59.95
A3000 Tower Power Supply	129.00
A600/1200 Internal Floppy Drive	69.95
A2000 Power Supply	109.00
Amiga Replacement Mouse	19.95
Mouse for CDTV, wired - black	16.95
CBM A3000 Power Supply	139.95
Bigfoot A40000 Pwr Sy 300 W	269.95
286 Bridgeboard PCB Only	69.95
CBM CDTV Control Pad	34.95
Casework 4000 (Spec Top or Bot.)	19.95

Monitor, CPU & Motherboard Buyout

Electrohome C1440 Monitor Multiscan - NEW	$489.00
1950 - Refurbished	299.95
1960 - Refurbished	339.95
A2000 Rev 4.x Motherboard	189.00
A3000 16Mz PCB w/1Mb	319.95
A3000 030/25Mz/1Mb Desktop PCB	378.95
A3000 030/25Mz/1Mb Tower PCB	479.95
A3000 Daughterboard	59.95
A500 Rev 5 PCB	109.95
A500 Rev 6a PCB	129.95
A500 Computer System NEW	219.95
A3000 Tower Power Supply	129.00
A2000 Bigfoot 300W P.S.	149.00
A3000 Tower System 25Mz/5Mb RAM 210Mb HD	*1199.00*

AMIGA Custom Chips

1Mb Agnus 8372A	$39.95
Super Denise 8373	34.95
CIA 8520 Chip	14.95
Gary 5719 Chip	13.95
Paula or Denise Chip	16.95
Lisa IC	44.95
Alice IC	44.95
Buster 5721 IC	29.95
Eproms 2630 Rev 7	36.95
Eproms 2091 Rev 7	34.95
1.3 ROM Chip	13.95
2.04 ROM Chip	29.95
2.05 ROM Chip	34.95
W. D. SCSI Chip Rev 8A	35.00
68000 CPU	16.95
CIA 8520 Surf. Mount Chip	25.00
Super Buster Rev 11	58.95
Amber IC	44.95
Ramsey Rev 7	49.95
Fat Gary IC	49.95
Gary Surface Mount	42.95
Paula Surface Mount	42.95
Super Dmac Rev 4	54.95
Bridgette	38.95
Video DAC	46.95

Advanced Amiga Analyzer

An inexpensive hardware & software diagnostic tool for end users and service centers alike. Plugs into your Amiga 500, 1000, 600, 1200, 2000, or 3000 and will tell you what part, or parts, you need. Eliminate costly service center visits. Detects 85% of all problems on the Amiga, including disk drive problems.
$69.95

Special this month:
Purchase your choice of Service Manual for the A500, A2000, A3000, A3000 Tower for only $12.95 with your purchase of the Advanced Amiga Analyzer.

CD-ROM

Hitachi CDR-1750S CD-ROM
- External w/SCSI pass-thru
- Single Speed, 320Ms Access Time
- 150Kb/sec, 64Kb Buffer
- ISO9660, Single-Session Photo-CD
- Variable Audio Jack, 1 YearW'ty

$89.95

NEC CDR-210P CD-ROM
- ISO9660, Multi-Session Photo-CD
- SCSI • Double Speed • Caddyless
- 1 Yaer Warranty

Internal model
$149.95
External model
$199.95

Sanyo CRD-254S Quad Speed CD-ROM Drive
- Quad Speed (4X), 600Kb/Sec Access
- 120Ms Random Seek • 256K Buffer
- SCSI-2 • 1 Year Warranty

Internal model
$239.00
External model
$309.00

ASIM CDFS CD-ROM Driver v3.x comes w/Fish Market CD
$64.95

CD32 Products

Again available NEW, boxed CD-32s w/90 Day Warranty
$279.95

SX-1 Exp. Module by Paravision	$239.95
SX-1 Keyboard	44.95
Networking Cable for CD-32	55.00
1Mb RAM	49.95
4Mb RAM	165.00
8Mb RAM	319.00
40Mb Hard Drive	149.00
170Mb Hard Drive	189.00
240Mb Hard Drive	269.00
350Mb Hard Drive	349.00
Big Foot CD32 Power Supply	79.95

A500 Peripherals

BigFoot 200W P.S.-A500-600-1200	$84.95
Commodore A500 Power Supply	49.95
A500 Case complete w/shielding	17.95
A500 Internal Replacement Drive	44.95
A500 Keyboard	44.95
AIR External Floppy Drive	89.00
A501 RAM Expansion Board	33.95

Warp Engine

This high end accelerator for the A3000 & A4000 features:
- *Motorola 68040 CPU*
- *32-bit RAM up to 128Mbs*
- *SCSI-2 Controller*

A4028 28Mz w/o CPU	$799.00
A4028 28Mz w/CPU	979.00
A4033 33Mz w/CPU	1149.00
A4040 40Mz w/CPU	1299.00
A3028 28Mz w/CPU	1019.00
A3033 33Mz w/CPU	1199.00
A3040 40Mz w/CPU	1399.00

2.1 & 3.1 OS

From Village Tronic, of Germany, we have the official 3.1 kits! Each kit comes complete w/Manuals, Disks & ROM(s).

AS320 3.1 Kit for the A500, A2000, & A2500
$129.95

AS330 3.1 Kit for all A3000s
$144.95

AS340 3.1 Kit for all A4000s
$144.95

AS312 3.1 Kit for all A1200s
$144.95

AS306 3.1 Kit for all A600s
$129.95

3.1 ROM for A500, A600, A2000 (Specify)	$69.95
3.1 ROM set for A3000, A4000, A1200 (Specify)	89.95
3.1 Manuals & Disks (no ROM)	69.95
AS216 2.1 Kit from Commodore	56.95
AS216 2.1 Kit w/2.04 ROM	86.95
AS217 ARexx/DOS Enhancer	14.95
Multi-Start 2 v6A 500/600/2000	34.00

Joysticks & Mice

Suncom (Spec TAC 3 or TAC-30)	$12.95
CBM CD-32 Controller	12.95
Competition Pro CD-32 Controller	24.95
The Bug	18.00
Python	17.95
Port Ref	19.95
Ergo Stick	12.95
Gravis Clear Switch Stick	39.95
Swifty 3 Button Mouse	27.95
Alfa Data Mega Mouse, 400 DPI	26.95
Alfa Data Crystal Trackball	26.95

Power Supplies & Expansion Boards

A2000 300W Power Supply	$149.00
A3000T Fan Assembly	39.95
Emplant Basic	269.00
Emplant Deluxe	359.95
AMIA Interface	55.00
E586DX Module for Emplant	119.95
Multiface III I/O Extender	99.00
Cyberstorm 060/50Mz	1289.00
Cyberstorm Fast SCSI-2 Controller	249.00
Cyberstorm I/O Module	549.00
Megalosound	49.95
Pro Midi	42.95

TekMagic

TekMagic (the new GVP) now suppliies these high quality products. TekMagic's designers are formerly from GVP. Combo boards feature sockets to hold 4 GVP SIMM 32s & 4 standard SIMMS.

Guru ROM v6	$71.95
4008 SCSI-2 Controller	159.95
4008 SCSI-2 w/127Mb Quantum	269.95
4008 SCSI-2 w/540Mb Quantum	399.95
I/O Extender	119.00
A2000 060/50 Combo	1459.00
A2000 040/33 Combo	979.00
A2000 040/40 Combo	1179.00
4Mb SIMM 32 60Ns	209.00
16Mb SIMM 32 60Ns	799.00

Golden Image

JS-105-1M 400DPI Handscanner w/64 grayscale + MiGraph Touch-Up software
$109.95
with OCR software: ***$149.95***

GI-6000N 3 Button Optical Mouse for all Amiga computers. Fully optical, ultra high-resolution. No ball to clean or replace. Includes Mouse Pad.
$23.95

JP-100 Pen Mouse for all Amiga computers. Fast, accurate and precise movement. Excellent for the graphics professional. Affordable for every Amiga user.
$19.95

VILLAGE TRONIC

Picasso 2 Board w/2Mb - The best 24-bit graphics board for the Amiga 2000, 3000, and 4000 is now back in stock! - NEW LOW PRICE: $399.95

MAin Actor Professional	$79.95
Main Actor Broadcast	269.95
Pablo	179.95

Video Products

Cybervision 64 Z3 4Mb	$649.00
All Noahji's Products	Call
DCTV	299.00
Personal Anim. Recorder, Amiga	**Call**
Personal TBC 4	829.00
RocGen Plus Genlock	199.00
SuperGen SX Studio	729.00
Vidi Amiga 12	119.00
Vidi Amiga 12 RT	249.00
Vidi Amiga 24 RT	369.00

Hard Drives

We carry a full line of 2.5" and 3.5" Hard Drives from Conner, Quantum, Seagate, Micropolis, and Maxtor. Call for pricing.

WildFire 060 50Mz for the A2000 Introductory Price: $1539.00

Megachip A500/2000	$209.95
2632 RAM Board 0K for 2630	189.00
Cobra 1240 28Mz RC CPU	139.95
Cobra 1240 40Mz EC CPU	249.00
Mongoose 50Mz RC CPU+FPU	359.95
Video Tape Backup	89.95
The Clock A1200	17.95
3128 RAM Board A3/4000 0K	249.00
Ferret SCSI-2 Cobra/Mongoose	89.95
Kwikstart 2 A1000	54.95
1202 No FPU 0K	99.95
FPU and RAM prices	Call

Contents

SYSTEM

The essential guide to Amiga gaming

System On-line 64
We bring you up to date with all the recent goings on in the Amiga games world

Preview: Virtual Karting 66
We check out life in the fast lane with OTM's pacey driving game

Small tips 72
We solve all your gaming problems with a selection of hints and tips

Preview: Odyssey 74
Audiogenic take a departure from their usual sports sims and try their hand at platformers

Preview: Leading Lap 80
Racing mania again this month with Kellion's forthcoming polygon racer

Preview: Citadel 81
Tina Hackett reveals yet another Doom clone in the pipeline – this time from Poland

Game Reviews

Gloom 68

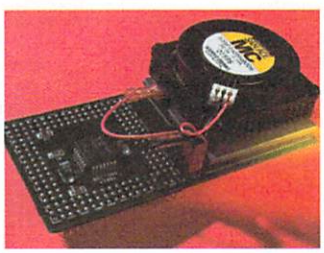
Super Street Fighter *2* 70

Turbo Trax 76

Reviews

Tune Builder 26
Paul Austin gives you a full review of this acclaimed music package

Sonnet Doubler 29
Ben Vost looks at a simple way to double the speed of your Amiga 4000 040



States of the Nation 30
Jason Compton investigates Amiga life on the other side of the pond

Zip Drive 34
The biggest thing in Amiga data storage since the CD-ROM explosion

Scala MD100 35
Scala's new Mpeg encoding and decoding card comes under scrutiny

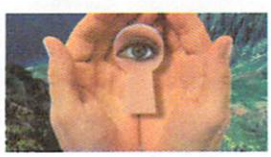
Ami File Safe 36
The defacto replacement for the standard Amiga file system. Nik Lines checks it out

Wacom 49
Grace under pressure with the ultimate Amiga graphics tablets

CD Write 61
Customise your CD collection with this impressive software add-on

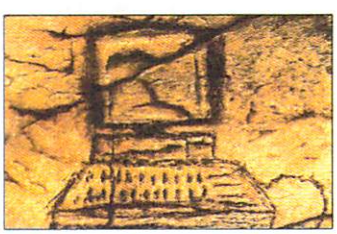
Features

In the Hot Seat 22
Amiga Technologies on the spot with some hard hitting questions and answers



Multimedia Future 54
Gareth Lofthouse reports on the people bringing you the Amiga's multimedia future

Mortal Combat 58
Tina Hackett speculates on the future of the Amiga as a viable games platform



COVER STORY

The Coverdisks

Page 16

CygnusEd

Amiga Computing brings you another complete commercial product. This time it's the Amiga's ultimate text editor, complete with a full on-line manual – worth £60

PLUS *Mand2000 demo; IFFMaster; Text Read*

Graphics Grandslam!

A stunning collection of the best graphics utilities for your Amiga. Simple point and click installation for some of the best PD and Shareware ever...

ATE; TiffView; TapAVI; Flick; PicBoot; Clouds; BMP Datatype; Font Datatype

The Amiga at the heart of a monster

Paul Austin fires up the nest step in Amiga evolution.

See page 40

Regulars

Comment 8
First an apology, then offers you can't refuse

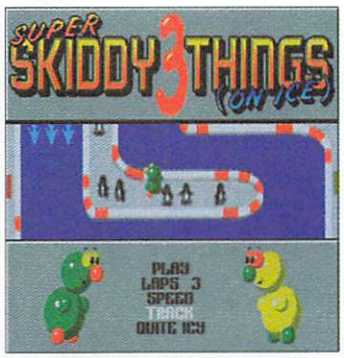
News 10
The secret's out for the new Amiga bundle

Disk Offer 21
Don't settle for half measures! Invest a few pounds and get the lot

ESP 44
Flaming prose and hard hitting opinions in the letters page

ACAS 47
Hardware, software, problems, solutions. The ACAS column

Public Sector 50
The PD and shareware keeps rolling in

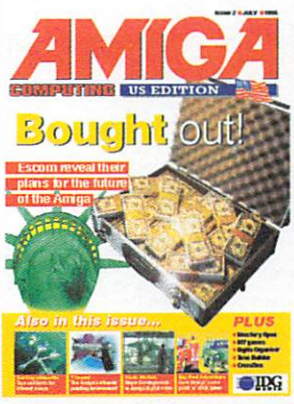


AMIGA GUIDE

93 ARexx
92 Video
98 Music
88 Assembler
94 Amos
84 Publishing

Amiga Medical 86
Amiga 3D 87
2D Amiga art 91

Subscriptions



Turn to page 82...

...for details of *Amiga Computing's* subscription offers this month

400% INCREASE IN SPEED ON AN AMIGA 4000/68040 25MHZ!
MACRO SYSTEMS MAKES IT POSSIBLE WITH THE WARP ENGINE!

YES! WE DO HAVE COMMODORE AMIGA 4000 SYSTEMS! LIMITED SUPPLIES!* *NO SALES TAX IN DELAWARE

AMIGA VIDEO & AUDIO

HARDWARE

CBM 1080 Monitor	249
CBM 1084 Monitor	299
CBM 1084S Monitor	299
CBM 1950 Monitor	299
CD Solutions 2001 20" Multiscan RGB Monitor	1799
CD Solutions 1401 14" Multiscan RGB Monitor	549
CEI 1962 14" Multiscan RGB Monitor	449
Play Kitchen Sync Dual TBC	1249
Newtek Video Toaster 4.0+	1995
Newtek Video Toaster Upgrade 4.0+	599
Newtek Lightwave 3D 4.0 Standalone	775
Newtek Lightwave 3D 3.5 Standalone	599
Newtek Lightwave 3D 3.5 Upgrade	99
Newtek Video Flyer 4.0+	3995
Noahji's Vlab Motion Card	1595
Noahji's Vlab Motion System (Toccata)	1995
Noahji's Vlab Motion Complete (T&RZ3)	2749
Noahji's Retina Z3 w/4MB	795
Noahji's Retina Z2 w/4MB	519
Noahji's Toccata Sound Card	425
Noahji's Vlab Y/C Internal / External	389
Nucleus Personal editor v1.1	589
Nucleus Personal SFC Plus v3.1	359
Sunrise Industries AD516 Digitizer (16bit)	1199
Villagetronic Picasso II w/2MB	599
Villagetronic Pablo Video Encoder	175
YC Plus - Y/CPlus SVHS Hi8	749
Cybervision 64 Z3 2MB	469
Cybervision 64 Z3 4MB	599
RockGen Plus Genlock	199

SOFTWARE

ASDG - Art Department Professional v2.5	149
ASDG - TRex Professional v2.15 (Toaster)	119
Caligari - Caligari 24	119
Cine Graphics - Powermacros for Lightwave	99
Crestline - Humanoid for Imagine	169
Crestline - Humanoid for Lightwave	169
Dimension Technologies - Composite Studio Pro	169
Dimension Technologies - Fly Effects	169
Dynanic Reality - Impact!	199
Electronic Arts - Deluxe Paint V	119
Focus - GraphicRECALL v1.5	51
Hester - Plug Ins & Go	69
Impulse - Imagine 3.0	319
Innovision Technology-Alpha Paint	549
Innovision Technology-Broadcast Titler II S.HiRes	189
Magic Lantern v2.0	74
Metrografix - Motion Master Volume 1	99
Metrografix - Motion Master Volume 2	99
Metrografix - Sparks v2.173	119
Nova Design - Image FX v2.0	249
Photogenics	119
Play - Brilliance 2.0	79
Prime - Multilayer v1.7 for ADPro	79
Prime - Multilayer v1.7 for Image FX	79
Questar - World Construction Set	169
Radiosity - Wavemaker v2.0	185
Realsoft - Real 3D v2.4	389
Scala Multimedia MM300	199
Sports Object for Lightwave	49
Syndesis - 3DROM Vol 1	84
Syndesis - 3DROM Vol 2	84
Synergy - Hollywood FX	224
Synergy - Hollywood FX Lite	49
Swipes	89
Visual Inspirations - Visual FX for Lightwave Vol 1	114
Virtual Reality Studio v2.0	69
Pixel 3D Professional v2.0	169

CBM AMIGA EMULATORS

A2088 XT/AT Bridgecard (2000)	99/299
GVP PC286 (GVPA500+ & A530Turbo)	149
Emplant Basic / Deluxe Version	239/339
E586 Upgrade IBM Module	99
Emplant Macroms	299
A-Max II+ w/A-Max IV Color	329

CBM AMIGA SYSTEMS & PRODUCTS

4000 68040 or 68030 25-40Mhz	CALL
1200 Computer without HD	899
2000 Computer System w/ECS	599
500 Computer System w/ECS	299
600 Computer System w/o HD	399
520 Video Adapter (works w/ all systems)	49
2 MB Ram For 2091 (256x4 dips)	96
2/3000 internal low density disk drives	79
500 internal low density disk drives	39
2/3/4000 internal high density disk drive	129
2/3/4000 external high density disk drive	139
1/2/3/4000 5/6/1200 Keyboards	CALL
1/2/3/4000 5/6/1200 Power Supply	CALL
Replacement Mouse	29
2320 Flicker Fixer (2000/4000)	299
2232 seven port serial card	299
2091 HD Controller card w/0MB	199
3640 68040 @ 25mhz for the 4000/3000	399
2630 w/2MB or 4MB (A2000 Accelerator)	399/499
2620 w/2MB or 4MB (A2000 Accelerator)	149/199
501c 512K ramboard w/clock	34.95
601c 1mb ramboard w/clock	69.95

CPU & FPU UPGRADES & REPLACEMENTS

68040-40 w/MMU&FPU	399.00
68040-33 w/MMU&FPU	299.00
68040-25 w/MMU&FPU	199.00
68040-EC25	149.00
68030-RC-50 w/MMU	139.00
68030-RC-40 w/MMU	119.00
68030-EC40 (NO MMU)	99.00
68030-RC-33 w/MMU	99.00
68030-RC-25 w/MMU	75.00
68030-EC-25 (NO MMU)	50.00
68882-RC-PGA-50 FPU	99.00
68882-RC-PGA-40 FPU	89.00
68882-RC-PGA-33 FPU	49.00
68882-RC-PGA-25 FPU	45.00
68881-RC-PGA-25 FPU	35.00
68882-FN-PLCC 40 FPU	129.00
68882-FN-PLCC 33 FPU	49.00
68881-FN-PLCC 25 FPU	35.00
68881-FN-PLCC 16 FPU	25.00
80387-25SX (386BB) FPU	69.95
Crystal Oscillators	10.00
68040 Heat Sink	25.00
Intel 486 DX2 - 66	175.00
Intel 486 DX2 - 50	145.00
Intel 486 DX 33	135.00
Intel 486 SX 33	99.00

MEMORY CHIPS

1 x 8	120 - 60ns SIMMS	39+
1 x 9	120 - 60ns SIMMS	45+
4 x 8	120 - 60ns SIMMS	129+
4 x 9	120 - 60ns SIMMS	139+
1 x 4	120 - 60ns Static ZIP	19+
1 x 4	120 - 60ns Page ZIP	19+
1 x 4	120 - 60ns Page DIP	39+
1 x 1	120 - 60ns DIP	5+
256 x 4	120 - 60ns DIP	5+
256 x 4	120 - 60ns ZIP	5+
256 x 32	100 - 60ns (1MB Simm)	39+
256 x 36	100 - 60ns (1MB Simm)	45+
512 x 32	100 - 60ns (2MB Simm)	85+
512 x 36	100 - 60ns (2MB Simm)	99+
1 x 32	100 - 60ns Simm (4MB)	149+
1 x 36	100 - 60ns Simm (4MB)	159+
2 x 32	100 - 60ns Simm (8MB)	299+
2 x 36	100 - 60ns Simm (8MB)	319+
4 x 32	100 - 60ns Simm (16MB)	599+
4 x 36	100 - 60ns Simm (16MB)	639+
8 x 32	100 - 60ns Simm (32MB)	999+
8 x 36	100 - 60ns Simm (32MB)	1199+
16x32	100 - 60ns Simm (64MB)	2299+
PCMCIA Ram Card 2M		119+
PCMCIA Ram Card 4M		229+
GVP SIMM32 60NS 4MB		199+
GVP SIMM32 60NS 16MB		799+
GVP SIMM32 40NS 1MB		129+

AMIGA CUSTOM CHIPS & UPGRADES

3.1 Upgrade kit (roms, soft, mans)	199.00
3.1 Upgrade kit (pick two)	125.00
3.1 Kickstart roms (specify unit)	89.00
3.0 Kickstart roms (specify unit)	199.00
2.1 OS Upgrade Kit (complete)	99.95
2.1 OS Upgrade Kit (soft,manuals)	79.95
2.05 Kickstart Rom	27.95
2.04 Kickstart Rom	27.95
1.3 Kickstart Rom	12.95
1MB Agnus (8372A)	37.95
2MB Agnus (8372B)	99.95
Super Denise (8373)	34.95
Paula (8364) Or Denise (8362)	16.95
CIA (8520)	14.95
Western Digital Revision 08A	35.00
Superbuster (rev11) (4091)	58.95
Ramsey (rev 07)	49.95
Fat Gary (A3000)	49.95
Super Dmac (rev 04)	54.95
Amber (A3000 & 2320)	44.95
Janus 2.1 upgrade kit	39.95
2620/2630 upgrade kit (7.0)	35.95
2091 upgrade kit (7.0)	35.95

Amiga Analyzer $69.95
Diagnostic software & hardware for problems

DPS

DPS PAR (IBM)	1699
DPS PAR (Amiga)	1549
w/Conner 540MB	+249
w/Conner 1275A 1.2G	+399
w/Micropolis 2217A 1.7G	+999
Personal TBC IV 4:2:2 & SVideo In & Out	799
Personal VScope	735
Personal Componet Adapter	229

Macro Systems WARP ENGINE

- Includes SCSI I & II Fastest hard drive controller available for the Amiga 4000/3000
- Up to TEN megabytes per second with a Seagate Barracuda 2.1 gigabyte hard drive
- Expandable to 64MB (3000) or 128MB (4000) using 72 pin industry standard simms

68040 @ 28Mhz w/o CPU	(4028)	799	68040 @ 28Mhz w/CPU	(3028)	895
68040 @ 33Mhz w/CPU	(4033)	999	68040 @ 33Mhz w/CPU	(3033)	999
68040 @ 40Mhz w/CPU	(4040)	1199	68040 @ 40Mhz w/CPU	(3040)	1199

Low profile, power & heat simms for maximum performance -
04 MB 60NS $149
08 MB 60NS $299
16 MB 60NS $499
32 MB 60NS $999

Upgrade rebates for A4000-040 owners with original CPU card & four mb simms & A3000 owners with zip style dram

SYQUEST (Amiga / MAC / IBM)

5.25" HH 44MB DRIVE (SQ555) SCSI	199
5.25" HH 88MB (SQ5110C) (R&W44) SCSI	259
3.5" LP EZ-135MB IDE or SCSI w/Cartridge	249
5.25" HH 200MB (SQ5200) (R&W 44&88) SCSI	349
3.5" LP 270MB SCSI (SQ3270S) 13MS SCSI	329
5.25" 44MB Cartriges	41
5.25" 88MB Cartriges	51
3.5" 105MB Cartriges & 270MB Cartridges	59
5.25 200MB Cartriges	79
External Versions w/Cabling Add	99

SCSI CD-ROM DRIVES & DRIVERS

Model	Buffer	Size	Access	Rate	Amount
Hitatchi	External	64k	320MS	150k/sec	89
Sanyo	Int / Ext	256k	380MS	300k/sec	149/249
NEC 3Xi	Internal	256k	190MS	450k/sec	225
NEC 3XE	External	256k	150MS	450k/sec	299
Sanyo 4x	Int/Ext	256k	120MS	600k/sec	239/309
Toshiba 4.4x	Int/Ext	256k	140MS	660k/sec	329/429
Plextor 4x	Int/Ext	1024k	150MS	600k/sec	415/515
Plextor 6x	Int/Ext	256k	145MS	900k/sec	449/549

ASIM CDFS 3.1+ w/Fish CD (AMIGA) 64

CSA DERRINGER+ ACCELERATOR
68030@25Mhz CPU w/MMU
68881@25Mhz FPU & /1MB Ram
Only 299.00
w/4MB 399.00 w/8MB 599.00

CSA DERRINGER+ ACCELERATOR

68030 @ 33MHZ with MMU
68882 @ 33MHZ (Math Co Processor) **399**
1Megabyte of 32bit ram (remap kickstart)
Install up to 32MB of 72 pin industry standard ram
Ours is the only one to come standard with the modification to work with the DKB Megachip
(a $25.00 value if purchased seperately)
4MB - 499 8MB - 699 16MB - 999 32MB - 1499

68030 @ 50MHZ with MMU
68882 @ 50MHZ (Math Co Pro add 99.00) **499**
1Megabyte 60NS 32bit ram (remap kickstart)
Install up to 32MB of 72 pin industry standard ram
Ours is the only one to come standard with the modification to work with the DKB Megachip
(a $25.00 value if purchased seperately)
4MB - 599 8MB - 699 16MB - 1099 32MB - 1599

WORKS IN AMIGA 2000 & 500

CONNER 1060 SCSI I & II
***** BLOWOUT SPECIAL *****
9 MS - 1060MB - 5 Year Warranty
up to 10 MB/Sec Synchronous
up to 5 MB/Sec Asynchronous
Works great with all controller cards! **$349.00**

3.5" HARD DRIVES

Quantum

340 ELS SCSI I & II or IDE	11MS	2 Yrs		125
540 ELS SCSI I & II or IDE	11MS	2 Yrs		179
730 LPS SCSI I & II or IDE	11MS	2 Yrs		199
850 LPS SCSI I & II or IDE	14MS	3 Yrs		249
1080 LPS SCSI I & II or IDE	12MS	3 Yrs		299
2.1G Capella 5400RPM 512k	8MS	5 Yrs		675
*2.1G Atlas 7200RPM	1MB	8MS	5 Yrs	999
*4.3G Atlas 7200RPM	2MB	8MS	5 Yrs	1599

Seagate

ST3145A 120MB IDE LP	16MS	1 Yrs		99
ST3290A 260MB IDE LP	16MS	3 Yrs		159
ST3491A 420MB IDE LP	16MS	3 Yrs		169
ST31220A 1080MB IDE LP - A4000 Autobootable!	9MS	3 Yrs		249
ST31230N 1050MB SCSI LP	9MS	5 Yrs		375
ST32550N 2.1G Barracuda	8MS	5 Yrs		975
*ST15150N 4G Barracuda	8MS	5 Yrs		1499
*ST410800N 9G Elite	11MS	5 Yrs		2299

Quantum 4.3GB SCSI I & II
512k Buffer - 3.5" - Grandprix
10 MB/Sec Sync - 5 Year Warranty - 1049.00

Micropolis

2217 A/V 1.7G SCSI I&II	10MS	5 Yrs		899
2217A 1.7G IDE	10MS	5 Yrs		899
*3221S 2.1G SCSI I&II	8.9MS	5 Yrs		999
*3221 A/V 2.1G SCSI I&II	8.9MS	5 Yrs		999
*3243S 4.3G SCSI I&II	8.9MS	5 Yrs		1399
*3243 A/V 4.3G SCSI I&II	8.9MS	5 Yrs		1499
*1991 9.0G SCSI I&II	12MS	5 Yrs		2199
*1991 A/V 9.0G SCSI I&II	13MS	5 Yrs		2299

Conner

CFA 1275A IDE (w/PAR)	12MS	3 Yrs		399
CFA 850A IDE	12MS	3 Yrs		265
CFP 540A IDE	12MS	3 Yrs		199
CFA 540A IDE (w/PAR)		3 Yrs		225

* Video Flyer Certified Drives

Hard Drive Controllers

Commodore A2091 w/0MB Ram		199
(For the A2000) w/2MB Ram		279
- Includes 7.0 Roms & WD rev 8 SCSI chip two megs of additional rams can be added		
Trifecta 500 LX w/0MB expandable - 8mb		225
- Controls seven scsi & two ide drives at the same time. Fastest transfers for A500		

A1200/600/SX1 2.5" IDE HARD DRIVES

ST9096A 80MB Seagate		75
ST9150A 130MB Seagate		99
ST9190A 170MB Seagate		125
ST9240A 210MB Seagate		169
ST9300A 260MB Seagate		239
ST9550A 455MB Seagate		339
ST9655A 520MB Seagate		349

Install kits available $25.00

AMIGA NETWORKING

Interworks ENLAN-DFS (Five node licence)	299
CBM A2065 Ethernet board	299
CEI 4066 ETHERNET PLUS	299

Three network interfaces for 2000,3000,4000
- 10 BASE T, Thick AUI, Cheapernet (10BASE2)
- Diagnostic LEDs & 1 Year Warranty
- 10MB/SECOND&is SANA II compliant

DeVine COMPUTER SALES

TO PLACE AN ORDER CALL
(800) 699 - 4049

25 South Old Baltimore Pike
Lafayette Bldg. Suite 202
Newark, DE. 19702
(302) 738-9046 ORDERS ONLY
(302) 738-9267 Information & RMA
(302)738-9259 Fax 24 HOURS

Please understand our policies

DISCOVER / VISA / MASTER Card / American Express & COD Accepted. All Prices and specifications are subject to change without notice! ALL SALES ARE FINAL - NO REFUNDS OR EXCHANGES WITHOUT APPROVED RMA#. 15% restocking fee on all refunds. Defective items replaced with same item only. Call 302.738.9267 for approval RMA# before returning merchandise, or fax an RMA# request to 302.738.9259 otherwise your return will not be accepted. We are not responsible for incompatibility of products. CODs are CASH ONLY Shipping & handling is non-refundable. S&H for chips is $5 COD Fee $6 Personal checks require 14 days to clear. Call for actual shipping prices on all other items.

EXPANSION SYSTEMS

HIGH FLYER

Standard	295
With Power Supply	395
Fan Kit	35
Cable Kit	65

Dataflyer SCSI Card 4000SX 90
- SCSI Controller card supports up to seven devices internally, can add external port later

Dataflyer SCSI Card 4000SX-25 100
- Includes the DB 25 external connector for external devices

Dataflyer SCSI + A4000 119
- Converts IDE Header into SCSI support for SCSI devices w/ pass thru to work with original IDE drives you already own!

Dataflyer SCSI + A1200 99
- Same thing for the A1200 series systems

Dataflyer XDS 1200 / 600 69
- External case supports 3.5" IDE hard drives & allows use of original 2.5" hard drive. Connector also uses power from inside the machine.

Ramboard w/2MB Ram exp to 8MB 199

Dataflyer 2000 SCSI 95
- Supports up to seven scsi devices , internally mount a 3.5" hard disk drive onto controller card

Dataflyer 2000 IDE 95
- Support two IDE devices, one can be mounted onto controller card.

Dataflyer 2000 SCSI & IDE 125
- Two controllers in one card! Support seven SCSI and two IDE devices!

Dataflyer 500 SCSI 149
- Supports Seven SCSI devices , one can be mounted internally and powered!

Dataflyer 500 IDE 149
- Supports two IDE devices , one can be mounted internally and powered.

Dataflyer 500 SCSI & IDE 179
- Supports two IDE devices , one can be mounted internally & seven scsi devices can be connected!

VILLAGETRONIC

MainActor Professional 79
- Full featured animation program that works with all Amigas with support for Picasso II owners.

Ariadne 299
- Zorro II Ethernet card offering 10base-2 (cheapernet) & 10base-T (twisted pair) Features; 2 parallel ports 32k buffer; boot eprom option; SANA-2 Compatible drivers & Envoy network software; DOS 2.04 or higher required.

Liana Network 89
- Connects any two Amigas togeather via the parallel port

Pablo 179
- A video module for your Picasso II card permitting output to your TV or VCR - Quality comparable to high performance video broadcast encoders; includes RCA - S-VHS - SCART cables & 24 bit animation program

Micro R&D

2000 Bigfoot Power Supply	159
1200/600/500 Bigfoot	89
Slingshot A500 (1A2000Slot)	39
Slingshot Pro A500	69
X-Calibur A4000 Ram Unit	649

ICD

AdIDE 130MB HD System w/2.5" Drive (500/2000)	225
AdIDE 170MB HD System w/2.5" Drive (500/2000)	249
Flicker Free Video II	249
ADRAM540 w/4MB (A500)	275

Store your work on 4/8GB DAT TAPES

Conner Internal 400k/sec	899
Conner External 400k/sec	999
Sony Internal 500k/sec	899
Sony External 500k/sec	999

TO PLACE AN ORDER CALL 800 699 4049

A2000 68060 @ 50MHZ !!!

DKB's WILDFIRE 060 w/FAST SCSI II & 64bit ramboard $1499

Low profile, power, heat simms for maximum performance -

Upgrade rebates available for owners of other accelerator boards & ram through De Vine.

04 MB	149
08 MB	299
16 MB	599
32 MB	1099

- True 68060 50Mhz Design - NOT A MODIFIED 68040 BOARD !!!
- Lightning High Speed Local 68060 Memory
- Supports Interleaved Memory
- Supports Posted Writes to Motherboard
- 32 Bit FAST SCSI II Host bus DMA Interface
- Supports 10MB/second SCSI Transfers
- Over 90% of the CPU available at full Speed SCSI DMA
- Totally Autoconfigurable
- 64 BIT Ram expandable to 128MB
- Uses Industry Standard 72 Pin Simms
- Ethernet - Twisted Pair & Thin Coax
- PCI Bus For Future Expansion supporting up to 100MB/Second
- Compatible with the Newtek Video Toaster & DKB Megachip
- Includes Manufactures TWO year full warranty

From A Company that listens to what the public wants! This is the FASTEST accelerator available for the Amiga 2000!

Commited to the Amiga marketplace since 1980 & going strong!

CSA MAGNUM 68040 @ 40MHZ

- for the Amiga 2000 series machines
- faster than a Macrosystems Warp Engine @ 40Mhz
- uses standard 72pin simms expandable to 64 MB of memory
- 1MB SRAM Option available
- Extra Serial Port Option Available
- Built In SCSI I & II HD Controller Card

Limited time price of $1099.00

VIDEO TOASTER SYSTEMS

CBM Amiga 4000 Motherboard, Case, Power Supply, slotboard, 1.76 Floppy Disk Drive, Mouse, Keyboard & 2MB Chip ram 2495

Processor Options -

CBM A3630 68030 @ 25mhz w/mmu & fpu	199
CBM A3640 68040 @ 25mhz w/mmu & fpu	499
Macrosystems Warp Engine 4028 w/CPU, SCSI I&II Controller	895
Macrosystems Warp Engine 4033 w/CPU, SCSI I&II Controller	999
Macrosystems Warp Engine 4040 w/CPU, SCSI I&II Controller	1199

Memory Options - (Minimum of 8MB Fast Memory needed)

1x32 Simms 60ns 4MB	149+
2x32 Simms 60ns 8MB (warp engine or extra ramboard)	299+
4x32 Simms 60ns 16MB (warp engine or extra ramboard)	499+
8x32 Simms 60ns 32MB (warp engine or extra ramboard)	999+

Newtek Video Toaster 4.0	1995
Newtek Video Flyer	3995
- 2.1 GB Quantum Atlas Video Drive	999
- 4.3 GB Quantum Atlas Video Drive	1599
- 9.0 GB Seagate Elite Video Drive	2295

Seagate Barracuda 2.1 GB HD

7200 RPM! - 8MS!
Five Year Warranty!

$975

USRobotics Modems

External Sportster 14.4kbps v.32 bis data v.42, v.42bis, quicklink II s/w, fax $149

External Sportster 28.8kbps v.34 data, 14.4kbps class 1 & 2 fax v.42/v.42bis quicklink II s/w $299

AMIGA Lightwave 4.0 stand alone Version $775.00

REMOVABLE MEDIA SCSI DEVICE CLOSE OUT

Richo 50 MB Removable HD 99.00

AMIGA RAM BOARDS

Paravision MBX1200Z w/20Mhz&1MB		159
Paravision MBX1200Z w/20Mhz&2MB		199
Paravision MBX1200Z w/20Mhz&4MB		299
Paravision MBX1200Z w/20Mhz&8MB		429
Paravision 8-Up! w/0MB	(2000)	99
Paravision 8-Up! w/2MB	(2000)	149
Paravision 8-Up! w/4MB	(2000)	229
Paravision 8-Up! w/6MB	(2000)	309
Paravision 8-Up! w/8MB	(2000)	389
DKB 2632 w/4MB	(Requires2630)	399
DKB 1202 FPU & 1MB Ram	(1200)	159
DKB 3128 w/4MB	(3000/4000)	395
Exp. Sys. Dataflyer Int. w/2MB Exp to 8MB		199
Supra External w/2MB (500)	(500)	199
CBM 2052 w/2MB	(2000)	99
CBM 2058 w/2MB Exp to 8MB	(2000)	175
CBM 501c Clone w/512K	(500)	49
Exp. Systems 601c w/1MB	(600)	69
DKB Megachip 2000/500 w/2MB Agnus -accesses & adds 1MB of chip ram. The -must have for graphics & audio users		249

CSA 12 Gauge Accelerators

33Mhz w/MMU & SCSI Board w/4MB 80-70NS Ram	399 / 549
33Mhz w/MMU & FPU & SCSI w/4MB 80-70NS Ram	499 / 649
50Mhz w/MMU & SCSI Board w/4MB 60NS Ram	499 / 675
50Mhz w/MMU & FPU & SCSI w/4MB 60NS Ram	599 / 775

Amiga 2000 Accelerators

GVP 68040 @ 33mhz w/MMU, FPU SCSI Controller with Extra Serial, Parallel Ports & 4 MB Ram 60ns Expandable to 64MB ram using 16MB simms (799 each) 1395

CSA 68040 @ 33mhz w/MMU, FPU SCSI II controller card w/0MB. Uses 72 pin 60ns industry standard simms and is expandable to 64 mb using 16mb simm moduals. 995

GVP 68030 @ 40mhz w/FPU & SCSI Controller & 4MB ram at 60ns expandable to 16MB ram 795

DKB

Megachip 249

Allows your A500 & A2000 series computers to have two megabytes of chip ram. A must have for people who use video, graphics and audio applications. Included is the Megachip daughterboard with 2MB Agnus chips with an extra one megabyte of ram. (Requires A500 to have A501 ram expander +49.95)

A1202 board (A1200 Only) 99.95

A multi-function board for the A1200 Computer that provides the maximum fast ram expansion plus a battery backed up clock-calendar. Includes two simm sockets for combinations of 1, 2, 4, 5, or 8MB of fast ram using industry standard 32 bit simms with 72 pins. Optional plcc math co processor can speed upmath functions as much as 1000% or more.

A3128 Ram board (A3000/4000 Only) 249

Allows 32 bit ram expansion to 146 megabytes of ram using 72pin industry standard simms. Four simm slots accept either 4, 8, 16, or 32 megabyte simms.

A2632 Ram board (A2630) 399 w/4mb

Allows 32 Bit ram expansion onboard of 112mb of ram using industry stanard 72pin simms. Has four sockets allowing use of 4, 8, 16, or 32 mb simms. Allows full burst mode support.

Kwikstart II (A1000) 54.95

A1000 owners can now add kickstart roms to their machines with this device! Supports two different revision roms & allows access to more system ram

Multistart II 6a (A500, 600, 2000) 29.95

You can use more than one kickstart rom chip with this device! Switchable by resetting the machine for a few seconds.

Cobra 28 mhz & 40ec mhz 159/249

Accelerator for the A1200 computer system that allows you to speed your machine up to 600% faster. Includes capibility to add 128MB of fast ram using industry standard 72 pin simms & battery backed clock-calendar. Optional FPU can be added. Optional SCSI I & II Controller can be added +89.00

Mongoose (A1200) 68030 50MHZ 275.00

Accelerator for A1200 computer with 68030@50mhz Expandable to 128MB of fast ram using industry standard 72 pin simms. Increase in speed up to 800% & has battery backed clock-calendar. Optional FPU or SCSI I & II Controller can be added +89.00

Welcome to issue four of *Amiga Computing US Edition.*

By now you will know that issue three, nominally dated August, is seriously delayed. This is mainly due to unavoidable printing problems. Because it is so late, we have taken the decision to cancel it altogether and concentrate on this issue. Several good things will come out of this.

Firstly, *Amiga Computing US* issue 4 will be an up-to-date magazine with current news and editorial. This should stop the few complaints that, while the magazine is superb, the content was somewhat out of date.

Secondly, the continuing series of articles you have enjoyed from issues one and two will be bumped into this issue. This means that instead of only getting one Assembler article, you will now have two, and instead of one Amos column there are now three. Other articles from issue three have also been incorporated into this month's magazine ensuring you have a bumper read on your hands.

Thirdly, as a result of the problems we have had getting the mag out to you in a timely fashion, we now have a firm schedule for the printers which will be adhered to. This means you will be guaranteed *Amiga Computing US* when we say it will arrive.

All these trials will ensure that we have a trouble-free publication from now on. This has only been made possible thanks to your continued support and patience through our teething troubles.

AMIGA ACTION

The publishing gremlin did it again! Last issue I promised you a copy of our sister title *Amiga Action* for just $5. Needless to say the offer still stands, and the details are on page 97. Sorry for any confusion, it isn't always easy to publish across the pond!

Amiga Action is widely regarded as the best magazine in Europe when it comes to dedication to Amiga games. Every month it ships with two coverdisks containing game demos for you to play, as well as editorial coverage of all that's new in the games world. If you are an Amiga games enthusiast and simply can't get enough, why not give *Amiga Action* a try. For just $5, we will send you the latest issue plus an additional two Amiga Action coverdisks for hours of entertainment and fun. Complete the form on page 97 and send it today.

AMIGA COMPUTING US EDITION

Good news and an issue containing reviews of the Draco Amiga compatible machine, Zip drive and Scala's Mpeg Card, and features on Amiga Technologies, the state of the US market and the Amiga's multimedia future

SUBSCRIPTIONS

Many of you have written to find out what subscription package you should be receiving to replace your previous Amiga World subscription. The answer is a magazine without CoverDisks each month, for the number of months remaining on your previous Amiga World subscription. Why then do you run pages on Coverdisks in the magazine, you ask? The answer is that many of you are upgrading to a **Gold** subscription and therefore receiving two CoverDisks each month, and these pages are there to help get the most out of the disks.

To get a **Gold subscription** you can either wait until your subscription renewal date and renew as a ***Gold subscriber*** by completing the form on the subscriptions page, or you can ***ACT NOW*** and upgrade your subscription immediately to ***Gold*** and we will start sending you the two disks from the following issue. An upgrade costs $2.25 for each remaining issue of your current subscription. Just complete the brief form on last month's insert, send it today, and we will send you a bill with your first two disks – it couldn't be easier. ***PLUS, all Gold*** subscribers will receive a CD-ROM worth $24 absolutely ***FREE!*** The Weird Science Multimedia Toolkit contains music, utilities, fonts, clip art and images, and is also compatible with the CD32.

OUR ADDRESS

If any of you have any queries with respect to your subscription, or simply wish to speak to us here at *Amiga Computing*, please contact us at either:

IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP, England;
or by telephone on 01144 1625 878888;
by fax on 01144 1625 850652;
or by e-mail: VQH@acomp.demon.co.uk
We also have a 24-hour Amiga Computing hotline available on 01144 1625 876669.

Regards

Paul Austin
Editor

The AC team

EDITOR Paul Austin
DEPUTY EDITOR Ben Vost
ART EDITOR Tym Leckey
NEWS EDITOR Gareth Lofthouse
COVERDISK EDITOR Neil Mohr
PRODUCTION EDITOR Judith Chapman
GAMES EDITOR Tina Hackett
STAFF WRITERS Andrew Maddock, Dave Cusick
ADVERTISING MANAGER Lisa Bracewell
AD PRODUCTION/SALES Barbara Newall
MARKETING MANAGER Claire Mawdsley
MARKETING ASSISTANT Victoria Quinn-Harkin
PRODUCTION MANAGER Sandra Childs
SYSTEMS MANAGER David Stewart
CIRCULATION DIRECTOR David Wren
COMMERCIAL DIRECTOR Denise Wright

DISTRIBUTION COMAG +44 1895 444055
SUBSCRIPTION +44 151 357 2961

Member of the Audit Bureau of Circulations
ABC 33,546
June-Dec 1994

Published by IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP
Tel: +44 1625 878888 , Fax: +44 1625 850652

E-mail contacts:
Editorial edit@acomp.demon.co.uk
Advertising ads@acomp.demon.co.uk

CHAIRMAN Richard Hease
MANAGING DIRECTOR Ian Bloomfield

We regret *Amiga Computing* cannot offer technical help on a personal basis either by telephone or in writing. All reader enquries should be submitted to the address in this panel for possible publication.

Amiga Computing is an independent publication and Amiga Technologies GmbH are not responsible for any of the articles in this issue or for any of the opinions expressed.

Amiga Computing (ISSN 0959-9630) is published monthly by IDG Media, England, a subsidiary of the IDG Corp. Application for second-class postage rates pending at Boston, MA and additional mailing offices.
Postmaster: *send address changes to AMC Subs Dept, 460 Hillside Avenue, Hillside, New Jersey 07205. PRINTED IN THE USA. ©1995 IDG Media . No material may be reproduced in whole or in part without written permission. While every care is taken, the publishers cannot be held legally reponsible for any errors in articles*

IDG MEDIA

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

US yearly subscription rate:
USA Gold $70
USA Standard $44

POWER COMPUTING LTD
44a/b Stanley Street, Bedford,
MK41 7RW. England
Tel **+44 1234 273000**
Fax **+44 1234 352207**

Delivery extra, please call

POWER

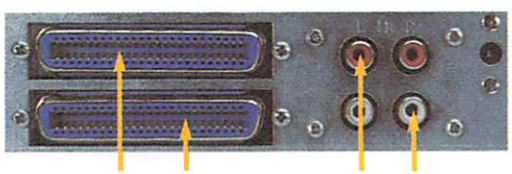
TELEPHONE **01234 273000**

CD-ROM

NEW
CD-ROM
INC. CD32
EMULATION

$263
x2 CD-ROM

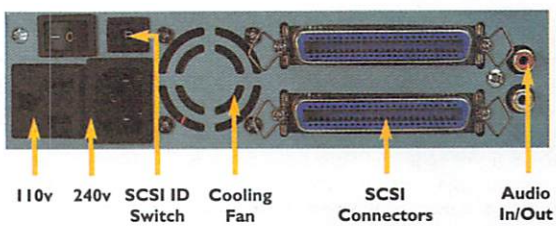
DOUBLE SPEED CD ROM



BLUE CHIP AWARD

$394
x4 CD-ROM

QUAD SPEED CD ROM



POWER CD-ROM

The new Power CD-ROM for the Amiga 600/1200 plugs directly into the PCMCIA port and provides a direct SCSI-I and SCSI-II interface, allowing up to six additional peripherals to be connected, for example: Syquest Drives, Hard Drives, Flatbed Scanners and Dat Drives. What's more the Power CD-ROM features a 'Hot-Plug' and 'Un-Plug', which allows you to connect/disconnect at any time the Power CD-ROM and any additional devices, even when your Amiga is switched on.

The CD-ROM comes with a SCSI interface, PSU, manual, audio lead, mains lead* and software: Audio CD, CD32 Emulation, MPEG Film Decoder and PhotoCD software.

Amiga 600/1200

Double - Speed
CD-ROM $263

Quad - Speed
CD-ROM $394

Amiga 4000 No SCSI Interface

Double - Speed
CD-ROM $202

Quad - Speed
CD-ROM $343

CD-ROM SOFTWARE

CDBOOT 1.0 ..... **$38**
Enables you use almost any CD32 games

FRESHFONTS II **$22**
632MB of fonts for almost any computer system

GAMERS' DELIGHT **$33**
Contains 40 games for the Amiga

GOLDFISH 2 ..... **£33**
Volume 2 of the Goldfish series, contains a selection of software

LIGHT ROM **$51**
Contains almost 650MB of 3D objects, images etc.

MAGIC ILLUSIONS **$13**
3D stereograms on your screen!

MEETING PEARLS VOL I **$13**
First CD published with the concept of "sharecompilation"

MEETING PEARLS VOL II **$13**
Contains 650MB of the finest FD software via a special user interface

THE LIGHT WORKS **$45**
Raytracing - a fascinating area of computer graphics

THE BEAUTY OF CHAOS **$16**
Drive into the fractal world of geometry

AMINET 5 ..... **$16**
1.1 gigabytes of software

AMINET SET I **$33**
4 CD's containing freeware

CD-WRITE **$51**
Enables you to virtually write to CD's

FRESH FISH 8 ..... **$33**
Hundreds of MB's of freeware

Accessories

Amiga 4000
SCSI-Interface $170

Multi-media Speakers
80 Watt $68

Trade orders welcome - Worldwide distribution available

Specifications and prices are subject to change without notice, all trademarks are acknowledged. All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available free of charge on request.

*UK only

NEWS

By Gareth Lofthouse

Amiga bundle revealed

Last minute news from Amiga Technologies revealed that the software to be bundled with the A1200 and 4000T will include the newest versions of some of the most acclaimed productivity packages available for the Amiga.

As reported in our press conference feature in this issue, there will be a standard A1200 package costing £399 and a A1200 plus hard drive package costing £499. Up to now, however, the contents of the software pack that will be bundled with the Amigas has been a mystery.

The standard pack will come with three applications from Digita: Wordworth 4SE, a brand new version of the award-winning wordprocessor, Datastore v.1.1. (a database) and Organiser v1.1, their recently released computerised filofax.

It will also include Turbocalc v3.5, an as yet unreleased version of Schtztruhe's spreadsheet program. On the artistic side, an updated version of Cloanto's highly regarded Personal Paint software – version 6.4 – will be accompanied by another Amiga showcase program, Photogenics 1.1 from Almathera. Despite the productivity focus of the package, games players are also catered for with the inclusion of Pinball Mania, a new title by 21st Century, and Whizz from Microvalue Flair.

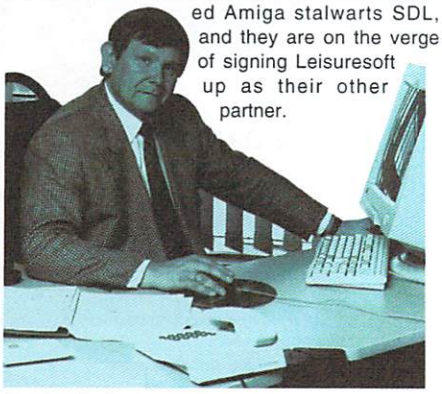
The HD package will include the same bundle of software plus Scala MM300, the leading multimedia authoring package. The same bundle is currently set to ship with the 4000T as well, although there's a possibility that Scala's MM300 will be replaced by the upgrade, MM400.

Amiga Technologies clearly hope a strong bundle will put pay to complaints about the Amiga's pricing. Jonathan Anderson, MD of Amiga Technologies UK, claimed that the standard A1200 pack's software had a combined average street value of £497, while adding Scala for the HD version could save buyers as much as £677.

Anderson also said he was particularly pleased by their success in securing such up-to-date versions of each software product. He commented: "As far as I know, Wordworth, Personal Paint and Turbocalc are brand new products which the publishers do not intend to launch until next year."

The only possible bad news is for American users, since this bundle is only confirmed for European distribution. Whether Amigas sold in America will be standalone or have a different software package is still under discussion.

An announcement is also imminent on the identity of the two trade suppliers to be used by Amiga Technologies. According to CTW, the trade newspaper, Amiga Technologies have already appointed Amiga stalwarts SDL, and they are on the verge of signing Leisuresoft up as their other partner.



Tyschtschenko: the Amiga is on time for September

Amigas in America

While Amiga Technologies' plans for the UK are gradually becoming clearer, the strategy for the American market remains less certain. It has been announced, however, that Ed Goff, former US lawyer for Commodore, will be leading the company's US division.

It was made clear at the Heathrow press conference that Amiga Technologies considers the 4000T to have the strongest market in the US, although a smaller allocation of 1200s has been made.

The general manager of Amiga Technologies, Petro Tyschtschenko, revealed that the 4000T motherboards will be produced in the United States near Philadelphia, and computers marked for American distribution will be assembled in the same place.

At the time of going to press, the company was still looking for a North American partner that would be willing to support and invest in their product. We hope to bring our US readers fuller details as they are revealed.

Heathrow press conference

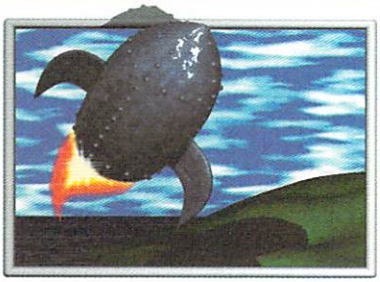
On Wednesday 16 August, Amiga Technologies held a press conference to officially announce the relaunch of the Amiga line of computers in the UK. The day after it was followed by a meeting with developers in which the company's UK strategy was outlined. The main news was the announcement of an A1200 bundle including a 170Mb hard drive priced at £499. For full details read the In The Hot Seat article featured in this issue.

It was also confirmed that the 4000T will initially be without a high density floppy disk drive. The reason given for this was the difficulty in obtaining components following the bankruptcy of the company involved in the production of the drives for the 4000 desktop unit.

Amiga exhibitionist

Following our focus on animators in last month's issue, the Amiga is due to receive another dose of creative talent following the announcement of an exhibition of work by artist Paul Hamilton on 4-28 October.

Named Artificial Eyes, the event will feature dye sublimation prints of the artist's recent Amiga artwork. His pictures were created using Photogenics, Real 3D and DPaint 4. "The name of the exhibition comes from the idea of looking at artificial scenes with, necessarily, artificial eyes – kind of photos that never



Power to accelerate

Power computing have joined the competition offering Amiga users more speed with the announcement of a new line of accelerators. Though the new Falcon range was developed by Macro Systems, Power Computing have bought exclusive distribution rights for everywhere, apart from Benelux and Germany.

Developed for use with the A1200, the first Falcon accelerator will feature an 040 processor – roughly 14 times faster, the same speed as an A4000 – and a single SIMM socket allowing for FastRAM expansion. It will also have a SCSI 3 interface allowing for greater transfer speeds , and the package will include a fan to cool the board.

An 060 version is set to follow which will give the A1200 a blistering performance, but prices on either option are yet to be announced. For more details phone Power Computing on 01234 273000.

The eyes have it

As well as presenting its strategy for the Amiga's relaunch at the Heathrow press conference, Amiga Technologies also unveiled the new virtual reality I-glasses for the first time in the UK.

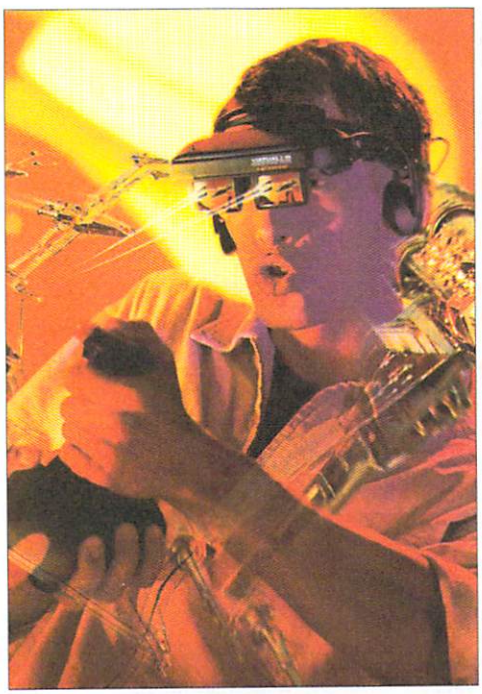
As reported last month, the Virtual I-glasses are made in America by Virtual i-0, but Escom have exclusive distribution rights for the product in Europe. Newly revealed, however, was the fact that there will be two different models on the market. The virtual reality headsets don't come cheap though. The basic video model that allows users to see computer and film images in 2D and 3D will cost £599, while a PC version including a head-tracker for use with 3D games will cost £899.

Escom stated that the range of applications for the headsets is almost unlimited. At the press conference it was claimed that the makers are already in discussions with film moguls like Steven Spielberg, and they have shown great interest in the technology's potential.

There are also plans to develop a version of the headset for use in dentist's surgeries. Instead of lying with their eyes screwed up in terror, patients will be able to relax watching a film while the dentist drills away at their teeth. Apparently they are already being used in the US for this purpose.

"Our product gives patients an out-of-mouth experience by taking the focus away from what the dentist is doing," said Virtual i-0 President Linden Rhoads. "They enable people to watch movies, educational programming and even play video games while they have their teeth worked on."

The AT panel went on to reveal that the lightweight headsets made them ideal for the private viewing of erotic movies, but whether this capability will be combined with the dentist's version is currently unclear.

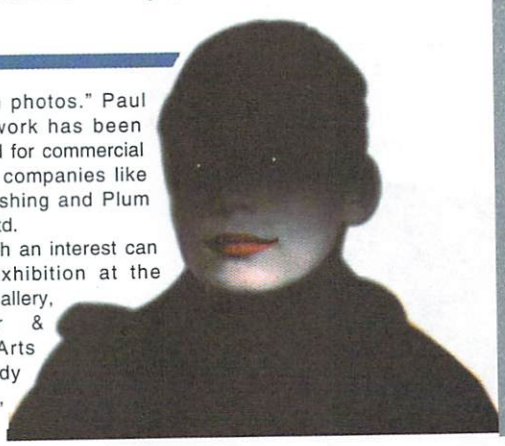


The video version of the glasses will connect to the Amiga's composite output port. As yet, the head-tracker version has no software support on the Amiga, however.

Asked if they planned to sell the product in the UK, major retailers Silica replied that they had not made any decision on the matter. MD John Arundel would not discount the possibility, however. "If it's a product that supports the Amiga then we will certainly be interested in taking it," he commented.

were," Paul explained. "Also on a literal level, I seem to have an obsession with painting over people's eyes when working with photos." Paul Hamilton's work has been commissioned for commercial purposes by companies like Quarto Publishing and Plum Productions Ltd.

Anyone with an interest can go to the exhibition at the Reflections Gallery, the Exeter & Devon Arts Centre, Gandy Street, Exeter.



News briefs

For football fanatics

Football Statistician Professional may sound like another team management game, but it's actually the ultimate football application for use by the home enthusiast and professional club, according to its makers.

Available for the Amiga at £19.95, the League Monitor software will store league results, analyse them in tables and graphs, and follow your favourite team's performance.

The program might just win you a fortune as well, thanks to its ability to make pools predictions on the basis of teams true form. Call OTM Publications on 01827 312302.

Imagine all the objects

The Imagine user group is running a special offer for readers of *Amiga Computing*. The price of membership has been reduced from £8 to £5 until 2 January 1996, and the first 100 readers to join quoting *Amiga Computing* will get a free disk containing brush maps, objects and other material for use with the Imagine rendering package.

Members can benefit from a wide range of services, according to group founder Spencer Jarvis, including an object and attribute finding service, quarterly newsletters, and unlimited technical support. The group has a library of 2000 objects, 60Mbs of text, 1000 attributes, and hundreds of brush maps available to members.

For more information contact Spencer Jarvis on 01375 670036/0585 102633

Apologies to Active

Active software are owed an apology for an error made in the review of their Zoom CD. The telephone number that should have been given was 01325 352260.

Active also report that further enhancements are being made to the time of going to press.

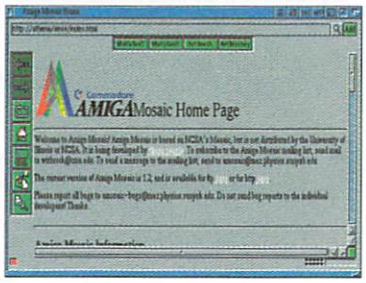
Amigas meet the public

On 26 August to 3 September, Amiga Technologies presented the Amiga to the public for the first time since Commodore's demise 18 months ago at the IFA fair in Berlin. The company bought space in which to present not only the Amigas but also the CD32 in different configurations running various applications.

The event is seen as important by industry commentators concerned that the Amiga's relaunch is not gaining a high enough profile. Petro Tyschtschenko previously announced at a press conference in August that there were no plans to advertise the Amiga until 1996.

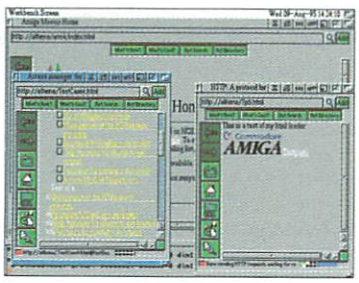
AMIGA

New web navigator



Amiga web users who are tired of hearing about the wonders of the Netscape Internet software will be pleased by the announcement of a more powerful browser designed solely for the Amiga. Designed by the makers of AMosaic, not only does it promise to improve vastly on its predecessor, but it also offers features unavailable on the much vaunted PC/ Mac rival.

A browser is the software that makes navigating the Internet a graphically appealing and user-friendly experience, but up to now Amiga users have had to use the relatively slow AMosaic. Named IBrowse, the new Amiga software is claimed to be up to 30 times faster according to the latest reports from its developers. It will also be packed with advanced features, including the ability to use multiple windows to a greater extent than AMosaic. It will support HTML 1-3 and Netscape commands which will allow for a full viewing of sites previously limited for Amiga owners.



Like Netscape, it will come with a powerful point and click tool bar, but the interface will have the added advantage of being fully configurable which will allow users to customise the package to suit their needs. It will also start up without the need to launch AmiTCP first.

Perhaps the best news of all is that the program is likely to be released as shareware. We hope to feature the program in *Amiga Computing*'s December issue, but in the mean time readers can get further information at the following web site: **http://www.omnipresence.com/ibrowse/**

Knight raises standard

White Knight Technologies is continuing to give high-end Amiga users strong support, with announcements this month of new products and services. Recently appointed as Macrosystem's official UK distributor, they will be selling the Draco digital video system featured as this issue's main story.

In the future, they will also be distributing a new 32-bit version of VLAB motion, the acclaimed Amiga editing card for video. WKT claim it will offer far greater video data transfer rates, lower Jpeg compression ratios and generally far superior picture quality than can be achieved on the current Amiga version.

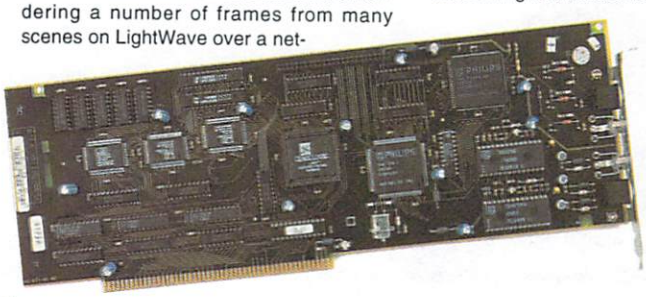
White knight now have a demonstration suite at their offices in Hertfordshire which will allow customers to test out a non-linear video editing system incorporating not only VLAB motion but also the Toccata sound card and the Retina graphics board. Customers who wish to test these products are invited to telephone for an appointment.

They are also offering a new product for serious LightWave users. Named T-Net, it will allow users to distribute the task of rendering a number of frames from many scenes on LightWave over a network of Amigas. Made by Interworks USA, it is designed for use with the maker's ethernet software ELAN-DFS 2 and multiple copies of NewTek's acclaimed rendering package.

Using T-Net, all the machines will share the same scene files, objects and image data, and each machine on the network renders its frames to a shared common location. A single Amiga equipped with either the Broadcast Elite, a PAR card, or VLAB motion can then be used to output the rendered sequences to video tape.

According to WKT, the software's powerful features will allow users to efficiently manage and delegate the distribution of frames across the network. It will be possible to monitor the progress and status of each system on the user's 'render farm' at a glance using a graphic representation of each node showing its current rendering status.

The price is set for £299 for a T-Net with a 5 user license. For further details or to arrange to see a demonstration, call White Knight on 01920 822321.



The all-new 32-bit Vlab Motion, soon to be shipping from MacroSystems

New world order

Another company reasserting its support for the Amiga market is Blittersoft, with the announcement of a number of products to be released in the near future.

Fans of virtual world designers will be pleased to hear World Construction Set 2 is likely to be reviewed in the next issue of *Amiga Computing*. The terrain modeller/animator will use a non-modal interface, allowing users to work in multiple windows to lay out motion paths, adjust colours, and modify ecosystems. The price is set for £119.95.

Blittersoft are also releasing ATAPI.device for £69.95, a product that allows users to attach the extremely cheap ATAPI CD-ROM drives to their A4000s and A4000Ts IDE controller.

With new Picasso II graphic board bundles available with prices ranging from just under £300 upwards, plus the fact that they're making AmiTCP available directly in the UK, Blittersoft are bringing some much needed activity to the Amiga market. For more details call them on 01908 261466.

Amigas for Uganda

Dr Andrew Basden, inventor of the INCA Expert System featured in our September issue, is starting a new initiative to send Amigas to Uganda for educational purposes.

According to Dr Basden , the Amiga is the best machine for the job because it can just be plugged into a TV without requiring a monitor. He is hoping that people with unwanted Amigas or even components will send them in for the appeal. Those with the remnants of an unused A500 at the back of a cupboard somewhere should write to Dr Basden at 24, Penrith Close, Frodsham, Cheshire, WA6 7ND.

TO ORDER
CALL 800-544-6599
MON.-FRI. 9-6, SAT. 9-5 CST
INFORMATION 414-548-8120 • FAX 414-548-8130
TECH SUPPORT/RMAs 414-548-8159 • 2-6 PM, Mon-Fri.

Look for us soon on the Internet!

MasterCard VISA DISCOVER NOVUS

PRODUCTIVITY-UTILITIES

Ami-FileSafe 36.00
Art Dept Pro 2.5.....145.00
Batch Factory 2.0.....49.99
Checks & Balances 29.99
Cinema 4D 319.99
Composite Studio Pro.....159.00
Decision Maker.....229.00
Deluxe Paint V 105.00
DeskTop Magic.....25.00
Digita Organiser.....99.00
Disk Expander.....29.99
Disk Magic.....59.00
Epson Stylus Driver 22.99
Fiber Factory.....67.99
Final Calc 149.00
Final Copy II.....59.99
Final Writer IV.....105.99
Flite Gear 4000 .....160.00
Forge/Essence 75.00
Image F/X 2.1 .....225.00
ImageMaster RT 59.00
Impact! 195.00
LightWave 4.0.....795.00
MacroForm 169.00
Math Vision 2.4 .....93.99
On The Ball 34.00
PageStream 3.0 .....225.00

TOP 10

1. TerMite.....39.00
2. Amazing Computing Magazine...3.49
3. Aminet Set #1.....37.00
4. Gloom AGA.....35.00
5. ASIM CD FS 3.0.....63.99
6. Studio Printer II.....99.00
7. MegaChip 2000 .....199.00
8. Boing! Optical Mouse.....74.99
9. Connect Your Amiga Book.....21.99
10. Image F/X 2.1.....225.00

PhotoGenics 1.25 .....129.00
PhotoPro Toolkit.....47.99
ProWipes Vol II.....65.00
ProVector 3 .....179.00
Real 3D 3.0.....425.00
SAS/C 6.5 .....149.99
Super DJC3 or LJ4 .....38.99
Surface Pro/LightWave.....55.99
TVPaint 3.0.....359.00
Twist 2 Database 107.00
Upper Disk Tools 26.00
Video Toaster 4.0 Upgrade ..459.00
WaveMaker 2.0.....179.99
World Construction Set 159.00

HARDWARE

Clarity 16.....189.99
CyberVision Display Card.....Call
CyberStorm '060.....Call
DigiMax 639.99
Drawing BoardIII 12".....430.00
Drawing BoardIII 18".....822.00
FlickerFixer 265.00
Guru ROM 75.00
Harddrives Various Sizes
Quantum/Microp/Seagate ....Call
Megalosound.....49.99
MIDI, ProMIDI 45.00
Monitor, Electrohome 1440...510.00
Mouse, Eklipse 16.99

dkb

Accel, Cobra 28MHz....155.00
Accel, Cobra 40MHz....225.00
Accel, Mongoose 50MHz 315.00
Accel, Wildfire '060 ..1499.00
SCSI-II HC Rapidfire ..149.00
SCSI Option Ferret.....89.00
MegaChip 2000 .....199.00
MultiStart II 26.00

Micro R. & D.

1200 RAM Expansion 0K .95.00
Directory Opus 5.0 .....89.00
GP FAX Class 1 & 2.....54.99
Gigamem 3.12.....59.00
MIDI Interface 45.00
W/ 2 cables.....61.00
Mouse, Swifty 3-Button.29.00
Power Supply 500.....89.99
Power Supply 2000.....155.99

Micro R&D CDs

Games & Publishing.....15.00
MAND 2000.....49.00
Nature's Backdrop.....48.00
Transition 31.00
Video Pro's Companion.16.00

MODEMS

Supra Corporation

SupraExpress 144 FAX Ext 95.00
SupraFAX 28.8 V.34 Ext 210.00

U.S. Robotics

Sportster 14.4 Ext FAX 119.00
Sportster 28.8 V.34 Ext FAX 214.00

NoahJi's

Retina Z3 4MB.....836.00
Retina Z2 4MB.....549.00
Retina Monitor Switch 139.00
Studio Printer II.....99.00
VLab Y/C Int/Ext ..442/487.00
VLab Motion Card.....1599.00
W/ Toccata Card.....1984.00
W/ Toccata Tools....2009.00

EXPANSION SYSTEMS

DataFlyer 500/8 .....225.00
DataFlyer 2000S 85.00
DataFlyer XDS 74.00
SCSI+1200 .....92.00
SCSI+4000 .....119.00
HighFlyer 4000 Chassis .419.00

Dale Luck's Boing! Mouse

Having trouble finding just the right mouse?

LOOK NO FURTHER!

This is a top-of-the-line optical mouse with precision handling for anyone who wants the BEST for their Amiga.....74.99

MultiFace III I/O 99.99
Personal Anim Recorder ...1549.00
Picasso II Display Brd.....399.99
Printer, Epson Stylus.....490.00
Printer, Foto Fun .....Call
SCSI-II 2008 Oktagon.....149.99
Scanner MiGraph 2400.....989.00
SuperGen SX Bundle 699.00
Tape Drive, Iomega 230MB ...475.00
Tape Drive, Iomega ZIP 210.00
TBC IV 795.00
Trackball, AlfaData.....34.99
Trackball, AmTrac.....69.99

BOOKS

ARexx Cookbook 38.99
Complete Post Production 18.99
Connect Your Amiga.....21.99
Exploring LightWave 3D ..52.99
Mastering DOS 2 .....10.00
Program Secrets 29.00

CD ROM DRIVES & TITLES

NEW!

Sanyo 4X Internal.....224.00
External 319.00
Toshiba 3601B Int.....329.00
Toshiba 3601B Ext 439.00

****

3D Arena 44.00
Amiga Desktop Video CD..27.00
AmiNet 7 .....19.00
ASIM CD ROM FS 3.0...63.99
CD Write.....48.00
Fractal Pro Images 30.00
FantaSeas.....41.00
Fresh Fish Vol 10.....19.00
Frozen Fish Aug.....23.00
Gold Fish Vol 2.....20.00
Light ROM Vol 1/2...35/39.00
OnLine Library.....26.00
PhotoCD Manager 33.99
Ten on Ten Pack.....59.00
Texture Gallery Vol 1 ....39.00
Visual F/X CD Vol 1/2 .. 99.00
World Info 55.00

LEGENDARY DESIGN TECHNOLOGIES, INC.

Business Package 50.00
Address It, Invoice It, DataTax All in One!
DataMix CD 19.99
Family Connections 29.00
New geneology program
Link It! Coming! 41.99
Sound Ideas CD 24.00
ProPics CD.....Call!

CONSULTRON

Cross MAC 79.00
Read/write files from MAC floppies and harddrives directly from your favorite Amiga program.

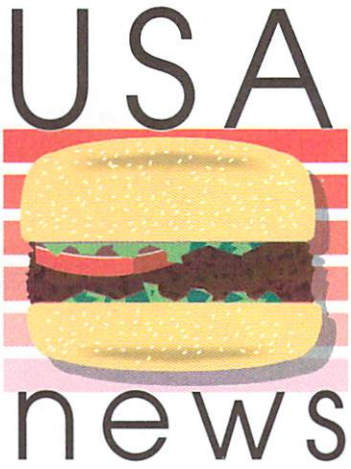
CrossDOS 6.0 .....39.00
The classic PC to Amiga utility has just been improved: faster floppy access, faster HD writes, creation of MS-DOS partitions.

Terms: POs accepted from schools and government agencies • Personal checks require 7 days to clear • Defective products replaced promptly. RMA number required (call 414-548-8159) for all merchandise returns. Returns not accepted after 15 days. Returned products must be in original packaging, postage prepaid. Opened software not returnable. Shipping charges not refundable. Non-defective returns subject to a 15% restocking fee • Not responsible for typos. Prices subject to change.

SAFE HARBOR COMPUTERS

W226 N900 EASTMOUND DR., WAUKESHA, WI 53186

The price isn't right



Denny Atkin reports on the US market's uncertainty about the new Amiga package and price

The US Amiga market is cautiously optimistic about Escom's prospects for reviving interest in the Amiga on this side of the pond. New Amiga 4000Ts are on the way for US customers, but it appears at press time that Escom don't believe there's enough interest in the A1200 over here to justify releasing an NTSC version in North America. This has a large group of dedicated Amiga followers anxious to upgrade to AGA but unable to justify an A4000T upset.

Rumours of a stratospheric $3,500 price for a basic A4000T unit hit the nets in July and nearly caused even high-end Amiga users to panic. However, Escom issued a statement that no price had yet been set, and it appears that the units will sell for under $3000. Even at that price, though, it appears that Escom views the A4000's North American market as strictly high-end video. Despite the Amiga's superior OS, it's hard to justify spending $2995 for a 25-MHz, 6Mb A4000T with a 540Mb hard drive and no monitor, when the same money will buy a name-brand 120MHz Pentium system with 16Mb, 1.2Gb of hard drive space, a 17-inch monitor, and a quad-speed CD-ROM drive.

Despite a growing concern that Escom have not only picked up Commodore's hardware line, but also their marketing prowess, a number of US companies are still working hard to provide new products for Amiga users. DKB has a 68060 board in the works (look for details next month), Final Writer 4 just shipped, and Oregon Research has updated Termite, the only commercial terminal program available in the US.

Gnawing on a New Termite

Oregon Research have updated their popular Termite comms software (distributed in the UK by HiSoft) to version 1.10, which sports a number of new features and bug fixes. Among the improvements are built-in ZModem (the program still supports external XPR protocols as well), built-in ANSI and VT102 terminal emulations, as well as XEM-based support for the RIP graphics terminal emulation popular on PC BBS systems, much faster scrolling, and a multitasking review buffer.

Other enhancements include chat window history, an improved dialer, support for multiple palettes, ARexx support in the macro subsystem, and an improved manual and quick-reference card. Most of the nagging bugs that plagued the initial release have been squashed – I have yet to see a crash in this version.

The update price in the US is $10 for a new disk and quick reference card, or $15 with the improved manual as well. For more information, contact Oregon Research, 16200 SW Pacific Hwy., Suite 162, Tigard, OR 97224 USA; phone (503) 620-4919; fax (503) 624-2940; or e-mail orres@teleport.com. (Contact HiSoft for U.K. update information.)

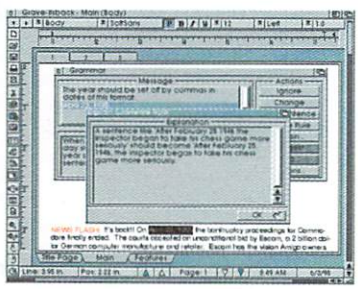
SoftWood branches out

SoftWood, once the tiny publisher of a few top-notch productivity programs, are branching out to become one of the big players in the US Amiga market. The company recently purchased the assets of now-defunct New Horizons, and now they've announced that they'll be carrying Phase 5 hardware products in North America, including the Cybervision 64 graphics card, Blizzard 1230-III accelerator and 1220-4 RAM board, Fastlane Z3 SCSI card, and Cyberstorm 060 accelerator for the A4000. Other exciting news is that SoftWood have hinted that the company will be working with Phase 5 to bring 68060 accelerators to the A1200, A2000, and A3000 series as well.

In the meantime, Final Writer is seeming to be an oddly inappropriate name for the company's word processor. SoftWood has now released version 4 of this 'Final' program. The updated version now sports an improved user interface with click-tab access to pages, sections, and requester areas, making many functions a click or two away and saving the trouble of working through layers of requesters.

Casual writers will appreciate the addition of a professional grammar checker to the program, as well as the ability to pull up readability statistics. And if you've cursed Final Writer's mechanism for selecting bold and italic text, you'll be happy to know that it's finally been made simple. The upgrade's only $30 from any previous version.

In the US, contact SoftWood at (800) 247-8330 (voice); fax (602) 431-8361, or e-mail 75300.670@compuserve.com for more information. European users should contact their local distributor.



Final Writer 4 sports an improved user interface, as well as a grammar checker

Breakup of the CIS

The CompuServe Information Service (CIS), home to four Amiga forums and the only US online service with easy access from the UK, has announced dramatic price cuts. The network's hourly rates have dropped from $4.80 an hour to $2.95 per hour, and the $9.95 monthly fee now includes five hours of access to all services.

Revamped software is on the way for the Mac and PC, but it remains to be seen whether CIS will support Amiga developers who want to create front-ends for our favourite computer. Hopefully they will, as it appears CIS isn't going to update the text-based portions of its services, but rather concentrate on building its Mosaic-like graphical user interface.

CompuServe also announced that they're going to create a second service, code-named WOW!, that will be geared more towards novice computer users.

TURTLE LIGHTNING AMIGA DOMAIN

Amigas' Best: TLAS - FISH - TBAG - EUROPEAN - LICENSEWARE - COMMERCIAL

COMMODORE AMIGA MOUSE $19

GRAPHICS BUNDLE TV TEXT PRO DELUXE PAINT 3 $29

GOLDEN IMAGE OPTICAL MOUSE $22.50

NO-BOX COMMERCIAL SOFTWARE HITS

Archer Macleans Pool	$11	Gazza 2	$10	J. Pond 2, RoboCod AGA	$6	Shuttle	$14
Armalyte (Space Gm)	8	Gee Bee Air Rally	5	Nigel Mansell Racing AGA	9	Sinbad	8
Back to the Future 3	11	Golden Axe	9	Overkill AGA	9	Spindizzy Worlds	5
Blaster	9	Hacker 2	5	Populous 2	14	Super Off Road	9
Blob	9	Hole in One	5	Railroad Tycoon	14	SWIV (nice combat game)	10
Body Blows Galactic	9	InfoFile	5	Shadow Warriors	7	The Combo Disk	6
Cyber Punks	9	James Pond 2, RoboCod	6	Shanghai	5	Toyota Celica-PAL	$12
						Total Recall	9
						Tournament Golf	5
						Trolls AGA	9
						Wonder Dog	10
						Zool AGA	9

GREAT TLAS DISKS FOR $1.50 EACH OR 20 FOR $25

HOME & BUSINESS:
116–SPREADSHEETS
286–LABEL PRINTERS
287–EASY BANKER
288–PENNYWISE
289–VIRUS KILLERS
321–VIDEO FILER
396–BIZCALC
400–BANNER MAKER
449–BUDGET
455–B-BASE 3
472–MULTIDOS & SID
473–COOKBOOK
520–TURBO PAL F/1.3
620–QUICK-PAL F/2.0x
671–KICK INSTALL 1.3
716–SCREEN BLANKERS
720–JR-COMM
741–PK-ZIP CRUNCHER
788–BEST DISK COPIERS
815–MAGIC WORKBENCH
821–DISK SALVAGE 2+
843–NCOMM 1.92
895–BLITZ BLANKER*AGA
901–VLT F/2.0 TELECOM
902–S KICK F/2.0 a3.0X sim
905–NEWICONS F/2.0X HD
913–Screen Blankers F/2.0X
946–DISK MASHER V 1.53"
947–H-D GAME INSTALL
948–CRUNCH-MANIA V 1.91"
949–ZIP & UNZIP

791–METALLICA 1 OF 3
792–METALLICA 2 OF 3
793–METALLICA 3 OF 3
830–OCTAMED V2.0
844–HEAVY METAL MUSIC
846–CRAZY MEDS
852–CHURCH MUSIC
856–DOS TUTOR F/2.0x
857–TERM V4.0 DISK 1
858–TERM V4.0 DISK 2
862–CHRISTMAS CLIPART
863–PLANTS/CHRIST-CLIP
864–BEAUTY-GALS #3
865–BEAUTY-GALS #4
9–ADVENTURE MAKER
10–STAR TREK #2 DISK 1
11–DISK 2 OF TREK #2

GAMES:
12–DISK 3 OF TREK #2
13–WANDERER
14–STAR TREK #3 DISK 1
15–DISK 2 OF TREK #3
21–SEALANCE SUB GM
22–YAHTZEE (3 GAMES)
24–WHEEL OF FORTUNE
44–DOWNHILL SKIING
55–ZERG D&D ADV.
62–DRIP (ARCADE GAME)
70–MISSILE COMMANDS
72–DRAGON CAVE
78–PETERS QUEST
79–MEGA BALL
80–PAC MAN+
96–TANKS/INTERFERON
103–TETRIS GAMES
114–LEMMINGS PLAYABLE
128–SPACE GAMES
136–HATE (Zaxxon clone)
137–BLACKJACK & BANDIT
143–NEBULA
147–INTREDIP (TANK)
148–BOULDER DASH
162–VIDEO POKER
176–GALACTIC WORM
190–MORIA D&D ADV.
191–KINGDOM AT WAR
194–SINKING ISLAND 3
240–CHESS & PACCER
245–CHECKERS
255–PINBALL
282–SYS (ARCADE)
328–WANGLE & TRIX
349–OXYD
378–DOMINOS & CARDS
398–LEGEND OF LOTHAN
403–INTRUDER ALERT
433–SCUD BUSTER +
468–LEMMINGS TRIBES PLAYABLE DEMO
470–SEUCK GAMES
492–WALKER (Playable)
463–CATACOMB (Adv)
630–KLONDIKE 2 AGA #1
631–KLONDIKE 2 DISK 2
632–KLONDIKE 2 DISK 3
940–CRAZY-8 & SOLITAIRE

GAMES:
941–KNIGHTQUEST 2.0X
942–AIR TAXI 2.0X – 2 Meg
950–DLX PAC-MAN ECS
907–LION KING DEMO AGA
908–ALADDIN (AGA)
673–DEFENDER
676–MECHFIGHT DISK #1
677–MECHFIGHT DISK #2
679–TAILSMAN 2 MEG #1
680–TAILSMAN DISK #2
684–ULTIMATE RIDE
728–TRODDLERS
766–DESERT STRIKE (DEM)
772–POPEYE
784–GIGATRIS (AGA only)
796–MEGABALL 3 (AGA)
812–SCORCHED TANKS
816–INCINERATOR
837–REUDA & TANKX
925–ZAXXON F/2.0-3.0x
926–CHARR (Tanks)
936–SPACE TAXI 2 *1.5 Meg

EURO GAMES
FATTER AGNUS REQ
500–NO MANS LAND
501–STORYLAND 2
502–PONTOON
505–WASTELAND
509–BALLOONACY
514–SUPER PACMAN
515–COLORING BOOK
517–LEAP'N LARRY
523–LANGUAGE TUTOR
524–DONKY KONG *1.3
533–PINBALL FANT. DEMO
535–FIRE AND ICE
561–PARACHUTE JOUST
575–STARBASE 13 #1
576–STARBASE DISK #2
646–XENEX (Asteroids)
647–JUDGEMENT DAY F/2.0x
906–XMAS OBSTICKLE

EDUCATIONAL:
95–JAPANESE TUTOR
188–STAR CHARTING
200–STATES/MATH 1.3

EDUCATIONAL:
338–CROSSWORD GEN.
345–COMPUTER TUTOR
350–DESERT STORM
399–BIBLE PROSPER
399–B.P. SPANISH
495–MATH PLUS
637–WEATHER (AGA) #1
638–WEATHER DISK #2
639–WEATHER DISK #3
669–MATH-BODY-COLORS
688–SOLAR SYSTEM
719–ASTRONOMY
779–COMMUNICAT ALL
783–LITTLE TRAVELLER
800–MATH WIZARD
801–CHEMISTRY 1
853–NIGHT MATH ATTACK
889–FRENCH VERSE (2.0)
890–BLACKBOARD (2.0)
891–AWARD MAKER 2
892–PAINT IT (2.0 only)
893–PICTURE MATH F/2.0X
894–KIDS DISK 5 F/2.0X
914–SPELLTRIS TETRIS
916–STATES OF EUROPE
917–WORLD WAR 2
935–TYPING DRILL
938–AMIGADOS MANUAL 2.0x

MEGALOSOUND Sound Digitizer, many special effects, High speed sampling, 8-Bit Stereo Sound sampling hardware with volume control.
ONLY $49

SQUIRREL SCSI Plugs into your A1200 or A600 PCMCIA slot to attach any SCSI CD-ROM Drive or other SCSI-1 or SCSI-2 Device. Comes with Software Drivers and other Utilities.
ONLY $97

AGNUS – 1 MEG 8372-A	$37
22.04 ROM CHIP	29
2.04 ROM CHIP W/WIRE	32
1.3 ROM CHIP	14
3.1 ROM CHIP for A500/A2000	69
CIA 8520 CHIP	15
SUPER DENISE 8373	33
DENISE 83622	16
PAULA 8364	16
GARY 5719	14
68000 CPU CHIP	17
A520: AMIGA TO TV MODULE	45

NOW OPEN 7-DAYS A WEEK TILL 9pm CENTRAL

A-55 Template for D. Paint 4. Gives you Keystroke Aid. Durable Lexon fits top of the keyboard $9 $9

WE ALSO HAVE FRED FISH - TBAG- ASSASSINS EUROPEAN: ALL $1 EA.

$5 GET OUR $5 4-Disk Intro GAMES & CATALOG

BIBLE SEARCH $6 3-DISKS $6

24-HOUR FAX 915-563-4315

WE HAVE FRED FISH, ASSASSINS, EUROPEAN, TBAG, ALL FOR JUST
$1.00 Each
FRED FISH NOW TO 1060+

C-63 BLACK MAX JOYSTICK $4.00
C-66 MARATHON JOYSTICK $4.00

HUES ART DISK-MAGAZINE 2-DISK SET **$3**

WE SHIP WITHIN 24 HRS!

★ CD-32/CD-TV/CD-ROM SALE ★

AM. HERITAGE 3 DICTIONARY–CD-32/CD-TV	$10
CLASSIC BOARD GAMES–CD-32/CD-TV	$8
DEFENDER OF THE CROWN–CD-32/CD-TV	$13
GROLIER ENCYCLOPEDIA 2–CD-32/CD-TV	$22
INSIGHT TECHNOLOGY–CD-32/CD-TV	$14
WRATH OF THE DEMON–CD-32/CD-TV	$7
DIGGERS–CD-32	$14
GLOBAL EFFECT–CD-32	$14
GUINNESS BOOK OF RECORDS–CD-32	$14
PINBALL FANTASIES & SLEEPWALKER–CD-32	$14
SUPER METHANE BROTHERS–CD-32	$13
WEMBLEY INTERNATIONAL SOCCER–CD-32	$13
ILLUSTRATED HOLY BIBLE CD-32/CD-TV	$15
POWER PINBALL	$10
CHAOS ENGINE – CD-32	$16
KINGPIN CD-32	$24
PINBALL ILLUSIONS	$39

VALUE-PACK #6 – INCLUDES
INFOFILE – Database Program
F-40 PERSUIT *PORTS OF CALL* WHO, WHAT, WHERE, WHEN, MASTERTYPE.
Get all Five Programs for $14

VALUE-PACK #10 – INCLUDES
MAXIPLAN PLUS V2.70
PORTS OF CALL
ZANY GOLF (Miniature)
Get all Three Programs for only $19

VALUE-PACK #3 –
PHASER: Home Finance Manager
WHO/WHAT/WHERE: All in 1 Organizer
MASTERTYPE: Typing Tutor
F-40 PURSUIT: Auto Race Game
HOLE IN ONE: Miniature Golf
$9

★ GREAT FULLY BOXED COMMERCIAL SOFTWARE ★

ADV. D&D HILLSFAR (PAL)	$12	DINO WARS	$5	HOUSE OF FLUX (Space)	6	PAGESETTER	4
AMIGA VISION	24	DONK	12	HUDSON HAWK	8	PINBALL ILLUSIONS	Call
AMIGA VISION PRO	39	DOUBLE DRAGON (1.3)	6	INDY HEAT	12	POWERSTYX	5
ANARCHY (Space Gm)	9	DOUBLE DRAGON 2	9	INTELLITYPE (Tutor)	19	PREDATOR-2	9
BAT-2	12	F-1 RACING	27	IT CAME FROM THE DESERT	15	PUSH OVER	7
BLUES BROTHERS	12	F-15 STRIKE EAGLE 2	8	JETSTRIKE	10	RAMBO 3	9
BRAVO ROMEO DELTA	9	FIRETEAM-2200	17	JOE BLADE	5	RINGS OF MEDUSA	6
CIVILIZATION AGA	24	FLAMES OF FREEDOM	6	KILLING CLOUD	4	SHADOW OF THE BEAST -3	12
CLEVER AND SMART	5	FULL METAL PLANET	17	KIND WORDS Wordprocessor	4	SHADOWLANDS	12
CLOWN-O-MANIA	5	GENESIA	17	KNIGHTMARE	15	SIM CITY 2000 AGA	24
COLONIZATION AGA	39	GLOBAL EFFECT	27	LEANDER	11	SKYBLASTER	5
COVERT ACTION	14	GLOBDULE-(PAL)	12	LEGACY	12	STAR-GOOSE (PAL)	5
CRUISE FOR A CORPSE	7	GREENS 3-D GOLF	8	LEGACY OF SORISEL	12	STAR-RAY (PAL)	5
D-PAINT-2	4	GUNSHIP-2000	24	LEGEND (3-D Arcade)	12	SYNDICATE	17
D-PAINT-3	19	GUNSHOOT	5	LEMMINGS 512K	22	T.V. TEXT PRO TITLER	12
DELUXE CLIPART SEASONS	7	HARLQUIN	12	NICK FALDO GOLF	22	TABLE TENNIS	5
DELUXE CLIPART VOL-2	7	HILL STREET BLUES	$5	OVERRUN-(1 MEG)	$12	TARGHAN (D&D Game)	$5
						TEAM SUZUKI	9
						TEAM YANKEE	8
						TERMITE V 1.10	39
						TEXTCRAFT PLUS	4
						THEME PARK	39
						THEME PARK MYSTERY	4
						THUNDER BOY	5
						TIP OFF BASKETBALL	17
						TRODDLERS	12
						UFO AGA	39
						VAMPIRE EMPIRE	5
						WHILD WHEELS	5
						WORLD OF LEMMINGS AGA	22
						WORLD TROPHY SOCCER	5
						WORLD WRESTLING-2	15

TAC-30 JOYSTICK $12.95
TAC-3 JOYSTICK $10.95
ERGOSTICK JOYSTICK $14.95

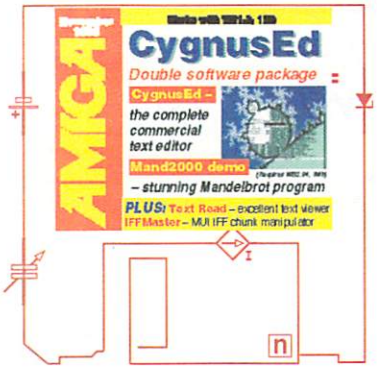
DISK DRIVE CLEANING DISK $3.50
MOUSE CLEANING KIT $4.50

WE DO NOT CHARGE A CREDIT CARD FEE LIKE SOME DO!!

TLAS, P.O. BOX 30499, MIDLAND, TEXAS, 79712
POSTAGE AND HANDLING $5.00
FOR C.O.D. ORDERS ADD $4.00

VISA MasterCard **C.O.D.**

Information and Orders: Call 915-563-4925



The Coverdisks

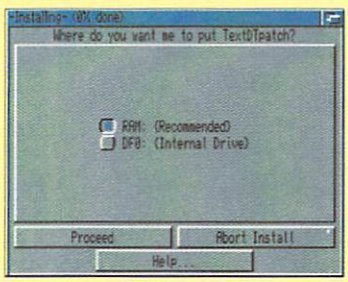
Ed'able goods

Extracting CoverDisk files

If you have already booted this month's CoverDisks, you may have noticed a slight change to normal. We are now using Commodore's installer utility to try and make extracting the archives as easy as possible for you.

To extract any single archive, simply double-click its icon and follow the on-screen instructions. If you want to quickly extract the program to RAM, select the NOVICE level on the welcome screen and press proceed once on the current screen, and then again on the next. The program can now be found in your RAM disk.

You also have the option of using a floppy disk. If you pick this option make sure you have a blank formatted disk at the ready, and if you only have one disk get ready for lots of disk swapping and a long wait.



The Amiga installer needs to be told where to extract the files to. Simply click on the appropriate destination

CygnusEd

Author: CygnusSoftware
Workbench: 1.3

A good text editor is essential for every Amiga owner. From just being able to alter your user-startup to writing your e-mails, you cannot get away from the need for this essential utility. Let's face it, the standard Ed that comes with Workbench is pretty feeble in both the power and looks department, with Commodore doing a typical good job of ignoring all its own style guides.

CygnusEd purports to be the fastest text editor available for the Amiga, and probably any computer. Once you have tried it I am sure you will agree that whether you are writing a ten line e-mail or need to view a 10,000 line manual, CygnusEd will let you happily jump to any point in the text, read, write and modify the file in a blink of an eye. Even your basic A600 will handle kilobytes of text without breaking into a sweat.

I am sure most of you are quite proficient with using a keyboard and the language of your choice, and with these basic skills you should find CygnusEd a doodle to use and should be able to produce reams of text in no time at all.

As CygnusEd has evolved over the last eight years it has picked up some pretty impressive and very useful features along its way. Potentially one of the most useful or lifesaving functions is the extremely comprehensive undo/redo option. Basically, CygnusEd has an unlimited undo buffer, only restricted by how much memory you want it to be able to use.

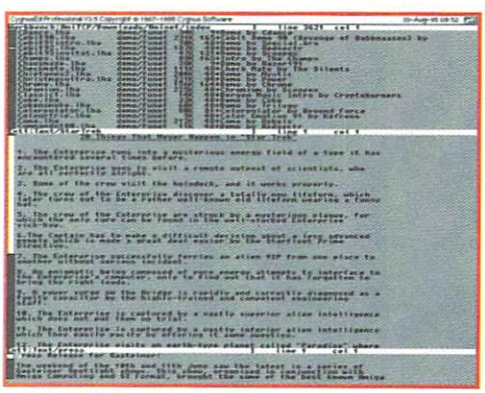
Most editors at the most only allow you to undo/redo the last action or line worth of text. Well there's none of this pussy footing about for CygnusEd. If you have a big enough undo buffer you could delete every line from a text, and then simply by pressing right Amiga u you can watch as the entire text magically reappears line by line in front of your very eyes.

ADJUSTMENTS

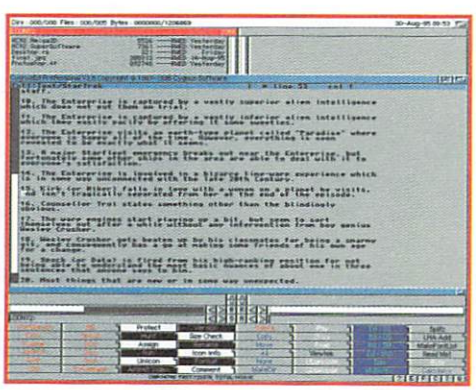
The Environment menu in CygnusEd actually consists of three 'hidden' menus, letting you adjust almost every aspect of the editor – from the typical options of screen size, font type and word wrap to the more unusual ones such as letting you adjust the screen scroll borders and the exact tab positioning.

Another unusual feature is the way CygnusEd handles multiple files. If you choose to open another document the CygnusEd screen will split into two, allowing you to view and edit both at the same time. This is very handy if you need to look at some reference material while doing some writing, and is better than having to resettle with multiple windows.

For all you people out there with Workbench 2 or above you are going to be able to take advantage of CygnusEd's comprehensive ARexx port. Now, most people might be wondering what's the point of an ARexx port on a text editor? Well for starters, any



CygnusEd allows multipal views



Workbench 2 users can open CygnusEd on any public screen

Disks

Faulty CoverDisks

If you should find your *Amiga Computing* CoverDisk damaged or faulty, please return it to:

TIB Plc, TIB House, 11 Edward Street, Bradford, W. Yorks BD4 7BH.

Please allow 28 days for delivery

Amiga Computing brings you another full commercial product – CygnusEd, the fastest text editor you can buy. Also included is the best selection of this month's Aminet downloads

programmers out there will be able to get CygnusEd to automatically save and compile the current program they are working on, all from the comfort of CygnusEd. If you wanted, you could get it to save off different versions each time you compile.

Possibly of more interest to Joe Bloggs is the fact that CygnusEd has a versatile macro function which lets you record a number of different keystrokes and menu functions which can then be repeated over and over again. What is the point in that? Well, I will tell you. If you have a long list that needs reformatting, why should you have to do the same thing for every line? All you have to do is record a macro, showing what you want to be repeated for each line. Once that is done you can then get CygnusEd to do all the hard work by it repeating the macro for each and every line.

TOTAL SUPPORT

Included with the CygnusEd package are a number of support programs – Ed, MacEd and RecoverCED files. Ed is a small program that can be used to launch the main CygnusEd executable. You do not have to use this to run CED, but if you use it there are a number of advantages. Firstly, it allows you to run CygnusEd in a dormant state, meaning the main CED window will not appear. Then, when you want to use CED it will appear straight away. Using Ed, it is also possible to load a file directly into a copy CED that is already up and running.

MacEd has nothing what so ever to do with Macs, you will be glad to know. It lets you create and modify CygnusEd's macros away from the main program.

Finally, RecoverCED files is a handy little program which, if your machine crashes while you are working on a document, will try its best to recover those files. It is not guaranteed 100 per cent, but any chance of getting lost files back is better than none at all.

If you are having problems with any of CygnusEd's functions then there is an extremely comprehensive Amiga Guide document detailing every aspect of CygnusEd. Other than that, the best way of finding out about CygnusEd's functions is just to try out all of those lovely menu items. ➤

Mand2000

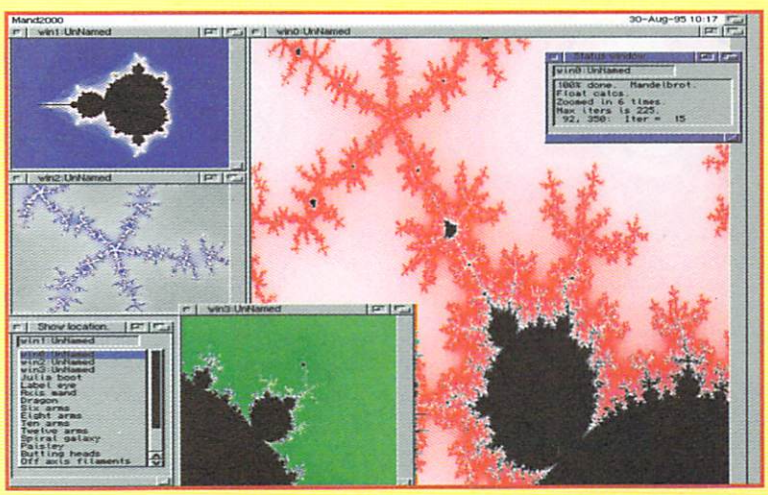
Author: Cygnus Software
Workbench: 2.04

Mand2000 has to be the best fractal exploration program available for the Amiga computer. It provides a super simple interface combined with a stupifyingly fast screen update.

Exploring a fractal in Mand2000 is simply a matter of double-clicking where you want to go and you will instantly zoom into the area you chose. If you want to decrease the zoom amount just press the D key, and you zoom straight out. Also, if you want to move to a slightly different position, simply click on the Mandelbrot and slide the area to where you want it.

One of the impressive parts of Mand2000 is the window approach it takes. You can literally have dozens of separate fractal windows open all showing different parts of the Mandelbrot set – you can even have a separate window open showing what part of the Mandelbrot you are currently looking at. The program is not restricted to only the Mandelbrots as it will also allow you to explore the Julia set.

If you own an AGA machine, Mand2000 lets you access a bewildering number of screen modes, supporting Ham8 and Ham6 screens resolutions all the way up to 1280x512 – allowing every window you open to have its own separate palette.



Probably the best Mandelbrot explorer in the world – even works on graphics cards

The real problem with trying to explore fractals is that the deeper you go into them, the longer it takes to produce each screen. Mand2000 give you a number of options to allow you to preview or speed up the screen drawing process. Firstly, you can change the number of iterations the computer will perform – decreasing the number of iterations increases the screen speed, but reduces detail.

The other option you can use is the number of passes Mand2000 will make to draw the screen. The effect is that on the first pass the picture is highly pixelated, with each successive pass adding more detail to the screen. If you only want a rough idea of what you are looking at this is an excellent feature because you can interrupt the drawing process and keep on moving around the fractal.

PicBoot

Author: Magnus Holmgren
Workbench: 2.04

Every one must have seen the Windoze startup picture, with the little blocks all evaporating away. It may seem a trivial point but it's quite nice to have some sort of picture to look at while you wait for Workbench to load.

Commodore may not have seen a reason for including some sort of boot picture, but from all the small utilities and the number of boot pictures that pop up on the Aminet, most of us seem to want one. A boot picture that is.

PicBoot was one of the earliest boot picture utilities I can remember. This latest version provides you with load of options. For starters, it can handle both GIF and IFF files, and the routine that unpacks them is extremely fast – so the time it takes to boot up your computer is not changed too much.

If you use the xpk compression libraries, PicBoot will even handle IFFs that have been compressed. It is also possible to fade in and out your chosen picture, which looks quite flash, and will even fade in Workbench if you so wish. AGA owners will also have the benefit of a silky smooth 24-bit fade.

All you people with a collection of different possible boot pictures will be pleased to know that PicBoot can use a script file to randomly choose one of the pictures. So you will never get bored with the same picture being flicked up every time you boot your machine.

Banish that blank boot screen and add a little colour to your life with BootPic

Clouds

Author: Krzysztof Kobus
Workbench: 2.04

To quote the author: "Clouds is the first program on the Amiga platform giving you visual modelling and realistic animation of the turbulent motion of clouds. It is based on spectral synthesis method. The method employs a variety of intuitive parameters describing natural properties of clouds phenomena, as cloudiness, contrast, wind direction, strength of wind, and turbulent changes.

"Such a wide range of controls allows a creative animator to generate all kinds of clouds, gases, mists and so forth. Resulting images can then be used as backgrounds, textures in 3-D programs, or alpha channel information – to mention just a few possibilities."

Blimey, sounds pretty impressive does it not? Basically, Clouds will produce beautifully animated clouds that will roll across your screen with such majesty, you will be instantly relaxed. Well, I feel better already.

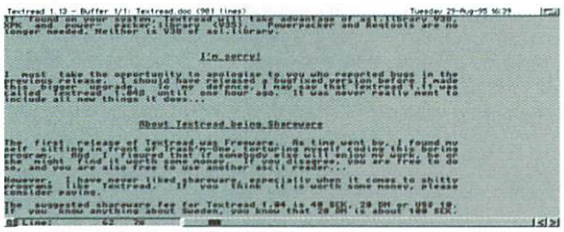
Animate clouds with Clouds

Text Read

Author: Martin Blom
Workbench: 2.04

Slagging off the standard Commodore utilities is always a favourite hobby of mine and it has to be said that 'more' is pretty dire. What you need is a decent text reader. Well lo and behold, it looks like Martin Blom had the same idea.

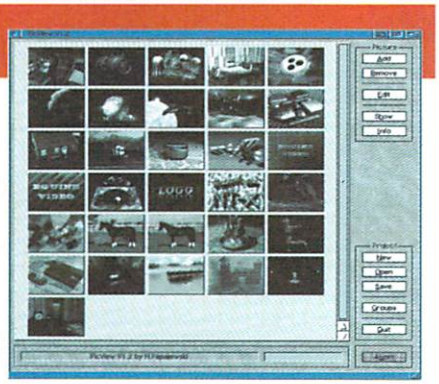
Text Read is a powerful style guide compliant text reader and will happily handle xpk'ed and power packer files. Some of the nice features of Text Read are the search facility, jump to line/percentage, and a handy scroll bar to let you quickly scan through any document. It is also possible to specify what font and screen mode you want, and print and save of the current document.



A decent text reader is an invaluable addition to anyone's utility collection

Pic View

Author: Holger Papajewski
Workbench: 3.0
Magic User Interface



This powerful picture cataloguer will let you quickly access all your collection

This could be just the thing for anyone with a large catalogue of pictures on their hard drive, or any of the picture CDs that are floating around the PD house at the moment.

Pic View allows you to produce a catalogue of all your pictures. It is very simple to operate as you use the file requester to select which pictures you wish to catalogue, and go. For each picture a thumb nail, grey-scale representation is produced.

Once the catalogue is made, you scroll through the list of images and double-click on an images to display that particular picture, or just get certain information about the picture – such as its size, name and where it is. If you have a large collection, it is possible to group related pictures together, making finding a particular image much easier.

Pic View uses datatypes to import the various pictures, so whatever picture datatypes you have, pic view will handle. Currently, that could include IFF, PCX, BMP, Jpeg, Targa, Mac Paint, Tiff, PNG and even Klondike card sets.

ATE

Author: Gordon Fecyk
Workbench: 2.04

Amiga Type Engine allows you to use the plethora of outline fonts that are available in the commercial and public domain. Essentially, it allows you to access Adobe type 1 and 3 outline fonts just as though they were normal Amiga bitmap or Compugraphic fonts.

All you need to do to use ATE is copy any postscript fonts you have into the PSFont drawer and voilà, next time you pop up a font requester there will be a host of new fonts available for you to use, in any of your art or writing packages, or just for Workbench.

The only font provided with ATE is called funky font – it's not too useful but will give you an idea of how ATE works. There are plenty of disks and CDs that have shareware PSfonts on them, and if you got our cover CD there was a complete section devoted to fonts, so you should now have a completely new selection of fonts at your disposal.

BMP Datatype

Author: Gunther Nikl
Workbench: 3.0

It's another BMP datatype, but you probably have one already so why would you want a new one. Well, the old BMP datatype only handled the Windoze BMP format, and would only load 16 and 256 colour pictures. When IBM released OS/2, they decided they wanted their own special version just to keep things nice and incompatible. This new version will handle both the IBM and OS/2 version of BMP.

Font Datatype

Author: Michael Letowski
Workbench: 3.0

As we are a friendly bunch down here at *Amiga Computing* we talk to each other, and seeing as we mentioned the Font datatype in the publishing page, I thought it might be nice to have it on the CoverDisk – aren't I a gent? What do you mean, no?

Anyway, this datatype will let you view any installed system fonts in MultiView. All you do is drop load the blar.font file and the next thing you know, you will have a large picture with all the available characters in that font. If you want, it is then possible to save off the picture so you can do any number of nasty things to it.

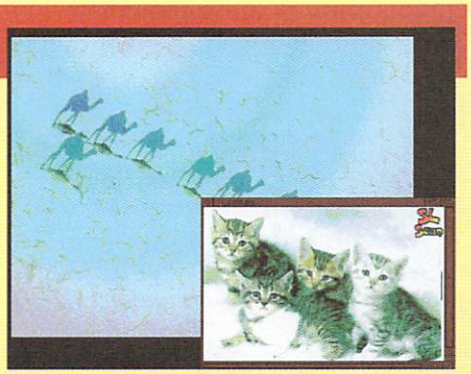
Tiff View

Author: Bert Wynants
Workbench: 2.04

If you remember, last month we had a Tiff datatype on the CoverDisk. Well, from the same author we now have Tiffview. The title of the program is a little misleading because as well as being able to view Tiff files, there are a whole host of options and functions available for you.

For starters, Tiffview directly supports IFF, Tiff, Jpeg, GIF and MacPaint picture formats, as well as any datatypes you may have. You then have a whole choice of display options. Firstly, you can choose what screen mode you want the picture to be displayed in – obviously AGA and graphic card owners have a nice advantage here.

You can then choose from five dithering methods which improve the visual quality, along with how many colours the image should be dithered to. This is helpful if you do not have a 256 colour display because it greatly improves the image quality.



An extremely versatile picture viewer that will handle many different formats

Once an image is loaded, Tiffview can act as a mini image converter, letting you save off a picture either as an IFF, Tiff or Jpeg. If you choose to use Jpeg you have a choice about the quality of the saved image. As Jpeg is a lossy picture format, a high compression ratio means lower image quality, while a low compression ratio leads to better image quality.

Flick

Author: Peter McGavin
Workbench: 2.04

With more Amiga owners getting access to the Internet and CD-ROMs, you are more likely to come across other picture and animation formats. One of the widely used animation formats on the PC is FLI or FLC. Animations in this format are mainly produced by Autodesk Animator (Pro) and Autodesk 3D Studio, as well as many other PC programs.

Flick is an excellent FLI player, and to use it just double-click the nasty looking icon and use the requester to pick your chosen animation. Even though Flick runs under 2.04, it supports a great deal of advanced options. It will take full advantage of Workbench 3 by using the new OS double buffering routines.

Users with either EGS or Cybervision graphics cards will be able to use flick directly on them. AGA owners are not left out as Flick will allow you to replay animations in there full 256 colour glory. If you have a CD32, Flick will even use the Akiko chip.

There are also numerous other replay options for OCS or ECS owners which allow different replay modes depending on what number of colours you would like. For those extra large animations, Flick will spool directly off a disk, and all the options can be changed in the icons tools types.

Considering all FLI animations have to be converted from chunky to planar, you get very good replay speeds on a plain A1200 – even when spooling on a CD.

TAPavi

Author: John Bickers
Workbench: 2.04

To continue with the animation theme, TAPavi allows you to view the standard Windoze video format AVI. The main advantage of AVI over FLI is that it allows animations to include sound, and it was designed to play back animations direct off disk. In some ways it is similar to the CDXL format.

TAPavi will handle a number of different types of AVI files, including both 8 and 16-bit colour modes. If you have an AGA machine then you will be able to view any of the animations in glorious 256 colours.

As for sound, TAPavi will happily allow you to play both 8 and 16-bit sound out through the Amiga's normal audio. One problem, however, is that if your machine cannot play back an animation at its full frame rate, the sound may be a little corrupt, but this happens on PC so it's only to be expected.

IFF Master

Author: Kay Drangmeister
Magic User Interface

Have you ever wondered what lurked in the deepest, darkest, dankest depth of your IFF files? Well probably not. This is a fairly handy little program that lets you poke about with the insides of IFF files.

Another lovely MUI program, IFF Master lets you quickly access all your collection

IFF files are split up into chunks, each chunk containing different information about the file. For example, an ILBM file has a bitmap header and colour map chunks. IFF master knows about these, so can show you the palette used by an ILBM, and also the dimensions and other information about the picture.

"If it sounds like I raved, then I've communicated successfully exactly how groovy this product is".

Ami-FileSafe

"It makes as much difference as adding some fast SCSI Zorro III controller from hell".

all quotes from Internet Review: (comp.sys.amiga.reviews)

available NOW

A Fourth Level Development

Ami-FileSafe
The NEW de facto standard Filing System for your Amiga

pro version

RRP £69.75 inc VAT

for larger & multi-user systems

Secure filing system No more corrupt disks when applications crash whilst writing to disk!!
Super Fast – much faster than FFS.
Instant Directory Listings
Parallel access and negligible performance loss!
Efficient use of disk space.
Large directories do not decrease operating performance.
Multi-User Filing System Support

"There's no doubt about it. This is one *SAFE* mother this Ami-FileSafe system".

A Fourth Level Development

Benchmarks

A3000 030 Oktagon SCSI 2

Test	FFS	AFS	Units
Dirscan	409	1780	Files/Sec
CreateFile	227	1073	k/sec
ReadFile	244	1363	k/sec
Seek and write 4bytes (start & end) x100		53.6 Sec	4.4 Sec

AFS: the Amiga Power Tool!

"Brilliant if, like me, you use your Amiga multi-tasking capability to the max".

Fourth Level Developments Certified Amiga Developers

0117 985 4455 (6 Lines)

Ami-FileSafe
Latest User Version
now with auto FFS2AFS conversion!!

£29.75
p&p £3

Ami-FileSafe Branded Products
Dice V3.01

User Version Limits
Single Hard Drive
Up to 650 Meg
No MuFS
Private user licence
Otherwise as Pro-Version

Ami-FileSafe is distributed in the USA by
INTANGIBLE ASSETS MANUFACTURING
828 ORMOND AVE, DREXEL HILL PA 19026-2604
TEL: 610 853 4406
FAX: 610 853 3733
PRICE: USER VERSION – U.S. $40.00
PRO VERSION – U.S. $99.95

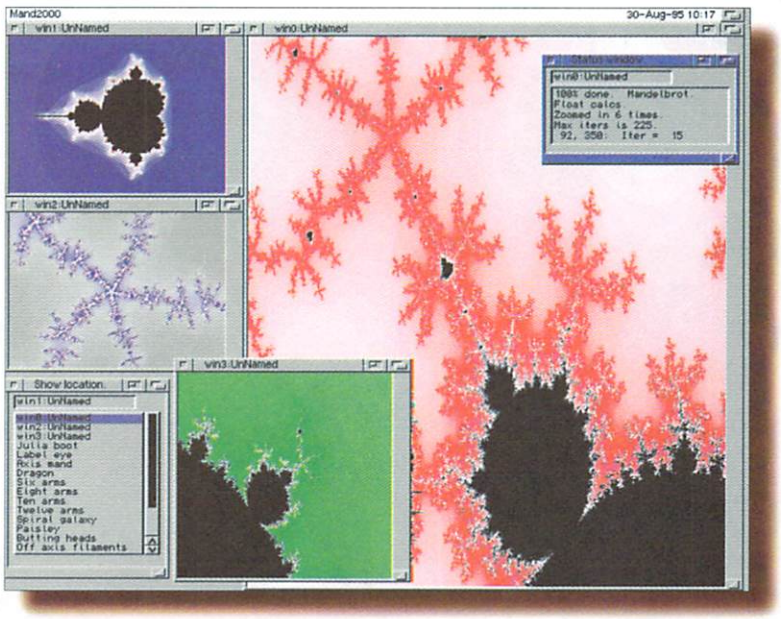
State Sales tax 6% + P&P

"Our German Version distributed by: Stefan Ossowskis Schatztruhe, Essen +49 201 788778

"Tried with Mail Manager again. My *GOD* it was amazing! Tossing sped up from around 500 messages/min up to 1200 or so!"

Mand2000

Now you've had a chance to see what our coverdisk can do, why not upgrade to the full version of Mand2000



Available for only $29.95 on disk or even better value CD-ROM

● The release version of Mand2000 2.0 is regularly priced at $44.95. However, all *Amiga Computing* readers can upgrade to the release version for the discounted price of $29.95. The full release version allows unlimited saving of colour mapped, HAM and IFF24 images, and has no annoying requesters.

● *Mand2000 also has the facility to produce fractal zoom animations. You set up the start point in the fractal, say where you want to go and how many frames it should take. Click on proceed and then go off and have your tea. When you get back there should be a fractal animation you can impress your mates with.*

● There is also a Mand2000 CD-ROM containing the full release version of the software, plus a full CD-ROM worth of images and animations in a wide variety of resolutions, including NTSC, PAL, FrameStore and D1 video. Perfect for the video professional or fractal hobbyist.

● *The CD-ROM version is regularly priced at $59.95, but Amiga Computing readers can upgrade to the CD-ROM, containing over 30,000 frames of spectacular animation, for just $44.95.*

Mand2000 order form

Please rush me:

☐ **Mand2000 at $29.95**

☐ **Mand2000 CD-ROM at $44.95**

Deliver to:

Name (Mr/Mrs/Ms/Miss) _____

Address _____

_____

Postcode _____ Daytime phone _____

I wish to pay by:

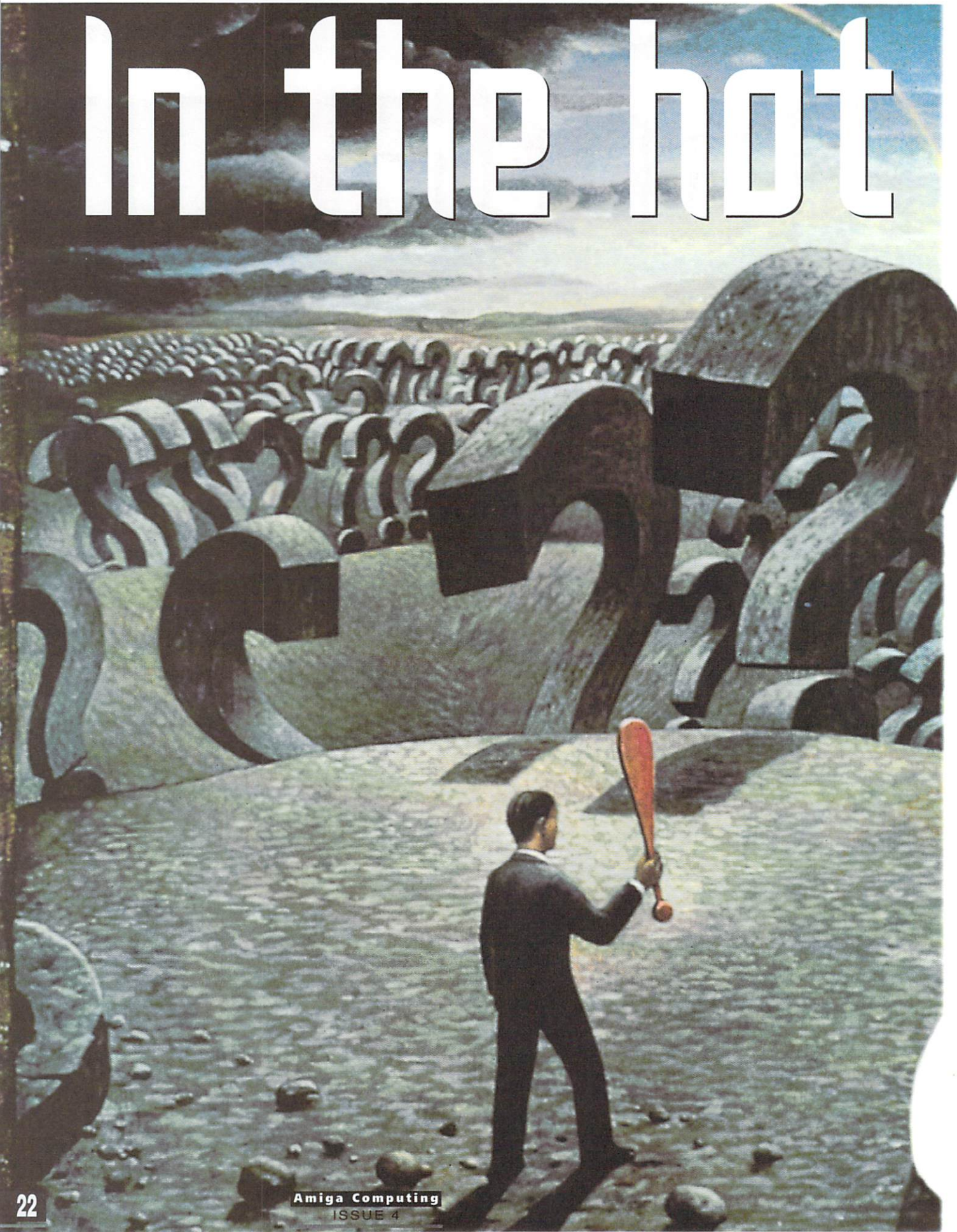
☐ Credit card

Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ Expiry Date ☐☐/☐☐

Please send your order form to:
Micro R&D, Attn: Amiga Computing Mand2000 Offer,
721 'O' Street, Loup City, Ne 68853, USA

☐ *Tick this box if you do not wish to receive promotional material from other companies*

In the hot



seat

It was the height of summer, and the Amiga Technologies press conference announced the rebirth of the Amiga in the UK. Gareth Lofthouse reports on the tough questioning the company had to face

It was the moment we've been waiting 18 months for since the demise of the old Commodore Empire: the Amiga is back, said the men from Escom, and on target to hit the streets of Britain in time for September.

The official UK relaunch of the Amiga took place at a press conference at the Sheraton Hotel in Heathrow on a sweltering summer day in mid-August. Optimists might have taken the sunshine as a good omen, but difficult questions had been fermenting during the months since the takeover, however, and *Amiga Computing* was there to find out what substance lay behind the talk.

The panel assembled to state Amiga Technologies' case included most of the key players from Europe and Britain, which at least showed some encouraging commitment to the key UK market. Petro Tyschtschenko, the company's general manager, was accompanied by Jonathon Anderson and John Smith of Amiga Technology UK, plus PR man Gilles Bourdin, and Barry Thurston of SCALA who was there to orchestrate the multimedia presentation.

It soon became apparent, however, that the amount of new and concrete information available was rather limited. The announced specifications for the roll-out Amigas, for example, held no surprises, with even the faster 060 version of the 4000T not available until November at the earliest.

Amiga Technologies were not in a position to disclose much more about the contents of the software to be bundled with new Amigas either. John Smith, UK Sales Manager, revealed that 1200s would include a database, word processor, spreadsheet, paint package and two games, but specific product names were unavailable.

BUNDLED UP

The confusion over how Scala was going to be combined with 1200s was finally cleared up, with the announcement of two different A1200 bundles. The £399 bundle announced last month will lack a hard drive, and it was decided that it would be impractical to include SCALA with this option. Consequently, a £499 package was announced containing an Amiga with a built-in 170Mb hard drive ➤

Marketing a legend

Asked if there were any plans to advertise the Amiga products, Tyschtschenko replied that this would not be possible until next year. This means that at the time when Microsoft and the Japanese console manufacturers are taking over prime time TV slots, the Amiga will have little presence outside its own specialist press.

Anderson argued, however, that allowances had been made towards distributors to help them with cost, and he expects them to shout about the Amiga in their own adverts. Gilles Bourdin also pointed out that Amiga Technologies' presence at the IFA fair in Berlin showed a worthwhile marketing investment.

What is encouraging is that almost 50 per cent of the 60,000 Amigas allocated for the UK this year have already been sold. Amiga Technologies are confident they'll sell their entire stock of Amigas produced this year.

and Scala MM300, on top of the standard software bundle.

What *was* surprising, however, were a number of statements that contradicted details everyone thought were settled some weeks ago. It appears, contrary to what Tyschtschenko told *Amiga Computing* last month, that the Amiga will be distributed through Escom shops after all – a revelation that came as a relief to those concerned about the Amiga's high street presence this Christmas.

U-TURN

Previously, Tyschtschenko had believed that the Escom staff would be too geared towards PC and insufficiently educated about the Amigas to sell them successfully. The about face, however, seems to be based on the fact that the employees in the UK shops will all have had experience of selling Amigas before the Rumbelows buyout.

CD32 owners on the verge of hara-kiri were given pause for thought as well. While the failure to outline any plans previously had led many to assume the console was to be consigned to the dustbin of computer could-have-beens, Tyschtschenko gave it a more optimistic prognosis.

"We have had tremendous problems obtaining DRAMs, so we decided not to produce the CD32 this year," he offered.

Virtual Amigas

Despite it being the official relaunch of the Amiga, they was no sign of them at the conference. Escom did take the opportunity to unveil the Virtual I-O glasses, the virtual reality headset for which they have exclusive distribution rights.

Two versions will be made available. The basic video model will plug into any machine with a composite video port – for example Amiga and VCRs – enabling it to 2D and 3D films. The price is set for £599, though they hope to drop prices as the technology becomes more mainstream.

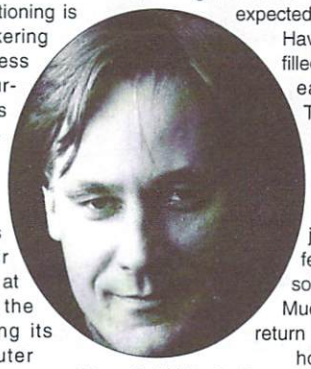
The PC version includes a head-tracker so it can be used with 3D games like Doom or Heretic. However, due to the fact it will require a PAL converter, it costs £899.

Hot suits, frayed tempers

The words 'press conference' might conjure up the vision of large halls packed with hordes of scribbling hacks, places where quickfire questioning is accompanied by a barrage of flickering flashlights from the assembled press photographers. You will not be surprised to hear that this affair was somewhat more – shall we say – subdued.

Ironically, Amiga press members themselves were rather thin on the ground, with staff from the games magazines conspicuous by their absence. It would appear that they, at least, are rather sceptical about the prospects of the Amiga regaining its place at the heart of the computer entertainment industry.

The remaining 'serious' editorial from *Amiga Computing*, Format, Shopper, CU Amiga and JAM magazines assembled at the Sheraton hotel, Heathrow, conversed with strained civility, moaned about the steep pricing for beer, and gave voice to the sort of cynicism I suppose is expected from journalists on these occasions.



Escom's MD Manfred, negotiating in America to ensure the Amiga's success

Having been ushered into a small but well filled room, the tone for the event was set early on. In his opening words, Petro Tyschtschenko excused the absence of Manfred Schmitt, explaining that the Escom MD was striking a deal in America somewhere – perhaps he was negotiating a take-over of Microsoft, he joked. It was the first sign that the conference was more about confidence than solid news.

Much as everyone wanted to proclaim the return of the UK's favourite home computer, however, old tensions within the Amiga community began to resurface once the speeches were over. Perhaps it had not helped that the first half of the conference was as much about Escom's PC line and PC games on the I-glasses as it was about Amigas.

"But you can be sure we will produce it next year. This year we have too many problems with our two main products."

This year though, the only other new products due from Amiga Technologies are the virtual I-glasses (see our new report) and a multiscan monitor that is almost certainly going to be the 14" Microvitec 1438 – though 15" and 17" models are planned for next year.

Neither the speech made by Petro Tyschtschenko, or John Smith, however, confronted many of the doubts that had been lurking at the back of most enthusiasts' minds, and it was only in the question and answer session that the knottier issues were addressed. Pricing was perhaps the most commonly voiced worry.

CLEAR AIMS

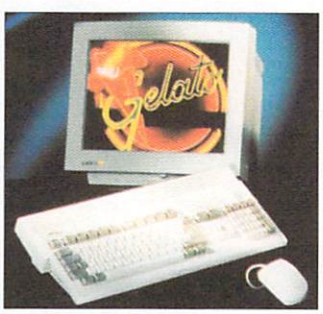
The £1900 ex VAT cost for 4000Ts was the first target, and with faster, fully kitted PCs available at around £1000, Amiga Technologies had to explain where they thought their high-end machine's market lay. "I think one of the problems in the past is that the Amiga has been badged as if it will do everything for everyone," argued Anderson. "We are clearly aiming the 4000T towards the multimedia market. Even though technology has moved on a bit, the Amiga is still the best machine out there because of its multitasking capabilities, among other things, for multimedia."

The multimedia strategy itself was later brought into question, however. Escom themselves are selling cheap, ready-to-run PCs with in-built sound cards and speakers. The terms PC and multimedia are almost synonomous in the eyes of the general public, and even the Amiga's flagship software, Scala, is now available for the rival platform.

Despite being pleased by their PC product, Scala UK's Barry Thurston fought back against the idea that the Amiga was overpriced and behind the times. "You still have to put an awful lot of expansion into a PC to get it up to the effortless performance level the Amiga has for multimedia," he argued. "So your basic cost might be OK, but your actual overall cost will be much higher. That's particularly true," he continued, "when you're talking about distributing information to television. The cost of putting a PAL encoder in a PC is damn expensive."

The argument for the A1200's strengths seemed more compelling, however. Amiga Technologies admitted the

The A1200: Amiga Technologies are confident about Christmas sales



The new multiscan monitor, looking suspiciously like the Microvitec 1438

A4000T: The new green case would have taken too long to produce

Amiga Technologies is run largely by ex-Commodore people, and at one point the panel faced the same sort of criticism over marketing strategy that was levelled at the old company. After all, it was argued, there seemed to be little marketing to raise the Amiga's profile, and not a lot in the way of new products either. "Convince us otherwise !" one person demanded in an increasingly heated atmosphere.

In response, Anderson contested that the massive advertising campaigns from Microsoft and the Japanese giants would just lead to confusion for the public, and added a criticism of his own against magazine publishers. "I think that one of the misdemeanours that most mags have done to the detriment of our industry is to confuse the end users **big time**," he retaliated. "They don't know whether to wait for this or that, and the net result is that they're still waiting. "Anderson's subsequent plea for Amiga Technologies and the specialist press to work together for a successful relaunch did little to calm things down. The Future Publishing camp accused Anderson of snubbing Amiga magazines by giving information to CTW first. There then ensued an argument about who phoned who first, how many messages were left on whose answering machines, and so on, until discussion of the Amiga seemed in danger of being lost in personal disputes.

> The Amiga will be distributed through Escom shops after all - a revelation that came as a relief to those concerned about the Amiga's high street presence this Christmas

Fortunately, the proceedings soon returned to more of an even keel, but a certain amount of frustration remained at Amiga Technologies' failure to dispel some widely held doubts. Perhaps, though, the press were expecting too much from the company in the time they'd had to ramp production up. "We know there is a lot more to be done," Gilles Bourdin acknowledged after the conference had been wound up.

Tyschtschenko, general manager: 'We will start spending on advertising next year.'

machine faced some stiff competition both from £299 super consoles and low priced PCs, but there was a strong belief that the A1200 could win the middle ground as an entry-level computer.

As far as the PC was concerned, John Smith argued, not everyone could afford £1000 even if they wanted one. Tyschtschenko also pointed out that PCs were about to rise radically in price due to the fact that Windows 95 required a minimum of 8Mb of notoriously expensive RAM.

A lot of people originally bought their Amigas to play games, but with Sony's Playstation about to hit the shops, didn't they fear for the A1200's fortunes in the Christmas season? John Smith was unperturbed over this issue.

"I think the kind of productivity software in the pack we were delivering at the end of Commodore's time showed the direction in which we were already moving," he said. "Basically, I think lots of A500/600 users want to move over to the 1200 – they now have computer experience and they want productivity stuff. They know the Amiga is far more than just a games machine, so we will certainly push things towards the productivity side."

Anderson added that it would attract people who were sick of the console's limitations as well. "Most parents want their kids to have more than one option. With a console you either play games or do nothing. I don't think we're directly squaring up to the Japanese here."

Make or break

The Amiga's relaunch is imminent, but its long-term survival is less certain. Amiga Technologies are confident of being able to sell the Amigas allocated for the UK market this Christmas; if they are to prevent it from slipping back into oblivion, however, upgraded machines with bundled CD drives must be accompanied by serious investment in advertising, and the sooner the better.

If it was a pity that the conference led to some angry exchanges between the press and the panel, it was at least a testament to how passionately everyone assembled wanted the Amiga to be reborn. And in raising the spectre of future challenges, it's easy to forget what Amiga Technologies have achieved in getting the computer back into the shops in time for Christmas. Tyschtschenko put it succinctly:

"To ramp production up in three months is very difficult. I can tell you I've never worked so hard in all my life to be successful for the Amiga as I have in the last three months."

Friends in high places

The day after announcing the relaunch to the press, Amiga Technologies presented its UK strategy at a developer's conference. *Amiga Computing* contacted Hi-soft, makers of the Squirrel interface, to find out their reaction to the key issues.

MD David Link's views on the pricing were generally positive. "Taken as a whole package, the bundle offers tremendous value for money," he said. Yes we would all like to see a stand-alone A1200 at a lower price. But I can understand Amiga Technologies' need to put forward A1200s at a price that allows them to go on supporting the Amiga. They've done that by putting forward a very attractive software bundle."

Link did add, however, that he thought the A4000 was over-priced and hoped it would come down in cost once Amiga Technologies had recovered some of its expenditure.

UNCONCERNED

As far as the lack of pre-Christmas advertising was concerned, Link was unconcerned. "Knowing our customers as we do," he commented, "there's a large pent up demand for A1200s and A4000s in the market that will be reached through the individual retailers. People like us evangelise the machine, and that's as good as any advertising given the number of machines available before Christmas."

Link was also impressed by Amiga Technologies' marketing push, although he accepted that Amiga users wanted CD interactive titles as well as authoring systems. "Of course we want products like Encarta and Cinemania," he said. "But that's up to individual publishers to bite the bullet. I think the number of CD drives sold with the Squirrel shows the serious potential for any publisher to move in on that market."

Like Hi-Soft itself, we asked? Link responded positively: "If anybody wanted to approach us with half an idea, or an authoring system, or a title they wanted publishing, we would almost positively seriously consider it."

Not everyonewas so positive, however. Chris Wiles, MD of Active Software, felt the price even for A1200 was set too high.

CD quality cut

For those who missed our initial preview in *Amiga Computing's* July issue, Tune Builder basically offers a totally unique approach to musical production on the Amiga. In the past, producing music to accompany either video or a multimedia production was both expensive and time consuming, and more often than not both.

Fortunately with its arrival, custom-built, pro-quality CD sound, is within the reach of quite literally anyone. And there's no need for any musical equipment, talent or studio facilities.

As any videographer will tell you, quality pre-recorded music is expensive, and even when you've got the basic working material you're still looking at a big investment in time, money and effort to edit and incorporate the music into your production. Even then you're by no means guaranteed that the end results will fit perfectly into the overall production – crescendos in the wrong place, quiet sections where you want a bit of excitement, the list goes on.

Fortunately, Tune Builder puts all these problems to the sword by providing a fully interactive customising process that allows the user to create music of precise length, tailored throughout in the style of your choice. Whether you need a change of mood or a dramatic crescendo, the exact slice of music you need can be slotted exactly in the right spot and repeated as often as necessary.

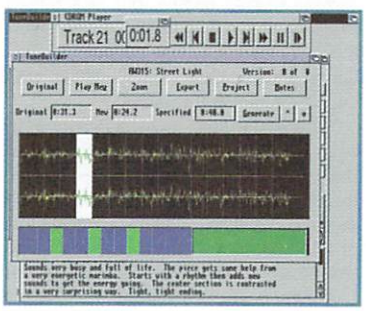
The question is, how can a combination of a musical illiterate, some software, and TB's accompanying CD's create pro-quality music that normally would keep a professional musician busy for hours if not days. The simple answer is that although you have control over the construction, the tunes themselves and all the hard graft that went into them has been done on your behalf by a team of professional musicians.

Obviously, the process of transforming a musically inept computer jock into an instant impresario all hinges on the skill of those lovely people who put TB's Arpeggio CD collection together. During what must have been a nightmare production process, the musos behind the music built multiple edit points directly into each tune, which were then picked up by the accompanying software. As a consequence, the software can take a slice out of this digital loaf and cut, copy and paste it back in anywhere you need it. As any muso will tell you, simply taking a random slice out of a song and slapping it down elsewhere is a recipe for disaster. Unless you're either very gifted or extremely lucky the timing, the key, and overall continuity will be shot to bits.

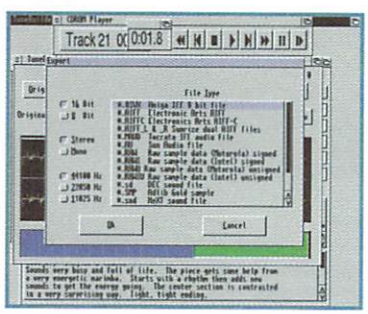
LARGE AND SMALL

During testing I dissected and totally reorganised entire tunes, shrank them to a tenth of their original size and expanded others from 30 second originals into minutes. Every time the end results were perfect, no clicks, no pops, no agonising key changes or obvious continuity faults well perhaps one or two...

As you may already be aware, one



Drag and drop simplicity amidst incredible sound and production quality



Just about every sample format imaginable from 8-bit mono to full 16-bit CD stereo

The bass line

Aside from the ease of use, time saving and all the other point bonuses for Tune Builder, the overriding must for any library is the overall quality of the music. All too often, libraries consist of innumerable synthesiser specials with the inevitable 'chicken in a basket' overtones that make for more of a novelty item than a serious production tool.

In Tune Builders' case there is a slight cheesy feel on the odd track, but in general the collection is truly excellent with vocals and guitars blended with believable brass and impressive percussion. Better still, all the major sampling formats, options and rates are supported across Amiga, PC and Mac and others. There's even a direct support of the Toccata card.

In short, Tune Builder is nothing short of essential for anyone involved in serious video or general multimedia. It will literally save hundreds of hours of hard graft while improving your overall production quality. If you can afford it, and can envisage a return on your investment, you can't really afford to be without it.

Mix and match

On initial boot-up, the first port of call is the Library section where you audition and select from the 344 assorted tunes spread over the 12 accompanying CDs. Needless to say, some form of filtering, not to mention auditioning, is essential, but fortunately both areas are something TB is particularly adept at.

Initially, the library presents you with the complete list and you're free to scan the collection and read the notes appended to each track – regardless of whether the CD is actually in the drive. If you find something you like the sound of, either during a browse or a dedicated search, it can be tagged and will then always appear in the search window regardless of subsequent search parameters.

If time is of the essence, or perhaps you already have a firm idea of what you're after, the obvious step is to forego browsing and go straight into a search. As you've probably gathered courtesy of the screen shots, filtering the 344 tunes is particularly well implemented. The first step is to select a style or even multiple styles. If this doesn't trim down the selection sufficiently you can narrow the selection further by searching by word, defining preferred tempos and/or a range of beats per minute. Even track length, using greater, less or exact parameters is an option.

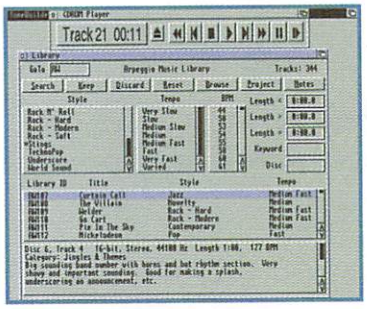
DELIVERIES

During a complex search a click on the button will usually deliver three or four tunes. The next step is to audition your selection and to do it you'll need to fire up your CD-ROM drive. As you select each track the software provides a brief overview in the form of an editable note, the ID of the track, and the CD on which it's stored.

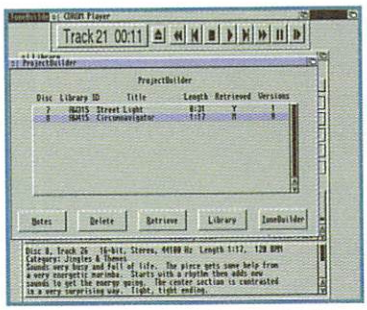
If you then select the CD Player preview from the pull-down, a tape deck control pops-up ready to assist the

and paste

Paul Austin auditions Tune Builder – arguably the greatest advance in Amiga music in years



The ultimate in pick and mix. With 344 tunes to choose from there's no chance of running out of ideas



Make your selections and import. But bear in mind you could need 60Mb of disk space for the necessary 16 and 8-bit data

minute of stereo CD quality audio translates into roughly 14Mb of storage space. As a result, actually producing 30 minutes of CD quality sound internally would bring even the best equipped Amiga to its knees. Consequently, TB offers a unique approach to production by importing the original 16-bit data for the selected tune, and from this it creates a more manageable 8-bit dummy. And it's this 8-bit clone which TB uses for preview during production.

As you'll discover later, you do have the opportunity to audition the available tunes in 16-bit prior to editing, so you should have a good idea of the overall quality beforehand. For the purists, 8-bit may seem like a worrying compromise, but in reality the clone is more than adequate for basic edit decisions.

Once your designer tune is complete, the software reverts to the imported 16-bit data and compiles your master tune in the format and sound quality of your choice.

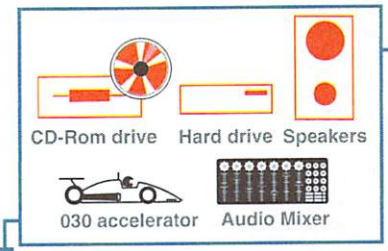
process on either searches or during browsing. Alternatively, if you simply double-click on the selected track the CD drive will automatically locate it and start playback direct from the CD.

Obviously there's a chance that not all your selections will be on the same CD. Fortunately, if you double-click on a track that isn't on the current CD you'll be prompted to insert the correct volume. And as an added safeguard, each track which is on the current CD will be highlighted with a star in the selection window.

Assuming you've found one or more tracks you're particularly keen on, you simply tag them and click on the project button. At this point you'll be asked what you want to import – either the currently highlighted file or your complete selection. That done, the software sets about importing the 16-bit data and generating its 8-bit doppleganger. Assuming you've imported all the tunes you require, simply select one and click on the all important Tune Builder button.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended



The bottom line

Product: Tune Builder
Supplier: AirWorks Media
Price: $999 none broadcast
Price: $1,899 TV and broadcast rights
Tel: 001 403 424 9922 (Canada)

Ease of use ____ **10**
Implementation ____ **10**
Value for money ____ **7**
Overall ____ **9**

> Tune Builder provides a fully interactive customising process that allows the user to create music of precise length, tailored throughout in the style of your choice

Legato lego

Once inside the editor you're presented with a waveform of the entire tune segmented into numerous individual edits, and it's these seamless cuts that are the key to the whole process.

Although the principle is inspired, the actual production process is embarrassingly simple. To audition the tune simply click on the Play Original button, and if you're perfectly happy with things as they are you can export the tune in the rate and file format of your choice.

The next option is to interact a little more by specifying a user-defined length for the tune you require – either larger or smaller than the original. If you add the length you need and click on generate, TB automatically interpolates the existing track to produce a custom-built tune that will fit your time parameter – usually to within one second.

If you don't like this initial mix you can click again and TB will produce a new variant. You can repeat the process as often as you like and then toggle between the variations with the adjacent arrow keys. If this still doesn't quench you thirst for interaction, there's still lots of scope. The next option is to use a combination of shift and mouse clicks to select individual sections – more than once if necessary. The selection is then played in sequence to generate a completely custom-built tune. If you like it, again a simple clicking on the Export will generate a new master.

INTERACTIVITY

The final and, without doubt, the most flexible method is to opt for a full-blown edit session by getting interactive with the Assembler Bar directly below the waveform. To use it you simply click on a section you like, drag it across and drop it on the bar. To create an entire tune you just keeping clicking, dragging and dropping until you have exactly the arrangement and length you need.

To audition your creation you can click on the Play New button or shift and drag over the section you want to hear. As you select a new block from the waveform, its counterparts in the Assembler window light up, so it's easy to construct repeats or verse/chorus sections.

You're also free to drop blocks in-between existing selections and delete others. In short, complete drag and drop control. If you need to fade the volume, a click on the join between any two blocks evokes the Dynamic Adjustment Requester which allows you to add space for voice-overs or fade out tunes that perhaps slightly overrun the require run-time.

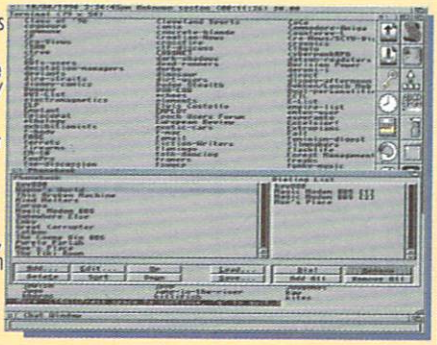
New! Version 1.10

TERMITE

Telecommunications

Everything you need to start cruising the Information Super Highway in one easy to use package. Termite is so easy to use a novice telecommunicator will feel at home, yet it has all of the power and high end features to satisfy seasoned modem warriors.

- New version 1.10 features internal Zmodem, ANSI, and VT102 emulations optimized in assembly laguage for maximum performance
- Flexible Phone Book with unique configurations for each number
- Supports all modems/serial cards
- Support for Multiple Line BBSs
- Configurable multi-tasking review buffer with cut and paste
- Multi-tasking chat window w/ history & cut/paste to prepare text before sending it. Great for those real time conferences.
- Configurable Function Macros
- Font and Screen sensitive, supports high rez graphics cards, use Workbench or custom screen
- Fully ARexx programmable
- Automatic Call Logging. Know where you were and $'s spent
- Configurable button bar! Assign any program function/macro a button. Do you want your own custom icons? No problem, just assign your own IFF brush to the button!! COOL!



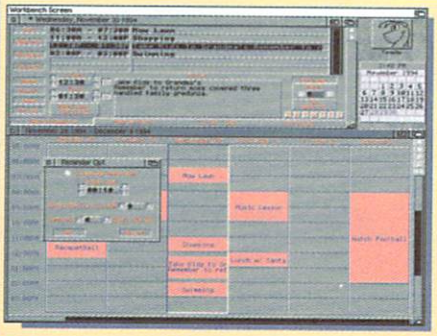
- Supports Amiga XPR libraries giving you a wide range of transfer protocols including Xmodem, Zmodem, Kermit, Compuserve B+, etc.
- Supports Amiga standard XEM external terminal emulations. Support for RIP XEM.
- New Quick Reference Card
- Many New Features

Upgrades to Version 1.10 are available to current Termite owners in two forms:
- Upgrade Disk and Termite Quick Reference Card $10 + $2 S&H
- Upgrade Disk, Quick Reference Card, and 2nd Edition Manual $15 + $2 S&H

ON THE BALL

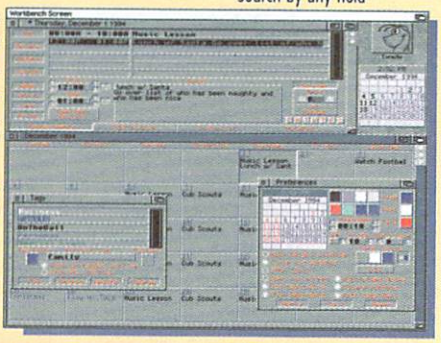
Personal Information Manager

Your Amiga is a powerful ally in the quest for increased productivity. On The Ball allows you to take control of your busy schedule and information so you always accomplish your goals with the timesaving features that let you organize your life! Calendar and Appointment Manager, Address Book and Contact Manager, To Do list, and FreeForm Notepad. Get ***On The Ball***!



- Runs on WorkBench - Always available! Iconifies to a convenient monthly calendar
- View and print configurable appointment schedules from day, week, month, or year
- 11 appointment repeat modes
- Configurable reminders with "snooze"can also launch ARexx scripts, programs
- Flexible appointment search
- Convenient Rolodex layout for locating addresses. Sort and search by any field

- Load and save notes with the handy built in Text editor with cut/copy/paste, search & replace, copy to clipboard.
- Attach notes to calender, appointment, to-do list or addressbook.
- Contact Management with Auto dialer and Auto date/time stamp of notes.
- Create your own labels(e.g. Personal, Business, Birthdays, etc.) to organize your data.
- Extensive ARexx support.



SQUIRREL SCSI

Plug and play SCSI 2 solution for your A1200 and A600! The Squirrel SCSI interface simply plugs into your PCMCIA port. Attach up to 7 different devices including: Hard Disks,Tape Drives, Syquest, Floptical, and any SCSI CD-ROM drive including 3 and 4x drives. Completely compatible with any SCSI 1 or SCI 2 device, Squirrel SCSI can achive a transfer rate >1.2Mb/sec on a stock A1200 and >3 Mb/sec on a 68030 accelerated A1200. Can be inserted or removed at any time and software auomatically mounts/unmounts the drvies! Drivers are all CD32 compatible so you can run your favorite CD32 titles! Squirrel comes complete with SCSI software drivers and a host of utility programs.

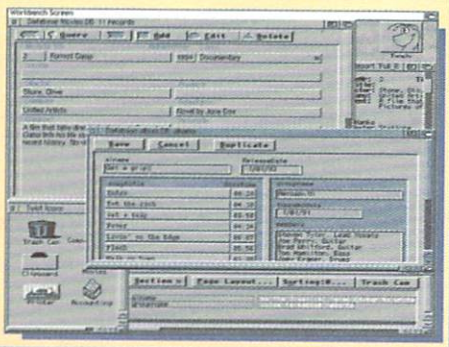
Coming soon!

Full featured Zip driver including write protect and password functions plus Diamond Disk Tools Cataloging, Syncronization, and Duplication software!

TWIST 2

The Friendly Relational Database

Graphically create your databases and reports with the easy to use, uncluttered user interface. Twist is the perfect database for your CD collection to a full double entry business accounting system. And it's fully relational and REALLY REALLY FAST!!!

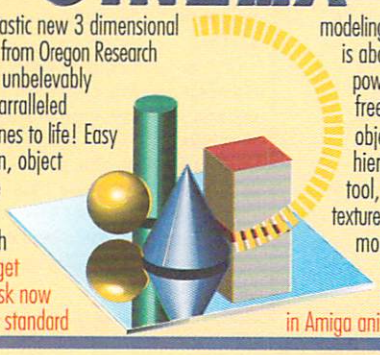


Import/Export to other database formats. Full clipboard support for data exchange with other programs. Full ARexx support for total automation of database tasks. Much more!!!

Coming Soon!

CINEMA 4D

The fantastic new 3 dimensional modeling, ray tracing, and animation package from Oregon Research is about to arrive. The easy to use and unbelevably powerful real time modeler gives you unparralleled freedom and power to bring your scenes to life! Easy object definition, object hierarchies, movable tool, object, and texture palettes and more! Be sure to get your demo disk now to see the new standard in Amiga animation.



GAMESMITH

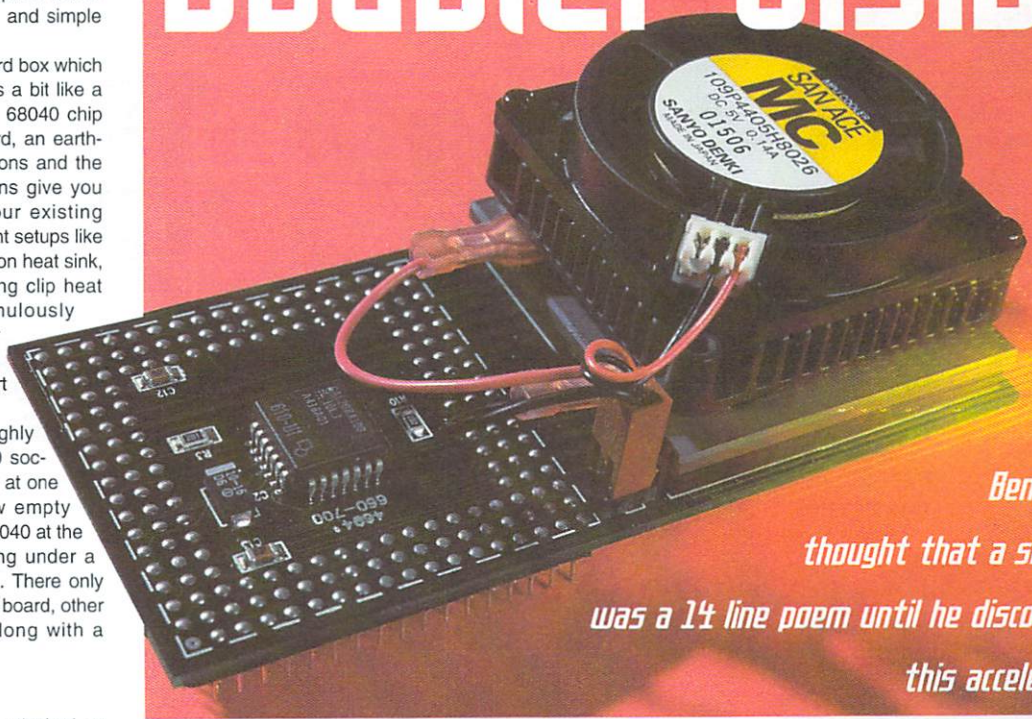
Development System

Professional game development made easy! Fast Parallax scrolling? No problem. Dual Playfields?? A piece of cake! The perfect solution for shoot 'em ups to graphic adventures. Includes FREE Compiler and Assembler!

OREGON RESEARCH

16200 S.W. Pacific Hwy, Suite 162 Tigard, OR 97224
PH:503-620-4919 FAX:503-624-2940 orres@teleport.com

Doubler vision



Ben Vost thought that a sonnet was a 14 line poem until he discovered this accelerator

As I start this article I am dreading being able to finish it. I'm not worried about going over the top in terms of copy, I am worried about being able to fill the page with pertinent information. The main reason for my worry is that the Sonnet Doubler is so simple it defies belief. Simple in its operation and simple to install.

It arrives in a small cardboard box which also contains a tool that looks a bit like a small comb for removing the 68040 chip from your 3640 daughterboard, an earthing strap, a sheet of instructions and the doubler itself. The instructions give you guidelines on removing your existing 68040, covering all the different setups like the epoxied heatsink, the clip-on heat sink, and the paper-clip type spring clip heat sink. Once you have tremulously removed the heart of your machine and pried the living soul from it, you can then insert the Sonnet Doubler.

It consists of a board roughly twice the width of one 68040 socket, with pins on its underside at one end to insert into your now empty 68040 socket, and the new 68040 at the other end of the board sitting under a combination heatsink and fan. There only appears to be one chip on the board, other than the '040 of course, along with a couple of resistors.

OVER-CLOCKED

Motorola only make 68040s clocked up to 40MHz as far as I know, so the heatsink and fan have to work even harder to cope with an over-clocked CPU. The fact that it is running hotter than the normal '040 seems to make little difference and certainly didn't cause our machine to crash any more than normal.

Owners of machines other than A4000s may have trouble fitting the Doubler owing to the increased height requirements – it stands about an inch and a half proud of the daughterboard. You might be able to fit it into a 3000T but, unless they are willing to make serious modifications to the case, A3000 owners will probably be out of luck.

What speed does it run at? Well, SysInfo, that notoriously unreliable benchmark, gives us a rating of about 38.13MIPS and 9.66MFLOPS. Running it through AIBB gives us results of around twice the speed of our standard 040 rating. But is £399 too much to pay for doubling the speed of your Amiga? It's certainly on the edge of acceptability as far as I'm concerned when you could have a machine that is at least four times the speed for about a grand. Admittedly, that is over twice the amount the Doubler costs, but you would also have your original 3640 board to sell, and they fetch somewhere between £300 and £450 for the right buyer.

That brings the cost of the CyberStorm down to between £550 and £700, a much better proposition, especially when you consider that you will get better memory access and an optional SCSI-2 controller. Of course, if you can't afford that extra dosh then the Doubler does represent a good way of increasing the speed of your machine for relatively little outlay. AC

Too warped to fit?

I asked Blittersoft whether the Sonnet Doubler would work on any other 68040 accelerator card but it seems that most other accelerators don't use the 68040 at 25MHz, they all overclock to 28MHz. This means the Doubler will unfortunately not work as it actually relies on there being a 25MHz clock rate.

ZIF a dee doo dah

Nearly all PC motherboards these days come with what is known as a ZIF socket for the CPU to sit in. ZIF is an acronym for Zero Insertion Force and works by having a socket with overwide holes in it for the CPU's pins to go into. There is a lever on the side of the socket which, once you have inserted your Pentium or whatever, you pull over until it locks once more.

This basically locks the pins of the CPU in contact with a conductive layer inside the socket. No more fiddling about trying to pry a chip out of its socket, levering it this way and that with a small screwdriver, hoping you won't bend any pins – just flip the lever back and the chip will just lift out.

As to why there aren't any ZIF sockets on Amiga motherboards or accelerators, I can only surmise that this is because the 680x0 range of processors isn't so swiftly obsolete (either that or the sockets cost too much).

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

The bottom line

Product: Sonnet Doubler
Supplier: Blittersoft
Tel: 01908 261466
Price: £399

Ease of use	**9**
Implementation	**9**
Value for money	**7**
Overall	**9**

Brave new

Jason Compton reports on the state and survival of the Amiga nation in America

The Amiga may have been born and raised to adolescence by an American upstart company in the form of Amiga Incorporated, but after the transfer to Commodore, the Amiga would enjoy much greater success in Europe than on the continent where it got its start. Poor advertising got the machine off to a bad start, but enough Commodore brand loyalists went with the Amiga to keep the market fresh for the advent of desktop video, which the Amiga has thus far had a firm grasp on.

Serious development was largely found on the North American continent for a number of years, but attrition and more lucrative markets have squashed some companies and lured others away. In some areas of Amiga development, most notably the high-end graphics card market, North America is completely reliant on European products, having no home-grown card to consider.

The arrival of each new day seems to bring more and more television and print ads for rival platforms. Confusion over North American distribution rights and policies have only thrown the market into more chaos.

Perhaps the best way to start answering the question, 'where exactly do we stand?' is with a qualified 'Not as bad as it looks.' After all, some things have actually improved measurably over the past few months, namely the availability of general-interest printed Amiga magazines. For a time there was only one, but the introduction of this publication into the market as well as the revival of Amiga Game Zone has made the situation a bit more tolerable.

Where some software developers have failed or given up, others press onward. Consultron, manufacturers of the astoundingly useful CrossDOS and CrossMAC filesystem packages, are still keeping their heads above water. President Leonard Poma reports that his company's sales are down over the past two years and that there hasn't been a marked improvement since Escom's April acquisition of the Amiga which ended a year of total uncertainty. Still, sales in the

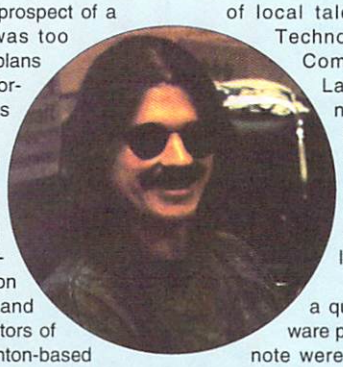
Some of the crew of AmiTrix Development

The view of the Amiga Convention '95 show floor

AmiJAM '95

The Amiga Users of Calgary (AMUC) held a successful AmiJAM in 1993, but the prospect of a show in the summer of 1994 was too uncomfortable for the group. The plans went through for 1995 after the formation of Amiga Technologies increased user confidence.

Booked into the Southern Alberta Institute of Technology's show floor were Wonder Computers, the aforementioned Canadian dealer/distributor/software development company, Oregon Research, publishers of Termite and On The Ball as well as the distributors of HiSoft products, AmiTrix, an Edmonton-based Amiga development and distribution company, local dealers Software Supermart and The Computer Shop, and Spots, a local Internet service provider with active Amiga support. In addition to booking dealers for the show floor, AMUC brought speakers to the show, made up of local talent, Steve Vetzal, Information Technology Division Head for Wonder Computers, Dave Haynie and Dale Larson, former Commodore engineers, and myself. Dave Haynie's speeches brought the biggest crowds, and they were rewarded with a look at a prototype board for Nyx, the AAA development machine. Sadly, Dave's board no longer works.



Dave Haynie kicks back during an autographing session for his video

Wonder sprawled across nearly a quarter of the show floor, with software piled high off the tables. Of particular note were the products they acquired from New Horizons, most importantly DesignWorks, the structured drawing package, enhanced to version 1.1 by Lazarus Engineering, the Wonder sister software development company. Oregon Research brought

The AmiJAM '95 panel discussion team

their entire Amiga product line and Bob Luneski, the president, spoke of an upcoming refit to On The Ball, the personal organiser package recently acquired from Pure Logic Software. Termite 1.1, the modem terminal program, was available, complete with updated manual.

AmiTrix was showing AmigaLink, the floppy-port networking system it recently acquired distribution rights for. Also on display were the SCSI-TV and SCSI-570, the full SCSI interfaces for the CDTV and A570 that the AmiTrix engineers devised.

The show wound down with a panel discussion made up of Brant Coghlan of AmiTrix, Dale Larson, Dave Haynie, Steve Vetzal and Steve Cockwell from Wonder, and myself. It crystallised the mood of the show, which was one of 'strong concern.' Amiga users are looking for fast action and inspiring decisions, and to date have not been getting what they're looking for.

Also discussed was what the panel would like to see for future development of the Amiga line. PowerPC was a virtually unanimous choice. As Dave Haynie put it: "it will be the only RISC chip with a chance to be priced as a commodity item."

Despite attendance in the hundreds (registered attendance did not break 400, according to reports), the exhibitors were pleased and the organisers were too tired to be concerned. Show admittance was free, and many people came and went without checking in.

Everyone went home happy, and most people were just glad to be in an environment with so much Amiga enthusiasm and energy.

world of Amigas

high-end market where cross-platform disk sharing is a must have kept the company going and able to support its product line.

Standing in contrast to proud veteran Consultron are new arrivals Phantom Development, publishers of Amiga software. When asked why he decided to get into the Amiga market in its current state, President Christopher Aldi replied simply: "I hate Windows. This is the business I want to be in. Maybe I'm stupid."

First off the Phantom lines is Digital Quill, a high-powered, visually polished text editor by Timothy Aston, and soon to follow will be Hell Pigs, a monstrously large adventure that can be best described as a cross between King's Quest 6 and Zak McCracken and the Alien Mindbenders – with big guns. Classica, the Croatian team developing Hell Pigs, plan an Amiga floppy version, an Amiga CD-ROM version with full motion video clips, as well as a PC conversion.

The manager of GfxBase tries to clear off his table into the shopping bags of the duo in front of him

In between these stark comparisons sits Nova Design, the three-man software company famous for ImageFX, the professional image manipulation package. They survived the collapse and sale of GVP by taking their ball and finding somewhere else to play, so to speak. Upon release of ImageFX 2.0, Nova found their own independent distribution channels rather than publishing through GVP, as they had done in the past.

Many areas of North America have seen their dealerships shrink, consolidate, or disappear altogether. Indeed, I am constantly reminded that Mexico City, the world's largest metropolis, has only one Amiga dealership. What, then, fuels Wonder Computers, a dealership chain that has grown from one store to five in the past few years, has instituted a corporate division for infrastructure management and product distribution, and recently added a software development team to its repertoire?

Based in Ottawa, Canada, with stores in Ottawa, Toronto, London, Montreal, and Vancouver, the answer seems to lie in dedication and making the right decisions in the right places, as well as having an impressive enough presence to instil confidence in the user base.

Each of Wonder's five stores is Amiga- ➤

American dream

In short, there are a lot of questions in the North American market and no easy answers. The decision to spend no marketing dollars this year was a difficult one to accept for many. While the argument is certainly true that this is not the strongest market historically for the Amiga, the potential-and existing-customer base cannot be ignored.

At this point, sitting back, sipping that cup of coffee you just bought and riding out the situation is not a bad idea. Gilles Bourdin of Amiga Technologies PR has asked North Americans to send him articles mentioning the Amiga in major press publications. Former engineers such as Dale Larson have interviewed with ISE, the new subcontractor for Amiga engineering. The questions are not easy, but the answers, slowly, are forthcoming.

And even more importantly, the dealer and development support is still here. Yes, there is no more GVP to flagship the Amiga on this continent. But the community survives. The users, developers and dealers are doing as much as they can, as evidenced by their continuing dedication and support. It is now Amiga Technologies' market to make or break.

Dale Larson shares another rendition of Wild Thing

The assembled cast of the AmiJAM '95 speakers, presenters, and organisers

Ian and Steve, two die-hard Amiga fans at the recent Amiga bash

➤

only, barring the occasional video product. Wonder's deal for distribution rights of the Quasar Distribution product line (primarily consisting of Chris Hames' DirWork and PC-Task packages) put them on the map, and their purchase of the New Horizons 'B-Pack' of software, including DesignWorks, QuickWrite, and QuarterBack added a ready-made, if slightly dated, suite of a dozen products they could develop or sell outright at their option. (QuarterBack has already been sold to Quasar.) Wonder's services even include classes on the Amiga, held in a small computer lab environment.

There certainly is no lack of interest in Amiga distribution on this continent, as demonstrated by the half-dozen companies that participated in Amiga Technologies' impromptu meeting in July which attempted, unsuccessfully, to implement a solid distribution arrangement in North America.

DISTRIBUTION ROLE

Alex Amor of Creative Equipment International, who has repeatedly tried to secure an agreement for distribution, says he is "anxiously awaiting the release of the Amiga Technologies line of machines in North America." It is unclear what role a distributor would play – it has been made clear by Amiga Technologies that they will not spend a dollar on North American marketing in 1995, and at the recent UK press and dealer conference they said they were interested in a 'partner' rather than a 'distributor.' This could dramatically change the way the Amiga is presented to the market-when an agreement is reached.

What truly drives the Amiga market isn't just the software developers or the dealers or the distributors. In fact, I daresay they're secondary. Amiga users have stepped up where software developers, distributors, and dealers, until very recently, have been unwilling to tread, organising and holding Amiga shows to keep the dream alive and to retain active support for their machines, even if it means being a part of that support. AC

Amiga Convention '95

Just over a month later, on the other side of Canada, Amiga Convention '95 kicked off. On paper the two shows don't look all that different. Dale Larson and Jason Compton booked as speakers. Wonder Computers to anchor the dealer floor. Two days, ending in a panel discussion. But just as every city has its own flavour, every Amiga show has its own lasting impressions.

Garnet and Mark – Oby's Amigo Computing Shop

For one, AC '95 took a different approach to the off-floor entertainment. While AmiJAM was very heavy on speeches and presentations, booking two different rooms through most hours of the day, AC had only one presentation room, which had demo, music, and graphics competitions in addition to the booked speakers. The organisers plan to make the winning entries freely available on Aminet FTP.

On the floor, the dealer presence was more noticeable, perhaps because they were cramped more closely together – a testament to the number that were booked. Dealers Oby's Amiga Computing Shop, GfxBase, and National Amiga were on hand with products to sell. Pre'Spect Technologies had their own display of products including the MultiFace II and IV cards, which they now manufacture on license from bsc, the original development company. AsimWare were on hand with their AsimCDFS CD-ROM filesystem, complete with CD32 emulation, which president Paul Reeves took delight in demonstrating by playing hours of Super Stardust CD32.

While he did not man a dealer table for long, Hal Greenlee had flyers on hand and on display for the Micronik 4000 Tower, a custom Amiga 4000 tower system manufactured in Germany with a special daughterboard offering expanded slots for the machine. As mentioned, Wonder Computers had a large display of software and hardware at their tables, including enhanced New Horizons software. Rick Sulpizio, distributor of the MacroSystem Germany product line in Canada, had the V-Lab Motion set up for impressive displays of real-time non-linear editing. Unfortunately, he did not have the Draco 060-based Amiga-compatible non-linear editing computer with him. (See the exclusive review of the Draco in this issue – ed.)

Most dealers kept a cheery disposition as the 12-hour days marched on. Oby's sold every copy of Gloom they brought (greatly assisted by the fact that they had a two-player networked display set up for attendees to play), and National Amiga covered the entire cost of the trip the first day.

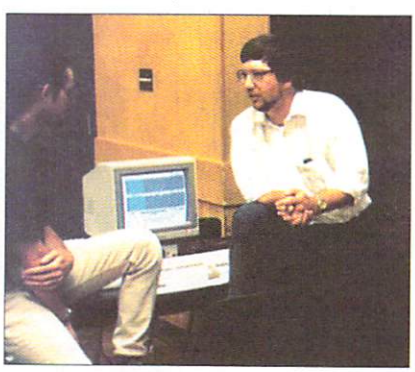
Dale Larson, who now makes his living as President of Intangible Assets Manufacturing, gave his presentation on networking Amigas – a logical choice, since his company produces Amiga Envoy 2.0 and the book Connect Your Amiga!, as well as publishing Dave Haynie's Deathbed Vigil documentary and DiskSalv utility.

Al Mackey of MegaBall fame gave a stunning art demonstration on Digital Creations' Brilliance paint program. I made the mistake of leaving the room when a rough sketch was on the screen, and when I returned two minutes later, a full-colour cartoon drawing greeted me.

My speech was a consolidated version of the two speeches on emulation I gave at AmiJAM. The crowd indulged my strange desires to play old Commodore 64 games on Amiga screens.

The panel discussion closed the event with Dale Larson, Peter Cherna (also late of Commodore and now employed on PC development at Scala), Greg Scott, president of National Amiga, and myself. Most of the audience's questions were aimed at the former Commodore folk, feeling out their theories for future development and the potential for the Amiga in the marketplace.

Paid attendance was roughly that of the registered attendance at AmiJAM. Those that came had essentially the same questions and concerns as the first time around – when will we see new products? When will we be supported? When will we be convinced that this isn't Commodore all over again?



Bob Luneski (centre), President of Oregon Research

AMICOM TECHNOLOGY

Mon-Sat
10am-6pm
(Central Time)

Orders Only:
800-556-1562
Info/Questions (402) 556-6160
24-Hour Order FAX (402) 556-6160
6057 Maple Street -- Omaha, NE 68104

Fargo Printers

FotoFUN! Photo/Postcard/Mug Printer	**$399.95**
FotoFUN! 36 Photo Print Kit	$39.95
FotoFUN! 36 Postcard Print Kit	$44.95
FotoFUN! 4 Coffee Mug Print Kit	$34.95
Primera *"NEW LOW PRICE"*	**$599.95**
Primera Pro	$1,339.95
Primera T-Shirt Transfers (10)	$16.95
Primera Premium Paper (200)	$19.95

Other Fargo supplies also available!

CD32

CD32 + 3 CD Titles	**$339.95**
SX-1 Expansion	$219.95
Network CD & Cable	$49.95
Pro Control Pad	$27.95
Chaos Engine CD32	$14.95
CD32 Gamer Magazine w/CD	$11.49

Other CD32 titles also available!

Word/Data Processing

Final Writer Release 4	**$115.95**
WordWorth 3.1	$129.95
Final Data Release 2	$64.95
Twist 2 Relational Database	$109.95
TurboCalc v2.0 Spreadsheet	$34.95
TextCraft Plus Used Word Processor	$5.00

Graphics & Sound

Lightwave 4.0 Unbundled	$774.95
Image FX 2.1	$244.95
AD Pro 2.5	$137.95
Photogenics v1.25	$128.95
Brilliance 2.0	$79.95
Caligari 24	$129.95
Toaster Toolkit 4000	$79.95

Most Amiga Magazines Also Available!

Telecommunications

14.4 Pract. Periph. Fax/Modem	$109.95
14.4 Boca Fax/Modem	$119.95
28.8 Cardinal Fax/Modem	$179.95
(Other Fax/Modem Brands Available)	
Termite *"HOT SELLER"*	**$35.95**
GP Fax Universal	$58.95

Accelerators

M-TEC 68020I (A500 ONLY)	$99.95
Derringer 030/25 (A500/2000)	$319.95
Derringer 030/33 (A500/2000)	$409.95
Derringer 030/50 (A500/2000)	$509.95
TekMagic 040/33 (A2000)	$999.95
TekMagic 040/40 (A2000)	$1,199.95
Cyberstorm 060/50 (A4000)	$1,449.95

Others available, please call!

Pointers

MegaMouse-Plus (3-button 400dpi)	**$29.95**
Crystal Trackball	$34.95
Golden Image Optical Mouse	$22.95
AlfaOptic 3-Button	$44.95

Expansion Cases

HighFlyer 4000	$349.95
HighFlyer 4000 w/250W	**$439.95**
HighFlyer Cable Kit	$79.95
HighFlyer Fan Kit	$44.95
External Large SCSI Case	$119.95
DataFlyer 500 Empty Case	$74.95

Cables

6' Printer Cable *"GREAT VALUE"*	**$2.99**
6' Serial Cable	$4.99
ParNet Cable	$24.95
SerNet (Null Modem) Cable	**$14.95**
ParNet/SerNet Software	$3.00
AB Serial/Parallel Switch	$10.95
2 Drive Internal SCSI Cable	$9.95

Other Cables Available!

Disks & Drives

Dell 1.76MB External Floppy	**$119.95**
A1010 880K Ext. Floppy *(Used)*	$40.00
50 3.5" DD Disks (Prelabeled)	**$16.95**
50 3.5" HD Disks (Prelabeled)	$21.95

Hard Drives

172MB IBM 2.5" IDE	**$119.95**
210MB Toshiba 2.5" IDE	$149.95
2.5" IDE Short Cable	$10.95
2.5" to 3.5" Cable Adapter	$14.95
2.5" to 3.5" Mounting Bracket	$4.95
540MB Quantum "Lightning" SCSI	$249.95
1.05GB Seagate IDE PAR Drive	$379.95
1.08GB Quantum SCSI	$419.95
100MB ZIP SCSI Removable	**$219.95**

Gfx/Sound Hardware

VLab Motion	$1,649.95
Toccata 16-bit Sampler	$439.95
VLab Y/C Internal	$424.95
VLab Y/C External	$469.95
Retina ZIII 4MB	$759.95
Picasso II 2MB	$399.95
Cybervision 64 2MB	$464.95
Cybervision 64 4MB	$595.95
Pyramid MIDI Interface	$42.95

CD-ROM Drives

1x Hitachi SCSI External	$89.95
2x Sanyo SCSI Internal	$199.95
3x NEC 3xp SCSI External	$209.95
4x Sanyo SCSI Internal	$269.95
6x NEC SCSI Internal	$479.95
AsimCDFS 3.3	**$64.95**

SCSI/IDE Hardware

Squirrel PCMCIA SCSI2	**$98.95**
M-TEC AT-500 IDE + RAM	**$149.95**
DataFlyer 500 IDE/SCSI	$149.95/159.95
DataFlyer 500 SCSI & IDE	$189.95
DataFlyer 2000 IDE/SCSI	$99.95/84.95
DataFlyer 2000 SCSI & IDE	$129.95
TekMagic 4008 SCSI + RAM	$139.95
Oktagon 2008 SCSI2 + RAM	**$149.95**
DataFlyer SCSI+1200/4000	$89.95/99.95

AmigaDOS

AmigaDOS 2.1 (A500/2000)	$79.95
AmigaOS 3.1 (A500/2000)	$124.95
AmigaOS 3.1 (A1200)	$154.95
AmigaOS 3.1 (A3000)	$149.95
AmigaOS 3.1 (A4000)	$139.95

International Flow Charter
by Neather Realm Software
Dealer Inquiries Invited

This is the perfect program for those wishing to make organizational charts, logic flowcharts, process diagrams, etc. Comparable programs on other platforms sell for $250. Suggested retail price of $39.95.

Yours for the introductory price of **$29.95!**

15% restocking fee will be levied on returned non-defective items. Shipping is the responsibility of the purchaser. Not responsible for typographical errors. Prepayments by personal check require 14 days to clear. **No surcharge for using your credit card.** Availability and prices are subject to change.

We are always looking for good, new software to distribute commercially. If you have written a commercial-grade software program, you may submit it to Amicom Technology, 6057 Maple St., Omaha, NE 68104 along with a cover letter requesting a review. Enclose a SASE if you wish the software to be returned to you.

We carry a large supply of used software and hardware! If you are looking for low priced hardware/software, CALL!

Programmers...call our info line to find out about joining Amicom's remote programming team!

This ad was produced entirely with Amiga computers, PageStream, and other Amiga software

Zig zag zip

Ben Vost examines a possible successor to the floppy drive

Well, finally we've had a Zip drive to look at. I know we've been promising it for quite a while now, but the facts of the matter are that IOmega, the company that produces the Zip, has been so inundated with orders in the States that none of their production run has reached these shores. However, thanks to a licencing deal with Epson, the Zip should be in plentiful supply by the time you read this piece.

First impressions of the Zip are very good. It's a gorgeous looking bit of kit, its lines reminiscent of something out of Bladerunner. The drive, as you can see, is a metallic blue, in splendid contrast to the drab beiges we have been used to for computer peripherals for a long time now.

The rear end of the drive shows us two 25-way SCSI ports – in and out – for putting the Zip in the middle of a SCSI chain, a termination switch – on or off – and a SCSI ID switch. The ID switch is the only possible problem with the Zip as you can only use SCSI IDs five and six, which might be a pain for A3000 owners. But with this being the Zip's only limitation, I can see a day when SCSI unit five or six is the standard position for a Zip in the way that three is there for CD-ROM or tape back up.

The Zip's power supply plugs into the side of the drive using a right-angle plug which slots into the side of the drive, leaving that edge flush – which is jolly handy as you might want to stand the Zip on its side. The Zip has two lights at the front and an eject button that feels just like the old Spectrum keyboard. Overall, its dimensions are not much larger than a standard external floppy drive unit, and it weighs less than most external drives I have seen.

The disks the Zip uses look almost like normal floppy disks, apart from the fact that they are somewhat thicker and have a small shutter. They also don't have a write protect tab, but more of that later. There is an interesting prism-like device on the left-hand corner of the disk nearest the shutter, which may be something to stop manufacturers from copying the disk design – SyQuest owners will know the number of different manufacturers of cartridges for their drives. Sliding back the shutter reveals a single disk, again much like a floppy, only with air on either side of the disk rather than being sandwiched between cloth.

RATE OF KNOTS

Inserting a disk into the Zip drive results in the disk being brought up to speed at a rate that will surprise and delight SyQuest owners – the disk being ready for use within about four seconds. Once it is ready, the disk will read and write data at a sustainable rate of about 1Mb a second. Yes, a meg a second. Pretty impressive for a removable media device.

The Zip is only currently available in an external version, although an internal one isn't out of the realms of possibility and there are two versions of the disks that it uses. The 100Mb disk is readily available, but the 25Mb disk's future looks in doubt. After all, who is going to want a 25Mb disk for only slightly less than the 100Mb version? HiSoft will also be shipping the Zip with an adaptor to link it up to a Squirrel, and a set of tools for formatting and toggling write protection which is controlled through software, rather than using a write protect tab.

It seems that the Zip drive actually breaks one of the primary rules of computing – take any two of the following three terms:- Cheap, Fast, Good. Basically, you can have something that is fast and good but not cheap, cheap and fast but not good – you get the idea. But the Zip seems to break this rule and goes for all three at once. With a price below £200 it certainly isn't expensive – we were paying that for a bare 105Mb Quantum hard drive not so long ago – and at a meg a second, the Zip certainly compares favourably with an internal hard drive. So that's fast taken care of, and with its looks and overall usefulness, you haven't got a good product, you've got a great one. AC

AMIGA BLUE CHIP AWARD

SYSTEM ESSENTIALS
RED = Essential **BLACK** = Recommended

SCSI controller

The bottom line

Product: IOmega Zip Drive
Price: £189.99 – 100Mb disk
£15.95 (less for quantity)
Supplier: HiSoft
Tel: 01525 718181

Ease of use	**10**
Implementation	**10**
Value for money	**9**
Overall	**10**

Cheap, fast, good... but big

If you want a Zip, but you really need more space per disk, IOmega will be bringing out a new drive based on the technology used in the Zip, called the Jaz drive. The Jaz looks similar to the Zip but is a bit taller and the disks are also about twice as thick.

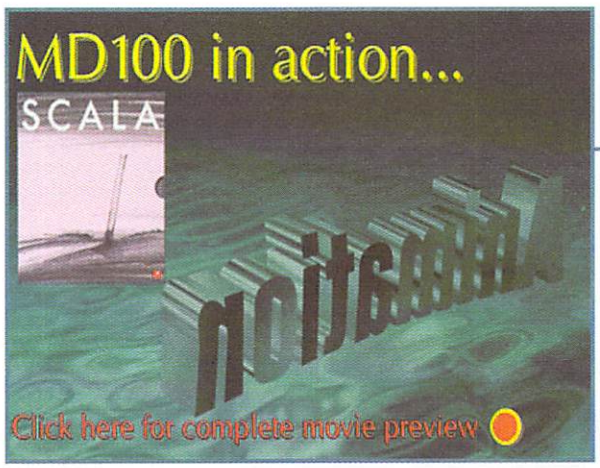
The big difference is in the capacity of the disks the Jaz uses. While the Zip seems impressive storing 100Mb to a disk, the Jaz will astonish because it can hold a staggering one gigabyte on each disk. The only potential flies in the ointment are the facts that the Jaz won't be available for some time and that it will be considerably more expensive than the Zip.

All the options you need to customise your creations

Full screen or in a window, Mpeg import has all the options, if perhaps a little slow to implement

DV on the desktop

Paul Austin explores video on demand – Scala style



All the usual Scala goodies plus full frame digital video, impressive by any standard, and only 1.1Mb to store the entire 300 frame animation

For the majority of Amiga users Mpeg is generally perceived as nothing more than a rough and jerky anim format. But as the CD32 has already proven, full-screen real-time digital video is well within the reach of the Amiga, offering a cost, storage and transfer time-effective means of delivering digital video at or about composite quality.

Not surprisingly, Scala haven't wasted any time in recognising Mpeg's potential for presentation. As a result, the Scandinavian multimedia men have fine tuned the Amiga's only dedicated Mpeg encoding and decoding card for direct application within Info Channel, MM300 and their latest creation MM400.

Although originally known as the Peggy card, the same hardware has now been reincarnated as the MD100, complete with stylish packaging and a degree of ease of use within both the controls and utilities that have made Scala a multimedia giant. The main reason for incorporating hardware directly into a primarily software-based system is, of course, to minimise the demand for even more hardware. At present the expense and hassle involved in incorporating traditional video into multimedia productions simply doesn't make it an option for most multimedia productions.

PROVISIONS

In the past, Scala offered provision for incorporating traditional video and even laser disks into presentations via their EX standard. However, both methods had their limitation. Laser disks offer little in the way of interaction as well as being very difficult to master. Traditional tape offers many of the same problems plus the evils of hardware maintenance, slow interaction and, of course, degradation of the tape.

With the arrival of the MD100, Scala finally has full frame or partial digital video that will never degrade, unlimited video clips with no tape swapping, hardware that is unlikely to need any maintenance, and it's all in one box.

Once the hardware is firmly entrenched in the Amiga's video slot and the appropriate cable linked either to a composite video, S-VHS, or RGB outputs, plus an Mpeg audio out on the rear of the board, you effectively have a traditional genlocked video single directly beneath the Scala presentation. Unfortunately as it stands, Mpeg audio is only available via pre-recorded Mpeg movies, primarily from CD – CDs being supported directly in the control software. As a result, direct encoding Mpeg video is the only option, although audio accompaniment is still available thanks to Scala's sample and mod playing abilities.

The ability to connect up to such a wide variety of display media is a real bonus, and should provide enough scope for pretty much any production. Obviously, quality Mpeg streams doesn't exactly grow on trees. As a result, after initial set-up, encoding an Mpeg animation is likely to be the first step.

Assuming you've installed the Mpeg EX software in the Scala start-up drawer, a quick trip to the system menu will reveal the encoding side of MD100. From here you simply select a sequence of frames to import and where to save the new Mpeg file, adjust the resolution and setting as required, and click on encode. Now it's time to make lots of coffee.

Although the end results are impressive, it must be said that encoding is a slow process. The example 300 frame anim listed took roughly an hour and a half to encode from full video-res frames. Originally exported from a PAR card, they were then scaled and converted into the Mpeg format and resolution.

Slow import and the lack of real-time capture is perhaps the only chink in MM100's armour. Unless you're lucky enough to have either a PAR card or a VLab Motion, your Mpeg productions are likely to be limited to traditional computer graphic animations. After selecting an existing Mpeg or creating your own, its addition to the production simply means clicking on the newly acquired Mpeg box in Scala's main layout.

A quick click reveals the Mpeg decoder controller, and it's from here you can control the Mpeg action. The first step is to select the file, at which point you're provided with an impressive array of customising options.

As you can see from the screen grab you can play and pause, add a definable or infinite loop, apply definable slow-motion, and even make the Mpeg wait when you hit the appropriate point in the production. Tape deck transport controls allow instant scans of the Mpeg stream and once you're happy, a simple OK adds the Mpeg and play settings to the production.

During testing I had at least five separate Mpegs, combined with mods, samples, wipes and all the other Scala classics with no appreciable drop in overall performance.

Roll the credits

Needless to say, MD100 is a product dedicated to serious multimedia production, and if you're looking for the ultimate in Scala impact it's arguably the ultimate addition. Full frame genlocked 24-bit video at 25 fps, amidst all the other goodies that Scala can throw into the action –it has to be tempting for animators and multimedia types alike.

AC

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

Zorro video slot

The bottom line

Product: MD100 Mpeg encode/decode
Supplier: Scala UK Ltd
Price: £599
Tel: 01920 444294

Ease of use	**9**
Implementation	**8**
Value for money	**8**
Overall	**8**

Safe as houses

Nik Lines looks at a fast new filing system

Exciting! Interesting! Two words that really can't be used to describe filing systems on the Amiga. However, Fourth Level Developments have now released AmiFileSafe with the proud claim that it's the *new* de facto standard for the Amiga.

First off, a brief explanation of what a file system is: It's a bit of software that sits in the system and maps files onto a disk or suitable medium, servicing requests for data. The Amiga has used FastFileSystem for the past few years but this has its faults, including speed and fault tolerance.

If you reset your Amiga while writing to a disk you'll know about it when you boot again – the disk thrashes around trying to re-validate itself. The bad news is that occasionally it can't sort itself out, at which point it's time to start praying that some extra utility can recover your files. This can take an inordinate amount of time and still fail.

AmiFileSafe's main claims are to never become invalidated and also to be nippier, which does sound too good to be true. The first hurdle I suspected was that installation would be a pain, but thankfully the manual is excellent so people who have no experience of this sort of thing will be fine. You'll need HDToolBox to follow the manual's instructions but RDPrep can be used to do the same job – one should have been supplied with your system. Due to the nature of the product, your disks need to be reformatted after installing the new filesystem onto them, but you'll already have a recent backup of your data, won't you?

STILL WORKING

Once in place and with data reinstalled, I was glad to see that everything still worked and that my machine definitely booted faster. AFS's claim of improved parallel access certainly seems to be founded and the seemingly endless thrashing when ToolManager and EGS battled for bandwidth has pretty much become negligible.

Time for the reliability tests – close eyes, copy large file and reset half way through. No troubles with invalidation. Group delete files and reset? Nowt wrong. Okay, time for the biggie. Unplug the SCSI cable while writing data and up pops a requester saying Write Error. Cancel that a few times. Aha! Gotcha! Replug the SCSI cable and the light starts flickering again. After a second or two, my 3Mb file has been copied and the disk is valid. No data had been lost! Unbelievable, and a possible scenario for those with an external disk farm.

On the data security side of things, I reckon it's safe to say that this is exceptionally good, but maybe the real word to describe it is bulletproof.

Over to speed now, AmiFileSafe's other big claim. 'Instant Directory Listings' claims the cover of the manual. Maybe I'm just cynical, but I think I've heard this sort of thing too many times before so I was expecting disappointment. I was wrong; instant is the word to use. The first indication of this was when I typed 'list' and found that my graphics card was the

bottleneck in displaying the data, despite the fact that it's a Zorro III 64-bit card! Benchmarking with DiskSpeed reveals that even on my humble A3000, 1837 directory entries are being thrown at the system per second. Good old FFS manages a stunning 198. FFS with directory cacheing manages 1421 but at the expense of data transfer speed.

Transfer speed is up on FFS too, whatever size file is being tested. On small buffers the write speed is up by a factor of five, yet the CPU availability is still at 44 per cent. Larger buffer sizes manage to return an increase in speed along with an increase in CPU availability, too! Suffice to say, AFS is significantly faster than FFS on paper.

The greatest difference, however, is seen in everyday use as FFS disks just keep on getting slower, whereas AFS keeps up its speed well. This supports the explanation in the manual that fragmentation is kept to an absolute minimum. Icons fly up all the time, not just on small, empty disks.

The only benchmark parameter that is below FFS for AFS is a seek/read parameter which is around ten times slower than FFS. If this was relevant, I would have expected it to manifest itself in copying many small files (such as ENVARC: to RAM), but this operation is faster under AFS, reducing from taking three seconds with FFS to one and a half seconds with AFS. Perhaps it was just a spurious result or a parameter that really doesn't make much difference?

Testing directory manipulation speed		
File Create	116 files/sec	CPU Available: 9%
File Open	86 files/sec	CPU Available: 29%
Directory Scan	198 files/sec	CPU Available: 33%
File Delete	344 files/sec	CPU Available: 16%
Seek/Read	810 seeks/sec	CPU Available: 12%
Testing with a 262144 byte buffer. (LONG-aligned, MEMF_FAST)		
Create file	605928 bytes/sec	CPU Available: 83%
Write to file	863157 bytes/sec	CPU Available: 89%
Read from file	906176 bytes/sec	CPU Available: 88%
Average CPU Available: 55%		CPU Availability index: 754

Testing an FFS: device on a Workbench 3, 68030-based machine

Testing directory manipulation speed		
File Create	163 files/sec	CPU Available: 2%
File Open	283 files/sec	CPU Available: 0%
Directory Scan	1741 files/sec	CPU Available: 0%
File Delete	270 files/sec	CPU Available: 0%
Seek/Read	51 seeks/sec	CPU Available: 74%
Testing with a 262144 byte buffer. (LONG-aligned, MEMF_FAST)		
Create file	970903 bytes/sec	CPU Available: 84%
Write to file	1178647 bytes/sec	CPU Available: 89%
Read from file	1194950 bytes/sec	CPU Available: 89%
Average CPU Available: 52%		CPU Availability index: 714

Testing the AFS: device on a Workbench 3, 68030-based machine

MISSING FEATURES

At the moment, MultiUser users will not be able to fully work with AFS, but a free upgrade is promised to version 2.1 which will support this. The only other missing feature (which the manual draws your attention to instead of trying to hide) is that there is no 'undelete' feature, but this is promised in version 2.2 (released this month and free to registered users of 2.1).

This is an excellent product. I love the speed, reliability and complete transparency of it. As yet unmentioned is the fact that there's a floppy version and an optimised version for machines with an 020 or better. The floppy results are stunning (1800 directory entries a second compared to 37 with FFS-DC), but most will be interested in hard drive speed.

And now to the price. Seventy pounds may seem steep, but it's a small price to pay for pretty much guaranteed security. New Amigas need this reliability if they are to stand a chance in the commercial world. Are you listening Escom?

AC

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

2.04
Kickstart

The bottom line

Ease of use	**8**
Implementation	**10**
Value for money	**8**
Overall	**9**

Zipperware – NorthWest Public Domain

"Seattle's Last Great Amiga Store"
76 South Main Street, Seattle, WA. 98104
(206) 223-1107 (206) 223-9395 FAX

AMIGA IS ALIVE!!! NEW MACHINES AND MANY NEW TITLES COMING SOON!!!

We accept Visa/Mastercard/AMEX/Discover with NO "slight fee for credit card users"!!
Minimum $4.00 S&H Fed Ex, UPS, Airborne Next Day available! C.O.D. $5.00.
Hours: Monday-Friday 10am-6pm Saturday Noon-5pm PT

Amiga Productivity

Ami-File Safe $39.95
Ami-File Pro $99.95
AmigaVision Professional $74.95
ASIMWare 3.0 (CD Driver) £69.95
Brilliance 2.0 ....$69.95
CrossDos Version 6 ....$54.95
Crouton Tools (toaster) $89.95
Datastore $99.95
Deluxe Music $89.95
Deluxe Paint V $104.95
Disk Salv 3.0 ....$39.95
Disk Expander $49.95
Devpac3 ....$109.95
Final Copy II $79.95
Final Data $64.95
Final Writer IV $109.95
GameSmith $119.95
GPFax $54.95
GuruROM v6 (GVP SCSI) $74.95
Octamed Pro 6.0 ....$54.95
On the Ball (Personal Info) $39.95
PageStream 3.0 ....$224.95
HiSoft Basic 2 ....$129.95
HighSpeed Pascal $159.95
MaxonMAGIC $34.95
Photogenics $134.95
Proper Grammar $59.95
Scala MM300 ....$199.95
Sequencer One $29.95
Termite v1.1 ....$44.95
TurboCalc 2.0 ....$39.95
Twist 2 ....$109.95

Hot Amiga floppy games!!
[ECS unless otherwise noted]

Aladdin AGA $34.95
ATR $39.95
Blitzkrieg $24.95
Clockwiser $34.95
Colonization AGA $39.95
Dawn Patrol $39.95
Detriot (ECS/AGA) $34.95
F1 World Championship $39.95
Fields of Glory $39.95
Gloom AGA $44.95
Guardian AGA $39.95
Jungle Strike (AGA/ECS) $39.95
Kingpin $24.95
Lion King AGA $34.95
Mega Ball 4 ....$29.95
PGA Euro Tour (AGA/ECS) $29.95
Pinball Illusions AGA $39.95
Roadkill AGA $34.95
Ruff 'n' Tumble $29.95
Shadow Fighter AGA/ECS $44.95
SimCity 2000 AGA $39.95
Skeleton Krew AGA $29.95
SuperSkidmarks $39.95
Super Stardust (AGA) $39.95
Top Gear 2 (ECS/AGA) $34.95
Tower Assault (Alien Breed 3) $34.95
Tower of Souls AGA $39.95
Universe $34.95
ViroCop (AGA/ECS) $39.95
Voyages of Discovery $34.95
Wild Cup Soccer $39.95
Xmas Lemmings $24.95

CD32 Software

Akira $19.95
Battletoads $9.95
Bubble & Squeak $24.95
Castles II $14.95
Chaos Engine $19.95
Dragonstone (PAL) $34.95
Fields of Glory $34.95
Global Effect $19.95
Gloom $44.95
Guiness Book Records (PAL) $19.95
Impossible Mission: 2025 ....$29.95
Insight: Technology $39.95
Lemmings $19.95
Lock 'n' Load $14.95
Marvin's Adventure $29.95
Nick Faldo Championship Golf $14.95
PGA Euro Tour $34.95
Pinball Illusions $39.95
Rise of the Robots $34.95
Roadkill (PAL) $34.95
Speedball 2 ....$29.95
Subwar 2050 ....$34.95
Super Putty (PAL) $19.95
Syndicate $44.95
The Clue $34.95
Theme Park $29.95
UFO (X-COM) $34.95
Universe (RPG) $34.95

Hardware and Accessories

A520 Video Adapter (used) $19.95
Bigfoot 500 Power Supply $89.95
Competition CD32 controller $24.95
Joystick $7.95
Liana + Envoy $99.95
Megalo Sound $54.95
M-Tech 68020 board for A500 ....$99.95
A1084S Monitor (refurbished) $224.95
Optical Mouse (3 button) $34.95
Swifty Mouse (3 button) $24.95
Mouse, Eklipse (2 button) $24.95
540MB Fujitsu SCSI $249.95
CD32 Machine (slightly used) $149.95
(regular controller, power supply, no games included)
Trackball, 3 button $39.95

Migraph 24-bit Flatbed Scanners

MS 2400 (2400dpi) $999.95
MS 1200 (1200dpi) $799.95
OCR Jr. $129.95
OCR Full $199.95

SUPER SPECIALS!

Sanyo 4x Internal SCSI CD-ROM *$249.95*
2 Free CDs included
ASIMware CDFS 3.0 add *$49.95*
External Case *$54.95*
NEC 1GB SCSI *$349.95*

Amiga Magazines

Amazing Amiga (US) $3.95
Amiga Animation (US, 3 disk) $14.95
Amiga Action $10.00
Amiga Computing $10.00
Amiga Format $9.45
Amiga Power $8.95
Amiga Shopper $6.75
Amiga User $10.00
Best of Amiga (US, 3 disk) $14.95
CD32 Gamer $10.00
CU Amiga $7.95

Books

The Amiga GURU book $44.95
Amiga Workbench A-Z $24.95
A-Rexx Cookbook $44.95
Mastering Amiga Assembler $29.95
Mastering Amiga C $34.95
Mastering Amiga System $24.95
Mastering Amiga AMOS $26.95
Mastering Amiga DOS 3 ....$29.95
Writing RPG's in AMOS $24.95

Connect Your Amiga! (T-Shirt) $14.95
Connect Your Amiga! - A guide to LANs, BBSs, and the Internet $24.95
Signed by Dale Larson, the author.

CD ROM

17 Bit Collection (2 discs) $39.95
17 Bit Continuation $19.95
17 Bit Phase 4 ....$19.95
LSD/17 Bit Compendium $19.95
LSD/17 Bit Compendium 2 ....$19.95
Aminet 8 (October 1995) $19.95
Aminet 7 (August 1995) $19.95
Aminet 6 (June 1995) $19.95
Aminet 5 (March 1995) $19.95
Aminet Set 1 (Discs 1-4) $39.95
Aminet 2 (Walnut Creek) $11.95
Amiga Desktop Video CD $24.95
Amiga Utilities Pro $19.95
Amiga Hottest 4 ....$19.95
Berliner Splelkleste Game CD $29.95
C User's Group Library $24.95
da capo (Music & Mods) $22.95
Fractal Frenzy $24.95
Fresh Fish $19.95
Frozen Fish (1-1000) $19.95
Gateway (Amiga UNIX) $19.95
Gold Fish #2 ....$19.95
Gifs Galore $19.95
Internet Info $24.95
Light Rom 2 ....$34.95
Light Works $62.95
Meeting Pearls 2 ....$19.95
Micro R&D Vol #3 ....$19.95
(DTP Fonts, Clipart, and more!)
Micro R&D Vol #4 ....$19.95
PDSoft Pro Fonts and Clipart $24.95
Photo Session: 1000 Adult pix $29.95
Space Shuttle Encyclopedia $39.95
Source Code CDROM $18.95
Visions (500 royalty free pix) $34.95

Weird Science Ltd.

Amos PD CD V2.0 ....$24.95
Animations CD $34.95
Assassins $19.95
Clipart CD $13.95
Fonts CD $13.95
Multimedia Toolkit 2 ....$24.95
Network CD $24.95
CD32 Serial Cable $29.95
Network CD and Serial Cable $49.95
Sounds Terrific $24.95
UPD Gold CDs (4 disks) £39.95
United PD collection: Over 4800 disks!

Shareware Disks: $1 each

3997 ABCD Klondike AGA III
3546 HD Games Installer–Install Lion King, Aladdin, Superfrog and more to your hard drive!!
3636 MASH – A cross between Lemming and Scorched Tanks
3666 AMIGADOS GUIDE V1.5
3668 WORD SEARCH DESIGNER
3669 ICON TOOLBOX V2.12
3670 (AB) BIG GIRLS 2 AGA
3671 DOMINOES
3674 (AB) GLOBAL FACTS
3675 (ABC) CARD GAMES DELUXE – Compatible with the REKO cardsets.
3681 GLASSBACK 2-platform game.
3685 MAN. OVERRIDE DEMO-AGA
3686 HYDROCEPHALUS DEMO
3687 (AB) DEEP DEMO-AGA
3688 SWAZBLANKER 2.7 AGA Screensaver
3689 MR. BACKUP PRO V2.20
3691 TSMORPH V3.2
3692 LAST LAP V1.0 – racing program
3694 (AB) BLOX – Sliding puzzle game
3695 SUPER DMS-GUI front DMS
3702 SCORCHED TANKS 1.85 (SW)
3703 SPRINGTIME Puzzle Game
3704 BATTLE DUEL AGA Sco. Tanks clone
3705 BATTLE DUEL ECS
3707 VIRUS WORKSHOP V4.8
3708 VARK CLI UTILS #7
3709 IMAGEDESK V1.5
3710 (A-F) PROJECT UFO - 6 disks with UFO related files from around the world.
3714 (ABCD)M ON THE MOON AGA Demo
3715 (AB) DREAM WALKER
3717 (ABC) GREENDAY DEMO AGA
3724 INTERNET UTILS 2
3628 DISK COMPRESSION SYSTEMS** NOT FOR BEGINNERS**
3730 SPONDULIX MK 5 - personal acc. system
3731 KING HIGH: CARD GAME
3732 PCTASK V3.1
3734 TEXTURE STUDIO V1.0.2-Supports Imagine3 format
3738 TEMPLE OF DECEASE AGA--demo
3743 VIRUS WORKSHOP V5.1
3744 DELITRACKER 2 V2.14
3747 TERM V4.3 + LOCALE
3748 TERM V4.3 030 VERSION + LOCALE
3749 TERM V4.3 EXTRAS + LIBS
3751 BROWSERII V3.03 - file manager
3754 NEW UTILS #11-AmigaNCP V1.5, MCP V1.02, AssignZ V2.7 NaeGrey V1.1.
3755 NEW UTILS #12
3761 HARDWARE PROJECTS DISK
3762 MORSE CODE TUTOR V1.2
3772 MOSIAC V1.3b
3766 THE X-FILES GUIDE

NEW .REKO CARDSETS

3722 BIRDS
3723 DREAMGIRLS 2
3745 NEW ROSES
3756 EROTICA
3757 FRACTALS
3764 REN + STIMPY
3768 DOOM 2
3679 NIGHTMARE BEFORE CHRISTMAS
3690 DRAGON'S LAIR
3696 RECORD
3697 STEPHANIE SEYMOUR
3698 BASKETBALL
3699 OCEAN
3700 PB COVERS
3701 KYLIE
3736 PREHISTORIC
3737 ST: GENERATIONS

Zipperware Licenseware

Scorched Tanks v1.9 ....$12.00
Most popular Licenseware!

AMOS LIVES!!!!!!

AMOS Intuition Extension $14.95
Create true Workbench applications with AMOS
AMOS Turbo Plus Extension $29.95
Holds over 130 new commands to AMOS! Including a Scene Editor, faster graphic commands, Color font capability and more!!
Enhanced Music Extension $14.95
Replaces the bugs in AMOS music lib
Writing Role Playing Games in AMOS $24.95

F1 LICENSEWARE

F1-094: AMOSZINE Issue 7 AMOS dedicated disk magazine with hints, helps, and tons of source code for AMOS! $10.00

F1-091: The Disk Mag Creator DMC can be used by anyone wanting to make their own catalog, disk mag, or letter disk! $8.50

F1-089: Absolute Beginner's Guide to AMOS v.3 Excellent Tutorial for AMOS! ..$7.00

F1-088: Ghostslayers Amiga version of the CLASSIC C64 "Ghostbusters" $7.00

F1-085: Legions Of Dawn Final and best of the Black Dawn Series, 3-D roleplaying ..$8.50

F1-081: Aquakon "Doom" on water 50 levels, 10 weapons! Requires 2MB chip mem..$10.00

F1-077: Absolute Beginner's Guide to WB3.0 Don't be lost in the Workbench! ..$7.00

F1-076: Obstickle 100-level arcade platform game, with editor! Got a great score of 85% in Amiga User $7.00

F1-074: Amiga Assist In-depth guide for new Amiga users! $7.00

F1-066: G.R.A.C. Create your own graphical adventure game! This great program rated a whopping 92% in Amiga User! $8.50

F1-051: Introducing Workbench $8.50

F1-048: Erik. Great game!! NTSC $7.00

F1-044: Black Board v3. A full featured image processing program. CU Amiga 89%..3 disk set..$10.00

F1-032: Word Power v2! Solve crossword and anagram puzzles with ease. $7.00

F1-025 Art School v1.1 ....$8.50

Get our 6 disk catalog that has all of the NPD, Zipperware, F1 Licenseware, 17bit catalogs, samples, and more! ONLY $5.00, or get any one disk for $1/each!

LOOK FOR ZIPPERWARE ON THE INTERNET SOON!!!

BETTER CONCEPTS INC

1-800-252-6442 SALES
914-786-0218 TECH/INFO
914-786-1708 FAX
betterc@j51.com
36 DYE STREET GARNERVILLE NY 10923 http://commons.j51.com/bci

AMIGA HARDWARE

NEW AMIGA COMPUTERS FROM ESCOM

A1200 Computer 2MB RAM, 3.1 OS $CALL$
ALL A1200 Configurations Avaliable! Call For Info!

A4000T with 3.1 OS, 6MB RAM, 1 GIG SCSI HD $CALL$
All A4000T Configurations Available! Call For Info!

CD32's ARE BACK! CALL FOR PRICING!

Purchase Any New AMIGA Computer From Us & Receive Special Software Bundle From Amiga Technologies (Call for info on what is included with the latest bundle from AT) **Plus** The BCI CD ROM Bundle Which Includes 6 CD's!! (Aminet 3 CD, Aminet 4 CD, BCI Net I CD, BCI Net II CD, Euroscene I CD & GIFS Galore CD! That's over $80 worth of CD's!!!!)

BCI HURRICANE CD ROM DRIVE KIT $319

EXTERNAL CDROM DRIVE FOR A1200/A600
- Comes complete & ready to plug in!
- Hooks up through your PCMCIA slot!
- Emulates CD32 & CDTV on A1200!
- Emulates CDTV on A600!
- Plays all Audio CDs & ISO 9660 CDs!
- Consists of: External Triple Speed CDROM Drive, Squirrel SCSI Controller & Software, 5 disk utility pack for your A1200/A600 & 1 year warranty!
- Plus you can still add up to 6 other SCSI or SCSI2 devices!!

BCI TORNADO CD ROM KIT $399

Same as above except it comes with an external SCSI **Quad** Speed CD ROM Drive!

Don't forget that we will always match any competitor's price on any product!

CALL FOR ANY ITEM NOT SHOWN!

ASSORTED HARDWARE BLOWOUT

AMIGA REPLACEMENT & UPGRADE CHIPS

8362 R8 Denise $15
8364 Paula $5
8373 R4 Super Denise $30
8520A CIA 2mhz $20
8375B 2MB Fattest Agnus $50
8375 2MB Fattest Agnus $50
5721 A2000 Buster $25
1.2 ROM Chip $5
1.3 ROM Chip $19
8721 R3 PLA $10
8564 R6 $10
2.04 ROM Chip $34.95
2.05 ROM Chip $39.95

OTHER HARDWARE

120MB Maxtor SCSI HD 3.5" (RFB) $75
A2286 Bridgeboard w/5.25" drive,manuals.. $45
A500 Keyboard $29
A500 Motherboard Rev 5 or 6A $99
A500 Power Supply $39
A500 Big Foot Power Supply $89
A520 Video Adapter $30
A590 PCB SCSI WDHD $59
A600 Keyboard $39
A600 Power Supply $39
A1000 Power Supply $45
A2000 Mother Board Asstd Rev's $150
A2088 Disk Drive (5.25") $25
A2090 HD Controller $25
A3000 Daughter Board $50
External DD Floppy Drive $90
3.1 Complete Upgrade Kit A500/2000 $Call
3.1 Complete Upgr. Kit A4000/3000/1200 $Call
Internal DD Floppy Drive $75
Dell (Black) External HD Floppy Drive $119.95
Int. HD Floppy Drive (A4000) $135
Int. HD Floppy Drive (Other Amigas) $140
BAG O' 1084 Monitor New Parts $10
Cable for 1080/1084 Audio (RCA Y Cable) $3
CDTV Remote Control $20
CD32 Competition Pro Pad $19

CD32 Standard Replacement Joypad $8
CD Caddies $4
Chinon Int. 1.4MB Floppy Drive in 5.25" brkt for a2000 brgbrd $75
Commodore C-1600 Modem $10
CRT 1084 (Picture Tube Only) NEW! $10
DCTV $299
Eject Button For A500 Int. Floppy Drive $3
EMPLANT MAC Basic $259
EMPLANT MAC Deluxe $359
EPYX Ergo Hand Held Joystick $13
586DX Upgrade Module For Emplant $109
Golden Image Optical Pen Mouse $22
Golden Image Optical 3 Button Mouse w/Pad $25
Guru ROM (For GVP Boards) $79.95
MONITOR 1802 (Slightly Used By CBM Tech's) $60
MONITOR 1702 (Slightly Used By CBM Tech's) $50
Picasso II Graphics Board w/2MB $399
Power Supply (Replacement) A3000 $89
Power Supply (Replacement) A4000 $129
QUANTUM 52 MB SCSI or IDE 3.5" Hard Drive NEW $50
Replacement 2 Button Mouse For Any Amiga $16
Squirrel SCSI2 PCMCIA Controller For A1200/A600 $99
Sonnet Doubler A4000 040 50MHZ $599
SX1 Expansion Box For CD32 $209
-4MB RAM for SX1 $165 -8MB RAM for SX1 $299
--White Keyboard for SX1 $40 -Black Keyboard for SX1 $49
-Internal 2.5" 210MB IDE HD $290 -Cable for HD (44 pin) $15
Video Adapter Cable 15 pin to 23 pin $35
Video Adapter:15 pin to 9 Pin $15

SERVICE MANUALS / SYSTEM SCHEMATICS

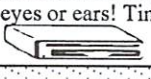
64/64C • CDTV • 1084-SD1 • A2300 • 1402/03
A500 • A3000 • A3000T • 1084 PAL • A2058
$9.95 EACH

ASSORTED BOOKS

ROM KERNEL Manual V2 $20
Commodore & Amiga Software Information Book $15
Commodore Parts Cross Reference Manual $25

External HD Floppy Drive

NEW! DELL External HD Floppy Drive for all Amigas WB 2.04+! You won't believe your eyes or ears! Tiny, thin, black, silent & **only $119.95**



CYBERGRAPHICS

Cyberstorm 060 $1350
Cyberstorm SCSI $250
Cyberstorm I/O $550
Cybervision w/ 2MB $470
Cybervision w/ 4MB $599

EXPANSION SYSTEMS

Dataflyer 500 SCSI Cntrlr $139
Dataflyer RAM 8MB Board $89
Dataflyer SCSI/IDE Card $99
Dataflyer XDS for A1200 $89
Dataflyer 4000SX SCSI $119
High Flyer Case & p/s $399

DKB

WILDFIRE 060 for A2000
w/ 4MB $1679 w/ 8MB $1829
w/ 16MB $2039 w/ 32MB $2489
Rapidfire SCSI II Controller $150

NEW Heavy Duty Amiga Power Supplies From BCI

CD32 **'Fat Boy'** Power Supply
-120 watts & fan cooled! $49

CD32 **'Obese Boy'** Power Supply
-250 watts & fan cooled! $69

A500/A600/A1200 **'Obese Boy'** P/S
-250 watts & fan cooled! $69
!All Fans Are 110V/220V Switchable!
!Call For More Details!

MICROBOTICS

MBX 1230XA 68030 50 MHZ
w/MMU & FPU $279
-4MB Ram For MBX $165
-8 MB RAM for MBX $299

DEFECTIVE EQUIPMENT

Through out the liquidation of Commodore, we obtained a ton of supposedly 'defective' equipment. The items listed here are items that we have not tested yet. Over 50% of the 'defective' items that we did test, were completely operational (sometimes new!) . Items are sold AS IS!

Defective CDTV $25 • Defective CD32 (Unit Only) $50
Defective A2000 Power Supply $25 • Defective A2000 Int. Floppy $15
Defective A3000/4000 Int. HD Floppy $25 • Defective A2000 Keyboard $25
Defective A3000 Keyboard $25 • Defective A4000 Power Supply $40
Defective 40MB 2.5" IDE Hard Drive $15
Defective 120MB SCSI Hard Drive $25
Defective A2286 Bridgeboard $20
Defective Commodore MPS 1250 Printer $10
Defective A520 Video Adapter $8

There's more! Call/fax/send/email for updated list!

BETTER CONCEPTS INC PRESENTS HOMEMADE CD'S

MUSIC MOD & SOUND EFFECT CD $19.95

- SPECIALLY GEARED TOWARDS AMIGA OWNERS
- OVER 2800 MUSIC MODS (CLASSICAL, POP, ROCK, TECHNO, ACID, RAVE, MELLOW...)!
- OVER 6300 SOUND SAMPLES RANGING FROM SOUND EFFECTS, DIGITIZED SPEECH, ALL KINDS OF INSTRUMENTS & MORE!
- ALSO COMES WITH SEVERAL MOD & SOUND SAMPLE PLAYERS FOR YOUR AMIGA COMPUTER!

DESKTOP PUBLISHING CLIP ART & FONTS CD $16.95

- SPECIALLY GEARED TOWARDS AMIGA OWNERS
- CLIP ART DIRECTORY CONTAINS OVER 2500 B&W EPS STRUCTURED IMAGES, 1500+ IFF PLUS OVER 8000 PCX IMAGES!
- 1000S OF TYPE 1 ADOBE FONTS & POSTSCRIPT FONTS!
- ALL YOUR DESKTOP PUBLISHING & WORD PROCESSING NEEDS ON ONE CD!

BCI-NET II CD APRIL/MAY $14.95

THIS CD CONTAINS OVER 1 GIG OF THE LATEST, GREATEST, MOST USEFUL PROGRAMS OFF OF THE INTERNET. UTILITIES, GAMES, GRAPHICS, MUSIC, ENTERTAINMENT PLUS TONS MORE! ALL COMPLETE WITH A CUSTOM BUILT INTERFACE WRITTEN JUST FOR THIS CD THAT WILL LET YOU SMOOTH THROUGH THE ARCHIVED FILES WITHOUT EVER LEAVING THE INTERFACE! PLANNED TO BE RELEASED QUARTERLY, THE LATEST VERSION AVAILABLE IS APRIL/MAY 95.
(BCI NET I DECEMBER 94 STILL AVAILABLE FOR ONLY $9.95!)

!NEW! YOUR PRIVACY ASSURED CD32/CD $34

FIRST OF ITS KIND ANYWHERE ON THE AMIGA. AN ADULT ORIENTED, USER INTERACTIVE CD FOR YOUR CD32 OR AMIGA CD. NOT ONLY ARE THERE 14 DIRECTORIES OF HOT PICTURES, MANY NEW DIGITIZED HOT VIDEO ANIMATIONS BOTH CONTROLLED BY A COMPLETELY CUSTOM MADE THUMB NAIL VIEWER FRONT END; THERES ALSO TONS OF ADULT STORIES TO READ RIGHT FROM THE CD. ALSO A FULL VERSION OF KLONDIKE III AGA WITH 20 DIFFERENT ADULT CARDSETS. BEST OF ALL, IS A COMPLETELY INTERACTIVE GAME SCREEN WHERE YOU MUST *PLEASE* ONE OF OUR MODELS BEFORE HER PATIENCE RUNS OUT. YOU CAN NIBBLE, CARESS, RUB, KISS, LICK, SUCK.... TO YOUR CHOICE OF HER MANY BODY PARTS. LISTEN TO HER RESPONSES AS YOU PLEASE HER (IF YOU CAN!). CHOOSE FROM OVER 20 MUSIC TRACKS! THIS CD WILL MAKE HISTORY!

PLAIN BROWN WRAPPER CD $25

ADULTS ONLY PLEASE! THIS CD CONTAINS OVER 1600 IMAGES OF HOT XXX ACTION. COMPLETE WITH VIEWERS, THIS CD HAS SET UPS & RUNS ON BOTH PCS AND AMIGAS!

SPECTRUM & KLONDIKE 2 CD SET $39

NEW! THIS 2 CD SET CONTAINS LATEST SPECTRUM EMULATORS FOR BOTH AMIGA AND IBM WITH OVER 4000 SPECTRUM GAMES! ALSO CONTAINS KLONDIKE III CARD GAME WITH OVER 400 CARD SETS! ANOTHER KICK BUTT CD FROM BCI!!!!

SEXUAL FANTASIES CD32/CDTV/CD $18

ADULTS ONLY PLEASE! THIS CD IS SPECIALLY DESIGNED FOR YOUR CD32, CDTV OR AMIGA CD ROM. FILLED WITH 1000S OF XXX PICTURES AND SOME HOT ANIMATIONS. ALL COMPLETE WITH VIEWERS!

SHEER DELIGHT CD32/CD $22

ADULTS ONLY PLEASE! THIS CD IS SPECIALLY DESIGNED FOR YOUR CD32 OR AMIGA CD ROM. FILLED WITH OVER 3800 IMAGES OF BEAUTIFUL WOMEN POSING IN BATHING SUITS, LINGERIE, SEMI NUDE PLUS MORE! IMAGES ARE ALL U.K. OK!. COMPLETE WITH VIEWERS!

MORE HOMEMADE CD'S ON THE WAY!

CD32 DEMO CD VOLUME 2

This CD was to be bundled with the CD32 when CBM released it to the U.S.A.! Contains:Several minute movie intro and playable demo of MICROCOSM, preview of RISE OF THE ROBOTS, Video presentaion of CD32 capabilities, CDXL & 2 complete FMV videos! Only $10!!

FUTURE SHOCK 2 AUDIO CD By Sidewinder

This Audio CD was completely made on an Amiga using Protracker and MED. 15 butt kicking Techno tunes by one of todays hottest writers! Plays on any audio CD player! Only $15

COMMERCIAL FLOPPY SOFTWARE BLOWOUT

Aegis Animator (Utility) $10
Amiga Font Set #1(Data) $5
Amiga TextCraft (Utility) $10
AMIGAVISION Authoring Pkg $19
Apidya (Game) $10
Arkanoid $8
ASIMWARE 3.0 CD Driver $68
Back To The Future III (Game) $5
Body Blows $8
California Games (Game) $5
Colonization $30
Cybercon (Game) $5
Gloom A1200 $35 **HOT**
Golf Challenge (Game) $9
Gold Of The Aztecs (Game) $9
Graphics Studio (Utility) $10
Gunship 2000 A1200 $15
Heat Wave (Game) $5
Hot & Cool Jazz (Utility & Data) $5
Impossible Mission A1200 $15
Impossible Mission A500 $15
JUG (Game) $5
Knight Of Crystallion (Game) $5
Leatherneck (Game) $5
MACRO ASSEMBLER $29
Money Mentor (Utility) $10
Prime Time (Game) $5
PHOTON PAINT 2.0 $19
Project X (Game) $10
Qwak (Game) $8
Test Drive (Game) $5
Test Drive 2:Spr Cars (Data) $5
TestDrive2:Calif.Scenes (Data) $5
Tetris $6
The Godfather (Game) $9
Theme Park Mystery (Game) $5
Universe (Game) $18
Virocop AGA or Reg $30 *HOT*
VIVA Authoring Software $19
World Class Soccer (Game) $9
Zero Gravity (Game) $5
MANY MORE JUST IN! CALL!

CD32 TITLES

100 PD GAMES I*	$18	DIZZY	$17	LABYRINTH OF TIME	$25
100 PD GAMES II*	$18	D/GENERATION	$10	LAST NINJA III	$6
TOWER ASSAULT*	$30	DISPOSABLE HERO*	$15	LEGACY OF SORASIL	$32
ALFRED CHICKEN*	$10	DRAGON STONE*	$34	LIBERATION	$28
ALIEN BREED S.E./QWAK*	$27	EMERALD MINES*	$15	LITIL DIVIL	$35
ALIEN BREED 3D*	$35	EUROPEAN PGA GOLF	$34	LOST VIKINGS	$12
ALL TERRAIN RACER	$34	FIELDS OF GLORY	$30	LOTUS TRILOGY	$15
ARCADE POOL*	$18	FIRE FORCE	$26	MANCHESTER UK SOCCER	$19
BANSHEE*	$27	FLY HARDER*	$12	MARVELOUS MARVIN*	$30
BATTLECHESS	$30	FRONTIER:ELITE II	$16	MEAN ARENAS	$10
BATTLETOADS	$10	FURY OF THE FURRIES	$10	MICROCOSM	$19
BEAVERS	$10	GAMES N GOODIES*	$18	MORPH*	$10
BENEATH A STEEL SKY*	$34	GLOBAL EFFECT	$10	MYTH	$13
BRIAN THE LION*	$16	GROLIERS ENC. II	$25	OUT TO LUNCH*	$12
BRUTAL SPORTS FOOTBALL	$17	GLOOM	$35	OVERKILL / LUNARC	$12
BRUTAL SPORTS SOCCER	$12	GUARDIAN	$25	NICK FALDO GOLF	$10
BUBBA & STIX*	$15	GUINESS CD OF RECORDS*	$15	NIGEL MANSELL*	$12
BUBBLE & SQUEAK*	$30	GUNSHIP 2000	$25	PINBALL ILLUSIONS*	$35
BUMP & BURN*	$12	GUPPY	$10	PINBALL FAN/SLEEPWLKR	$10
CANNON FODDER	$30	HEIMDALL II	$20	PIRATES GOLD	$25
CASTLES II	$12	INSIGHT:TECHNOLOGY	$15	POWER DRIVE*	$35
CD32 SPORTS FOOTBALL	$15	IMPOSSIBLE MISSION 2025*	$32	PREMIER*	$12
CHAOS ENGINE	$10	JAMES POND II	$10	RISE OF THE ROBOTS	$32
CHUCK ROCK I	$10	JAMES POND III	$12	ROADKILL*	$32
CHUCK ROCK II*	$12	JETSTRIKE	$12	SHADOW FIGHTER*	$35
THE CLUE	$32	JUNGLE STRIKE*	$34	SIMON THE SORCEROR	$32
DARKSEED	$15	KID CHAOS	$12	SOCCER KID	$28
DANGEROUS STREETS	$10	KINGPIN*	$20	SUBWAR 2050	$30
DEATH MASQUE	$32				
DEEP CORE	$10				
DEFENDER OF THE CROWN II	$10				
DENNIS THE MENNIS	$12				
DIGGERS	$8				

SKELETON KREW*	$32
SPEEDBALL 2 *	$35
SUMMER OLYMPIX	$15
SUPERFROG	$18
SUPER METHANE BRO'S	$12
SUPER SKIDMARKS	$35
SUPER STARDUST*	$30
SYNDICATE*	$35
THEME PARK*	$32
TOTAL CARNAGE*	$8
TRIVIAL PURSUIT	$16
TROLLS	$30
UFO:ENEMY UNKNOWN	$32
ULTIMATE BODY BLOWS	$29
UNIVERSE*	$15
VIDEO CREATOR*	$34
VITAL LIGHT	$15
ZOOL*	$10
ZOOL II*	$12
ADULTS ONLY	
COVERGIRL STRIPPOKER	$17
SEXUAL FANTASIES	$18
SHEER DELIGHT	$22
STRIP POT (ADULT SLOT MACHINE)	$29
YOUR PRIVACY ASSURED	$34

*=PAL only!

IF YOU DON'T SEE WHAT YOU WANT, CALL US AND WE WILL GET IT!

JUST IN!

CD32 TITLES

CLOCKWISER	$15
FEARS	$37
SENSIBLE SOCCER	$20
POWER GAMES	$22
SUPER PUTTY	$12
TOP GEAR II	$30
FIRE & ICE	$20

FLOPPY TITLES

Super Street Fighter II AGA or REG $35
WWF European Rampage $15
Raider $6 • SkidMarks $19 • SWIV $6
Brutal Football A1200 $10 • Puggsy $19
F19 Stealth Fighter $19 • Robocod $10
Burning Rubber A1200 $25 • Outrun $10
Zool 2 $25•Special Forces $20•Speedball $10
Wonder Dog $10 • Bomber Bob $10
Int. Soccer Challenge $10 • Titus The Fox $20
Cntrfld Squares (Adult) $20 • Chuck Rock $10
Football Director II $10 • Wolfchild $10
Curse Of Enchantia $10 • Super Tetris $10
Rick Dangerous $10 • Thunderblade $10
World Class Leader Board $10 • Luxor $10
Dr Plummet's House of Flux $10 • Mafdet $10
Veteran $10•Fire Power $10•Dragonscape $10

CDTV TITLES

ADVANCED MILITARY SYSTEMS•	$8
ALL DOGS GO TO HEAVEN•	$8
AMERICAN HERITAGE DICTIONARY•	$10
BARNEY BEAR GOES TO SCHOOL•	$8
CINDERELLA•	$8
CLASSIC BOARD GAMES	$8
CURSE OF RA	$8
DEFENDER OF THE CROWN II•	$15
ELECTRONIC COOKBOOK•	$8
EYES OF THE EAGLE	$8
FUN SCHOOL 3•	$8
GARDEN FRUITS•	$8
GARDEN PLANTS•	$8
GARDEN TREES•	$8
GROLIERS ENCYCLOPEDIA II•	$25
GUINESS DISC OF RECORDS•	$15
HOLY BIBLE•	$8
HOUNDS OF THE BASKERVILLE•	$8
INDOOR PLANTS•	$8
INSIGHT:TECHNOLOGY•	$15
ILL. WORKS OF SHAKESPEARE•	$8
MOVING GIVES ME STOMACH ACHE	$8
MUD PUDDLE•	$8
PAPER BAG PRINCESS•	$8
POWER PINBALL	$8
PSYCHO KILLER•	$8
TALE OF PETER RABBIT•	$8
THOMAS SNOW SUIT•	$8
TIME TABLE OF HISTORY•	$10
TOWN WITH NO NAME•	$8
WOMEN IN MOTION•	$10
WRATH OF THE DEMON•	$8

*=Works on CD32 also!

ADULTS ONLY

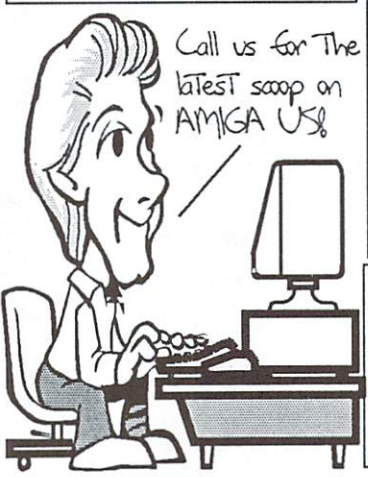
COVER GIRL STRIP POKER•	$17
SEXUAL FANTASIES•	$18

AMIGA CD ROMS

100 PD GAMES I	$18
100 PD GAMES II	$18
17 BIT 2 CD COLLECTION	$34.95
17 BIT CONTINUATION	$17.95
17 BIT PHASE 4	$17.95
17 BIT 5TH DIMENSION	$24.95
AMINET 3 (JULY 94)	$9.95
AMINET 4 (NOV 94)	$9.95
AMINET 5 (MARCH 95)	$14.95
AMINET 6	$14.95
AMINET 7	$17.95
AMINET SET (4 CDs)	$39.95
AMOS PD CD I	$19.95
AMOS PD CD II	$19.95
ANIMATIONS 2CD SET	$24.95
ASSASSIN GAMES CD I	$14.95
ASSASSIN'S GAMES CD II	$22.95
BCI-NET I CD (DECEMBER 94)	$9.95
BCI-NET II CD (APRIL/MAY 95)	$14.95
CD PD I, II, III, or IV	$19.95
DEMO CD I or II	$19.95
DEMO MANIA I	$19.95
DTP CLIP ART & FONTS CD	$16.95
EUROSCENE I	$12
FRESH FISH (LATEST)	$19.95
FRESH FONTS I	$19.95
FRESH FONTS II	$19.95
FROZEN FISH (LATEST)	$19.95
GAMERS DELIGHT	$29.95
GAMES N GOODIES	$18
GIF'S GALORE	$9.95
GOLDFISH I	$19.95
GOLDFISH II	$19.95
HOTTEST 4	$24.95
LIGHT ROM I	$34.95
LIGHT ROM II	$34.95
LIGHT WORKS	$34.95
LSD & 17 BIT COMP. I, II or III	$19.95
MEETING PEARLS I	$14.95
MEETING PEARLS II	$14.95
MULTIMEDIA TOOLKIT 2 (2 CD PACK)	$39.95
MUSIC MOD & SOUND EFFECTS	$19.95
NETWORK CD I	$12.95
NETWORK CD II	$19.95
SERIAL CABLE FOR NETWORK CD	$29.95
SOUNDS TERRIFIC 2CD SET	$29.95
TEXTURE GALLERY	$34.95
UPD GOLD (4 CD'S)	$39.95
WEIRD SCIENCE CLIP ART CD	$13.95
WEIRD SCIENCE FONTS CD	$13.95

ADULTS ONLY

PLAIN BROWN WRAPPER	$25
SEXUAL FANTASIES	$18
SHEER DELIGHT	$22



LICENSEWARE ON FLOPPIES

DESERT APACHE $25 !NEW! !NEW! !NEW! !NEW!
-By John B Graham. Desert Apache is another software based Full Motion Video (FMV) game that runs on any Amiga with 1MB RAM all the way up to AGA machines. Includes new Digital Video Engine which allows for Full Screen game play!! Try to free your captured comrads from the enemies ground bases by flying your Apache Helicopter through enemy territory. Watch out for enemy fire! A game of non stop Full Motion Video action!

IT'S THE PITS! A BOLD MINER'S SLAUGHTER $12
-By Kit Felice. Amazing multi-level AMOS arcade game. REQ:Hard drive, 2 MB RAM, ECS or AGA, LHA decompresser, any Amiga OS. 3D tunnel scenes are featured in this excellent arcade adventure game. Hours of fun!

TOMCAT $19
-By John B. Graham. Experience Amiga's first software based Full Motion Video arcade game. Any Amiga with 1 MB of Chip RAM and hard drive can play this thrilling arcade F-14 fighter game. Over 11 megs of hard hitting all video action!

PSYCHO SQUARES DELUXE $15
-By Shane R. Monroe. So easy, you'll learn it in 5 minutes; so addictive you'll play it for 5 hours! This strategy game features EHB graphics, digital speech, original music, two player mode and much, much more! Complete with many awesome backround graphics! You'll love it!

PSYCHO SQUARES DLX:ADULT GRAPHIC DISK $4
-By Shane R. Monroe. If you love Psycho Squares Deluxe backround graphics, imagine playing for STEAMY ADULT pictures! 13 levels of beautiful, hot women! Requires the registered version of Psycho Squares Deluxe sold above.

WAR GAME PROCESSOR $25
-By Sean Emerson. Your favorite wargame can now be played on computer, using a friendly graphic interface. Positions can be saved to disk, as well as detailed histories of where each unit moved in the previous turn or phase. These can be sent e-mail to your opponent, who will be able to replay the turn, even seeing your comments as play unfolds! Or maybe your opponent doesnt have this program. Thats okay, because the War Game Processor can generate your turns into summaries of plain English text! All you do is make your moves. Other features are:compatible w/most strategy board war games, play by mail/Email, full color graphics, scrolling play screen, replay/review moves, automatic dice rolls, customizable dice, stores any # of games/setups at once,..... too much to list! Also comes with a module editor that allows you to generate WGP modules for your favorite wargames and edit the heck out of them!

PUBLIC DOMAIN SOFTWARE

All our PD disks are now only 99¢ EACH! That includes all disks from our library, Assassin Game disks (200+), LSD Utility Disks (170+), 17 Bit Software disks (3800+), Amos PD disks (700+), Fred Fish Disks (1-1100+) plus more! Thats about 10,000 PD disks available to you for only 99¢ each! Why bother paying more when you can get it here for less? Send $3 for our paper catalog, 4 disks of disk catalogs & a sample disk from our library! See something we don't have? Call us & we'll get it!

ADULT CD ROM TITLES

The following is a list of NEW Adult XXX CD ROM titles that are made to work with your Amiga and/or any PC Compatible!

ADULT SENSATIONS	RED HOT
BODY LANGUAGE	SEX & GAMES 1
CHEEKY CHICS	SEX & GAMES 2
CLIMAX	SEX & GAMES 3
ERUPTION	SIXTY NINE
EXOTIC EXTASY	SMOOTH LIPS
GIRLS OF PARADISE	SPICY PICS!
HOT PIX 5	TIGHT PANTIES
HOT PICS:VOL. SEX	TOP HEAVY
LUSCIOUS LIPS	TROPICAL HEAT
MOODY NIGHTS	WET DREAMS
PARTY TIME	WHITE UNDERWARE
PUSSY GALORE	WILD WENDY

MUST BE ATLEAST 18 YRS OLD
$19.95 EACH
ANY 5 FOR $89.95
ANY 10 FOR $149.95

!SALE! ONLY $10 EACH!

HOURS
Monday Through Friday
SALES 9-5 Eastern
Tech Help/Info/Customer Service 1-5 Eastern
Saturday
SALES only 10-2
Sorry, no customer service on Saturdays

SHIPPING & HANDLING
$5.50 MIN. Charge For UPS Service
Many other Shipping Options Available
We accept Visa, M/C, Discover, CK, M/O
Slight fee for Credit Card Users

BETTER CONCEPTS INC

36 DYE STREET GARNERVILLE NY 10923
1-800-252-6442 SALES 914-786-0218 INFO 914-786-1708 Fax
Email: betterc@j51.com WWW: http://commons.j51.com/bci

Draco – a

After much hype and hollow promises, it appears there's about as much chance of a new or improved Amiga appearing before Christmas as yours truly sprouting an extra orifice. At best, we can expect a fresh production run of the existing range with perhaps the added glamour of the new Amiga Technologies logo. Not what you'd call inspiring news for serious Amiga users.

Fortunately, there is a ray of hope thanks to the Amiga's most prolific third-party supporter. Even through the Amiga's darkest hour, MacroSystem have continued to develop their impressive range of add-ons, which have now evolved into a completely new machine with Amiga technology at its heart.

Courtesy of their existing hardware, MacroSystem already have all the principle elements of a ground-breaking computer. Thanks to Retina, which in the Draco's case ships with 4Mb of RAM and CyberVision drivers as standard, they can deliver super fastest 24-bit graphics. Add to that stereo 16-bit audio via Toccata and the digital video skills of VLab Motion and you arrive at a computing potential the PC and Mac can only dream off.

What's missing is, of course, an operating system, and in that particular area the Amiga is still revered. With Windows 95 barely knocking on the door of Workbench 1.3 and the incredibly expense and self indulgent OS of the Mac, a licensed Amiga OS is the obvious choice for serious audio/video and CG productions.

GREAT CHOICE

With its combination of 10-years multitasking experience, a natural affinity with video, an OS which only requires one eighth of the resources required by a PC to perform the same task, the Amiga OS is the obvious choice for the new Microsystems' machine.

Although sound and vision are taken care of, there's the small matter of the CPU, not to mention the other I/O essentials that go to make up a modern computer. In the case of the Draco, this is taken care of via a 'Draco direct' plug-in CPU card and I/O combo consisting of an 060 with a SCSI II controller, space for up to 64Mb of RAM via standard simms, connections for mouse, serial, parallel ports and of course an HD floppy.

Add to that an array of QuickLogic chips for Kickstart and a few other essentials and you arrive at the world's first Amiga on a card – with one major difference. At first glance, the Draco's graphical user interface – or GUI – looks every inch an Amiga, but there is one major difference. The Draco does not have the AGA, or in fact any part of the Amiga's custom chipset. To prove the point, a quick glance at the menu bar reveals not 2Mb, but 4Mb of chip memory – alias Retina on-board Add to that the lack of the AGA chipset and you arrive at the Draco alternative. Admittedly, this may sound like a terminal problem, but for those using the Amiga as a production tool – especially video – the AGA Chipset is often more of a hindrance than anything else.

However, no AGA obviously does preclude certain applications from the Draco repertoire, notables including Dpaint, Brilliance and most important of all Scala. In short, software that insists on the AGA chipset by default, or in the case of Scala has a heavy dependence on Amiga specific chip RAM. To counter the loss of Dpaint, MacroSystem are already putting the finishing touches to a 2D animation system for Xipaint – a package which already ships as part of the Retina/Draco software suite. To further enhance the painting power, MacroSystem have already successfully tested TVPaint on the Draco. As a result, a dedicated Draco version and dongle should be shipping in the Autumn.

Obviously, Scala presents a bigger problem, and at present there are no plans for a dedicated Draco version. However, if the machine achieves the success it deserves, I'm sure it wouldn't be too long before Scala step in to fill the gap in the

Dragon fire

Another unique, and truly superb feature of VLM is its seamless combination of audio and video, since version 2.0 of the MovieShop software VLM has had the ability to act as a true digital AV – audio/video editing system.

Unlike any other Amiga system, audio and video are actually hard-wired together. As a result, when you cut, copy and paste video, the same edits apply to the accompanying stereo or mono audio. When the need arises you're still free to import, edit, and export the accompanying audio tracks or mix them within MovieShop to generate a perfect backing track.

Although both VLM and the Toccata sound cards

new breed

Paul Austin previews the incredible MacroSystem power tower

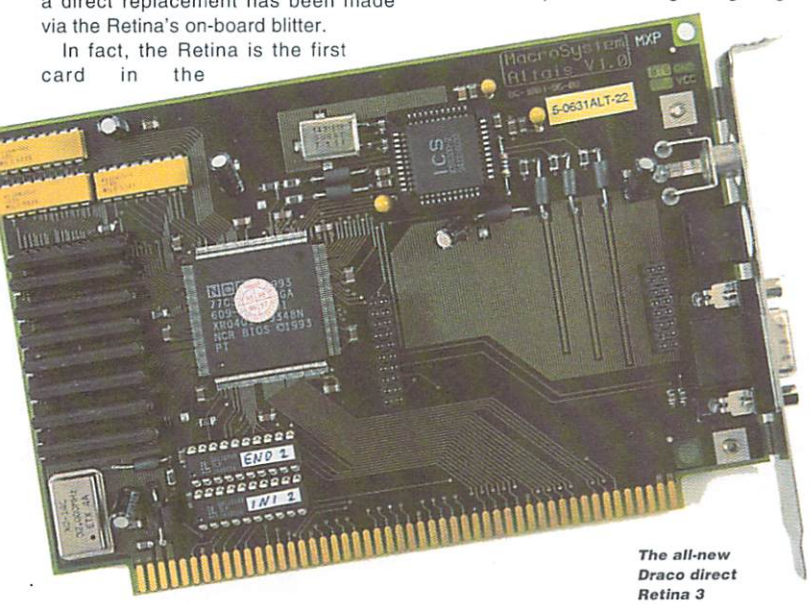
market. After all, if they can port to the PC in the form of MM100, I doubt they'd have too much trouble doing the same for the Draco – the process being made all the easier via the standardisation offered via MMOS.

DRACO DIRECT

The lack of the standard Amiga chipset could hold a few potential problems for programmers and indeed some notable Amiga Applications. One of the most worrying aspects is access to the Amiga blitter. Fortunately, MacroSystem have already spotted the problem and after some clever coding, a direct replacement has been made via the Retina's on-board blitter.

In fact, the Retina is the first card in the collection to go 'Draco direct' and can now pump through an incredible 35Mb per second, making it the fastest graphics card in the business – running Workbench or any graphic card-compliant software in full 24bit, 64K or 256 colours in a variety of resolutions ranging from 320 x 240 up to 1600 x 992.

The Retina's affinity with Workbench emulation, plus the ever-growing range of software with direct support for RTG boards, is a key factor in the development of the Draco. LightWave, ADPro, ImageFX, Wordworth, PageStream, the list goes on. As a consequence, even with the Custom Chipset stripped away, the Draco remains compatible with the vast majority of Amiga applications – only the ones which absolutely insist on standard chip RAM or the AGA fall by the wayside.



The all-new Draco direct Retina 3

COMPATIBILITY

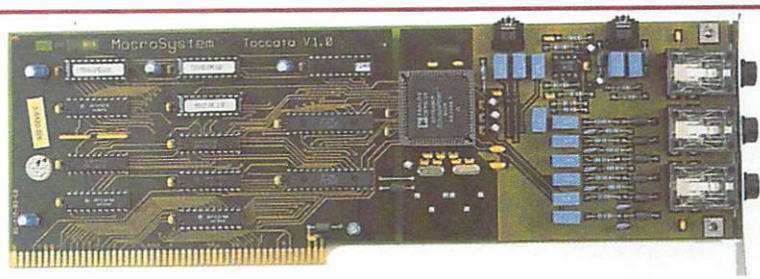
Another huge plus for the Draco is its backwards compatibility. This may seem a strange comment in relation to a brand new computer, but when it comes to MacroSystems' hardware it's entirely accurate. Obviously, there's a lot of people out there who've already invested a fair amount of hard earned cash on Toccatas, VLab Motion cards and Retina's. The good news is that all of the above will work perfectly well in the Draco. As a consequence, MacroSystem will be offering a mix and match option for those who already have elements of the Draco as part of the existing systems.

However, it must be said there are

➤

combine forces within the MovieShop/Draco environment, samples captured directly via the Toccata such as backing music or narration can still be imported and mixed with the existing AV in the production. Better still, any imported or directly captured audio can still be worked upon within MovieShop. For example, you can import as much audio as you like, adjust its length and position on the Timeline, or transfer it between video clips or scenes.

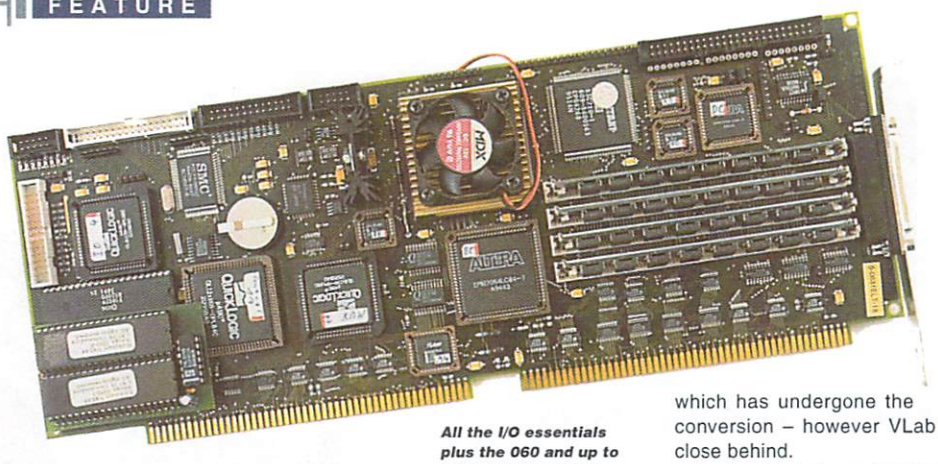
But perhaps most importantly, you also have complete control over the sound envelopes of the samples you're working on. As part of the Timeline control, you're provided with an envelope requester which allows you to insert multiple edit points and adjust where the levels appropriately. Consequently, you can introduce frame accurate volume changes and even cross-fades between different audio tracks in different video clips. In short, complete control over the sound dynamics within the production.



The Toccata card delivering DAT quality stereo sound with multiple input mixing MoviShop and its own control software

Once you've achieved a suitable mix between the original audio, backing music, vocal over-dubs, sound effects or whatever else, the whole thing can be boiled down into a new super sample which can be linked to a particular section of video or kept as a separate element.

The finishing touch on the audio side is the arrival of a built-in SMPTE timecode generator. Now, striping a tape with timecode is simply a matter of plugging-in the target recorder and clicking on a button. Yet another broadcast essential catered for.



All the I/O essentials plus the 060 and up to 64Mb RAM on board

advantages for those willing to invest in 'Draco direct' hardware. At present, the Retina is the only card in the collection which has undergone the conversion – however VLab Motion is close behind.

A standard Zorro II VLM transfers roughly 1Mb a second faster on the Draco, courtesy of a fast Zorro II software patch. In addition, the MovieShop code has also been optimised, especially in relation to decoding and encoding for the ever growing band of DVEs.

Running the standard VLM card, the Draco can attain, and more importantly maintain, 90 per cent Jpeg compression, which equates to BetaCam SP and above. In other words, image quality on a par with the DPS Personal Animation Recorder – otherwise known as the PAR card.

However, with the arrival of the "Draco direct" version, VLM compression will no longer be a consideration. With transfer speeds up to three times faster than Zorro III the "Draco direct" VLM will easily encode real-time full frame video without using any compression whatsoever. And better still DVE decoding and encoding will be done via hardware – making for much faster DVE

The Alpha option

Okay, you've heard the preamble concerning the key elements in the system, but what's it all in aid of? In short, the Draco is a one-stop graphics, digital video and audio solution which will become one of the fastest rendering and digital video effects systems on any desktop.

The aforementioned Dec Alpha co-processor could well prove to be the real key to the Draco's success in the long term – with the first and most obvious beneficiary being the MovieShop software.

Not surprisingly, an expansion slot already awaits a new co-processor which features the fastest chip in the Dec Alpha range, and currently holds the record for the world's fastest micro-processor delivering an astonishing 450 mips – which translates into 10 times the speed of an 50Mhz 060. The end result in MovieShop's case is real-time DVEs in software.

At present, the generation of wipes, fades and special effects can be a fairly lengthy process, especially on more complex DVEs. However, with the arrival of the co-pro, the vast majority of MovieShop SFXs will be real time, while the more complex flying cubes and the like will be generated in near real time.

However, MovieShop need not be the only software to cash in on the power of the Dec Alpha. MacroSystem will be providing a dedicated compiler for anyone wishing to re-compile their software for the Draco co-pro – obvious choices being LightWave, Real 3D and the like.

In the past, the attempts at partial RISC solution on the Amiga OS has fallen at the first hurdle. Nevertheless, the MacroSystems' example does prove that a RISC-based accelerations system, an 060, and the Amiga's existing OS can work – Amiga Technologies please take note.

But unlike its predecessors, the Draco will have the advantage of a solid platform with a user base whose ownership of the machine in itself proves dedication to the DV and computer graphic cause.

Timelines and SFX

When the real time grabbing and importing is complete, and the assorted clips have been trimmed, edited, and appended, the next step is to drop them into the Timeline and add the all-important special effects and additional audio.

The actual process of building the Movie is entirely non-destructive. In reality it simply offers a means of layering and combining existing audio and video into a new sequence. The end result of all this is user-defined sequencing of all the existing scenes – aided by visual and audio effects. If a new clip overlaps an existing element, a fade operator could be dropped between the overlap to produce a digital cross-fade.

This ability to mix and process multiple sequences points to another unique feature of VLM, namely its ability to operate as a digital A/B roll environment with a built-in digital effects processor. Admittedly, this is by no means a real-time process, because once the scenes are arranged, and the operators in position, MovieShop still has to set about processing the video sequence, transitions and effects specified within the Timeline.

Fortunately, this is all done automatically, but it nevertheless takes time as the process is done entirely via software – in a similar way in which ADPro and ImageFX apply effects to single images. Needless to say, Draco's 060 is a real bonus at this stage.

As you've probably guessed, audio is also computed in a similar manner. If, for example, you've added a backing track, or adjusted the envelope within an existing AV soundtrack, a separate computing pass is needed to apply the changes. Fortunately, this process usually takes only a matter of seconds.

Although the DVE process may sound daunting, after a little practise it becomes second nature. Beginners are catered for via an easy mode in addition to the more complex RPN approach – which can process an almost unlimited number of sequences alongside multiple layered special effects.

What's in the box

As mentioned earlier, mix and match configurations are available for those who already have elements of the system. However, assuming you're starting from scratch, the basic DV system consists of the following: The Vlab Motion, Toccata, Retina and the 060 CPU and I/O combo.

On the storage side you start off with an HD disk drive. The only limitation of which is that the drive is in fact a PC HD floppy. As a consequence, it actually writes Amiga format floppies at roughly half the normal speed.

In addition to the floopy, the Draco also ships with a quad-speed CD-ROM plus 4Mb of RAM as standard. To complement the CD-ROM, MacroSystem will also be supplying a dedicated CD which houses Workbench and installs all the accompanying software and utilities needed to manage the system.

Even more interesting is a plan to incorporate Shape Shifter as a standard part of the Draco software suite. For those unfamiliar with the Shape Shifter, it allows you to define either a file or a partition as a Macintosh.

Add Mac system software and you effectively have a full blown Mac running on your Amiga, or in this case a Draco. However, in order to accomplish the seemingly unthinkable you do need a Mac ROM stored as a file on your machine. Obviously, simply ripping a ROM image out of a Mac is highly illegal. As a consequence, an official deal with Apple is essential. MacroSystem are confident that current negotiations will end in the all-important handshake. And if so, Draco owners will have access to the best of both the Amiga and the Mac.

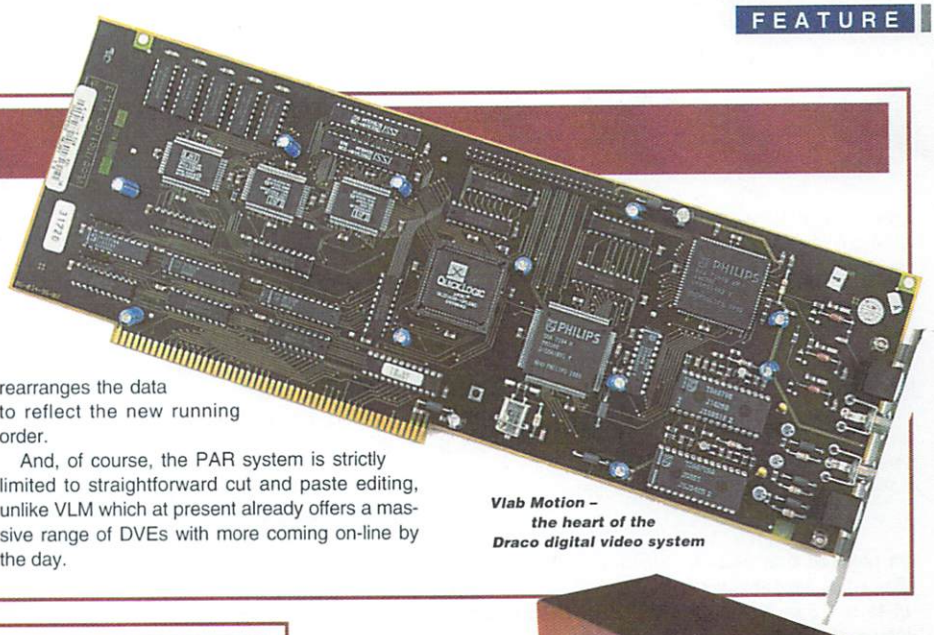
On the Amiga side, MacroSystem are throwing in the complete ADPro collection including the conversion

An editor's delight

As you've probably gathered, the real essence of the Draco's appeal is its ability to operate as a true off-line editor/digital video effects generator. And in that domain it stands head and shoulders above the opposition.

Unlike the PAR card, actually moving edits around is both easy and, most importantly, instantaneous. Rather than physically moving the data, the VLM and MovieShop combo simply makes a cuelist from the existing data and skips around the drive with the assistance of RAM buffering. As a consequence, making changes to the running order of scenes, or entire movies is instant, whereas the same process on the PAR could literally take hours as the system physically rearranges the data to reflect the new running order.

And, of course, the PAR system is strictly limited to straightforward cut and paste editing, unlike VLM which at present already offers a massive range of DVEs with more coming on-line by the day.



Vlab Motion – the heart of the Draco digital video system

processing. As a result full D2 – the digital video broadcast standard – will be guaranteed. The only problem then will be one of available storage space. To drive the point home the existing Jpeg compression settings will be replaced with a Mb per second – enabling the user to define how much space to use per second of encoded video.

Thanks to such a high degree of image quality, Draco will easily hold its own in the broadcast market, even on a Zorro II VLM – a factor which is backed up by a direct link to BetaCam SP equipment and other broadcast quality hardware. This is thanks to an optional YUV component module which simply slots onto the board.

The only other card that really benefits from a 'Draco direct' connection is the Retina and as that's already alive and kicking, the only other element is the Toccata. However, it remains to be seen if MacroSystem will bother with a 'Draco direct' version as the existing version already works at and above CD quality as standard.

Up and coming

Needless to say the launch of the Dec Alpha co-processor is a major event for the elite. However for mere mortals, investment in a co-pro will hinge on the arrival of re-compiled versions of LightWave and other power applications specifically for the Draco.

In addition to the various bits that have already had a mention, there is one more imminent upgrade waiting in the wings, which like the co-pro is due to coincide with the official Autumn launch of the Draco. The mystery add-on is in fact a new 64-bit graphics card which will provide full a colour preview actually on the MovieShop control screen. Better still, the card will also generate a genlockable signal. Add both of the above to a 64-bit bus and you're looking at a blisteringly fast card that should add the finishing touch to the Draco.

And finally

Aside from the system performance, the price tag itself is bound to attract many a serious Amiga fan, with the basic Draco retailing cheaper than an Amiga 4000 running an 060 accelerator. Not bad for a fully-featured digital video box with the potential for full off-line editing, CD quality audio, broadcast quality digital video effects, and much more besides.

Look at the opposition from the likes of Quantel's Paintbox and various Mac systems and you'll discover the Draco's asking price is tiny in comparison. The only other question, especially in relation to newcomers, is ease of use.

Although generally no more daunting than the average Amiga, there is one aspect of the MovieShop environment that could see some improvement, namely the application of DVEs. To achieve DVEs MovieShop employs a Reverse Polish Notation system to stack and process DVEs on an almost unlimited collection of video clips simultaneously. For the novice, it must be said the process can present something of a hurdle. It would be nice if MacroSystem implemented a GUI in the style of MultiLayer specifically for DVE design.

As for the system as a whole, there are no complaints whatsoever. The beta version tested arrived with all the necessary bits separate from the tower, with one piece of A4 listing the various connections. I wired everything up, hit the power button, and it fired-up first time! Vorsprung durch technik – or something similar.

If you're tired of the trail of broken promises surrounding Amiga development, the Draco deserves serious very attention. But if you're serious about audio, video and computer graphics, the Draco is nothing short of a dream machine.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

Hi-res monitor
60Khz+

16 Mb
RAM

The bottom line

Produce: Draco
Supplier: MacroSystem
Price: £2750 – with 060, 4Mb video, 4Mb system RAM, quad-speed CD-ROM
£3670 – with all of the above plus Toccata and VLab Motion
Phone: 0049 230 289 177
Fax: 0049 230 280 884

Hard drives sold separately

Ease of use 9
Implementation 9
Value for money 10
Overall 9

Better than Amiga World

I am writing to tell you how grateful I am to receive your magazine, *Amiga Computing*, in fulfilment of the remainder of my subscription to Amiga World. These have been trying days for Amiga owners in the United States, with suppliers and publishers closing shop or switching to PC-related products.

I am delighted by the depth of the articles in your magazine, as evidenced by its thickness in my mailbox. I am also quite pleased that you publish a US edition complete with US advertisers. It is good to see that there are still some loyal businesses supporting the Amiga community in the States.

I also look forward to upgrading to your Gold Subscription. I have tried your CoverDisks in the past, but newsstand prices of foreign periodicals are almost criminal here.

Please keep up the good work, it is not unappreciated here.

Robert J Bruce, Kansas USA

I'm pleased that you like our new edition of *Amiga Computing*. We are proud to offer what we consider to be the best advice on new products and old alike, with up to the minute news reporting and in-depth tutorials, and to paraphrase Al Jolson, you ain't read nuthin' yet!

Singing our praises

I must write to congratulate and thank all of you for providing a valuable and informative publication. You do justice to the Amiga by representing the qualities of the machine, notably creativity and enthusiasm. Perhaps the best compliment I can give is that you really seem to enjoy doing what you are doing.

For instance, if I take a look at your August '95 edition, in the ImageFX v2.1 review, I immediately notice that you're not saying 'ImageFX does this...' Instead, you're saying 'I am happy to use ImageFX' or 'This seems odd to me...' or 'Maybe you really ought to look at this' etc. See the difference? Of course, because that's what makes your magazine different to the PC magazines I've flicked through. They are all 'Mhz' and 'Windows X.Y.'

You get this feeling running up your spine that that's all PCs are. But when you get your hands on an Amiga, it's like 'Hey, what shall we do now – music, art? It's friendly and it's shaped by you. One of my friends owns a PC and all the time he's saying: 'What's it doing now' or 'It's run out of memory' etc.

Please keep up the good work – you provide a kind of parenthood over the Amiga users.

Finally, I would be pleased to hear any comments you might have about the future of the Amiga and that shadowy force that is Escom.

C Cousins, Warrington

I think we do enjoy what we are doing, and it's for the reasons you give. Although we all get frustrated when the Amiga crashes, it's normally because we want to carry on having fun. As for Escom, read our piece by Gareth Lofthouse on the recent press conference that took place in Heathrow.

True fans

As an avid Amiga user for eight years it is still good to see such enthusiasm from other Amiga users. After the Commodore fiasco, it's obvious the only people still reading magazines and writing software are *true* Amiga fans.

If Escom do deliver the goods as promised, then I am sure the Amiga will be back in the Spotlight. It was nice to see the new logo Escom plan to use on *our* new machines. In my opinion (even with the energetic red square) the logo does not appear bold enough.

I have subscribed to your magazine in the past, although I have bought the magazine at the local newsagent recently for two reasons.:

1. Uncertainty about Commodore and the Amiga.
2. The free gifts you have offered recently have not interested me (when are you

Amiga Computing has recently become an international publication with a US edition going out to subscribers of the now-defunct Amiga World. It seems from the amount of mail the change has proved quite popular with our American cousins.

Iberian inquiry

I've seen in the news pages of issues 88 and 89 of your magazine the incredible Zip Drive which acts like a 100Mb removable hard disk, and in the future there will be a version which will also incorporate a 3.5 inch high density drive.

My question is, where can I buy this wonderful drive? Is it only in the USA or is there a distributor here in Europe? I've seen a review of it in a US magazine which says it is the most wonderful thing ever made, but doesn't give an address where you can buy the drive. If I buy it in the US will it work in Europe?

You are the only European magazine I have seen that has said something about the Zip drive. Congratulations on informing the readers of new technologies, and will you be doing a full review of the Zip Drive?

Yours is the only Amiga magazine that has given a CD free that is full of interesting things, and I think it's the first to publish something about the new Personal Paint 6.3. Not only that, you also had an offer to buy it on a floppy or CD-ROM version.

I hope you don't raise your price as other magazines have done as I don't buy these any more – and it's not just me, they have lost thousands of readers because we are not as rich as they think we are.

C R Redrado, Menorca

Òla señor Redrado! Check out this month's issue for a full review of the super Zip. I'm glad you liked the Personal Paint feature and the CD we gave away on May's issue. As for our cover price, we are always at the mercy of the cost of the paper we print on, but we have managed to hold our price down this far, and hope to continue to hold it down. Besides which, I really hope you don't just buy our magazine because it is cheap, but rather that it is the best.

Does anyone care?

I am a new subscriber, formerly an Amiga World sub. I have just received my first issue of your magazine and am very impressed with the look and content. My question is one that I am sure is shared by many other readers both here and on your side of the ocean.

I am an A3000 owner, with 10Mb RAM, a 24-bit EGS spectrum board, etc. On reading your magazine I felt both lost and confused. Where do we A3000 folks fit in with the state of the Amiga? I originally bought my EGS to tap into the power of 24-bit graphics, only to discover that all new games for the A4000 won't even work with my machine. Most Amiga magazines now seem to feature CoverDisks, but even if I paid the extra price for these mags, I couldn't use the programs on the disks. Will I ever be able to run CD32 games or any of the AGA games?

And what about PC/Mac compatibility? If I purchase an Emplant, will my EGS be able to run the 256 colour games and programs available for the PC? And will a PowerPC board be available for the A3000? How much would it cost? Would it be more economical?

Like many others, I don't have the money to simply trash my computer and buy a new A4000T, or even an A1200. I have a large investment in my current equipment and would appreciate an honest answer or speculation on how bad off A3000 owners really are.

As you cover the new and exciting developments for the new Escom Amiga, please remember that there are a lot of us out here using A3000s who would like to know where we stand. We are confused and worried. We would appreciate any information you could give us, as well as clarification in your reviews and articles as to what will and won't run on our machines.

Thank you for your excellent magazine and I look forward to receiving it every month.

B Nicholson, Lake Buena Vista, USA

Well now, Mr Nicholson, don't fret. Quite a few of the staff of Amiga Computing are also A3000 owners and we don't look worried. Sure, you'll never be able to play AGA games, but is that really all you bought your graphics card for? Yes, you can buy an Emplant and run 256 colour Mac games on it, I do (get Maelstrom, by the way), but PC bridgeboards are a little thin on the ground at the moment.

If you are currently still using Workbench 2.x, which I assume you are because you say that you can't run 256 colour programs on your machine, then the best thing you can do is to immediately upgrade to Workbench 3.1 as this will let you run a 256 colour Workbench on your machine.

Finally, on a personal note, I think that the A3000 and A3000T were the best machines Commodore ever designed and they have a lot of advantages over A4000s, including a built-in SCSI controller and more importantly, a flicker fixer so you can use your Amiga with any old VGA monitor and not have to worry about not being able to sync down to 15kHz.

going to change them?)

Needless to say, I will probably subscribe soon enough.

M Clatworthy, Herstmonceux

It might be seen as a shame that it is only true Amiga fans who are left to produce software and hardware for us. We really need to have big companies seeing us as a valid platform for development in order to bring our machine back to prominence. All the same, we are getting some great stuff at the moment. Look at Photogenics, Twist, DOpus 5, etc.

As for the new Escom logo, you can always send us what you think would be more appropriate. If we get enough entries we might have a competition to see which one we think is best.

Letters please

Keep those letters coming! If you can't be bothered to find a bit of paper and a stamp, why not e-mail us? Simply point your mailer to: ESP@acomp.demon.co.uk There's a £50 pound prize for the best letter printed as an incentive

Quality products

I read with interest about the CD-ROM that Colchester Zoo are employing and would be very interested in buying such a quality CD. Imagine how popular the Amiga range of computers will become with products such as these – parents will not need to take a second mortgage to provide quality edutainment for their children.

Now that CD drives are available to the mass market, courtesy of Squirrel, I hope more products of this nature will become available. This is what the Amiga needs to be taken seriously in the realm of multimedia. I also have a demo of Insight: Living Body by Optonica, and trust that this product is still due for release.

I also hope that once the A1200, 4000 and CD32s come back into production, these companies will make AGA CDs the standard. Without this commitment, the Amiga will always be held back. Non-AGA graphics do not carry the same impact and quality, and our titles will always pale in comparison to those on the PC. Commodore, and Escom (?), dropped the non-AGA machines for good reason – this is the 1990s.

This leads onto another point – with the vast majority of Amiga users who are unwilling to update their machines, we will never see software that can match the likes of Word or Word Perfect. Our computers will never be powerful enough. And if, for instance, Word did appear on the Amiga, how many people would buy it?

For that price you could buy yourself a second-hand A1200 with a copy of Wordworth 2. I only hope that the Amiga market will develop and that its users take note, so I can continue to use and support my favourite machine without settling for second best.

R Morse, Milton Keynes

There has been no decision made on whether the Colchester Zoo CD will become a commercial product yet. Ben Vost, the author of the piece, says he hopes it does because it is really informative and fun to use. The Squirrel SCSI controller has indeed been a phenomenal success, with HiSoft selling them as fast as they can produce them.

Put this together with the fact that the survey we conducted at the end of last year showed that most people were interested in buying a CD-ROM drive, and you have a convincing argument for more developers to produce quality titles like the Colchester Zoo one.

But it doesn't just have to be limited to edutainment titles either – it would be really nice to see some original CD-based games that don't rely on CD32 emulation, but that ran from Workbench or a CD32. Any offers?

Hard drive worries

I've just bought a second-hand A1200 with hard drive, PSU, mouse, manual, and disks complete, except for the Hard disk install disk version 3.0 and the Amiga Hard Drive Users guide.

All that was otherwise wrong was that the keymap was set to American, resulting in the wrong characters being produced by the English keyboard.

Could you please tell me where I might buy the above disk and manual.

D R Bartnell, London

I take it from your letter that the hard drive was fitted by a third party, rather than bought with one when it was new. Unfortunately, this was always the only way you could actually get hold of the official Commodore hard drive installation disk and manual, whether that situation has now changed with Amiga Technologies remains to be seen. You could try contacting them on 01628 770036.

Alternatively, should you have no luck with that avenue of enquiry, you can try any of the numerous PD libraries whose adverts grace our pages and ask them if they have a public domain or shareware equivalent of the Commodore installer. You will quite likely be offered RDPrep which is excellent, although it doesn't actually come with a manual.

AMIGA REPLACEMENT CHIPS AND SYSTEM UPGRADES

Paxtron is North America's largest wholesale supplier of Amiga replacement and upgrade chips

AMIGA REPLACEMENT & UPGRADE CHIPS

(Factory New)	PRICE
1.3 ROM O/S	$12.50
2.04 ROM O/S	$27.95
2.04 ROM (A3000) Set of 2 Rom 0/1	$39.95
2.05 ROM (V37.350)	$25.75
3.1 ROM (A500/A2000) s/w add $10.00	$57.50
3.1 ROM (A3000/A4000) s/w add $10.00	$67.50
3.1 ROM (A1200) s/w add $10.00	$67.50
3.1 Manuals	CALL
A2091 7.0 ROM Upgrade	$29.95
A2620/30 7.0 ROM Upgrade	$31.50
8520 CIA	$13.50
8372A Agnus with installation disk	$29.95
8375-17 Agnus	$31.95
8375-B (2MB) (A3000) 318069-03	$42.50
Paula (8364)	$10.95
Denise (8362)	$12.95
Super Denise 8373 w/installation disk	$23.95
Gary 5719	$10.95
Buster 5721	$14.95
WD SCSI chip 8A	$32.50
Video Hybrid - (A500 390229-03)	$9.95
GVP Upgrade Chip Series II	$34.95

SURFACE MOUNTED DEVICES - SMD

8520 PLCC (391078-02)	$19.50
Amber (390538-03)	$34.50
DMAC 4/7 (390537-04/07)	$44.50
Lisa (391227-01)	$37.50
Ramsey (rev. 7) (390541-07)	$29.95
Alice 8374 (391010-01)	$29.75
Gal (XU9) (390123-01))	$21.95
Gayle (39155-02)	$29.95
Budgie (391425-01)	$38.50
Paula 8364 (391077-01)	$29.95
Gary (390540-02)	$32.95
Super Buster Rev. 11 (390539-07)	$38.50
Bridgette (391380-01)	$39.95
Video DAC (391422-01)	$29.95

MOTHERBOARDS (Factory New)

C64 (refurbished)	$39.95
C128	$49.95
C128D	$69.95
A501 RAM Expander	$29.95
A601 RAM Expander	$19.00
A500 (Rev. 5/6)	$89.95
A500- 2 meg MB PAL ALL CHIPS	$79.95
A600	$139.95
A2000 LATE Rev. 8372/8373/2.04	$249.95
A3000 (16MHz)	$274.50
A3000 (25MHz)	$359.95
1541 II	$17.95
1581	$36.50
1541 Alps (15000401)	$17.95
1571 Newtrncs (310420-01)	$17.95

THIS IS A PARTIAL LIST ONLY
Send for Catalogue

AMIGA FLOPPY DRIVES (Factory New)

1541 (refurbished)	$44.50
1541 II	$74.50
1571	$99.95
1581	$69.95
A500	$39.95
A2000	$46.95
A3000	$49.95
1010/1011 (refurbished)	$29.95/$34.50

POWER SUPPLIES (Factory New)

C64 nonrepairable	$16.95
C64 repairable	$24.95
C128D	$24.95
C128 external	$39.95
1541 II/1581 (110/220 volts)	$9.95
A500	$38.95
A500/A600 Big Foot (200 Watt)	$79.95
CD32 Original / Factory (110 volts)	$29.95
CD32 Original / Factory (220 volts)	$29.95
CD32 Big Foot (200 Watt)	$74.50
A2000 110/220V. internal original	$99.95
A2000 Big Foot (300 Watt)	$144.50
A3000 internal (110/220 volts)	$114.50
A3000 Big Foot (300 watts)	$144.50
A3000 Tower	$124.00
A4000 internal (220 volts)	$99.95
A4000 internal (110V)Big Foot 300 Watts	$199.95
1084SP Phillips Flyback Transformer	$42.50
A4000 Int. 110 volts Big Foot (300 Watts)	$199.95
1084-D1 Phillips/Daewoo Flyback	$39.95
1084-D2 Daewoo Flyback Transformer	$39.95
A590 external	$24.95

GREAT PRICES
FAST DELIVERY

KEYBOARDS (Factory New)

A500	$39.95
A600	$34.50
C128D	$19.50
A1200	$44.50
A2000 (U.S. ver.) KKQ E94YC/ 312716-02	$64.95
CDTV Black (U.S. version)	$59.95
CD32 Black	$39.95
A3000 (U.S. version)	$74.50

ADD ON BOARDS (Factory New)

386 (25MHz) Bridgeboard /SW/ Instructions.	$279.95
A2286 (20MHz) Bridgeboard	$79.95
A2058 (0K) 8MB Expansion	$69.95
A2058 2 Megs Expandable to 8	$149.00
2091 Hard Disk Controller OK	$89.95
A501 original Ram Expander - 512K	$29.95
A590 external A500 Contr. no h/d with p/s	$129.95
ICD AD Ram 540 (0K)	$69.50
ICD AD SCSI 2000	$89.50
ICD AD Speed	$99.95
ICD Flicker Free Video	$258.00
Microway Flickerfixer	$224.00
Micro R/D Slingshot Pro	$39.95
A1050 RAM Expander (A1000) 256K	$10.95
A1700 RAM Exp-board only - no case	$17.95

MISCELLANEOUS

A520 NTSC Video Modulator Adap. kit/cab.	$19.95
Monitors / Refurbished	CALL
CBM 1351 Mouse (C64/C128)	$19.95
Amiga 1352 Mouse	$17.95
Swifty Mouse (3 button)	$22.50
Rom Switch - (Switch itt) with speaker	$14.50
Advanced Amiga Analyzer (10,000 sold)	$69.95
Amiga Diagnostician Trouble Shooter	$7.95
Amiga A1000 Mouse	$11.95
Amiga CDTV Mouse	$15.95
Amiga 1230 Printer (citizen 120) (refurb.)	$39.95
Cables - Monitor, Serial, etc.	CALL

— 65 different service manuals in stock —

ADVANCED AMIGA ANALYZER

AN INEXPENSIVE DIAGNOSTIC ANALYZER THAT WORKS ON ALL AMIGAS

Features

- Locates most common IC circuit failures on **all** Amiga computers.
- Tests all memory banks, floppy drives and all ports, including port voltages.
- Tests mouse and joy stick port
- Displays show status of all tests / better than 90% accuracy.
- Fast, efficient and accurate in diagnosing nearly 90 percent of Amiga failures.
- Saves you lots of money on repairs and down time.

AMIGA SHOPPER MAGAZINE *(UK) product review says:*

"Without doubt, this is the finest diagnostic equipment I have ever seen, and I address all Amiga repairers and practical-minded users when I say this is something worth having ... Not only does the Advanced Amiga Analyzer identify the problem, but it also offers a cure. When a fault is detected, it will display a message describing which components to look for and what order to check them in, starting from the cheapest component upwards. I assure you this is not an amateur product. The information provided was expert and really a worthwhile package."

A complete diagnostic hardware and software analyzer (uses point and click software interface.) The analyzer cable plugs into all Amiga ports simultaneously and through sophisticated software, displays 8 screens to work from. Shows status of data ports, memory (buffer) checker, system configuration and auto test. Reads diagnostic status of any read/write errors from track 0 to track 79. Software automatically tells what errors are found and the chips/components responsible. 85 to 90% of the problems presented to service centers are found with this analyzer. Saves you lots of money on repairs and no end user or repair shop can afford to be without one. Don't be fooled by its low cost. Simply plug in cables from the analyzer box. This diagnostic tool is used by end users and Amiga repair centers worldwide and is the only one of its kind.

$69.95

****** *JUST RELEASED - NEW VERSION 2.0* ******

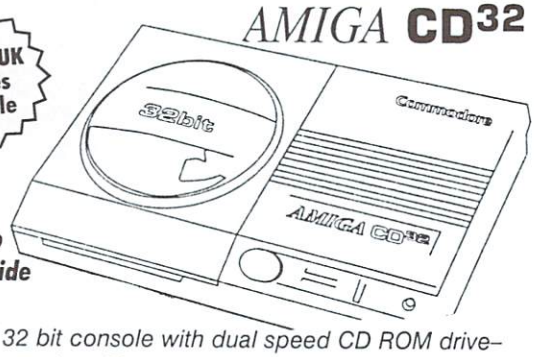
SEND FOR ADDITIONAL INFORMATION/PRODUCT REVIEWS

Licensed by Wilcom Australia *©1993 Ian Perry*

JUST RELEASED FROM COMMODORE

AMIGA **CD32**

U.S. and UK voltages available



We Ship Worldwide

Powerful 32 bit console with dual speed CD ROM drive–16.8 million colors–Plays audio and CD plus graphics CD's–Eleven button controller–Full RGB output **$259.00***

SX-1 EXPANSION MODULE

Transforms your CD32 into a high-powered multimedia computer system. Many extra features. (Built-in battery back-up for clock/calendar, IDE controller.) **$234.95**

SX-1 OPTIONAL UPGRADES

101 Style black keyboard, internal 170 meg IDE hard drive, floppy drive (uses all A1200 software) additional SIMM slot for expansion to 8 megs of RAM.

SAVE MONEY, BUY BOTH
and pay only $468.00*
($25.00 Savings)

**Includes free software*

Amiga CD32 are trademarks of Commodore-Amiga

Paxtron CORPORATION

28 Grove Street, Spring Valley, NY 10977
914-578-6522 • ORDER LINE ONLY: 800-815-3241 • FAX 914-624-3239
Hours: 9-5 pm EST • Add $5.00 UPS Charges • MC/VISA • Prices subject to change

VISA MasterCard

Sit back, relax, put your feet up, have a long cool drink. Another bunch of Amiga owners receive enlightenment

acas

AMIGA COMPUTING ADVICE SERVICE

CD Scala turmoil

I have an A1200 with 85Mb hard drive, and a GVP A1230 II with 4Mb of RAM. I have recently purchased an Archos CD-ROM drive, and the problem is after I install the CD software. Whenever I try to run any Scala script, big or small, the screen goes blank and a requester comes up stating that the machine is out of memory.

Currently, the only way I can use the CD-ROM is by booting up the computer with the supplied software, which does not solve the problem. Do I need more RAM for my system, or am I only going to be able to use Scala and the CD separately?

Kurt Dallas, Middlesex

The Archos CD handler software is not that brilliant, and it does seem to be the cause of your problems. It may be worth getting hold of the latest version of the handler software, which is up to about version 11, and that may solve your problems.

Another way around your problem is there should be a CD0 DOS Driver in your 'DEVS:DosDrivers' drawer. If you move this out of the DOS Drivers drawer, the CD handler software won't be started each time you boot up your machine. This will let you use Scala in peace, and then whenever you wish to use the CD, simply double-click the CD0 icon and the CD software will be started.

A600 expansion

I have a 2Mb Amiga600 and am planning to add an IDE hard drive and possibly a CD-ROM via the PCMCIA slot. I'm getting into DTP and want to add some extra memory, but the only way seems to be to use either a 2 or 4Mb PCMCIA memory card, which have seemingly disappeared from the current Amiga adverts. Is there any other way of expanding the A600's memory further?

M Toms, Isle of Wight

The A600 really is the machine that Commodore forgot, and it is quite difficult finding any adverts selling products for it. The PCMCIA cards that used to be advertised were fairly expensive, and they slowed the A1200 down so they never really took off. The other downer is that it would tie up your PCMCIA slot. If you plump for a PCMCIA card, you could try looking in a PC (spit spit) magazine, if none of the Amiga dealers can help.

I do remember a A600 card that could take either 2 or 4Mb of memory, so it was possible to expand your A600 up to 9Mb in conjunction with a PCMCIA (I hate that acronym) card. The problem you are going to have is that DTP really requires a fast processor. You do not say what DTP software you have, but on our February '94 issue we gave away 'The Publisher' which is an excellent DTP package and its main advantage is that it is extremely fast.

If you really do fancy getting serious about DTP, you might want to consider getting a second-hand A1200 fitted with a hard drive and an accelerator.

Game gremlins

I bought an A500 back in 1990 to which I have added a ½ Mb memory expansion card, a 40Mb hard drive with 4Mb of RAM. The problem I am having is that I have installed Civilization and Lemmings 2 onto my hard drive, but when I try to run them they both crash the machine, complaining about not enough memory. Am I doing something wrong or do I need some more hardware? Is there a solution that will not cost an arm and a leg?

Steve Mellows, Cambridge

It sounds to me like you do not have enough chip memory. This is the memory used to store the graphics and sounds used by the games. The A500 you have probably only has a ½ Mb of chip memory, and as you are running the games off the hard drive the amount of available chip memory is reduced, so it cannot get the required memory to run.

One option is that you could fit a mega chip expansion board which would give you 2Mb of chip memory – very handy for using paint packages, but it does cost a £150. The other alternative is if you have a revision 6 mother board. You can perform a little surgery on it which will give you 1Mb of chip memory. However, we take no responsibility for any damage caused to your machine as a result of performing this operation, and suggest that you get an authorised engineer to do the modification for you.

After you have checked that you have a revision 6 mother board – it says on the far right – you should locate three small square solder pads labelled JP2, just left of the central square chip. You need to cut the connection between the bottom two squares – a craft knife is best – and you do not have to cut very deeply at all as the solder join is on the surface and is quite thin. You then have to ➤

TUDE trouble

I cannot get TUDE to work. What's going on?

Lots of People, everywhere

Whoops, looks like he hit the tree. Did you extract TUDE off our September CoverDisk? If you double-clicked the GUI icon then tried to use your selected options, all that happened is that you got an error message.

We made a bit of a boob there, but do not worry as the problem is quite easy to correct. The TUDE GUI program is separate from the actual TUDE program, which can only be used from the shell. When you tell the GUI program to run TUDE, it cannot find it as it only looks at the set path, which does not include the directory TUDE is in.

What you have to do is first boot up the first disk and extract the TUDE program into ram:. Next, open up the RAM disk and from the Workbench menu select the 'show all files' option. You should now see a C drawer and the TUDE drawer. Open up the TUDE drawer and find the TUDE program. Now you have to drag TUDE into the Ram:C drawer. If you now run the GUI program it will be able to find the actual TUDE program and every thing should work fine.

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

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

Any questions?

➤

solder a connection between the top and the middle solder pads.

Finally, you need to locate another three small solder pads labelled JP7a, found next to the RAM expansion. The connection between the bottom two needs to be cut. Once done, the bomb is defused – whoops getting a bit carried away there. If you now boot up your computer you will have a full Megabyte of graphics memory.

AmigaGuide guide

When I am writing AmigaGuide documents, how do I get my buttons to be in Bold, italics etc. I can do it with text, but not the buttons. Also, how do you get AmigaGuide to launch external applications such as pictures, animations from within a document?

Ben Chapman, Bramhall

Blimey, it could take pages to go into the design and usage of AmigaGuides. Hang on – Paul I've just had an idea for a feature.

As far as I can tell, there is no way of getting the button in an AmigaGuide to be rendered in any other style. It ignores the built-in style commands, and also ignores any ANSI escape codes you might try.

If you are using AmigaGuide under OS3.0 or higher, it is possible to do a link to an external data file. If the data type is supported, the AmigaGuide will be able to display or play the file. The link takes the form of a normal NODE link, but the second part is the path name of the data file. For example:

```
@{'It's a Picture' link 'Work:Guide/MyPicture'}
```

Using this technique, it is also possible to do links to other guides, which are saved as separate files. The only problem with using the guide to display or play picture and sound files is that it will be on a blank window, which does not look that nice.

It is possible to execute system commands from button presses. The format is the same as above, but you use the word 'system' instead of 'link', and you have to add a '/main' to the end of the file name – don't ask me why you just have to:

```
@{'Picture' system 'run MultiView
Work:Picture/MyPicture/main'}
```

This will allow you to display a picture using another AmigaGuide or MultiView on the same screen, but in a separate window – which I think looks better. It also allows the user to get rid of the picture whenever they like.

CD conundrums

I recently purchased an Octagon 2008 controller and a Apple CD300e and am having a great deal of trouble trying to configure the system and get it to work.

I was told to extract the CD0 driver from the storage disk, but this does not exist – the only drivers I have are Aux, Pipe, PC0 and PC1. When I use the Octagon HD inst tools, the window comes up with the following:

PIC	TID	LUN
0 0	0	Matshita CDRom CR8004 1.1f Unsupported
- -	-	
6		All Repeated

I hope you can help me out as I am getting extremely frustrated.

Alex Currie, Ayrshire

The problem you are having is that you do not have the correct DOS Driver. As someone has kindly pointed out, you will need to copy the CD0 DOS driver into your DEVS:DosDriver drawer. Unfortunately, only AmigaDOS 3.1 came with CD-ROM support, so only 3.1 owners will have a CDRom.handler and accompanying CD0 DOS driver in their L: and DEVS:DosDrivers drawers.

However, all is not lost. What you need to get hold of is the AmiCDRom software. This will install the correct driver and handler software to allow you to use your CD player. This is available on Fred Fish disks, so any decent PD house should be able to supply you with the right disk.

The information displayed by the Install tools shows that the CD is connected to the SCSI chain. You may still have problems using the CD as it stands because the CD data is repeated for every SCSI device entry. This can be cured by fitting a SCSI terminator, which basically indicates that there are no more devices attached to the SCSI chain.

Printer predicament

I am writing to you for help with an AmigaDOS problem that I have. On my old A600HD with WB2.05, I used to be able to dump ASCII text or directory listings to the printer from the CLI, with the following command line: type s:test TO PRT: or list s: TO PRT:.

Now that I have upgraded my machine to an A1200HD, the above command line will crash my machine, and sometimes a prompt will appear which will ask for a volume with no name.

The hard drive I have is a 120Meg Seagate – it was in my A600 but I re-installed it in the A1200. The boot partition did originally have WB2.05 on it. All other aspects of printing are fine, and I currently get around the problem by making a temporary file in RAM and using ppmore to print out the file, which works fine. Most of my executable library and device files are imploded with imploder, and I use early Explode patch to allow programs to use them.

I would like to take this opportunity to congratulate you on an excellent magazine, and also your 'Utility Heaven' CoverDisk was BRILL. It's great to see lots of useful PD programs on your Cover Disk, so keep up the good work!!!

Adrian Richings, Gwynedd

We are always susceptible to grotesque amounts of praise – glad you like the magazine so much.

As for your problem, I would firstly check that you have fully installed all the new Workbench 3.0 files over the old 2.05 files. Having said that though, using an older version of the parallel or printer device should not make the computer crash.

I am going to have to point my finger at early Explode. As it is quite an old patch, there is a chance that the new OS is doing something it cannot handle. I would unImplode all your device and libraries files because the amount of room you gain is not that great, and all you are doing is slowing the computer down because each time it opens a library or device file it is having to decompress it, increasing the amount of time it takes to run programs.

If you really want to compress your system files you might want to consider the XPK distribution, which is usable for any data files, or the Disk Expander product.

Amiga Painting perfection

Paul Austin examines the ultimate in freehand Amiga art

Just try to do these simple squiggles without a pressure sensitive tablet – it's almost impossible

The problem with most Amiga graphics tablets is one of sensitivity. In the past, Amiga tablets have offered the ergonomics of a pen, but that's about it. Fortunately Wacom, a company renowned for graphics tablets on both PC and Mac, also support the Amiga via TVPaint and Shareware author Roland Schwingel.

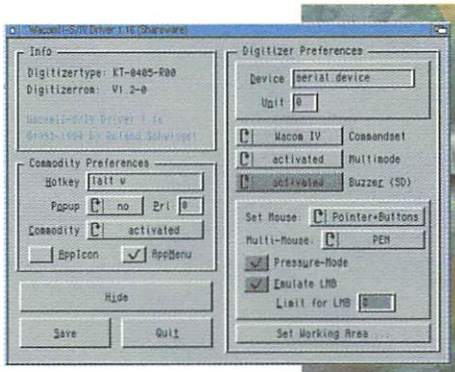
Although sensitivity isn't an option on Workbench – as there's no need outside specific applications – you can still replace the mouse with the cordless pen and tablet for general Amiga interaction.

Once installed in the WB-Startup drawer, the pen and tablet kick in on boot-up allowing all the normal click, select, drag and drop options associated with the traditional Amiga mouse. However, this doesn't mean you sacrifice the trusty rodent, because both devices work happily in tandem, with the tablet attached to the serial port rather than the mouse port. And because the control software operates on a system level, you're free to apply the tablet's ergonomic talents with any application you choose, regardless of whether it offers direct support.

Obviously, if the software doesn't offer pressure sensitive support you are limited to basic on/off application, but even so there's still an appreciable benefit within a number of applications in addition to just paint programs. Freehand sketching and general use within 3D applications, structured drawing software. In short, any program that can benefit from the subtlety a pen can provide.

Another major plus for the Wacom, as opposed to many other Amiga tablets, is its extremely economical use of CPU time. All too often, tablets attached to the serial port eat up a disproportionate amount of processor time and therefore dramatically reduce the overall performance of the machine.

Set-up and installation of the Wacom is extremely simple courtesy of the Wacom control commodity, which as you can see only requires the minimum of effort to accommodate any tablet in the Wacom range. After setting the various toggle switches, the working area of your tablet will be online. At this point the nib reacts as the left mouse button, with a double push opening drawers or applications, while a single push and hold will select and drag.



Simple set-up and guaranteed trouble free sketching in any application

The right mouse button is replaced with a nicely designed micro-switch on the pen itself, which rests conveniently beneath the forefinger. Add the two together and you have all the traditional mouse options in a pen.

Thanks to TVPaint, Amiga users are finally allowed access to the sensitive touch which professional artists demand from a quality graphics tablet. Before firing-up the TVPaint, the first step is to shut down workbench emulation as this frees the serial port and therefore the tablet for TVPaint's built-in control. After selecting and saving the appropriate tablet name and your serial configuration from the start-up screen, you're ready to get creative.

PRESSURE SENSITIVE

Once inside the software you're automatically in tablet mode, although, like Workbench, your mouse is still active if the need arises. Although not obvious at first, pressure sensitivity affects every application of paint to canvas. Using the airbrush pressure translates into the density of paint, while a normal pen's footprint grows and shrinks as you apply the pressure. Even cut brushes benefit from the pen as the pressure applied translates into the transparency of the stamped brush. You also have complete control over the way the pressure translates to the canvas.

For solid brush strokes this defines to the amount the brush stroke will grow as the pressure is applied via a user defined percentage. Better still, there's even a definable pressure curve which will fine tune the affect in relation to the pressure applied. However, perhaps most important of all is the overall feel and speed of the tablet.

The freedom from a cord is an obvious bonus, and when this is combined with unparalleled speed and a light, accurate touch, you arrive at simply the most responsive and natural interaction between man and machine imaginable.

AC

Small but beautiful

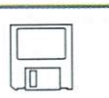
As you've probably noticed, Wacom tablets aren't cheap. Even the UD-0608-R, which incidentally is the smallest in the range, offers only a 153.6mm x 204.8mm working area.

Although this may sound uncomfortably small, I found it perfectly adequate, and it's already played a key role in most of my recent creations, including a number of magazine covers and illustrations.

If you have a copy of TVPaint and want the best from it, a pressure sensitive Wacom is an essential. And after ten minutes you'll wonder how you got by without one.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended



TVPaint 3.0

RTG card

The bottom line

Product: Wacom UD-0608-R (PC)
Supplier: Computers Unlimited
Price: £425
Tel: 0181-200 8282

Ease of use	**10**
Implementation	**9**
Value for money	**8**
Overall	**6**

public sector

Dave Cusick plunges an appendage into the PD pile and plucks out a plethora of premier products

Autumn marches ever onward, and before we know it Christmas will once again be upon us. It's over a year now since I took over the reigns of Public Sector and that time has seen many changes, not least of them being Escom's purchase of the Amiga. But some things never change. The quality of my alliterative standfirsts is, for example, as feeble as ever, and the quality of the PD and shareware *Amiga Computing* receives has remained consistently high...

Extreme Amos #1

Produced by: Carl Drinkwater
Available from: PD libraries

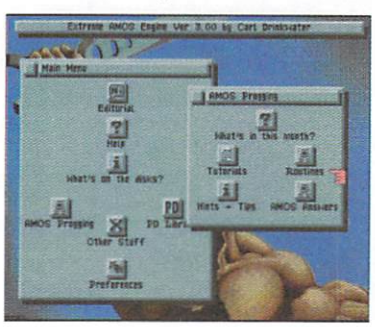
It's not often that the first issue of a diskmag makes a really good impression. This is particularly so in the case of those concerning Amos programming as the vast majority tend to be disappointing, insubstantial products.

Understandably, since this is the first issue, the content of some of the articles is a little thin. This is forgivable though, because at least the topics covered are more adventurous and interesting than in some disk magazines I have encountered. Tutorials, news, source code and so on make up the bulk of the magazine, and Extreme Amos also makes no secret of its close links with Mushroom PD, which claims to be the second largest Amos-only PD library in the country. Extreme Amos also distinguishes itself because it employs a stylish Workbench-like interface for article selection which makes a welcome change to the usual scrolling text-based lists.

As an added bonus, the second of the two disks on which Extreme Amos comes contains two excellent programs which demonstrate effectively what Amos is capable of in the hands of good authors. The first of these, Paul Burkey's Piles O' Tiles, is an enjoyable Shanghai-style game in which the objective is to remove pairs of 'Free' tiles – those which are not surrounded by tile stacks of equal heights. In the mould of numerous great puzzle games, it is simple but enormously engaging.

The second program is a magic eye picture creator called TERDS (standing for Totally Excellent Random Dot Stereograms). Written by magazine producer Carl Drinkwater, this is one of the better programs of its type, offering various options for twiddling with the RDS creation process.

Both TERDS and Piles O' Tiles are decent titles in their own right, but combined with the first issue of a promising new diskmag they become even more attractive. This is a package worth investigating.



Extreme Amos boasts a more innovative interface than most disk magazines

MUSIC of the month

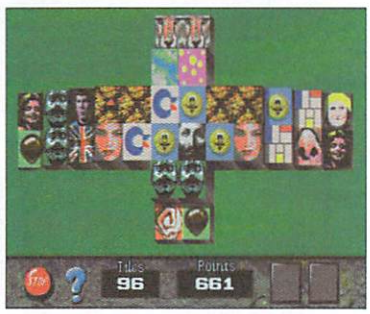
Surfing On The Jazz Wave

Produced by: The Grooving Brothers
Available from: 17 Bit Software
Disk No. 3828 A/B

'What you gonna do when there ain't no swing?' asks the title screen of this curious production. Speaking personally I'll probably throw a party, but for those rather more favourably inclined towards it this disk could prove quite interesting.

Essentially, Surfing On A Jazz Wave is an immaculately presented collection of acid jazz tunes, all beautifully sampled and arranged. This sort of music doesn't do much for me, but if this is your thing then you'll love this disk – and even if it's not you will at least be stunned by the top class graphics and crisp sound reproduction.

As an added bonus, there's also an attempt to categorise a few dozen artists and their recordings, labelling them Dance, Funk, Acid Jazz, Salsa, Indefinable, or whatever. And at least the programmers realised that a well-crafted music module benefits from the non-inclusion of spinning texture-mapped balls and spiralling pictures of top supermodels.



Piles O' Tiles... one of two excellent Amos programs included on Extreme Amos

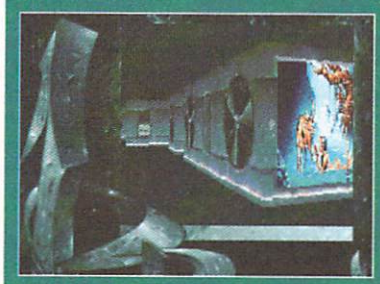
Artcore

Produced by: Scoopex
Available from: Pixel Digital PD
Disk No. AG249

Artcore is a slideshow with a difference. Whereas ordinary slideshows present the viewer with a series of pictures, one after another, with some awful tune wibbling away in the background, Artcore allows you to explore a texture-mapped 3D dungeon-style 'gallery'... with some awful tune wibbling away in the background.

It's surprising how much such a simple idea adds to the interest. Admittedly, as a consequence of including this kind of 'game engine' on the disk, only a dozen or so pictures can be included. But in this age where the prefix 'Virtual' is often happily slapped onto computer versions of real-life experiences and held up as examples of advancing technology, it is perhaps fitting that the common computer slideshow should be overhauled in this manner.

What about the pictures though?



Explore the Artcore gallery...

Scores of artists and recordings categorised for your listening pleasure

Come as you are

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

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

Super Skiddy Things 3 On Ice

Programmed by: Simon Hitchen
Available from: PD Libraries

This amusing little two-player racing game is just the thing for those lengthening Autumn evenings. The aim is to guide your rubber-suited Penguin around one of the four tracks before your opponent does. The thing is, since the tracks are constructed on ice, there tends to be a fair bit of skidding around, making this a slightly trickier exercise than might be imagined... especially when the track slippiness setting is adjusted for minimum grip.

The title screen includes a basic ping-pong game... fifteen years ago this sort of thing on a Grandstand Video Game System would have been all the rage

Owing more than a little to Skidmarks, Super Skiddy Things 3 in all its graphical splendour

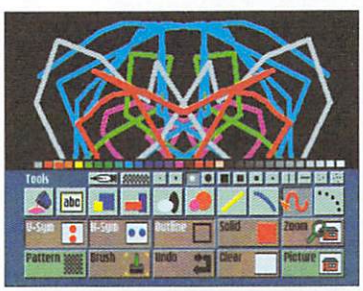
Top graphics and decent sound definitely help, but as ever it's the playability which makes or breaks a game. Super Skiddy Things 3 is not only very good fun, but it's the sort of game you and a friend could end up playing for quite some time.

Admittedly it does not demand a great deal of brainpower, but this is, if anything, in the game's favour. And in the unlikely event of one of you becoming bored with skidding around the tracks at high speed, the title screen also features a simple ping-pong game.

Belle's Paint

Programmed by: Philip Drake
Available from: SaddleTramps PD
Disk No. A115

A charming paint package written in Amos Professional and boasting a decent selection of tools. In addition to the compulsory line and shape tools, it is possible to turn on lines of vertical and horizontal reflection symmetry, zoom in to work in detail on tricky areas, and fill in areas with preset patterns. At the click of a button the screen can also be flipped either horizontally or vertically.



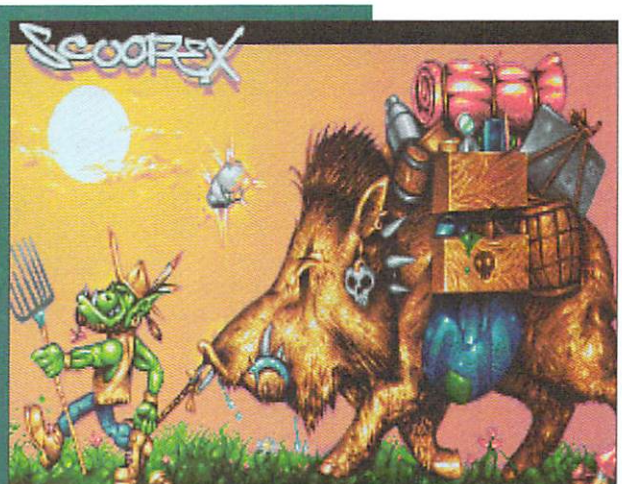
All the tools you would expect are to be found in the Belle's Paint toolbox

While it's scarcely a rival for Personal Paint or Brilliance, or even DPaint, Belle's Paint is a competent piece of programming which costs a fraction of the price of commercial alternatives. It's also got some nice touches. For instance, with a little bit of effort it is apparently possible to use the program to perform some video titling functions such as fancy wipes.

However the only documents provided are some very brief ones added by those nice people at SaddleTramps, so a degree of experimentation could be necessary to familiarise yourself with this facility. I must confess, I couldn't entirely ➤

Well, admittedly if they were in a conventional slideshow they wouldn't grab the attention particularly. The fantasy images are all pretty typical: a couple of monstrous entities and the obligatory naked women in bizarre and highly unlikely poses. The standard of artwork throughout is high but imagination is a little lacking in some cases.

It's slightly ironic really that what is first and foremost a slideshow should impress largely because it clones the often-imitated PC blastfest Doom, albeit, of course, without the violence. But it's a nice idea, and one I'd like to see attempted again in the near future – and given the stunning lack of originality displayed in the demo scene sometimes, I think it's highly likely that I will.



...and then stare at the pictures for hours on end

Scavenger

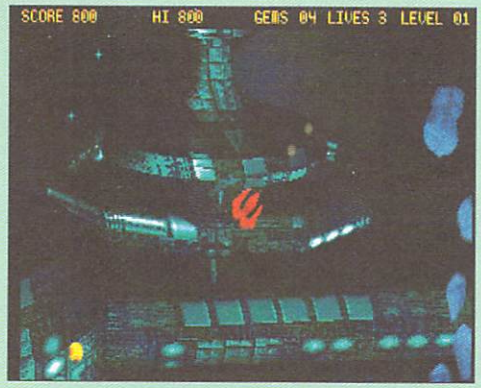
Programmed by: Ben Wright
Available from: Ben Wright

Old game ideas are constantly being resurrected in the world of PD and shareware, which is not necessarily a bad thing because many golden oldies were a good deal more entertaining than some recent commercial offerings. Scavenger is essentially Asteroids, with the slight difference that to finish a level in this version the player must collect a certain number of gems, rather than just blow away every asteroid on the screen.

However, I don't think I've ever played such a difficult Asteroids clone. Scavenger is so tough that even with the maximum possible nine lives I struggled to stay alive for more than a minute or two.

The strange thing is that despite being almost impossibly tricky due to what might kindly be described as quite sensitive controls, Scavenger is very addictive. There is also the added advantage that you're not likely to finish the game in a hurry.

Yes, the first time you play it you'll be lucky to last three seconds before colliding with a giant floating chunk of rock. But that won't stop you coming back for more.



Scavenger is a tough Asteroids clone that's even harder on accelerated Amigas

The graphics and sound are reasonable enough, although they are certainly nothing to get excited about. The gameplay is a different kettle of fish altogether though, because arcade action fans will want to have this game's babies.

➤

get to grips with the process in the limited time available, but I'm sure others will.

If you fancy trying your hand at producing some titling effects or are just on the look out for a no-frills paint package, Belle's Paint is definitely worth checking out.

RemDate 2

Programmed by: Andrew Whiteley
Available from: Roberta Smith DTP
Disk No. BU169

If you're one of those people who always forgets important dates such as birthdays and anniversaries, then RemDate is the program for you. It stores these along with special days, diary appointments, addresses and telephone numbers, making this one of the most comprehensive personal organiser programs in the public domain. It can print out in a variety of ways, including paper of sizes suitable for use in pocket personal organisers.

On demand, RemDate will summarise events in the next few days and inform you how many days are left before a certain day such as a birthday, allowing you to plan accordingly. When entering these dates in the first place, it is possible to specify how much warning you want, so you'll have no excuse for being late with that anniversary card.

RemDate is also capable of displaying key events that happened 'On this day in history', or in a specified year, and producing a quote for the day.

There's a small program included called RemDateWB which is designed to sit in your Workbench Startup drawer. Then, when you turn on your machine it will remind you of any events coming up. RemDateWB can also be configured so that it only does this once a day, rather than every time you reboot, which was a thoughtful inclusion by the author.

The interface is attractive and the program is a joy to use. In short, if your life is in need of some organisation then RemDate will be the answer to your prayers.

Find the answer within

17 Bit Software
1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire WF1 1DH
Tel: 01924 366982
Fax: 01924 200943
Cost: £1 per disk plus 50p P&P

OnLine PD,
1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX
Tel: 01704 834335
Cost: 75p per disk plus 75p P&P

Pixel Digital PD
Stanley Dock Market, Regent Road, Liverpool S4
Tel: 0151-259 4017
E-mail: Paul@Pixel.u-net.com
Cost: £1 per disk plus 50p P&P

Michael Pratt
10 Rivers Road, Yeovil, Somerset BA21 5RJ
Cost: £1

Ali Prior,
10 Lovell Park Heights, Leeds LS7 1DP
Cost: Demo version free, send disk and SAE

SaddleTramps PD
1 Lower Mill Close, Goldthorpe, Rotherham S63 9BY
Tel: 01709 888127
Cost: 95p per disk

Roberta Smith DTP
190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE
Tel: 0181-455 1626
Cost: 95p per disk plus 50p P&P

Ben Wright
65 South Road, Portishead, Bristol BS20 9DY
Cost: £2, although fans should also pay registration fee later

Strange currencies

For practically a year now since the launch of the National Lottery last November, there has never been a week go by without at least one Lottery program arriving in the Public Sector mailbag. It must be said that the majority are much of a muchness, and even in the more outstanding cases it is very hard to tell whether these programs will improve your chances of winning. There have been plenty of random number selectors and even a lottery simulator. One gentleman this month sent in the interesting Talk A Lottery, designed to literally tell you some random numbers, which was at least something slightly different – but unfortunately it stubbornly refused to run for me, making it rather hard to try out.

Still, if you fancy getting hold of a proper predictor, whether out of curiosity or because the Lottery has become so important to you that you've nothing better to do of an evening than consider endless multi-ticket permutations, then here's the Public Sector guide to the three to beat...

Pro Lottery 1.1

(Originally reviewed in AC89)
Available from: Ali Prior

The program I think I'd opt for if I ever bothered doing the Lottery. This was the first predictor *Amiga Computing* received which suggests multi-ticket permutations, making it very useful to members of Lottery syndicates.

Lottery Winner AGA

(Originally reviewed in AC84)
Available from: OnLine PD (Disk No. OX101)

This is a demonstration version, with the full version costing £2.50 from the author. Prediction methods based on recognising trends in winning numbers.

MP Lottery 4.1

(Originally reviewed in AC85)
Available from: Michael Pratt

Attractively presented program, with the added advantage of costing only a quid, exactly the same price as a Lottery ticket.

Shift gears into the lucrative field of Legal Videography with Sidebar

SideBar is a high quality barcode scanner and matching Amiga software. When a barcode is scanned, an ARexx file of that name is run. The use of ARexx files allows almost any response; play a sound, picture, or animation file; run a Toaster frame, effect or clip; control any ARexx device or program. With the SideBar package you can start contacting local attorneys to set up presentations of your videographic services. SideBar is a state of the art innovation in courtroom presentation. Included is a How-To Guide from Tom Aims legal videography consultant for over 15 years.

TouchLink is used in 100's of kiosks. It works with MediaPoint, VideoStage, CanDo, Helm, SCALA, AmigaVision and other authoring systems. The only touch screen that plugs directly into the CD32 via the gameport. The TouchLink driver is a fully Amiga friendly commodity and compatible with ALL Amigas, Amiga video modes, resolutions, and scan rates. Included is a CD32 development disk, the driver can use the CD32 flash memory to hold its calibration data for CD ROM only kiosk. You may call our BBS and download the entire TouchLink Product Disk which contains our complete manual as an AmigaGuide document.

AirLink IR controller is used by Multimedia, and Home Automation users around the world. Macro Systems bought 500 of them for control of VCRs and DATs with their products in Germany. Set up hotkeys and control IR equipemt without ever taking your hands off the Amiga keyboard, even while in the Toaster Switcher and Editor screens.

Products from Geodesic Designs, Inc.

Amiga SideBar	(scanner, software, and manual)	$495.00
TouchLink	(with KeyTec 14" flat snap-on panel)	$250.00
TouchLink	(with KeyTec 17" flat snap-on panel)	$400.00
TouchLink	(with KeyTec 20" flat panel)	$450.00
AirLink III	(super bright IR works up to 15 meters)	$75.00
AirLink III	(with old AirLink trade-in)	$35.00

VISA, M.C., Am.Ex, and Discover Cards Accepted

Geodesic Designs Inc.
P.O. Box 956068
Duluth, GA 30136
USA

Tel. (770) 822-0566
Fax (770) 339-7051
BBS (770) 339-9995

A&M COMPUTER REPAIR

Authorized Commodore/Amiga Service Center

- *We service the ENTIRE Commodore-Amiga product line.*
- *Experienced & authorized technicians.*
- *Video Toaster Service Experts.* ● *We service nationwide*

FREE ESTIMATES
24-HOUR TURNAROUND

1-800-344-4102

A&M Computer Repair
24 Colonel Conklin Drive, Stone Point, NY 10980
(914) 947-3522 fax (914) 947-2728

800-735-2633

VisionSoft

P.O. Box 4398 Carmel, CA 93921, U.S.A.
sales@visionsoft.com http://visionsoft.con.visionsoft.html

800-735-2633

Memory Upgrades

A3000 1x4-60ns SC Zip	24.95
A3000 1x4-70ns SC Zip	24.95
A3000 1x4-80ns SC Zip	22.95
1x4-70ns Page Zip	20.95
1x1-80ns Page Dip	5.95
1x1-100ns Page Dip	4.25
256x4-70ns Page Zip	5.75
256x4-70ns Page Dip	5.75
256x4-100ns Page Dip	4.95
1x8-80ns Simm	34.95
1x8-100ns Simm	32.95
1x9-70ns Simm	29.95
4x8-70ns Simm	132.95
4x9-70ns Simm	134.95
A4000 1x32-60ns Simm	149.95
1x36-60ns Simm	159.95
2x32-60ns Simm	299.95
4x32-60ns Simm	499.95
8x32-60ns Simm	999.95
GVP-32 4mb Simm	185.95
GVP-32 16mb Simm	799.95

Hard Drives

W.D. 170mb 2.5" IDE	139.95
Maxtor 85mb 2.5" IDE	109.95
Maxtor 120mb 3.5" SCSI	79.95
Maxtor 245mb 3.5" IDE	129.95
Quantum 175mb 3.5" IDE	119.95
Quantum 245mb 3.5" IDE	129.95

Custom Chips & Upgrades

1.3 Kickstart Rom	19.95
2.04 Kickstart Rom	29.95
2.1 Upgrade Kit	85.95
3.1 Rom for A500/2000	69.95
3.1 Rom for A3000	79.95
3.1 Rom for A4000	64.95
3.1 Kit for A500/2000	129.95
3.1 Kit for A3000	142.95
8372A 1mb Agnus	34.95
8375 1mn Agnus	19.95
8375B 2mb Agnus	39.95
8373 Super Denise	35.95
8364 R7 Paula	17.95
5719 Gary	17.95
8520 A-1 CIA	13.95
8520 Surface Mount	24.95
Super Buster Rev.11	56.95
Super Dmac Rev.4	52.95
A2091 Rom Rev.7	34.95
A2630 Rom Rev.7	36.95
W.D. SCSI Chip Rev.8A	34.95

CD 32 Software Clearance

Brutal Football	9.95
Defender of the Crown II	9.95
Nigel Mansell World Champ.	9.95
Super Methane Bros	7.95
The Chaos Engine	9.95
GunShip 2000	9.95

Peripherals

A520 Video Adapter	19.95
A500 880K Int Floppy Drive	35.95
A2000 880K Int Floppy Drive	79.95
A4000 1.76mb Int HD Fl Dr	139.95
A500 Power Supply	39.95
A2000 Power Supply	89.95
A3000T Power Supply	79.95
A1200 Keyboard	59.95
A2000 Keyboard	65.95
A3000 Keyboard	74.95
A1000 Safeskin	9.95
Pyramid Midi Interface	39.95
Midi Gold 500	19.95
Golden Image Pen Mouse	29.95
Golden Image Optical Mouse	29.95
Speed King Analog Joystick	19.95
Bart Simpson Joystick	5.95

CYBERSTORM

CyberStorm 060/50MHz	1289.95
CyberStorm Fast SCSI-II	239.95
CyberStorm I/O Module	539.95
CyberVision w/2mb	459.95
CyberVision w/4mb	589.95
Blizzard 1230-IV SCSI Kit	119.95
Blizzard 1230-IV Turbo	259.95
Blizzard 2060 Turbo	989.95
Blizzard 1260 Turbo	939.95

EXPANSION SYSTEMS

HighFlyer w/PS	399.95
HighFlyer w/o PS	329.95
HighFlyer Fan Kit	39.95
HighFlyer Cable Kit	79.95
DataFlyer 4000+ SCSI	99.95
DataFlyer 4000 SX-25 SCSI	99.95
DataFlyer 4000 SCSI	89.95
DataFlyer 2/3000 IDE	89.95
DataFlyer 2/3000 SCSI	89.95
DataFlyer 1200+ SCSI	89.95
DataFlyer 8mb Ram Board	89.95

dkb

DKB Wildfire 060/50	1519.95
RapidFire SCSI II	149.95
DKB 1202 for A1200	89.95
The Clock for A1200	19.95
Kwikstart II for A1000	55.95
MegaChip for A500/2000	199.95
MultiStart II for A500/2000	29.95
DKB 3128 for A3000/4000	199.95
Cobra 28 for A1200	139.95
Cobra 40 for A1200	249.95
Mongoose	359.95
Ferret SCSI II for A1200	99.95
DKB 1202 for A1200	99.95

Info (408) 626-2633
Fax (408) 625-6588
BBS (408) 625-6580

VISA MasterCard DISCOVER NOVUS COD

Visa, Master and Discover Card orders are accepted with no surcharge. We also ship COD only in payment of Cash. Cashier's Check or Money Order. All returns must be returned and accompanied with a RMA# within 15 days. Defective products will be replaced with the same item only. Other returns subject to 25% restocking fee. Shipping & Handling charges are non-refundable. Price & availability are subject to change without notice. We do not guarantee hardware and software compatibility. We are not responsible for any typographical errors.

Recapturing

Amiga owners are used to talk. In an industry that seems to thrive on hot air and unsubstantiated speculation, no-one knows better than they that certain promises should be taken with a pinch of salt.

So when Manfred Schmitt stood up at the Frankfurt press conference to announce the Amiga's new key role at the head of his ever expanding multimedia empire, it's not surprising if everyone's scepticism didn't evaporate overnight.

Escom's plan to build on the Amiga's technological superiority as a multimedia platform was obviously encouraging, but a number of questions remained. After all, in the Amiga's absence the PC had been marketed so successfully it was almost synonymous with the term multimedia in the eyes of the general public. With even Escom themselves pushing PC multimedia solutions, could the Amiga ever regain lost ground ?

Fortunately the promises seemed infinitely more credible thanks to the contribution of two companies: Scala and Viscorp. Both could justifiably claim to have invented their own brand of multimedia, and both teams have experience from long before PC owners had even encountered the winning term. If any third parties were needed to kickstart the new wave, they were the ones. But are they really committed, or is it just more talk ?

To take Scala first, their decision last year to move into PC development was so shocking to some Amigaphiles it was seen as a death knell. The relief at having the company that invented computer television back at the helm of Escom's multimedia drive was understandably intense.

As reported in our August issue, the first good news was the plan to bundle Scala's MM300 package with new A1200s. The fact that the software won't run on the base machine, however, left some commentators puzzled. "What is the point," some said, "of giving away software that most new owners can't use?"

Barry Thurston, MD of Scala UK, thinks differently: "On the face of it it's a strange package," he conceded. "But it's forcing the A1200 into the multimedia environment and almost trying to encourage the purchaser to get interested – which is no bad thing."

No bad thing indeed, since the A1200 certainly needs to offer

something different than the similarly priced super consoles it will be up against this Christmas. But Thurston is aware that more will be expected from the Scala-Amiga Technologies collaboration if the Amiga is to become a really profitable multimedia contender.

Encouragingly, despite their move into the PC market, Scala believe the Amiga can still lead the way to a future of computer television. Thurston explains: "In market areas like distributing information onto TVs, which is what we're about, the Amiga will still be the best machine. It's PAL compatible as standard, plug and play like they say Windows 95 will be, and once Amiga Technologies start producing the machines they'll still be the most cost-effective solution in the area."

It would be fair to wonder, however, how much this commitment is backed up by new Amiga developments from Scala, which currently seem rather thin on the ground. Thurston explains that they've only really started pushing MM400 following the buy-out, as they've been building EXs which expand on the current product's functionality – most recently they've created drivers for the PAR card and Sunrize Studio 16.

The key to Scala's vision of the long-term future, however, is a multimedia standard that will thrive on all platforms, including the Amiga. Far ahead of the faddish approach that some PC developers have adopted, Scala have designed a state-of-the-art, object-oriented operating system called MMOS.

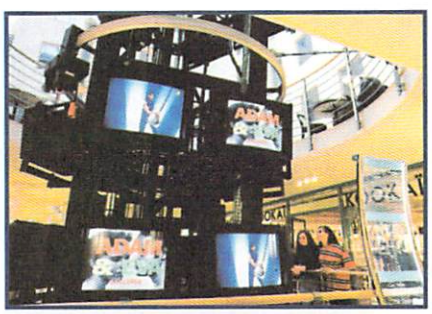
"Object-oriented programming," Thurston elaborates, "basically means that each function in a program is a separate object with hooks which allow it to link with other objects within the program. So whereas before with a Scala product the main menu would be a whole series of things stuck together, now virtually every item is a separate object. It makes it a lot more flexible, pliable and easier to add to."

In fact, MMOS is so flexible it can grow to meet new requirements with the minimum amount of difficulty. Thurston gives the example of a customer that wishes to incorporate Scala into an editing suite; previously Scala would have written an EX for it, but now the customer could be given a development pack to create one themselves.

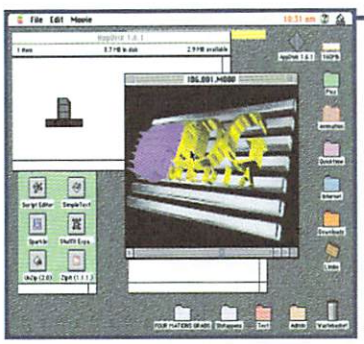
The good news is that though MMOS was developed for the PC, it adapts to the AmigaDOS environment much more readily. According to Thurston, the developers one day decided to port it back to AmigaDOS and were amazed by how quickly they did it. "If we talk in terms of man years to get it onto PC, it took a day to put it back ➤

the vision

The Amiga has been promised a new multimedia future by the men at Escom, but they can't deliver the dream alone. Gareth Lofthouse talked to the third parties that will lead the way



Scala's InfoChannel, an Amiga multimedia champion



They say the Amiga in its current form is too slow, but using Shapeshifter it can run Mac's Quicktime faster than a LC III

This is ED, a Viscorp set top currently doing well in trials in American homes. Gilbreath believes its Amiga-based successor will be even better

The future of interactive television is Amiga based – or at least it will be if Don Gilbreath gets his way

Don't believe the hype

Everyone knows the Amiga was the firstborn multimedia machine. If you were to believe the hype, however, it would seem that it has been left far behind by the PC's dominant brand of multimedia, CD-ROM.

Magazines have trumpeted PC interactive CD as if it were the dawn of a new age, with writers making huge claims along the lines of CD redefining the boundaries of entertainment. And if you asked the developers of such software about the Amiga, the best you could hope for was a patronising smile expressing sympathy.

But while the talk has definitely helped retailers push multimedia PCs into the family home, the actual product is often disappointing. Anyone who's seen the average fare will know there's a lot of clichéd, bland material lurking behind arty interfaces.

If this sounds like the bitter whine of someone who's missed the boat, then you might be interested to hear a few statistics. According to CTW, the computer trade weekly, 90 per cent of the thousands of multimedia CDs that went on sale in the US last year sold less than 100 copies. Now that speaks volumes.

Even makers of acclaimed CD titles are finding it surprisingly difficult to survive, with Medio Multimedia, the makers of the almost benchmark CD called JFK Assassination, recently having to announce it was laying off 40 of its 75 employees. With so many of the CD companies being small start-up businesses, some commentators believe that many will be hard pushed to survive.

Which all seems to suggest that a certain amount of the CD multimedia is not really impressing the public. Dressing encyclopaedias and cookery books up in hi-tech clothing does not necessarily make them into a new and exciting medium.

It's clearly foolish and immature to be overly partisan on this issue. The fact remains that many Amiga owners would jump at the chance of getting products like Microsoft's Encarta, and both hardware and software developers should be striving to match the PC's talents in this field. But it is equally important that we build on the Amiga's unique strengths, rather than jumping on a bandwagon heading for fool's gold. AC

onto Amiga," Thurston explained. "Which says an awful lot for AmigaDOS as an operating system."

"What that means for us," he continued, "is that cross compatibility between scripts will be easier, and it's highly likely that our next generation of Amiga products would be based around MMOS." Which, he went on to point out, will fit in very nicely with RISC Amigas that can emulate MS DOS.

The question remains, however, of what will give the Amiga an edge over PCs already running the system, but Thurston is confident. "It will be superior because it'll run AmigaDOS as well, and from *that* there will be a whole new range of products that are smoother, faster and more fulfilling."

It appears, then, that creative tools are still the key to Scala's vision. Now they're involved in the PC market, however, you'd think they might move in on the supposedly booming interactive CD scene as well. Thurston, however, is nonplussed by most PC CD-ROM.

"Somebody hit upon the idea of sticking a CD-ROM drive in the PC and including a sound card, and they said that was multimedia," he said. "Now, if ever there was a killer application that was it, because it's made an awful lot of companies an awful amount of money."

"But in truth it *isn't* multimedia," he continued. "It just means you've got a large storage device that you can retrieve information from and you can play sound files but – oh, by the way – while you want to access information your sound is going to stop because your PC can only do one thing at a time! I think the general public on the PC has been cheated from true multimedia because of what various manufacturers have done."

Thurston does concede that the PC has certain advantages, the main one being the quality of games from which, in his view, the PC owner gets their only taste of true multimedia. But it's still relatively expensive. "The Amiga is still the best machine affordable on the market," Thurston emphasised. "It's multimedia for the masses, if you like. Hopefully Amiga Technologies will be able to maintain that."

Scala success stories

Scala's record of success has put the Amiga home computer at the heart of some of the world's biggest corportions:

Ford, Esso, Trust House Forte, SAS International Hotels and Co-op Supermarkets.

High hopes

If Scala can take almost sole credit for inventing the multimedia software environment on the Amiga, Don Gilbreath has an equal claim on pushing the hardware in a similar direction. Now Chief Executive of the American-based Viscorp, the inventor of the CDTV and CD32 is back with high hopes.

Following a deal struck shortly before the Frankfurt press conference, it is Viscorp that stand to benefit first from Escom's liberal approach to licensing by incorporating Amiga technology into a new set top box.

Interactive TV in the US is at a far more advanced stage of development than in Europe. Like his numerous rivals, Gilbreath is hoping to bring video on demand, home shopping and interactive entertainment into the family living room all under the control of a TV top unit. Unlike his competitors, however, he thinks he can do it at an affordable price – thanks to the Amiga.

Gilbreath explained that using Amiga technology would cut down costs thanks to the way it used and encouraged writers to use memory economically. "What happened was that a lot of the entertainment writers didn't have the luxury of 16Mb main memory like you got with a PC," he said. "In a way it forced them to write efficiently and it forced applications to be efficient."

He continued: "That helps us because memory is the highest component cost in any set top box. You look at some of the set top offerings in this country: There were requests for bids for machines to be made at a certain price, but people were coming up with units that needed a crazy amount of memory – ten times what the Amiga would need! Which, of course, just killed the whole thing."

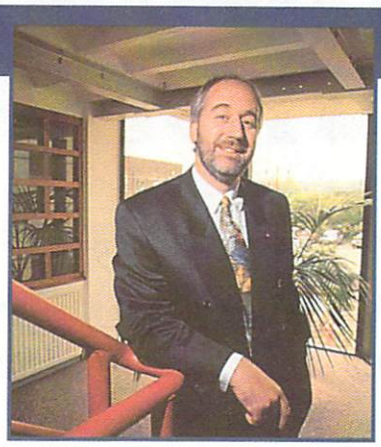
In general, it seems the whole issue of price could be the decisive factor in terms of who wins the race to bring multimedia to the masses. Outside the set top box field, Apple Mac's Pippin is just another example of an impressive spec machine that's been indefinitely delayed because they can't deliver the goods at an affordable level for home use.

The lesson is clear to Gilbreath. "To be successful the initial cost is the key. We feel that with the Amiga we can reach these target costs."

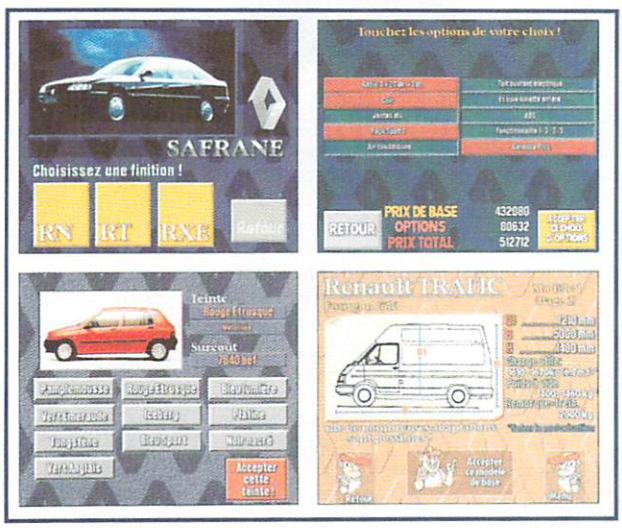
In Europe, the concept of the set top box is largely unheard of, so what could purchasers of Viscorps model expect? According to Gilbreath, the TV-based technology will incorporate a voice phone, a fax, Internet access, plus an all-in-one access point to a variety of different network services with everything controlled using icon-based menus via your remote control.

Clicking on one icon will allow the user to jump into a multimedia, potentially graphical, vivid world. Since it's Amiga-based, Gilbreath also forsees the possibility of incorporating CD and authorising synchronised CD-based games.

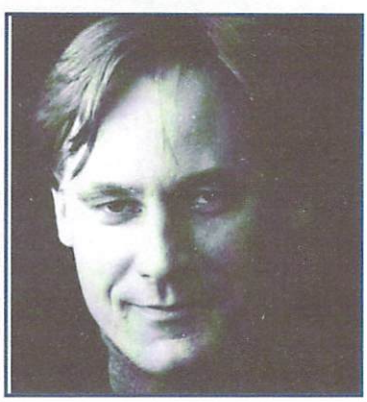
Up to this point, however, the product sounds like an extension on typical computer-based product's technology. In fact the project is rather more radical than that. "We see a computer world which is well versed in interactivity," Gilbreath



Barry Thurston, MD of Scala UK, outlines his vision for the future



Elegant interfaces are the key to information access



"Scala lets us promote ready-to-use multimedia solutions. Escom now turns from a PC manufacturer and retailer into a multimedia company – we see this as a key to success." Manfred Schmitt at the Frankfurt Press conference

Tinkering with the engine

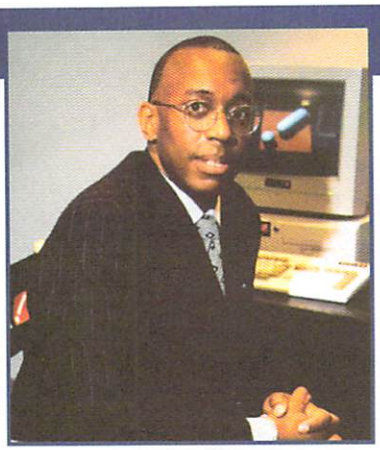
Positive though Viscorp and Scala are about the Amiga's prospects, the new machines have some catching up to do with other platforms if they're going to have a chance of competing. Fortunately, it seems Amiga Technologies are well aware of this – hence the commitment to a RISC-based Amiga.

In the nearer future, Barry Thurston agreed that bundling a CD drive with the Amiga was going to be important, and he added: "Hopefully it could spawn true multimedia products along the lines of Encarta, but obviously a lot more accessible and quicker." But though a CD-inclusive package was mooted at the conference, how long before it appears is another matter. Ideally, Escom need to get it ready for Christmas, but by the sound of things we could be waiting until Spring 1996.

If Amiga users are going to get products like Encarta, however, a more fundamental change would have to be made at the heart of the Amiga. PCs and Macs are able to show video footage running in a small window next to text and other graphics, whereas the Amiga would have to cut to a different screen.

The reason for this is that the other computers use chunky pixel graphics which make 256 colour images move as fast as two colour images. By contrast, the Amiga uses bitplane graphics which become slower the more colours you use.

It's argued that the Akiko chip, which was incorporated into the CD32, was a way around this problem, but since nobody has exploited the technology, that remains to be seen.



Dennis Phillips, the joint MD of Scala's UK division

explained. "Then there's a whole community of TV people who may not have a computer. What we are driving towards is more TV centric hardware and software."

Thus, Viscorp's previous set top experiments typically had built-in genlocks to make them very television friendly. And if you think TV centric software sounds like no more than another empty buzz term, it's an eye-opener to see what Viscorp have already achieved with a non-Amiga-based box named ED.

MAX ED-ROOM

For example, ED already has an unusually convenient on-screen TV entertainment guide. It differs from a facility like teletext because users will be able to select programmes that interest them, and automatically set the VCR up to record them at the same time.

Then there's the matter of Viscorp's license to NTN, a company bearing rights to a number of key sporting events. NTN actually transmit live action to ED and users are given the opportunity of betting in a 'What happens next?' game.

"It's a way to get involved with the sporting event you're watching, and over the whole country you could be playing with 20-30,000 people," Gilbreath said. "We see that happening with a lot of different TV shows."

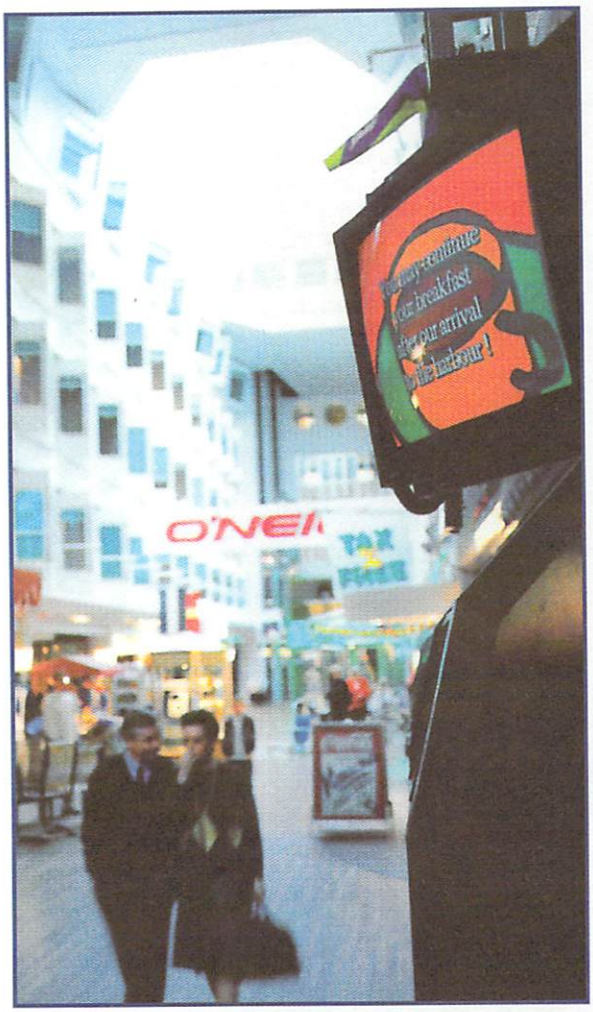
All of which sounds impressive, but one would expect that the new Amiga-based set top box would be a long way off in development time. According to Gilbreath, however, making the new product is the easy part. "Electrically, the Amiga-based product exists but we've not deployed it yet," he said. "Before we can do that it's about lining up a sufficient amount of roll out developers to have titles ready. The product itself is not a problem since it's based on a merging of our previous experience."

Gilbreath has seen radical technology flop before, including his own CD-TV, so he realises having a good base product isn't enough. "This is a very expensive business to be involved in," he explained. "If the battle was just about technology this box would be a very strong winner. But it comes down to content; if you bring out a new player you need enough supporting software on launch."

If anything gives the Amiga a fighting chance, it's not the hardware but the talent that can exploit it to the full – a fact stated by both Scala and Viscorp. Barry Thurston called the Scala programming team heroes of the Amiga world. Gilbreath is equally adamant that Amiga people are smartest in the set top field.

"There's a base of software writers that know AmigaDOS **and** know television and entertainment," he argues. "We know of other computer-based companies doing similar stuff and television is not their normal playback medium. We think our people are better equipped to do the job."

A lot of promises have been made over the last few years, and lot of promises have been broken. With teams like Scala and Viscorp leading the way, maybe this time things will be different.



Computer television will become an everday part of life, and the Amiga leads the way

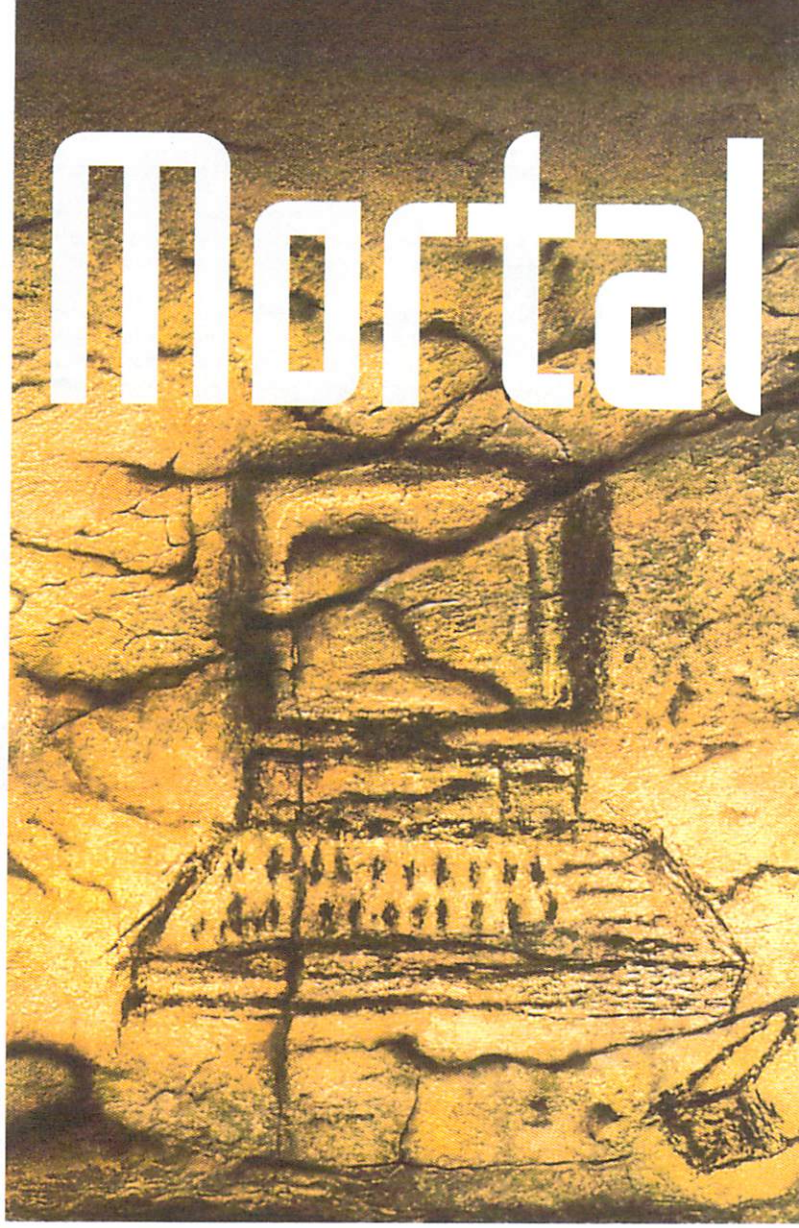
Slowcoach myths

If people moan about one area in which the Amiga has been superseded by its rivals, it's processing speed. New PCs and Macs are just so much faster, it won't be possible to do half the things they're capable of until the RISC machines come through – or so they say.

Of course speed is very important, but for multimedia the Amiga is a lot more capable in this area than many realise. Interestingly enough, the Shapeshifter Mac emulator ran animations and video faster on an Amiga 030 processor than on many of the Macs in our office.

The fact that Escom have dropped the IDE-based A4000 desktop in favour of the SCSI equipped A4000T will also prove a big help. Barry Thurston points to faster transfer rates as being vital when planning for the playback of motion video. Add to that the fact that it allows the connection of better quality peripherals, and more of them, and this will give the Amiga access to some very powerful multimedia tools indeed.

Mortal AMIGA



Not so long ago, the Amiga games market was awash with high-quality, innovative titles that sold in abundance. But after the collapse of Commodore, software companies unsurprisingly became very cautious when it came to releasing Amiga games. Some, after years of supporting the machine, were only too ready to abandon it and desert to the PC camp, others took a toe-dipping policy, releasing a couple of titles or even worse – second-rate PC port-overs while many titles were 'put on hold.'

But now, the latest news from Escom is that the Amiga is going back into production and an A1200 is promised for September. But with a higher than expected RRP announced at £399, a lot of people are going to take a fair amount of convincing that developing for the Amiga is once again going to be a viable option.

And, not only have Escom got their work cut out for them in this respect, but the vicious circle of developers not making the games until retailers stock them, and retailers not making shelf space available until they see wide-spread commitment, must be broken.

GENERAL CONSENSUS

Amiga Computing talked to key industry sources to get the general opinion about the future of the Amiga games market and what they'd like to see from Amiga Technologies.

The Amiga has always been the cheap, yet quality home computer that not only could you buy the latest games for, but you could also create music on, compile a database and write a letter. The PC has always been priced over three times as much as the Amiga. The consoles, while available for the same price, were merely toys that could do no more than play games. But after a year off the market has it still got what it takes?

As it stands, the Amiga still has many strengths which the supportive software developers are only too keen to point out. A strong and loyal user base already exists and Escom need to cultivate this. As Chris Warrender from Grandslam points out: "Escom must listen to the users, both past and present, and give them what they want in relation to the machine rather than telling them what they need. They have a ready-made installed base to start from – they should not ignore these users, but should foster the relationship between user and developer and this base will, undoubtedly increase."

Amiga users have proved themselves extremely loyal, especially with a generation who have grown up with the machine. Marcus Dyson, head of Multimedia at Team 17 states: "The great thing about the Amiga was that it taught a whole generation of games-players the fun of graphics, music making and coding." Dyson also points to the Amiga being a user-friendly machine that is easy, even for the novice to use.

"The Amiga comes out of a box and is ready to run in seconds. No tiresome and troublesome sound cards, graphics accelerators, I/O cards and mouse drivers to install. And Workbench 3 is still superior to Windows '95, which is only being steeped in praise because PC

Amiga Technologies have their work cut out for them against all the tough competition

Tech spec

There has been a lot of speculation about what the new Amigas will be like and the price at which they will retail. Incidentally, the interviews were conducted before Escom announced the price of the new A1200, and at £399, it's a lot more than everyone was hoping for.

Marcus Dyson, Team 17: "A1200 with an 030, 4Mb RAM (2 fast, 2chip) and a 120Mb hard drive for £299. This may sound a little unrealistic, but PC's are now so well specified and so cheap that Amiga has to really offer good value for money."

Andy Jolly, Binary Emotions: "The A1200 has to be around the £200 price range."

Michael Crook, Guildhall: "If the A1200 can re-enter the market at £349.99 or less they will immediately grab a healthy chunk of consumer spend this Christmas."

Simon Reynolds, Inter-mediates: "I would like to see a cheap (sub-£200) A1200 in the marketplace, to kickstart interest in the Amiga."

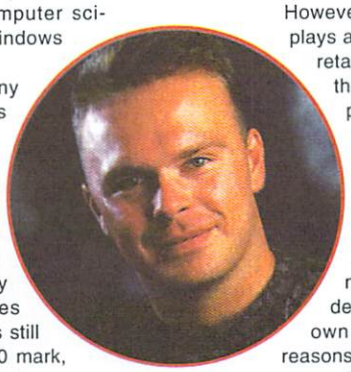
combat

There is a worrying trend in the Amiga games market with fewer titles being released. Tina Hackett investigates whether anything has changed now Escom have unveiled their plans

users have had to tolerate Windows 3.1 for so long."

Vulcan Software's Lisa Tunnah agrees: "The PC has a habit of doing really scary things when you least expect it, whereas the Amiga sits there displaying a very friendly looking workbench environment. Running software on the Amiga is so easy, whereas you need a degree in computer science just to install Windows on your average PC."

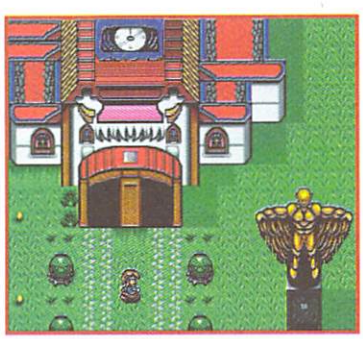
The Amiga has many other positive factors and having a good budget market certainly helps matters. As well as those available for around £10, the full price titles are also competitively priced. With cartridges and PC CD-ROM titles still costing around the £40 mark, and with full priced Amiga titles averaging around £25, the Amiga will still provide value for money on that score. A triple A title on the Amiga can still sell in abundance, and some developers are ready to point the finger at some of the bad-quality games being released that are giving the machine a bad name. Jolly believes: "I think Amiga owners are fed up with paying out for poor quality software and are only willing to buy quality. For instance, Skidmarks 2 sold twice the number of the top console games in its first month."



Dyson: "Any company developing for the Amiga but isn't doing CD32 stuff is out of its mind"

However, distribution always plays a crucial part and if the retailers aren't convinced, then the software companies' hard work will go down the drain. Vulcan Software have found a way around this by distributing their games themselves through mail order. "We have decided to distribute our own products for several reasons. One is the declining confidence in Amiga products at wholesale and retail level. Vulcan couldn't change this sad fact so we simply adapted."

Neil Boote, Head of Non-Music Product at Virgin Our Price, defended the retailers by saying: "Virgin Retail is committed to all games formats and as such, we stock Amiga products in the Megastores. Amiga was a very strong format three years ago and recently had a very successful Christmas in 1994. Demand has diminished since then, and as such we are keeping a close eye on the Amiga market and any developments that might affect it. We are aware that the Amiga still has over 1.5 million machines in UK households, and any decision we make will take this into consideration."



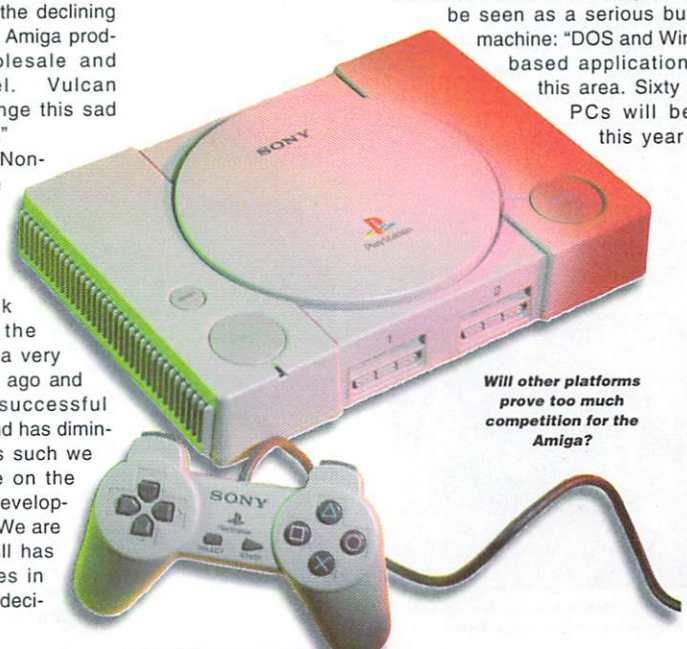
Binary Emotions, developers of Speris Legacy, believe that Amiga owners are fed up of buying poor-quality software

Simon Reynolds for Special Reserve is rather more pessimistic: "The demand for Amiga products is dwindling down to the fact that there has been no new hardware sales for a year, and after a year out of the market, and with the Saturn and Playstation looming, Escom are going to have to do something really special to succeed."

This time factor is also seen as a major problem that Escom will have to overcome. A year out of the market is a long time and in its absence the PC has taken the major foothold in the home computer market. Simon Jeffery, Vice President of Marketing at Virgin Interactive states: "Those who require a future-proof computer for education and a bit of gaming will be driven towards a DOS-based PC. Intel and Microsoft have increased the profile of the PC to the non-hobbyist consumer to the extent that people equate the term computing with the names of those two companies. This delimits the Amiga to the hobbyist and design sectors, plus niche areas like video. So pricing has to be extremely aggressive."

After a meeting with Escom, Virgin Interactive will continue to develop for the Amiga

The Amiga is also limited by being mainly a European platform – the Superconsoles will be international: "Their problem will be that the other platforms are truly international whereas the Amiga will be very much a British/European platform," said Michael Crook of Guildhall. Jeffery believes, too, that the Amiga will never be seen as a serious business machine: "DOS and Windows-based applications rule this area. Sixty million PCs will be sold this year – and ➤



Will other platforms prove too much competition for the Amiga?

that's conservative. Sadly, I can't envisage the day when Microsoft publishes Amiga-specific apps." He finishes: "The Amiga is a wonderful hobbyist machine. To pretend it's anything more will be its downfall."

Apart from the hardware not being on the shelves for a year, the Amiga has also faced other problems. Piracy is cited as one factors that has led to the situation. One way around this would be to increase the amount of development on CD format. As Dyson puts it: "Any company that is developing for the Amiga but isn't doing CD32 stuff is out of its mind. Because CD piracy is still (relatively) uncommon, Amiga CD software sells in larger amounts than the CD32's marketshare would suggest. More Amiga owners are getting CD-ROM drives and if companies will release enhanced CD software, I'm convinced they will see that effort rewarded with sales.

"Personally, with faster loading times, less disk swaps and no need to take up hard drive space with full installs, I'd rather see all software issued on CD only."

ENHANCING

However, the CD32 in its current form is another bone of contention. Most games available for the CD32 have been port-overs from the Amiga with little or no enhancements, and the general feeling seems to be that the machine needs vastly enhancing and CD-specific titles need to be developed – especially with the imminent arrival of the Sony Playstation. Jolly backs this up: "We think that the CD32 in its present design will have a hard time if it goes back into production – unless Escom intend to focus it on a different market, i.e. a set-top box. They must produce an upgraded CD32, re-styled and renamed would be a good move, complete with a tight development schedule."

What software developers would actually like to see on the Amiga itself is wide and varied, but most seem to be in agreement that they'd like to see increased specs. Warrender replies: "I would like to see high-capacity hard drives, built-in CD-ROM, cross platform compatibility, a new high resolution monitor to coincide with a higher standard video output, a portable version, and a newly designed Amiga mouse!"

Binary Emotions' Andy Jolly adds to this: "I'd like to see 2Mb FastRAM, new 32-bit blitter, fast 3D chip for polygons and texture mapping, 68030 25MHz base processor, sound improvement, and multi-player facilities."

Another possibility that some would have liked to have seen is the new Amiga put together as a complete package, much like how the PC is sold. Tunnah states: "The Amiga would benefit from 6Mb of RAM as standard, with an accelerator, CD-ROM and a large hard drive accompanied with a monitor. This would provide the end user with a state-of-the-art machine which could run the most sophisticated software."

As with all new machines, in-house development is very important, and unless Escom have some software teams in-house then it could be very damaging for the future of the Amiga. Jolly stresses this: "You simply cannot rely on third-party development, maybe in the '80s it was possible but in these days of intense competition you have to be crazy not to release exclusive in-house titles."

Taking all these points into account, Escom have a tough job on their hands and only time will tell if the Amiga can be born again. What is for sure, though, is that no-one wants to see the Amiga go, and for a machine that has been off the market for a year there's still a faithful following. And as Vulcan's Lisa Tunnah summarises: "They [Amiga users] are loyal people and deserve only the best."

AC

Super Skidmarks proved that quality titles will still sell well

Vulcan Software have made the decision to distribute their own products through mail order

> there has been no new hardware sales for a year, and after a year out of the market, and with the Saturn and Playstation looming, Escom are going to have to do something really special to succeed

In the pipeline

We take a look at what the software companies have in store now that Escom have revealed their plans.

Vulcan: "Our policy is to continue to develop for the Amiga regardless of Escom's plans. We sincerely believe there is a strong user base out there." **In development**: 'The Mini Series'.

Grandslam: "Our policy on the development for the Amiga has only been strengthened with the Escom news. We have always been an active supporter of the Commodore range since the early machines, and will continue to develop titles as long as Amiga users are still out there to buy them." **In development**: Basejumpers CD32, International Test Series Cricket, Gamer Gold, Ruffian, 7th Sword of Mendor

Virgin Interactive: "We had an important meeting with Escom recently, discussing our future Amiga development plans. Escom have certainly assured us of a future for the Amiga, so appropriate projects at VIE will continue." **In development**: Sensible Golf, CD32 titles and Renegade's Z.

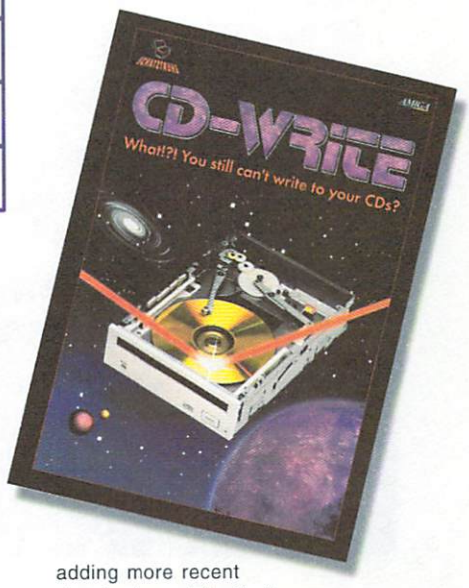
Binary Emotions: "Our plans have always involved the Amiga simply because it's such an easy platform to develop for, so Escom's buyout has enhanced matters." **In development**: Minskies Furr Balls, Nemesis Syndrome, Speris Legacy 2

Team 17: "Escom's plans haven't really affected Team 17's attitude to the Amiga yet. They haven't approached us directly, we have had to approach them. This was always a problem with Commodore, who really had quite a shoddy attitude towards developers. We are still developing for the Amiga, mainly because we owe much of our success to the machine and because many people here are huge Amiga fans rather than it being a particularly profitable market at present." **In development**: Speris Legacy, Final Over, Alien Breed 3D, Worms

Team 17 are still developing for the Amiga because they are all huge Amiga fans

Write on ROM

A new piece of software from Germany claims to allow users to write to CD-ROM, but can it really be true? Gareth Lofthouse finds out



CD-ROM has been unrivalled as a cheap way of storing vast quantities of data, but until very recently the average computer user has been unable to record their own data onto disc. Things have changed with the release of Panasonic's read-write drive, reviewed last month, but with an asking price of over £500 it's still not an affordable option for many of us.

Not surprising, then, that the release of Schatztruhe's CD-Write software has been anticipated with some enthusiasm – along with an understandable amount of scepticism at the same time.

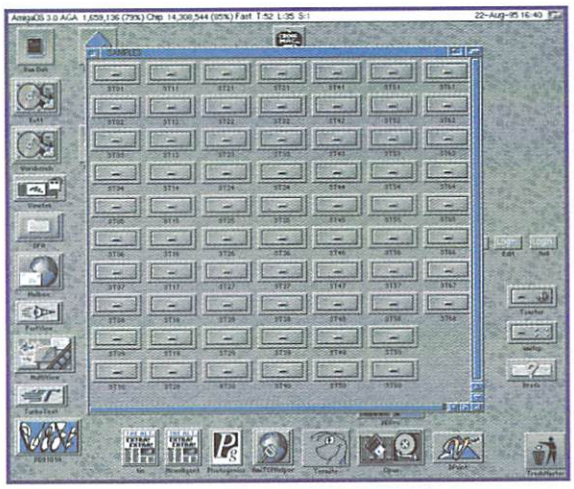
Those who were misled by the product's name will be disappointed to find that CD-Write is not the miraculous super bargain it initially sounds like. This software does not allow users to *physically* write any information onto CD, so any thoughts of having a portable 600+ Mbs storage format at your disposal to do with as you wish should be put aside right now.

So the answer to the boast on the box saying, 'What !? You still can't write to your CDs?' is an emphatic **no** as far as CD-Write goes. Evaluate it on terms of what it really does for your money, however, and this product begins to look rather useful nonetheless.

MODIFICATIONS

In reality, CD-write allows users to *virtually* add, delete or modify data on their discs. The difference is that the alterations are recorded in a drawer on your hard drive rather than on the actual CD itself. The package is simply comprised of a single floppy containing the software, and a manual, most of which seems unnecessary for the basic applications most people will use CD-write for. Installation is fully automatic with the only other requirement being that the user must create a new directory in which CD-write will record alterations to CDs.

From then on, every time you use a CD it will bring up *two* icons on your Workbench, one of which will be a pseudo version of the CD created by the software. The other icon means that the original disc contents are always available should you wish, for example, to access a file which has been virtually deleted.



Tidy your drawers: CD-Write could help you make sense of your disc chaos

In practice, CD-write allows users to reorganise and amend discs to optimise them for their individual requirements. Unlike when using a disc normally, for example, the user will be able to rearrange its appearance on the Workbench – by moving icons, changing window sizes, and so on – and then snapshot the preferred set up so it will appear whenever the CD is accessed.

It's also possible to add new programs to your CDs, though these will actually be recorded on your hard drive. Thus the four disc Aminet set could be updated by adding more recent downloads, and it will all conveniently appear in your CD0 window. Those Amiganuts who have to give Workbench their own customised appearance will also be able to replace boring and repetitive CD icons with more interesting buttons using Magic WB.

If a CD is to be used for BBS services, the program can also be used to make certain files unavailable by virtual deletion. This could be useful to prevent illegal downloads. The packaging claims many other applications are possible, but that's basically what it's all about. A final point, though, is that the program will work fine with multiple CDs. AC

CD optimiser

Where the product will come into its own will be in organising all those poorly categorised CDs that have flooded the market over the past few years. By creating new directories and shifting or deleting data to suit, collections can be changed from chaotic time-consumers to orderly, well structured libraries.

Take music sample collections for example, as they're often the worst of the bunch when it comes to organisation. This product will allow you to virtually delete all the rubbish and arrange the material of actual value into logically named drawers. For once you could have all the drum loops in one drawer and all the orchestral samples in another.

Verdict

More of a CD optimiser than the miracle product it's billed as, CD-Write is an unusual but welcome program all the same. Too often, files on disc archives are lumped willy nilly into huge, unstructured directories, and this package could help users begin to make sense of them.

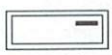
Of course, any major overhaul of a disc's organisation could be almost as laborious as compiling a new archive yourself, but even a few changes can make useful material more easily accessible.

CD-Write would more accurately be named CD Spring Cleaner, and the price is rather high considering its uses are mainly cosmetic. Nevertheless, it's a must for the Amiga user with a large cupboard of poorly compiled CDs.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

CD-ROM drive



Hard drive

The bottom line

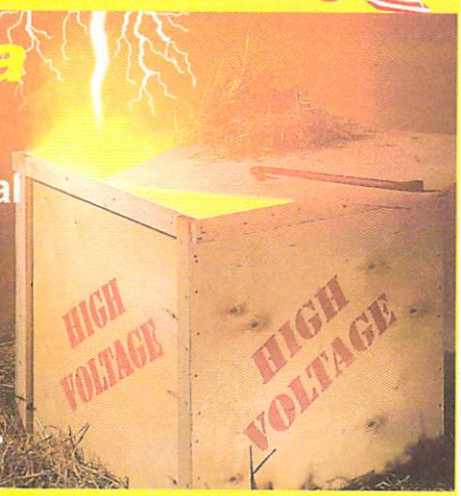
Product: CD-Write
Price: £44.95
Supplier: Schatztruhe
Tel: +49 6171 85937

Ease of use 9
Implementation 8
Value for money 7
Overall 8

Next Month in AMIGA COMPUTING US EDITION

The Amiga is back!

Our five page special covers the all-new Amiga bundle. We look at the software and next steps from the bundle onwards.



Also this month:

Windows 95? System 7.5? or Workbench 3.1?
We compare the three leading operating systems in this in-depth report

ECTS Report

The leisure computing industry's main European bash, the place to go to find out what's going to be hot in the next twelve months.

Graphics

Amiga Computing's coverage of all the big news in graphics includes reviews this month on the latest version of Real 3D v3, together with a feature on Foundation Imaging's latest televisual treat – Hypernauts.

With other features including a printer round-up, a Final Writer update, our regular CD-ROM review section, and features on the worsening piracy situation on our favourite machine, his month's *Amiga Computing* is jam-packed with interest.

SYSTEM

System is bursting at the seams this month with previews of Tracksuit Manager 2, Pole Position, Team, Audiogenics' Cricket '95 and a review of ace Doom clone Fears. We also have an exclusive interview with new coding team Binary Emotions

On this month's coverdisk:

Final Data *and* Main Actor Professional worth £70 for the pair

PLUS

our usual selection of the latest utilities

Competitions this month include prizes of CD32s, Gloom CD and Phase 1 CDs

ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!
ADVERTISERS!

If you want to target dedicated Amiga users – call the UK advertising team

☎ 01144 1625 878888

☎ 01144 1625 876669
(24 hour hotline)

FAX 01144 1625 850652

lisa@acomp.demon.co.uk

Reviewed:

Virtual Karting

Small, low powered, dinky cars make their way onto the Amiga, thanks to OTM. Oh yes, thanks a lot

Gloom

Will a perfect Doom copy ever appear on the Amiga? Guildhall hold the best effort yet

Super Streetfighter 2

Greeted with open arms - US Gold finally get round to releasing their long-awaited sequel

Cheat Mode

Hints and tips to get you out of sticky situations and deadlocks

Odyssey

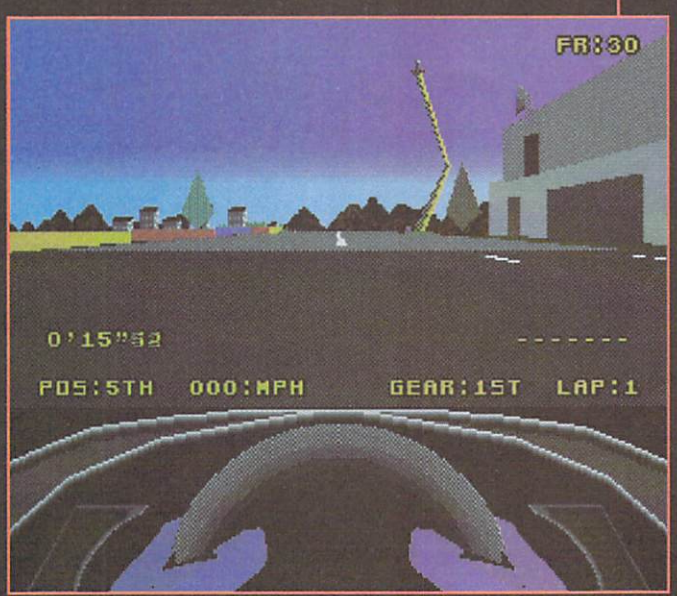
A strangely titled game full of mystical excitement with a blend of mythical magic... or something

Turbo Trax

Arcane finally decide to release a challenger for the likes of Overdrive and Roadkill

Leading Lap

Kellion Software's latest racer goes into the garage for a full service. Is it a faulty alternator or the battery? Take a look under the System bonnet



AMIGA SYSTEMS

Your essential guide to Amiga gaming

By Tina Hackett

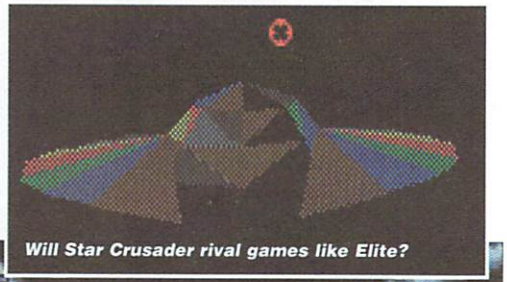
Star Crusader update

The release of Gametek's space flight simulator, Star Crusader, is imminent. Graphics are looking pretty smooth and it has fully texture mapped ships and 'state-of-the-art' 3D technology.

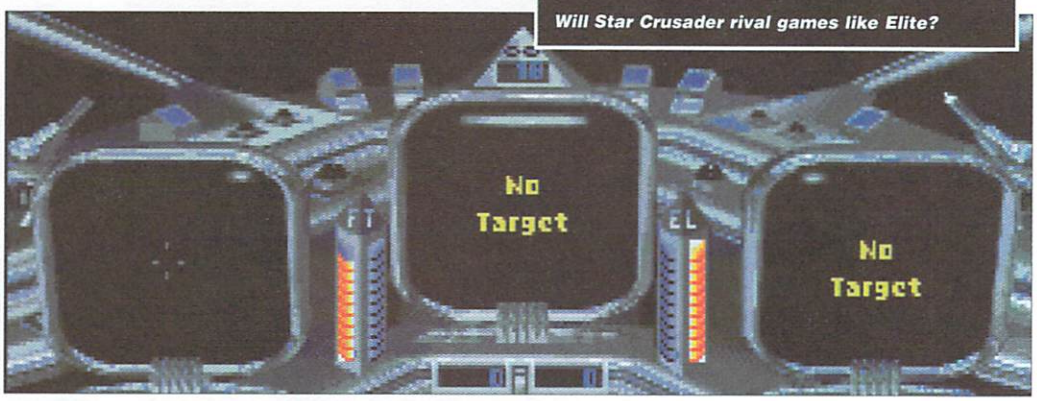
From the playable demo we've just looked at, there will be some stunning different views to choose from including external shots to a torpedo camera which lets you tail your torpedo as it is launched towards its target.

Control is via the keyboard and the interface is fully configurable which will make gameplay easy to execute. There will also be an extensive mission replay system which will allow you to rewind the action as well.

Star Crusader will be available for both the Amiga and CD32 in October priced at £29.99.



Will Star Crusader rival games like Elite?

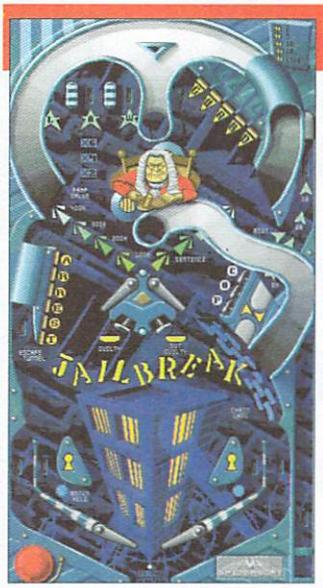


Different views will make it graphically appealing

The one and only

Things started to look pretty bleak for Amiga magazines when Emap's Amiga games title was put 'on hold.' However, only a month later, publishers Maverick must have decided Emap had made a hasty decision and have relaunched The One, which is a positive confidence boost to the market. They've decided to keep the magazine's unique style.

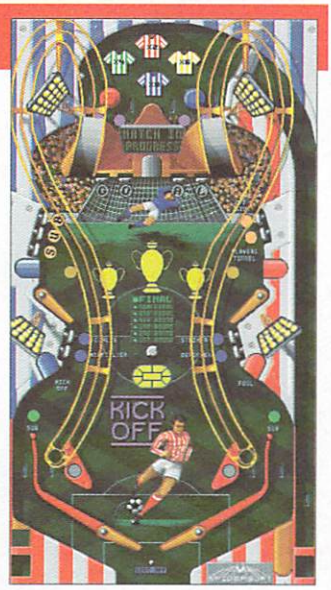
Manic Pinball



Pinball Mania continues the series of 21st Centuries high-quality pinball sims

21st Century are pledging their support to the new Amiga machine by releasing their latest title, Pinball Mania, for the A1200 and A4000T. Developed by the Spidersoft development team, it will contain four new tables, each with a new theme. Tarantula, as you'd expect, contains all sorts of horrid things like locusts and poisons. Jailbreak has an unforgiving judge who likes to dish out life sentences, Kick-Off aims to create all the atmosphere of a football match, and lastly there will be Casino, a miniature version of the real thing.

The table size will be increased, multi-ball added, and four flippers on every table will provide extra challenge. A UK release date of 25 October has been set.



All the tables will have different themes and top notch graphics

Stone-age computers

We had a conversation in the office about the many different computers there have been over the years, the ones that have just faded away, a mere recollection in the minds of gamers. So with this in mind, System hope to put together a feature along these lines. However, there is just one problem – we can't actually find any of this old hardware. So any readers out there who can remember these old machines, please send in your thoughts on the machines and even the games you could play on them. Even better – if you still have them, why not send in a photograph too.

Where are they now?...

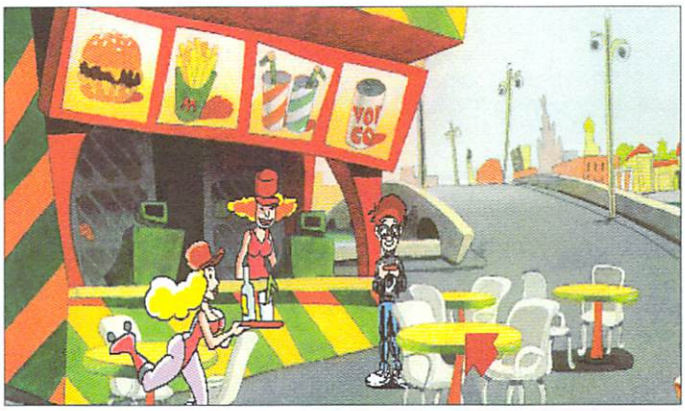
Remember some of our previews from dim and distant months, and now wondering what ever happened to certain games? We didn't lie – they just didn't come out. Sorry.

Pizza Tycoon – unfortunately, this intriguing looking business sim just isn't coming out on the Amiga. The game would only work on certain machines and MicroProse believed it wouldn't be worth bringing out. Distribution deals with magazines were considered but nothing as yet.

Pussies Galore – I don't think it is any great loss to the games community that this won't see the light of day. A rather cheesy looking platformer to say the least.

The Adrenalin(e) Factor – Mirage's rather good looking cyberpunk blast-'em-up also now looks unlikely to come out on the CD32. The same goes for their Rise of the Robots 2 release.

Big Red Adventure – rumour has it that Core Design's brilliant looking Russian adventure is unlikely to see the light of day on the Amiga. A great shame as this looked rather good.



Don't be disheartened by this, as there are still releases in the pipeline and we'll be attending next month's European Computer Trade Show to bring you bang up to date with all that's happening on the Amiga games scene.

Oink, Oink

Sounding like a blatantly sexist title, 'Karate Babes' is going to do little for the image of games for both sexes. It comes complete with atrocious storyline which is a shame because the first Amiga game to use full-screen, 256 colour, Full Motion Video graphics, and the developers, Creative Edge Software, claim: "The graphics on this will make you feel like you are watching TV on your Amiga!"

The game uses the talents of people trained in martial arts who have been digitised. As the character moves, so do the backgrounds and they update accordingly. The game is divided into two parts – one is the fighting section, the other is an interactive movie which develops according to the choices you make.

Karate Babes also makes the plot an important part of the game (joy) and goes along the lines of: A new competitor called 'Karate Babe' wins the worldwide martial arts tournament, taking the title off the two-time winner. As a result, the defeated competitor loses his corporate sponsor, his girlfriend, and a role in a movie. He claims the victory was a fluke and demands a rematch. She refuses, and as a last attempt to force a rematch, he kidnaps Karate Babe's sister. Karate Babe must find her sister and defend herself against the kidnappers.

Creative Edge Software have some other titles on the way and among these is Bikini Karate Babes which contains digitised women in bikinis fighting. Nothing like these frustrated programmers, eh?

Ready for take off!

The eagerly awaited Flight of the Amazon Queen from Time Warner is finally here. Set in 1949 it is a parody of all the popular '40's adevnture serials.

The plot follows the exploits of Joe King, a pilot whose mission is to stop the evil Dr Frank Einstein, rescue the Amazons and win over the beautiful princess. (Aah).

The release date has been set for the 25th September and we'll be bringing you a full review next issue.

Flight of the Amazon Queen due to arrive next month

Inherit the earth

Life's unfair at times. There is a brilliant looking adventure game which you can find on Aminet called Erben der Erde. As you can see, it is German and this is the problem. It's in the hands of American company New World Computing and as yet it is undecided whether or not there will be an English version. We certainly hope so because the game's definitely not the same when we have to make do with translations from our Deputy Editor.

There is an AGA and ECS version planned, and it all looks rather unusual. Rather than your usual adventure stuff, you control a team of animals and graphically it looks stunning, with some incredibly smooth scrolling.

So keep your fingers crossed for this one.

As you can see it is in German. Looks good though.

Virtual Karting

By Tina Hackett

OTM are a new company to the Amiga market and unfortunately their first game, Touring Car Challenge, left a black mark against their name, receiving pitiful review scores. However, their forthcoming release, Virtual Karting, looks likely to redeem their reputation and unlike most of today's rather predictable race-'em-ups, this title takes the form of a Go-Kart racing game.

Virtual Karting is fully texture mapped and aims for this latest 'virtual' style. Two views are available – a 2D overhead angle where you can zoom in or out, or a 'behind the kart' 3D angle. Both work pretty well so far and the 3D angle gives a good impression of speed, whereas the 2D overhead gives more of a tactical style of game.

There are three tracks available, one is the simple figure of eight style, another a taxing windy track, and the last one is for the experts only because as well as hairpin bends and sharp corners, you are in danger of falling into the water surrounding most of the track. Overall, three tracks do sound quite limiting, but OTM are promising update disks at a later date. Another limitation could be that it doesn't have a two-player head-to-head mode but even so, it still seems like a fun game that looks original.

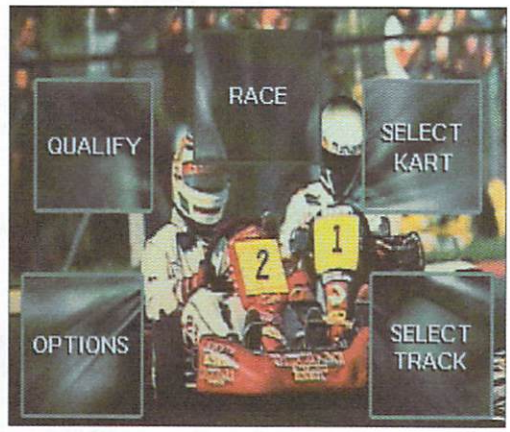
The gameplay feels very responsive at this stage and is easy to control. Game speed depends on your machine, and with a standard A1200 you can expect 25 frames per second. However, with an accelerator you can double this to 50 frames per second.

Sound effects are also fairly realistic and are close to the real thing, and a quite acceptable intro tune gives quite a polished feel. What also looks nice is a 'Fly-by' helicopter preview of the tracks.

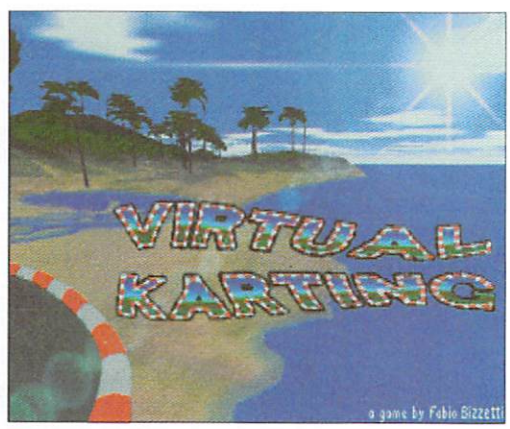
Control of the game is either by digital joystick, mouse, or analog joystick. The player can also choose whether to race in a 100cc kart or 125cc, and manual or automatic gears are also user-definable.

Unfortunately, the screenshots don't do the preview much justice. Due to the graphics mode they don't grab all that well, but they'll give you some sort of an idea anyway. The game is AGA only and is due for release this month.

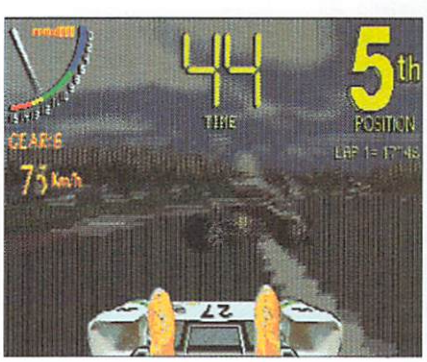
> Virtual Karting is fully **texture mapped** and aims for this latest **'virtual'** style



Options are quite generous although there is no head-to-head mode at this stage



Virtual Karting already looks quite professionally presented



A 3D view will give an impressive feeling of speed

With the overhead mode you can zoom in or out

In the future

We are going to be seeing a lot more of OTM in the near future. Planned for late '95 is Starfighter, a 'ground breaking' shoot-'em-up. League Monitor is also in development and is a football application package which allows the user – either home user or professional club – to enter data. Features include full league tables, form guide, and results prediction. On the more serious side they are about to release PowerBase v3.5, their Amiga database package.

Premier Mail Order

Please Send US Dollar Cheques (made out to Premier Mail Order) or Mastercard/Visa & Expiry Date to:
Dept: ACU11, 9-10 THE CAPRICORN CENTRE, CRANES FARM ROAD, BASILDON, ESSEX, SS14 3JJ, ENGLAND U.K.
Telephone orders: ++1268-271172 Fax your order on: ++1268-271173 Mon-Fri 9am-7pm UK Time Sat&Sun 10am-4pm UK Time.
Airmail Postage & Packing is already included for all orders. For Swiftair Express Delivery add $5.00 per item.
Please note: Some titles may not be released at the time of going to press. E&OE

	500	1200	CD
1 Day Cricket	32.99	------	------
4th & Inches	20.99	------	------
688 Sub Attack	23.99	------	------
A10 Tank Killer	26.99	------	------
ACID BLITZ COMPILER	**53.99**	------	------
Addams Family	20.99	------	------
Adventures of Robin Hood	26.99	------	------
Air Bucks 1.2	26.99	26.99	------
Akira	35.99	------	37.99
Afterburner	16.99	------	------
Aladdin	------	37.99	------
ALIEN BREED 3D	------	**37.99**	**37.99**
Alien Olympics	37.99	------	37.99
All Terrain Racer	34.99	37.99	37.99
Altered Beast	16.99	------	------
Amazon Queen	37.99	------	------
Another World	26.99	------	------
Apidya	20.99	------	------
Arabian Knights	20.99	21.99	26.99
Arcade Pool	20.99	------	26.99
Archer Macleans Pool	23.99	------	------
Award Winners 2	37.99	------	------
B 17 Flying Fortress	26.99	------	------
Baldie	37.99	37.99	37.99
Banshee	37.99	------	24.99
Base Jumpers	34.99	------	28.99
Battlechess	------	------	37.99
Battle Isle '93	34.99	------	------
Battlehawks 1942	26.99	------	------
Behind The Iron Gate	32.99	------	------
Beneath A Steel Sky	30.99	------	37.99
Benefactor	34.99	------	34.99
Big Sea	37.99	------	------
Birds of Prey	26.99	------	------
Black Crypt	23.99	------	------
Blastor	34.99	------	------
Bloodnet .....A500+	37.99	------	------
Blitz Tennis	37.99	------	------
Blitzlight	53.99	------	------
Blue Angels	20.99	------	------
Body Blows Galactic	------	37.99	------
Bravo Romeo Delta	20.99	------	------
Breach 3	42.99	------	------
Brian The Lion	37.99	34.99	34.99
Brutal Paws of Fury	37.99	------	37.99
Bubba n Stix & Premier	------	------	28.99
Bubble Bobble	16.99	------	------
Bubble & Squeak	34.99	37.99	------
Budokan	23.99	------	------
Bureau 13	------	37.99	------
Burning Rubber	32.99	34.99	------
BURNTIME	**34.99**	**34.99**	------
Campaign 2	26.99	------	------
Cabal	16.99	------	------
Cadaver/Pay Off	26.99	------	------
Cannon Fodder 2	37.99	------	------
CANNON FODDER	**26.99**	------	**37.99**
Cardiaxx	20.99	------	------
Carrier Command	13.99	------	------
Castle Master	16.99	------	------
Caesar Deluxe	26.99	------	------
Centre Court Tennis	37.99	37.99	37.99
Champions of Sport	28.99	------	------
Champ Manager 2	37.99	------	------
Champ Man End Of Season	24.99	------	------
Champi Manager Italia 95	32.99	------	------
Champ Manager Compendium	34.99	------	------
Chuck Rock 1 & 2	------	------	28.99
Civilisation	------	34.99	------
Classic Board Games	20.99	------	------
CLASSIC COLL - DELPHINE	**32.99**	------	------
CLASSIC COLL - LUCAS ARTS	**37.99**	------	------
Club Football	37.99	37.99	------
COALA	------	**37.99**	------
COHORT 2	**37.99**	------	------
Colonels Bequest	23.99	------	------
COLONISATION	**42.99**	------	------
Combat Classics 1	37.99	------	------
Combat Classics 2	37.99	------	------
Combat Classics 3	42.99	------	------
Core A1200 Bundle	------	37.99	------
Core CD32 Bundle 1	------	------	42.99
Core CD32 Bundle 2	------	------	32.99
Cosmic Spacehead	34.99	------	------
Covergirl Poker	26.99	------	------
Craft for AMOS	34.99	------	------
Cruise For A Corpse	26.99	------	------
Crystal Dragon	42.99	------	------
Curse of Enchantia	26.99	------	------
Cybercon 3	23.99	------	------
Cyberspace	42.99	------	------
Cyberworlds	26.99	------	------
D Generation	------	------	34.99
D Thompson's Olympic Chall	16.99	------	------
DARK SEED	**26.99**	------	**37.99**
Dawn Patrol	42.99	------	------
Deluxe Paint V	59.99	------	------
Detroit	32.99	34.99	------
Demomaniac	34.99	------	------
Desert Strike	26.99	------	------
Disposable Hero	18.99	------	26.99
Dizzy the Big 6	------	------	26.99
Dogfight	26.99	------	------
Dragon Ninja	16.99	------	------
Dragonstone	37.99	------	29.99
DUNE 1 OR 2	**26.99**	------	------
Dungeon Master 2	------	42.99	------
Elfmania	34.99	------	------
Elite +	26.99	------	------
Elite 2 - Frontier	37.99	------	37.99
ELITE 3 - 1ST ENCOUNTERS	------	**37.99**	**37.99**
Embryo	34.99	------	34.99
Emerald Mines	------	------	26.99
Empire Soccer '94	37.99	------	------
Epic	26.99	------	------
European Champions	23.99	------	------
Evasive Action	37.99	------	37.99
Excellent Games Compilation	42.99	------	------
Exterminator	34.99	------	------
Extractors	------	------	37.99
Eye Of The Beholder 1 or 2	26.99	------	------
FORMULA ONE GRAND PRIX	**26.99**	------	------
F1 W/CHAMP EDITION..A500+	**37.99**	------	------
F15 Strike Eagle 2	26.99	------	------
F17 Challenge	23.99	------	------
F19 Stealth Fighter	24.99	------	------
F117A Stealthfighter	26.99	------	------
F29	23.99	------	------
Fantasy Manager	20.99	------	------
FEARS	------	**37.99**	**37.99**
Fields Of Glory	26.99	26.99	42.99
FIFA SOCCER	**37.99**	------	------
Final Over	23.99	------	26.99
Fire Force	------	------	24.99
Flashback	26.99	------	------
F Sim 2 Japan Scenery	28.99	------	------
F Sim 2 Hawaiian Scenery	28.99	------	------
Flink	------	------	34.99
Football Glory	34.99	34.99	------
FOOTBALL GLORY INDOORS	**34.99**	**34.99**	------
Future Wars	23.99	------	------
Gamer Gold Collection	------	------	37.99
Global Effect	------	------	20.99
GLOOM	------	**37.99**	**37.99**
G Gooch-Second Innings	24.99	------	------
G Gooch-Test Match Special	37.99	------	------
G Gooch-World Class Cricket	22.99	------	------
G Gooch - 94/95 Data Disk	14.99	------	------
G Gooch - Battle for the Ashes	14.99	------	------
G Taylors Soccer Challenge	20.99	------	------
GROLIERS ENCYCLOPEDIA	------	------	**42.99**
Grand Prix Circuit	20.99	------	------
Guardian	------	21.99	21.99
Gunboat	23.99	------	------
Gunship	23.99	------	------
GUNSHIP 2000	**26.99**	------	------
Hanna Barbera Animation	53.99	------	------
Hardball	20.99	------	------
Hard Drivin II	20.99	------	------
Hard Nova	20.99	------	------
Head over Heels	16.99	------	------
Heart of China	26.99	------	------
Heimdall	20.99	------	------
Heimdall 2	42.99	42.99	19.99
HIGH SEAS TRADER	------	**42.99**	------
History Line 1914-18	42.99	------	------
Hook	20.99	------	------
Hoyles Book of Games 1 or 2 or 3	23.99	------	------
Hudson Hawk	16.99	------	------
Humans 1& 2	------	------	37.99
Immortal	23.99	------	------
Impossible Mission 2025	42.99	45.99	42.99
Indy Jones - Atlantis Adv	26.99	------	------
Indianapolis 500	23.99	------	------
Intelligent Strategy Games	37.99	------	------
Ishar 3	42.99	48.99	------
Ishar Trilogy	32.99	------	------
IT's International Cricket	35.99	------	------
Ivanhoe	16.99	------	------
James Pond 3	------	------	20.99
J Nicklaus Greatest 18	16.99	------	------
Jaguar XJ220	20.99	------	------
Jetstrike	34.99	37.99	37.99
Jimmy White's Snooker	26.99	------	------
John Madden Football	23.99	------	------
Jungle Strike	34.99	34.99	34.99
KGB	26.99	------	------
Kick Off 3 European Challenge	32.99	37.99	------
Kid Chaos	34.99	37.99	------
Kingpin	23.99	26.99	26.99
Kings Quest 1, 2, 3, 4 or 5	26.99	------	------
Kings Quest 6	42.99	------	------
Knights Of The Sky	23.99	------	------
Last Ninja 2	16.99	------	------
Leading Lap	37.99	37.99	------
Legacy of Sorasil	18.99	------	------
Legends of Valour	26.99	------	------
Leisure Suit Larry 1 or 2 or 3	26.99	------	------
Lemmings 1	------	------	37.99
LEMMINGS 3	**37.99**	**37.99**	------
Lethal Weapon	20.99	------	------
Links -The Challenge	26.99	------	------
Lion King	------	37.99	------
Lombard RAC Rally	16.99	------	------
Loom	26.99	------	------
Lords of the Realm	42.99	42.99	------
LOST EDEN	------	------	**42.99**
Lotus Trilogy	------	------	21.99
Lure Of The Temptress	26.99	------	------
M1 Tank Platoon	26.99	------	------
Manhunter "New York"	26.99	------	------
Manhunter "San Francisco"	26.99	------	------
Man Utd - The Double	37.99	------	------
Marvens Marvellous Adv	------	37.99	25.99
Master Axe	37.99	37.99	37.99
Match Day Manager	20.99	------	------
Mean 18	20.99	------	------
Megarace	------	------	42.99
Megatraveller 1 or 2	26.99	------	------
Messengers Of Doom	37.99	------	------
MICROPROSE GOLF	**26.99**	------	------
Micro Machines	34.99	------	------
Midwinter	23.99	------	------
Midwinter 2	26.99	------	------
MIG 29 Fulcrum	23.99	------	------
Mighty Max	34.99	------	------
Military Masterpieces	37.99	------	------
Mini Office	62.99	------	------
MONKEY ISLAND 1 OR 2	**26.99**	------	------
Moonbase	61.99	------	------
Morph	34.99	37.99	12.99
MORTAL KOMBAT 1 OR 2	**37.99**	------	------
Mr. Blobby	28.99	------	28.99
Mr. Nutz	34.99	------	------
Mutant League Hockey	34.99	------	------
Napoleonics	26.99	------	------
Navy Moves	16.99	------	------
New Zealand Story	16.99	------	------
NHL Hockey 95	50.99	------	50.99
Nigel Mansells W/Champ	20.99	------	37.99
Nightbreed	16.99	------	------
Night Shift	23.99	------	------
One Day Cricket	20.99	------	------
On The Ball-World Cup Edition	21.99	21.99	------
On The Ball-League Edition	37.99	42.99	------
Operation Harrier	20.99	------	------
Operation Stealth	24.99	------	------
Oriental Games	20.99	------	------
Overdrive	20.99	------	------
OVERLORD	**42.99**	------	------
Pang	16.99	------	------
Patrician	26.99	------	------
Parasol Stars	20.99	------	------
PEN PAL(WORDPROCESSOR)	**45.99**	------	------
PGA European Tour	34.99	34.99	24.99
PGA Tour Golf	26.99	------	------
Pictionary	16.99	------	------
Pinball Dreams & Fantasies	42.99	------	------
Pinball Fantasies	------	37.99	45.99
Pinball Illusions	------	37.99	37.99
Pinball Magic	16.99	------	------
PINBALL MANIA	------	**37.99**	------
Pirates	23.99	------	------
Pirates Gold	------	------	42.99
Pitfighter	16.99	------	------
Player Manager 2	28.99	------	------
Police Quest 1 or 2 or 3	26.99	------	------
Populous & Promised Lands	26.99	------	------
POPULOUS 2	**26.99**	------	------
Powerdrive	37.99	37.99	37.99
Powerhouse	42.99	42.99	------
Powermonger & D/Disk	26.99	------	------
Predator	16.99	------	------
Premiere	------	------	14.99
Premier Manager 3	34.99	34.99	------
Prem Man Multi Edit Sys	23.99	------	------
Prime Mover	23.99	------	------
Prince Of Persia	16.99	------	------
Project X	23.99	------	------
Pro Tennis Tour	16.99	------	------
Pushover	20.99	------	------
Pussies Galore	------	32.99	32.99
Putty	20.99	------	------
Putty Squad	------	37.99	37.99
Puzznic	16.99	------	------
Qwak	21.99	------	------
Quest For Glory 1 or 2	26.99	------	------
Railroad Tycoon	26.99	------	------
Rainbow Islands	16.99	------	------
Rambo 3	16.99	------	------
RBI Baseball 2	16.99	------	------
Reach For The Skies	26.99	------	------
Realms	23.99	------	------
RED BARON	**26.99**	------	------
Red Heat	16.99	------	------
Rise Of The Robots	24.99	50.99	------
Risky Woods	23.99	------	------
Roadkill	------	21.99	21.99
Road Rash	23.99	------	------
Robocop 2	16.99	------	------
Robocop 3	23.99	------	------
Robinson's Requiem..(A500+)	42.99	42.99	42.99
Rome AD92	26.99	------	------
Rugby League Coach	37.99	------	------
Rules Of Engagement 2	42.99	------	------
Ruff n Tumble	34.99	------	------
Ruffian	28.99	------	------
Run the Gauntlet	16.99	------	------
Sabre Team (Enhanced)	------	------	39.99
SCI (Chase HQ 2)	16.99	------	------
SENSIBLE GOLF	**37.99**	------	------
SENSIBLE WORLD OF SOCCER	**37.99**	------	------
Sensible Soccer International	28.99	------	------
Settlers	37.99	------	------
Shadow Warriors	16.99	------	------
Shadowlands	20.99	------	------
Shaq Fu	34.99	------	------
Shuttle - S/Flight Sim	26.99	------	------
Sierra Soccer	32.99	------	------
Silent Service 2	26.99	------	------
Sim City 2000	------	39.99	------
Sim Classics (Ant/Life/City)	42.99	------	------
Sim Life	23.99	42.99	------
Simon The Sorceror	29.99	29.99	29.99
SIMON THE SORCEROR 2	**42.99**	**48.99**	**48.99**
Simpsons	20.99	------	------
Sink or Swim	20.99	------	------
Skeleton Krew	------	42.99	24.99
Skidmarks	26.99	------	------
SKIDMARKS UPGRADE	**26.99**	------	------
SKIDMARKS 2	**37.99**	------	**37.99**
Skitchin	34.99	34.99	34.99
Sleepwalker	20.99	------	24.99
Sly Spy	16.99	------	------
Soccer Kid	21.99	21.99	24.99
Soccer Team Manager	23.99	------	------
Space Academy	37.99	------	34.99
Space Crusade	20.99	------	------
Space Quest 1 or 2 or 3 or 4	26.99	------	------
Speedball 2	20.99	------	26.99
Speris Legacy	37.99	------	37.99
Spherical Worlds	34.99	------	34.99
Sports Challenge	26.99	------	------
Stardust Special Edition	21.99	------	------
Star Crusader	37.99	37.99	------
Starlord	45.99	------	------
Street Fighter 2	26.99	------	------
Strike Fleet	23.99	------	------
STRIP POT	------	------	**37.99**
Stun Runner	16.99	------	------
Stunt Car Racer	16.99	------	------
Subversion	20.99	------	------
SUBWAR 2050	------	**26.99**	**42.99**
Super Hang On	16.99	------	------
Super Space Invaders	20.99	------	------
Super League Manager	37.99	37.99	37.99
Super Loopz	------	21.99	21.99
Super Methane Brothers	20.99	------	20.99
SUPER STARDUST	------	**37.99**	**37.99**
Super Streetfighter 2	39.99	39.99	39.99
Superfrog	------	------	26.99
Superskidmarks	37.99	------	37.99
Supremacy	23.99	------	------
Syndicate	26.99	------	42.99
Tact Man - English or Scots	37.99	------	------
TACTICAL MANAGER 2	**37.99**	------	------
Team Yankee	26.99	------	------
Test Drive 2	16.99	------	------
Test Match Cricket	21.99	------	------
Terminator 2	16.99	------	------
Tetris	32.99	------	------
T.F.X	------	48.99	------
The Big 6 - Dizzy	------	------	26.99
The Blue & The Grey	42.99	------	------
The Clue	------	37.99	29.99
The Greatest - Compilation	40.99	------	------
The Publisher	42.99	------	------
Their Finest Hour	26.99	------	------
Their Finest Missions	21.99	------	------
THEME PARK	**42.99**	**42.99**	**42.99**
Tiny Troops	42.99	------	37.99
Toki	20.99	------	------
Top Gear 2	34.99	34.99	37.99
Total Recall	16.99	------	------
TOWER ASSAULT	**28.99**	**28.99**	**37.99**
Tower of Souls	------	37.99	------
Trivial Pursuit	16.99	------	------
Turbo Trax	37.99	------	------
Turning Points	26.99	------	------
U.F.O	42.99	45.99	42.99
Ultimate Body Blows	------	------	37.99
Ultimate Golf	20.99	------	------
Ultimate Soccer Manager	37.99	37.99	------
Universe	42.99	------	17.99
Untouchables	16.99	------	------
Valhalla - Before the War	42.99	------	------
Valhalla - Lord Of Infinity	37.99	------	------
Voyages Of Discovery	28.99	------	------
Virocop	34.99	34.99	------
VIRTUAL KARTING	**37.99**	------	------
Vital Light	37.99	------	37.99
Wembley Rugby League	17.99	------	------
Wembley International Soccer	------	17.99	17.99
Wheel Spin	------	------	37.99
Wild Cup Soccer	34.99	34.99	20.99
Wing Commander	26.99	------	------
Winter Gold	26.99	------	------
Wizkid	23.99	------	------
World Class Leaderboard	23.99	------	------
World Class Rugby 95	22.99	------	------
World Cup USA '94	34.99	------	------
WORLD CUP YEAR '94	**37.99**	------	------
World of Football	37.99	------	------
World of Golf	34.99	------	------
Worlds at War	16.99	------	------
Worlds of Legend	26.99	------	------
WORLD CUP GOLF	------	------	**37.99**
Worms	34.99	------	37.99
Wreckers	37.99	------	------
WWF 1 or 2	20.99	------	------
X-IT - Zonked	37.99	------	------
Z-Out	16.99	------	------
Zak McKraken	23.99	------	------

SPECIAL OFFERS

Alfred Chicken	------	------	19.99
American Heritage Encyclopedia	------	------	24.99
BattleToads	------	------	29.99
Beavers	------	------	29.99
Body Blows	26.99	26.99	------
Chaos Engine	21.99	------	29.99
Clockwiser	------	------	29.99
Cool World	20.99	------	------
Dennis	------	------	29.99
Disposable Hero	18.99	------	------
Fly Harder	------	------	29.99
Garden Fax - Fruit & Veg	------	------	29.99
Garden Fax - Garden Plants	------	------	29.99
Garden Fax - Indoor Plants	------	------	29.99
Garden Fax - Trees & Shrubs	------	------	29.99
Humans 1+2	------	------	29.99
Jack Nicklaus Unlimited	26.99	------	------
J Nicklaus Designer Clip Art	18.99	------	------
James Pond 2 - RoboCod	------	------	29.99
K240	18.99	------	------
Last Ninja 3	------	------	24.99
Legacy of Sorasil	18.99	------	------
Mean Arenas	------	------	29.99
MICROPROSE GOLF	**26.99**	------	------
Myth	------	------	29.99
Naughty Ones	------	------	29.99
Out to Lunch	------	------	29.99
Powergames	------	------	29.99
Sabre Team	------	------	29.99
Sensible Soccer 92/93	26.99	------	29.99
Sensible Soccer International	------	------	29.99
Shadowfighter	21.99	21.99	21.99
SYNDICATE	**26.99**	------	------
TORNADO	**21.99**	**21.99**	------
Total Carnage	------	------	24.99
Zool	20.99	------	20.99
Zool 2	20.99	------	20.99

EDUCATIONAL

10/10 Dinosaurs (All Ages)	35.99	------	------
10/10 Driving Test (Learners)	35.99	------	------
10/10 Early Essentials (3-7)	35.99	------	------
10/10 English (6-16)	35.99	------	------
10/10 Essential Maths (5-12)	35.99	------	------
10/10 German (8-16)	35.99	------	------
10/10 French (8-16)	35.99	------	------
10/10 Junior Essentials (5-11)	35.99	------	------
10/10 Maths Algebra (6-16)	35.99	------	------
10/10 Maths Numbers (6-16)	35.99	------	------
10/10 Maths Statistics (6-16)	35.99	------	------
10/10 Structured Spelling (-9)	35.99	------	------
Better Spelling (8-10)	28.99	------	------
Better Maths (12-16)	28.99	------	------
Cave Maze (8-12)	23.99	------	------
Count and Add (3-5)	20.99	------	------
Fraction Goblins (8-13)	23.99	------	------
F School 2 (-6) or (6-8) or (8+)	16.99	------	------
F School Maths (7-11)	34.99	------	------
F School Paint & Create (5+)	34.99	------	------
F School Spelling Fair (7-13)	34.99	------	------
Grolliers Encyclopedia	------	------	42.99
Insight Dinosaurs	------	------	29.99
Junior Typist (5-10)	23.99	------	------
Kid Pix	23.99	------	------
Magic Maths (4-5)	28.99	------	------
Maths Dragons (6-13)	23.99	------	------
Maths Mania (8-12)	28.99	------	------
Mix and Match (3-5)	20.99	------	------
Noddy's P/Time or Big Adv (3+)	32.99	------	------
Picture Fractions (7-10)	23.99	------	------
Reasoning With Trolls (5-12)	23.99	------	------
Tidy The House (6-10)	23.99	------	------

JUNIOR ADVENTURES

Robin Hood (8+)	28.99	------	------
Scrooge - Xmas Carol (8+)	28.99	------	------
Spellbound (7-16)	20.99	------	------
The Three Bears (5-10)	28.99	------	------
Wind In The Willows (6+)	28.99	------	------
Wizard Of Oz	28.99	------	------

JOYSTICKS & ACCESSORIES

4 Player Joystick Adapter	13.99
Analog Joystick Adaptor	13.99
Automatic Joystick/Mouse Splitter	29.99
Cheetah 125+	18.99
Cheetah Bug	24.99
Competition Pro Joypad for CD32	28.99
Freewheel Steering Wheel	45.99
Gravis Adv Switch Joystick	42.99
Gravis Gamepad	31.99
Mouse	23.99
Joystick Extension Cable	16.99
Joystick Y Splitter	13.99
Logic 3 Quatro GT Autofire JT155	23.99
Logic 3 Quatro JT154	20.99
Quickjoy Hyperpad	20.99
Quickjoy Jetfighter	24.99
Quickjoy Pedals	28.99
Quickjoy Topstar	34.99
Quickjoy II Turbo	23.99
Saitek Megagrip 2 Autofire MX220	23.99
Screenbeat 3 Speakers SB203	26.99
Screenbeat 4 Speakers SB204	24.99
Screenbeat 5 Speakers SB205	24.99
Screenbeat Pro 50 Speakers SB250	57.99
Screenbeat RCA Adapter Cable	8.99
Screenbeat Power Supply	18.99
Suncom Slik Stick	**15.99**
Suncom Tac 2	18.99
Wico Q Stick	13.99

PD & SHAREWARE

BUSINESS

B001 A-Gene (1 meg)	2.25
B002 Business Card Maker	2.25
B003 Database Master	2.25
B004 Ami Cash	2.25
B005 Amibase Prof	2.25
B006 600 Business Letters	2.25
B007 Text Engine	2.25
B008 PC Task	2.25
B011 A-Gragh	2.25
B013 Analytic ALC	4.50
B015 Stock Analyst	2.25
B016 Little Office	2.25
B017 Budgets V1.34	2.25

EDUCATIONAL

E002 The Bible (4 Disks)	8.99
E003 World Databank	2.25
E004 GCSE Maths	2.25
E006 Total Concepts	2.25
E007 Bank Talk	2.25
E008 Dunks DTP	2.25
E009 Colour The Alphabet	2.25
E010 The Highway Code	2.25
E011 Junior Maths	2.25
E012 Electronic Train Set (1 MEG)	2.25
E013 Learn & PLay 1	2.25
E014 Learn & Play 2	2.25
E015 Treasure Hunt	2.25
E016 Wraithed One	2.25
E017 Story Land 2	2.25
E018 Wotitsname	2.25

CREATIVE

C002 Label Designer	2.25
C003 Super Fonts	2.25
C005 Deluxe Paint Tutor	2.25
C006 Shadow Demo Maker	2.25
C007 Clip Art	2.25
C009 Illinois Labels	2.25
C011 Word Power	2.25
C012 Font Farm	2.25
C013 Wine Maker	2.25
C014 Assassins	2.25
C016 Garden Designer	2.25
C017 X Beat	2.25

UTILITIES

U003 The Workshop	2.25
U006 Address Book	2.25
U008 Asteroid	2.25
U010 Autograph	2.25
U013 The Right Way	2.25
U014 Panasonic Printer Driver	2.25
U015 H.P. Printer Driver	2.25
U016 Seikosha Printer Driver	2.25
U017 Cannon & Citizen Printer Driver	2.25
U020 Bad Format	2.25
U021 Amiga Beginers Guilde	2.25
U022 Better Bench V1.2	2.25
U023 De-grader 500 600 1200	2.25
U024 Extermin-8 Virus Killer	2.25
U027 Fake Memory for a 1200	2.25
U028 Action Replay For The 600	2.25
U029 Amiga Tutorial	2.25
U030 A.C.E.S Database	2.25
U035 Text Plus v4.00	2.25
U037 Ultimate Cheats And Solutions	2.25
U038 Number Pad For 600	2.25
U039 Calorie Base	2.25
U040 J R Comm	2.25
U041 Race Raptor	2.25
U042 Pools Pools V2	2.25
U043 Training Log	2.25
U044 Mastie Niblick	2.25
U045 D-Solve	2.25
U046 Lockpic v2.0	2.25
U047 Relo Kick v1.4	2.25
U048 Procad Electroid	2.25
U049 Dividends Winner	2.25
U052 Essential Virus Killer	2.25
U053 Soccer League	2.25

DEMOS & RAVE

D001 Night Breed	2.25
D002 Iron Maiden Slideshow	2.25
D003 Good Morning Veltnam	2.25
D004 Creep Show	2.25
D005 Fracion Horror Show	2.25
D006 Total Recall Slideshow	2.25
D007 Evil Dead (1 meg)	2.25
D008 Batman Cartoon	2.25
D009 Robocop	2.25
D010 Viz Slideshow	2.25
D011 Not The 9 Oclock News	2.25
D012 Raider Of The Lost Ark	2.25
D013 Predator Demo	2.25

Gloom

Reviewed by Andy Maddock

GRAPHICS 85%

SOUND 80%

GAMEPLAY 84%

OVERALL 81%

PUBLISHER
Guildhall Leisure

DEVELOPER
In-house

PRICE
£29.99

DISKS
2

HD INSTALL
Yes

SUPPORTS
A1200

From the title and the screenshots, I can guess what all you readers are expecting. It looks like Doom and sounds like Doom, but more importantly, does it play like Doom?

There's no escaping the fact that the 'in' game at the moment is Doom... on the PC. Everyone seems to want to make a close version of it on the Amiga – it's rumoured there are many more to come.

Some people believe Doom on the Amiga is just not possible, and I agree with them. Others believe or hope to believe that Doom will grace their Amiga screens soon. I feel it will never be reproduced on the Amiga because of the technical differences between the PC and the Amiga. However, if Escom do produce a PC that's Amiga based then I'll have to believe it when I see it. Until then, I won't be holding my breath.

Gloom is basically a 3D shoot-'em-up that contains the most violence ever witnessed. There is an option to switch it to either meaty or messy. If messy is selected, as soon as you fire a bullet at one of the opposing soldiers they will burst into little bits and leave an awful mess on the floor which you will have to walk through. You can imagine after shooting quite a few soldiers that the floor won't remain in its shiny, polished state.

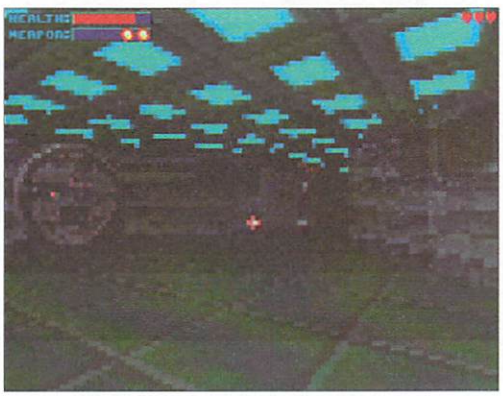
You are basically thrown into a futuristic Space Hulk maze which looks remarkably like the scenery used in the film Aliens, and the idea is to get out – alive. This is not such an easy task because there are literally hundreds of foot soldiers and bare chested madmen to plough through. These and huge robots will stand in your way, firing bullets ten times the power of your own.

Throughout the game bonuses are available

Doom and Gloom

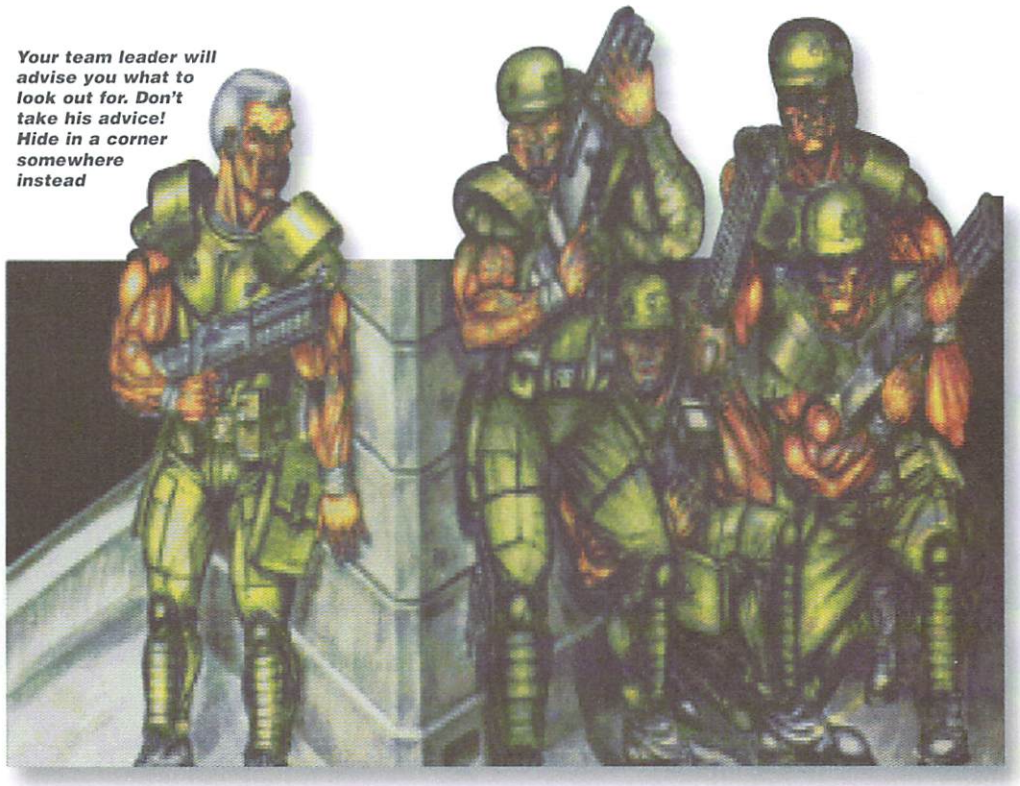
Other games following this genre are Alien Breed 3D, Fears, Behind the Iron Gate, and more recently Citadel from the Polish team Arrakis Software – previewed in this issue. Gloom has a fair amount of competition to get through and each one is looking excellent. Can Doom finally be reproduced on the Amiga? From what we've seen of these efforts already, it's getting there. I'm beginning to change my mind completely.

These two human players are staring straight at each other. However, one of them is invisible



The graphics do appear very blocky here, although, thankfully, the screen resolution can be changed

Reducing the size of the window speeds up the game immensely



Your team leader will advise you what to look out for. Don't take his advice! Hide in a corner somewhere instead

> ‘as soon as you fire a bullet at one of the opposing soldiers they will burst into **little bits** and leave an awful mess on the floor’

for collection which can affect your health and firing power. A huge gun with a full weapon boost is essential for disposing the bigger robots.

There are plenty of options to choose from before you begin the game, including a two-player split screen where you can chase your opponent around a sealed maze with only yourself and a gun. You can also play Gloom through a serial link connecting two Amiga's together, so you can both play using a full screen.

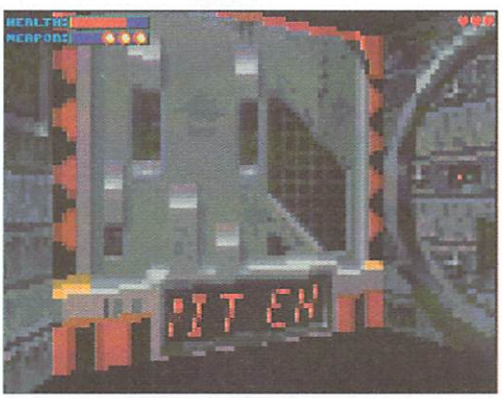
The Amiga 1200 has, in the past, been able to churn out some quite speedy graphics, although something has to be sacrificed for this. For more speed, the variety or amount of sprites usually deteriorates immensely. In Gloom's case, the variety of sprites is lacking and during the later levels the amount of sprites does affect the speed.

There are three main locations and in these there are some sub-missions where you have to reach the exit. There are no real missions such as rescuing colleagues which is a shame because it gives the game a plot and a storyline, which Gloom unfortunately hasn't got.

As said before, the level of violence is quite high. After shooting someone with a bullet they won't be content with falling to the floor and disappearing, but throw themselves violently into the air while spreading their various organs over the wall. On occasions I have noticed that if you get too close to an exploding body, it will squirt spots of blood on to your own face. By the end of a particularly nasty level you will find that your face will be covered in blood, partially covering the action.

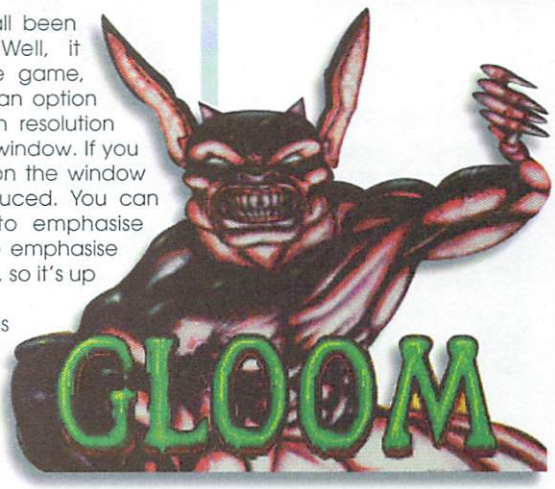
Now, the bit that you've all been waiting for – the speed. Well, it depends you see. During the game, pressing escape will bring up an option for you to change the screen resolution and size of the actual playing window. If you choose a high screen resolution the window size will automatically be reduced. You can play with a small window to emphasise speed, or with a full screen to emphasise the action. They both work well, so it's up to you.

The actual character sprites do appear very blocky when you get reasonably close – although to increase the speed, the floor and ceiling graphics can be switched off.



You have to be very careful when attempting to open one of these doors. Lots of bare chested madmen will appear

The title screen sets the scene delicately. Are you ready to slice some bodies up and eat their remaining entrails? Not here



Final word

Although the whole idea of these games is to get on a par with Doom on the PC, as I've said before there's absolutely no way I am going to compare the two. There's no point in saying 'Ooh, it's rubbish, it looks nothing like Doom on the PC' because it's not supposed to. I'm not going to give it a low score because it doesn't match the PC version of Doom – I am going to mark it purely for Gloom itself, as a game. The graphics are the best yet for games of this genre. Gloom is completely packed with smooth graphics, a huge challenge and most of all, action and excitement. It's certainly the best attempt yet, although with other similar efforts only weeks from completion, only time will tell which one will rise above the rest.

GRAPHICS 50%

SOUND 48%

GAMEPLAY 80%

OVERALL 75%

PUBLISHER
US Gold

DEVELOPER
In-house

PRICE
TBA

DISKS
6

HD INSTALL
Yes

SUPPORTS
A1200

Following hot on the heels of all the hype surrounding the film, the latest addition to the Street Fighter titles is finally here for the Amiga. Called Super Street Fighter 2, it features four new players each with an additional setting. Now you will also find Cammy (played in the film by Kylie Minogue), Dee Jay, Fei Long and T Hawk, plus all the old familiar ones. They have also been improved with extra moves and new touches.

However, the first thing that strikes you when you load up the game is how dated it all looks. A few years ago this would have been quite acceptable but now after Mortal Kombat 2 and Shadow Fighter have passed, it does look its age. And a very amateur introductory animation is quite laughable. But the gameplay is what counts and this, fortunately, works well.

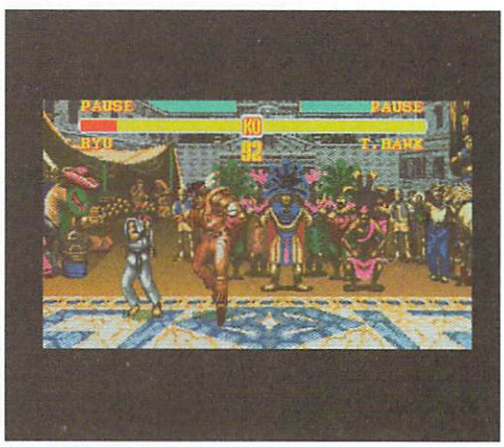
You can either play against the computer, choosing the level of difficulty, or a human opponent chosen from a number of characters. Each has their own set of special moves which are surprisingly easy to execute. The moves can be put together to perform a number of 'hit combos' and each character is different enough to provide varied gameplay. E Honda, for example, is a large character who relies on his bulk, whereas Cammy is small but agile and has lightening fast reactions.

Why did they leave this appalling intro in?

The game can also be dramatically altered by changing the speed you play at. The Turbo option can be turned up to high which speeds everything up – including the music – and means you have to think fast and move quickly to avoid the blows from other players.

What is particularly nice about this game is that it supports a joypad. This works a lot better than using the one-button joystick as you get a

You can pull off a satisfying range of moves



Black borders become irritating after a while

Move closer

Super Street Fighter allows you to put a very able combination of moves together. Each character has a good range of kicks, punches and special moves.

Dhalism – the stretchy limbs of Dhalism allows you to attack your opponent and keep out of their reach.

Blanka – uses electricity to keep his opponents at bay.

Chun Li – despite being one of the smaller fighters, this works to her advantage as she can move quicker than, say, Zangief.

E Honda – uses his sumo size to launch his powerful weight against his rivals.

Battle of the beat-em-ups

Super Street Fighter 2 as it stands is a good, playable title, but compare it to the likes of Mortal Kombat 2 with its bloodthirsty graphics or Shadow Fighter and it does start to look rather limp. Mortal Kombat 2 managed to create an authentic atmosphere and had some fantastic and original special moves.

Shadow Fighter was also a particularly rewarding and addictive game, with well-designed characters which looked very clear and detailed for this type of action.

The static backdrops fail to impress

Super Street Fighter 2

Reviewed by Tina Hackett

separate button for either a punch or kick. You can also use a two-button joystick on this same principle.

As I mentioned before, though, the graphics are very dated – such as the bland backdrops which don't do anything to create atmosphere. And what's worse is that they look flat and two-dimensional and there's been no attempt to make them interesting with the use of animation. Okay, so this may have slowed the game down but other games manage this successfully and it would certainly have made for a more polished looking title.

Another flaw is the size and detail of the characters themselves. I'm sure they've been intricately designed but they're just too small too see any detail or, sometimes, what is going on properly. Huge black borders around the screen don't help matters either and although you can change the screen mode from Pal 50 hertz to NTSC 60 hertz to speed things up and get rid of some of the blackness, it never disappears completely.

Music and sound effects don't really enhance the game either, with feeble death noises and dismal music. Oh, and some of the characters have some very strange verbal expressions when they launch an attack, such as 'Had-o-ken' or some other weird saying which does nothing to increase the competitive atmosphere. However, what really let the game down was the amount of disk swapping involved. Thankfully it is hard disk installable, otherwise it would be completely unplayable with a ridiculous six disks to access each time.

The many characters available keep things varied

Final word

After reading all this, it may sound like the game is a complete letdown. This isn't the case. Yes, it does have quite a few negative points but when it comes down to the gameplay it works extremely well – especially if you have a joypad. Two-player mode works particularly well too, and there's never a situation (unlike Rise of the Robots) where you can corner your opponent and bash them to death with the same tedious move.

An A500 version is also planned, although this won't support a joypad. We'll bring you an update on this in a future issue.

> 'SSF 2 does have a few negative points but when it comes down to gameplay it works extremely well – especially if you have a joypad'

hints & tips

Jungle Strike

Stuck in this strategic blast? Try these level codes:

Return home	N7RL7JK3BPY
River raid	TG3TGDBR9C9
Training ground	96PBLHZJF4L
San Puloso city	VHJ94MC7JLN
Sub attack	RSMKVSPGC7X
Mountains	7CR94SPGC7V
Snow fortress	WPYV4F3BRG3
Night strike	XMCRLGFDY6G
End screen	LJ96YRWT7Y6

Zool

Level select: type GOLDFISH on the title screen, then F1 to F6 while playing!

Chaos Engine

If you still can't get anywhere in this game you're a bit sad really, but that's what we're for, eh? These codes will sort you out:

World 2 with infinite money	GVVCH5DMS7#N
World 3 with infinite money	V35O76X6S7WH
World 4 with infinite money	6UCDXU25S7V2

ATR (CD32)

Annoyed because you can't play those later tracks (like Space and Alien Planet) in two-player mode? Fret no more! All you have to do is reach them on one-player mode, lose a race, enter your name as ATR, then you can select them in two-player mode. Wahey!

Terminator 2

This game too hard for you? Skip over those levels by pausing the game, pressing F1 to F10, fire, then Esc.

Impossible Mission 2025

Top game! Top codes!

Level 1	ETQFJXXD	Level 4	FYQQPXEF
	EXQEJXDC		GCQCRXWB
Level 2	FBQDDXRE		GGQKTXVF
	FFQCVXIA	Level 5	GKQJYXDI
	FJQCHXOM		GOQJFXBK
Level 3	FNQAYXHI		GSQFDXZA
	FRQYCXVL		
	FUQTBXQE		

Zeewolf

Level codes! What a surprise!

Shark Fishing	IMAGO
Pal in dome	TIBUROW
Twenty angry men	ARGUS
Mind the hippos	MARTEN
Brass Rumblings	SOCKIN
Red airing	GANNPAY

Pointless but true: type in FRAMPAGE on the password screen to fly an ever-so-slightly superior plane instead of the old 'copter.

Get-out clauses

Stuck on a particular game? Martin Shenton (our resident work experience lad) helps you out of your pit of despair

Top Gear 2

I've heard of annoyingly long and complicated level codes before, but this is ridiculous. It's bad enough for the gamesplayer, but I have to spend years checking them as well. AAAARGH!

	One Player (sigh..)	**Two players** (no, please, nooo)
Britain	)PN) +V$L PN13 47G%) 743HH	6$BJ #D1$ HMMW 34L%V NJH77
Canada	HLF6 8JHJ GBLV 23J+T MHG66	L+G3 LCBQ 38QT 12H$R LGF55
Egypt	)FB3 55#2 HNPB M3T5) 521FF	L2QB 59B2 N#91 C7N%T PLJ88
France	T65W 2B%Y $B4R M34DQ FB%11	%VRC GRF4 5BDD)67MY TPN((
Germany	HLF$ B2$R JNR$ 3M977 521FF	(CB5 PYLW QPP7 1QR$H D%+YY
Greece	GPLC GLG$ MQTN %4HFF C+$WW	273M $79M TB13 FFGMY D%+YY
India	WNJB FHY6 %34V G9PMM JFD44	4TN+ 3L%M GN67 LLMR4 JFD44
Ireland	51FS B#5L#FTR 8(RTT B$)VV	(TP% 4)8B 3DLB JT948 PLJ88
Italy	C1G+ C%DV G6 PC3Y3 JFD44	LBWP R1%# 1(L4 LH1GF#76MM
Japan	G9NF J22(P%RL $GM46 NJH77	(T94 6TC2 #2T(TBP(# 1VT%%
Scandinavia	J2F$ BMLQ CQ%J)FL35 MHG66	6Q83 563N ¢LSM #T7ML +(#RR
South America	CG#4 7F6D YBHC T#+52 NJH77	T572 4T19 B6#1 G7C21 MHG66
Spain	$C82 5Q1T (MV9 84#1V HDC33	95T2 4HY# LDSW D5%YW JFD44
Switzerland	%7VM Q$5Y 2NPV %2TFB 743HH	NWJR VC29 3+GF 6N3GF#76MM
USA	WQ%9)P6G HLM4 2QVYT GCB22	82NW 14HF QLQF 6N3GF#76MM

Alien Breed

Press CAPS LOCK on the player select screen and it's extra lives ahoy!

Alien Breed

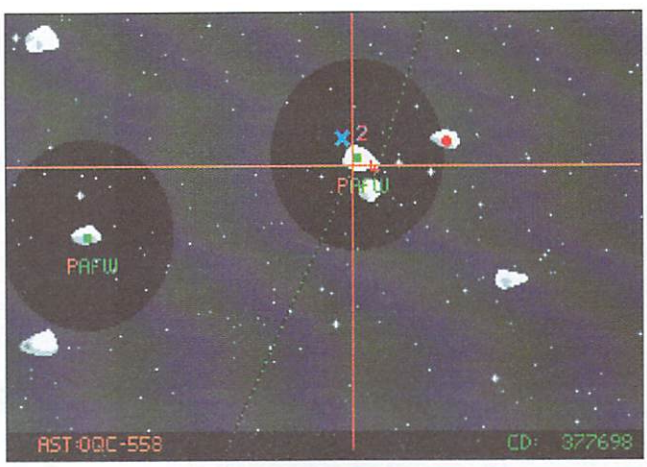
Let's face it – this game is hard. Don't panic:

Level 2	353828
Level 3	108383
Level 4	L370101
Level 5	982822
Level 6	847464
Level 7	737373
Level 8	928122
Level 9	267364
Level 10	193831
Level 11	090921
Level 12	309838
Level 13	101221
Level 14	103992
Level 15	998112
Level 16	125332
Level 17	091233

K240

Type these on the main view screen then press return;

ICBM	get four of every satellite and missile! Wow!
SKYSCRAPER	cuts down that construction time
LOADSADOSH	hmm...I wonder what this one does...
TELESCOPE	shows all the asteroids
LEMING	adds 50 to the population
ICEMAN	stops all the asteroids, literally!



Robocop 3

Hold down right shift and type THE DIDDY MEN in the game to become invincible. After this you can press Esc to skip to the next level.

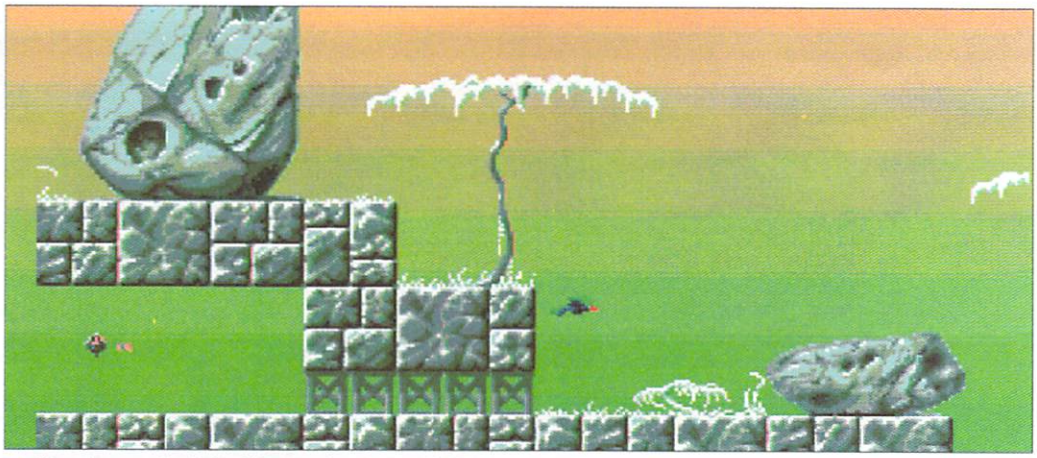
Beavers

When this cheeky little game begins, type BIGBIG-BIGB and you can skip levels by pressing F2.

Mr Blobby

Why Millennium thought they needed that fat pink blob of pure evil to promote this perfectly good game is beyond me, but here are the codes if you need them:

Level 1	BABE
Level 2	OOAH
Level 3	DAKD
Level 4	EMEA
Level 5	FLAF
Level 6	GGAK
Level 7	HAAJ
Level 8	BAJM
Level 9	DASL
Level 10	FTAN
Level 11	GOAS
Level 12	AAOB
Level 13	OOBI
Level 14	DBLD
Level 15	ENEB
Level 16	FMBF
Level 17	GGBL
Level 18	ALKB
Level 19	BBJN
Level 20	OKBQ
Level 21	DBTL
Level 22	EVMB
Level 23	GOBT
Level 24	AADO
Level 25	OOOJ
Level 26	DOMB
Level 27	EOEO
Level 28	FNOF
Level 29	HOHL
Level 30	BOJO
Level 31	DOUL
Level 32	EWMO
Level 33	GOOU
Level 34	HOPT
Level 35	AAED
Level 36	BDBH
Level 37	OODK
Level 38	FODFHDHM
Level 39	BDJP
Level 40	DDVL
Level 41	EXMD



They key on the left will come in very useful for opening doors, especially the ones that lead to crystals

Audiogenic are not especially known for their contributions to the platform genre, being more sports-like – especially with releases like Graham Gooch's Cricket and Wembley International Soccer, and soon to be Imran Kahn's Cricket all appearing, not to mention a number of other successful games.

Audiogenic are certainly not letting themselves slide down that pit where other companies have recently been disappearing to – although, one of their latest products, Bubble and Squeak 2, is on hold.

However, one title is certain to go ahead, and it goes by the name of Odyssey – a platform game which has quietly possessed many morphing capabilities. It's a side-on platform game which could deliver a different perspective to the already mountains of usual platformers out there. Let's see.

The idea behind Odyssey is to collect various crystals from several different islands to complete the game. On the way through, you'll encounter a number of creatures trying to prevent you from doing so. With a large number of perplexing puzzles that must be solved to access other areas, Odyssey is looking a lot like a puzzling platformer – like Delphine Software's Flashback.

During your quest you will encounter a number of various monsters such as vultures, and an army of small people armed with huge swords which you must overcome to collect the crystals and proceed further. You must fight them while losing as little energy as possible, although what makes Odyssey good to play is the fact that when you do lose a serious amount of energy, you don't have to trundle around over-cautiously. Instead, standing still for a good 10 seconds will get your breath back – replenishing your energy and helping you get past the tricky parts.

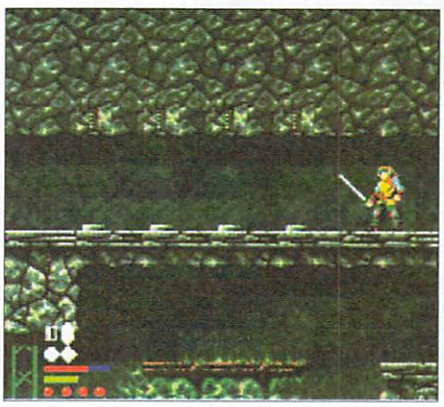
One of the hardest parts of Odyssey is negotiating the bigger rocks. You can take a swipe at them

Morphing mania

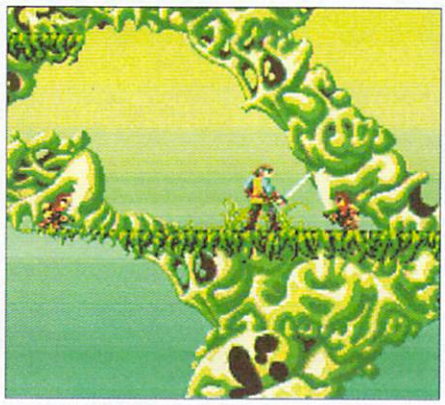
When you acquire the morphing power, it is possible to morph into a number of objects. For instance, you can morph into a rock to smash smaller rocks by falling from a great height and then rolling through tiny gaps. This is essential for reaching the keys which will open the doors to the crystals.

You can also morph into a bird and fly high above the lower platforms which you wouldn't be able to reach if you were using the hero without the special morphing powers. The last morph is a grasshopper, which obviously allows you to jump great distances to reach hidden platforms you normally wouldn't have seen.

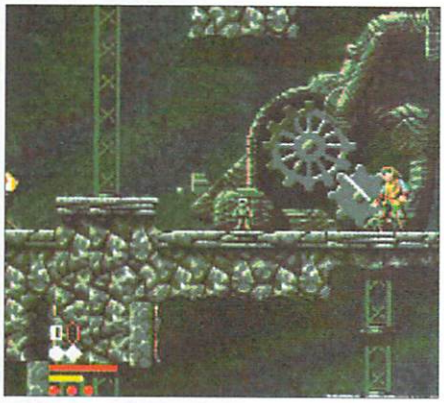
The morphing characteristic adds a lot to the originality of Odyssey, making it something different from the bog-standard type of platform game around today. The idea of using different characters to solve different puzzles adds a lot to the depth and challenge tremendously.



Pressing the buttons activates various traps and doors which must be negotiated



The small rock people will do their best to prevent you from collecting the crystal



Although, obviously, you can't hear them, the sound effects are very realistic indeed

The tunnel leads to the outside bit where you will encounter even more monsters

with your sword which will set them rolling, but you have to be careful because you may end up trapped behind it or it may block your path. These puzzles will no doubt have even the most experienced games player tearing their hair out.

What people may fail to realise, which I'd better explain, is the fact that Odyssey isn't just a game completed by running from left to right, killing monsters and picking up the crystals at the end. You have to negotiate all the puzzles which, believe me, are quite taxing. They involve moving rocks onto various buttons, directing shooting arrows towards pressure zones, and even morphing into different, smaller creatures to squeeze through tiny gaps which are only accessible to the smallest of insects.

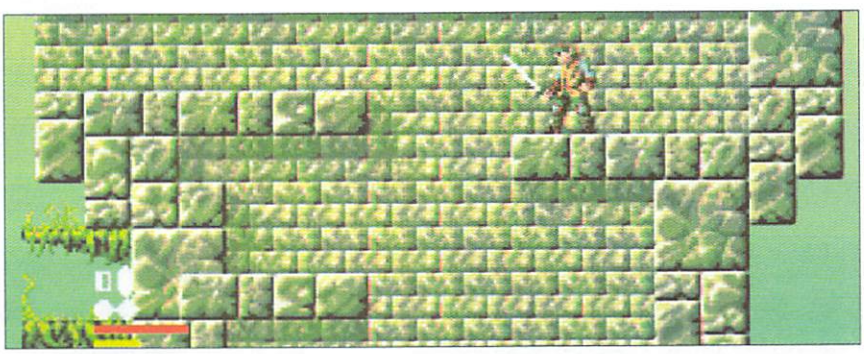
There are several large islands to battle through, accompanied by truly fantastic backdrops. At the beginning, when you select an island, a human hand appears as a pointer - using very impressive method animation with the dark black shadow, which makes it smoother than a baby's bottom. The morphing sequences are also animated in this way - proving what a graphical feast it will be when it finally hits the shops.

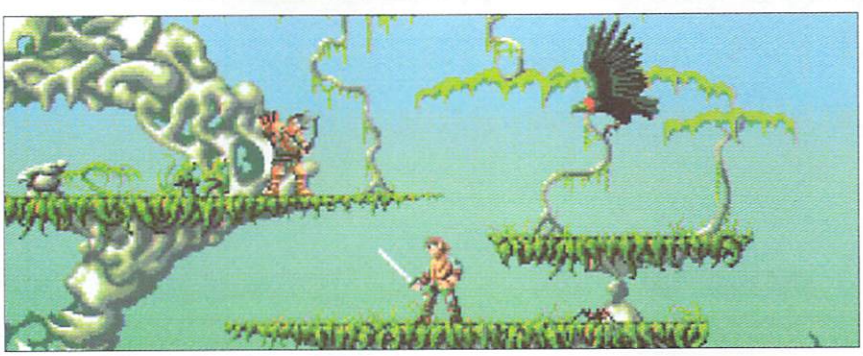
> ‘With a large number of **perplexing puzzles** that must be solved to **access other areas**, Odyssey is looking a lot like a puzzling platformer’

Odyssey

By Andy Maddock

The graphics and animation are both looking very good. Let's hope we see more of them in the finished version





There is a stiff amount of opposition out there ready to crush your high hopes

Final word

Overall, Odyssey is looking very complete, especially graphically and gameplay wise. The game is already running very smoothly, with no noticeable glitches standing in its way.

When it's finally released I can almost certainly see it being a huge success. Audiogenic may have latched themselves on to a winner. Keep an eye out for a full review very soon.

Kompart return to grace the Amiga screens once again. After many months of pure speculation, Turbo Trax has finally arrived - in Ferrari-like fashion too.

Kompart, responsible for the abundance of Amiga releases during these last few months, are adding to their already well-developed collection a challenger for the likes of Overdrive and Roadkill. These two weren't particularly successful compared to the likes of the late '80's Nitro. This was one of the few top-down racing games that packed pure challenge and action. The idea was to race against a series of opponents in various cars. A whole host of tracks were included making this one of the most pleasing and satisfying games of all time.

During the early '90s, Supercars was introduced on the Atari format, later making its way across to the Amiga. This was viewed top-down just like Nitro, but where Nitro failed in terms of variety, Supercars filled the spot almost too perfectly. Featuring an option to buy more cars and progress onto later tracks, Supercars' success was inevitable. What made Supercars incredibly popular was the fact it offered a different perspective. The idea of layered tracks was welcomed with open arms by games players everywhere.

After the recent releases of Roadkill and Overdrive, Turbo Trax is the latest top-down racing game. After being in the pre-production phase for months, will it finally pass its driving test?

There are three modes of play - Arcade, Time Trials, and Practice. The arcade mode is basically to beat five other computer opponents to cross the line first, picking up some cash to spend on your car to increase its handling and power. After you complete a race, you are given a number of items to buy to increase your car's capabilities. You can buy five types of engine, steering wheel, fuel and tyres. The better the component the more expensive it'll be.

In the arcade mode, the computer opponents are especially hard and the car in pole position always seems to be half way round the course before you've even turned the first corner. It'll take an enormous amount of practice to enable you to come first, or even second.

To slow you down, various obstacles are placed on the tracks - the oil is undoubtedly the worst. Having said that, it's not as frustrating as you can imagine. On most racing games, sliding on oil will send you careering into the crash barriers, almost certainly putting you out of contention for first place. However on Turbo Trax, the frustration factor is set just about right. If you do happen to be in an unavoidable position resulting in skidding over an oil leak, the worst that can happen is a simple 360 degree spin followed by a loss in speed. This enables the opponents to gain a little, but not so much that it ruins the entire race. The

Comparing cars

There have been a significant number of top-down racing games released recently, namely Roadkill, Overdrive and Micro Machines. In the past we have seen the likes of Super Sprint, Nitro and Indy Heat. Oh, alright, so Indy Heat wasn't specifically top-down but more of a mid-slanty top view that worked surprisingly well.

These are the only commercial releases I can think of. Most of the top-down racers emerge from Public Domain, and some of the decent PD racers include Moose Drive and Road To Hell.

GRAPHICS 81%

SOUND 77%

GAMEPLAY 89%

OVERALL 86%

PUBLISHER
Kompart

DEVELOPER
Arcane

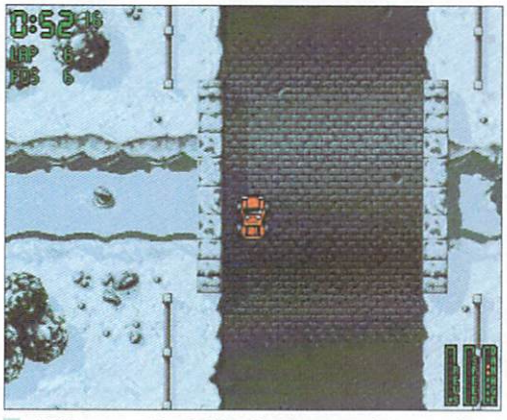
PRICE
29.99

DISKS
3

HD INSTALL
No

SUPPORTS
All Amigas

Don't forget to brake for the pedestrian crossing. Oh, and don't run any grannies over either!



Driving over the bridge in the snow. It's certainly not a wise idea to practice handbrake turns now!

The desert track is the perfect track for a bit of fun with plenty of dunes and jumps

Turbo Trax

Reviewed by Andy Maddock

> the car in pole position always seems to be half way round the course before you've even turned the first corner. It'll take an enormous amount of practice to enable you to come first, or even second

other mode of play is Practice, whereby you can select any course, any car, and can get to know each course, so when you come to take on the arcade mode you'll have an idea of the corners and where and when to brake etc. The last mode is Time Trials whereby you have to complete the lap in the fastest time which can then be saved to disk for future reference.

To help you in your quest for loads of cash and a decent reputation, there are all sorts of helping hands. You can pick up spanners which reduce your damage, money to give you something to enhance your car, and turbos which will give you that extra speed - maybe enough to carry you across the line in first place. There are three types ➤

Crossing the finish line in first place is probably the hardest task within Turbo Trax

You can purchase components to improve your car and achieve a better position in the next race

Gearbox problems

Every car I have known has had problems with it in one way or another. If it's not the gearbox, you'll probably have left your keys inside. It's funny the way all the problems seem to occur just after the two month warranty has expired. Oh well, thankfully none of these problems appear in Turbo Trax.

Although every car featured in Turbo Trax is extremely high powered, you wouldn't really expect the type of acceleration you are presented with. The gear changes are noticeable, unlike many other racers, and the pitch of the engine noise is also heard. Most games seem as if they are controlled in first gear all the time, and a high pitched roaring noise becomes extremely annoying.

However, the acceleration is lacking immensely. If you do happen to get hammered off the side of the track, the possibility of getting yourself going within seconds is very remote – as moving up to sixth gear seems to take a life time.

Although there is a variety of cars, there isn't any actual difference between them. For instance, you'd expect a formula one car to have a higher speed than an off-road truck.

You are also given a damage bar. This will inform you of how much damage your car has taken and how much it will take. If you happen to exceed this amount, you'll be thrusted back at the beginning again. You can damage your car in a number of ways, although trying to overtake is possibly the worst, so I suggest you try to avoid it – although not at pedestrian crossings. That always seems to inject a little excitement.

➤ of car which race on their own respective circuit. For instance, you won't find a Formula One tuned car racing on a dirt track. There are quite a few different styles of tracks, with around seven or eight mapped out differently. There are street, snow, dirt, and racing tracks which require various types of handling because of the conditions.

Before you take on a track, you can tune your car to suit the circuit. Obviously, if the next track to race is a slippery ice track, the idea is to spend money on handling and grip by purchasing the steering wheel and tyres. There is little point in purchasing a high-powered engine because you'll spend most of the time going far too fast and spinning out of control. You have to master the car-set-up screen before attempting a race or you will undoubtedly come nowhere.

The car sprites for top-down racing games are basically of a standard appearance. They are kept very simple because they have to be manipulated at every angle to make them smooth and fluent. Turbo Trax's sprites are simple, yet they work very effectively. There is no animation on the cars themselves because that would simply complicate the speed and definition.

The tracks and backgrounds are good, making it pleasurable to play as well as being easy on the eye. There are different kinds of scenery to add enough variety to keep you playing for a while. There is a street track which is mapped out with cones – these must be negotiated along with the other five cars to complete the track. As Turbo Trax runs quite fast, it is difficult to see which bends and corners will be coming up. Memorising them won't work either because there are simply far too many of them to attempt. When you begin the arcade mode, a random one will be picked as well.

The computer opponents don't really give you much chance of catching them, never mind beating them. It will take many weeks of practice until you are good enough to challenge for first place.

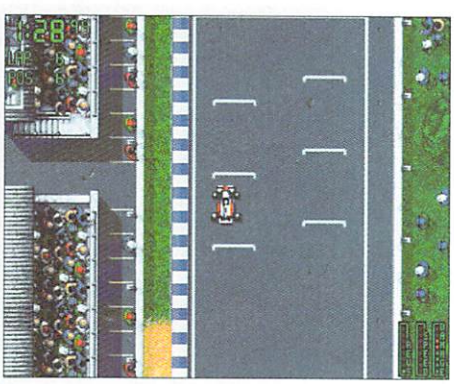
Finally, the sound effects are very realistic with engine noises and the screeching of brakes. These all add to the excitement and action – although, not that much.

Final word

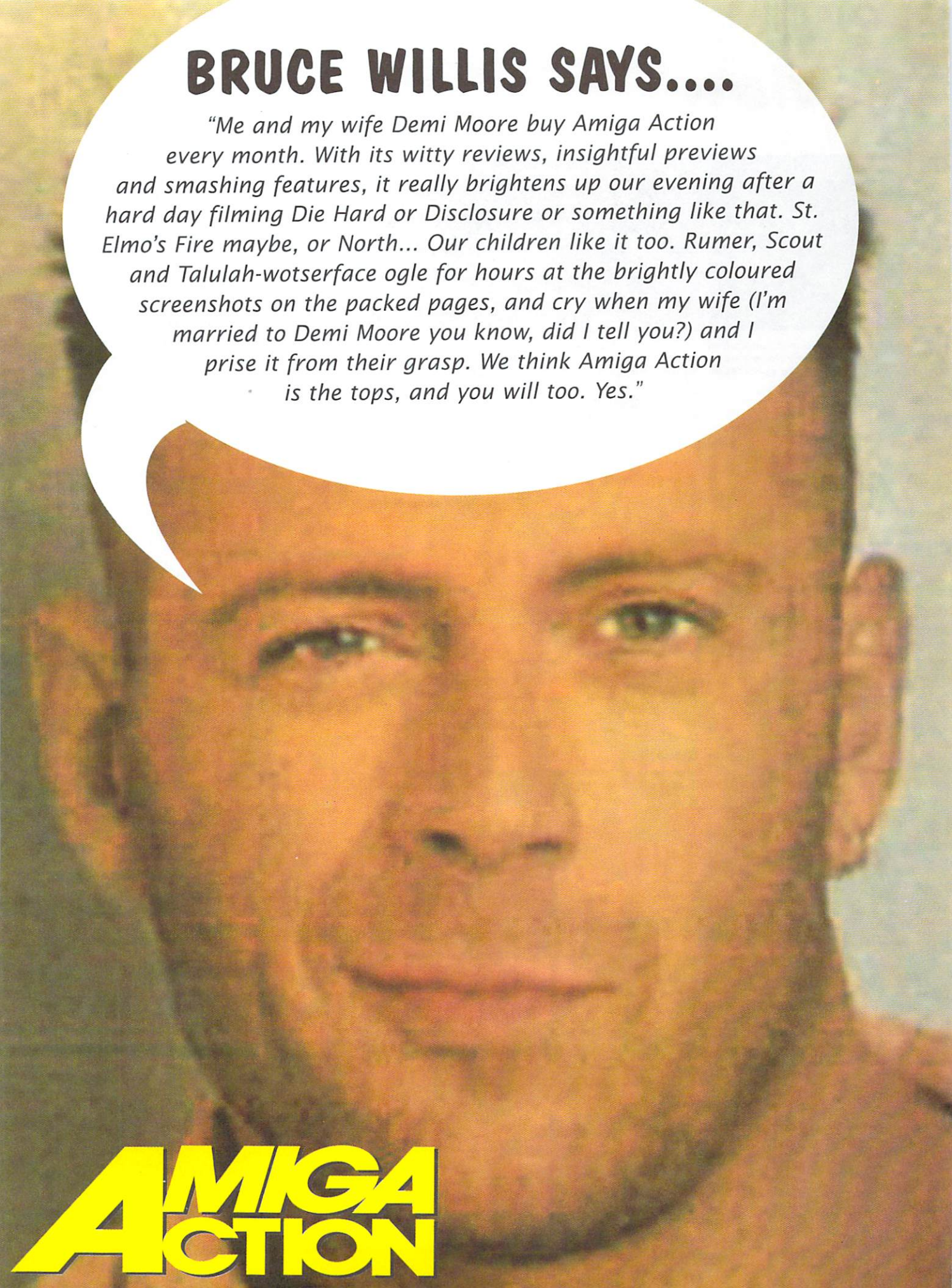
Overall, Turbo Trax is a fairly good game. It doesn't include anything special or mind-blowing, it's simply another top-down racing game – although the main point of the game is the fact it simply plays well and is quite enjoyable. The variety of tracks and cars gives it a longer lasting challenge as you have to adapt to each one. The graphics do their jobs adequately and it all adds up to a really playable game with many months of enjoyment.

Going over a turbo boost will give you that extra speed which is invaluable for keeping up with the rest of the pack

The starting grid is the best place to zoom into, at least, second place.



The Formula One set-up is far more involving than any other car/track combination


BRUCE WILLIS SAYS....
"Me and my wife Demi Moore buy Amiga Action every month. With its witty reviews, insightful previews and smashing features, it really brightens up our evening after a hard day filming Die Hard or Disclosure or something like that. St. Elmo's Fire maybe, or North... Our children like it too. Rumer, Scout and Talulah-wotserface ogle for hours at the brightly coloured screenshots on the packed pages, and cry when my wife (I'm married to Demi Moore you know, did I tell you?) and I prise it from their grasp. We think Amiga Action is the tops, and you will too. Yes."
AMIGA ACTION

Leading lap

By Andy Maddock

The polygon graphics that feature in the external views are looking quite spectacular

Since the success of Geoff Crammond's Formula One Grand Prix, Amiga owners have been crying out for a sequel. Unfortunately, it was announced it will only be developed exclusively for the PC. Now, a company willing to take on the challenge of creating a similar version are Kellion Software – a new company whose debut game is looking mightily impressive.

Leading Lap has been in development since December of last year. Almost 12 months have passed and hopefully they will have studied the competition and plan to try and attract the Christmas crowds as well as having the premium arcade racing game, stealing the crown from MicroProse.

You can see from the screenshots that Leading Lap looks like a jigsaw – put together by pieces of other racing games. Formula One Grand Prix, Hard Drivin' and Sega's arcade, Virtua Racing, all seem to make some kind of appearance, graphically.

However, the plot behind Leading Lap strays from these three. The idea is to race around many different European countries and gather enough points to top a league containing five other drivers. The drivers will have their own particular personalities and characteristics so obviously, there will be many budding computer-like Michael Schumachers out there.

There will be three areas to race around, namely the racing, country and city tracks, as well as three different cars – formula one, rally and endurance – and each one is graphically different from the previous.

The polygon graphics are looking particularly spectacular, and there is an option to change the detail from trees and bridges to large buildings.

> 'race around many different **European countries** and gather enough points to **top a league** containing five other drivers'

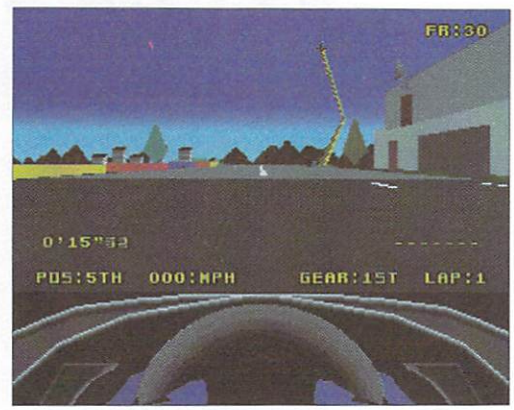
Final word

Another surprising aspect is the speed. It is probably one of the fastest games I have witnessed in this genre. Usually, to make a racing game fast the graphics are often sacrificed. Leading Lap contains high detailed background screens, while still managing to keep the speed at a realistic rate.

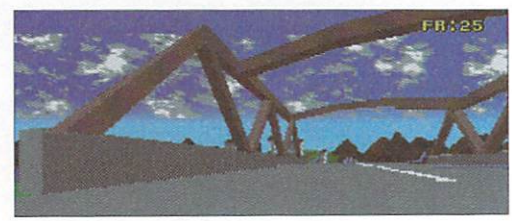
There are still a few tweaks that need to be made here and there, but so far, Kellion Software could present an offer that MicroProse Formula One Grand Prix fanatics just can't refuse.

You will also be able to set the angle at which the external view is observed. This enables you to change the view by the press of a button to see who is around you, whereas in Formula One Grand Prix, to see who is behind and in front you have to toggle the views awkwardly, and eventually you'd lose control of your own car. This option is present too, but it works far better.

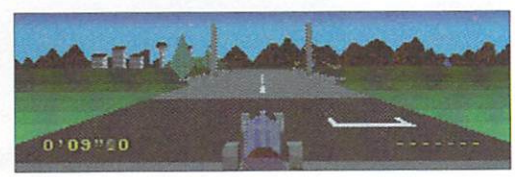
In Formula One Grand Prix, there are three different angles from which you can view the action. With Leading Lap there are more. You can view from inside the cockpit to anything up to a zoomed out view – much like Sega's arcade Virtua Racing. This particular arcade boasted all these angles and, surprisingly, Leading Lap is shaping up to look like a close Amiga version.



This is the view from inside the cockpit. As you can see, it's very similar to MicroProse F1GP



This screenshot proves what a graphical feast Leading Lap is going to be



The background scenery is looking quite varied with many trackside objects which hopefully won't slow the action down

Like other games of this nature, there will be a liberal splattering of blood and guts

The Citadel

Previewed by Tina Hackett

When finished the game will contain 20 levels, varying in difficulty and using different graphical scenarios. The final version will also have a 2Mb rendered intro and will have in-game and Game Over animations.

The pre-production demo we played had plenty of blood and gore to keep the more blood thirsty happy. It also looks like it will be quite successful in creating a mysterious atmosphere – something the other clones seem to lack so far. One thing we weren't too happy with at this stage was the way you got hurt when you bumped into walls – a fact which is inevitable when you play from this view.

> 'The pre-production demo we played had plenty of **blood and gore**, it also looks like it will be quite successful in creating a mysterious atmosphere'

The name is fairly new over here but Arrakis Software are a company who usually develop utility products for the Polish market. Their latest projects include a new editor like Final Writer, a database, and a spreadsheet with versions in Polish, English, Czech and German planned. But the reason for their inclusion in this section is because of their latest title which means a real change in direction for the Polish team. Called 'Citadel' it joins the latest in a long line of Doom clones for the Amiga. It's not the only game in the pipeline either. 'Diamonds Mine' is the next on the schedule with three more to follow – although details are sketchy at the moment.

Citadel, as previously mentioned, is a Doom-esque shoot-'em-up. Viewed from the usual first-person perspective, set in a 3D environment, you are armed with a gun and the mission is to shoot anything that moves.

A brief plot summary casts the player as the only surviving crew member on a mysterious planet and their mission is to destroy the Citadel. The Citadel is the army complex placed under the surface of the planet D104-GS12. When communications broke down, your crew – the X16, combative operation unit – was sent to see what had gone wrong. The rest of the crew have now been destroyed.

The main character of the cyborg is armed with six types of weapons, all of which are necessary to see off the different types of enemies. The hero can also get tired, become injured and even get drunk. As well as being able to blast the enemy, the player will encounter puzzles and traps such as moving walls and levers and buttons which need to be operated.

The recent problem that the developers of the Amiga Doom clones face is how to get the game running smoothly at quite a fast rate, but without reducing a lot of the detail. Most have overcome this by making their game configurable to suit the capabilities of different machines.

Similarly, Arrakis Software have also made this possible by making the game window a variety of different sizes and incorporating user-definable detail levels. So those with an A500 can still expect a fairly slick game as long as they play on a small window and without floors. Those with A1200s and above, on the other hand, can freely choose screen size and level of detail.

Expect a full review of Citadel soon. We'll also be bringing you a round-up of the best and rest of the Amiga Doom clones when we've seen all the contenders in what seems to be genre of the moment.

There are many different screen modes available and each alters the speed depending on machine

This is the smallest view available – a bit too small perhaps

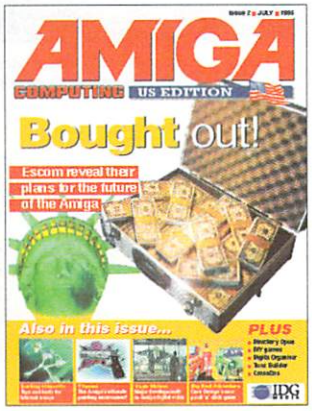
NEW LOW PRICES!

Best value Amiga magazine

Subscribe to the top value guide for your Amiga

AMIGA COMPUTING US EDITION

Subscribing is the only way to ensure your invaluable Amiga guide each and every month. Only **Amiga Computing** gives you **100 pages** of the latest news and reviews on what's hot and what's not. Find out all about Commodore's new owners and their plans for the Amiga. View the latest games International Golf, High Seas Trader, Tower of Souls and Virocop. Learn all about how to use the internet with your Amiga, multimedia applications, Lightwave updates and much, much more.



Priority Order Form

Please enrol me for the following subscription:

☐	9716	USA Gold 12 issues	$54
☐	9717	USA Gold 6 issues	$27
☐	9718	USA Standard 12 issues	$28
☐	9719	USA Standard 6 issues	$14
☐	9720	Canada Gold 12 issues	$59
☐	9721	Canada Gold 6 issues	$29
☐	9722	Canada Standard 12 issues	$33
☐	9723	Canada Gold 6 issues	$17

● **I wish to pay by:**

☐ Cheque (made payable to IDG Media)

☐ Credit Card (Visa/Access/Mastercard/Connect)

Card No ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ *Expiry Date* /

● **Please deliver my magazine to:**

Name (Mr/Mrs/Miss/Ms) _____

Address _____

_____

_____

Zip code _____

Send this form to: AMC Subs Dept, 460 Hillside Avenue, Hillside New Jersey 07205
This is not a Freepost address. Please put a stamp on your envelope

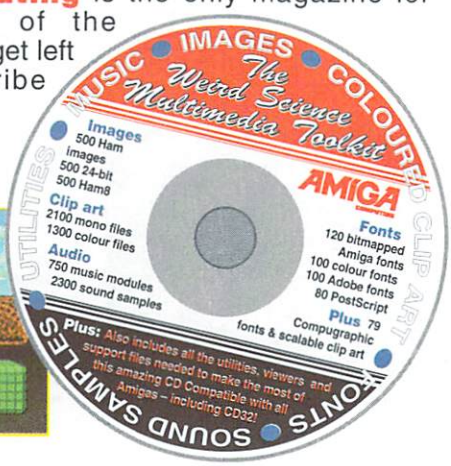
Your subscription will commence from the earliest possible issue.
All orders must be prepaid in U.S funds from a U.S. bank.

Now **Amiga Computing** go one step further to give you pure gold. As a gold subscriber you will receive your top quality magazine with not one, but two cover discs every month! Each disc is jammed full of exiting demos and complete products.

Only the best will do for the **Amiga Computing** cover disc, as the previous demos show. In recent months cover discs have included the following full products, Personnel Paint 4, Animation Workshop, Easy Amos, Speris Legacy plus Amiga utilities, stunning shareware and games galore!

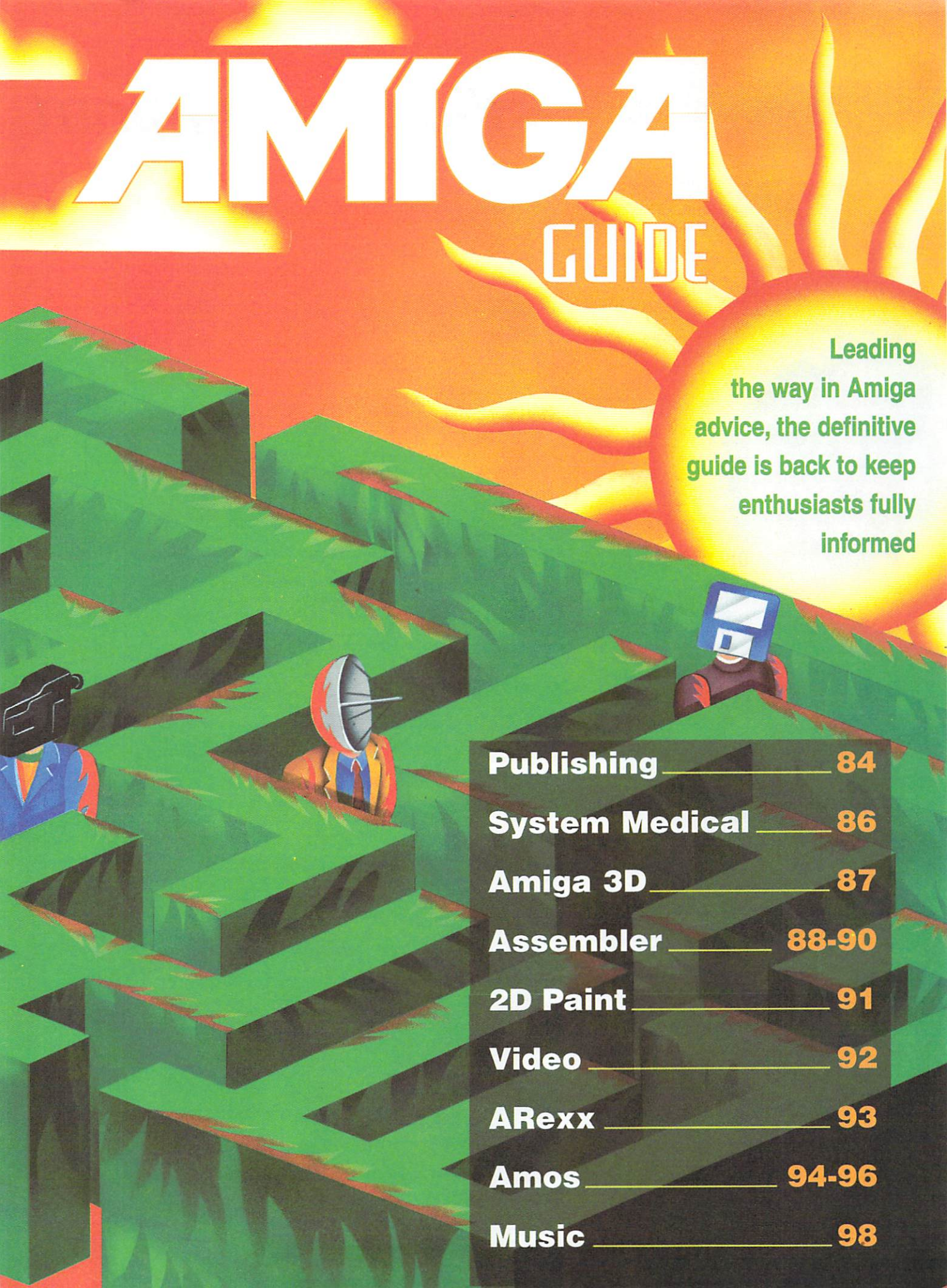
Plus as a Gold subscriber you will receive the complete CD ROM Weird Science's Multimedia Toolkit, as featured on May's cover disc, worth $24 absolutely **FREE!**
Improve your subscription by going for Gold.

Amiga Computing is the only magazine for serious users of the Amiga. So don't get left behind, subscribe today!



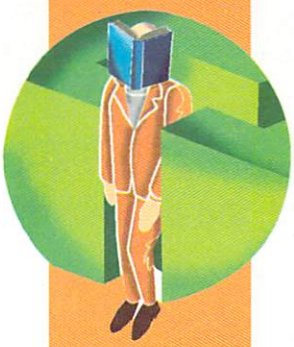
AMIGA GUIDE

Leading the way in Amiga advice, the definitive guide is back to keep enthusiasts fully informed



Publishing ____ 84
System Medical ____ 86
Amiga 3D ____ 87
Assembler ____ 88-90
2D Paint ____ 91
Video ____ 92
ARexx ____ 93
Amos ____ 94-96
Music ____ 98

Plug in and print



Frank Nord gets his mitts on the new plug in modules for PageStream 3

In with the latest update (3.0h) I received this morning, I got the four new add-ons for PageStream. They are: Gary's Effects, a Jpeg filter, a Wordworth filter, and a font engine for TrueType fonts. These additional filters can be bought now from SoftLogik themselves for between $20 and $25, so get your credit card ready.

Gary's Effects come on a single disk for installation into BME 2.0. They are a series of Effects modules that get added to BME's Effects menu and give you some of the more common operations required for desktop publishing. These include, but are not limited to, a user-editable convolution matrix, gamma correction, a histogram graph display (which cannot be edited), control over hue and saturation and other such effects.

It's a bit disappointing that there are none of the really useful DTP-oriented operators such as unsharp masking, or that most of the operators don't seem to work in a predictable fashion when applied to pictures in CMYK format. I can only hope that Gary's Effects evolves into something more like Kai's Power Tools over a period of time. Still, thanks to the new Jpeg filter, at least you can save pictures out from BME as Jpegs.

QUALITY SETTING

There isn't very much to say about the Jpeg filter for PageStream. It does what it is supposed to and offers you a quality setting slider, but really talking about it is going to sound like one of those Ronseal product ads on the telly: So if you want a filter and you want it to be Jpeg, then get the Jpeg filter. It does exactly what it says in the docs.

Moving on to the third item in our add-on collection – the TrueType font engine. Again, there isn't very much to say about this plug in. It allows you to use TrueType fonts in PageStream transparently, without needing to first convert them into Postscript format. This opens the vast vista of CD-ROMs made for people with PCs and Windows (which uses TrueTypes). SoftLogik say in the documentation accompanying the add-on that the speed and quality of TrueTypes in PageStream is roughly equivalent to Postscript fonts. The only thing that would have been nice to see would have been PageStream taking advantage of some of those WinPrinters – printers optimised for Windows' use by having TrueTypes built-in. I'm not sure if this is actually feasible given the printing system in PageStream, so I don't suppose it's all that important.

The last add-on seems to be a little underdeveloped. Although the WordWorth filter will import your WordWorth documents, it will only do so under fairly strict conditions. Because PageStream has no Text Effects or Tables feature, it won't be able to load in any of those nice layouts you have created in WordWorth using these features. PageStream is also unable to load CGM graphics files like those used by WordWorth, so that option is right out too. PageStream's hyphenation method differs from WordWorth's so you might have problems there too, although not necessarily.

Finally, there are two further problems that would appear to be in the process of being sorted out. The first is a problem with extreme type sizes and the 'Loose' leading method and the other is a problem with picture aspect ratios. All in all, it doesn't sound as though the WordWorth filter is going to be much use for anything but the simplest layouts and as such, perhaps it should have been included with PageStream for nothing, or they should have at least waited until you could do a bit more with it.

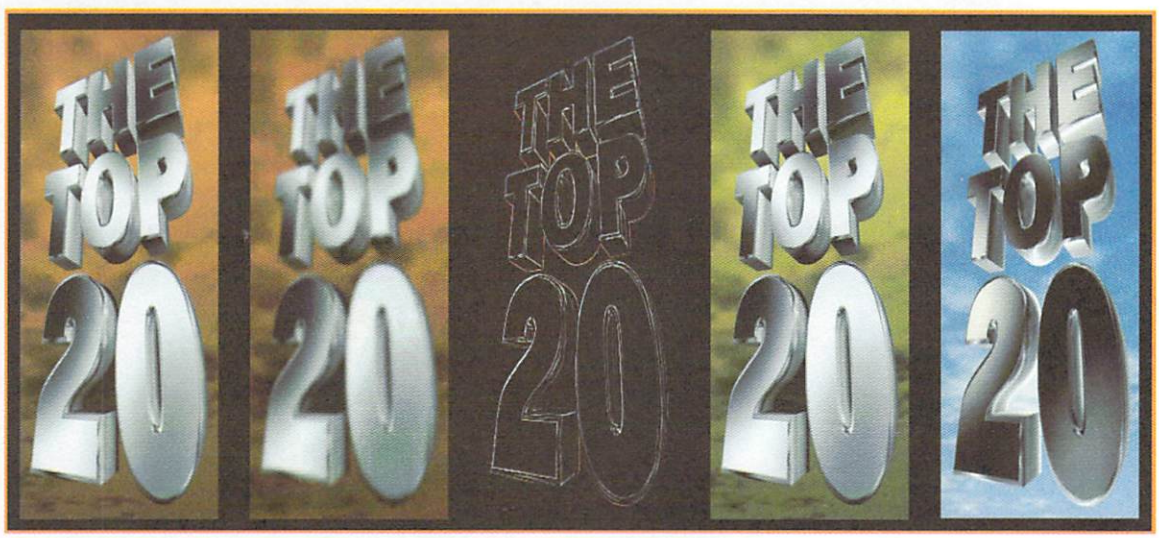
PageStream progress

After having spent some time with PageStream 3.0h, I can definitely say that SoftLogik are pushing forward at a rapid rate towards a finished product. Typing speed in the new version is vastly improved, particularly in long articles, although SoftLogik say it is still not as fast as they would like for v3.1. Also, you can now quit from the editors without them locking up PageStream (at last! I can't remember the number of times I hit Amiga S, Amiga Q out of sheer habit). In addition, external graphics have finally been implemented and you can now revert to saved.

Owners of non-Postscript printers should be pleased that printing has been sped up and that memory is no longer as important when it comes to printing. Hyphenation, both soft and automatic, has now been incorporated and, at last, your cursor accurately represents where in a text article you are. BME also gains two new effects – Emboss and Sharpen.

However, some of the more annoying niggles like PageStream's inability to copy, duplicate or transform a text box have still not been resolved, neither should you expect PageStream to be able to do colour separations for EPS files or printing (one aspect which must surely limit PageStream's appeal for serious use. Perhaps this ought to be attended to before anything else).

Finally, in the readme file they mention release dates for both a Mac and Windows version of PageStream and promise full cross-platform compatibility, so lets hope that a) this doesn't mean that Amiga development slows down and b) Amiga users will finally have a hope of going to a printer with a PageStream file and not get laughed at.



Some of the new operators that Gary's Effects provides BME with. They are: the original picture, blurred, Laplacian Edge (convolution), hue (+23°), solarized

AMIGO
BUSINESS COMPUTERS

192 Laurel Road
East Northport, NY, 11731
Tel.(516)757-7334 Fax.(516)757-7234

InfoChannel Products

- Networking - ScalaNet over an Ethernet Network
- Remote PC Control - Switch Scripts, Text Files
- Comports-8 - For VCR Decks & Routing Switchers

COMPORTS-8
Multi-Serial Card

COMPORTS-8 is a Zorro2 card containing 8 serial channels per board. Up to 5 boards can be used in an Amiga. Great for controlling many video decks or anything that accepts serial control. A must-have for Amiga BBS's.

CC1200 : The Amigo CableCaster 1200 is our expanded and modifyed CD32/SX1 combination, Perfect for the Cable Industry. A great Amiga 1200 replacement. Multimedia broadcast machine on a desktop!

Amiga 4000T Special!

Special Prices On New Escom A4000T, 1 Year Warranty

DESKSTATION RAPTOR
DEALER: SANYO VIDEO GEAR
InfoChannel MULTIMEDIA
NEWTEK VIDEO FLYER NON-LINEAR EDITING

Silent Paw Productions

1995 Product Line

Avialable Now
The **PAWSTrac** microtrackball is designed to be operated at a fingers touch and is small enough to fit in your pocket.

Coming this September
The **PAWS 600 and 1200** - The Portable Amiga Workstation. The PAWS kit includes case, basic LCD driver Card, Active color LCD, power unit that can mount up to two batteries, one battery, power supply, and trackball. Includes Link-It and Cross Dos Pro. No soldering.

Coming in November
The **PAWS 3000 and 4000** - Same as the PAWS 600 and 1200 (no battery support) but includes our Enhanced Driver Card.

Enhanced Driver Card (Upgrade) for the PAWS - Our latest driver card will support Passive Color LCDs and support most Amiga display modes to include PAL.

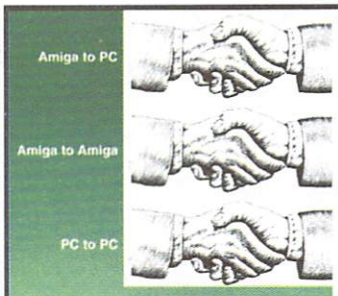
The **Gecko** - The Gecko is an external unit that plugs into the Amiga's RGB port to use any standard VGA monitor in most display modes, even PAL! Comes with cable and power supply.

P.O. Box 1825, Manassas, Virginia 22110
703-330-7290 - Voice, 703-330-5752 - Fax

SLIDES or NEGATIVES

Image Your IFF, IFF24, Framestores, DCTV, HAM and HAM8 Files to 35mm Film
For as Low as $5.95 per File!
Volume Discounts!
24 Hour BBS w 28.8 Baud Modem
44, 88 or 200 meg Syquest
48 hour turn around
CALL for details: 715 856-5627
AMIGA Specialists since 1986!

GRAPHIC IMPRESSIONS
502 Main Street
PO Box 254
Wausaukee. WI 54177



Link-It!
This package contains disks for both Windows™ and Amiga™ environments

CONNECT YOUR AMIGA AND YOUR PC TOGETHER!

- Easy file transfers between computers
- Amiga-2-Amiga, PC-2-PC, or Amiga-2-PC
- Serial & Parallel
- Point & Click interface
- 6 ft. parallel cable included

Family Connections
Genealogy Software for the AMIGA Computer
- Trace your family tree
- Ahnentafel, pedigree and descendancy reports
- GEDCOM Support

NEW
New productivity titles!

LEGENDARY BUSINESS PARTNER
Address It!, Invoice It!, dataTAX
All for one low price!

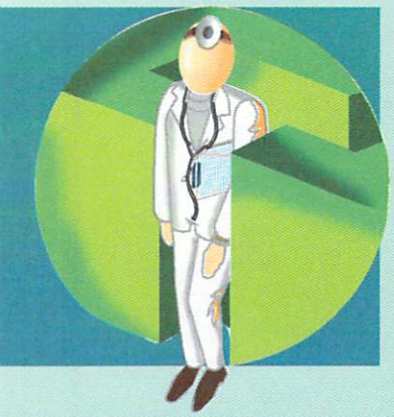
dataMIX ProPics SFX

CD-ROM
- dataMIX
- ProPics
- SFX

COMPACT disc

LEGENDARY Desktop TECHNOLOGIES INC.
25 Frontenac Ave, Brantford, ON N3R 3B7
P.O. Box 1147, Lewiston, NY 14092-8147
Tel: (519) 753-6120 Fax: (519) 753-5052

Amiga Medical

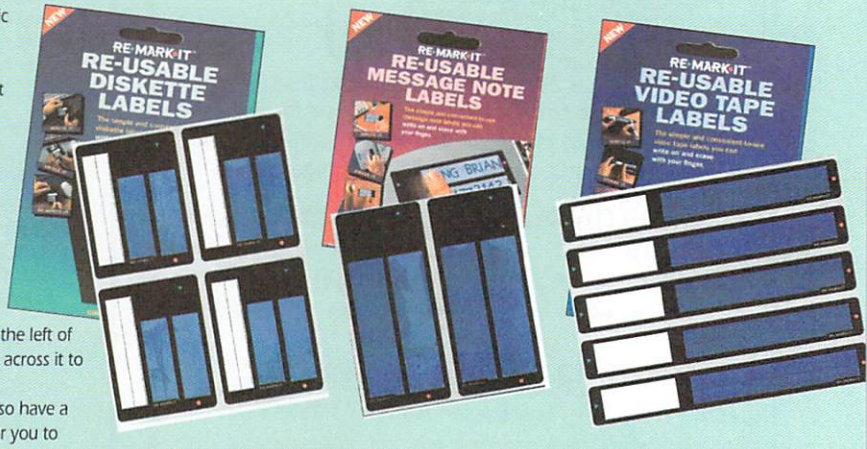


Magic labels

Frank Nord peruses some nifty labels in addition to the sage advice he dispenses

I don't know if you remember them, but there used to be these Magic Drawing tablets – they may still exist for all I know. You could write and draw on them with the supplied stylus, your fingernail or a twig – anything remotely pointy really. But the really groovy thing about them was the fact that once you had covered the entire area of the tablet, you could simply pull this integral slider across the surface of the tablet leaving you with a pristine surface on which to draw once more.

How does this relate to anything Amiga-based? Has someone developed a similar method for clearing the screen in DPaint? Well no. It's a bit more mundane than that. The Magic Drawing Tablet approach has been appropriated by a manufacturer called Re Mark It for their range of disk, video and message labels. You can write on the blue-ish part of the label using your fingernail or a twig or whatever, then, when you want to clear the message, you can put your finger on the green arrow (the green activator arrow according to the literature) to the left of the label and slide your finger across it to clear the label.



The disk and video labels also have a permanent section on them for you to make your mark on for posterity, and the message labels come in two varieties – a two line variant and a four line version. The disk labels come ten to a packet for £2.49, you get five video labels for the same price, and the small messages labels are £1.99 for four – the big message labels are slightly more expensive at £1.99 for only two. If you are interested in these, and I'm sure you are, then get in contact with the First Computer Centre on 0113 2319444 immediately to place your order.

Wasting space

So, onto other business. I think that this month I should tell you how to get rid of stuff, rather than putting new stuff onto your machine. So we will start with unwanted assigns. You know how you have a drawer assigned and you want to get rid of it, but AmigaDOS brings up an alert saying "Cannot delete blahdiblah, object is in use." Well, if you hit the Shell you can usually get rid of assigns by typing the assign name followed by dismount or remove, i.e.:

```
assign blahdiblah: remove
```

This will usually let you delete the offending directory. Use the Dismount option if it's a device you are trying to get rid of rather than an assign. Alternatively, if you have the assign made in your user-startup script, you can always remove it from there and then reboot. Assigns aren't usually too problematic to get rid of, but there are other items that might chew up memory that you would do well to sort out.

The most important of these is undoubtedly your ENVARC: directory. Numerous programs use ENV: to store settings and preferences, programs that you might no longer use. The only way to make sure you aren't wasting valuable system resources is to trawl through ENVARC: periodically to check for offending items.

If you are using a file manager like DOpus or Diskmaster you can easily get to envarc: by bringing up an assigns list. If you don't have a suitable file management program, you can do the same stuff by opening a shell window and cd'ing to ENVARC:. If shell frightens you, then the last method of getting there is to go into your prefs drawers on your boot disk (usually called DH0:, HD0: or Workbench:) and have a look for a drawer called env-archive. This probably won't have an icon so you'll need to show all files from the Window menu on Workbench first.

Anyway, by whatever method you reach it you should eventually find yourself within the ENVARC: drawer. The only files that are really important in ENVARC: are contained within the sys drawer, but that doesn't mean you can go deleting all the other files willy nilly. The files in the Sys drawer are all your Workbench preference settings, like the font your Workbench screen uses, its resolution, number of colours, etc.

This is very useful to know if you make a mistake and save something in Prefs that you can't use – for instance a DBLPAL screenmode on a 1084 monitor. If you have done that then the best you can hope for is a black screen, but you might damage your monitor. The thing to do is to boot without a startup-sequence and cd to sys:prefs/env-archive/sys and delete the file screenmode.prefs. Then you can happily reboot once more, safe in the knowledge that your Workbench will boot in four colours on a PAL Hi-res screen which will be happily displayed on your 1084.

Sometimes the preferences stores in ENVARC: are held within their own drawers inside ENVARC: – this makes it really easy to see what you are doing. If this isn't the case, you can always move the questionable files elsewhere and reboot to see if the files are required by any of the programs currently running on your machine.

Obviously, you will need to run the programs you have on your drive to be able to check whether the files you have moved are needed.

Time to 'assign remove' I think...

Cover version

Ben Vost talks us through a recent commission

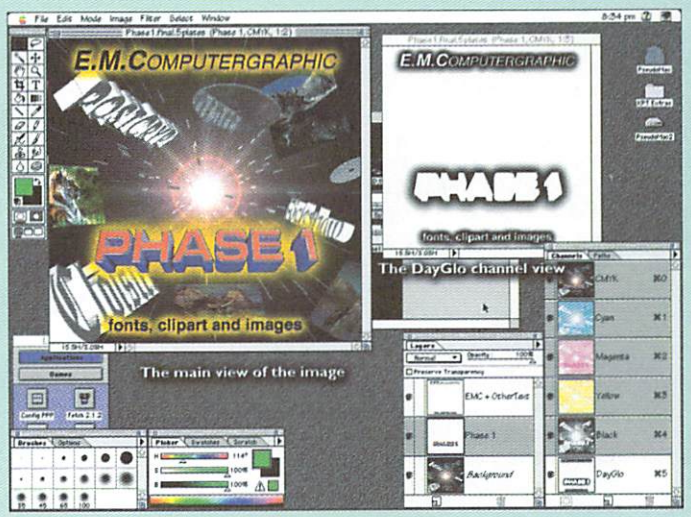
My good friend Errol at EMComputergraphic approached me a while ago and asked if I could produce some cover artwork for his upcoming CD-ROM release. I agreed and he sent me some sketches of what he thought would be nice. I played around with the concepts he gave me and decided that LightWave would probably prove the best solution for the building blocks of the final image.

The initial text 'Phase 1' was the first thing to deal with. LightWave actually provides good facilities for converting PostScript type 1 typefaces into 3D objects, albeit not quite as nice as Imagine's for a change, so rather than having to build the text from scratch I simply loaded the appropriate font (Jupiter from the Safari Fonts collection that EMC sells) and extruded it.

I decided to bevel the text as it looked a bit bland and flat. At this point I checked with Errol to see what he wanted in terms of texturing for the text, and surprisingly, he went for my first choice which I had merely selected for a test render. All this was was a slightly glossy red for the front, the sample texture Bumpy Chrome with the bump map removed for the bevel, and the sample texture Gradient for the sides of the letters.

I did several test renders of the text at different angles, but decided it still looked too flat, so I changed the focal length of the lens to distort the end result a bit more. Errol didn't like the jaunty angle I first put the text at, so we settled on the flat front, but tipped back style that graces the cover now.

For the background, which was rendered separately, I set up a scene using the random stars object which comes with LightWave, a pair of lights (one to provide a fill, the second for the lens flare) and some objects. These objects were based upon the content of the CD-ROM and consisted of several pictures and objects made from fonts.



Caption required

To retain the aspect ratio of the pictures, I made their object the same size in centimetres as the pictures were in pixels. I distorted the lens for the camera once more, although not to the same extent I had used for the text, and shifted the camera back a bit. To get the stretched out star effect, I turned on particle blur and gave it a high percentage, then I jumped to frame five and moved the camera back towards the centre of the scene. At the same time I brought the text and picture objects out from the centre to see if motion blur would look nice. Unfortunately, motion blur looked anything but nice, but the particle blur seemed to work really nicely.

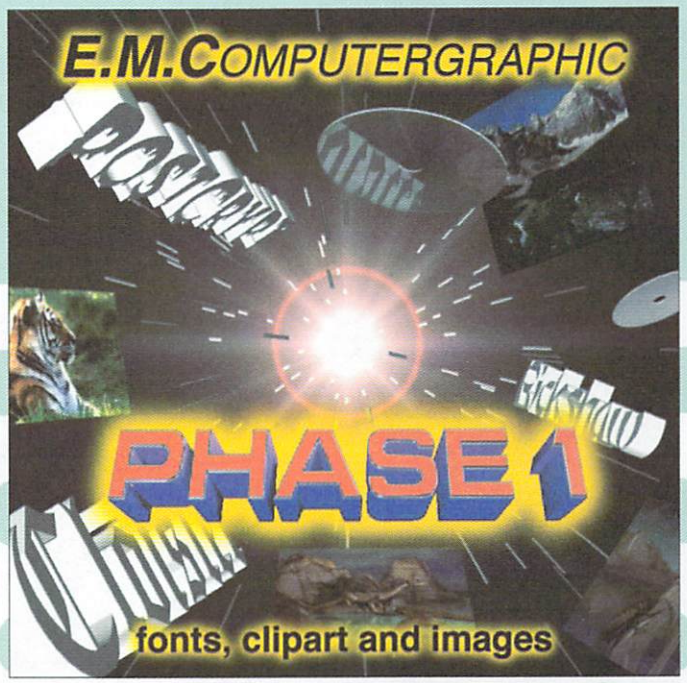
I composited the Phase 1 text onto a Lo-res preview of the background so that Errol could get some idea of what I was trying to do. He liked the base idea but suggested some improvements, including a couple of flying CDs to go onto the cover to ram home the point of the artwork. So I re-rendered. Eventually, through trial and error, we came to agree how the end result would look.

Now that I had completed the building blocks for the image, I rendered them once more, this time at a higher resolution. Because a CD cover isn't all that large, I only rendered the images at 'high' resolution, rather than 'print.' This obviously took a lot less time to render, hopefully without showing in the final print. I ended up with an image that was about a thousand pixels square for the background.

I had done the early compositing in ADPro, which was fine for the purpose at that level, but for the final artwork I decided to fire up Shapeshifter and use Photoshop on the Mac. Photoshop is what ImageF/X should, and perhaps will, be. The most important feature for me was Photoshop's facility for multiple, independent layers in the same picture. This meant I could have separate, discrete elements, like the Phase 1 logo, the normal text that appears on the cover, the background, and the glow as individually editable pictures.

This allowed me to play around with scaling the Phase 1 logo and its placement on the background, without needing to keep reloading the picture. I also resorted to using Quark XPress for the layout of the CD on the page because PageStream **still** cannot print separations (a really serious fault for a professional DTP package, I kid you not).

So there you have it. From original sketch to completed image in less than a page. I only wish it was as painless a process to create the image as it was to write about it. That having been said, I did have a lot of fun doing the work and if you wish to see the end result, I can only suggest you boost EMCs coffers and buy the CD for yourself.

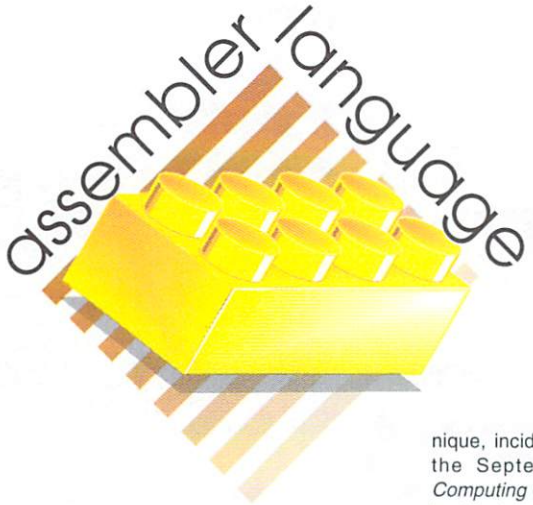


Caption required

Things to note

Looking back at the image I produced, there are certainly some things I would try if I had had the time (and might attempt for Phase 2, 3, etc. if Errol lets me). Firstly, I probably wouldn't make the cover a space theme again. Everybody uses the same sort of imagery, and lens flares are getting so clichéd these days. The second thing is that I might have relied more on Photoshop to speed up the rendering process. Motion blurs, lens flares and lighting effects are all easy to achieve in Photoshop and take a lot less time than the effects rendered by LightWave.

Having said that, I wasn't overly hampered by a deadline for this commission, so I didn't need to save time. Lastly, it pays to try and extend your software collection. Had I only been able to use LightWave and ADPro for this cover image, it would have been a lot more bland than it currently is.



In a state of collapse

Don't worry, this isn't bad news about Commodore – just Paul Overaa on his assembly language trail. In this section he provides Intuition newcomers with a useful window arrangement tip

You've doubtless all seen programs that start as a collapsed bar inside a screen or window's title area and then open to a full sized window when the zoom gadget is activated. This trick is often used by utility programs to allow them to remain permanently available for use while not taking up much screen display space. Luckily, it's not that difficult to do and this month, for the benefit of those of you new to Intuition coding at the 680x0 level, I thought it would be useful to explain how it is done.

Needless to say, the code used to perform this trick is fairly minimal, but in order to provide a runable example it is necessary to incorporate the various statements into a fully fledged Intuition program. You'll find the source for this on disk as the file october.s and it is with the overall structure of this code that we need to start our discussions.

The program begins by opening the intuition and gadtools libraries using a loop arrangement. If you end up wondering why I use this method when just two libraries are involved, it's because it's a useful standard approach since it works for any number of libraries. This technique, incidentally, was first discussed in the September '94 issue of *Amiga Computing* (and then outlined briefly again in the April '95 issue). If you find this section of the code at all mysterious then I'm afraid you will have to dig out (or beg, borrow, or steal) one of the above mentioned back issues. Failing that, you could always treat yourself to a copy from our back issues department!

Immediately after the library opening section comes a set of allocation/deallocation routines controlled by a series of subroutine calls. This code, again, should have a familiar ring to it since the approach has been used many times in past examples. A series of subroutine calls are made to lock the Workbench screen, get the VisualInfo data, open a window, and attach a simple (two-item) menu to it. If you've not seen this type of code before, here's a brief description of how it works.

ALLOCATIONS

All resource allocation operations (i.e. things the program needs to set up before it can be considered as truly up and running) are coded in such a way that, providing they are successful, the address of the corresponding deallocation routine gets pushed onto a special 'deallocation stack'.

When the program terminates, these addresses are removed and the associated deallocation functions executed. This method ensures that deallocation during closedown is always performed in the reverse order to that used during program startup (for full details of this particular trick take a look at the October '94 issue). Once the program is up and running (i.e. all allocation routines have been successfully executed), control passes to an event handling routine. The sole job of this area of the code is to identify the various classes of events that Intuition has been asked to send the program, and take the appropriate action for each event that is detected.

Listing 1 constitutes the program's event handling code. This starts by performing an exec library WaitPort() call which puts the program to sleep until Intuition sends us a message saying something of interest has happened. How does the program tell Intuition what sorts of events are of interest? It's all done via the Window's tag list description – if you look at the tag entries in listing 2 you'll see that a WA_IDCMP tag is being used like this... dc.l WA_IDCMP,IDCMP_MENUPICKIIDCMP_CLOSEWINDOW. This tells Intuition we want to receive notification whenever the user activates the menu or hits the close gadget.

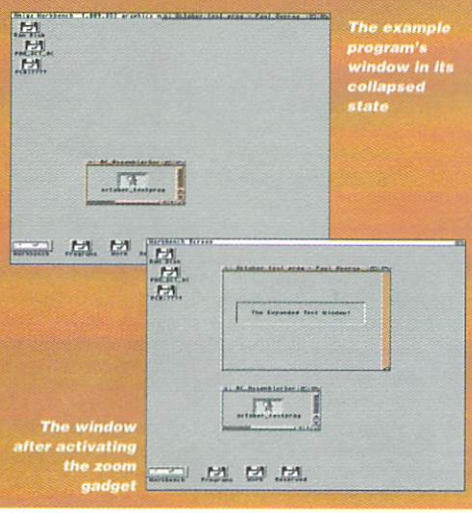
Remember, incidentally, that whenever any IDCMP (Intuition Direct Communication Message Port) tags like these are specified in a window definition, Intuition will set up the appropriate window message ports automatically, so this is not something our program has to worry about. What we do need to identify, however, is the address of the window's

Assembling the code

There's just a single source file this month. As mentioned earlier, it's called october.s and if you want to run it from the Workbench you'll need to assemble it to produce linkable object code (october.o) and then link this to some startup code. Devpac users will probably opt for using the astartup.obj module for this purpose and the basic Blink command line needed in this case will be:

```
blink astartup.obj october.o to october_testprog library
amiga.lib
```

Obviously, you'll need to add file paths to reflect the various locations of Blink and the target files (but you're used to doing this, aren't you?). As usual, I've included a runable version of the example program on disk as well, and to execute this all you need do is double-click on the 'october_testprog' icon!



The example program's window in its collapsed state

The window after activating the zoom gadget

UserPort because this is the message port at which Intuition IDCMP event messages will arrive. This address obviously needs to be available to the event handler and is obtained from the window structure set up by Intuition by using the window pointer in conjunction with a wd_UserPort displacement like this:

```
movea.l window_p,a1
movea.l wd_UserPort(a1),a2      user port
address
```

Within the event handler proper two events, namely the user hitting the window's 'close' gadget or selecting a 'Quit to Workbench' menu option, result in an exit flag being set that eventually causes the program to terminate. You'll see from the source that a check is also made for menu events whose code field is set to MENUNULL. This is important since these events are generated whenever a user activates the menu, but then fails to make a selection (such events need to be safely ignored). The other menu option, incidentally, is just tied to a dummy routine so nothing actually happens when the menu item is selected. This act of tying a menu option to a 'do nothing' routine in this way is actually a very useful trick during development of fully fledged applications. You may have dozens of menu options that relate to code sections that are as yet unwritten, and tying such options to dummy routines allows the event handler and overall structure of the code to be developed, even though many associated routines may not yet be written.

As the corresponding real routines become available, you just replace the appropriate call to the dummy routine with a call to the real version. Another benefit of this type of approach is that it automatically provides an 'incremental testing' pathway. If, for example, your program works fine until you swap, say a... jsr DoNothing call, with a call to a real routine, then you'll know straightaway that any faults that appear are almost certainly connected with the code present in the newly added routine!

Most of the event handling code should be easy enough to follow, but it may help to examine the diagram shown in figure 1. This provides a fairly high-level, general, description of the code's operation in flowchart form.

Listing 1: The event handling code from this month's example program

```
EventHandler        movem.l   d0-d4/a0-a2,-(a7)     preserve registers
                    clr.l     d2                    clear exit flag
EventHandler2       movea.l   a2,a0                 port address
                    CALLSYS   WaitPort,_AbsExecBase
                    jsr       GetMessage
                    cmpi.l    #TRUE,d2              exit flag set?
                    bne.s     EventHandler2
                    movem.l   (a7)+,d0-d4/a0-a2     restore registers
                    rts                             logical end of routine


GetMessage          movea.l   a2,a0       get port address in a0
                    CALLSYS   GetMsg,_AbsExecBase   get the message
                    tst.l     d0
                    beq.s     GetMessageExit        did it exist?
                    movea.l   d0,a1       c         opy pointer to a1
                    move.l    im_Class(a1),d3       copy message class
                    move.w    im_Code(a1),d4        copy message code
                    CALLSYS   ReplyMsg,_AbsExecBase then send message back

                    cmpi.l    #IDCMP_CLOSEWINDOW,d3
                    bne.s     MenuMessage
                    moveq     #TRUE,d2              set QUIT signal to exit routine
                    bra.s     GetMessage

MenuMessage         cmpi.l    #IDCMP_MENUPICK,d3    check message class
                    bne.s     GetMessage            ignore other message types

                    cmpi.w    #MENUNULL,d4
                    beq.s     GetMessage            ignore if MENUNULL
                    lsr.w     #5,d4                 extract menu item number
                    andi.b    #$3F,d4               (will be either 0 or 1)
                    beq.s     DoMenuItem0
                    moveq     #TRUE,d2              set QUIT signal to exit routine
                    bra.s     GetMessage

DoMenuItem0         jsr       DoNothing
                    bra.s     GetMessage            check for more messages!

GetMessageExit      rts                   d2 holds exit flag
```

```
tags            dc.l    WA_PubScreen
workbench_p     ds.l    1
                dc.l    WA_Left,300
                dc.l    WA_Top,0
                dc.l    WA_Width,340
                dc.l    WA_Height,10
                dc.l    WA_DragBar,TRUE
                dc.l    WA_DepthGadget,TRUE
                dc.l    WA_CloseGadget,TRUE
                dc.l    WA_SizeGadget,TRUE
                dc.l    WA_Gadgets
gadtool_list    dc.l    NULL
                dc.l    WA_Zoom,zoom_data
                dc.l    WA_MinWidth,100
                dc.l    WA_MinHeight,10
                dc.l    WA_MaxWidth,640
                dc.l    WA_MaxHeight,256
                dc.l    WA_IDCMP,IDCMP_MENUPICK|IDCMP_CLOSEWINDOW
                dc.l    WA_Title,window_name
                dc.l    TAG_DONE,NULL
```

Listing 2: The tag-based window description

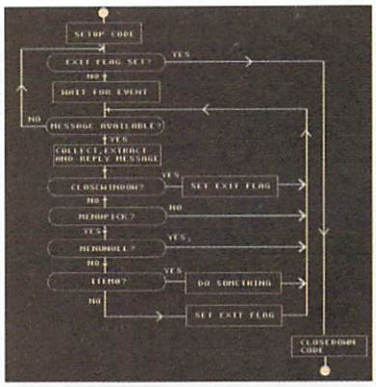


Figure 1: basic program structure in flowchart form

Title bar collapsed windows

With the preliminary program layout discussions now safely out of the way we can deal with the real topic of the month – namely, how to produce windows that initially reside in, or can be made to collapse into, a window's title bar. Perhaps surprisingly, it is very easy to do because all it takes is a few well chosen tag list entries in the window definition.

Firstly, provide a zero WA_Top value and set WA_Left to a value which places the 'window' at a suitable position within the title bar. Then set the Window initial width and height tags, WA_Width and WA_Height, to define a window which has only a 10 pixel height (i.e. the height of a window title bar). For instance:

```
dc.l    WA_Top,0
dc.l    WA_Left,300
dc.l    WA_Width,340
dc.l    WA_Height,10
```

Having done that you then just arrange for the real co-ordinates of your window to be stored as the 'alternate' zoom gadget set. This involves using a WA_Zoom tag in the window definition to identify a pointer to a set of alternate window dimensions that will be used when the window's zoom gadget is selected. These dimensions have to be provided as an array of word (16-bit) entries, so in the example program you'll find this tag entry:

```
dc.l        WA_Zoom,zoom_data
```

along with this dc.w directive which identifies the corresponding set of alternate window co-ordinates:

```
zoom_data   dc.w        150,50,340,200
```

The result? The window opens initially inside the title bar and can be expanded to normal use size by selecting the zoom gadget. You will, of course, be able to see the effect of these statements when you run this month's example program. To get the reverse effect, namely initially having the window open normally, but collapsing into the title bar when the zoom gadget is activated, you just reverse the original and alternate sets of window co-ordinates!

Text message display

assembler language

Paul Overaa outlines an easy way to get text messages written to a Shell window

Assembly language programmers frequently need to be able to write text messages back to a Shell window. The good news at this point is that it is very easy to do and by making use of a few well chosen macros, you can effectively get the assembler to write most of the code for you. This month's example is based on three macros: WRITEDOS, which sets up a DOS library Write() function call, and CALLSYS and LINKLIB which (as regular readers will already know) are used to generate the library calling code.

A description of the Write() function has been provided in the accompanying boxout and you see that for delivering text messages, this function needs to know the length of the text string. One way to work out the number of characters is to actually count them, but this approach is both tedious and error prone. A better way is to get the assembler to do the counting for you by placing an additional label at the end of the text, and then using the EQUate directive to set it to a value based on the current assembler location counter value minus the start of the original string like this:

```
message          dc.b 'Just some example
text!'
message_SIZEOF   EQU *-message
```

The result is that the assembler sets the second label to the size of the preceding text string. Now, if we also adopt a convention whereby the sizes of all strings are represented by adding _SIZEOF to the original label, it's possible to create a macro that automatically forms the size label from the string name it is given. The WRITEDOS macro, shown in listing 1, does exactly this and it therefore allows a programmer to create text display code simply by writing statements like:

```
WRITEDOS        message,_stdout
```

Notice at this point that we need to identify the standard output handle for the Shell. There is an easy-to-use DOS function called Output() which allows us to obtain this. The function needs no parameters and since the result comes back in register d0, the fragment for identifying the handles looks like this:

```
CALLSYS         Output,_DOSBase
move.l          d0,_stdout
```

UNDERNEATH THE SURFACE

Those of you who are new to assembler coding may find it useful to know what the assembler does as it encounters the WRITEDOS macro call. Firstly, the macro gets expanded to produce these instructions:

```
movem.l     d1-d3,-(sp)          preserve regis
                                 ters d1-d3
move.l      _stdout,d1           DOS output file
                                 handle
move.l      #message,d2          start of mes
                                 sage
move.l      #message_SIZEOF,d3   size of message
CALLSYS     Write,_DOSBase       DOS call to
                                 write message
movem.l     (sp)+,d1-d3          restore regis
                                 ters d1-d3
```

The CALLSYS macro also gets expanded, causing the _LVO prefix to be added to the 'Write' label and generating a further reference to the system include file LINKLIB macro which is then also expanded. The result is that the assembler ends up producing code which looks like this:

```
movem.l     d1-d3,-(sp)          preserve registers
                                 d1-d3
move.l      _stdout,d1           DOS output file
                                 handle
move.l      #message,d2          start of message
move.l      #message_SIZEOF,d3   size of message
move.l      a6, -(sp)            preserve contents
                                 of a6
move.l      _DOSBase, a6         base address of
                                 library
jsr         _LVOWrite(a6)        indirect subroutine
                                 call
move.l      (sp)+,a6             restore a6
movem.l     (sp)+,d1-d3          restore registers
                                 d1-d3
```

```
Function Name:      Write()
Description:        Write data to a file
Call Format:        length_written = Write(file, buffer_p, data_length)
Registers:          D0          D1          D2          D3
Arguments:          file        - file handle
                    buffer_p    - pointer to buffer holding the data
                    data_length - length of the data
Return Value:       length_written - number of bytes actually written

Notes:              A length_written value of -1 will indicate an error
```

Description of the Write function

```
WRITEDOS MACRO
movem.l     d1-d3,-(sp)          preserve registers d1-d3
move.l      \2,d1                DOS output file handle
move.l      #\1,d2               start of message
move.l      #\1_SIZEOF,d3        size of message
CALLSYS     Write,_DOSBase       DOS call to write message
movem.l     (sp)+,d1-d3          restore registers d1-d3
```

Listing 1: The macro for writing text strings

The CoverDisk code

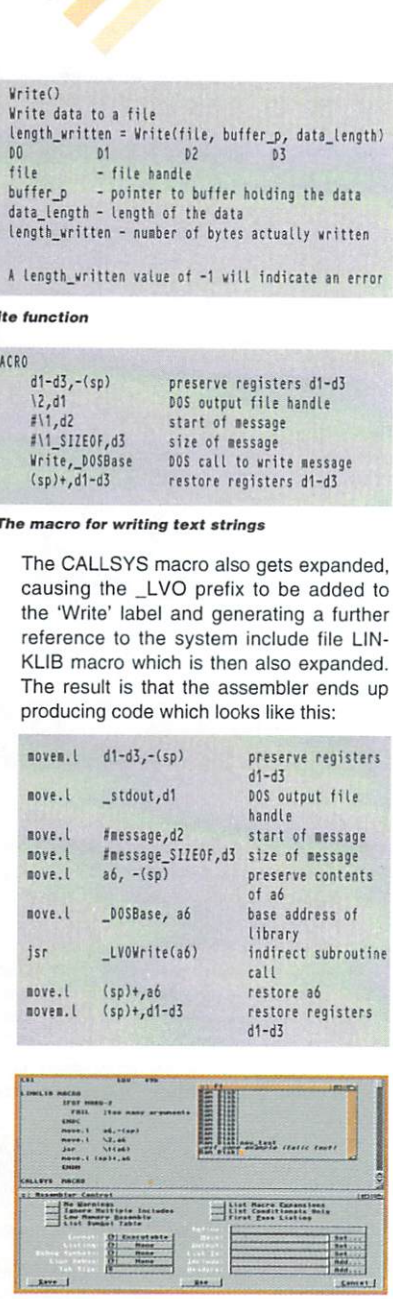
All we need now is a runable example and you'll find this on the CoverDisk. Of course, WRITEDOS can be used for control character output as well as text string output so, to make the example a little more interesting, I've included a couple of console control sequences which tell the Shell window to turn italic text display on and off. The data for these calls are set up in just the same way as already explained, with italic control being provided by these two definitions:

```
italic_ondc.b CSI,$33,$6d
italic_on_SIZEOF    EQU *-italic_on
italic_off          dc.b CSI,$32,$33,$6d
italic_off_SIZEOF   EQU *-italic_off
```

You'll therefore find the real text message generation sandwiched between the calls that control the italics setting like this:

```
WRITEDOS italic_on,_stdout      turn on italics
WRITEDOS message,_stdout        get DOS to write message
WRITEDOS italic_off,_stdout     turn off italics
```

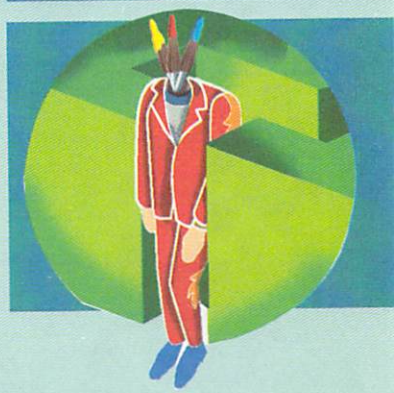
And that's basically all there is to it as far as basic Shell window text display is concerned. So that the example code can be assembled without the official Amiga system files, I've included all necessary LVO (library vector offset) values for the function calls and the WRITEDOS, CALLSYS and LINKLIB macros in the source itself. The runable form of the program does, of course, need to be run from a Shell window because it will be to that window that the output text will be sent!



This month's example was actually created using Hisoft's Devpac but the code can be assembled using any assembler

A splash of paint

Amiga 2D



Steve White explains how you can join the artistic masterclass and improve your desktop graphics techniques

The aim of this tutorial is to help you get the most out of your paint package and as a result, show you how to design great pictures and animation.

I will be demonstrating how you can create realistic looking backgrounds – including natural backgrounds, choosing the correct colours and spreads, preliminary design techniques, brush manipulation, special effects, animation techniques and much more.

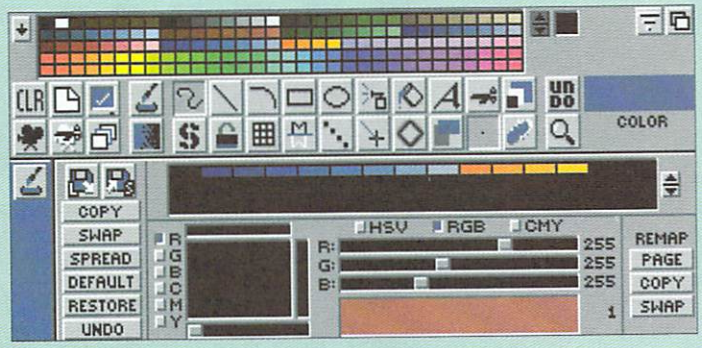
Although most of the screenshots in this tutorial are taken from Brilliance 2.0, the subjects covered will also apply to those of you with Deluxe Paint or Personal Paint. I have used terminology employed across all these packages so you can find the appropriate reference in the manual.

ROUGH SKETCH

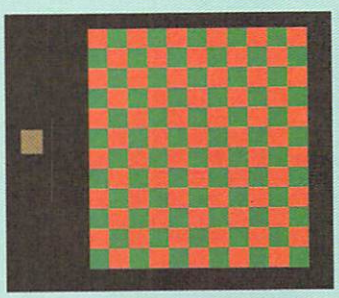
The first step when designing any computer-oriented artwork is to make sure you have a rough on paper from which to work from. By designing on paper first, you can easily correct and enhance your scene without wasting precious time in your paint package.

When you are happy with your design, you should write down what colours you will need and any spreads that may be required. A spread is a range of colours blended between a start colour and end colour. You may want to create a spread of greys, in which case you simply select your start colour (black probably), select Spread, and then click on the end colour (white). Your paint package will automatically fill in the slots between start and end with the appropriate colours.

Obviously, those of you with AGA machines will be able to create more extensive spreads, allowing for smoother transitions between colours. However, more colours invariably means more work, although the finished artwork will look better than a 16 or 32 colour image.



Creating the right colours is the first step in any graphics venture. Use them wisely or suffer the consequences



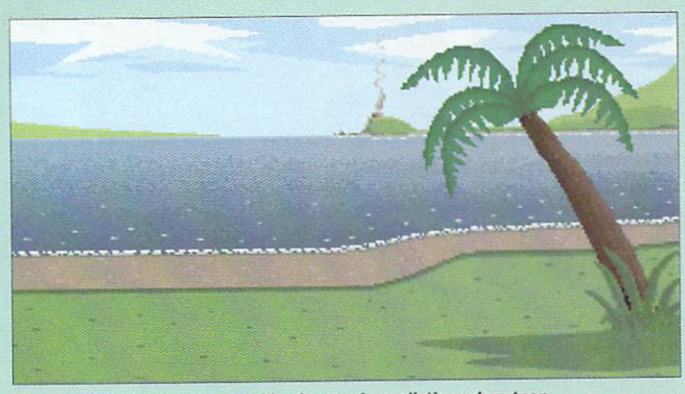
By using dithering techniques you can build a third colour from two other colours and ease the strain on your palette

COLOUR SELECTION

For those of you with non-AGA machines, the task of colour selection is a more difficult one and you may find your scene doesn't lend itself too well to 16 or 32 colours. If you also require spreads, you may even have to consider HAM (Hold And Modify) mode which is extremely slow in Deluxe Paint. Remember that it is the foreground elements of your design that are of most importance – a background can easily be covered by just a single colour, two at the most.

One way to falsely create colour transitions (spreads) is to use dithering. Dithering works by creating a chess board pattern made up of two colours. Due to the resolution, the effect fools the eye into thinking its seeing a new colour. If you dithered red and white it would look like pink, green and red appears as brown. If you don't own an AGA machine it may be a worthwhile exercise to actually create an image with different colour dithering to see which combinations work best. When you think you've got your palette right, save it out.

Although it's tempting to start your design with the foreground, the best place to start is the background. The background is invariably the simplest element in design and can act as an incentive to finish the picture off (one of the toughest disciplines in computer-design is patience). It also acts as an excellent reference for your foreground elements and you may even find better positioning than you originally anticipated.



There are two styles of natural background – realistic and cartoon. Whichever you choose, they both dictate the style of foreground graphics

Don't go spare

One of the most useful tools in any paint package is a Spare page, normally accessed with the J key. While designing backgrounds you can use the spare page to test different effects before applying them to the work page. In fact, the spare page proves such an invaluable page that I regularly save mine so that useful bits and pieces can be retrieved whenever I need them.

The real world

Probably the most frightening type of background is a natural one. The sea, land, rock, sky, desert and snow are all natural backgrounds that make artists cringe. The problem with natural backgrounds is that critics won't allow for mistakes. If it's the inside of a spaceship or building you made up it doesn't matter what people say, because it's your creation.

There are two ways to design natural backgrounds and both work equally well. You can go for the realistic design in which you attempt to accurately recreate the background as much as possible, or opt for the more cartoon look, using less colours and taking less time.

If done correctly, both look impressive, but you must remember that they also dictate the foreground style to some degree. If you create a complex background with many colours then you'll probably have to do the same with the foreground elements. Therefore, for those of you with non-AGA machines it may prove a sound decision opting for the cartoon-style background.

In the next issue I will be explaining in detail how to go about designing natural backgrounds – both realistic and cartoon. I'll also be taking a look at Gradients and how they can speed up the background process.

Gary Whiteley explains basic lighting for 3D rendering

Step into the light

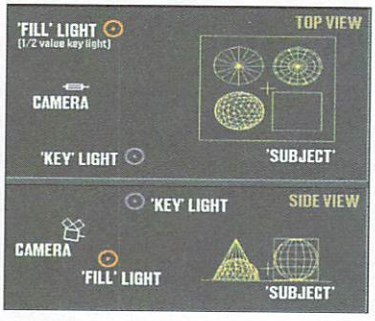
While 3D programs like LightWave, Real 3D and Imagine can flaunt the laws of Physics and produce scenes impossible in the real world, when it comes to lighting a scene realistically there's a lot to be learned from natural, as well as theatrical, film and television lighting.

In the real world, at least during daytime, there is one predominant light source – the Sun. The way in which it lights our world is affected by various factors such as the angle of the sun in the sky, cloud and fog (and, increasingly, pollution), objects casting shadows – be they trees, buildings or mountains – the angle an object presents to the Sun, the surface characteristics of illuminated objects, and the manner in which light enters buildings and other environments.

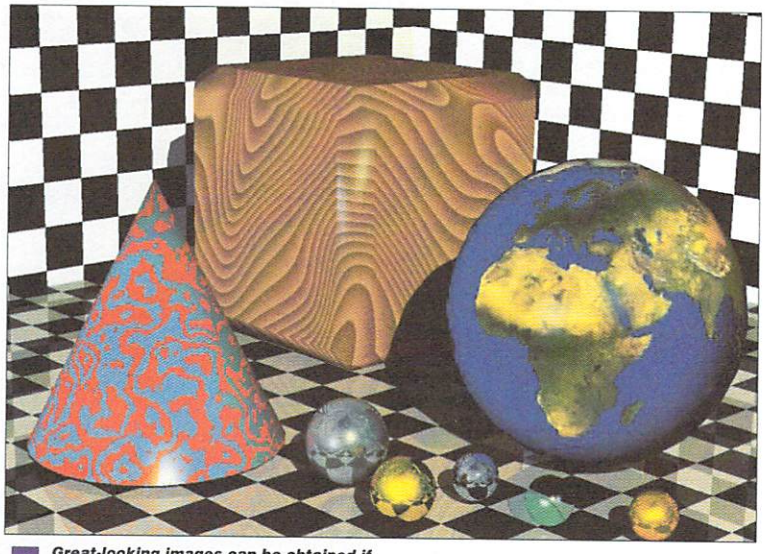
Unlike artificial lights, our relative proximity to the Sun and the strength of its light means there is little perceptible fall-off of the light intensity with distance, though of course like all real light sources, the Sun's light actually decreases in strength the further it travels away from its source.

The Sun, while really a 'point' source of light, can be regarded on Earth as a parallel light source because of the great distances involved. Parallel light sources emit rays which all travel in the same direction, hence the term 'parallel', and because of the great distances involved and the small area of Earth in relation to the Sun's light output, the rays which hit the Earth are effectively parallel rays. Sunlight is also scattered by the physical environment it passes through, including the atmosphere, providing an ambient light which adds a degree of 'fill' light to a scene. 3D renderers allow the user to define both 'normal' and ambient light sources.

So you can see that the simplest 'real world' situation can be lit with just a distant light source to represent the Sun and some ambient light to add natural fill. To enhance this a little, try adjusting the colours of the Sun and the ambient light away from the default white or grey settings. One interesting combination is orange-yellow sunlight (e.g. R255 G220 B150) and blueish ambient light (try R150 G150 B185), especially when shadows are also rendered. Experiment with other combinations to add a different mood to your renders.



A basic Key and Fill lighting setup. Keep the ambient light to a minimum



Great-looking images can be obtained if you follow a few simple lighting rules

Contact point

Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk.

Artificial light

When it comes to interior scenes a new lighting pattern is needed, since the Sun is no longer likely to be the main light source, if indeed it is present at all. In this case we need to simulate the effect of the Sun with a 'Key' light (so-called because it is the main light source), but it is also usual practice to add one or more extra lights to provide fill to soften up the shadows caused by the key light and to enhance detail in the otherwise dark areas caused by using a single light source.

The key light is the brightest light source in the setup and is usually a point or distant (parallel) light source which is set to cast shadows. Place it to one side of the camera, about 30 degrees above and at a reasonable distance from the main centre of attention. The absolute distance of the key light from the subject depends on the strength of the light and the 3D package you are using. In Imagine, a distance of at least 1000 units for a R200, G200, B200 light is recommended.

The Fill light is around half the brightness of the key light, set on a level with the main subject on the opposite side of the camera to the key light, but at an equivalent distance from the subject. It is usual for this light to be set to cast NO shadows. Sometimes a second fill light will be placed behind and to the left of the main subject to provide more soft fill. Again, vary the colour of the lights away from the standard default settings for more interesting results.

Once the key and fill lights have been positioned, the rest of the room/environment can be lit accordingly. Perhaps there are wall or other incidental lights, or maybe a small window. These shouldn't contribute much to the main lighting setup but they should add interest to the background and illuminate the rest of the scene to produce the desired effect. You can also add some ambient light, but remember to keep it to a minimum to avoid flooding out your main lights.

There will be situations where the key light might be a large, well-lit window in a building, for example. In this case, position a fill light where it most effectively softens the shadows and yet still enhances the detail of the scene. Try different positions for the fill light until you find one which produces the most pleasing results.

Obviously, there are too many variations to go into here, so don't be afraid to experiment. If you want more ideas, use the resources of your local library and read up on film, theatrical and photographic lighting to get more insight into lighting your 3D worlds.

How to expose yourself!

AREXX

This month I'm adding the finishing touches to the skeleton form-fill script we've been working on in recent issues and tackling the last remaining problem area, namely the need to define identical 'pseudo-constant' terms in any procedure that uses them.

Defining an ARexx function as a procedure is, for the most part, a good thing to do because variables and data used within that function then become local to the function (so cannot be modified by anything that happens in other areas of the code). In short, the function gets its own 'execution environment' and, as scripts get larger, this procedural isolation becomes increasingly important.

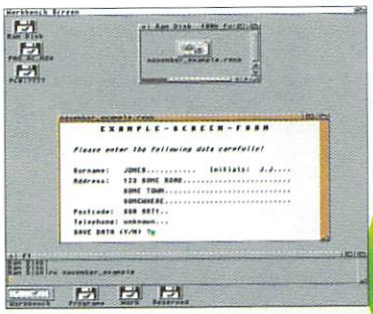
The difficulty, you may remember, is that there are times when you'd actually like to have a few items of data shared between routines that have been marked as procedures, and this is particularly so with variables that have been set up to provide static, i.e. pseudo-constant, data. Listing 1, for example, shows two of the routines from last month's code which both require their own CSI (control sequence introducer) variable definition.

As far as ease of maintenance etc., is concerned, it would, of course, be far better if that CSI definition existed in just one place in the program! One solution to this dilemma would be to define such items at the start of the program and then pass the required variables as function parameters. This approach is fine if you've only got one or two terms that may need to be shared, but it would get very cumbersome if many items were involved.

As you probably know, ARexx provides an 'Expose' keyword which provides another pathway for making particular variables 'visible' to a procedure. My approach for making static variable definitions available to a procedure is based on this keyword, but it's not just a matter of explicitly exposing each of the variable names in turn – it involves the use of ARexx's compound variables.

By defining a suitable stem and using this as the basis for all static definitions, all that needs to be done to make the whole set of pseudo-constant variables 'visible' to a procedure is to make the stem itself visible using a single 'Expose' declaration. I tend to use the stem name 'g.' (g for 'global') for these types of applications, and listing 2 shows the set of constant terms you'll find in this month's CoverDisk example. You'll notice, when you compare this month's code to that given in the October issue, that this technique slightly reduces the size of the procedures. This, however, is not where the real benefit lies. The real advantage is that we end up with all pseudo-constant definitions defined in just one place within the source, but eliminate the need to pass or expose lots of individual variables.

Stem exposure is then an extremely useful method for making suitably defined data sets available to a procedure. Another change made in this month's example code (you'll find the full script on the CoverDisk) is that the DisplayForm(), ClearForm(), ReadForm() and SaveData() functions have now also been rewritten as procedures, and you'll notice that I've been able to make the whole set of field definitions available to these procedures by just exposing the f. stem.



The display may look the same but underneath the surface some significant code changes have been made

```
CursorWrite: Procedure
parse arg window,r,c,text$
CSI = '9b'x
call Writech(window,CSI||r||'3B'x||c||'48'x)
call Writech(window,text$)
return

ShowInputField: Procedure
parse arg window,r,c,count
CSI         = '9b'x
call Writech(window,CSI||r||'3B'x||c||'48'x) /* position cursor */
call Writech(window,Copies('.',count))
return
```

Listing 1: Because these two routines have been created as procedures they both need their own CSI pseudo-constant definition

```
g.TRUE              = 1
g.FALSE             = 0
g.CR                = '0D'x
g.BACKSPACE         = '08'x
g.SPACE             = '20'x
g.APPROX            = '7E'x
g.ESC               = '1B'x
g.CSI               = '9b'x
g.BACKGROUND        = g.CSI||'3e'x||'32'x||'6d'x
g.CELL_COLOUR       = g.CSI||'34'x||'32'x||'6d'x
g.INVERSE_ON        = g.CSI||'37'x||'6d'x          /* inverse video style command */
g.INVERSE_OFF       = g.CSI||'32'x||'37'x||'6d'x   /* inverse off command */
g.ITALIC_ON         = g.CSI||'33'x||'6d'x          /* italic text style command */
g.ITALIC_OFF        = g.CSI||'32'x||'33'x||'6d'x   /* italic off command */
g.BOLD_ON           = g.CSI||'31'x||'6d'x          /* bold text style command */
g.BOLD_OFF          = g.CSI||'32'x||'32'x||'6d'x   /* bold off command */
g.UNDERSCORE_ON     = g.CSI||'34'x||'6d'x          /* underscore text style command */
g.UNDERSCORE_OFF    = g.CSI||'32'x||'34'x||'6d'x   /* underscore off command */
g.SCREEN_PROMPT1    = g.BOLD_ON||'E X A M P L E - S C R E E N - F O R M'||g.BOLD_OFF
g.SCREEN_PROMPT2    = g.ITALIC_ON||'Please enter the following data carefully!'||g.ITALIC_OFF
g.SCREEN_PROMPT3    = 'SAVE DATA (Y/N) ?'
g.SCREEN_PROMPT4    = 'DO YOU WISH TO ENTER MORE DATA (Y/N) ?'
g.SCREEN_PROMPT5    = '                                    '
```

Listing 2: The example program's static variable data set in its new stem based form

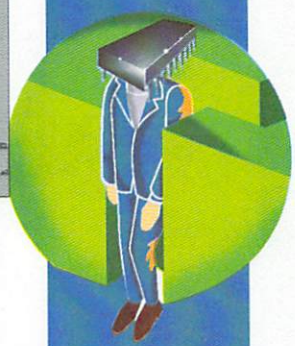
```
CursorWrite: Procedure expose g.
parse arg window,r,c,text$
call Writech(window,g.CSI||r||'3B'x||c||'48'x)
call Writech(window,text$)
return

ShowInputField: Procedure expose g.
parse arg window,r,c,count
call Writech(window,g.CSI||r||'3B'x||c||'48'x) /* position cursor */
call Writech(window,Copies('.',count))
return
```

Listing 3: The modified versions of the routines shown in listing 1

Coming soon

With the front-end form display code now complete, it is possible to envisage a number of uses for the routines we've developed. A questionnaire program or simple flat-file database utility are two applications that come to mind and, in a few months time, I'll be returning to the script we've built over the last few issues to explain how things like random access file handling facilities can be added.

For the immediate future, however, I suspect it is probably best if we allow some time for the quite complex ideas of recent instalments to settle for a while. Next month, therefore, I've got something totally different for you – a way of using a fully-fledged ASL file requester in your ARexx scripts with just a single line of code. Trust me – it's an issue that you must not miss!



That got your attention didn't it! Of course, what Paul Overaa is talking about this month is ARexx stem variable exposure, but you knew that didn't you

Halt!

Phil South looks at the first part of a useful screen routine

This month it's the turn of Graham Moody, another regular contributor to the column, and this is a program which finds out the specification of a screen. Over to you Graham.

"Here is a routine that will give you information on the current screen, from the screen number to the amount of memory the screen is using. There are two modes of operation: _SCREEN_INFO[1] is the silent mode, where by the information is returned from the procedure in a string:

```
_SCREENNUMBER=Val(Left$(I$,1))
X=Val(Mid$(I$,3,4))
Y=Val(Mid$(I$,8,4))
WIDTH=Val(Mid$(I$,13,4))
HEIGHT=Val(Mid$(I$,18,4))
NUMBEROFCOLOURS=Val(Mid$(I$,23,4))
NUMBEROFBITPLANES=Val(Mid$(I$,28,1))
AMOUNTOFSCREENMEMORY=Val(Mid$(I$,30,7))
```

this is how we get the information, that is returned form the procedure:

```
_SCREEN_INFO[0] is non silent mode where by the
information is displayed directly on screen."
```

Okay, here's the first part of the code. Don't try to run this! It is not complete, although if you're really clever you might be able to figure out where it's going and beat us to it. Otherwise, wait until next time and fill in the rest of the code before trying it out. Okay, here we go with part 1.

First the usual starting type code:

```
Screen Close Screen
F$=Fsel$(Dir$,"","Load any Iff Picture","to
test screen info")
If F$=""
        Edit
```

which loads the screen you are going to test and if it doesn't load it will boing you back to the editor.

```
Else
        Load Iff F$,Rnd(7)
```

This loads the iff picture to a random screen number. Close the IF/ELSE/ENDIF and we're onto the next bit:

```
End If
Wait Vbl
```

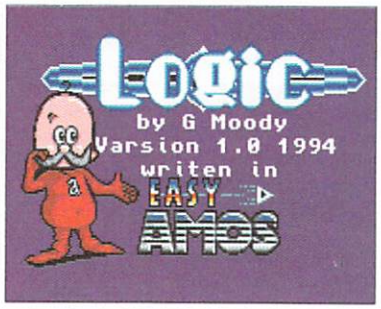
This of course waits for the next vertical blank, and then we are into the first PROC.

```
_SCREEN_INFO[1]
I$=Param$
```

This returns the information from procedure as a string called I$, which of course we can process later. The other form of the PROC is next:

```
_SCREENNUMBER=Val(Left$(I$,1))
X=Val(Mid$(I$,3,4))
Y=Val(Mid$(I$,8,4))
WIDTH=Val(Mid$(I$,13,4))
HEIGHT=Val(Mid$(I$,18,4))
NUMBEROFCOLOURS=Val(Mid$(I$,23,4))
NUMBEROFBITPLANES=Val(Mid$(I$,28,1))
AMOUNTOFSCREENMEMORY=Val(Mid$(I$,30,7))
Default
```

and after gathering the info we return to a default status. Now we can PRINT some of the info we've gleaned to the screen:



Find out the specification of a screen with logic

```
Print "The screen number ="+Str$(_SCREENNUMBER)
```

This prints the screen number, followed by similar statements to print x coordinate, y coordinate, screen width, screen height, maximum number of colours, number of bit planes in use, and finally the amount of screen memory in use, with the following stements:

```
Print "X ="+Str$(X)s
Print "Y ="+Str$(Y)
Print "The screen width ="+Str$(WIDTH)
Print "The screen height ="+Str$(HEIGHT)
Print "The total number of colours
are"+Str$(NUMBEROFCOLOURS)
Print "The number of bit-planes is"+Str$(NUM-
BEROFBITPLANES)
Print "The memory requirment ="+Str$(AMOUNTOF-
SCREENMEMORY)
```

then we locate the cursor and print a prompt to tell the user to press a mouse button:

```
Locate ,15 : Centre "press mouse key."
Repeat : Until Mouse Key<>0
```

Then we close current screen:

```
Screen Close Screen
```

and then we start again with the requester to load another picture (or even the same picture!):

```
F$=Fsel$(Dir$,"","Load another Iff Picture","to
test screen info")Wait 15
```

This waits for 15/50s of a second. Then we test for the picture load again and go back to the editor if it didn't, as before. If it does load we load it into a random screen:

```
If F$=""
        Edit
Else
        Load Iff F$,Rnd(7)
End If
Wait 15
```

Now we activate the PROC again:

```
_SCREEN_INFO[0]
I$=Param$
Default
Direct
```

Now we get to the point where we define the procedures:

```
Procedure _SCREEN_INFO[SILENT]
        GAP$="                                   "
```

Note: The gap between the quotes is 39 spaces by my reckoning. Next we set the address of screen table:

```
  AD=Screen Base
_SCREEN_NUMBER=Deek(Screen Base+188)
```

until we hit the current screen number. Now we look for the screen's x and y co-ordinates:

```
   INFO$=Str$(_SCREEN_NUMBER) :
I$=Right$(INFO$,1)+" "
XDISPLAY=Deek(Screen Base+82)
INFO1$=Str$(XDISPLAY)
I$=I$+Right$(INFO1$,Len(INFO1$)-
1)+Left$(GAP$,5-(Len(INFO1$)-1))
YDISPLAY=Deek(Screen Base+196)
INFO2$=Str$(YDISPLAY)
I$=I$+Right$(INFO2$,Len(INFO2$)-
1)+Left$(GAP$,5-(Len(INFO2$)-1))
 _SCREEN_WIDTH=Deek(Screen Base+76)
```

and then the width and the height of the screen:

```
   INFO3$=Str$(_SCREEN_WIDTH)
I$=I$+Right$(INFO3$,Len(INFO3$)-
1)+Left$(GAP$,5-(Len(INFO3$)-1))
_SCREEN_HEIGHT=Deek(Screen Base+78)
INFO4$=Str$(_SCREEN_HEIGHT)
I$=I$+Right$(INFO4$,Len(INFO4$)-
1)+Left$(GAP$,5-(Len(INFO4$)-1))
```

Then the max amount of colours, number of planes available and screen memory requirement:

```
 _MAXIUM_NUMBER_OF_COLOURS=Deek(Screen Base+96)
INFO5$=Str$(_MAXIUM_NUMBER_OF_COLOURS)
I$=I$+Right$(INFO5$,Len(INFO5$)-
1)+Left$(GAP$,5-(Len(INFO5$)-1))
NOPA=Deek(Screen Base+80)
INFO6$=Str$(NOPA)
I$=I$+Right$(INFO6$,Len(INFO6$)-
1)+Left$(GAP$,2-(Len(INFO6$)-1))
TSM=(Deek(Screen Base+76)*Deek(Screen
Base+78)*Deek(Screen Base+80))/8
INFO7$=Str$(TSM)
I$=I$+Right$(INFO7$,Len(INFO7$)-
1)+Left$(GAP$,7-(Len(INFO7$)-1))
If SILENT=0
        If _SCREEN_NUMBER=7
        ISN=6
Else
        ISN=7
End If
```

● Next month we'll conclude the process and round it all up.

Who goes there?

Phil South looks at part two of the screen info program

Welcome back. Let's hope you have the rest of the program typed in by now, as we are going to give you the rest of the Screen Info program by Graham Moody. All set? Right, let's get going.

As we said last month this is a screen info program which loads a screen and gives you info about it. The author describes its usage thus:

"Here is a routine that will give you information on the current screen, from the screen number to the amount of memory the screen is using. There are two modes of operation.

```
_SCREEN_INFO[1]
```

is the silent mode, where by the information is returned from the procedure in a string.

```
_SCREENNUMBER=Val(Left$(I$,1))
X=Val(Mid$(I$,3,4))
Y=Val(Mid$(I$,8,4))
WIDTH=Val(Mid$(I$,13,4))
HEIGHT=Val(Mid$(I$,18,4))
NUMBEROFCOLOURS=Val(Mid$(I$,23,4))
NUMBEROFBITPLANES=Val(Mid$(I$,28,1))
AMOUNTOFSCREENMEMORY=Val(Mid$(I$,30,7))
```

this is how we get the information, that is returned from the procedure:

```
_SCREEN_INFO[0]
```

is non silent mode where by the information is displayed directly on screen."

Okay, here's the second part of the code. Don't try to run this on its own as it is not complete! Okay, here we go with part 2.

First we open a screen:

```
Screen Open ISN,640,120,16,Hires
Screen Display ISN,128,-100,,
```

We grab the palette of the current screen:

```
Get Palette _SCREEN_NUMBER
```

Then we fade in:

```
Fade1,,$FFF,$FF0,$F00,$CC0,$AAC,$77A,$F00,$F,
$8E8,,,$C,$8F,$3,$AAC
        Curs Off : Flash Off : Paper 5 :
Hide : Wait Vbl
        X=0 : Y=0 : WIDTH=640 : HEIGHT=120
: Gosub LIGHT3D
        X=40 : Y=13 : WIDTH=560 : HEIGHT=13
: Gosub LIGHT3D
```

We then GOSUB to the routine that prints the information:

```
Gosub INFOPRINT
Wait Vbl
Ink 3 : Paint X+4,Y+4,0 : Rem paint an area
of screen, in colour 3
Paper 3 : Pen 5 : Locate ,2 : Centre "Screen
information"
For N=0 To 150 Step 16
        Screen Display ISN,128,N,,
        Wait Vbl
        Next N
        For N=150 To 100 Step -4
           Screen Display ISN,128,N,,
           Wait Vbl
        Next N
For N=100 To 150 Step 2
        Screen Display ISN,128,N,,
        Wait Vbl
Next N
Timer=0
```

Having done all that we set timer to zero and then we go into a little repeat/until loop:

```
Repeat
        T=Timer/50
        If T=>60
          If UP=0
            N=N+1
              If N=>150 : UP=1 : End If
```

If this is the case we will move screen down. But...

```
        Else
          N=N-1
          If N=<60 : UP=0 : End If
```

if this is the case we will move screen up.

```
        End If
        Screen Display ISN,128,N,,
```

Here's where the decisions we made earlier about moving the screen up/down come into effect:

```
                End If
                Wait Vbl
```

Wait for the next vertical blank and then set up a mouse key sensor, so if a mouse key is pressed we will continue, like so:

```
            Until Mouse Key<>0
```

Next we have a FOR/NEXT loop, which shows us the info screen:

```
        For N=N To -100 Step -16
        Screen Display ISN,128,N,,
        Wait Vbl
        Next N
```

Then we close the information screen and exit the procedure:

```
        Screen Close ISN :
        Pop Proc
  End If
  Goto REPORT
```

Right, now we enter the Light3D area of the program. Try this proc on its own to see what happens. X and Y hold the x,y position of the box, WIDTH and HEIGHT hold the width and height of the box. Simple and effective huh?

```
LIGHT3D:
Ink 5 : Bar X,Y To X+WIDTH,Y+HEIGHT
```

This clears the middle with the background colour.

```
Ink 6
Draw X+WIDTH,Y To X+WIDTH,Y+HEIGHT
Draw To X,Y+HEIGHT
Ink 4
Draw To X,Y
Draw To X+WIDTH,Y
Ink 6
Draw X+WIDTH-1,Y+1 To X+WIDTH-1,Y+HEIGHT-1
Draw To X+1,Y+HEIGHT-1
Ink 4
Draw To X+1,Y+1
Draw To X+WIDTH-1,Y+1
Ink 6
Draw X+WIDTH-2,Y+2 To X+WIDTH-2,Y+HEIGHT-2
Draw To X+2,Y+HEIGHT-2
Ink 4
Draw To X+2,Y+2
Draw To X+WIDTH-2,Y+2
Return
```

And finally we have the INFORPRINT label we referred to earlier:

```
INFOPRINT:
Pen 12
Locate ,4
Centre " The screen number="+Str$(_SCREEN_NUM-
BER)
Locate ,5
Centre " The screen width="+Str$(_SCREEN_WIDTH)
Locate ,6
Centre " The screen
height="+Str$(_SCREEN_HEIGHT)
Locate ,7
Centre "The maximum number of
colours="+Str$(_MAXIUM_NUMBER_OF_COLOURS)
Locate ,8
Centre "The number of planes
avialable="+Str$(NOPA)
Locate ,9
Centre "The lefthand side of the screen is dis-
played at"+Str$(XDISPLAY)
Locate ,10
Centre "The top of the screen is displayed
at"+Str$(YDISPLAY)
Locate ,11
Centre "The total memory requirement for this
screen="+Str$(TSM)+" bytes"+" or
"+Str$(TSM/1024)+"KILOBYTES "
Locate ,12
Centre "(When the double buffer system is in
use time by 2)"
Locate ,13
Pen 0 : Centre "Press mouse key to QUIT"
Return
REPORT:
End Proc[I$]
```

And there you have it. All the information you could wish for about a screen. Handy to be able to do this kind of thing on the fly. If, for example, you had an image processing program, and you wanted to sense the parameters of an incoming screen file so you could casually pop them up on the screen after a menu, for example, then this is the routine for you. It is a veritable Swiss Army Knife of a routine, so keep it handy.

Back to normal, whatever that is, next month, and keep those routines and letters coming.

Write stuff

If you have a routine you'd like to share, then please write to Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP.

Phil South shows you how to emulate cheesy old arcade game techniques

What's that pong?

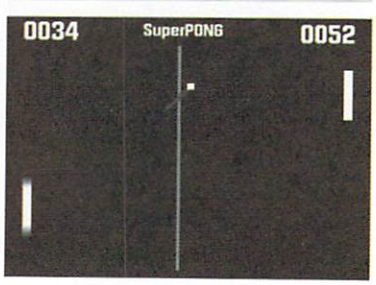
I'm always getting letters asking me how to do this or that in Amos, like 'How can I write a game of Defender?' or 'can you show me how to emulate the bouncing balls in Ping Pong?', or 'How do you do that trick with the characters de-rezzing in Robotron?' I tell you, it's a never ending struggle for sanity in this house. What is worse is that half the time, people don't want to know how to code, they want me to write the program for them and put it on the disk they send me. Forget it, buster! It's my job to teach people how to code, not do the work for them. Tsk! Some people.

But just when I was resolved never to do the dirty work for anyone again, I got a letter from an a Amiga Computing reader – R Bellows of Edinburgh – who asked: "I've tried as hard as I can to make a ball bounce around the screen like it does in Pong or those Arkanoid clones. How do you do it so it looks good?" Okay, all right, I give up. Here is my way.

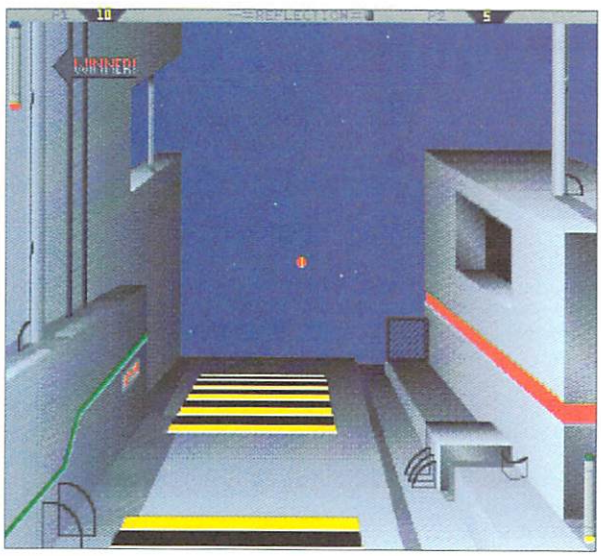
Pong, or Ping Pong, was one of the first games ever devised as a computer or video game, and it was certainly the first video game I owned, I don't know about you – but then I'm sad and old. The thing which always fascinated me about the game was the way the ball bounced around the screen. It seemed to simulate a real ball bouncing around, which of course is incorrect because real balls bounce in three dimensions not two. But as a 2D game of ping pong it wasn't at all bad.

It was quite a few years later that a friend of mine, I think it was probably Aaron Fothergill, showed me how to compute bouncing things with vectors. The example is as follows:

```
Curs Off : Hide : Flash Off : Cls 0 : Ink 4,4 :
Paper 0
Input "X Vector ";DX#
Input "Y Vector ";DY#
Cls 0 : Bar 0,0 To 3,3
Get Bob 1,0,0 To 4,4
Cls 0
X#=160 : Y#=100
While X#>0 and X#<320 and Y#>0 and Y#<200
          Bob 1,X#,Y#,1
          Wait Vbl
          X#=X#+DX#
          Y#=Y#+DY#
Wend
End
```



Pong was one of the first computer games



Ping Pong doesn't have to be just mono and two dimensional

You begin by specifying the start X and Y direction between -8 and 8, and this tells the sprite which way to go. Learning how the vectors behave in two dimensions is one way of learning how to compute them in 3D, which makes for some pretty fancy 3D game ideas.

A separate routine, which is sort of related to that, is the Flip Flop, where a value is flipped one way and back again. Try this:

```
X=1 : DX=1
Curs Off : Flash Off : Cls 0
Ink 4,4
Bar 0,0 To 15,15
Get Bob 1,0,0 To 16,16
Cls 0
Double Buffer
Do
  Bob 1,X,100,1
  Wait Vbl
  X=X+DX
  If X<=0 or X>=319
            DX=-DX
  End If
Loop
```

This is a simple example of bouncing a ball on the side of the screen. Add these things together and what have you got? A lot of code which doesn't go together to make a game? Yes, you'd be right there. But you have the seed of a game. You have a couple of processes that work. All you need to do is to put them together. You can't? Doh! Do I have to do everything? Okay...

You set the sprite off in a random direction from the centre of the 'court', okay. You do this simply by making the input values to the vector random. Next, you check the sprite via collision detection and checking the numbers:

```
X=0 or X=320
```

to see if it hits the bat or a goal line. If it hits the roof or the floor, the top and bottom of the screen, you simply flip the Y co-ordinate so it is going in the opposite direction. So imagine the ball is going up to the top at 45 degrees. Both the X and Y co-ordinates are increasing. Then the ball hits the side. Flip flop the Y co-ordinate and make it go down and the ball appears to bounce off the roof of the court.

Write stuff

If you have any other Amos programs or queries about Amos, then please write to the usual address, which is: Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP. Please send routines on an Amiga disk with notes on how the program works on paper, not as text files on the disk. Make the routines short enough to appear in print, i.e. no more than about 30-40 lines of code, and if possible make them use no external graphics. If they can't be used without them then be sure to provide them on the disk in native IFF format, and the same goes for sound files. Follow these guidelines and you'll be sure of making me a happy man if nothing else.

Okay, Pong me!

Let's see your Pong games then. Write a game based on the principles we've discussed, and write a simple Pong game. Add a scoring mechanism, a method of repeating rounds and starting a new game or finishing the game all together, and put it on a disk. It shouldn't be terribly long, so I'll print the best ones in a future issue. To give you a little incentive, the best one gets a copy of my book 'Mastering Amiga AMOS', and if you're particularly unlucky I'll sign it too. That'll teach you.

Do you play Amiga games ?

If so, **Amiga Action** *is the magazine for you – it's 100% pure Amiga games entertainment!*

Amiga Action can be yours with *FOUR* incredible coverdisks for only $5.

The coverdisks also contain the best in *fully playable* PD games.

Amiga Action facts:

- Monthly
- *Two coverdisks each issue containing only the best Amiga game demos*
- The latest reviews from writers who know the market
- *Comprehensive behind-the-scenes previews of games yet to be released*
- Everything an Amiga games player needs to know
- *Over the past 12 months, coverdisks on Amiga Action have included, among others, the following demos of commercially released games:*

If you wish to sample the very latest available issue, plus an additional two Amiga Action coverdisks for hours of entertainment and fun, simply fill in the form below and send it with a payment for $5 to:

Amiga Action Offer, IDG Media
460 Hillside Avenue, Hillside
New Jersey 07205

- *Impossible Mission 2025*
- *Valhalla*
- *Dreamweb*
- *Skeleton Krew*
- *Shadow Fighter*
- *Speris Legacy*
- *Premier Manager 3*
- *Brutal*
- *Turbo Trax*
- *Quik the Thunder Rabbit (full game).*

ORDER FORM

☐ *Please send me the latest issue of Amiga Action and four coverdisks*

☐ *I enclose $5 payment*

Name: _____

Address: _____

_____

_____ Zip code _____

Now send this form to Amiga Action Offer, IDG Media, 460 Hillside Avenue, Hillside, New Jersey 07205.

Please put a stamp on your envelope. This is not a freepost address

A gem of a mixer

Paul Overaa takes a look at a sound mixer designed specifically for use with the Amiga

Most people would agree that, quality-wise, listening to internal sound-based music through most Amiga monitors leaves a little to be desired. The addition of multimedia-style speakers helps quite a bit but to be honest, some of the offerings currently available have quite limited tone control circuitry. This, coupled with the fairly mediocre speakers that are normally provided, usually means that even once you've added a separate speaker system there is still room for improvement.

In most cases, all that's needed to improve things are simply some better signal EQ (equalisation) facilities. Boosting the bass and treble end of a signal, for instance, can provide some extra 'punch' that brings music to life. If you can also control the signal level being fed into the speaker system, it's often possible to further improve the sound quality.

This is exactly where a unit called the Little Gem comes into its own. It's a small (7.5cm(W) x14cm(H) x3cm(D) two channel audio mixer that provides independent gain, high and low frequency boost and cut, and left/right pan controls. The two input and two output connectors are phono socket type (i.e. the same as the Amiga uses) so when using the unit for sound output control, it's just a matter of connecting the Amiga's sound terminals to the Little Gem via a stereo phono lead (not supplied) and connecting the Little Gem outputs to your existing multimedia sound system.

The unit itself is powered by a 9v PP3 battery and you do need to remember to switch the unit off after use, otherwise current will continue to be drawn. Mains operation is also possible via most everyday regulated power supplies, and the Little Gem will operate satisfactorily anywhere between 9-18 volts DC, and accepts any polarity.

The Little Gem mixer

And that's basically it – you place the Little Gem into your signal line and bingo, you instantly get much improved signal level and tone control. The other advantage of course is that you also get full control over left/right stereo panning which is particularly useful for removing hard left or right instrument panning in a song. If, say, all the percussion/drums or a bass line of a song had been placed on the left stereo channel, you could use the pan control to bring those instruments nearer to the centre of the 'stereo stage', in all likelihood producing a more natural overall sound output.

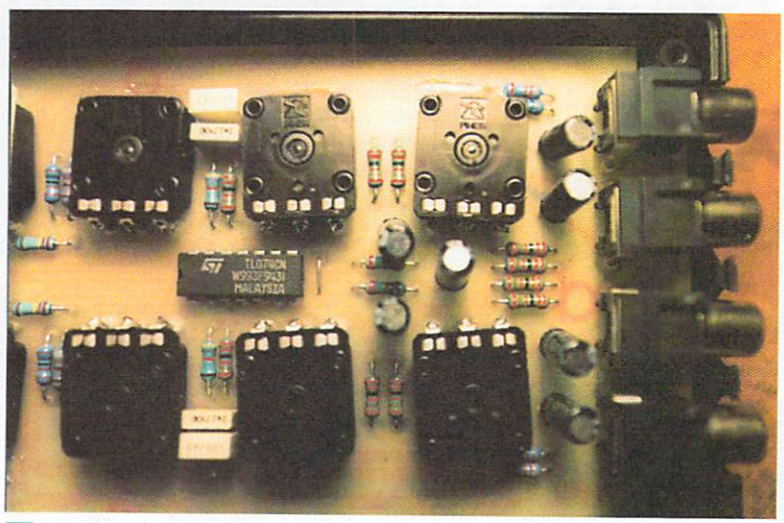
There are other uses for the Little Gem as well. Most sound samplers, for example, have little or no signal EQ facilities, so unless the sound source itself provides these, you're stuck with sampling whatever signal arrives at the sampler. Put the Little Gem between the source and the sampler, however, and you can then process the sound before it enters the sampler – and this often allows you to improve the quality of the resulting sample.

Though fairly expensive (relative to the prices of many of the Amiga sound systems around), the Little Gem has made a good impression. The construction inside is of reasonable quality and in practice the mixing circuitry works well. Equally important, the Little Gem has very low noise levels (in fact it's as good as some mixers costing ten times the price).

In short, if you have any doubts about whether you're getting the best possible output from your existing Amiga sound system or not, the chances are you aren't – and the Little Gem could provide the perfect solution!

What's it got?

- 2 channel in, 2 channel out
- Hi and lo EQ to +/- 12 dB
- Pan controls for stereo positioning of channels
- Battery or mains operation – takes no power from the Amiga
- Suitable for all Amiga models



The internal circuit board layout looks to be reasonably good

The bottom line

Product: Little Gem Micro Mixer
Price: £69-95 incl UK p&p
Overseas delivery – Europe add £4, Rest of world, add £6
Supplier: Gillett Multimedia
Tel: 01353 669203

Ease of use	**10**
Implementation	**8**
Value for money	**8**
Overall	**9**

AMIGA COMPUTING US EDITION

Welcome to the August issue of ***Amiga Computing US Edition****.*

At last the wait is over! The A4000 and A1200 are guaranteed to be back in production by September, and better still, Amiga Technologies have just announced the incredible software bundle that will be shipping with the new machines: ScalaMM300, Wordworth 4se, Photogenics, DataStore, Personal Paint 6.4, Organiser 1.1 and TurboCalc 3.5, plus Pinball Mania and Wizz.

The future's secure and ***Amiga Computing*** *will be here to cover every aspect of the Amiga's renaissance. We will, of course, continue to bring you the very best editorial, analysis and insight of any Amiga magazine in the world.*

GOING FOR GOLD

As an ***Amiga World*** *subscriber, you simply received a high-quality magazine every month. Now* ***Amiga Computing US Edition*** *is able to make your subscription Gold. If you choose, you can receive two coverdisks each and every month with your magazine. These disks contain demos of the latest products, full working programs, utilities, shareware, and stunning games. Recent disks have included Personal Paint 4, Animation Workshop, Easy Amos and The Speris Legacy – the list goes on....*

To become a Gold subscriber you can either wait until your subscription renewal date and renew as a ***Gold subscriber*** *by completing the form on the subscriptions page, or you can* ***ACT NOW*** *and upgrade your subscription immediately to* ***Gold*** *and we will start sending you the two disks from the following issue. An upgrade costs $2.25 for each remaining issue from your current subscription. Just complete the brief form below, send it today, and we will send you a bill with your first two disks – it couldn't be easier.*

PLUS, all Gold *subscribers will receive a CD-ROM worth $24 absolutely* ***FREE!*** *The Weird Science Multimedia Toolkit contains music, utilities, fonts, clip art and images, and is also compatible with the CD32.*

AMIGA ACTION

The publishing gremlin did it again! Last month I promised you a copy of our sister title ***Amiga Action*** *for just $5. Needless to say the offer still stands, but this time I guarantee the promised offer page will actually appear. Sorry for any confusion, it isn't always easy to publish across the pond!*

Amiga Action *is widely regarded as the best magazine in Europe when it comes to dedication to Amiga games. Every month it ships with two coverdisks containing game demos for you to play, as well as editorial coverage of all that's new in the games world. If you are an Amiga games enthusiast and simply can't get enough, why not give* ***Amiga Action*** *a try. For just $5, we will send you the latest issue plus an additional two Amiga Action coverdisks for hours of entertainment and fun. Simply complete the form on page ** and send it today.*

- ☑ *I wish to upgrade my remaining subscription to GOLD from the next issue (billing will be $2.25 for each issue)*
- ☑ *Please send me my first two disks immediately*
- ☑ *Don't bill me until I receive the first two disks*
- ☑ *Don't forget my FREE CD-ROM gift*

Name: _____

Address: _____

_____ *Zip code* _____

Please send this form to:
Amiga Computing US Gold subscription offer, IDG Media, Media House Adlington Park, Macclesfield, Cheshire, England, SK10 4NP

Paul Austin,
Editor

More speed... more color... more fun!

VILLAGE TRONIC

Within North America contact

Software Hut
Folcroft East Buisness Park
313 Henderson Dr
Sharon Hill, PA 19079
Phone: 610-586-5701
Fax: 610-596-5706

Expert Services
7559 Mall Road
Florence, KY 41042
Phone: 606-371-9690
Fax: 606-282-5942

Creative Computer
2645 Maricopa St
Torrance CA. 90503
Phone: 310-787-4520
Fax: 310-222-5888

Select Solutions
109 South Duncan Road
Champaign,Il 61826-6512
Phone: 800-322-1261
Fax: 217-356-0097

Within Europe contact

Wellweg 95 D- 31157 Sarstedt - Germany
Tel: +49/(0)5066/7013-13 technical Hotline
Tel: +49/(0)5066/7013-18 Orders
Tel: +49/(0)5066/7013-40 Mailbox
Tel: +49/(0)5066/7013-49 FAX

Prices all RTG. Articles, Logos, Public Mailing Actions are trademarks of Village Tronic. Dealer inquiries welcome. All prices are Suggested U.S. Retail Price (SRP). Dealer prices may vary. (c) 1994 Village Tronic. All rights reserved.

'060 SPEED FOR YOUR A1200/1500/2000 and A3000/4000 TODAY!

CYBERVISION 64

LIMITED OFFER
PHOTOGENICS LITE SOFTWARE WITH CYBERVISION FREE FOR A LIMITED TIME!

64-BIT ENGINE A3000/4000 24-BIT COLOR ACCELERATED GRAPHICS CARD.
For all Zorro-3 Amigas, this 64-Bit high speed graphics engine/blitter offers up to 1600 x 1200 pixels in 8-Bit color or 1024 x 768 pixels in True 24-Bit Color, with 2Mb of display memory (4Mb user upgradeable).

Cybervision 64... 2Mb - $469.95 4Mb - $599.95

FREE PhotoGenics LITE - Powerful software for image manipulation - the ULTIMATE 24-bit graphics package for A3000 or A4000! Includes 27 effects for processing photos/images such as Emboss, Solarize, Texturize, Add Noise etc. as well as Paint Tools inc. Chalk Pastels, Crayon, Felt Tips & more - Great!
(Packaging is shown for illustration purposes only and is not included)

Figures shown in our chart are in MIPS and are taken from comparative performance tests using SysInfo

CYBERSTORM

THE WORLD'S FASTEST... NO QUESTION!

- Up to 128Mb of standard SIMMs can be installed and you can even transfer the 72Pin SIMMs from your A4000 straight onto Cyberstorm.
- Options include a SCSI-2 only module, or a SCSI-2 and combined Ethernet expansion module.

The World's Fastest Amiga!
CYBERSTORM - THE FIRST and ONLY **68060** ACCELERATOR FOR THE A4000. When Cyberstorm renders a test graphic with Imagine 2.0 software, processing time is FAST... Just 2.45 minutes! Compare this with 10.34 mins on a standard A4000 040/25!

Cyberstorm 68060/50
50MHz 68060, 0Mb (Exp. to 128Mb)
$1349.95

BLIZZARD 1220/4

28MHz 68EC020 A1200 TURBO 4Mb, 32-Bit RAM Expandable to 8Mb

Multi award-winning BLIZZARD 1220/4 4Mb TURBO
Offering by far the best price/performance ratio of any A1200 32-Bit RAM expansion on the market, the 1220/4 incorporates everything a good memory expansion should - such as a Real Time Clock, RAM expandability, optional FPU etc. And, with its Motorola Processor running the 32-Bit FAST RAM at an amazing 28MHz, the 1220/4 has broken all the barriers! Check the facts for yourself and fit the BEST Amiga A1200 Turbo Memory board. Remember with this unique expansion, you get 4Mb, 32-Bit RAM already fitted, tested and ready to use - included in the price!

- Integrated 28MHz 68EC020 Clock Speed Doubler for up to 300% overall performance increase
- Factory Installed & Tested 4Mb 32-Bit FAST RAM
- Expandable to 8Mb with Blizzard Add-4 Board
- Integrated Battery Backed Real Time Clock
- Easy Trapdoor Installation
- Can be disabled for full games compatibility

1220/4 Turbo 28MHz 68EC020
4Mb 32-Bit Fast RAM, expandable to 8Mb — **$299.95**

Add-4 Board - extra 4Mb for 1220/4
4Mb 32-Bit Fast RAM add-on — **$Call**

Motorola Maths Co-processors
68882 PLCC type FPU, 14/28/40MHz — **$Call**

THE AWARD WINNING A1200 RAM EXPANSION!

1st Place Amiga Shopper Reader Awards

What the Mags think...
Amiga Computing
Top Rated
Amiga Format
Amiga Shopper
Star Buy
Amiga Superstar

Amiga Shopper said "in short if you want the fastest Amiga in the World, you have no option." Amiga Computing "...Amigas can now do anything Pentiums can" 91% Amiga Format "...buy one as soon as you get chance" - 95% rating

BLIZZARD 1230-IV

NEW... 50MHz 68030 A1200 TURBO ACCELERATOR - 0Mb Expandable to 128Mb

THE highest performing A1200 68030 Accelerator!
The NEW 1230-IV is the successor to the market leading 1230-III board. Not only has there been an INCREASE in specification, but at the same time, a DECREASE IN PRICE! With its 50MHz 68030 and MMU, the new 1230-IV offers EVEN MORE for LESS! Up to 500% performance gain is achieved and options via its Fast Expansion Bus include Modules such as a SCSI-2 Controller. A standard SIMM socket provides for up to 128Mb auto-configuring 32-Bit FAST RAM (or 256Mb with SCSI-2 option).

- Easy Trapdoor Installation
- Battery Backed Self Recharge RT Clock/Calendar
- High performance DMA expansion with full 32-Bit wide DMA
- 68030 may be disabled with a simple keystroke on boot up allowing full games compatibility - even badly programmed, older software!
- PGA FPU Socket allowing optional 50MHz, 68882 FPU

1230-IV Turbo[1] 50MHz 68030 & MMU
0Mb 32-Bit Fast RAM, Expandable to 32Mb — **$249.95**

SCSI-2 Module[1] for 1230-IV Turbo
(with additional 128Mb SIMM socket) — **$125.95**

Motorola Maths Co-processors
68882 PGA type FPU, 33/50MHz — **$Call**

4Mb SIMM RAM Expansion
32-Bit, 72 pin (*Call for Larger SIMMs prices*) — **$Call**

THE WORLD's FASTEST A1200 '030 ACCELERATOR!

Blizzard and Cyber products have lead the way for Amiga add on boards, extending performance for the home and business user alike. They've consistently achieved the highest magazine accolades & awards! Not surprising then, that for the introduction of the World's FIRST series of '060 technology add in boards available for YOUR Amiga, Blizzard and Cyber are again the name to innovate! A new range for A1200/1500/2000/3000 & 4000 Amigas look set to earn even further recognition.

[1]*Available 3rd Quarter '95* [2]*Available 4th Quarter '95*

BLIZZARD 1260

NEW... 50MHz 68060 A1200 TURBO ACCELERATOR - 0Mb Expandable to 64Mb

The '060 revolution is here NOW for YOUR A1200!
The NEW Blizzard 1260 Accelerator gives you the World's fastest A1200! With its 50MHz **68060** and MMU, the new 1260 offers unsurpassed performance 4 to 5 times faster than an Amiga A4000/040! Options via its Fast Expansion Bus include Modules such as a SCSI-2 Controller. A standard SIMM socket provides for up to 64Mb auto-configuring 32-Bit FAST RAM (or 192Mb when utilising the SCSI-2 option).

- Easy Trapdoor Installation
- Battery Backed Self Recharge RT Clock/Calendar
- High performance DMA expansion with full 32-Bit wide DMA
- 68060 may be disabled with a simple keystroke on boot up allowing full games compatibility - even badly programmed, older software!

1260 Turbo[1] 50MHz 68060 & MMU
0Mb 32-Bit Fast RAM, Expandable to 64Mb — **$799.95**

SCSI-2 Module[2] for 1260 Turbo
(with additional 128Mb SIMM socket) — **$139.95**

BLIZZARD 2060

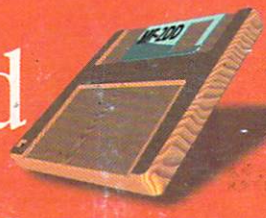
50MHz 68060 A1500 or A2000 TURBO ACCELERATOR - 0Mb Expandable to 128Mb

The '060 revolution is here for YOUR A1500/2000 too!
The NEW Blizzard 2060 offers the same features/performance as the 1260 to the AMIGA 1500 and 2000 user, whilst allowing up to 128Mb RAM

2060 Turbo[2] 50MHz 68060 & MMU
0Mb 32-Bit Fast RAM, Expandable to 128Mb — **$995.95**

All Blizzard and Cyber products use brand new MOTOROLA 68030 series processors (not second hand as in some of our competitors boards) They always run **WITHIN** the electrical timing specification laid down by Motorola to prevent any possible overheating or reliability problems. When you pay for a new 50MHz CPU for example, that's exactly what you get - not a 40, 33 or even a 25MHz CPU "clocked" to 50MHz!
Look out for the **MOTOROLA MOTIVATED** logo - your guarantee of our commitment to quality and reliability - **BEWARE** of "clocked" CPUs!

SoftWood



The quickest way to Speed up YOUR Amiga...

PLACE AN ORDER BY PHONE OR FAX WITH YOUR CREDIT CARD RIGHT NOW...

VISA MasterCard

MAIL ORDERS...
SEND CHECK OR MONEY ORDER
ADD $25 POSTAGE/HANDLING

SoftWood, Inc. P.O. Box 50178, Phoenix, Arizona, 85076. Phone: 800-247-8330 (Voice) 602-431-8361 (FAX)