Issue 2 ■ JULY ■ 1995

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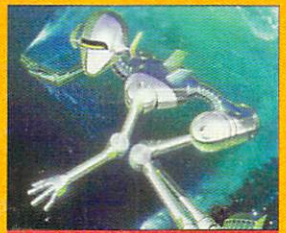

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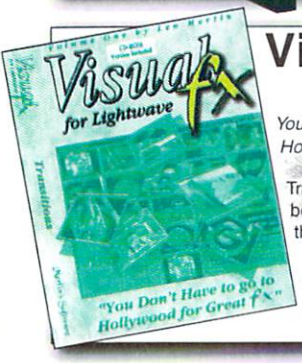

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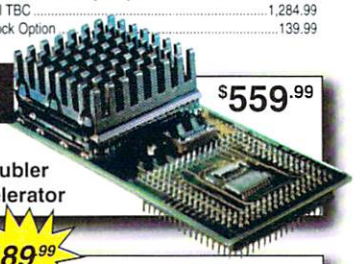

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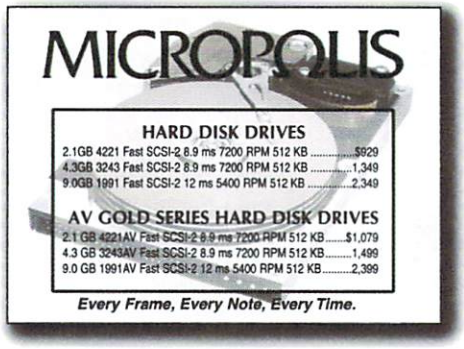

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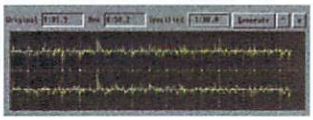

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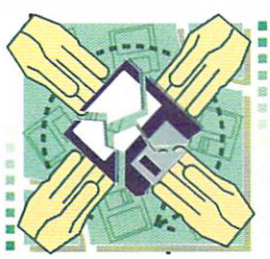

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68040 Heat Sink	25.00
Intel 486 DX2 - 66	175.00
Intel 486 DX2 - 50	145.00
Intel 486 DX 33	135.00
Intel 486 SX 33	99.00

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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, manuals)	199.00
3.1 Upgrade kit (pick two)	125.00
3.1 Kickstart roms (specify unit)	89.00
3.0 Kickstart roms	199.00
2.1 OS Upgrade Kit (complete)	99.95
2.1 OS Upgrade Kit (software,manuals)	79.95
2.05 Kickstart Rom	29.95
2.04 Kickstart Rom	34.95
1.3 Kickstart Rom	13.95
1MB Agnus (8372A)	39.95
2MB Agnus (8372B)	99.95
Super Denise (8373)	34.95
Paula (8364) Or Denise (8362)	29.95
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	+899
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)	1099	68040 - 33Mhz w/CPU	(3033)	1099
68040 - 40Mhz w/CPU	(4040)	1299	68040 - 40Mhz w/CPU	(3040)	1299

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	265
3.5" LP 105MB IDE or SCSI	259
5.25" HH 200MB (SQ5200) (R&W 44&88) SCSI	399
3.5" LP 270MB SCSI (SQ3270S) 13MS SCSI	399
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	99
Panasonic Int / Ext	256k	380MS	300k/sec	175/199
NEC 3Xi Internal	256k	190MS	450k/sec	259
NEC 3Xp External	256k	150MS	450k/sec	279
Toshiba 4x Int/Ext	256k	120MS	600k/sec	299/399
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	499/599

ASIM CDFS 3.0 w/Fish&Photo CDs (AMIGA) 67

CBM A3640 ACCELERATOR 68040@25Mhz $399

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! **$395.00**

3.5" HARD DRIVES

Quantum

365 ELS SCSI I & II or IDE	11MS	2 Yrs	125
540 ELS SCSI I & II or IDE	11MS	2 Yrs	199
730 LPS SCSI I & II or IDE	11MS	2 Yrs	255
850 LPS SCSI I & II or IDE	14MS	3 Yrs	269
1080 LPS SCSI I & II or IDE	12MS	3 Yrs	435
1075 Atlas 7200RPM 1MB	8MS	5 Yrs	775
*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	179
ST3491A 420MB IDE LP	16MS	3 Yrs	199
ST31200A 1050MB IDE LP - A4000 Autobootable!	9MS	3 Yrs	299
ST31230N 1050MB SCSI LP	9MS	5 Yrs	519
ST32550N 2.1G Barracuda	8MS	5 Yrs	1099
*ST15150N 4G Barracuda	8MS	5 Yrs	1549
*ST410800N 9G Elite	11MS	5 Yrs	2699

Quantum 4.3GB SCSI I & II
128 Buffer - 3.5" - Grandprix
10 MB/Sec Sync - 3 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	1499
*3243 A/V 4.3G SCSI I&II	8.9MS	5 Yrs	1599
*1991 9.0G SCSI I&II	12MS	5 Yrs	2395
*1991 A/V 9.0G SCSI I&II	13MS	5 Yrs	2499

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
ST9300A 260MB Seagate	229
ST9385A 340MB Seagate	289
ST9550A 455MB Seagate	369
ST9655A 520MB Seagate	429

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

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EXPANSION SYSTEMS

HIGH FLYER

Standard	395
With Power Supply	495
Fan Kit	45
Cable Kit	85

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 40MB HD System w/2.5" Drive (500/2000)	269
AdIDE 130MB HD System w/2.5" Drive (500/2000)	399
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	999
Sony External 500k/sec	1099

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!

VIDEO TOASTER SYSTEMS

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

Cyberstorm 68060 @ 50 mhz option now available for the A4000 Series!

SCSI Option	249.00
I/O Option	549.00
	1249.00

Processor Options -

CBM A3630 68030 @ 25mhz w/mmu & fpu	299
CBM A3640 68040 @ 25mhz w/mmu & fpu	499
Macrosystems Warp Engine 4028 w/CPU, SCSI I&II Controller	999
Macrosystems Warp Engine 4033 w/CPU, SCSI I&II Controller	1099
Macrosystems Warp Engine 4040 w/CPU, SCSI I&II Controller	1299

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

REMOVABLE MEDIA SCSI DEVICE CLOSE OUT

Richo 50 MB Removable HD 99.00

USRobotics Modems

Internal Sportster 14.4kbps v.32 bis data v.42, v.42bis, quicklink II s/w, fax $109

Internal Sportster 28.8kbps v.34 data, 14.4kbps class 1 & 2 fax v.42/v.42bis quicklink II s/w $259

AMIGA Lightwave 4.0 stand alone Version 775.00

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		249

-accesses & adds 1MB of chip ram. The -must have for graphics & audio users

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. 975

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

NEWS

By ADAM PHILLIPS

Buyer found for ESCOM Commodore

Escom: The new owners of Commodore

The official news from New York is that Escom have bought all the rights of ownership, technology, trademarks and patents to Commodore and the Amiga. After the somewhat harassing two days of 20-21 April, Escom's final bid of $10 million for Commodore's core assets was accepted over surprise bidder, Dell's, which stood at £13 million for the core assets. Unfortunately for Dell, their bid had certain strings attached to it which would have meant delaying the buyout further.

In a shock move, one-time favourite, Commodore UK, dropped out of the auction altogether, knowing they didn't have enough money to take on Escom or Dell. The other one-time favourite, Creative Equipment International, made a hasty alliance with Dell on the day but was unsuccessful and managed to upset Escom in the process for going against them in the bidding process.

As well as the bid being accepted by the US courts, the deal has also been approved by the Bahamian courts, making Escom's position as the new owners of Commodore final.

For the full story, turn to our five-page breakdown, starting on page 23, of the bidding day, and the interviews with the winner and losers.

Stop the press: C=UK time bomb

An unconfirmed rumour flapping its wings round the rumour mill is that if Commodore UK haven't found a buyer by the end of May, they will file for liquidation. Apparently, David Pleasance and Colin Proudfoot, joint MDs of the company, have warned in accounts filed at Companies House that the business can only survive up to the end of May.

No-one was available at the time of going to press to comment on the situation. If the above is true, one can only hope that C=UK's negotiations with Escom are successful.

Head of engineering appointed

With the recent buyout of Commodore, Escom would appear not to be resting on their laurels by appointing Dr Peter Kittel as the head of engineering for the Amiga. Kittel, ex-head of Commodore Germany, has released details on the new daughter company of Escom AG which will be based in Heppenheim in Germany and will deal with all developments concerning the Amiga.

There will be an engineering department for hardware and OS software. Also planned is an extensive marketing department, and Kittel estimates there will be a workforce of 50 people at the beginning.

If there are individuals reading this who are interested in working for the new company, they should send their resumés to: Escom AG, Personalabteilung, Tiergartenstr. 9, D-64646 Heppenheim, Germany.

Initial plans are to restart the production of existing machines (600/1200/4000) but because of Escom's casing policy, the 4000 at least should receive a new look. No immediate models will be altered technically because Kittel doesn't want to delay the re-release schedule – any alterations will come later.

As for the future, it can be confirmed that the way forward for the Amiga is RISC-based. The two principle systems being considered are Power PC and Hewlett Packard's PA RISC. "It will be the first task of engineering to prepare this choice of paths into the future" commented Kittel.

He also states that Escom have decided to be very "liberal" in regards to licensing the Amiga technology out to third parties: "Whoever wants to build, for example, an Amiga lap-top or set-top box can get the chips and OS!"

The new head of engineering is quick to point out, though, that all the above "is still a letter of intent. The points which are declared are still open."

Whatever the case, it's good to see Escom are moving so swiftly.

GVP saved

Parallels aplenty this month with another German company stepping in to save the day and revamp part of the Amiga's heritage. The critically-acclaimed hardware producers, GVP, having bitten the bullet, have had their intellectual rights bought by German-based company M-Tec in conjunction with Power Computing in Britain.

The only product available to buy at present is GVP's RAM. For the rest of the extensive catalogue, potential buyers will have to wait another two months. The catalogue at the moment consists of the 68040/68060 accelerator for the 2000/3000/4000, a 16-bit sound sampler, the HC8 SCSI interface and the I/O Extender, among others.

"This is a great day for the Amiga – first the buyout of Commodore and now GVP have been plucked from the jaws of ruin" commented Tony Ianiri of Power Computing. "There's a wind of hope blowing through the Amiga community and this is just the beginning. Things can only get better."

For more details, contact Power Computing on +44 1234 273000.

More storage with a zip

The Zip drive – could this system replace the floppy drive in the future?

Utah-based Iomega Corporation have released the Zip drive and Zip disk – the Zip drive is a compact, portable solution for moving information between work and home, expanding hard disk capacity, organising and saving business and personal financial records, and sharing large files. Basically, the system works along a similar line to floppy disks but offers a far bigger storage capacity. Zip disks are available in 100 and 25Mb capacities, and can be purchased in single packs or economical five packs. "Our new Zip drive is unlike any other storage product on the market," said Timothy L Hill, vice president of marketing for Iomega Corporation. "It's like getting four drives in one. It's an unlimited upgrade for your filled up hard disk; a high-capacity mobile storage solution; a personal organiser of your stuff; and, it's an excellent backup drive."

Every Zip drive comes complete with a starter Zip disk that includes ZipTools software to help consumers organise, track and quickly locate their computer information.

Contact Iomega Corporation's UK headquarters on +44 181 899 1734 for more details.

The call of the Big Smoke

After last month's call for animators to submit work to the European Festival of Animation, another exhibition has appeared in the form of the London Effects and Animation Festival. Acting as a showcase for the best in creativity in Europe, the show has attracted some high calibre competition in the last few years from companies across the world.

The event is split into several categories that include art, broadcast graphics, commercials, interactive entertainment, feature films, music video films and student work, among others. The closing date for all entries is 8 September. These entries will be judged by a panel of experts made up of media, potential clients and fellow professionals, and the awards will be handed out on 29 November.

Also included during the festival is a three-day programme of seminars and screenings which takes place alongside the Computer Graphics Expo at the Wembley Conference Centre from 28-30 November. For more details and an entry form, call Debbie Brown on +44 181 995 3632.

London Effects and Animation Festival: Get your work seen by potential employees

Ex-BT engineer fined for software theft

In another joint collaboration between ELSPA and the police, a raid was carried out on the home of ex-BT engineer, Alan Pirie, leading to a conviction and seizure of £200,000 worth of illegal software. Pirie was found guilty of six offences of selling and possessing, and was fined £1000 and ordered to pay £100 costs.

"One the major aims of ELSPA is to crack down on the illegal copying and distribution of pirated software" commented John Loader, head of ELSPA's crime unit. "As an industry, the computer and leisure software sector needs to be protected against those individuals or organisations that seek profit from its illegal activities."

Anyone with information concerning pirated software should call ELSPA on +44 1386 830642 in confidentiality.

A sonnet for the Amiga

Hot on the heels of the scorchingly fast Cyberstorm 060 card, the Sonnet 50MHz Doubler 4000TM is a daughter board that plugs into the 4000's CPU socket. The distributors, Blittersoft, claim the card delivers across-the-board speed increases for all applications and system functions.

Featuring an on-chip cache and maths co-processor, the chip costs £399.95 and can be obtained from Paul Le Surf on +44 1908 261466.

Further Photogenics

Those busy bods at Almathera have released another upgrade for their critically-acclaimed image processing package, Photogenics. Version 1.2 has had a series of new options added to it – warper tools allowing you to distort, bend, stretch and twirl parts of your image, printing capabilities, CyBERgraphics 24-bit painting, transparency gradients, the much-needed crop facility and for those without AGA machines, a HAM6 display option.

Improvements have been made to the previews and compose modes, and there are also some new paintmodes (colourise, gamma, mirage, jitter), NewIcon support, new GIOS (TIFF, PCX, HAM6, Retina, ProGrab24 among others). If you're a 1.1a owner, the upgrade will cost £15. For a brand spanking new copy, the price tag is £59.95.

Call Almathera on +44 181 687 0040 for more information.

Netting the benefits

While many people are convinced of the potential offered by the Internet for a variety of purposes, there are still sectors that remain unconvinced, according to Future Marketing.

The company believe that the Net is being seen by some as nothing more than a fad, and those people need to be informed about the benefits of using the Web.

Aimed at IT and marketing professionals, Future Marketing are hosting a series of day-long non-technical seminars. The day itself begins at nine and runs through to 17:30, addressing some of the most common questions from a Net novice – what exactly is the Internet? Are the companies employing it being successful?... and so on.

The cost of the seminar is £285 + VAT per delegate which includes lunch, refreshments and literature, and places can be reserved on +44 1737 222615.

Three million and rising

That on-line service, CompuServe, just keeps pumping out those press releases – in this month's instalment, the company has now officially achieved over three million paying users. They claim they are signing up as many as 60,000 new members each week.

"In the past year, there has been tremendous interest in on-line services and the Internet. And as the undisputed leader in on-line content, global networking and information services, CompuServe has become the place to be for millions of people" stated Barry Berkov, CompuServe's executive vice president.

CompuServe

CompuServe just keeps growing and growing

Read/write CD!

Massive storage capabilities are now available to the home user – Hi-Q have announced the imminent launch of the Panasonic PD System Optical Drive. Coming with a quad speed CD-ROM, a Hybrid 650Mb and an Optical Read/Write system allowing access to stockpiles of information at the click of a button, the system costs £680 approx.

Call Hi-Q on +44 181 909 2092 for more details.

Mega oops!

Our review of Easy Ledgers in the May issue of *Amiga Computing* gave the price as £29.99. Unfortunately, the suppliers, Wizard Developments, have phoned up to inform us that the package actually costs £199.99. For those interested in purchasing Easy Ledgers, they should adjust the value for money score from nine to six.

This is Apollo calling

Accelerators seem to be on the increase as people want more and more power for their upgrade-starved Amiga. New from Siren software is a range of accelerators with hooky title of Apollo.

The top of the range Apollo 1230 Turbo 50 for the 1200 runs at just under 10 MIPS. The card fits into the trap door slot of the Amiga which isn't too healthy for memory upgrades. Call Simon Cobb on +44 161 796 5279 for more details.

IT illiterate

Over two-thirds of small businesses are admitting they aren't as clued up as they'd like to be with the ever-growing world of information technology. In a survey conducted by Lloyds bank of 300 small firms, just over half the businesses said they were computer literate – lack of technical support, suitable training courses and objective advice being the main problem areas according to the small businesses contacted.

Also identified by the survey were several areas of missed potential – for example, one fifth of larger firms polled still don't use computers for invoicing and credit control.

John Spence of Lloyds bank commented: "It is clear from these findings that many consider themselves inadequately informed on the subject. As we are increasingly moving towards a world dominated by technology, the findings are clearly a cause for concern."

Change of number

For those interested in buying the Advanced Amiga Analyser (reviewed in the May issue), the company to order from has changed. The new suppliers Dart Computer Services can be reached on +44 116 247 0059 and the price remains the same - £49.95.

Stay tuned

For the latest news on *Amiga Computing* and all things Amiga, take a look at our home page. Tap in the following URL Web address:

http://www.demon.co.uk/amigacomp

While you're there, take a look at our list of top ten fave sites on the Internet and access them.

News briefs

Lightwave has arrived

Lightwave 4, the package that everyone knows about, is now available from Premier Vision, and owners of 3.5 can upgrade to the latest version on any platform (Amiga, PC, SGI, Dec Alpha) for a paltry £150. The price for the full version is £695.

Call Andy Bishop or Andy Gould on 0171-721 7050 for more details.

Anim update

For those interested in the European Festival of Animation (as featured in last month's news), the organisers have a new number for interested parties – 01295 264711. The closing date for entries is the end of June.

Photographic print outs

Printers that can produce near photographic print outs are highly sought after. With the wealth of Amiga art packages such as Photogenics and Deluxe Paint 5, such a piece of kit would be ideal for small design companies and artists.

The Primera and PrimeraPro colour printers from Chicago-based Parallax Technology have been out for quite some time now, offering a range of dye-colour sublimation colour images for its users. With the arrival of their new Amiga-specific colour print driver though, 24-bit images can now be printed out.

The driver is free to all existing Primera/Pro owners and is available as standard to potential buyers. For more info, contact Parallax Technology on 001 312 645 4835.

CD-ROM slash

For those with a yearning to move over to CD so that productivity CDs and CD32 games can be become a part of their computing, the Zappo CD-ROM drive has received a rather substantial price cut of £40. The unit can now be picked up for £159.99 and features the latest software to aid CD32 compatibility.

For more details, contact Don Carter on 01543 419999.

Software upgrade

No sooner have Gordon Hardwood Computer's released version two software for the ProGrab 24RT, version 2.5 is now upon us. Featuring additional file format support, image processing effects (emboss, convolution, oil paint and many more), palette computing routines and dithering form the main basis of the upgrade and can be obtained from Harwoods on 01773 831040.

More price reductions

Further cuts in Amiga product prices have arrived with the Nexus Pro Reference Library CD-ROM available at £19.99, a significant reduction from the original £49.99
click of a button, the system costs £680 approx.

Call Hi-Q on 0181 909 2092 for more details.

More speed... more color... more fun!

VILLAGE TRONIC

Within North America contact

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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
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Complete system includes mouse, power supply, 1.3 WB disk, 1/2 MB RAM **Only $139**
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Complete systems in several configurations available! Call for more details!

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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**

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EXTERNAL CDROM DRIVE FOR A1200/A600
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Great, smooth rolling trackball with crystal clear ball that glows red/green colors! Once you use one of these, say goodbye to all mice! $29.95

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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

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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 $49
A2090 HD Controller $25
A3000 Daughter Board NEW $50
External DD Floppy Drive $90
3.1 ROM & Disks Kit A500/2000/2500 $65
3.1 ROM & Disks Kit A4000/3000/1200 $95
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
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Cable for 1080/1084 Audio (RCA Y Cable) $3
CDTV Remote Control $20

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Picasso II Graphics Board w/2MB $399
Power Supply (Replacement) A3000 $89
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Replacement 2 Button Mouse For Any Amiga $16
Squirrel SCSI2 PCMCIA Controller For A1200/A600 $99
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:15 pin to 9 Pin (For VGA, Multiscans..) $15

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

CYBERVISION VIDEO BOARDS

64 Z3 2MB $469
64 Z3 4MB $599

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 A3000MB 25mhz $50
Defective A500 Int. Floppy Drive $15
Defective A600/A1200 Int. Floppy $15
Defective A3000/4000 Int. HD Floppy $25
Defective A2000 Power Supply $25
Defective A2000 Keyboard $25
Defective A4000 Power Supply $40
Defective 40MB 2.5" IDE Hard Drive $15
Defective 120MB SCSI Hard Drive $25
Defective 240MB SCSI Hard Drive $40
Defective A2286 Bridgeboard $20
Defective Commodore MPS 1250 Printer $10

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

BETTER CONCEPTS INC PRESENTS HOMEMADE CD'S

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!

!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!

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NEW! This CD contains latest Spectrum Emulators for both Amiga and IBM with over 4000 spectrum games! Also contains Klondike III card game with over 100 card sets! Another kick butt CD from BCI!!!

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•Specially Geared Towards Amiga Owners
•Over 2800 Music MODS (Classical, Pop, Rock, Techno, Acid, Rave, Mellow..)!
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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!)

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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!

SEXUAL FANTASIES CD32/CDTV/CD $18
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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!!

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*=PAL only!

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What? You still cant write to your CDs? CD ROMs have long been an essential part of Amiga computing. Many owners already own a CD ROM drive and the # of software packages available on CD is increasing steadily. Until now, it was never possible to write to your CDs. This problem is solved with a new revolutionary product. CD WRITE from Ralph Babel and Stefan Ossowski's Schatztruhe enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete and modify data on your CDs. This product will take you into a new era, and you will be able to utilize CDROM technology to its fullest!

*Requires Hard Drive

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MEETING PEARLS II	$14.95
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SEXUAL FANTASIES	$18
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AMIGA RULES!

LICENSEWARE ON FLOPPIES

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!

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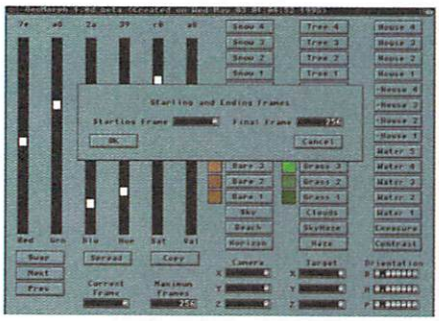
Reality bites

USA news

Yet more news from across the pond, courtesy of Denny Atkin

If you've worried that Virtual Reality Labs, Inc.'s success in the PC market might mean the end of the company's Amiga support, you can end your fears. VRLI has contracted with Chaocity to maintain, enhance, and market their Amiga line of software. Chaocity is run by Clint Woeltjen, one of the principle developers of the Amiga version of VistaPro. Chaocity's first new Amiga product is GeoMorph, a program which reads VistaPro DEM-format landscape files and MakePath scripts and produces sequences of VistaPro DEMs, and a VistaPro script which gradually morphs one landscape into another. Also, tree growth and density, tree level, snow level, sea level, and haze density can be controlled across the animation.



Landscape colours can be changed independently of other morphing. Multiple morphs can occur within a single script, and multiple scripts can be pasted together. You should be able to use GeoMorph to create some dramatic effects, whether morphing from a before to an after picture of the Mt. St. Helens explosion or animating the genesis of Earth.

The next product from Chaocity, coming later this year, is GeoForge, which will let you go a step further and design your own landscapes. For more information, contact Chaocity, 221 Town Center West #259, Santa Maria, California 93454; phone (805) 925-7732; fax (805) 828-3128.

Emplant PC on hold

If you purchased the initial release of the e586DX PC emulation module for Utilities Unlimited's Emplant board, you were probably shocked at its poor performance and its inability to run any Windows release greater than 3.0. In mid-April, Utilities Unlimited's Jim Drew responded to customer complaints on the GEnie online network.

"About three weeks ago, we discontinued work on the Amiga version of Emplant's e586DX emulation module," Drew says. "We have been working on the PowerPC version only. In the last few days we have ported back the PowerPC assembly code to 680x0, which has resulted in an emulation that corrects the MMU problems associated with some versions of Windows and some memory extenders. The code is 750K smaller, and is 20-200 per cent faster than the v1.1 version (without CPU transcription). This emulation is completely different code from the previous Amiga version."

Drew says that the back-ported code is being worked on, but wouldn't give a release date. "The only way we can continue to provide new products and support for the Amiga community is to expand into other markets," he explained. "Our first order for 'PowerCLONE' (the PowerPC version of our e586DX emulation) exceeded our gross revenue since we got into the Amiga market place (in 1989), something we can not ignore."

While the users who have shelled out $99 for an emulator that doesn't do much more than run the DOS version of WordPerfect are obviously distraught, it pays to remember that the original version of the Emplant Macintosh emulation also barely worked. Hopefully, Drew and company will repeat history and end up providing us with a PC emulator that works as well as the Mac Emplant works now.

Aladdin's out of the bottle

While you wait for PC emulation to be perfected, you can spend your time building virtual worlds with a product from a company that remains dedicated exclusively to Amiga products. Adspec's Aladdin4D version 4.0 is dramatically enhanced from earlier versions of the 3D rendering program, adding user-requested configurability and a host of new features. Despite all of this, the company has been able to lower the product's price.

The revamped 3D user interface supports the standard ScreenModes requester, so you can now choose which graphic mode to edit and preview your work in – and you can also use third-party displays like the Picasso II.

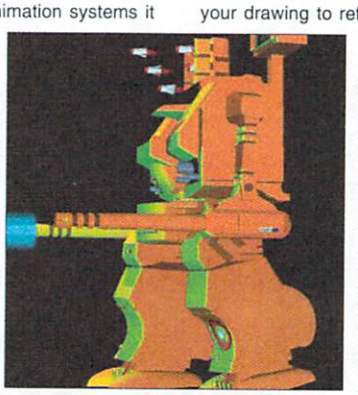
Perhaps the most significant feature for folks sending animations out to video is Field Rendering. This emulates the interlaced scanning of real video cameras, and can make for incredibly smooth animation displays. Adspec say their field rendering takes no longer than standard rendering; on some competing animation systems it can double the time needed to create an anim.

Image size and screen size are no longer synonymous, so you can create letterbox animations. If you're using gas effects, you can now move the camera into the gas, making for some dramatic views. Multiple selections have been improved, and anim requesters can be more easily reached from different parts of the program.

Flares and Fountains can now be either added for star and flame effects, or set for a new transparent mode. This allows you to use them for some outstanding confetti effects. Transparency can be set to achieve anything from barely there, to cellophane effects, to completely opaque, and black flares and fountains are now possible! You can also use the Alpha channel type in the texture list to control the shape and transparency of the flare and fountain images. Flares and Fountains also render significantly faster.

With the new batch rendering mode, you choose the drawings you want to render and set the target file names. Aladdin4D will load each drawing in the list and render it, one after the other, until it finishes or you tell it to stop. Drawings and render files may be spread among multiple devices and can be in multiple screen modes.

There are many other new features, including external operators, a faster shading tool, and an interactive bevel tool. You can even add notes in your drawing to reference why you did particular things to objects.



Aladdin 4D version 4.o, offers an alternative to 3D renderers

The program requires 4Mb and a maths co-processor. Upgrades from earlier versions and from Draw 4D Pro start at $119.50 plus shipping, and new users can purchase the program for $229.50 plus shipping. You can order with a MasterCard or Visa by calling (216) 223-2255. For more information, call (216) 337-3325 between 11am and 2pm EST (five hours earlier than GMT), or write Adspec Programming, PO Box 13, Salem, OH 44460 USA.

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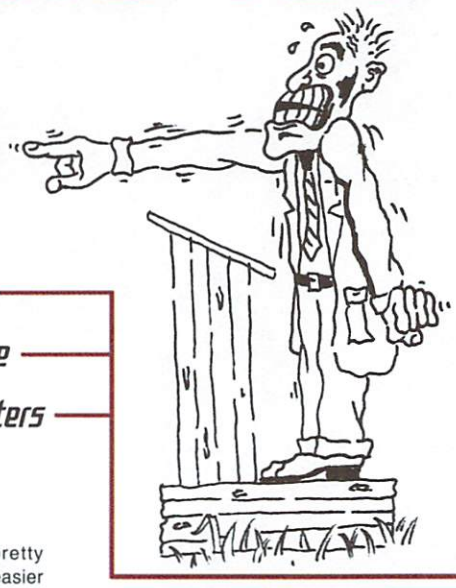
A time for GUIs

New boy Ben Vost has been thinking about the way we use our computers



A long time ago, James Watt invented the steam engine. But even in those Internet-less days of no communication between scientists, all working independently on their own projects, there was a pretender to the throne. Someone else stood up and said: "It was me, I invented the steam engine." And later, just before the turn of the century, bitter rivalry broke out between two men an ocean apart over who was first with the electric light bulb. Was it Edison? Was it Swann? Do we really care?

The point that many philosophers have made is that it was time for the steam engine, so someone invented it. It was time for the lightbulb, so that was brought into being too. It's always happening, people around the world simultaneously, and independently, working on the same notion.

NEW INVENTIONS

We've had personal computers for between 10 and 12 years now, so maybe it's time for someone to 'invent' the graphical user interface. I can hear shouts from the back saying that the scientists at Palo Alto invented it in 1976, but that's not enough. We have had 10 years of trying to get to grips with computers and we have learnt to do so, but there are going to be a whole new generation of computer users and, more importantly, programmers, who never had to struggle with Sinclair BASIC or MS-DOS, let alone Workbench 1.3.

There is always going to be a place for the sort of beardie weirdie who knows Unix like the back of his hand, but the future user of computers is going to want to access the information held within, and out of, them as easily as she can use a TV. This process has already started.

> Soon, when object-oriented programming has reached a greater level of maturity, we will be finding ourselves only buying modules to add onto our existing system without needing to buy complete applications all the time

Look at some of the software you have on your hard disk right now, then compare it to what you had, say, three years ago. Think about WordPerfect Amiga 4.1, then think about Final Writer. See what I mean? And the current Final Writer is going to seem like a dinosaur in years to come. It's not just that we want pretty interfaces, although they do make it easier to bear some of the shortcomings of the software at times, and it's not just added features; after all, how are you ever going to use all that clip art, all those fonts, all those words in the dictionary and thesaurus.

It's about making those things freely available for you to use. Now, if you choose the keyboard shortcuts – <right Amiga> Q, X, C or V – you can be pretty sure you are going to quit, cut, copy or paste. And this consistency is important. It means you will spend less time acclimatising yourself to the software, and more in actually putting it to use.

Programmers are getting used to the idea that they don't have to re-invent the wheel with each program they create. Let someone else take the strain of making loaders for different file formats, or screen gadgets for a colour palette. Soon, when object-oriented programming has reached a greater level of maturity, we will be finding ourselves only buying modules to add onto our existing system without needing to buy complete applications all the time.

We might buy a dictionary module to go with our text editor module and our page layout module, and voilà, a DTP package is born of discrete parts. It will happen – it's already started. But change should not be made just because it can be. There is a driving force for progress, but let's not get carried away with new features until we can make sure that the old ones are working in the best possible way. This way to the future, all aboard now.

AC

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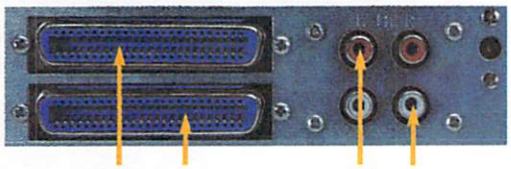

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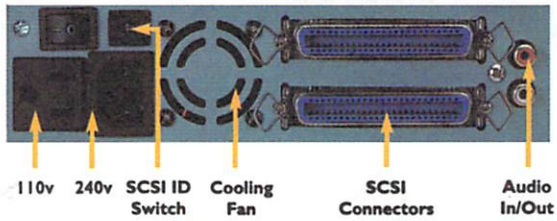

POWER CD-ROM

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.

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The Cover It's a Kind

Before you begin

Before you even think of clicking on those dinky little square icons in order to extract those cool utilities on CoverDisk 2, you had better click on that big icon called Extract_Me_First. Doing this will extract the Installer file and copy it and the LHA program to your C: directory. You will need to have at least 170k free on your boot disk for these files to fit. You have been warned.

You will then be able to simply double-click on the appropriate icons, which will result in the files being extracted to your RAM disk. After they have been extracted, they can then be installed to a floppy disk or directly onto your hard disk. Remember to delete the files from RAM once you have installed them to your preferred destinations or they'll just take up valuable memory.

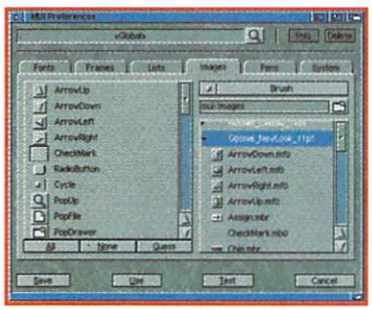
Also, beginners should be aware that some of the files are CLI commands which don't have icons. You must therefore ensure that you have 'Show all files' activated from the Window menu, otherwise you won't be able to see the files if you intend to copy them by dragging them to a destination.

Remember, also, that all the utilities here are accompanied by documentation files which explain the various features and functions in greater detail than can be covered in the disk pages. So, if you're having problems or simply wish to know more about these great utilities, check the documentation files

Magic User Interface

Author: Stefan Stuntz
Workbench: 2.04 or higher

Stefan Stuntz's Magic User Interface is a program which lets you edit the look of any programs that use it. Programs like AMosaic and DMS-Face can't be used without MUI, so it's a good job we've got the complete registered version on this month's CoverDisk. Double-clicking on the Extract_MUI icon will result in a drawer called MUI being extracted to your RAM disk.



Using MUI Prefs, you can completely change the way your applications look

MUI is a large application and readers without a hard drive shouldn't even bother extracting the files. In addition, because MUI is such a large application, you will need a machine with at least 2Mb to be able to extract the archive to RAM:. If you don't have that much memory, you will need to edit the "Extract_MUI" file and change the line:

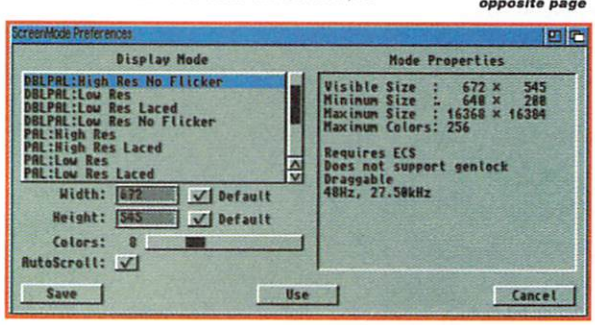
```
c:lha x MUI23AC.lha RAM:
```

to:

```
c:lha x MUI23AC.lha XXX:
```

where XXX: is whatever your hard drive partition is called.

Compare this standard Amiga-looking window with that on the opposite page



DMS-Face

Author: Øyvind Falch
Workbench: 2.04 or higher

Ever tried to use DMS? Isn't it a pain? It's even worse than trying to get LHA to work. But now there is a nice MUI GUI (don't you just love all these acronyms?) for it to make things so much simpler. DMS-Face is so user-friendly it even comes with a standard installer script.

AmosMui

Author: Paul Hickman
Workbench: 2.04 or higher

Amos Mui is a set of extensions to the extremely popular AMOS Pro BASIC language environment. Obviously, you will need to have a copy of AMOS Pro to make use of this program.

FalconMath

Author: Simon Forey
Workbench: 2.04 or higher

Just to give you a mix of MUI stuff, here's an algebraic equation editor that uses MUI. If you are the sort of egghead that actually knows what an algebraic equation is, then FalconMath is the puppy for you.

MUI Empire

Author: Karl Bellve
Workbench: 2.04 or higher

Just to prove that MUI isn't all technical, utility-type stuff, here's a strategy game completely programmed using MUI. Being a starfleet management game, there aren't any pretty graphics, but that doesn't detract from its gameplay.

MUI Screenmode

Author: Cyril Deble
Workbench: 2.04 or higher

Our Cyril's a French chap and he decided that the standard Workbench screenmode preferences editor was a bit bland and boring. So he undertook a project to revamp it and came up with this little gem. Cyril's screenmode editor is so flexible, it can even allow you to select HAM screenmodes.

Cyril says that his next conversion is going to be the Locale preferences editor, so you could say that it's today the screen, tomorrow the world...

Disks of magic

GOLD SUBSCRIBER DISKS

This month's CoverDisks are going to transform the way your Amiga Workbench looks and performs. Check out the awesome Magic User Interface and the utilities which make using your Amiga much easier

AddressManager

Author: Michael Schikora
Workbench: 2.04 or higher

AddressManager is one of the nicest address book programs available for the Amiga. With the ability to search for someone on any field and printing facilities that would not look out of place in a commercial package, AddressManager is a great addition to anybody's list of utilities.

MUI Speak

Author: Andreas Jung
Workbench: 2.04 or higher

This is a tool built with another excellent MUI package – one which, unfortunately, is too big to go onto our disks this month – called MUI Builder. MUI Builder lets you concentrate on what your interface looks like, then goes away and generates the code for that interface. MUI Builder comes with built-in support for C and E, among others, but there are external modules for the support of other languages.

MUI Speak is a replacement for the Speechtoy program on the Workbench 2.04 disks and as such requires the 'translator.library' file in libs:. Workbench versions after 2.05 don't come with this file, so you will need to get it from somewhere.

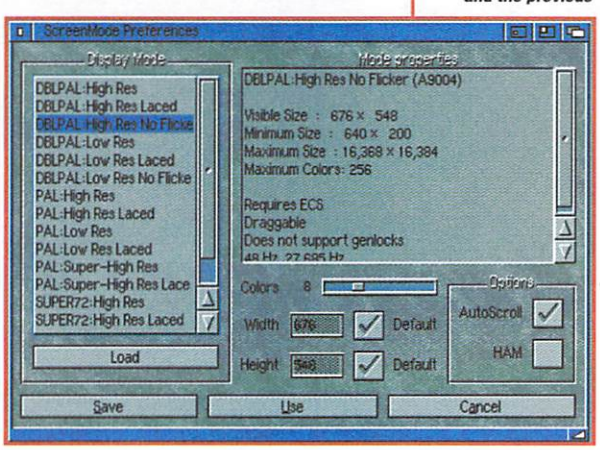
MUI Speak also comes with its own überstetzer library (übersetzer means translator in German) to make the Amiga's speech sound like a German adenoidal dalek with its head in a bucket, rather than an Australian one. Just like any other MUI package, you can change the way the interface looks to your heart's content.

MUI Env

Author: Michael Suelmann
Workbench: 2.04 or higher

MUI Env is a very useful gizmo for people who set a lot of environment variables every time they boot their machine. It lets you view your env: or envarc: directories and their sub-directories, create new variables or directories, and edit your current settings.

Spot the major difference between this Screen Prefs and the previous



Utility Heaven

Magic Menu

Author: Martin Korndörfer
Workbench: 2.04 or higher

Are you fed up with the rather boring look of Intuition's menus. Oh yes, they work perfectly well, but there's room for improvement in the aesthetics department isn't there?

Well, this is where Magic Menu steps in to dress things up a little as well as enhancing functionality too. Once installed and running, Magic Menu transforms the look and operation of the tacky white menu bar at the top of our beloved Amiga screens.

Some of the visual improvements on offer include a cool 3D look, complete with optional borders. On the functionality side, you can configure the way the menus are accessed.

As well as standard access mode – where you have to hold the right mouse button down to activate the menu, then release the right mouse button with the pointer over a menu item to select it – you also have Press once and Select modes.

Press once allows you to simply press the right mouse button once to activate the menu bar, without the need to hold it down to keep the menu bar active. Moving the mouse pointer over the various menu titles brings up the respective menu items which are also highlighted as the mouse pointer moves over them. You then simply click a menu item to select it.

Select mode brings up the menu with a single right mouse click and then requires you to actually click on each menu title to bring up the menu items.

Magic Menu also has a neat keyboard facility for accessing the menu bar and its items – useful if you find yourself suffering from a dead mouse. But Magic Menu's main feature is that it frees you from having to move the mouse to the top of the screen all the time, because Magic Menu lets you hit the right mouse button anywhere on the screen to bring up the menus.

Magic Menu is best placed in the WBStartup drawer so that it activates automatically at boot up. Once running, you should find your menu life that much classier.

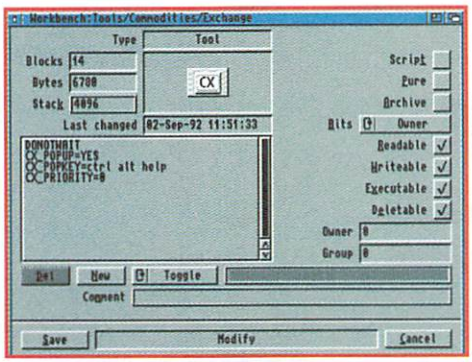
CacheFont

Author: Adam Dawes
Workbench: 2 or higher

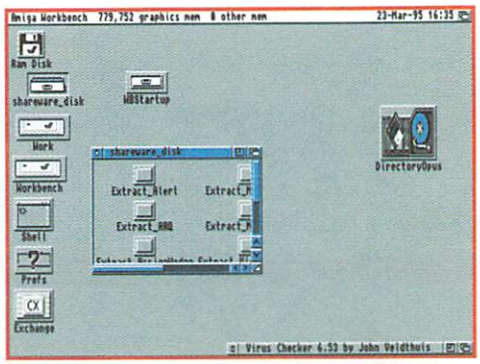
For those of you who have a healthy collection of fonts stored in the old Fonts drawer (DTP users in particular), you know how slow and irritating it is when a program has to read the fonts prior to displaying them. And if there's a lot of them, things tend to become tedious.

CacheFont injects a major speed increase into this operation by first creating a fonts list which CacheFont then refers to. Once installed, any access to the fonts is extremely quick and efficient. You will wonder how you ever did without it.

Installing CacheFont requires you to place CacheFont and MakeFontList in the C drawer. You must first run MakeFontList in order to create the font file CacheFont will use. You can then either run CacheFont manually, or place a call to it in the user-startup script in the S drawer.



SwazInfo replaces the standard Workbench Information facility with a much more powerful version featuring a drag and drop ability



Notice the time and date display at the top-right of the screen. This is provided by Title Clock

Virus Checker

Author: John Veldthuis
Workbench: 2.0 or higher

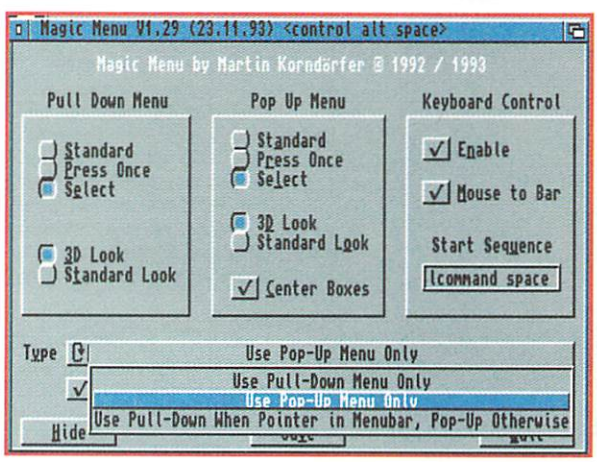
The threat of a virus is one which all computer users, both big and small, have to be aware of. These small nasty little blighters, written by equally small minded nasty little people, can find their way onto floppy disks and hard drives and do untold damage in a variety of different ways.

Of course, there are various virus killers on the market, but there are few which are as powerful and versatile as Virus Checker, including some commercially available packages. Once installed, Virus Checker searches your Amiga's memory for any dubious programs lurking in RAM. After that, Virus Checker lies in wait, keeping tabs on any disks inserted to see if they are clean – if not, Virus Checker let's you know.

Of course, virus killers are only as good as the library of virus programs they recognise. For instance, if a virus killer doesn't recognise a boot sector on a floppy disk, it will flag it as suspect. Now, this doesn't do your peace of mind any good. It may well be that the boot sector is safe and that it merely contains some code essential for the program on the disk to run, such as game disks.

However, it could be a new virus that the virus killer doesn't know about. Virus Checker gets around this by utilising an external library file of all known viruses it uses when comparing strange data found on a disk. This file is constantly being updated as new viruses are found and means you only need to get hold of the new file instead of updating the entire virus killer program.

To install Virus Checker, simply click on the InstallVC icon and follow the installation programs instructions.



This neat utility turns cycle gadgets within programs into pop-up lists for faster and easier access.

Alert Display Replacement

Author: Martin Mares
Workbench: 2.04 or higher

We've all had those dreaded guru alert messages thrown at us by our Amiga at some time or another. Unfortunately, these so-called messages displayed on our screens might as well be a hitherto unknown form of ancient hieroglyphics – they don't exactly tell you much about what went wrong.

This neat utility helps make things a little clearer by adding a little more information to the error message when it occurs. This information includes the name of the program which caused the alert, as well as a more comprehensive text description of the error.

To install the Alert Display Replacement, copy AddModule and NewAlertHook to the C drawer. Then using the CLI, enter:

```
addmodule c:newalerthook INIT
```

Arq

Author: Martin Laubach
Workbench: 2.0 or higher

Requesters. Those little windows of wisdom which appear, quite often before an unrecoverable operation such as deleting or formatting devices.

Although they do the job of asking for confirmation, they are a little irritating because the buttons, which are usually an OK or Cancel affair, have to be clicked on with the mouse.

It would be nice if they were dressed up a little and were given keyboard shortcuts for any buttons they contain, wouldn't it? Arq does just that, adding useful keyboard shortcuts with a smattering of animation to make life a little more interesting. Simply drag the Arq icon into your WBStartup drawer so it is loaded automatically.

Assign Wedge

Author: Olaf 'Olsen' Barthel
Workbench: 2.04 or higher

This neat utility is good for situations where you find yourself or a program trying to access a volume name which hasn't been assigned. Instead of the usual 'Please insert volume ??? in any drive requester', Assign Wedge is called up, giving you some extra options to choose from.

The options include Retry, which you click on if you have manually taken care of the assignment, Assign, which lets you choose a drawer to assign to the name currently shown in the requester, Mount, if the name in the requester is a device you can mount it and try again, and Deny, which tries to deny the program from calling the device again.

Just drag the program icon to your WBStartup drawer and you're away.

Cycle to menu

Author: Frederico Giannici
Workbench: 2.0 or higher

Cycle gadgets are buttons which cycle through the various items in a list. However, if you have quite a few items to choose from in the list, it can be slightly irritating to have to scroll through the entire list one at a time per mouse click to get to the item you need.

Cycle to menu changes all that by transforming the cycle gadgets into pop-up menus which display all the items at once for you to choose from when you click on

the item name. For the die hards, clicking on the actual cycle symbol makes the gadget behave in the normal way.

MultiCX

Author: Martin Berndt
Workbench: 2.0 or higher

MultiCX is a multi function commodity with lots of features and functions – too many to list here so check out the documentation. Some of the features include a Screen blanker and mouse accelerator.

MultiCX must be started from the Workbench, as CLI or shell is not supported. The majority of MultiCX's features can be configured by altering certain parameters – you can do this by selecting the MultiCX icon and selecting Information, or you can use the MultiCX Prefs utility also included on the CoverDisk and described elsewhere on these pages.

MultiCX Prefs

Author: Michael Barsoom
Workbench: 2.0 or higher

This utility complements MultiCX. Changing the parameters of some of MultiCX's functions requires altering the tooltypes. MultiCX Prefs provides a more intuitive method utilising pop-up menus and slider bars.

MultiCX Prefs needs to know where you have MultiCX stashed on your drive and you can tell it by entering MultiCXPath = <path> as a tooltype or CLI argument.

SwazInfo

Author: David Swasbrook
Workbench: 2.0 or higher

SwazInfo replaces the Amiga's standard icon information feature offering major benefits and extra features. One of the most useful extras which SwazInfo offers is an excellent drag and drop facility.

This allows you to do such things as drag icons into the icon display window to assign it, or you can drag an icon to the tooltypes window and all tooltypes associated with that icon will be loaded into the tooltypes window. There is also the handy feature of assigning a default tool to the icon using a file requester instead of having to type the program directory and name manually.

Other cool features include the ability to toggle tooltypes between active and inactive states at the click of a button, instead of having to enclose the tooltype in brackets via the keyboard. In short, this is one utility you shouldn't be without if you find yourself regularly changing tooltypes. To install SwazInfo, simply click on the Install icon.

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TitleClock

Author: Anders Hammarquist
Workbench: 2.0 or higher

If you want to know the time, you don't have to ask a policeman, just put TitleClock in your WBStartup drawer and you have a neat clock in the top-right corner of the screen.

TitleClock can be configured via a number of tooltypes which allow you to change various parameters such as update speed, whether the date should be shown, what format the date should be in, and many others.

Datatypes

Author: Various
Workbench: 3.0 or higher

Datatypes is a feature of Workbench 3.0 and above which provides a method of enabling the Amiga to recognise and use alien file types. For example, the Multiview utility allows you to view IFF picture files as standard (as well as other different files such as text and sound files) – however, it doesn't let you view picture files in, say, Targa format.

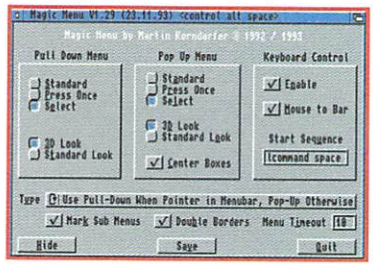
Thanks to Datatypes, it is possible to essentially tell the Amiga how to read these files by simply dragging the appropriate Targa datatype files to the datatypes drawers. The Amiga will then be able to understand Targa files.

There are a collection of datatypes for you to install. Some of them have their own install utility, which copies everything to the correct drawers for you, but some of them require you to do the copying yourself.

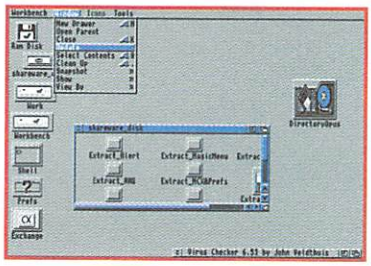
Refer to the associated documentation files for instructions on installation for such files.

Next month

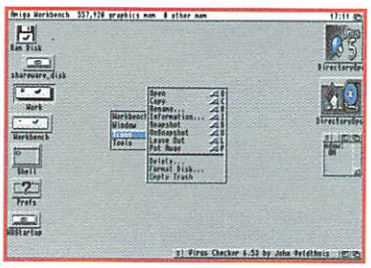
On next month's CoverDisks we have the complete Personal Paint 4 art package as well as more MUI applications. So make sure you don't miss out, – order your copy now or better still, why not subscribe and save money too?



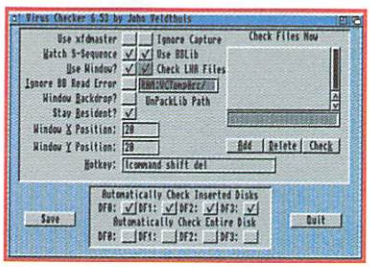
Magic Menu lets you alter the way your Amiga menus look and how they can be accessed



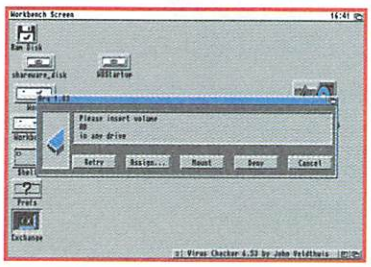
As you can see here, the Amiga menu bar has a much cooler 3D look to it



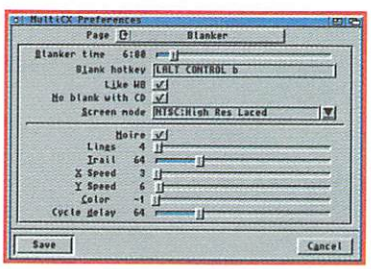
Magic Menu also provides a pop-up facility for accessing the menu from anywhere on the screen by clicking the right mouse button



No Amiga owner should be without a good virus killer and this is one of the best available



Arq makes dealing with those unassigned devices and volumes a lot less infuriating



MultiCX provides you with a host of features which can be configured easily using MultiCX Prefs shown here

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Judgement day

Dan Stets reports from New York about the date we'd all being waiting for - the day Commodore was finally bought

David Pleasance looked glum. The bidding for the remains of Commodore International Ltd. had not even begun, but the management team from Commodore Business Machines UK was throwing in the towel.

"We can't compete with Escom and Dell," said Pleasance. "We are going to try to settle with whoever wins."

Commodore, once a world leader in the production of home computers, had been reduced to corporate corpse. Circling in those law offices were small groups of men in dark suits, picking at the remains. They were hoping to revive a pulse – the company's name which once stood for innovation and quality at prices affordable to the average consumer.

For months there had been speculation about who would wind up with Commodore and what they would pay. Commodore's UK subsidiary had been among the most prominent suitors, as had Creative Equipment International of Miami, the largest Commodore distributor in North America. Other names emerged and faded. Amstrad, Philips, Samsung. Estimates of the sales price ran to more than $20 million. The company's American creditors, owed more than $100 million, were keen to get as much back as possible.

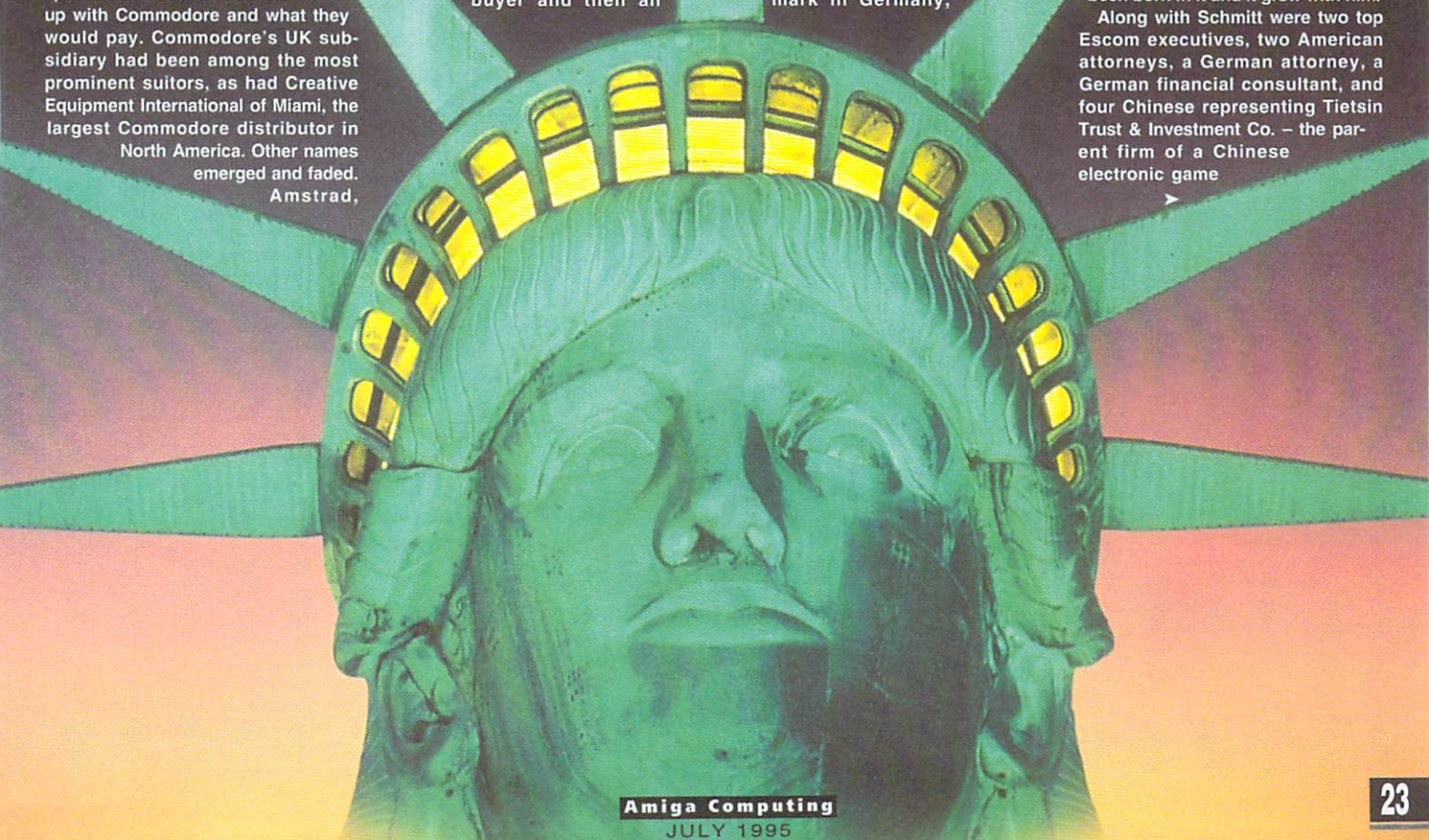
The American creditor had resisted allowing the bankruptcy to go ahead in the Bahamas as they were sceptical that Bahamian law would protect their interests. After months of bickering, a joint approach was agreed upon, allowing a blend of US and Bahamian law.

The Bahamian liquidators would sign a sales agreement with one potential buyer and then an auction would be held to convince American creditors they had got the best price. The first buyer would be a stalking horse. It was assumed the first price would be no more than an opening bid. Others would surely top it.

Escom AG, Germany's second largest computer company, became the stalking horse. The company, which had offered $12 million for Commodore in September, agreed six months later to pay only $5 million, in addition to $1.6 million – already paid to a German bankruptcy trustee for the right to use the Commodore trademark in Germany, one of Commodore's best markets. As events unfolded in New York on 20 April, it was clear the Escom offer was worth much less – only $3.5 million for the company's core assets. There was another $500,000 in the price for the UK assets and $1 million for the manufacturing inventory in the Philippines, but the Bahamian liquidators were not in a position to guarantee delivery of either of those. Jurisdiction was claimed by a Dutch liquidator conducting his own proceedings.

Escom came to the auction with a small army led by company president Manfred Schmitt, who owns 51 percent of the firm's assets. Schmitt is a tall, lean, sandy-haired, boyish but stern looking 44-year-old. He was in a white shirt, silvery tie, and a black suit so well tailored it seemed he might have been born in it and it grew with him.

Along with Schmitt were two top Escom executives, two American attorneys, a German attorney, a German financial consultant, and four Chinese representing Tietsin Trust & Investment Co. – the parent firm of a Chinese electronic game



company. If Escom were successful in the bidding, the Chinese had agreed to build all the Commodore products at a factory outside Beijing.

The UK effort was represented by Pleasance and the subsidiary's other managing partner, Colin Proudfoot. Alex Amor, president of Creative Equipment, arrived with a tall, dark-haired female assistant.

As the hour approached for the auction to begin, the dark suits which had been pacing the corridors crowded at the one long table and in chairs around a conference room. The Tientsin team had been seated for an hour. Amor and his assistant had a place at the table.

Next to Amor was a new figure in the drama, Dalton Kaye, Dell Computer Co.'s vice president and treasurer. Dell, a Texas maker of IBM-compatible computers, were suddenly interested in Commodore, but Kaye never would spell out just what the interest was. It was clear Dell were allied with Amor, who had tried for months to get IBM to back him, because he wanted to salvage his efforts with another American computer company.

Also around the table were representatives of several small and obscure American technology companies, but about half the places were taken by lawyers representing Commodore creditors and the liquidators, as well as the lead liquidator, Franklyn R Wilson, an accountant for Deloitte & Touche, who in the midst of the liquidation proceedings had set up his own firm, F R Wilson and Co.

There were more than 65 people in the room in all, a standing room crowd. Incongruously, among those left standing were Schmitt and most of the Escom team.

STARTING POINT

The proceedings were supposed to begin at 10 am. As lead lawyer for the liquidators, William J Rochelle III, the pin-striped essence of an American preppy earning at least six-figures a year, opened the meeting, asking for names and explaining the process.

Proudfoot asked to speak. He said Commodore UK was out of the bidding, but that the equity of the UK subsidiary was up for sale. He promised there would be tax advantages for whoever bought the concern.

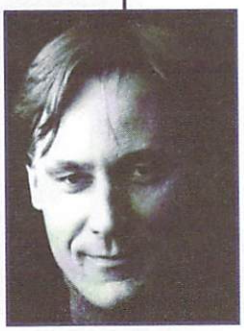
Then the problems began. Rochelle and Steven Richmond, lawyer for the creditors, had set up a bidding process the likes of which no one had ever heard of, and the details of which had not been contained in the announcement of the auction.

The auction would be held in two parts, with the entire company – or at least that part of Commodore the liquidators could deliver – put to the bidding process first. Then the parts would be auctioned off separately. If the parts brought a greater price than the whole, then the highest bidder for the whole could up the anté until a winner emerged.

That was all known beforehand, but then came the tricky part. Rochelle and Richmond had decided there would be 'a reserve price,' a magic secret number scribbled on a piece of paper. It was a minimum price the liquidators wanted for the core assets.

In the first round of bidding, if one and only one bidder exceeded the reserve price, that bidder would be the winner of all the assets. The idea was to pump up the price on the first round. If more than one bidder exceeded the reserve price, then they – and only they – would be allowed to bid in the next round.

Escom would have to submit a bid, in effect bidding against itself, to ensure it stayed in the competition to the end. Carlene Gatting, lawyer for Escom, objected. She and Richmond, a burly Boston lawyer, squabbled on several points of procedure. Escom reserved the right to object to the whole process.



Founder of Escom, Manfred Schmitt told Frankyln Wilson, the liquidator after the first day: "It was unfair what you did here."

After three hours, Rochelle finally managed to hand out bidding forms, single pieces of paper calling for two numbers – one price for the core assets and another for everything else. Representatives of seven firms raised their hands requesting forms.

A period of muttering and scribbling ensued. There was a break for lunch, and then at 2pm Rochelle collected the forms. To his obvious consternation, only three firms returned bids. The liquidator, Wilson, began to look nervous.

The bidders were Escom, Dell and an obscure Commodore distributor from California, Computer Connection. There was then another break as the liquidator and lawyers evaluated the bids.

A shaken Rochelle announced the results. Computer Connection's bid was invalid because it was not accompanied by the required $1 million deposit. Dell's bid also was invalid because it had been conditional – the conditions were not then specified. Escom seemed to be the winner with its original proposal, $3.5 million for the core assets.

There was another pause as the lawyers met with Kaye of Dell to discuss his conditions. Finally, Rochelle had to declare Escom winner of the auction. No one wanted to bid separately for Commodore's parts.

In a bit of gallow's humour, Rochelle joked that he had never seen so many people show up for an auction and prepared to pay so little.

Schmitt, who had been quiet throughout the day, had one comment for Wilson as he left the conference room: "It was unfair what you did here." But the young German had not yet seen the worst of it. As the room emptied, Wilson was already talking with Kaye. And then the lawyers began talking to him.

As Wilson would describe it later, the real auction had just begun. The meetings with Kaye lasted until just before midnight when Dell finally agreed to pay $15 million for Commodore, including $13 million for the core assets, another $1 million for Dutch and UK assets, and $1 million for the Philippines inventory.

A hearing to approve the sale had been set for the next morning in a US Bankruptcy Court down in Manhattan's financial district – it was clear something was afoot. The Escom troops, who had managed at least faint smiles after the auction, were stern once again.

Richmond asked Judge James L Garrity Jr. for permission to speak. He announced that the creditors would oppose the sale to Escom at the original offer price, which he called "shockingly low, grossly inadequate."

He said a better offer was on the table from Dell, with a condition that was acceptable to the creditors. Dell wanted a month to evaluate Commodore's assets and had agreed to pay a $1 million non-refundable deposit to buy that time.

More than an hour of debate followed. The issue was whether the judge had the right to reject the price produced at the auction. But Richmond had offered an alternative. The creditors would drop their objections if Escom would substantially up its bid for the core assets.

An hour-long lunch break was called. It stretched to two hours. The Escom group felt tricked, and they suspected a conspiracy aimed at driving up the price. Their lawyers assured them that such a thing was illegal, and therefore impossible, in an American court.

Neither Schmitt nor the rest of the Germans were really convinced. But they were stuck. They had big plans for Commodore. Resumed manufacturing of all Commodore products in China; manufacture of IBM-compatibles that would be sold under the Commodore name in European department stores; and a new PowerPC, an Apple clone, for the European market.

One of the Escom team explained the problem. Schmitt didn't really understand Commodore or its products all that well. He was being driven along by former Commodore employees who were now part of his management team, such as Bernard van Tienen, a former Commodore VP who was in charge of world-wide distribution for Escom. These former Commodore troops, more than 100 in all, wanted the Commodore assets badly.

Schmitt would have to take a leap of faith. He would have to spend more money for the assets and then be left with less money for the serious business ahead, an expensive marketing program to polish Commodore's tarnished image.

He decided to take the chance, agreeing to up Escom's bid for the core assets to $10 million – an increase of $6.5 million. Richmond, really not sure whether the creditors would ever see Dell's $15 million, quickly accepted.

Even before the court reconvened, Amor announced his defeat. He had backed a loser. "I guess we'll sell flowers," he said. His support for Dell had earned the animosity of the Escom representatives, who had refused to talk with him over the two-day auction.

The UK team was in a decidedly different position. Pleasance hadn't even bothered to attend the court hearing, taking a tour of the city instead. But Proudfoot was in there until the very end. He quickly made plans to meet with Van Tienen to discuss the future of the UK subsidiary and its 22 employees.

He predicted the UK team would have "a good future" with Escom.

Even before the court reconvened, Amor announced his defeat. "I guess we'll sell flowers" he said. His support for Dell had earned the animosity of the Escom representatives

About time too...

On the eyes of everyday business, the Commodore story is a mere blip of insignificance as yet another company that bit the bullet had a wretched, strung out liquidation process. To the people who care, though, the recent buyout now means that one of the computer industry's most popular machines has a chance to make its presence felt in the international scene as it has in the past.

What follows are a series of interviews with, and details on, some of the key players over the last year. Whether winners or losers, most have had to put up with constant setbacks and delays along the road to keeping the Amiga alive and kicking.

We ask the winner and losers after that fateful day about their views and plans for the future. Adam Phillips reports

The victor - Escom

After dropping out of the spotlight a few months ago and letting CEI and Commodore UK grab the headlines with their fighting talk, Escom produced the trump card on 20 April, buying out Commodore's intellectual properties, technologies, trademarks and patents.

Bernard van Tienen, an ex-vice president of Commodore and now managing director of Escom Holland, commented on the auction and their philosophy: "We are a company of action – we do things, we don't sit around and talk about them... as for the auctioning process, it's very different to what we're used to in Europe, but I think at the end of the day everyone came out of the proceedings happy with the way it had gone."

While the Amiga industry and users breath a sigh of relief that the business of bankruptcy is over, the previously-felt anxiety has been replaced by a mixture of anticipation of better things and a few niggling worries – Escom may have a money pit the size of the Bundersbank, but what are they going to do to that darling of the computer industry, the Amiga. To quell any fears, or even worse, the rumour mill, Escom have taken the wise step of laying out a general plan for the future use of the Commodore trademark and assorted technologies. The most immediate question on everyone's lips is the production of new Amigas – Escom have confirmed that they will be producing 600s, 1200s and 4000s again within the next three months or, by the very latest, October (see late breaking news story for more details).

Escom – the successful buyer of Commodore's intellectual properties, technologies, trademarks and patents. Founded in 1987 by Manfred Schmitt, it's the second largest European PC manufacturer. With a turnover of over $500 million a year and 750 stores across Europe, Escom are in a prime position to launch an Amiga comeback

Escom currently have an on-line service on the Web for their German customers. An English translation should be appearing soon. Take a look at the sight by typing in: http://www.veroni-ca.nl/escom/

Not only will Escom's 255 shops sell the Amiga, but any independent retailers are welcome to step back into selling the technology. The CD32 will be reappearing and Escom's Dr Wirsing, head of PR, has confirmed that there are plans for a 64-bit version of the console.

One surprise move that could drag money out of wallets as quickly as the Spaniards trawl fish from the sea is the news that the C64 will go back into production to be sold into the Chinese and East European markets. While the Western world crave for money-hungry Pentiums and Alpha Dec machines, China is a technological wilderness awaiting the arrival of an inexpensive computer.

CHINESE CREDENTIALS

The country is also playing a vital part in producing the Amiga. Chinese firm, Tianjin Family-Used Multimedia, has won the licence from Escom to produce and market the Amiga platform. Its credentials include being the largest producer of 16-bit games machines in China, with a market share of 80 per cent, and have an installed user base of one million consoles.

As for the Far East and US markets, Escom are currently in negotiations with major distributors for the Commodore licenses.

The other main financial magnet that pulled Escom into parting with its money, other than Commodore's established name, is the Amiga's multimedia capabilities. The company sees the machine as a key technology for private users in the future of the multimedia industry. To further their plans for the Amiga, the firm have aims to ➤

integrate the technology of the machine with the PC by producing PC cards that emulate the multimedia functions of the Amiga, such as audio and video. To add to this, Escom are also planning an Amiga TV set-top box that they hope will form the basis for interactive television.

This plan has added muscle, as one of the major shareholders in the German-based company wants to make a move into the interactive television market – with Escom's wealth, it could be a force to make the Murdoch's of this world look over their shoulder while they squabble for the rights of Channel 5.

The impression that one gets from the firm is that they are considering anything at the moment – Power PCs and Macs with the Commodore logo slapped on them are both on the cards.

Escom's Bernard van Tienen is eager to point out that they are open to all ideas from people who know the Amiga industry inside out. Indeed, any fears that third-party hardware and software may be a problem have been quashed: "We're very open to third-party licensing" commented Tienan. "We see ourselves as a very open company"

EARLY NEGOTIATIONS

The firm are well aware that there are many loyal developers, public domain programmers and consumers – perhaps as a sign of Escom's commitment to the platform, they are already negotiating with Commodore ex-employees to bring them back on board. In fact, with an estimated 100 Commodore ex-employees working for Escom already, there's a real Amiga family buried away behind the previously PC-only company.

Support for consumers will hopefully be placed high on their agenda – they already have a homepage on the Internet for their German customers, and Tienen told *Amiga Computing* that this will be resurfacing in English at some point in the future, along with a possible magazine based round Escom's products and services.

With all this seemingly good news, the only remaining hurdle is the residual stock in the Philippines which is being held by the government. Rumour has it that it can only be sold to Escom, and industry insiders estimate that the inventory will go for $1 million at some point in the near future.

More customer support comes in the shape of a magazine detailing Escom's products and services

Escom's headquarters based in Germany. Escom UK are based in Irvine, Scotland and can be reached on 01294 222600

...and the casualties of corporate war

Ask many a magazine PC critic to name four top PC manufacturers and Dell are usually placed somewhere in the list. The company has been selling PC clones for several years and made $8 billion in sales in 1994.

Dell after the auction: Still interested in buying certain patents from the Escom-owned Commodore portfolio

When their bid came out of the blue on 20 April, there were plenty of surprised people – why had they done it? Michelle Moore, vice president of communications for Dell in the US, clarified matters for *Amiga Computing* – but not by much. "It actually came up quite suddenly here also... we had just heard about the auction and we saw an opportunity. We had a late breaking review of some of Commodore's intellectual properties and decided that while we weren't interested in the company per se, we possibly would be interested in acquiring some of its patents."

Which patents they were interested in was not revealed but, despite Escom's success, it would appear that Dell are now considering approaching the German-based company. "We are still interested in their patents portfolio and possibly acquiring part of that. Buying from Escom is a possibility and we're exploring our options in that area."

Despite Escom beating Dell to the jackpot, we may well see the Stateside company producing some Amiga-related products in the future. It's interesting to see how a machine that is regularly ridiculed by the PC business has managed to attract quite so much attention on a global scale – it can only be a good sign.

CEI

One of the most active bidders and main competitors to Commodore UK over the last year has been Creative Equipment International, based in Miami. Headed by Alex Amor, the company first came into the liquidating limelight when announcing it had a silent partner that would turn the Amiga into a household name – that company was IBM. Unfortunately for Amor this fell through, so CEI had to arrive at the auction day with only its own financing.

Amor is stoical about the day: "Obviously we're a little disappointed we were not successful, but it was a procedure that was agreed upon and it was carried forward and will move on... I believe that based on the procedures and what the judge decided, Escom have rightly got the technology."

PARTNERSHIPS

One of the surprise moves on the day was the hasty alliance drawn up with Dell: "Our relationship happened two to three weeks before the actual auction, and Dell was very aggressive and looked like a good partner to move the Amiga technology forward." Amor commented. "They came to the auction independently of us and it was decided that it was best to join efforts at that point in time."

It would seem, though, that, like Dell, Escom's success has ultimately put CEI in a place to perhaps approach the German company at some point in the future for potential licensing: "At this particular juncture, the ball is in Escom's court – obviously, we understand where the Amiga needs to go and we'll be interested in moving the Amiga forward and the Amiga technology forward."

Amor continued: "We are standing by to see what Escom is going to do with the technology – if their intentions are to really make C64s in China and use the Commodore name, they might have intentions to move forward with the Amiga technology. If they don't, obviously we would like the opportunity to do that."

Is he glad the whole thing's over? "Oh, no question about it – absolutely. Now we need a few answers, and Escom hold the key to those answers and the Amiga can move back to where it rightfully belongs." And does he have hope for the machine in the future? "Absolutely."

While Amor remains upbeat, the friction caused between himself and Escom over the partnership with Dell could cause problems – Amor may well have his work cut out.

On their way back

Other than the C64 which is only for the East European markets, the 600, 1200 and 4000 will all be resurfacing internationally by August, or the very latest in October

Commodore UK MBO

Perhaps the biggest surprise, and some would say disappointment, was the withdrawing of Commodore UK from the auction on 20 April. After months of positivity from the ever-optimistic mouth of David Pleasance, MD of the UK subsidiary, the company appeared to put its tail between its legs and scurry out of the bidding process, claiming they lacked the financial muscle to make a viable bid the night before.

Pleasance is happy to explain the full circumstances of this decision. "Three days before the auction, there was news that the other bidders had more money to bid with than our entire working capital. It was an agonising decision – one brought about on behalf of the staff."

It transpires that Pleasance and Colin Proudfoot, the other half of the joint managing director team, didn't want to put their employee's jobs at risk by bidding. Pleasance believes that by placing such a bid, he would have alienated Commodore UK from Escom and any future negotiations may well have been affected – some would say that's exactly what CEI have done.

In case you're wondering, Escom don't own Commodore UK at present – the UK subsidiary was specially excluded from the contracts drawn up by the liquidators because Escom was uncertain whether they would want C=UK as an ongoing concern. Because of this, both Pleasance and Proudfoot have made two trips to Germany to discuss their potential future in the new company set-up. According to Pleasance, he is very hopeful that an arrangement will be found – he and Proudfoot have created a plan for Escom that he feels is a great opportunity for the Amiga, and shows that C=UK could be a valuable asset.

David Pleasance, MD of C=UK: Currently in talks with Escom concerning the future of the UK-based Commodore subsidiary

While Commodore UK backed out of the auction, Colin Proudfoot, joint MD of the company, commented that the UK team have "a good future" with Escom

NEGATIVE FEELINGS

While they have their plans set out for the immediate future, Pleasance is well aware of the negative feelings coming from the Amiga community who were hoping that Amiga International, the proposed title for Pleasance and co's new company, would become a UK-based reality.

"We know that certain parties are disappointed that we just gave up – they feel let down, but I believe they will be more than happy with the outcome eventually" commented Pleasance.

On the subject of Escom itself, he only has kind words for them: "They're the fastest growing PC company in Europe and their plans for Escom UK are very aggressive – 100 stores are being opened on 11th May."

He continues: "The Amiga user base knows that somebody with tremendous resources has taken the Amiga on board and are committed to the long-term development of the machine."

With the conclusion of this chapter in Commodore's chequered history, is he glad it's all over? "Unquestionably."

And finally

From where this journalist is sitting, there's an undeniable air of determination and hope for the future of Commodore and the Amiga. While the losers in this first important phase of re-establishing the Amiga aren't likely to start spitting nails at Escom because they all seem to have plans for approaching the company at some point, the general mood is distinctly upbeat and co-operative – that attitude in itself is alien to the Amiga world of over a year ago, where doors were closed to most third-party developers and the other unsung heroes that have stood behind the machine.

Cynically, perhaps this could all turn out to be nothing more than concealing PR from Escom – after all, the company was only interested in the trademark two months ago and have now produced a long list of substantially different plans for the future of Commodore. One gets a feeling that some of the comments coming out of Escom's PR factory and interviews are still generalised and by no means set in corporate concrete.

For the time being, though, while question marks remain and the road to recovery has several large and uncharted potholes dented out of its tarmac, the simple fact that Escom has plans, and has a substantial amount of money to back them up with and a soon-to-be-in-place world-wide distribution network, means the Amiga, even comparing back to its old hey days, has never had it so good.

Escom has a lot to live up to. For everyone's sake, *Amiga Computing* wishes them the very best for the future.

On its way out?

The CD32's future is still in question – there is no mention of it in any of Escom's plans but there is an rumour that its production will be resumed

Thanks to Tim's Megastore (01625 434118) for loan of C64

The time,

On the '80s, no self-respecting yuppie could be seen without a smart black filofax in their hand. You might have been hopelessly incompetent, a person so muddled you couldn't organise a beerfest in a brewery, but if you had the filofax at least you would look the part.

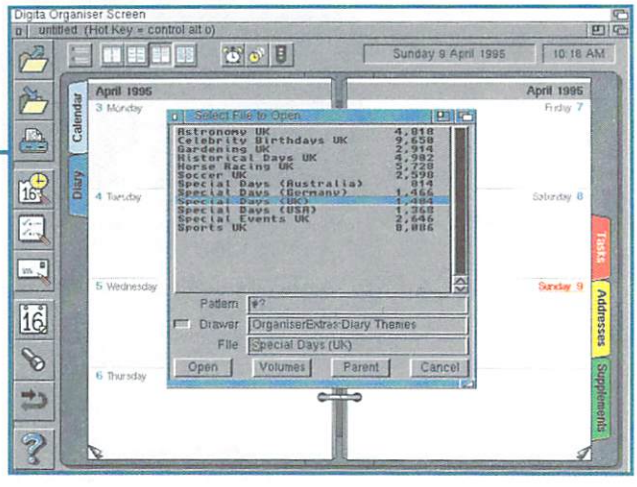
Fashion statement aside, these articles did prove to be pretty handy. It's good news, then, to see a new personal information manager on the Amiga that embodies the same handiness and visual appeal in a computerised package.

Created by Digita International, Organiser is intended to surpass their own Day by Day commercial diary program and improve on all the shareware and PD options available. Its most immediately obvious advantage will be its attractive, colourful front-end boasting the sort of user-friendly interface that has proved so successful in other Digita products.

Organiser can be run from floppy or can be installed onto a hard drive using the Commodore standard installer. Once up and running, the user is presented with a ring-bound filofax surrounded by a colourful toolbar reminiscent of that found in Wordworth 3.1.

As might be expected with a product from Digita, a lot of emphasis has been placed on making the package as simple to use as possible, so this software should be of general appeal. Consequently, finding your way around the organiser should be intuitive, with functions like page turning performed by clicking on the corner of the filofax.

Like Wordworth, Organiser features Digita's Human Interface Protocol, which in practice means the package can be controlled in numerous ways according to preference. Beginners may prefer to use the representational icons, for example, whereas those who want speed will probably pick up on the keyboard shortcuts available.



The diary can be made more interesting by including some of the event themes supplied as part of the package

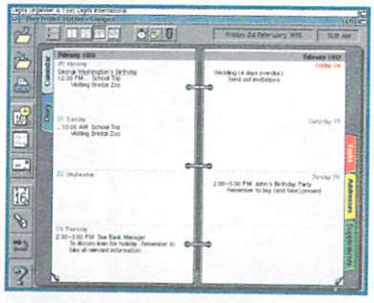
> It's easy to keep Organiser much neater than its pen and paper counterparts, and various tasks are undertaken automatically. For some people this could prove quite a time saver

Following the approach of a real filofax, Organiser is divided into five main sections, each accessed instantly by clicking on the coloured tab dividers. Naturally, the diary constitutes the main part of the package.

A novel addition to this section is that users can choose from a number of supplied themes to give their organiser a more personal appeal. Sporting events, historical entries or celebrity birthdays are just a few of the themes that can add a bit of interest to the diary.

REMINDERS

Entering information is simply a matter of selecting the required day and going through a familiar looking requester. At this stage the program allows you to choose a priority level for each date and, if required, select an alarm to remind you an hour, day or week before the event. This can be in the form of a flashing message or a noise sampled through Workbench 3 sound preferences.



Various views are available, from a page a day to a page a week

The diary allows users to select various ways of viewing their entries. If small entries are only being made you can select the option which puts a whole week on a page, whereas those requiring more space can have diaries with a whole page reserved for each date.

One of the benefits of having the filofax on your computer is the way repetitious tasks can be automated. It's possible to repeat events as necessary – for example your twice monthly squash game. Alternatively, the program allows event repetition on the same day every week.

A calendar section precedes the diary and highlights, in bold, any days with events for an at-a-glance idea of what lies ahead. Clicking on a particular date will instantly bring up the correct page in the diary – a simple but user-friendly touch.

The task list constitutes a separate section allowing users to generate a plan of things that need doing. When completed, these tasks can be ticked off on screen, and as in the diary there are five levels of priority to choose from for each item.

As you'd expect, addresses have their own section, and this part of the organiser again benefits from automisation. When you want to enter a new address, it's simply a matter of inputting the details into a database-style requester and it will automatically be filed under the correct letter in the book. Alternatively, addresses can be imported from other databases providing the files are in ASCII format.

A final quirky touch comes in the addition of Fortune Cookies. This will give a

Supplements

One of the key attractions of the filofax was the fact that you could buy information supplements that could be clipped into the folder as required. Imitating this, Organiser comes supplied with its own range of supplements covering a wide range of topics.

There are items you'd expect to find at the back of a proper diary, like conversion tables, dialling codes and world time zones. Less useful but more interestingly, there are lists of restaurants or wines that could be tagged on to the end of your Organiser.

This is yet another feature that allows you to build up a filofax with quite a customised, personal feel. What's more, it's possible to create your own supplements in Wordworth or any text editor. Though there are about 30 supplements to choose from, however, it's not really practical to use more than a few at any time. In fact, because the supplements use up your Amiga's RAM, they'll slow the program down if you use too many.

the place

Amiga diaries are nothing new, but up until now they've been rather dull. Gareth Lofthouse previews Organiser 1.0, Digita's electronic filofax for the '90s

word of wisdom for each day, though at the moment Digita have yet to complete this section of the program.

One of the most important aspects of Organiser is its printing facilities, since you may want to carry a hard copy version of your filofax. Thankfully, this software supports a huge variety of printers in the same way as Wordworth 3. It's possible to simply print pages in A4, but the best feature is the fact that it will print in the size of portable organisers like Fileofax, Rolodex, Day-Timer and Time Manager. Crop lines will appear showing users where to cut the page to the right proportions, and it's also possible to print on the other side.

WELL READ

Digita's manuals are always exemplary thanks to the fact they assume virtually no knowledge on the part of the purchaser. Organiser's documentation is very readable and includes the sort of step-by-step tutorials that will get anyone started very quickly. Having said that, the same information is repeated so many times in this product's literature that it sometimes seems like an exercise in padding.

Apart from this, there are the miscellaneous general features that can make a competent program into a classic. Digisense, for example, is a built-in intelligence facility designed to save time when inputting data. The auto date feature, for example, will automatically complete the date you are typing.

More laborious repetition can be avoided thanks to the cut and paste tools that have been included – these work just like in a wordprocessor. Digita have also included a powerful search tool that will find events, tasks, addresses or any other text.

File handling is another powerful and flexible element of the program. It's possible to share data with Wordworth, Mailshot Plus, Datastore and most other programs. These small details don't mean much in themselves, but they are bonuses that show how much Digita have learnt from their enduring experience in Amiga development. AC

Verdict

With Digita's Day by Day being the only commercial personal planner available prior to the release of Organiser, it's certainly good to see the new product shines in comparison to its rather dismal predecessor. Organiser 1.0 is colourful and appealing to view, and quick and easy to use – and that's how it should be.

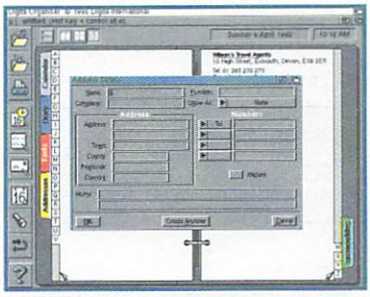
The only problem is whether anyone really needs a computerised filofax in the first place. After all, it could be argued that what the Organiser gains in novelty it loses in true portability.

On the plus side, it's easy to keep Organiser much neater than its pen and paper counterparts, and various tasks are undertaken automatically. For some people this could prove quite a time saver. The option to import information from other programs, the alarm reminder system and the various diary themes gives this software some valuable advantages over a real filofax.

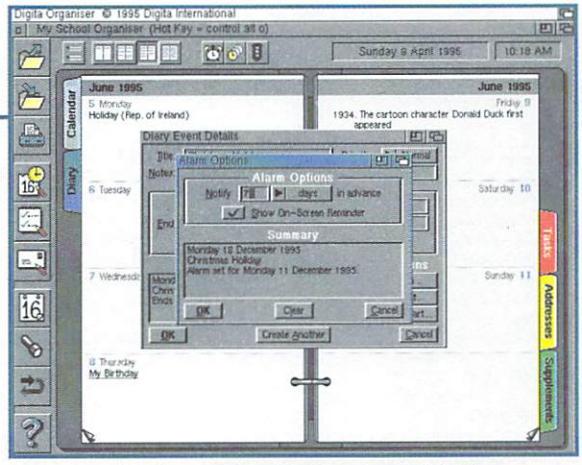
On the other hand the point about filofaxes is that you can consult them on the train, take them into meetings, or use them to find phone numbers at a pay phone. This is not possible with Digita's Organiser. True, it allows users to print up information in a portable form, but that's going to take a fair amount of additional effort.

Other problems include the fact that while you can have a number of people's filofaxes saved in Organiser, they will never be as accessible as the real thing. What happens when Dad wants to view his appointments for the next day but his son Nigel is hunched over the Amiga playing Alien Breed well into the evening ?

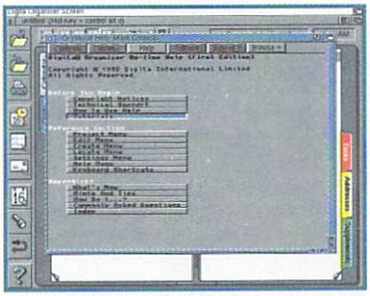
There's no doubt that Digita have done a very professional job with this package, and it's so simple to use that members of the family who've never touched a computer could quickly compile there own computer filofax. But whether it was worth the effort will depend very much on the individual customer.



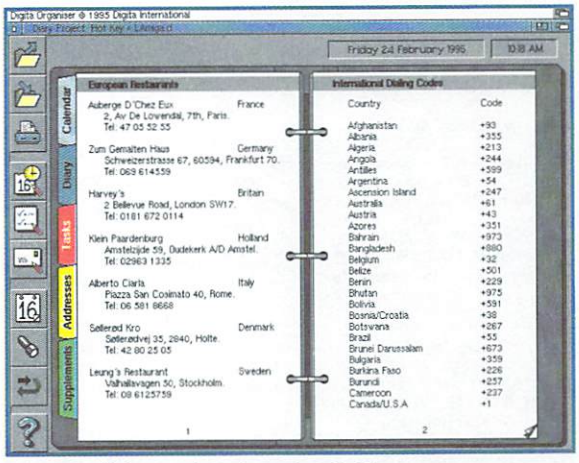
Addresses are entered using this simple requester and automatically filed in the correct place



The absent minded can set alarms for themselves which will remind them in the form of flashing messages or sampled sounds



A key part of the Digita interface, the help option should resolve the few problems that might arise



Like a true filofax, supplements can be added to Organiser to customise the program to your liking

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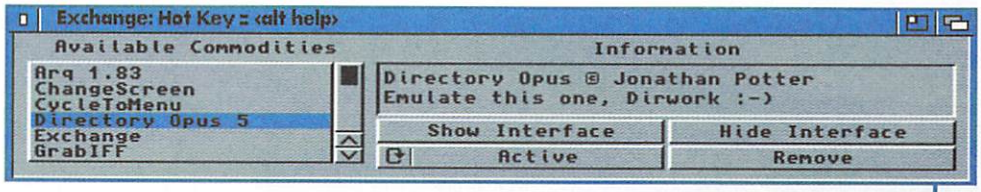


Cock a snook at DirWork, would you? I bet Chris Hames is working feverishly on a riposte!

Magnum Opus

Frank Nord closely examines the latest episode in the Directory Opus saga

Directory Opus has been long awaited. Since the first murky screenshots appeared in magazines late last year, breath has been baited, wallets clutched, murmurs of concern were heard when Jonathon Potter announced he wasn't going to be using his stablemates of old, Inovatronics, to distribute this multi-tasking beast.

But here it finally is, and the metamorphosis has been even greater than could be imagined. We were all ready for a larger amount of configurability, prepared for a new windowing system, we had even set our shoulders in grim determination when we heard you could have more than the standard two directory windows open at the same time. What I certainly wasn't prepared for was the fact that Directory Opus 5 could replace Workbench altogether. That's right, you don't even need to load Workbench at all.

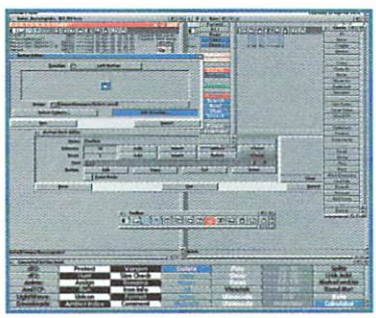
ANOTHER WORLD

If you choose the 'Replace Workbench' option, everything seems perfectly normal, there doesn't seem to be any difference. But as soon as you open a window on your Workbench screen, oh boy, you sure are in a different world. By default, DOpus doesn't fill its windows with icons. Although you do have that option, the default is actually to fill the windows like, well, like a file manager should. A burst of little icons fills the top edge of each window, letting you perform all the essential operations any file manager should be capable of such as copying, renaming and deleting.

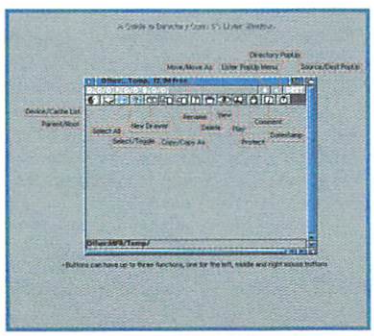
Running DOpus as a Workbench replacement seems like a really neat idea at first. Anyone who has played with Norton Desktop for Windows will know what I mean. It's funky to open your hard drive's window and find everything listed as text, with the ability to copy, move, rename, delete, etc. right at your finger tips in the window itself.

It's also nice not to have your entire Workbench screen filled with windows as you move through sub-directories. DOpusbench will let you do this if you want, but normally it will only replace the files shown in the window with the sub-directory's contents, as you would expect. But soon you get a bit fed up at the loss of all those customisations you had on Workbench.

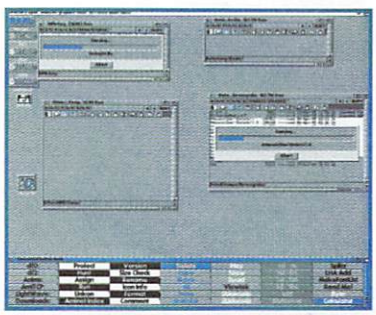
Apart from its looks, things have changed under the bonnet too. Directory Opus 5 is now a fully multi-threaded, multi-tasking package with the ability to perform several operations concurrently. One of the screenshots on these pages shows the contents of a disk being copied to a directory on my hard drive, while another pair of windows are being used to copy some files from another partition into RAM:. This ability is particularly useful for anyone who wants to copy files onto several disks at once, because you would be able to have as many copy operations going as the number of floppy drives you had.



How many button bars did you say you wanted?



Is this enough gadgets for you?



The directory manager is faster than the eye as DOpus 5 copies between two pairs of directories at the same time

OUTSTANDING

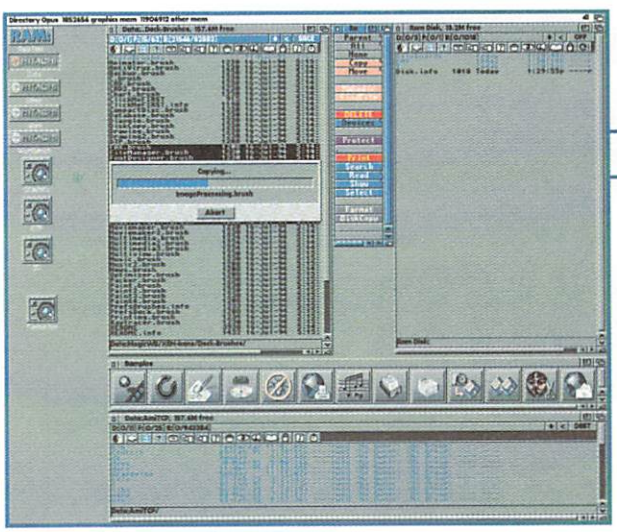
There are some really nice features with this new version. The ability to perform several operations at once must rank highest on the list, but there are some outstanding tools that vie with multi-tasking for attention. The ability to drag and drop more than one file at a time is a definite bonus, along with filetypes which are saved out with icons.

I think we will soon be seeing collections of these filetypes uploaded to Aminet, performing such esoteric functions as displaying imagine objects or HTML pages and so on. The fact that the built-in viewer now supports datatypes should be applauded and will certainly cut down on the amount of configuration that needs to be done to show GIF, PCX and Jpeg pictures or play VOC or WAV sounds. I liked the new ability to use the keyboard to navigate DOpus' interface.

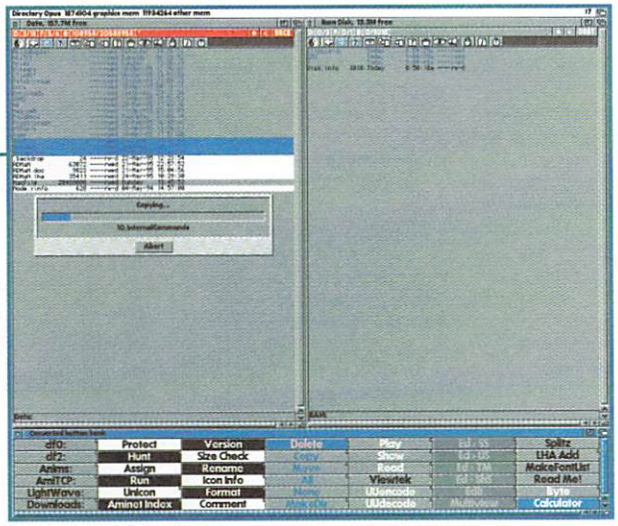
Slight confusion

The manual could stand some improvement. It's very nicely laid out, but the index is fairly poor and there are several typos and things that look like typos, but are, in fact, design elements. They have used the Right Amiga symbol that appears in menus to show that you are reading about a menu item. But this symbol is usually used in a manual to show the keyboard shortcut for that command, which makes things even more confusing because they don't show the shortcut – they are just in the manual on their own. One of the real disasters comes when you read the information about the internal 'Finish Section' command – it gave an example that sounded very useful indeed. The manual said you could get DOpus to beep when it had finished an operation, and the example given was using LHA.

I use LHA all the time and thought that given DOpus 5's ability to multi-task, it would be very useful to get it to beep on finishing the LHA compressing or decompressing. I followed the instructions down to the last letter until I came to the internal command 'Beep.' There isn't one.



Your Dopus could look like this...



...but I think most people's will end up looking like this.

➤

Instead of swapping source and destination windows as it used to do in DOpus 4, the space bar now switches on keyboard mode. To show this you are given a little arrow cursor in the active directory window which you can move up and down with the cursor keys. Selecting files is done with the return key and double-clicking on them can be emulated with the Enter key on the numeric pad.

The context sensitive on-line help is also useful, although I would have liked to see slightly more index entries. One other thing I liked was that DOpus 5 now caters for the three button mouse owner too. Most buttons can be configured for three different operations depending on the mouse button used, giving even more flexibility (all the same, I think I'll still use my middle mouse button to swap between screens rather than use it in DOpus).

However, if you've seen the requirements for DOpus at the bottom of this page, you will have noticed that you can no longer take it with you when you go to rescue a friend's hard drive. The price for all these added elements is the increased size of the application. It still comes on one disk – it only takes up about 800k of hard drive space – but that doesn't really leave enough room on the disk to install workbench as well.

One of the other features which had me slightly confused until I ran DOpusbench is an icon on DOpus's screen called 'Favourites.' This is a 'Program Group.' The reason for it became clear when I realised that running DOpusbench means you lose ToolsDaemon and ToolManager even though DOpus has the ability to show entries added to the Tools menu.

PROGRAMS

These program groups are where you are supposed to drag your most-used programs to to save you having to click through directories to get at them. You can have as many as you like and they can be called whatever you like, but it reminded me too much of Windoze, so I gave up on the idea of using them almost as quickly as I did on using DOpusbench.

The default configuration is, unlike DOpus 4's, pretty unusable, so there is no alternative but to configure the program to meet your needs. However, configuration has gone from one button in the bottom-right corner of the DOpus 4 interface to not one, not two, but eight separate menu items scattered from one end of the title bar to the other. I understand that each of these preferences tools are discrete, multi-tasking programs in their own right, but couldn't we have had them all in one place?

One of the really annoying problems with this schizophrenic configuration method is that keyboard shortcuts get duplicated. On my DOpus I like to have the Delete key as the shortcut for deleting files, surprisingly enough. When I hit the Del key in DOpus 5, however, I get a Lister Format window appear. Now, I've scoured the manual for a way to stop this from happening so that I can be re-acquainted with my Del key, but all it smugly tells me in the manual is the fact that not only can I use the Lister Status PopUp menu to call up this Lister Format window, I could also double-click with my right mouse button in the lister.

What it doesn't say is that the Del key also works, nor does it tell me how to stop it from working. Two methods for calling up this window seem ample to me, why

In the wrong direction?

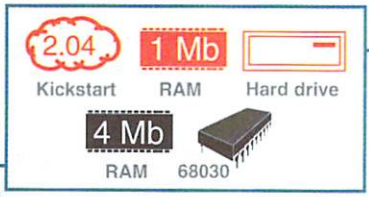
As you can probably guess from the text on these pages, DOpus 5 has got me really frustrated. It certainly is different from DOpus 4 and pretty much any other file manager, and is a lot more ambitious in its scope. But it is so much of a paradigm shift that it makes me wonder if anyone is going to use it to its full potential.

I have always plugged DOpus 4 in my various reviews and features, basically telling everyone that if they were to only ever buy one piece of software, then that should be it. So I, possibly more than others, feel disappointed that the clean interface DOpus 4 presented to the world has been swapped for something that could almost have been designed by Macro Systems (no offence, guys). Directory Opus' changes make me wonder about change for change's sake. Progress has once again triumphed over common sense, and what was an incredibly good file manager with only two flaws (not selecting .font files when the font directory was chosen and not being able to discern between two floppies with the same name) has become something that will require more maintenance than your hard drive.

I think what will happen for the vast majority of people is that they will load their old DOpus 4 config file and then not bother with the new configuration abilities of DOpus 5. And guess what? DOpus 5 still can't tell the difference between two floppies with the same name.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended



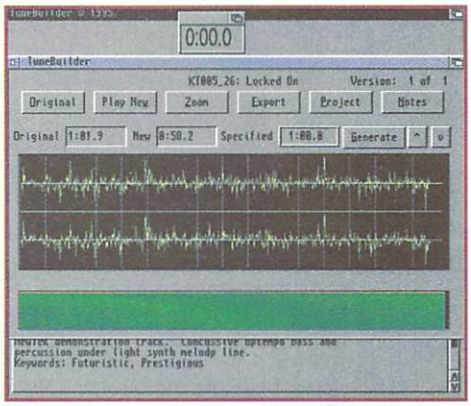
The bottom line

Product: Directory Opus 5
Supplier: Wizard Developments
Price: £49.99
Tel: +44 1322 277908

Ease of use 6
Implementation 8
Value for money 8
Overall 8

A sound future

Supported by some of the best creative packages available, the Amiga is the first choice computer for video and music professionals. Now Gareth Lofthouse previews TuneBuilder, a music editor that promises to amaze



Music tracks are loaded into the editor where the playing length can be specified or blocks recombined

Spring has brought good news for Amiga musicians, not least with the release of version six of the ever popular Octamed reviewed elsewhere in this issue. The high-end Amiga user, however, is more likely to be tantalized by a surprising new product that has already caused quite a stir in the *Amiga Computing* offices.

Created by Airworks Media, it's claimed TuneBuilder will revolutionise the way music is edited. With video and film makers particularly in mind, the package offers CD backing music which can be timed, cut and rearranged as required using the supplied software.

TuneBuilder is designed for use with CD music libraries specially embedded with edit points that allow each piece to be rearranged, shortened or expanded. Once loaded into the program, the user can specify a required length of playing time to fit almost exactly a sequence of film footage.

The system's benefits don't stop there, however. A musical piece might, for example, have a percussive effect that would suit a particular moment of action in a video. Using the editor, Amiga owners will be able to rearrange the tune so that the required sound effect comes earlier or later in the piece to fit in with the film – a feature that should prove to be an amazing time and cost saver.

SIMPLICITY

Though this is a package worthy of professional use, the interface lends the process childlike simplicity. Music appears in the editor broken down into a series of blocks, and rearranging it is simply a matter of dragging the blocks into the desired position using the mouse.

The ingenuity of the system lies in the fact it can play new versions of recombined music segments instantly, without any hint of a pause or a clash between sound blocks.

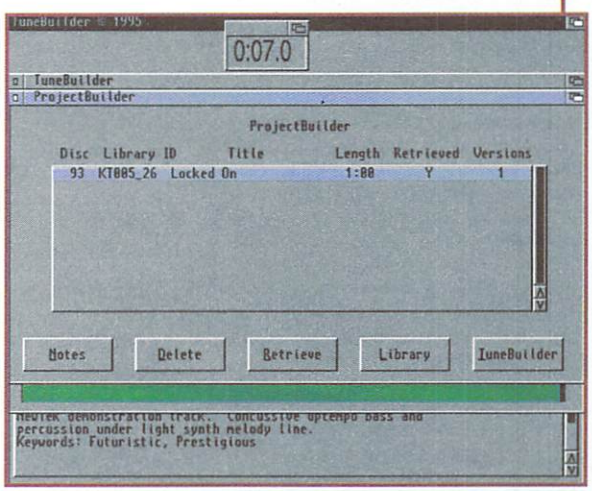
This is largely down to Airwork's use of professional musicians for the task of selecting the edit points on the CD – apparently every minute of music has taken two to three hours of work to accomplish successfully. Setting the length of the piece is even simpler than rearranging it. In the preview version, creating a new tune accurate in duration to a specific frame was not possible, but TuneBuilder will automatically generate a sequence that comes within tenths of a second of your specified time.

Music is retrieved from the CDs and manipulated in the editor as 8-bit sound. However, once satisfied with your new version it can be exported for video applications as 16-bit stereo if required. What's more, the software supports an impressive range of audio file formats.

For example, Sunrize, Sun audio, WAV and Toccata formats are all available. The latter should prove a boon to VLAB Motion owners who will be able to load edited pieces directly for use with the Toccata board.

TuneBuilder will be packaged with the Arpeggio music library, AirWorks' collection of 345 music cuts covering 12 CDs, with a variety of themes for all sorts of purposes. The asking price of $950 for non-broadcast material or $1800 for material to be broadcast may make some readers quail, but it represents real value for money in comparison to alternative methods.

Other companies are creating large libraries for use with TuneBuilder. A Killer Tracks demo CD was supplied to us with the required edit points, and if the pieces are typical of the standard we can expect, then the professional is in for a treat.



The export requester, and TuneBuilder boast about all the options you could ask for

Breakthrough

A certain amount of product hype from the developers is to be expected, but for once the implications of this new technology could be as dramatic as the owner's hope if it's marketed correctly. Previously, the only way to match music to video effectively has been either to hire sessions musicians or to create your own tunes by investing in midi equipment, and either of these options can cost the videographer an arm and a leg.

By contrast, TuneBuilder puts control over music into the hands of Amiga users in a way that's not been possible before. Thanks to the efforts of Airwork's professional editors, even the tone deaf will be able to produce a background soundtrack to very high standards.

Ever keen to keep our readers abreast of the latest and most prestigious software available, *Amiga Computing* will be giving TuneBuilder a full review as soon as it's finished. Looking ahead, however, Airworks envisage a time when the likes of the latest Madonna CD will be released on CD-ROM with pre-embedded editing points for arrangement with this system. Perhaps now you're getting an idea of just how important TuneBuilder could be.

The art of

TVPaint has been part of the power graphics scene since the early days. In that time it's seen a number of revisions which have always brought the cutting edge of painting technology to the Amiga. Not surprisingly, this tradition continues, but on the face value you could be fooled into thinking the update applies more to the price rather than performance. The assorted buttons and icons look worryingly familiar. However, dig a little deeper and the price to performance ratio improves dramatically.

The key to this latest incarnation is the arrival of layers as the pinnacle of the TVPaint environment. In the past TVPaint, like the majority of Amiga packages, used the traditional paging approach – taking the form of a double buffer primary and spare page. However, with the arrival of TVPaint 3.0 the Amiga takes its place in the forefront of painting technology, alongside the latest PhotoShop 3.0 and Quantel's Paintbox.

In simple terms, layers offer the ability to view multiple 24-bit images on the same screen while retaining the ability to edit them independently. In reality, this is achieved by stacking the buffers one behind the other.

SHARING

In TVPaint's case this translates to foreground, middle ground and background layers denoted as buffers A, B and C, with all three sharing a user-definable background colour. In addition, you also retain a spare page for work in progress and the application of specific special effects. This means you can paint on layer A and then switch to layer B. If you then add more paint to this layer it will appear behind anything in the first.

The same applies to layer C, the end result being a 24-bit graphic sandwich with layer B as the filling. And of course, these multi-layer projects can be saved just like a single image, but when reloaded you can disassemble the image, rearrange the layers and edit them with complete freedom.

The arrival of built-in image processing is a major innovation

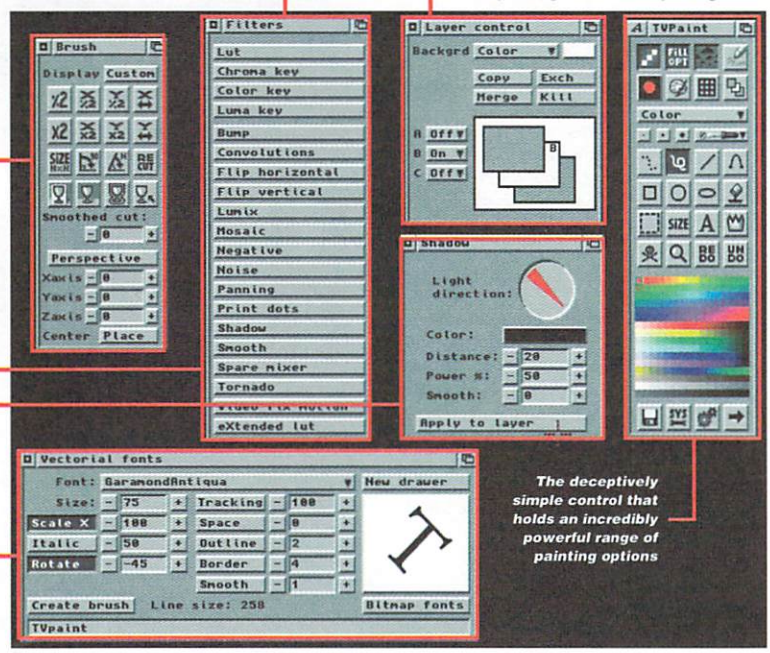
Possibly the most important requesting in the entire package

Perspective, re-cutting, soft edges, scaling and orientation – bliss with burshes

A typical example of a user-definable filter

Excellent scalable and bitmapped font support

The deceptively simple control that holds an incredibly powerful range of painting options



A typical example of filters in action, with the bump option adding texture to the blue backdrop and embossing the orchid onto the barrel

A touch of class

With the availability of such comprehensive alpha support, the actual process of applying paint to paper can be much more subtle than simply clicking on a mouse button. As a result, TVPaint offers extensive support for pressure-sensitive tablets, with Wacom being particularly well supported. Equipped with an appropriate tablet, TVPaint truly ranks among the very best painting environment on any platform.

As you've probably gathered, this is pro product from start to finish, and nowhere is this more apparent than via the program's built-in virtual memory facility.

For commercial artists, resolution is a constant irritation, especially for those working in print resolutions – *Amiga Computing* cover images are never smaller than 1500 x 1000 pixels. Imagine if you were commissioned to produce an image twice or perhaps four times this size. The onboard memory requirement would be massive. Fortunately that isn't a problem thanks to TVPaint's Big Edit option.

It's true that using Big Edit can slow the creative process, but the benefits for any serious commercial artist are immense. In fact, the only limitation is the amount of available hard drive space on the partition you've chosen to contain the Big edit swap file.

The process works by defining the size of the project and then selecting an area equivalent to your present page size from a scaled representation of the entire project. Once your edits are complete on a particular area, you simply save the changes and reselect another area to work on until your masterpiece is complete. Simple, efficient and often essential.

Not surprisingly, you're free to turn layers off and on as required, swap, merge and rearrange their position in the stack via requesters or hotkeys. Put in such simple terms, it's easy to be unimpressed by the degree of added freedom and flexibility this gives the artist – only when you get some hands-on experience does the true impact really hit home.

Like its predecessors, the latest release is actually a 32-bit rather than 24-bit environment – with the additional 8-bits providing built-in alpha channelling. In short, built-in alpha channelling allows you to generate a seamless fade from one image or brush to a freely definable level of transparency. In fact, every single pixel has its own alpha or transparency value which can vary between 0 and 256.

Classic examples of alphas in action are Movie trailers and promotional material which invariably feature multiple scenes and character close-ups, all crossfaded and blended into a montage – all of which could be captured via TVPaint's direct support for VLab.

APPLICABILITY

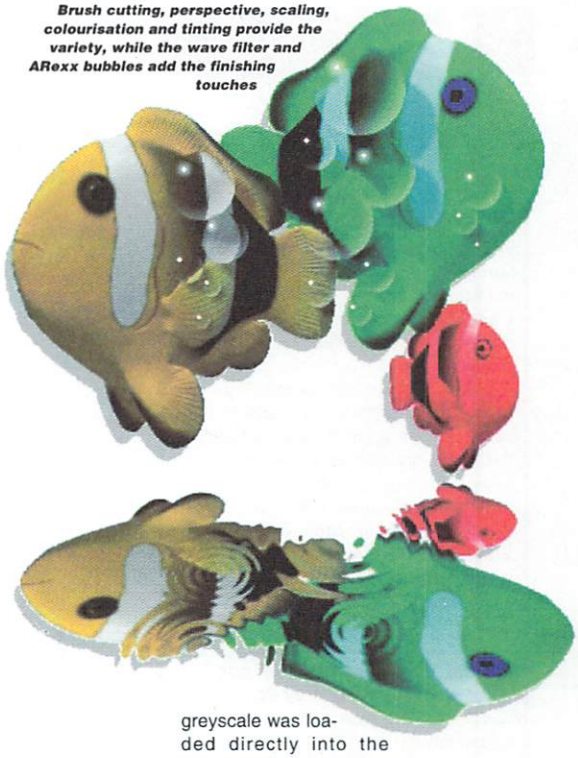
This essential commercial skill has always been a part of the TVPaint repertoire, and indeed still is, but it now applies across multiple layers in real time. If you apply an alpha channel transparency to an element in layer A, its affect is carried right through all the subsequent layers.

Combine alpha effect with density fills,

Although not detailed in the article, you can see TVPaint's new scalable font handling is superb in any size, aspect or angle

the matter

Paul Austin explores the latest update to the Amiga's ultimate painting environment



Brush cutting, perspective, scaling, colourisation and tinting provide the variety, while the wave filter and ARexx bubbles add the finishing touches

Filters for all

As mentioned briefly before, filters – in the style of Kai Power Tools on the Mac – are now a part of the TVPaint environment. At the moment the package ships with 20 assorted filters – with more in the pipeline – which either work directly on the selected layer or operate in concert with an image on the spare page.

Each filter produces its own dedicated requesters for fine-tuning the effect and defining whether it is to be applied to a single layer or over the entire project. Classics include the shadow option, which applies a user-defined shadow to the layer of your choice. Panning is another excellent addition which will pan either individual layers or the entire project in a user-defined direction and amount.

the assorted drawing tools, soft edge brush cutting, and a multitude of image manipulation options and you could have a masterpiece on your hands before you've applied any paint.

The actual application of paint and effects is also beautifully implemented, and now boasts the left mouse button erase feature as pioneered in Photogenics. Unlike Photogenics, though, complete ARexx automation is available across the board for those boring jobs.

In addition to the aforementioned button, you also have full undo and redo options – redo being particularly useful because it allows you to reapply existing strokes with different colours, modes and effects.

Quite literally, everything can be combined; drawing tools such as pens and airbrushes, and drawing functions like straight lines, filled shapes, bezzier curves, bucket fills or freehand can all be used in combination with the drawing modes – colour, merge, erase, pantograph, and so on. By mixing all the possible options, over 2000 combinations are available – all with user-definable parameters.

POWER

A classic example of this is the combined power of a bucket fill in erase mode. If we assume an image has been loaded which contains a specific element amidst a predominantly dark background, a bucket fill in erase mode – given an appropriate fill tolerance – would remove the unwanted areas of the image, revealing any layers beneath.

The element could then be cut out as a brush, scaled, given perspective or image processed, used as a painting tool in the mode of your choice, pasted into another layer or perhaps applied as a soft edged, user-defined density fill for a drawing

An attempt at a jazzy logotype, with gradients, fonts, and real-world images dropped in as density fills. And of course the ubiquitous drop shadow

function. Things get even more funky with the aid of the spare page. Take a quick glance at the gun image and you'll notice the blue density fill in the background has a texture. To achieve the affect a separate greyscale was loaded directly into the spare page. The layer containing the density fill was selected and the bump filter applied, at which point the former smooth blue background regenerated behind the gun and orchid as you see it.

Just as easily, I could have applied the effect to either the orchid or the gun by simply selecting their particular layer – and, of course, you can also apply the effect across the entire project if you wish.

Of course, you're not limited to simply loading images into the spare, as you're free to cut and paste and copy elements or entire layers to the spare. AC

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

8Mb Ram, 030 with FPU
Graphics card, Picasso II, Retina, Retina Z3 EGS, Rainbow 3 or Spectrum

12 Mb, Graphics tablet

The bottom line

Product: TVPaint 3.0
Supplier: Activa
Phone: +44 181 402 5770
Price: £495

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

Verdict

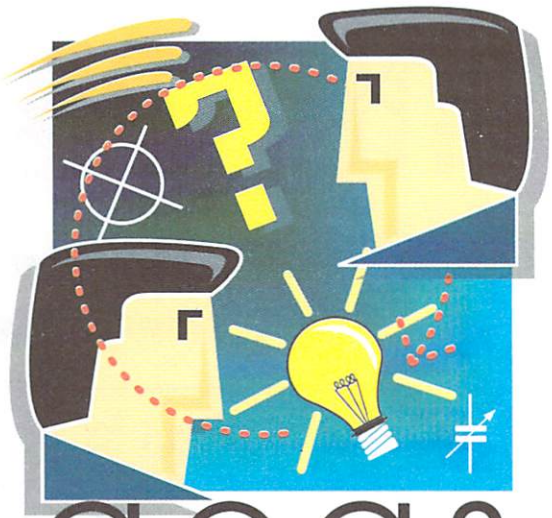
At risk of stating the obvious, the new TVPaint is without doubt the best paint package I've ever had the pleasure to use. In fact pleasure aside, usability and effortless power are the real issues.

You don't have to compromise, you don't need to make masks, stencils or all the other things that make computer-generated art a pain rather than a pleasure, you don't have to save out at every stage in case of accidents, you simply do whatever your imagination can dream up with the minimum of effort. The program has obviously been designed for artists rather than computer users. No matter what springs to mind, actually achieving faultless and accurate results is both quick and simple.

Obviously, with the arrival of Photogenics at a fraction of the price, most users will choke at the prospect of coughing-up this sort of money for a paint package. This is a factor which may be compounded by the arrival of the next Photogenics update, which promises full 24-bit on Picasso II, Retina Z3 and so on.

However, TVPaint isn't designed for most users. For those who require, and can afford, this kind of flexibility and power it's quite simply an essential. In fact, my only real complaint is the 'so you've never used a computer before approach' in the manual, and the almost fourfold increase in the asking price. However, if you can convince yourself there's even a slim chance you'll make good on your investment, I'd sign the cheque without a second thought.

The dispeller of despair, the light at the end of the dark tunnel. Yes, it's the ACAS pages in time to save all you anguished Amiga owners in need of help



acas

AMIGA COMPUTING ADVICE SERVICE

Backup blues

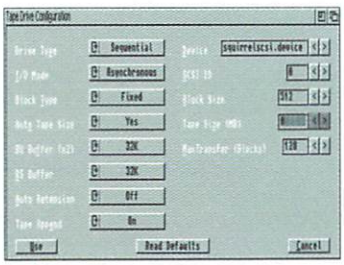
I am shortly to buy the much praised SquirrelSCSI adapter from HiSoft to connect a 540Mb SCSI hard disk which was given to me by my father. As you can guess, this is a drastic change from my simple dual floppy-based system and I am looking forward to no more disk swaps and having Workbench available instantly.

My father has also suggested I get hold of some disk backup and maintenance software and I have decided on AMI Tools and backup software. He also says that ideally, I should invest in a tape drive device for a fast and convenient backup storage device. Will SquirrelSCSI and, indeed, AMI Back work with such devices?

J Samuels, Prestwich

The SquirrelSCSI software doesn't explicitly support tape drives. They do show up as SCSI devices on the SCSI chain and it's simply a matter for third-party software, AMI Back in your case, to access this device directly.

Tape devices are certainly one of the best methods of backing up hard drives and I would think that you shouldn't have any problems with SquirrelSCSI and AMI Back communicating with such devices. If you do, HiSoft, the suppliers of SquirrelSCSI, have a customer support service second to none and I'm sure they could help with any problems should they arise.



Using a SCSI tape streamer connected to the A1200 via the SquirrelSCSI host adapter should work fine with AMIBack backup utility

Dead A500?

Every time I switch on my Amiga 500, the power light flashes and the screen goes green. What's wrong? Is it time to buy an A1200 now?

H Moore, London

Go on, be a devil and treat yourself to an A1200, you won't regret it – they're great. Your A500 is probably dead, I'm afraid. Coloured screens usually mean a component problem. Most of the major chips in an A500 are socketed, so it's possible, but not guaranteed, that one has come loose. Open up your A500 and push all the socketed chips down, making sure you have switched off the power and touched something earthed to get rid of any static first though.

Wassat then?

Having recently bought a second-hand A1200 and being very new to Amigas, I was wondering if you could tell me what the rectangular hole at the back of my A1200 (right next to the mouse port) is for. Has something important been removed?

M Timperly, Warrington

Don't worry, nothing important is missing. Usually, that hole is covered by a blanking plate. The hole is simply there for any third-party hardware developers to use for their expansion boards if needed, although I don't know of anyone who has taken advantage of it yet.

Clickless

I'm not an impatient person, or even one given to bouts of violence, but if I have to listen to the floppy disk clicking noise anymore when the drive is empty I will be driven to taking an implement of substantial mass to my newly acquired A1200. Please, please tell me how to stop it before I snap.

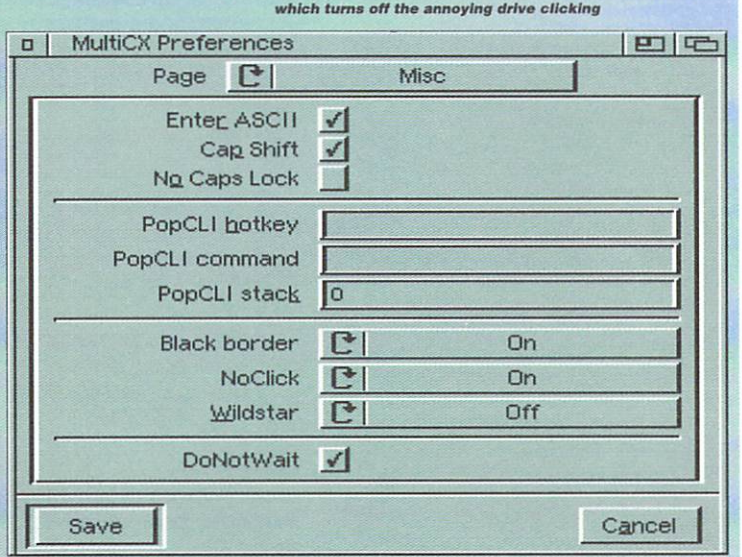
A Cowley, Bedfordshire

Oh dear, this age old and understandably annoying clicky drive problem rears its ugly head once again. It's good to see newcomers are still entering the Amiga scene and this is a good reason for Escom to get Amiga production up and running again as fast as possible.

Your should refer to a brilliant utility called MultiCX. This little wonder of wonders has many features built in to one program.

The most important feature in your case is the NoClick function which can be easily activated via the MultiCX Prefs utility which accompanies MultiCX on our CoverDisk.

Once activated, you can say good riddance to those clicky drive blues. Hurrah for MultiCX.



One of MultiCX's many features is the NoClick function which turns off the annoying drive clicking

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 Amiga software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a thorough description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

Any questions?

Virus info

As a pensioner and new to the Amiga 1200, I would like to ask some questions about something I have heard much about – viruses.

Am I right in assuming that all viruses stick to the disk which is infected and are not destroyed if the computer is switched off for a while and the infected disk loaded again? If they are as widespread as I think, how come commercial companies have not researched anti-virus techniques they can put on their disks to stop a virus from getting on it in the first place?

C Burley, Dronfield, Sheffield

Don't worry about asking questions in this magazine – we all started out as beginners.

You are right in assuming that a virus 'sticks' to a disk and is not destroyed. This is because it is written to the disks and stays there unless it is erased with a virus killer program. It will remain on the disk and will re-infect your Amiga, and other disks.

Commercial software companies check their software for viruses prior to sending their master disks off for duplication. It is down to the user to ensure infected disks are not played in the machine. To safeguard do the following:

1. Always write protect your disks, particularly commercial software such as games. Most commercials software seems to be write enabled these days, even though data will not have to be written to disks. Only remove write protection if you need to write to the disks or if you are instructed to do so by a message.

2. Always check new disks, especially those given to you by friends.

3. Make sure you run an up-to-date virus checker program such as John Veldthuis' Virus Checker, available on Aminet, BBSs and PD libraries.

Mind your language

I am 14-years old and have set my sights on a career in computer programming. I currently have an Amiga and would like your thoughts on which programming language to choose from.

I am interested in C and assembly languages as these seem to be the choice for most games programmers. Which one would be the one to learn for a games programming environment?

G Watson, Essex

Today's games programmers are generally using a mix of the two. The core of the game code is often written in C to aid portability and reduce development time. Then, any areas which need to be fast and efficient are written as assembler routines and incorporated into the main game code.

Therefore, to have an advantage over other people pursuing careers in games programming, you should ideally have good working knowledge of both.

Clean up

I have recently lost a disk with some important information on it due to a spillage accident involving a coffee mug and my wayward elbow. I was wondering if there is any cleaning kit which can clean the actual magnetic media inside the disk casing for situations like this?

L Peters, Somerset

There are no such cleaning kits available I'm afraid. The magnetic material inside floppy disks is rather delicate and susceptible to scratches.

However, I recently had a coffee incident with my LightWave installation disks but did manage to save them. I shall relate the whole sorry story to you, which begins shortly after I recovered from the shock and managed to stop swearing profusely. Once upon a time...(let's not get too carried away eh? – Ed).

The first thing I did was soak up the excess coffee on the exterior of the disks using simple kitchen roll. Next, I grabbed the bottle of cleaning fluid which comes with the many disk drive cleaning kits on the market. Such fluid is often alcohol based and is good at dispersing unwanted stains, while quickly evaporating.

At this point, my coffee-stained disks were starting to get a little sticky, so I proceeded to put drops of the cleaning fluid on the disk covers, rubbing it in with my finger. This seemed to disperse the sticky coffee residue and, because most cleaning fluid evaporates quickly and easily, it left the disk covers dry and a lot cleaner.

The next tricky step was dealing with the metal slider which protects the magnetic media inside the disk case. As you can probably guess, the slider was not at all well. A healthy slider quickly snaps closed when you release it thanks to the little spring hidden away inside. The coffee saw to it that this was not going to be the case any more and made the slider stick open and feel as if it was moving over a layer of treacle.

Carefully, I doused the outside of the slider with cleaning fluid and gently rubbed it in to the particularly sticky spots, letting it dry. Next, I carefully lifted the slider so I could get underneath it. Be careful not to bend it too far or it won't lie flat anymore, causing it to stick in the disk drive. It could also spring completely off.

Now that I could get under the slider, I proceeded to douse the underside of the slider and the surface area of the cover which the slider moves over with cleaning fluid – release the slide and try moving it back and forth a number of times, and keep adding more cleaning fluid until the slider starts to move freely. It may take quite a few minutes to get rid of all the sticky coffee residue, so be patient.

The next nail-biting step was to tackle the coffee which was actually on the magnetic surface of the delicate disk inside the casing. The first thing to remember is to never touch the magnetic media with anything that can scratch the surface – you can't get rid of a scratch.

Looking at the spots of sticky coffee on the magnetic surface of my expensive LightWave disks made me cringe at this point. So, with trembling hand, I started to put drops of cleaning fluid on the disk surface, rotating the disk as I did so. You will probably notice that the cleaning fluid quickly spreads across the surface.

I then began to turn the disk using a pen on the round metal hub at the back of the floppy disk. Inside all floppy disk cases is a layer of soft white fabric which, I presume, helps keep the surface clean. This helps clean up the cleaning fluid (and hopefully the coffee stains too) as the disk rotates. Keep doing this until the cleaning fluid has dried and there don't seem to be any coffee stains in sight.

Eventually, you should end up with a much cleaner disk. The next step is to find out whether it still works. At this point, I must point out that there is a risk that any coffee residue still on the disks will probably find its way onto your floppy disk drives heads. The risk is yours and will depend on how desperate you are to retrieve your disks, so keep that disk drive cleaning kit handy.

You should now dig out your best disk copier and, making sure the verify option is enabled, proceed to back up your disks. During this process, you will soon find out whether there are problems with your disks because the copier will probably display errors.

However, if you are lucky, the disk will copy without problems and you can then try and use any programs or data using the backups. In my case, I simply ran the LightWave installation process to a temporary partition to see if it worked.

And it worked perfectly indeed. Frankly, I was pleasantly surprised and would not recommend this process unless the data you are trying to save is worth the risk of mucking up your disk drives heads. I would guess, though, that any liquid finding its way onto the heads will easily be cleaned with a cleaning kit, and replacement disk drives are quite cheap anyway.

Certain things this incident has taught me is that there is hope of rescue should this unhappy state of affairs re-occur, that floppy disks are best kept in floppy disk cases, coffee best kept in the mug, and always to make backups. So invest in a good quality disk box and take extra care when drinking at your computer. The end.

Plug into the Amiga

star letter

Here's an idea. I use Macs and PCs fairly regularly and am extremely impressed by the idea of plug-ins. For those who don't know, plug-ins are pieces of software, like datatypes for the Amiga, which can be added to any program that supports them.

For instance, Kai's Power Tools on the Mac is a plug-in for extra image processing effects. It not only works with Photoshop, but also with Quark XPress, the foremost DTP program in the world. This means that you get Kai's Power Tools effect within XPress, without having to take your images into Photoshop first.

Wouldn't it be great if ADPro worked the same way? Then we could use its loaders and operators inside packages like Wordworth and PageStream. I think that if Commodore ever gets resurrected, one of the first things it should do is try to get some sort of standard set up.

William Russell, Colchester

Plug-ins are indeed a superb idea. However, it seems that none of the Amiga software companies are too willing to talk to one another when it comes down to it, so, as you say, a standard will probably need to be set by whatever entity Commodore becomes.

That being said, I think the 'new Commodore' will have other things on its collective mind than plug-ins. Like getting machines into shops for instance. But perhaps LightWave will lead the way as the new version supports plug-ins, but unfortunately not the standard ones used by 3D Studio, Photoshop, et al.

Faulty FastRAM

While reading your April letters page, I found a striking similarity between the situation experienced by Mr. Colin Smith and myself.

I ordered a 4Mb RAM board from Siren Software back in December. Upon receiving it I found it to be faulty and sent it back, demanding a refund. I expected to receive one soon – if the goods are faulty the company must cough up. It was several months and phone calls later before I was offered any sort of refund, and they suggested a credit note to the value of the board. After such a long wait I was in no mood to try my luck again. After all, who's to say the second wouldn't be faulty too?

I took a trip down to my local trading standards office for a chat. They said that if the company maintained that the goods were not faulty, they (Trading Standards) could do no more for me. It came as no great surprise when they later informed me that they had received a letter from Siren Software saying I had returned goods which worked perfectly.

In the end I got my money back. It was a long complicated process which I don't want to bore you with now. Suffice to say, I won't be dealing with Siren Software again.

Please print this, as I see no reason why anybody else should go through the same struggle. Expanding your machine should be fun, not a constant worry about your legal standing.

Kenneth Lyon,
klyon@touchdwn.demon.co.uk

I appreciate the difficulties you have had with Siren, but would just like to ask why you felt it necessary to 'demand' a refund. We don't live in a perfect world and it wasn't necessarily Siren's fault that the RAM didn't work in your machine. What was the matter with them simply sending you a replacement SIMM? That having been said, you do seem to have had an awful lot of trouble actually receiving a refund, which is not good in anybody's book.

Compact congratulations!

Congratulations on the first CD for the Amiga that is really worth mentioning. Any qualms of yet another software let-down were swiftly dispelled when I switched on my A1200 with the CD Toolbox in situ.

Terrific! More of the same please, even if you do have to up the cost of the mag in consequence – it would be worth it, at least in my opinion.

Just to reiterate, well done AC!

Frank Doswell, Crawley

Blush! Gosh, thanks. We do try our best. As to raising the cover price of the magazine, I'm sure the majority of our readers would have to disagree with you there

Booklet blunder

Please can you help me? I have just purchased an Amiga 1200 and a friend has lent me some booklets which I would love to be able to purchase: Amiga Answers, Mastering the Amiga, Amiga Format

If you could let me know the cost I will send a cheque by return.

Deryck Marston, Leicester

Well, Deryck, if I remember rightly, the first and last booklets you mention were published by our Bath-based competitor, Future Publishing, while the second one was published by Bruce Smith Books who can be reached on 01932 894355. Good luck with your new machine.

I just can't get enough

I'd like to disagree with Mr. Hawkins' views in March's issue of *Amiga Computing*. I use LightWave every day and find that only *AC*'s coverage of the various add-ons for it are in-depth enough for my liking. I say more LightWave!

I would also be extremely keen on a tutorial series like your Publishing column, not just the more general 3D page, but something to get your teeth into. My only other problem is getting hold of the items you review. It seems that the only UK supplier is Premier Vision and they charge too much and don't carry enough stock. Perhaps you can suggest some other dealer?

Mike Perrie, Sunderland

The lack of UK availability of some of the LightWave-related products we review can be a problem, especially for readers without a credit card, but we can only hope that as LightWave gains further ground in this country, their will be dealers springing up to offer UK users the software they want.

As to the likelihood of a continuing tutorial for LightWave users, I think it is unlikely at the moment, unless, as per Mr. Hawkins suggestion, we do change our name to LightWave Computing!

A clean bill of health

I would just like to say thanks to Frank Nord for his Amiga Medical articles. They have helped me no end with configuring my system, which consists of an Amiga 1200 with 65Mb hard disk. As I run lots of programs that have an ARexx interface, his advice on moving the REXX: directory has proved invaluable.

Bill Reason, Northwich

Frank says: I'm glad my hints have proved useful to you. They were culled over a great many years of messing around with not only my own Amiga, but other people's, to make things run a lot smoother, especially for people without a technical bent.

Net worth

Thanks very much for the Demon Internet CoverDisk – it was superb. I had been contemplating having a go on the Internet and this was just what I needed to push me into it. AmigaNOS is somewhat complicated in use, but I've found that as long as you leave it pretty much alone, although you might not get the best performance from it, at least it actually works.

It does seem a little strange that you have to edit three files to change the newsgroups you subscribe to, but ours is not to reason why. My next step is to jump to AmiTCP thanks to the hefty article you published last month. I just hope I find it easier than AmigaNOS, (I can't wait to use Mosaic though). Finally, keep up the good work. *Amiga Computing* is by far the best of the Amiga mags; all the others either aim too high, or too low. Yours has just the right balance between the two.

Kevin Bryant, Southall

The response to the Demon freebie has been phenomenal. We have been inundated with e-mail and snailmail to the effect that it has been the best giveaway any magazine has ever put on the cover – ever. We assume from this that you lot actually quite liked it.

0401200?

I have an Amiga 1200 and I have been saving up for ages to buy an accelerator card for it. But now I am worried that a 68040 accelerator will become available and I will have bought the 68030 one. Can you advise me on what to do?

Mr B Caldwyn, Falmouth

Rest easy Mr Caldwyn, there won't ever be a 68040-based accelerator for the A1200 unless someone can do something about the size of the 68040 chip and the amount of heat it generates. Get your 68030 board by all means and try to get one that offers two SIMM slots, if possible, as they offer more flexibility when it comes to upgrading your RAM.

AGA flicker

After having 'upgraded' from my A3000 last year to an A4000/040, I find it really annoying that I need to have two monitors. I kept my NEC Multisync from my A3000, but the A4000 doesn't have a built-in flicker fixer so I've had to buy a 1084S monitor to play games and use programs that don't promote to my EGS Spectrum or DoublePAL (which is horrible anyway).

Are there any companies out there making a flicker fixer for my A4000? I have ➤

Commodore worries

I have been a loyal Amiga owner for the past four years, but am wondering whether or not to keep up my commitment. I have a 1Mb A500 with Workbench 1.3 and a second floppy drive, but am looking at buying a 486-based PC. Commodore just don't seem to be getting back together, and the games companies are dropping the Amiga like a rock, unless you have an A1200. Why can't they convert the games from the A1200 to the A500. I'm sure there must be many more A500 owners out there than A1200 ones.

Matt Coverton, Slough

To be brutally frank with you Matt, your 'loyal commitment to the Amiga' doesn't strike me as that impressive. There are many Amiga owners out there who have spent a great deal more money on their systems. The bottom line with all these PC versus Amiga arguments is, does the machine do what you want it to? If it does, it doesn't really matter that some people call it obsolete, it suits your needs.

If you want an A1200, Matt, go out and get one, there are certainly plenty of people who are willing to sell their machines, but if you want to get a PC, then I guess we probably won't be hearing from you again. As for your complaint about games, there certainly are more A500 owners around at the moment, but the games companies like the added power and memory that come as standard in an A1200, not to mention the fact that games on the PC can be converted much more satisfactorily to an A1200 thanks to its increased graphic abilities.

Sex-net?

With reference to the letter by James Radcliffe and your reply, I would just like to point out that although porn is indeed widely available on the Internet, via the alt.sex.* and alt.binaries.* newsgroups, I wonder how many of the people who winge on about "vile perverts on the Internet" have actually taken the time to try and find these resources.

First of all, as stated by Ezra, you have to have a dial-up connection to the net, then you need to be willing to suffer an increased phone bill, the cost of downloading all those large pictures, and lastly, you need some way of viewing these pictures in a high resolution, true colour display. It is extremely unlikely, perhaps even impossible, to see anyone coming across this material accidentally, much less so than traditional pornographic materials in this country, namely newspapers, magazines or videos.

It seems that the national tabloid press in this country is scare mongering and pandering to the David Alton's of this world who would like to 'protect' us from the vaguest dangers. Censorship is not the answer in my opinion, but education. Bring information to people, not propaganda and dogma.

Reading back over the last paragraph, I sound like a raving nutter, but it's because I am passionate about protecting our rights to self-censorship. Personally, I have no interest in the newsgroups mentioned, but there are people who do. It doesn't bother me that this is what they are interested in and in my opinion, nor should it interest the government.

Adam Savant, Ealing

It seems like you have made quite a study of this subject Adam. I agree with you about the national media, but I think the topic is much further ranging than you give it credit for. There is definitely some material floating around the newsgroups that has serious repercussions in the real world.

Take Jake Baker as an example. He wrote a sadistic story about one of his fellow students and is now being prosecuted. There are people saying that this was a representation of his mindset, and there are those who say it was merely fantasy and harmless. Either way, it will mean a greater concentration of interest in the sex-related aspects of the Internet. Whether this leads to outright censorship remains to be seen, but the upshot is that there are people in power who are looking very closely at the topic.

I think you are right when you say that education is the way forward, but that would require a political party in power that was willing to look past the next general election and concentrate on a time maybe 20 years in the future.

More letters

You asked for more letters pages, but what you don't seem to realise is the fact that you have to write into us. To give you a further incentive, we will offer £50 from Adam Phillips' wages to the best letter written. But please keep quiet about it, as Adam doesn't know...

been offered an A2320 flicker fixer from an A2000 but a friend said that it wouldn't work properly in my A4000.

David Style, Northampton

You are in luck, David. Power Computing's are producing an AGA flicker fixer which we will be reviewing very soon. Alternativel, you could use the A2320 flicker fixer, but you wouldn't be able to see any HAM8 screens on it.

Amiga bugs?

Watching the BBC TV program 'Bug', I noticed they seem to be using 1084 monitors for an awful lot of screens, but there seem to be PCs controlling them. Does this mean they are using Amigas for the production of the graphics or are there PCs that can use the 1084?

Julia Smith, Oldham

What quite often happens is that the production company want the machines producing the graphics to look like PCs, so they put a PC on the desk with its keyboard, mouse, etc., but under the desk there will be an Amiga pumping out the graphics.

The reason for this is that the Amiga can put out a video signal at the same speed as the video camera reads it in, so you don't get any of the deeply ugly horizontal bands crossing the screen that you so often see when actual PCs are shown on television.

CD-ROM or bust

I know that Commodore has disappeared, but do you think the CD1200 will be high on whoever takes over Commodore's list of things to do? I do want to buy a CD-ROM for my A1200, but would rather have Commodore's own model rather than some third-party CD-ROM that probably won't be compatible with my Amiga.

Also, I keep seeing CD-ROMs on the cover of various PC magazines and was wondering if I could use anything from them as they are usually a lot cheaper than the Amiga CD magazines.

Alan Barton, Chelmsford

I think you would probably be better off just going for the excellent Squirrel SCSI interface and an external CD-ROM drive with Amiga CD32 emulator rather than wait for Commodore to be resurrected. The tests we have run on third-party CD-ROM drives have proved to be fairly successful in the main when it comes to running CD32 software.

The only problem lies in the fact that most CD32 programmers don't bother to check the hardware they are going to be running on so there might be memory conflicts, but this is down to the individual programmers and I'm sure that now there are several CD32 emulations available, they will be working on these aspects of their craft a little more from now on.

As to the usefulness of PC CD CoverDisks, you should be able to get some stuff off them with no trouble. If you want to go to the bother of setting it up, you could run Xanim to show quicktime and AVI movies from the disk (or TAPAVI if you were lucky enough to own a Picasso graphics card), and there are datatypes aplenty for the support of pictures like .BMP, .PCX and Jpeg, and sound samples in various different formats including .WAV, .VOC and MacSound.

These are all available on the Aminet and if you get a CD-ROM drive you can save yourself an enormous phone bill by buying the Aminet CD Set 1 which contains practically every single file ever uploaded to the Aminet. You obviously won't be able to run any of the programs directly on your Amiga, but you could try PCTask 3.1 which is a software-based PC emulator, but be prepared for it to be very slow.

Printer problems

I have just bought a Canon BJ-C4000 to go with my 6Mb Amiga 1200, but am pretty disappointed with the results I am getting from the standard Work-bench printer drivers. What am I doing wrong?

Steve Jones, Walthamstow

You probably aren't doing anything wrong as it goes Steve, but are you using cheap photocopier paper? It's fine for test prints, but you should really get some proper inkjet paper for the best results.

The other thing to get would be Wolf Faust's Studio II printer system. This gives the best possible quality output for nearly all printer types and does so by bypassing Workbench's rather crude printer.device and replacing it with true 24-bit output. Studio II is available from JAM on (01895) 274449.

Manual woes

I recently acquired an A500 upgraded to 1Mb. As a complete beginner with computers and trying to learn BASIC, I was very pleased to see Easy Amos on the CoverDisks of the Christmas '94 edition (issue 81). My first disappointment was getting a 'Sold Out' letter in reply to my order for the user's manual, as it had been described as "Vital to get past the basics."

I partly accepted the fact that this might be the case as we are two months behind you in getting the magazine. I tried a different approach by contacting a relative in the UK to get me the full program, but she was told that the program was obsolete, and that she had no chance of getting a copy. Europress told her the same story.

The question I would like answered is: Why is a CoverDisk advertised with such glowing terms and all the time, after buying your magazine on the strength of it, is obsolete so I cannot follow through with what is obviously agood language?

M F Jacquemin, Kelmscott, Western Australia

Firstly, I would like to say that Easy AMOS hasn't been made obsolete by another program. It is still just as useful and powerful now as the day it was released. Having said that, it is no longer sold, and unfortunately, as has been said in the letters pages before, Europress ran out of the manuals very swiftly, and won't be printing any more.

Amstrad Amiga

I've just seen an offer to get an Amstrad NC100 at what seems a very reasonable price. It would be ideal for me to sit on the train writing my correspondence then download it to my Amiga for final preparation and output. Can you tell me if this is possible, and if so, how?

Simon Robertson, Dulwich

First off, Simon, see if the place that's letting these NC100s go cheap have any NC200s for sale. The NC200 has a standard high density 3.5" floppy drive that will format high or double-density PC format disks which can then be used with your Amiga, provided you are either running Workbench 2.1 or higher, or have a copy of CrossDos, MessyDos or DOS2DOS.

If they don't have any NC200s you can still use the NC100 with your Amiga, but the process is a bit trickier because it works via the serial port of your computer. Either way, they make a great (and inexpensive) alternative to PC-compatible laptops, and the word processor on the NC100 and NC200 is none other than a version of that Amiga favourite, Protext.

Get writing!

In the last survey more than half of you said that you wanted more of the letters pages. That's fine, as long as you readers increase your output too. Send us your letters by the sack full and we will be only too pleased to bump up the number of pages devoted to letters.

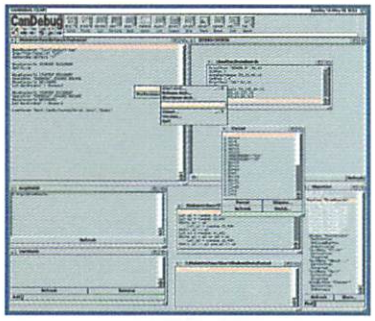
Bug killer

Ben Vost looks at an add-on for CanDo 3 that makes sure your code is up to scratch

As a follow up to our recent review of CanDo version 3, here's an add-on that will become essential to me as my expertise grows with CanDo. CanDebug is, as its name suggests, a debugging tool for your CanDo scripts. It requires version 3 of CanDo, or better, along with 500k of hard drive space for installation.

CanDebug's forté is to run through the scripts that go to make up a CanDo application, testing the integrity of each before proceeding onto the next. You can keep an eagle eye on the variables and arguments that your application uses, as well as checking on memory usage. Normally, you won't have a problem dealing with the more obvious bugs in your script, and see what is making them tick, draw, write and show.

One bad thing about CanDebug is Inovatronics' choice of colour scheme for the screen that CanDebug uses. For some reason, they decided that a sort of neon peach colour would be really settling for the eyes, especially when the file requester is used.



This cluttered interface hides the power that underlies CanDebug

As it stands, nothing could be further from the truth. It might have made sense to use the same screen palette as CanDo, or even just the four Workbench colours. After all, it's not as though CanDebug really gains from an eight colour palette – the extra four colours are solely being used to prettify (if you can call it that) the screen.

Other than this fairly minor complaint, CanDebug does what it says it will, just like the advert for wood varnish, so you won't be disappointed if you maintain large CanDo scripts that have evolved over a long period. It's a little overpowered for my current needs, but I'm sure that when I become a power CanDo programmer I will really be thankful for its many abilities. AC

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

CanDo

The bottom line

Product: CanDebug v1
Company: Inovatronics GmbH, Lise-Meitner-Str. 1, 85716 Untershleissheim, Germany
Tel: 0049 89 3173164
Price: DM199 (roughly £75)

Ease of use	**8**
Implementation	**8**
Value for money	**6**
Overall	**7**

CanDebug's tools

One of CanDebug's informative icons is the small stack under the 'g' in CanDebug. This shows CanDebug's current status and can be in one of several states. Most importantly, this icon lets you know if CanDebug is single stepping a script or letting it run through. It will also let you know when CanDebug is attempting to stop a script (or it is waiting for the end of a particular script.

ArgWatch – shows the arguments in the current line of the script you are debugging. BreakPoints are places in your CanDo application that can be singled out for special attention. This icon brings up a list of all the break points defined for your script and lets you edit them, show them or remove them.

Buffer List – lets you check out information relating to the buffers loaded by your program. Buffers in CanDo can be anything from a sound to a text file.

CmdPerform – lets you try out changes to a program without actually having to change the script itself. This makes it easier to try a different setting for a variable to see if the new version works better, before committing yourself by changing the script.

Unfortunately, although this module has an edit menu with cut, copy and paste commands, they are implemented in an even worse fashion than CanDo's own text editor. CmdPerform is limited to cutting, copying and pasting the entire contents of the CmdPerform window only, and doesn't use the standard Amiga clipboard to do so either.

GrabDeck – is a sort of task watcher which looks for any CanDo applications running on your machine and if they are unbound (not compiled into a standalone application), then you can choose to debug the. Even if they are bound you can still use GrabDeck to shut down CanDo applications.

MemoryWatch – is a chart showing the memory used by your app. It has a cycle gadget to let you move between different scales from 64k to 16Mb and shows not only the amount of memory allocated as a whole to the program, but also the amount actually being used.

ObjectList – shows all the objects contained within your program. Objects may be defined as the buttons, text fields, cycle gadgets and so on that your deck actually uses. The objects shown in the list are further subdivided into ones that are currently 'attached' (in use) – shown in white – and those that aren't – shown in black.

ScriptCommon – is a special case. Because CanDebug's many windows can really clutter up a standard resolution screen, ScriptCommon lets you open just one script window into which every script is piped.

ScriptSkip – lets you define scripts in your application that can be automatically executed at top speed.

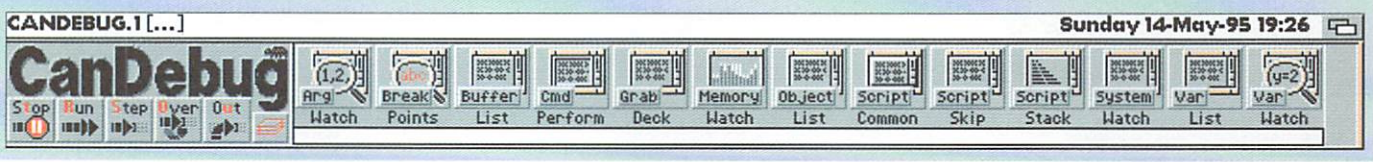
ScriptStack – shows the current script in an opened window topped by iconified windows of all the scripts, hence the name of the script.

SystemWatch – gives a general view of the application being debugged, with specific topics for information like Memory, Graphics, System, etc.

VarList – gives you a list of all the variables being used in the deck as they appear and lets you trace them through the scripts as they execute. It tells you the name of the variable as well as its type.

VarWatch – is the complement to VarList and lets you examine specific variables and add new ones to the list.

Most of these windows are actually separate program modules and as such have their own menus and settings, etc. Most importantly, with most of the modules you can set them to auto refresh, saving you the hassle of having to constantly hit the refresh button in all the windows on the screen.



public sector

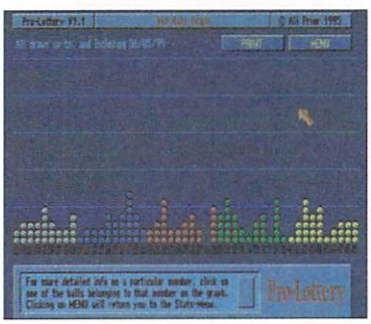
Dave Cusick opens the cheap and cheerful chest once more and grunts approvingly at the contents

Outside the weather is fine, but time and tide and Public Sector deadlines wait for no man. Once more I find myself hunched over a hot keyboard humming Boo Radleys' tunes and sifting my way through the PD pile

Pro Lottery 1.1

Programmed by: Ali Prior
Available from: Ali Prior

Some nights I wake up in a cold sweat, shuddering after suffering through a terrifying nightmare. In it I am sitting at my Amiga with a pile of jiffy bags. I select a particularly inviting bag and tear it open, eagerly anticipating a stormingly original piece of high quality software. But the disk label says 'Lottery Predictor.' The more cunning



The winning numbers' database is a couple of weeks out of date now, but it seems 28 has yet to come up

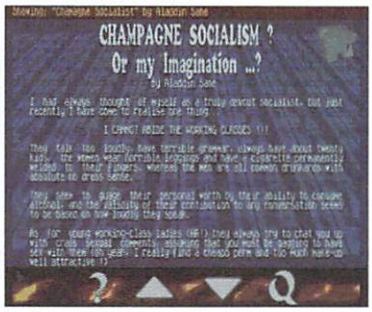
PD of the month

The Word 5

Programmed by: NFA
Available from: SAdENESS PD

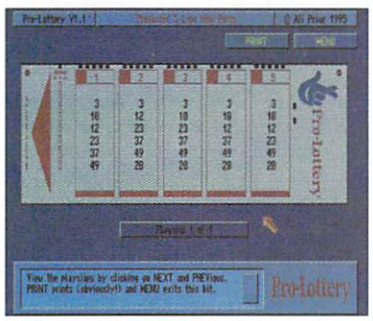
This is the most outstanding disk magazine Public Sector has received for some while. The whole thing starts with a decent intro which, as the authors are keen to point out, is all the more impressive for being totally written in Amos Basic.

From the main menu, articles are on offer covering a whole range of topics.



You may not necessarily agree with some of the views expressed within, but The Word is worth a read

Included are a couple of games reviews, a Coders' Corner, and numerous offbeat features ranging from Sponsored Resignations to a Brief History of Booze.



Pro Lottery's suggested numbers for next week. If they win you some money, donations are welcome

Lottery Predictor authors have obviously finally realised that many innocent PD reviewers are in a state of despair. In an effort to avoid being responsible for possible suicide cases, they are now resorting to more subtle methods of presenting their labours of love. The two disks inside this particular jiffy bag were cryptically marked only with a giant question mark. Unfortunately, the concern for my welfare stopped there, and I was lucky to avoid being blinded by the fluorescent orange disk labels and the accompanying luminous yellow letter.

Still, as the introduction (which takes up the entire first disk of the review copy) is keen to point out, this predictor is slightly different from the rest. For a start, it features the same attractive presentation as Mr Prior's previous offering 'Pro Gamble.' But most usefully, it is capable of producing lists of numbers for syndicates, covering as many likely winning balls as possible.

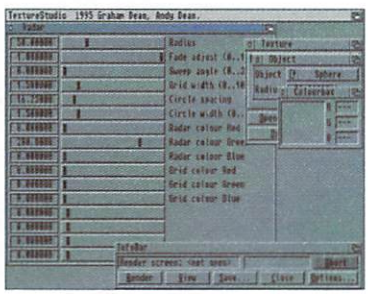
The whole package has an air of professionalism about it, although as with all such programs, it is difficult to know how effective Pro Lottery is without using it over a long period of time. Before making the decision about whether to purchase the registered shareware version of the program or not, you might, therefore, like to try out the free demonstration version. This can be obtained from the author by sending a blank disk and an SAE.

TextureStudio 1.0.2

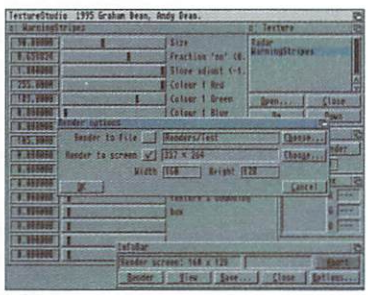
Programmed by: Graham and Andy Dean
Available from: Graham and Andy Dean

Raytracing is a popular pastime among members of the Amiga community but the main problem, with getting into this area, is the prohibitively high cost of software. Accelerator cards and floating point units cost enough, but then there's the expense of buying top quality software packages like LightWave and Imagine 3.

Users of the latter package could, therefore, be very interested in this release from the creators of ImageStudio. TextureStudio is capable of loading Imagine 3 format texture modules, which can then be modified and mapped onto planes, cylinders or spheres and rendered to a preview



A vast range of features are at your disposal within TextureStudio



Setting the rendering preferences prior to producing a quick rendering of a texture

There are even several strange lists such as '13 Movies with Armadillos in them' and '10 rivals of the Teenage Mutant Ninja Turtles' (of which 'Pre-pubescent Irradiated Jujitsu Wildebeast' is among the top picks).

The articles are generally quite short but there are plenty to choose from. The program helpfully ticks the articles you have viewed so you don't end up accidentally reading the same one twice. While there are quite a few spelling mistakes knocking about, The Word is certainly less guilty in this area than many disk mags.

When reading The Word, it is easy to see that a good time has been spent on presentation and feel. Articles are written in attractive and readable fonts, and are overlaid on a neat smoothly-scrolling backdrop. The whole interface is charmingly straightforward and using the program really is an enjoyable experience. If you're after an interesting and frequently amusing read and you don't mind the occasional bit of bad language, The Word could well be worth a look.

Take your pick from the lengthy scrolling list of articles on offer

screen. The principle benefit of this is that texture characteristics can be altered without the need to raytrace an entire image every time. Textures can also be saved to disk as 24-bit images in IFF24, Jpeg or Targa format for loading into other programs.

All of the program's main functions can be accessed from floating windows, and the attractive Workbench 2 interface makes getting to grips with the powerful functions on offer a painless affair. The program requires an FPU which it makes full use of, containing optimised code for 68881 and 68882 units.

There is a commercial alternative, Forge, which comes bundled with a ready-made texture collection Essence but has a fairly hefty price tag though. In comparison, the £10 registration fee for TextureStudio seems pretty attractive.

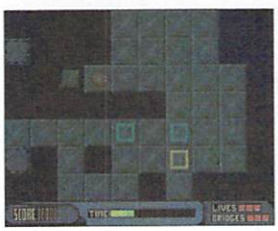
Jump 'Em

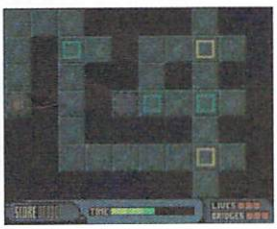
Programmed by: A. Cashmore
Available from: OnLine PD

This is a 10-level demo of a cracking 40-level puzzle game. It's got everything – cheesy, chirpy music, cute and attractive graphics and gameplay that will have you tearing out your hair. The objective on each level is to reach the exit, clearing the screen of tiles along the way. This is achieved by walking on the tiles causing them to fall away into space below. Some tiles must be walked across two or three times before they disappear. On later levels there are also teleportation tiles to make things that little bit more tricky. If you get stuck, you have three emergency bridges at your disposal – but once these have been used, stepping where there are no tiles results in the loss of a life.

The game features a password feature, which I can see proving very useful on later levels. Considering the full game costs just a fiver and includes extra features such as two new sub-games and an end-of-game sequence, Jump 'Em comes highly recommended and is sure to provide hours of brainbending amusement.

Good looks, alright to listen to, good to pass a bit of time with... it's not Andy Maddock, so it must be Jump 'Em





Glory box

We 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. Please clearly label the disk, and include a cover letter supplying a description of the disk contents, price and some basic instructions. The address to send the disks to is:

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

UTILITY of the month

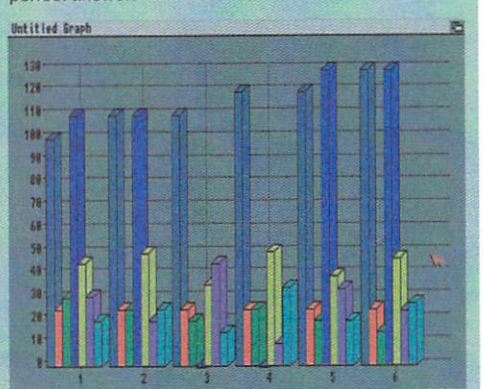
EasyCalc 2

Programmed by: Andrew Woods
Available from: KEW=II Software
Disk No. A1103

Exciting they may not be, but Spreadsheets are extremely useful programs to own. The most obvious use for them is for organising your accounts, but everything from league tables to statistical surveys can benefit from the use of one. EasyCalc 2 is perhaps the most intuitive I have come across, and although the full shareware version costs £20, this trimmed down demonstration version is almost fully functional, allowing you to get a very good idea of what to expect from the full version.

While spreadsheets can sometimes be a little slow to set up, once in operation they can make tedious tasks like budgeting so much easier. Once a few numbers have been keyed in, almost every conceivable mathematical operation can be performed on them, from simply adding to logging or square rooting. Change one or two numbers and then hit a button and every number in the entire worksheet will be recalculated accordingly.

EasyCalc lives up to its name, making full use of a Workbench 2 interface and providing on-line AmigaGuide help for those perplexed by the striking array of features. It can produce graphs which can be saved out as IFF picture files, it fully supports ARexx, and is highly configurable. If you're fed up with scribbling figures on scraps of paper, EasyCalc is the perfect answer.

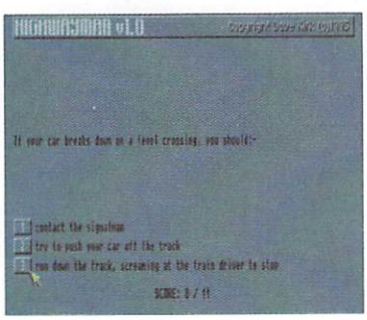


You too can have something on paper to show your bank manager, thanks to EasyCalc

Highwayman

Programmed by: Dave Kirk
Available from: Saddle Tramps PD
Disk No. E88

I'd guess that driving tests would come somewhere between job interviews and moving house in the stress-inducing top ten. While Highwayman won't sort out sub-standard signalling or pitifully poor parking, it should certainly be of assistance to those ➤



Highwayman – lots of 'No motorcycles on roof racks' jokes will inevitably abound

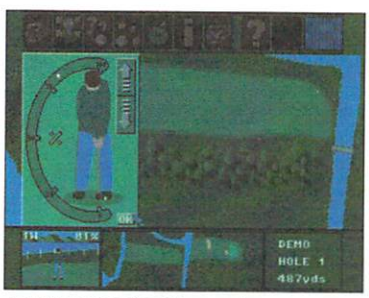
who struggle with the Highway Code. Highwayman is a quiz program featuring a total of 150 multiple choice questions, some based on pictures of road signs and others being text-only. Before beginning the quiz, it is possible to select the number of questions of each kind you will face. When you've finished struggling to remember the typical car stopping distance at 60mph and other such details, the program will present you with a percentage score.

It's a very simple idea but one which I'm sure will prove immensely popular. If there's one criticism I would make it is that often, two of the three possible answers to a question are so obviously wrong that they stand out a mile. Still, even when this is the case the actual selection of the correct answer serves to aid recall at a later time. If the big day is looming and your confidence is a little lacking, getting hold of Highwayman would be a good move.

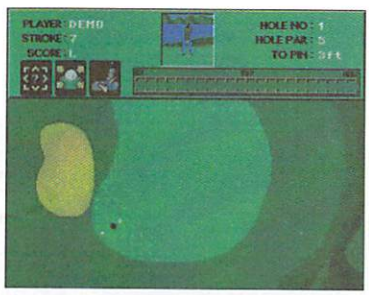
International Golf Demo

Programmed by: Summit Software
Available from: Saddle Tramps PD
Disk No. G294

Golf is a difficult game to simulate effectively, which could be why I found a certain something lacking in this demo of Summit Software's new release. Perhaps I'm being a little harsh, but since you'll only get a penny change out of fifteen quid for the full commercial release, I was a little bit frustrated by some of the gameplay limitations. I just can't put my finger on it though. The interface is functional enough, so it can't be that. Admittedly, sometimes it can be easy to forget to alter the shot direction because the program only does this automatically when you are standing on the tee, but to be fair this is only a problem because I am used to the slightly different control systems of other golf games.



I don't want to give it too much strength or I'll overshoot the green



I've a chance for a score in single figures – you can tell this isn't real life

I don't think it was the graphics, which are attractive enough, if a little disappointing, considering the price tag. It might have been the sound effects, although the fact that all I got was a high-pitched screeching noise may have been due to machine incompatibility problems, and these could be ironed out by the final version.

It could be that I was just hurrying too much, because the demo only lasts for three holes or five minutes. After several re-runs I did make it onto the third hole, but the first couple of times I ran the program the five minutes was spent deciphering the control system anyway.

The full version boasts two full courses, a tournament option and 64 computer controlled opponents. Unfortunately, based on this demonstration I don't think there will be many takers, especially considering the low prices of commercial rivals Microprose Golf and PGA Tour Golf these days.

SplatterPaint

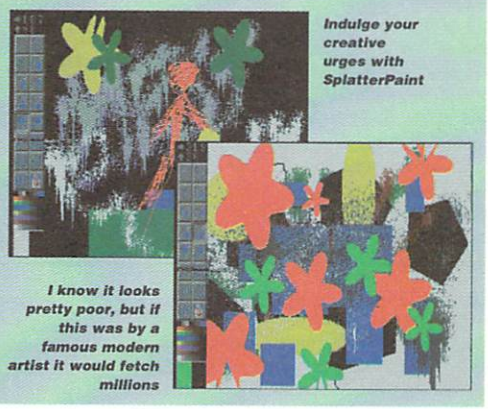
Programmed by: Pete W Storonskij
Available from: Roberta Smith DTP
Disk No. CU107

I suspect SplatterPaint is aimed at younger Amiga users but that does not stop it being an immensely entertaining program for children of all ages. That it has much in common with the grandfather of paint programs, DPaint, is not especially surprising – practically every art package does. However, SplatterPaint has a special twist – it has a selection of messy drawing tools that are the Amiga equivalent of those reception class aprons-on slopfests.

Big coloured polygons can be slapped onto pictures with a couple of clicks, and flower shapes are equally easily applied. But the real fun begins when you select the Spraycan. Scrawl some barely legible letters across the screen and they will drip and splatter as if being sprayed on a wall. Adjust the nozzle size and shape and then have another crack – it's great fun and is sure to keep little fingers happily mouse clicking for hours at a time.

SplatterPaint can also be used for more serious artwork. All the normal drawing tools such as dotted and continuous freehand lines, rectangles, circles and area fills are included too. For detailed work there is a basic magnification option and it is possible to cut, paste and flip blocks. The 64-colour palette is fully selectable and colours can be swapped, copied and spread over a range shades.

Admittedly, you are unlikely to produce a masterpiece using SplatterPaint, but to be fair I am sure it's not aimed at experienced graphics artists and it's hard to find fault with such a diverting program, especially when it's free.



Indulge your creative urges with SplatterPaint

I know it looks pretty poor, but if this was by a famous modern artist it would fetch millions

Even better than the real thing

Regular readers may remember that back in issue 82, the Art Of The Month accolade was awarded to Simon Lee for some stunning raytraced graphics. He recently wrote again enclosing a selection of his latest work, which is of an equally high standard and which he hopes to make available soon through the 24 Bit Club. Meanwhile, Simon is offering his services at very competitive prices, for instance he anticipates charging around £30 for a highly detailed model. Anyone interested should contact him at the address on the right.

One of Simon Lee's latest pictures, and typically stunning it is too

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Simon Lee
Lupus Productions, 4A Brecon Square, Ramsgate, Kent CT12 6NS
(Tel: 01843 583756 after 6pm)

OnLine PD
1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX
(Tel: 01704 834335)

Ali Prior
10 Lovell Park Heights, Leeds LS7 1DP

Saddle Tramps PD
1 Lower Mill Close, Goldthorpe, Rotherham S63 9BY
(Tel: 01709 888127)

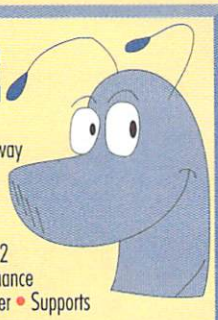
SAdENESS PD
13 Russell Terrace, Mundesley, Norfolk NR11 8LJ
(Tel: 01263 722169)

Roberta Smith DTP
190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE
(Tel: 0181-455 1626)

New! Version 1.10

TERMITE

Telecommunications



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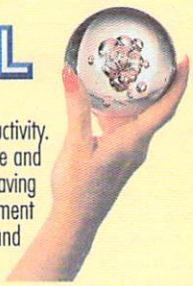
- Supports Amiga standard XEM external terminal emulations. Support for RIP XEM.
- New Quick Reference Card
- Many New Features

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



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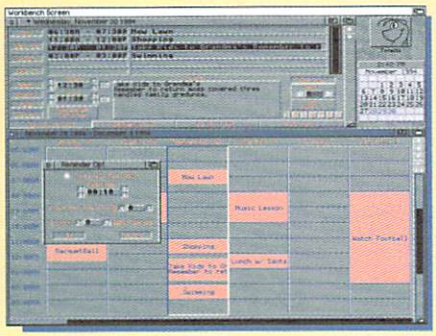

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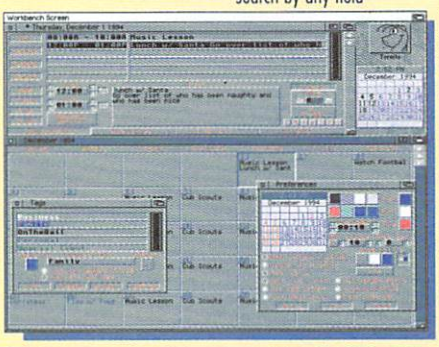

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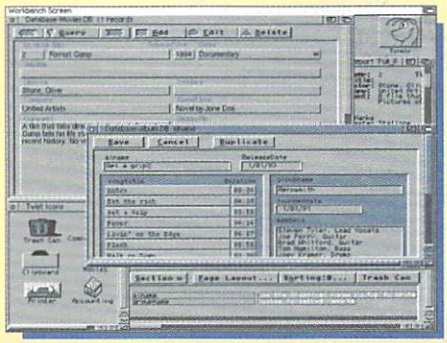

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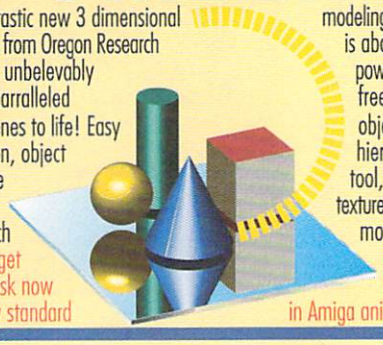

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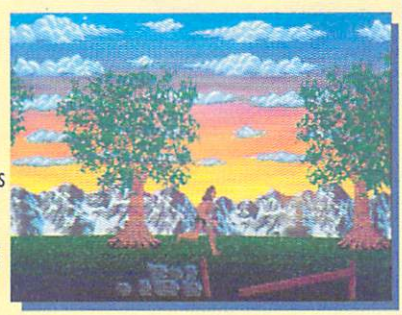

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A singular

As the industry behind interactive entertainment matures, game design is undertaken increasingly by professional development teams. But, as Gareth Lofthouse discovered, the individual enthusiast can still make a mark

Making a game in 1995 is a tough business. Back in the '80s the classic game releases were conceived by teenagers and brought to life on the cheapest, most popular home computers of the day. But the time when game design was the preserve of the spotty bedroom programmer is gone forever; in the '90s the suits have moved in on game development and a vast money-spinning industry has been well and truly established.

As the technical standards of game design have increased to the point where the latest releases boast film-like production values, it's not surprising that the amateur has been pushed aside and replaced by professional development teams. Interactive multimedia , fast-paced texture-mapped graphics and cinematic sequences are the order of the day, and such hi-tech projects can require teams of artists, programmers and sound specialists working on costly workstations. Small wonder if the average Amiga enthusiast feels outclassed and shut out.

MAKING A HIT

Yet against all odds, there are amateurs who dream of making a name for themselves with a hit game. In bedsits dotted around the nation, there are still people who will spend every moment of their spare time plugging away on that most affordable home computer, the good old Amiga.

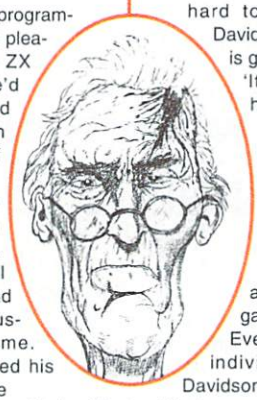
It would be natural to assume their efforts are doomed to failure, or that at best these naive enthusiasts will get some brief fame on the PD circuit. Is it possible, then, that potentially the biggest game of the year could have been made by one single man?

The tactical multiplayer game, Worms, is due to be released by Team 17 in September. Originating from PD titles like Scorched Tanks, it has simple two dimensional graphics that set it a million miles away from the latest multimedia extravaganzas – and it looks set to take the game playing world by storm.

Though Team 17 are publishing the game, it's entirely the work of 22-year old Andy Davidson. Developed over a period of four years, the story of its success is proof that the bedroom coder can still take on the professionals at their own game.

Davidson is a typically self-taught computer enthusiast who started programming games purely for his own pleasure in the hay day of the ZX Spectrum. It wasn't until he'd bought an Amiga and started coding Worms that he even considered trying to sell one of his games commercially.

During its development he was running a shop in Bournemouth selling Amigas, a job which proved helpful when it came to playtesting and gaining suggestions from customers regarding the game. However, he only really raised his ambitions for Worms when he heard that Amiga Format were running a competition for readers' games.



Limbo of the Lost Souls was created entirely by three self-taught enthusiasts

Amazingly, though Davidson got an impressive version of the game ready for the competition deadline, Format overlooked this gem – in fact, Davidson heard nothing more about the competition and had to find out for himself that Worms had been rejected. Team 17 obviously thought this was an error of judgement, so it'll be interesting to see how Format rate the game when it appears commercially.

Fortunately, this setback didn't mark the end of Worms, though it was quite a close call. 'I was getting a bit fed up,' Davidson told us, 'so the ECTS in September (1994) was going to be my last attempt to get it published.' His first choice was Team 17, who to his surprise immediately realised they had a classic in the making; after turning up at their stand and showing them Worms for just five minutes, Team 17's Creative Director, Martyn Brown, asked him if he'd like them to publish it.

The astounding way in which Worms has snowballed from its humble beginnings is hard to believe, particularly for Davidson himself. Asked if Worms is going to make him rich he said: 'It's very difficult to comprehend. When I went to Team 17 I was just thinking of selling Worms as an Amiga budget game.' Instead, Worms is going to be released as a full-priced game across an incredible 16 platforms, and Davidson stands to gain royalties from sales of each of the game's versions.

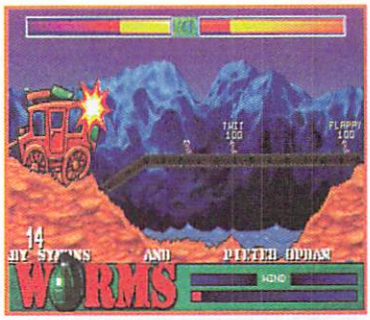
Even more encouraging for the individual enthusiast is that Davidson believes amateur programmers can compete against the visually glossy productions produced by major

Protecting your ideas

Ensuring that the copyright on a game is kept safely in the designers' hands is an issue that naturally raises concern with game makers. The fear that unscrupulous publishers will steal a good idea and claim it for their own is enough to make any programmer nervous.

Fortunately, protecting yourself legally is a simple procedure according to the game makers we spoke to. Tri-logic, for example, were advised by their solicitor that posting a copy of the game to themselves is a perfectly good way of registering copyright. Thankfully, this method has the added advantage of being virtually free.

success



Visually simple, Worms' strength lies in gameplay that will leave many more glamorous releases standing

companies, providing they concentrate on gameplay. Criticising multimedia and games featuring rendered animations, he said, 'I haven't seen one of those type of games that I want to play. The game itself is the essential thing. I've been playing Worms for nearly one and a half years and I still enjoy it. '

'If Worms relied on just rendered graphics it would never have the depth it has now. No two Worms games will ever be the same, but with rendered games you'll never get that much variety.'

BELIEVING

The story behind Worms is an example of the importance of believing in your own ideas. Asked about advice for people working on their own game projects, Davidson said: 'You can't imagine how people will respond seeing a game for the first time. But if *you* believe in it you can find someone else who believes in it.'

Worms, however, isn't the only potential hit to have been brought to Team 17 by an outside individual. Throughout the company's history people have turned up on their doorstep with ideas, and in some cases Team 17 have been only too happy to pay them a salary and help them turn a game concept into a commercial reality.

Of course, many of the best ideas would never see the light of day without the helping hand of luck, and this is as true of game design as anything else. Team 17's latest project developed by a single enthusiast is Alien Breed 3D, a high profile release that only came into being because of a chance meeting on the Internet.

Andy Clitheroe is a student at York University who had written a game engine for the Amiga in his spare time. Originally, it consisted of a 3D maze run-around – it was fast and slick, but a million miles away from being a game, let alone the first class Doom clone that Breed 3D promises to be.

Andy Davidson will earn royalties from the sale of his game across 16 platforms

Fortunately for Clitheroe, he happened to meet Martyn Brown on the 'net. Having mentioned the game engine, he was invited to show his work to Team 17, and when they'd been suitably impressed they offered him a deal and encouraged him to bring Breed 3D to fruition. Clithero is currently working on the finishing touches in between revising for end of year exams.

Those who are hoping to sell a game concept, however, would be fools to rely on this type of good fortune. Optimising a game's chance of being published in most cases boils down to a lot of hard work, persistence, and enough self-confidence to accept the odd knockback.

Tri-logic's Limbo of the Lost Souls, previewed in this month's System, is possibly the best example of how to sell a game to a publisher. The brainchild of three adventure enthusiasts, Limbo may have started as an idea cooked up over a few pub drinking sessions, but they quickly realised that encouraging interest from publishers would require a more professional approach.

Limbo's programmer, Steve Bovis, told us how they knew they had a good product to sell, but they had to find novel marketing ploys to get it noticed.

Consequently, they set about making a video using an A500+, Deluxe Video and a genlock, and despite its relative cheapness it seems to have paid off. Previously, Tri-logic had met with rejection, but Limbo's publishers, Rasputin, were so impressed by the new video they decided to give the game their full backing.

Presentation can, it seems, be all-important. 'Use all the resources at your disposal,' Bovis advises. 'The less you speak and the more you show the better.'

There can be no doubting the trio's commitment to seeing Limbo through. Over the six years of development, each member of the team has held down a day job and earned money which often got invested back into the project. Having been through the experience, Bovis pointed to this single-mindedness as the key to success for the game designer, and warned: 'Lose enthusiasm in the project and it's as good as finished.'

If only one lesson can be gathered from these varied experiences, it's that the industry needs a powerful but inexpensive machine like the Amiga to allow talent to come to the fore. Andy Davidson was particularly impassioned on this point: 'Worms could only have started on the Amiga – that's the only way you can turn an idea into a game. If the Amiga dies a hell of a lot of games are never going to come out which otherwise would.' Clearly a lot depends on the survival of our machine. AC

L J Laurence, T J Croucher and S Bovis, three adventure enthusiasts who set up Tri-logic

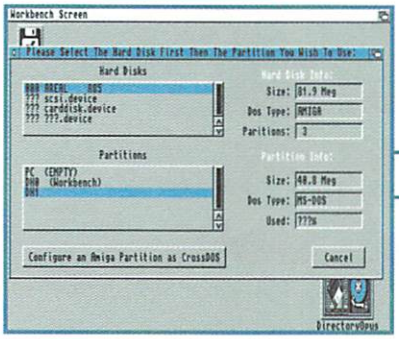
Between you and me

Transfer files between the Amiga and PC with ease, courtesy of CrossDOS Professional. Darren Evans puts it to the test

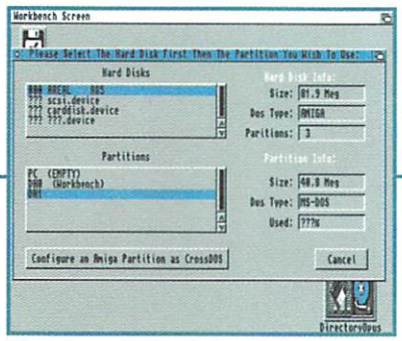
The ability to transfer files between an Amiga and different computers has become more and more useful these days. No doubt many of you have seen that obscure CrossDOS device driver lurking in the Storage drawer. No doubt many of you have never had the need to activate it.

For those who are in the latter category, this rather neat driver, once placed in the Devs drawer (or merely double-clicked), allows your Amiga to read, write and format standard MS-DOS floppy disks. This is obviously great news for Amiga owners who have access to, or work with PCs as they can now transfer their work to their Amiga.

I use this transfer feature a lot for the animation and graphics work I do between the two machines. Unfortunately, the CrossDOS driver supplied with Workbench is only set up to work with floppy disks and even with 1.4Mb floppy drives, many users will no doubt have to use multiple disks and archiving utilities for large amounts of data.



Configuring a hard drive to share with your Amiga and PC is as easy as pointing and clicking your mouse thanks to this utility



The Amiga and PC handle text files in radically different ways. This utility automatically converts between the two types when copying

For instance, animation and graphics files tend to lean towards the extremely large side. Imagine trying to transfer a 15 second animation consisting of 450 individual 24-bit Targa files to a PC for a spot of editing with Premier 4 or Photoshop 3. Now that's a lot of megabytes to transfer via floppy disk, and it usually ends up being a long and tedious archiving session.

If only there was some way to tell the Amiga to use an MS-DOS formatted hard drive as easily as it uses the floppy disks. You could then transfer lots of files, with no need to archive or swap disks whatsoever.

Now, thanks to CrossDOS Professional and those jolly nice people at HiSoft, this process is a breeze. The developers of CrossDOS Professional – Consultron – are, unsurprisingly, the same people who are responsible for the Workbench version. However, the CrossDOS Pro version offers much faster disk writes and reads, as well as a host of support utilities.

Once installed, CrossDOS Pro works as transparently with hard drives as Workbench's CrossDOS does with floppy drives. This transparent operation is due to the fact that CrossDOS is basically the MS-DOS file system which is seamlessly integrated into AmigaDOS.

The actual installation procedure is remarkably simple, with no lengthy setup procedures in sight. Running the install program brings up the standard Commodore install utility with the options of installing CrossDOS, which copies all the relevant library and device drivers to the appropriate drawers, Configure Hard Disk, which will automatically run the hard disk configure utility if you happen to have a suitable hard drive already connected and, surprisingly and infinitely welcome, an Uninstall option. All Amiga software developers take note. Once finished, PC floppy disks, and any MS-DOS formatted hard drives that are connected, will be automatically available on Workbench.

OPTIONS

The hard disk configuration option in the install menu starts up the hard disk configure utility which is also accessible as a standalone program on the CrossDOS installation disk. The utility has three different methods for creating an MS-DOS hard drive. You have the option of creating a 'real' drive or choosing between two simulated drives.

A real drive is simply one that is entirely formatted as an MS-DOS drive, either by a PC or by CrossDOS itself. A simulated drive can be a partition on an existing Amiga drive which can thus have a partition that is assigned the CrossDOS file system, with other partitions being standard AmigaDOS file systems.

The other simulated drive-type consists of the image of the drive stored as a file. This type is useful if you only plan to share it as a boot partition for products such as CrossPC, PC-Task, Bridgeboard, AtOnce or GoldenGate PC emulators. Such a flexible feature should mean that most users seeking PC compatibility will find the most appropriate setup for their needs.

The actual configuration process amounts to simple clicks of the mouse. All you do is select the respective button for the drive type, then choose the drive device which is to be configured, and then choose which partitions, if more than one, to process. Clicking on the configure button then instantly turns your device into an MS-DOS format drive, creating the mount file automatically and placing it in the Devs drawer. If only life were so simple? AC

What's in a name?

The only drawback to PC file transfers via CrossDOS is that you must keep a check on filename lengths. PC filename convention limits names to a maximum of eight characters with a three character file type extension.

The Amiga can handle longer filenames and these will be brutally chopped to the eight character limit, causing all manner of potential problems without so much of a by your leave. I must stress that this is an MS-DOS problem and not a fault of CrossDOS.

SYSTEM ESSENTIALS

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Hard drive

The bottom line

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Implementation 9
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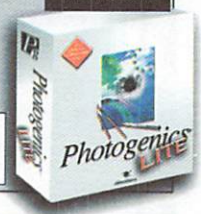

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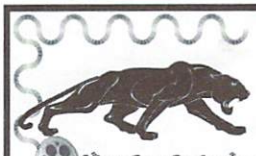

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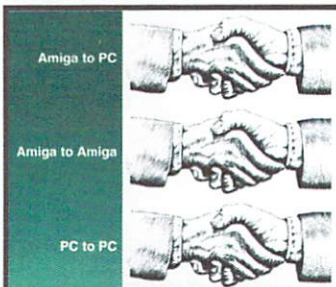

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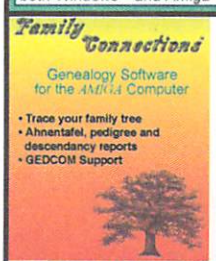

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Paul Overaa shows you an easy way to add Midi song playing capabilities to your Basic and C programs

Music for the masses

There are plenty of real good Midi files around these days and whether you like the classics, country, pop and rock, or more obscure stuff, the chances are that someone, somewhere will have produced Midi file arrangements to suit your tastes. In short you just buy the files, load them into a sequencer, and play them.

Incidentally, some commercial libraries can provide their material on Amiga format disks, although most offer only MSDOS format. Needless to say, this is no great problem nowadays because these disks can be read via CrossDOS without any trouble at all.

Library files are usually configured for General Midi type equipment, so most people usually need to do a little channel and patch editing to get the arrangements sounding right on their particular Midi equipment. Once you've saved a version that is suitable for your system, however, you'll be in a position to 'load and play' these arrangements just as easily as you might play a record or CD.

The question we might now ask is whether or not it is possible to add these types of file-playing facilities to our own programs. Midi file playing, as many of you will know, is quite complex, but by converting a Midi file into a format known as MPX2 it is possible to simplify beyond belief the code needed to regenerate the stored Midi data.

What I'm going to do in this tutorial is show you exactly how MPX2 file loading and playing facilities can be added to your own programs. The result is that with relatively little additional code it becomes possible to write programs that can play pre-arranged Midi file song material in essentially the same way your sequencer can.

FILE STRUCTURE

It should be pretty obvious that the key to writing any file processing utility is to understand, in detail, the relevant file format. Before I look at the MPX2 format, however, I ought to recap briefly on the structure of conventional Midi files so that you can appreciate the benefits that MPX2 files provide.

At the highest level, these files consist of blocks of data called chunks that consist of a 4 byte identifier field followed by a 4 byte number that tells you how much data is in the chunk. Two types of chunks are currently defined: Header chunks, which have a 'MThd' identifier, and track chunks, which have a 'MTrk' identifier.

Midi file chunks can be arranged internally in three ways and this leads to three types of files: The type 0 format files contain a header chunk followed by a single track chunk used for storing a sequence or song as a single stream of events. Type 1 files allow multiple track sequences to be stored, and these contain a header chunk followed by separate track chunks which represent tracks to be played simultaneously.

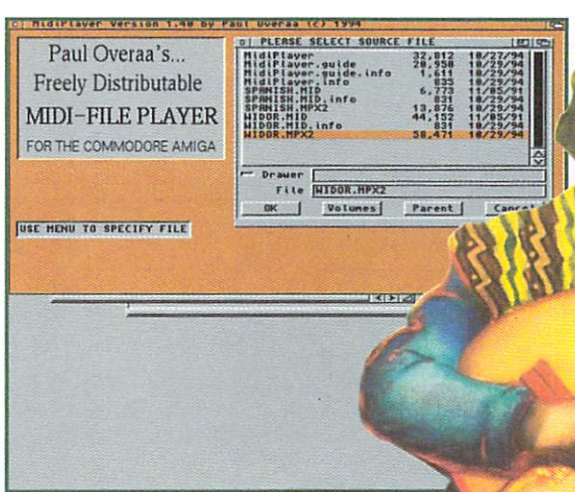
One last type of file was developed to allow sets of independent sequences to be stored, but these so-called type 2 files do not seem to be used to any great extent.

As far as chunk arrangements go, the 'MThd' header chunk is always the first one in the file and it currently has three words of data – the first identifies the file format (0, 1, or 2), the second tells you how many track chunks are present in the file, and the last contains timing interpretation details.

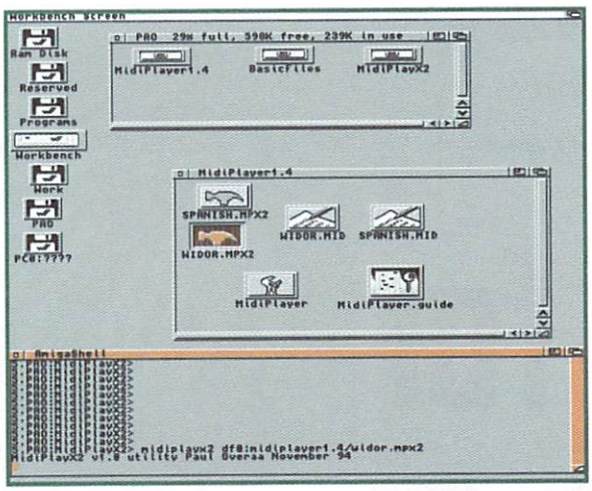
The data events stored in a Midi file all start with a time delay field, a so called Delta time, that specifies the amount of time which should pass before the specified event should be played.

It's worth mentioning that Delta times, and a few other Midi file items, are stored in a byte-efficient variable length format that has to be unpacked before it can be turned into a sensible numerical value. MPX2 format files, incidentally, do not use compacted time values, which is one of the things that makes them easier to read.

Midi file events can be one of three types: Midi events (channel messages), Sysex events, and a collection of non-Midi items known as Meta events. I'm not going to go into detail about each and every event structure because the MPX2 arrangements make it unnecessary for you to know what type of data is in the original Midi file. As an illustration, however, here are some details of the ➤



Paul Overaa's Midi file player has now been especially modified to convert Midi files to MPX2 format



You'll find both C and Basic MPX2 file playing example programs on the CoverDisk

layout used for Midi file Meta events: They start with an FF hex Meta event identifier, followed by a 'type' field, a byte count, and the data itself. The type field is a 1 byte value between 0 and 127 and the count field is stored in the same variable length format as is used for delta-time values.

Two Meta events of particular interest by the way, are those that allow the end of a track, or a change in tempo, to be recognised, although a great many other events have been defined for embedding track names, lyrics, copyright notices and so on.

HARD WORK

Midi file reading, as I've already mentioned, is not particularly easy. Chunks have to be identified, their contents extracted and unpacked, and Midi events have to be separated from Meta events. With type 0 files these events will be time ordered by virtue of their positions in the file and their delta times.

With type 1 files the situation is more complex, and in order to produce a stream of Midi data it is necessary to merge in time order all the events from all of the track chunks. When you realise that running status (i.e. the use of implied status bytes) is also allowed within streams of stored Midi events, it's not hard to see that writing Midi file unpacking code is no small feat.

At the playing end of the 'Midi file to Music' conversion scenario the task is simple enough to explain. The time ordered blocks of Midi messages generated as a Midi file were examined and have to be sent down the serial line at the appropriate times.

If you think about this end of the problem you'll realise that what we really need for playback simplicity is a file structure that allows blocks of Midi message data to be stored exactly as they should be transmitted.

One easy way to achieve this would be to opt for a file format that uses blocks consisting of a fixed length time value, followed by the Midi data in the exact form needed for transmission. The snag here is that in order to transmit a block of serial Midi data you need to know the size of the block. In other words, a block size field needs to be included with each event, and with the MPX2 format the event arrangement adopted is this:

```
<>4 byte microseconds delay>
        <>2 byte block size (S)>
                <>S bytes of Midi data>
```

The good news now is that the MPX2 file structure is based on exactly these types of event blocks, tagged onto an 8 byte header like this:

```
4 byte MPX2 file identifier ("MPX2")
4 byte event count    N
N events
        {
        <>4 byte microseconds delay>
                <>2 byte block size (S)>
                        <>S bytes of Midi
data>
        }
```

The first MPX2 header field lets you check that a file actually is a real MPX2 file before you process it. The second, the event count, indicates how many events are in the file. A file reader simply has to read the identification and count values and then output the required number of events down the serial line.

Handling an MPX2 event is both easy and efficient. Firstly, you read the time delay field and execute an appropriate timer device delay, next read the block size to see how much data you should transmit and finally, perform a single Exec DoIO() call to transmit the complete associated block of event data to your Midi equipment!

The key advantage of this file format then is playback simplicity. Because MPX2 data blocks contain only pure Midi message, information programs do not need to do any complicated event unpacking or interpretation – they can just read blocks of Midi data and transmit them without caring about their contents.

There are a variety of ways in which MPX2 data files can be used, but the simplest approach is to open the file as an ordinary sequential input file and read the event data using the in-built Basic file handling facilities. To illustrate this approach, and be bang up-to-date, I've opted for an example based on HiSoft's new Basic 2 package.

To produce runable code I did, of course, need access to the Amiga's serial port. Serial device handling is no problem because HiSoft Basic 2, like most Basics,

MPX2 file reading using C

One of the problems with using high-level language file reading is that it is inherently slow and this can affect MPX2 file playback timing. While, therefore, MPX2 reader code can certainly be written using C's high-level file handling functions just as easily as in Basic, I prefer a different approach. I load the complete file into a buffer and then access the events directly via a pointer. As each event is read the pointer is incremented so that it then points to the next item to be processed. Here's a typical example that reads the four byte event count and then increases the pointer by 4:

```
event_count=*(ULONG *)data_p; data_p+=4;
```

In order to avoid continually writing buffer handling routines, I use a buffer ADT (abstract data type) module that allows me to load a named file, ask for the start of the file data, kill (i.e. remove) the buffer, and so on. Listing 2 shows the header defining the functions this module provides, and all I have to do is include this header file in my source and then link my compiled code with the associated buffer module. Listing 3 shows these routines being used to load an MPX2 file and you'll notice that, having checked the file identity, I kill the buffer if the file is not a valid MPX2 type.

Listing 4 is the MXP2 play routine itself. It does the same job as the Basic routine discussed earlier, and the only difference is that I am using an incrementing pointer to move through the MPX2 file rather than reading items through high-level file functions.

> With relatively little additional code it becomes possible to write programs that can play pre-arranged Midi file song material in essentially the same way your sequencer can

CoverDisk files

To start with you'll find the HiSoft Basic 2 example program on the disk. Although this is an unoptimised 'bare bones' example, it is certainly sufficient to get you up and running, and in particular should convince you that Basic really can cope with these sort of song file applications. You'll also find all the C source and header files for a Shell MPX2 file player (written and compiled using SAS C) along with a runable version of the program.

So you've got player routines to examine in both Basic and C on the disk, but these would be of little use unless you were able to convert your Midi files into MPX2 format. At this point there's good news because during the last few weeks while I was preparing this tutorial, I've actually added Midi File to MPX2 file conversion facilities to my Workbench 2+ MidiPlayer program.

It can now not only load and play type 0 and type 1 Midi files but can play MPX2 files and, more importantly, convert any loaded Midi file into its equivalent MPX2 form. You'll find this utility, with documentation, and various example files on the CoverDisk. All that remains now is for you to set up your Midi equipment, dig out your favourite Midi files, and start giving your neighbours a mega-decibel treat!

Jargon help

RKM: Amiga ROM Kernel Manuals – the official Amiga system programming books

pointer – a variable used to store a memory location address. C programmers often tag a '_p' extension onto the names of pointer variables to remind themselves of this fact.

structure offset – a number (or an equivalent name) that specifies the position of a particular field in a block of memory relative to the base address of that block.

allows this to be opened and used in much the same way as an ordinary file.

I also needed time delay facilities, but this presented more of a problem – neither HiSoft Basic, nor any other Basic come to that, provides timer functions that are capable of providing delays of sufficient accuracy. Because of this it is essential to use the Amiga's timer device and this means we need to set up a reply port and an I/O request block for communicating with the timer device (as well as opening the device itself). Before I tackle this side of the problem though, let's examine the MPX2 file playing loop.

Listing 1 shows a program that asks for the name of an MPX2 file and then plays it. Don't worry about the initial code – look at the loop in the middle. What may well surprise you is that once the various setting up and file opening code has been performed, it takes just one loop containing these seven lines of Basic to read and play any sort of MPX2 file:

```
FOR i&=1 TO event_count&
          event_time&=CVL(INPUT$(4,#1))
          POKEL
timerIO&+tr_time+tv_micro,event_time&
          f&=DoIO&(timerIO&)
          event_count&=CVI(INPUT$(2,#1))
          event$=INPUT$(event_count&,#1) : PRINT
#2,event$;
NEXT i&
```

We read the four byte time value from the file [notice the use of CVL() to convert the INPUT$() string into a number], poke that value into the timer I/O request, and perform an Exec DoIO() call to the timer in order to produce the required delay. Having done that, we then use INPUT$() again to read the event size field and once more to read the Midi data block into an event$ string. A PRINT statement is then all that's needed to transmit that block down the serial lines and into your Midi gear. Not bad eh, for seven lines of code!

Because the play loop depends on being able to generate accurate time delays, this brings us to a stickling point as far as Basic is concerned – each version of the language has its own ways of allowing experienced coders to access the underlying Amiga system library routines and devices.

The latest version of HiSoft Basic does, in fact, include a new scheme for doing this and, since you are unlikely to have seen any code of this nature before, I'll explain briefly how it works.

HiSoft have created a set of header files that mimic the system headers used by Amiga C and assembler coders. As well as library function details, these headers also provide 'pseudo constant' definitions of all the important structure offsets. If you look at listing 1 again you'll see near the start of the code that I perform a CreatePort() Exec library function call and then create an extended I/O request block using this function:

```
timerIO&=CreateExtIO&(timerport&,timerequest_sizeof)
```

The returned value, timerIO&, is actually the base of the allocated timer I/O request structure but before it can be used with a DoIO() call various fields need to be set up. Timer I/O requests have to be set up with both a time delay value and a number which represents the command the device should carry out. The command field can be referenced by adding an offset value, defined as IOStdReqio_Command in the HiSoft headers, onto the base address of the I/O request structure.

Another constant defined in the headers is called TR_ADDREQUEST& and this is used to tell the timer device to perform a time delay. With HiSoft Basic 2 we poke a TR_ADDREQUEST command into the I/O request block like this:

```
POKEW timerIO&+IOStdReqio_Command,TR_ADDREQUEST&
```

The final location being poked is therefore the sum of the timer I/O request base address and the command field offset.

In a similar fashion, the four byte event time of an MPX2 event can be poked into the request block using predefined tr_time and tv_micro structure offset values:

```
POKEL timerIO&+tr_time+tv_micro,event_time&
```

Hard going? Well, there is nothing inherently difficult going on here – I'm just poking suitable numbers into particular positions of a block of memory. I will admit, though, that the purpose of this sort of 'jiggery-pokery' can only make sense if you understand the layouts and purposes of the appropriate Amiga system structures, and the same is true of Amiga library function use.

Experience with C or assembler and the RKM manuals undoubtedly comes in handy, but if you are new to Basic then all I can suggest is that you just take the timer code at face value and use it, being particularly careful *not* to inadvertently alter any offset names or variable types!

I have, incidentally, kept the example code as small and as straightforward as possible. In particular, I've not performed the customary checks on things like device opening and I/O request memory allocation functions because these would have made the underlying framework of the code much more difficult to examine. Be warned, however, that in general, the return values of library functions which can fail ought to be checked, and appropriate error closedown paths coded. AC

```
REM $include exec.bh
REM $include timer.bh
REM $include blib/execsupport.bas

DEFINT a-z : BUMPED_PRIORITY=50
LIBRARY OPEN "exec.library"
timerport&=CreatePort&(0&,0)
timerIO&=CreateExtIO&(timerport&,timerequest_sizeof)
POKEL timerIO&+tr_time+tv_secs,0
e&=OpenDevice&(SADD("timer.device"+CHR$(0)),UNIT_MICROHZ,timerIO&,0)
POKEW timerIO&+IOStdReqio_Command,TR_ADDREQUEST&
INPUT "Name of MPX2 file to play? ",name$
OPEN name$ FOR INPUT AS #1 LEN=5000
OPEN "COM1:31250,N,8,1" AS #2
header$=INPUT$(4,#1) : event_count&=CVL(INPUT$(4,#1))
task&=FindTask&(NULL&)
old_priority&=SetTaskPri&(task&,BUMPED_PRIORITY)
FOR i&=1 TO event_count&
          event_time&=CVL(INPUT$(4,#1))
          POKEL timerIO&+tr_time+tv_micro,event_time&
          f&=DoIO&(timerIO&)
          event_count&=CVI(INPUT$(2,#1))
          event$=INPUT$(event_count&,#1) : PRINT #2,event$;
NEXT i&
e&=SetTaskPri&(task&,old_priority)
CLOSE #2,#1
CloseDevice timerIO& : DeleteExtIO timerIO& : DeletePort timerport&
LIBRARY CLOSE
END
```

Listing 1: Playing MPX2 files via HiSoft's Basic 2

```
typedef void BUFFER;
BUFFER      *CreateBuffer(TEXT *filename); /* returns NULL if request fails */
void        KillBuffer(BUFFER *buffer_p);
ULONG       AskBufferSize (BUFFER *buffer_p); /* returns size of buffer */
UBYTE       *AskBufferStart(BUFFER *buffer_p); /* returns start of buffer */
UBYTE       SaveBuffer(BUFFER *buffer_p, TEXT *filename);
```

Listing 2: The buffer ADT routine definitions used for buffer handling

```
UBYTE LoadMPX2(TEXT *source_p)
{
UBYTE  *data_p, error_number=NO_ERROR;
if (!(g_mpx_buffer_p=CreateBuffer(source_p))) error_number=NO_SOURCE;
else {
          data_p=AskBufferStart(g_mpx_buffer_p);
          if(*(ULONG *)data_p!=ID_MPX2
              {
              KillBuffer(g_mpx_buffer_p);
              g_mpx_buffer_p=NULL;
              error_number=BAD_FILE;
              }
          }
return(error_number);
}
```

Listing 3: The routine for loading an MPX2 file into a buffer

```
UBYTE PlayMPX2()
{
UBYTE *data_p, error_number=NO_ERROR;
UWORD code, event_size;
ULONG delay, i, event_count, task_priority;
if (!g_mpx_buffer_p) error_number=NO_SOURCE;
else {
          task_priority=SetTaskPri(FindTask(0),BUMPED_PRIORITY);
          data_p=AskBufferStart(g_mpx_buffer_p); data_p+=4;
          event_count=*(ULONG *)data_p; data_p+=4;
           g_timer_request_p->tr_time.tv_secs=0;
          for (i=0;i<>event_count;i++)
                    {
                    delay=*(ULONG *)data_p; data_p+=4;
                    g_timer_request_p->tr_time.tv_micro=delay;
                    DoIO((struct IORequest *)g_timer_request_p);
                    event_size=*(UWORD *)data_p; data_p+=2;
                    g_serial_request_p->IOSer.io_Length=event_size;
                    g_serial_request_p->IOSer.io_Data=(APTR)data_p;
                    DoIO((struct IORequest *)g_serial_request_p);
                    data_p+=event_size;
                              }
                    }
          SetTaskPri(FindTask(0),task_priority);
               }
return(error_number);


}
```

Listing 4: A typical C code routine for playing MPX2 files

VLab Motion

It's a strange thing, but it appears the vast majority of Amiga journalists seem oblivious to the importance of the VLab Motion system. Such is the importance of this product, and the revisions to the MovieShop software, that another look is essential.

In short, the VLM system provides the only affordable means of producing broadcast quality AV – alias audio video – in a truly digital off-line environment. I think what has caused the animosity on the part of the journalistic fraternity is the rather optimistic and, dare I say, <None>unrealistic claims for the product on its initial launch.

In the early days, the accompanying manual combined unrealistic claims for hardware compatibility with a painful lack of essential information. This would be bad enough on fairly simple products, but that's one thing VLM certainly isn't. Although very easy to operate when configured, initial set-up can be a complex procedure demanding the assistance of a quality manual.

Fortunately, MacroSystem's have finally taken care of this key shortfall and replaced the original skimpy manual with a 200-page offering that delivers all the information you're ever likely to need in a friendly and comprehensible manner.

In reality VLM, like all DV systems, requires a relatively hefty machine, with the most important element being a fast hard SCSI II drive. Unfortunately, it's true that VLM can't match the image quality of the PAR – alias Personal Animation Recorder – on a less than perfect system – namely an 040 CPU running a SCSI II drive. However, even with the image quality compromise on lesser machines, the benefits far out-weighed the limitations via a combination of flexibility, functionality and cost effectiveness.

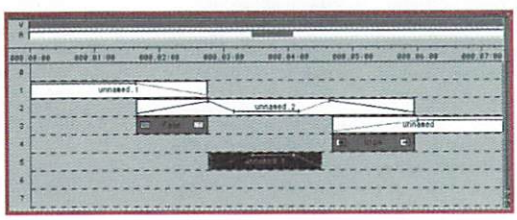
For example, I regularly run the system on an 040-based A3000 running a standard SCSI. As a result I can only reliably attain 65 per cent compression – which equates to image quality roughly similar to a quality composite/VHS signal.

In order to obtain BetaCam SP quality, I would require somewhere between 85 and 90 per cent – which simply isn't possible in video resolution on a standard SCSI device. Even though my VLM set-up can't compete with a PAR on the same machine when it comes to pure image quality, I wouldn't swap, simply due to the massive range of additional features the MovieShop software can provide. The most important bonus is VLM's ability to operate as a true off-line editor. Unlike the PAR, actually moving edits around the video sequence is both easy, fast and, better still, instantaneous.

The ever-growing collection of VLM digital video effects. But be warned – without a fast CPU, DVEs can take a long time to generate

Silky-smooth crossfades are one of the key elements in VLM's roll in A/B roll emulation

ADPro-style automated DVEs are all part of the VLM package



A simple example of A/B roll, DVEs and imported audio. Scene one fades to scene two, which in turn is wiped by scene three. Meanwhile, the audio ramps and crossfades to match the video transitions and also drops down during the vocal overdub. Drag and drop editing at its best

CUELIST

Rather than physically moving the data around the drive, VLM simply makes a cuelist from the existing data and skips around – assisted by a RAM buffer – reading the specific data as required. As a result, making changes to the running order of scenes, or entire movies, is instant, whereas the same edits on a PAR could literally take hours as the system physically rearranges the data to reflect the new running order.

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 16-bit audio. When the need arises you're still free to import and export the accompanying audio tracks, and mix them within MovieShop to generate a perfect backing track.

Although both VLM and the Toccata sound card combine forces within the MovieShop environment, samples captured directly via the Toccata's Samplitude software – 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 it on the Timeline wherever you want.

However, perhaps most important, you also have complete control over the envelope 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.

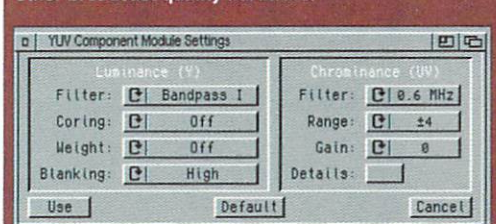
Consequently, you can adjust the sound level for each sample as often as is necessary, or even create cross-fades between different audio tracks. In short, complete control over the sound dynamics within the production. Once you've achieved a suitable

Stunning image quality cover from a composite source

Component plug-in

A shortfall often levelled at VLM, especially in relation to the PAR system, is the lack of component import and export. However, this compromise has now been put to the sword with the launch of the long-awaited YUV module.

Thanks to this latest addition, you can now compete in the broadcast market via a direct link to BetaCam SP equipment and other broadcast quality hardware.



The soft side of the all-new YUV component module. Add a BetaCam SP recorder/player and you're in the big league

revisited

Paul Austin returns to the most important development in Amiga digital video ever

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.

When the realtime 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. At this stage you should have the various video clips spliced into complete scenes ready for the assorted cross fades and special effects.

LAYERING

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. The end result 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, as once the scenes are arranged and the operators are in position, MovieShop sets about processing the video sequence, transitions and effects specified within the Timeline. Obviously 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, the faster your CPU the better.

As you've probably guessed, audio is also computed in a similar manner. So 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 is much faster than applying video specific operators.

It must be stressed that non of the timeline operations are destructive. The software simply takes existing data, applies your edit decisions and effects, and then generates the results as a standalone AV sequence.

Although the process may sound daunting, after a little practise it becomes second nature. Fortunately, 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. AC

Audio add-on

Firstly, the addition of CD quality 16-bit stereo audio is a matter of a £300 investment via a Toccata card, as opposed to £1000 for a stereo SunRize AD516 on the PAR system.

However, regardless of cost, the pure functionality of the VLM and Toccata combo makes it a far better investment. Unlike AV on the VLM, the PAR does not actually link the audio and video elements in a captured sequence.

As a result, if any edits are made on the PAR to either the video or audio track, the lip sync between the two will be lost unless you repeat exactly the same cut, paste and copy operations within the AD516's own control software.

In short, the sampler and video digitiser are completely separate entities. To keep things in sync requires a lot of manual effort, and of course there's no A/B roll emulation, DVEs, built-in chroma keying or automated audio processing.

In a nutshell...

Due to the pure scale of the VLM environment, the above has merely concentrated on the new and improved. However, that only scratches the surface of this incredible combination of hardware and software.

Given a suitable machine, the VLM and Toccata combination provides a complete digital AV solution which combines all the essentials of a true off-line editor, single frame recorder and DVE generator within a truly broadcast quality environment.

If all of the above doesn't make up for the scepticism and confusion surrounding the product's initial launch, I can't imagine what will. I only hope this update helps the VLM system receive the credit and sales it so richly deserves.

The bottom line

Product: *VLab Motion and Toccata Bundle*

Supplier: *NoahJi's*

Price: *$2,150*

Phone: *303.499.1975*

Video available upon request

Safe and

Hard Drive breakdown. Considering this is possibly the most devastating disaster that can threaten a computer, you'd think Amiga owners would be taking every precaution possible to protect their valuable files and programs. Yet everyone has a lazy streak, and backing up is about as interesting and rewarding a chore as ironing your underwear. No wonder many of us never get round to doing it.

Backing your system up, however, doesn't have to be as boring as it once was. There are both software and hardware solutions that can help to make the process less daunting, and there are options that should suit everyone's pocket and needs.

Backing up on to floppy is the cheapest way of securing your data, but everyone would have to admit it's a pain in the backside. To back up a 350Mb hard drive on to floppy will require hundreds of disks, not to mention hours of disk swapping.

The fact is, if you're going to carry out this process regularly and you're dealing with a large amount of data, you're going to need a high capacity storage medium and some method of speeding the process up.

When it comes to hardware specifically designed for this purpose, the most economical method is the standard tapestreamer. Using tape resembling that found in video cassettes, these devices can back up an entire hard drive in a matter of minutes. A high capacity tape drive can store 525 Mb of data and should attain a transfer rate of approximately 5Mb per second.

SCARCE

Unfortunately, these mechanisms are hard to come by these days, having been almost entirely replaced by technically superior but more expensive DAT systems. A search through all the usual Amiga distributors failed to reveal anyone who was offering the standard tapestreamer – perhaps your best bet would be to buy one second hand.

If you're a very serious Amiga user with large volumes of data requiring regular backup, it might be worthwhile considering the DAT alternative, though you'll need substantial sums of cash to be able to afford one. A DAT drive will achieve a transfer rate in excess of 10Mbs per second, reducing back up times radically. What's more, they will store between two to nine gigabytes of data depending on how much you're prepared to spend. Anyone who is considering DAT should be well advised to buy from a distributor who can provide Amiga installation and maintenance advice since, as with many SCSI devices, the sort of documentation you get with a DAT drive will probably be

DAT is the dream solution to the back-up problem, but it's only worth the cost for the serious or wealthy user

Video Back-up

Buying a DAT tapestreamer may be the dream solution to the back up problem but let's face it, very few of us are prepared to pay that sort of money for a precautionary device. Does this leave all but the affluent Amiga owner in the position of swapping floppy disk after floppy disk?

Thankfully, the situation is not anywhere near as grim, thanks to Power Computing's Video Backup System. Designed as a convenient, powerful device that works with a standard Video Recorder, it's also economical enough to make sense to even the stingiest Amiga owner.

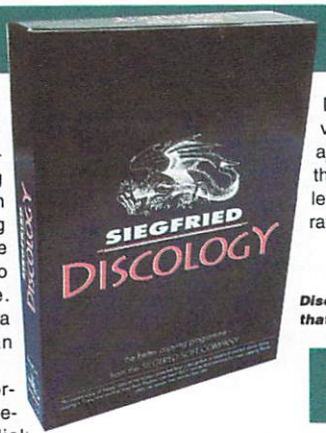
Using this product, a large hard disk or hundreds of floppys can be backed up onto a standard video tape, which makes the storage medium about as cheap as you could hope for – 200Mb can be squeezed onto one four hour tape. The package comes in video-style casing (though you'll have to provide the cassette yourself), and includes either SCART or

Commercial copiers

Backing up your software packages may be less important than securing an entire hard drive's worth of data, but then floppies are more vulnerable to damage than just about any other storage medium. For years, X-Pro Copy was the most popular and respected copying program, but now Siren Software have stopped supplying it and have switched to the new Discology package.

The advantage of commercial copiers over PD counterparts is that they come with a dongle which gives it great advantages in getting around software protection. Many developers protect a program by varying the length of tracks on the floppy – if you try to copy these via a standard AmigaDOS method it won't work because the Amiga will look for 80 tracks of a certain standard length. The hardware that comes with these commercial copiers means that copying is made directly from track to track without any need for them to be read by AmigaDOS, thereby bypassing the problem. Discology is a powerful package which automates the copying process, so you can just keep chucking disks into the drive without having to OK it all the time. Protected Amiga and IBM disks can both be copied.

A high-speed formatting facility, integrated floppy disk compaction, and the ability to copy Amiga high density disks are a few of the extras that make Discology highly appealing. Those who haven't got a virus checker will also benefit from Discology's ability to detect bootblock and link viruses.

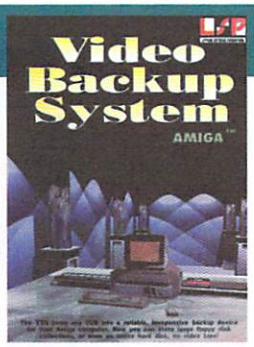


Discology, the disk copier that's set to beat X-Pro

Discology can also multitask, which the last version of X-Pro I saw was not able to do. Small additions like this combine to make Discology the best commercial copier currently available – let's just hope it gets used for back up purposes rather than piracy.

The bottom line

Product: Discology
Supplier: Siren Software
Tel: +44 500 340548
Price: £39.99



A flexible back-up option that is mercifully cheap compared to some alternatives

PHONO leads, the Video Interface, and the all-important software contained on a single floppy.

The system has a number of helpful features including verification and error correction facilities to optimise the reliability of the process. Naturally, the software allows you to select files and directories to back up, and it's possible to restore selected files off the tape if you don't want to restore the whole lot.

Ease of use is greatly increased by a well organised interface and a short but comprehensive manual which includes helpful illustrations. What's more, the program performs a connection check to ensure the hardware is correctly hooked up for reliable data transmission.

Another plus point is the way in which the software automatically maintains log files which contain the title and counter position for every backup on the tape. Then, when it comes to searching for files, a visual header precedes every file on the tape with title and date details.

Add to that the fact that Power's system will also back up a full Amiga floppy in one minute and restore it just as quickly, even onto an unformatted disk, and this product begins to look like the only sensible back up solution for those with limited funds.

The bottom line

Product: Video Back-up System
Supplier: Power Computing
Tel: +44 1234 273000
Price: £65 SCART £60 PHONO

aimed at the PC. White Knight Technologies (+44 1920 822321) do a range of internal DAT drives starting at £729 for a 2Gb version. A final point about DAT is that it can be accessed like a large hard drive using Moonlighter Software's Tapeworm (available from Ramiga – +44 1690 770304). This works best with sequential data like animations or long pieces of music, although it transfers data much slower than a hard drive and can take up to one or two minutes to find a file. AC

secure

Back up or lose it. Gareth Lofthouse reports on some of the safety measures available

Virus killer

An alternative threat to a hard drive crash is the risk of infection by computer viruses. Though these are less talked about than when they first appeared in the late '80s, there are new viruses being invented all the time, mainly with the intention of ruining as many people's systems as possible.

With this in mind, Siren Software have released Siegfried's Anti Virus Pro, a software package that's intended to be the ultimate Amiga aid in the detection and prevention of viruses. When you realise that Anti Virus carries a £40 price tag, the first question that will spring to mind is 'Is it worth it?' considering you can get PD virus checkers for virtually nothing.

Certainly, Anti Virus appears to have just about all the features you can currently hope for from this type of program. Virus searches can be made not only on floppies but also hard drives, RAD or CD, and the software allows for the quick tracing of link and file viruses including trojan horses, worms, bombs, and disk validator viruses. The problem is, however, that though it can do these things and a lot more, Virus Checker 6.53 can match it for just about every facility, yet it can be downloaded for free from virtually any BBS (and you won't even have to upload anything in return).

Another downfall is that Siegfried are trying to combat the new viruses released every month by offering a software update service for owners of Anti Virus, but they are unlikely to be able to beat the monthly revision Virus Checker benefits from.

All in all then, it's hard to justify Anti Virus's asking price considering it doesn't offer much more than its free PD rivals.

The bottom line

Product: Anti Virus
Supplier: Siren Software
Tel: +44 500 340548
Price: £39.99

Amiback is one of the most desirable HD Back-up programs you can own, but whether you can get your hands on it is another matter

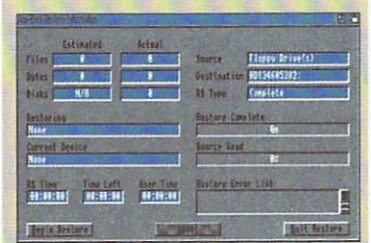
HD Back-up software

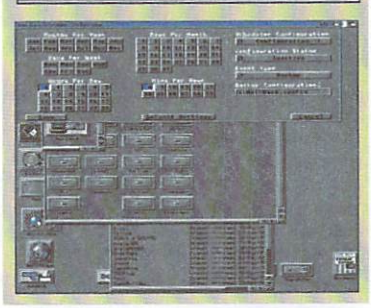
Tapestreamers and DAT are best used with either Quarterback 2.0 or Amiback 6.0, both of which are powerful pieces of back-up software. Unfortunately, the makers of Quarterback went bust and we've not had much luck finding anyone who can supply us with Amiback either.

Nevertheless, these commercial tools are so useful that if you can get your hands on either of them it will be well worth your while. Amiback, for example, can back up a 900k directory in just 47 seconds and has flexibility in terms of its support not only for tapestreamers and DAT, but also floppies and high density floppies.

If you can't get access to these programs it is possible to use HD Backup which is included on Workbench 2.04 and higher, but this is far from ideal. HD Back up is notoriously unpleasant to use with a poor interface, unnecessary complexity of use, and an inability to back up more than one partition or hard drive at once.

There are PD alternatives available – for example, Epic Software's HD Tools includes a back up program (call +44 1793 490988). A word of warning to those with less technical experience, however, is that there didn't appear to be a read.me file to explain how to use this software.





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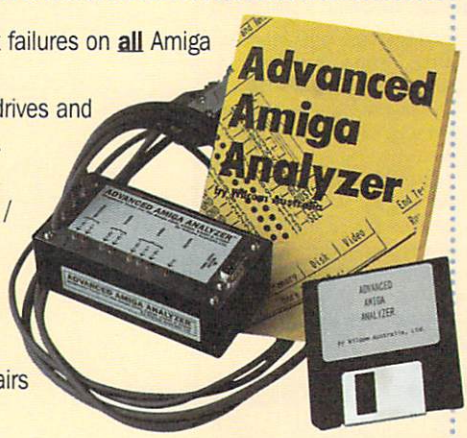

AMIGA SHOPPER MAGAZINE *(UK) product review says:*

"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.

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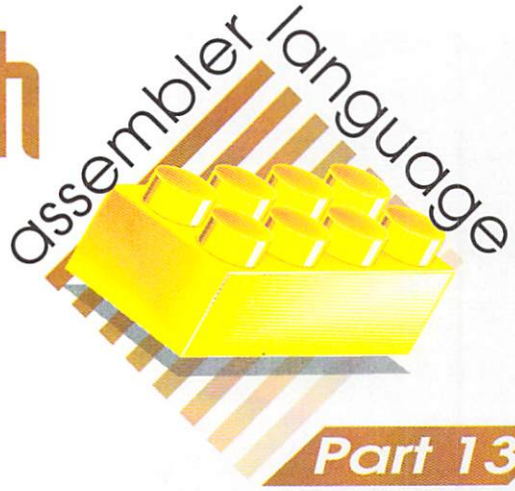


This month Paul Overaa rounds off his notes on parameter passing with details of an approach used when writing mixed C and assembler code

Mixed code programming is a topic that unnecessarily frightens a lot of newcomers. Admittedly, in order to get from, say, C to assembler code and back again (or vice versa) you need to know what happens when a C function is called, but providing you concentrate on understanding the overall themes, rather than getting bogged down with specific details, it's not too difficult to appreciate what's going on.

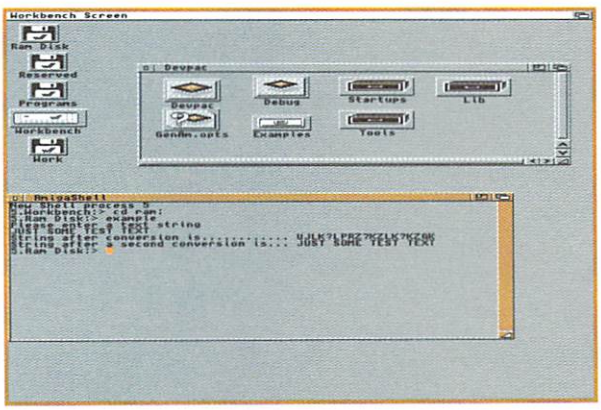
The purpose of this month's notes then is to do three things: Firstly, provide some background info so the accounts you'll read about in your compiler manuals will, hopefully, make a little more sense. Secondly, outline the conventions used with a popular C compiler – I've chosen SAS C.

In addition to this we'll need an example to show how everything fits together and here I've opted for the simplest runable example I could think of! The technique I'll be discussing is what you might call the 'conventional mixed code' approach. It's based on passing function arguments on the stack, and the first step is to appreciate what happens when you place a call to a routine, say, MyFunction(), into a C source program. The compiler uses such source code statements to generate a reference to the named routine and, under normal circumstances, SAS C and many other compilers tag on an initial underscore to the function name.

The call to the function MyFunction() therefore has the linker searching for a routine called _MyFunction and it is this routine, if the linker is going to successfully resolve the reference, that must be provided in the assembly language module!

The code various C compilers produce when they encounter a function call does vary, but the conventions to be followed will always be detailed in the compiler manual. To start with, all you really need to be aware of is that the end result is usually that any parameters present in the function call get pushed onto the stack prior to a call being made to the equivalent subroutine. I say usually because as just mentioned, there are some qualifying conditions with compilers which allow register arguments to be used rather than the stack. SAS C, for instance, then uses an @ character, rather than an underscore, at the start of the function name.

Writing the appropriate C code is easy. It simply involves placing suitably named functions calls, with any required parameters, into the C source. This is done using normal C function conventions – you can even add your own ANSI C function prototypes to make sure the compiler makes the appropriate usage and parameter type checks!



Don't forget that this month's example needs to be run from a Shell window!

Some simple example code

If all the references and directives in the above stages are correct the rest is easy – the C source is compiled, the assembly language code assembled, and then the modules are linked together with the startup-code to produce a runable program. This month's example (which needs to be run from a Shell command line) asks the user to type in a string, and then calls an assembly language routine called MyFunction().

The assembler routine performs an Exclusive-ORing (EOR) of all bytes in the string which are neither the NULL terminator nor equal to the mask value itself (thus protecting C's definition of a string by ensuring we don't produce any NULL values within the body of the string). Having done that, the program prints the modified string, repeats the MyFunction() process and prints it again. The second EORing process does, of course, result in the original input string being produced.

The thing to note is that both the start of the string and the EOR mask value are given to the assembler routine as parameters, i.e. they are provided as arguments of the MyFunction() function. This, in turn, means the assembler code patch has to retrieve those arguments from the stack, so here's a run down on what has happened just prior to control entering the assembler patch.

Firstly, the arguments will have been pushed, in right to left order, onto the stack. Then, a return address will have been placed on the stack. Because my assembler patch uses a LINK a5,#0 instruction the contents of a5 are pushed onto the stack as well, so the result is that to access the two arguments of the C function we need to use positive offsets of 8 and 12 respectively!

Before you examine the source listings some points should be made. To start with, you will notice in the piece of assembler code provided that only the scratch registers A0 and D0 are used. This means that for the example, it is not necessary to preserve register contents on the stack. Despite this, I have included some movem instructions to save and restore data registers d2-d7 so you can see whereabouts in the code those save/restore operations are used when registers d2-d7 are needed

OBJECT CODE

The next step involves writing suitable assembly language code and assembling it to produce linkable object code. A couple of assembler directives, called XDEF and XREF, have to be used to get things running smoothly.

XDEF is an assembler directive used to define assembly language labels as being visible to other modules at link time. If you forget it the assembly stage will go OK, but you'll get errors when linking because the linker will be unable to resolve the corresponding function reference in the C code module.

XREF goes the other way, i.e. it tells the assembler that the information needed about the item in question will be imported when the assembly language module is linked. If you forget these then you'll get errors as soon as you try to assemble your code because the assembler will not realise

➤

The best of both worlds

That's just about it as far as the mechanics of mixed coding are concerned and as you'll see when you examine the C and assembler code on this month's coverdisk, there's nothing particularly difficult about it. The benefits, however, of using this sort of 'hybrid code' approach can be significant – in short, it allows you to harness all the speed advantages of assembler in the sections of the program where it counts, while allowing you to develop the bulk of your code rapidly using a high-level language. The result is that you get the best of both worlds!

➤

that labels have been used whose values are unknown at assembly time.

Most assemblers, incidentally, place a limit on the number of characters within a label that will be regarded as significant. The ANSI C compiler standard also only requires that the compiler caters for six characters with external references, although most handle more. Either check first, or don't use long names for functions and variables whose references might need to be passed between modules.

Function Entry rules: Upon entry to a function the stack, under conventional parameter passing conditions, contains the function arguments placed immediately above the long-word return address which register A7 (the stack pointer) points to. The arguments appear in left-to-right order with the leftmost item being the one immediately above the return address. Here are some standard function entry steps which need to be carried out:

1. Save register A5, which contains the previous function's stack frame pointer. The best idea is to push it onto the stack!
2. Copy the contents of A7 into A5, thereby establishing a frame pointer for the current function which allows you to access the arguments indirectly using the A5 base value.
3. Subtract any stack work area needed from A7.

These steps can, if the work area required is less than 32K, be achieved with the 68000's LINK instruction. Lattice/SAS expects registers D2-D7, A2-A4 and A6 to be intact on return so if any of these registers are to be used, they must be preserved.

Again, it is common practice to place them on the stack. The above stack-oriented procedure forms the basis of a powerful general parameter passing technique and it's well worth learning about. Function return values are passed back in one or more registers, depending on the data type declared for the function in question. Here are the return value details that must be adhered to (see above).

Return Type	Size	Pass Back Details
char	8	low byte of D0
short	16	low word of D0
long	32	all of D0
float	32	all of D0
pointer	32	all of D0
double (IEEE)	64	passed in D0 and D1 with high bits in D0
double (FFP)	32	all of D0

Having set up the required return value, the routine needs to reverse its entry steps – restoring the registers, advancing the A7 stack pointer past the work area, and restoring the previous frame pointer to A5 before exiting via an RTS instructions. Again the 68000 has an unlink (UNLK) instruction intended to simplify these operations. (Note that it is the job of the calling function, and not the called function, to remove any arguments from the stack). AC

> Writing the appropriate C code is easy. It simply involves placing suitably named functions calls, with any required parameters, into the C source. This is done using normal C function conventions

c_code.c - data passed as C parameters

```
#include <exec/types.h>
#include <stdio.h>
#define MESSAGE1 "Please enter a text string\n"
#define MESSAGE2 "String after conversion is..........."
#define MESSAGE3 "String after a second conversion is..."
#define LINEFEED  10
#define MAX_CHARS 80
#define EOR_MASK  0x1F
void MyFunction(TEXT *input_string, UBYTE EOR_mask);
main()
{
TEXT input_string[MAX_CHARS+1];
space for user string

UBYTE EOR_mask=EOR_MASK;
Exclusive-ORing conversion mask

WORD  keyboard_character; UBYTE count=0;
printf(MESSAGE1);
while ((keyboard_character=getchar())!=LINEFEED)
          {
          if (count<=MAX_CHARS) input_string[count++]=keyboard_character;
          };
input_string[count]=NULL;
add terminal NULL

MyFunction(input_string, EOR_mask);
EOR the string

printf("%s %s \n",MESSAGE2,input_string);
display converted string

MyFunction(input_string, EOR_mask);
2nd EOR operation

printf("%s %s \n",MESSAGE3, input_string);
display string again */

}
```

Listing 1: The C code part of the program

assembler_code.s - associated assembler patch

```
                XDEF        _MyFunction

_MyFunction     link        a5,#0           workspace not needed
                movem.l     d2-d7,-(sp)     normally where we preserve regs
                move.l      12(a5),d0       retrieve mask value
                move.l      8(a5),a0        retrieve string pointer
                subq.l      #1,a0

loop:           addq.l      #1,a0           move to next byte
                tst.b       (a0)            check it
                beq         exit            quit if NULL terminator
                cmp.b       (a0),d0         will it EOR to NULL ?
                beq         loop            if YES don't EOR it
                eor.b       d0,(a0)         safe to convert
                bra         loop            keep going

exit:           movem.l     (sp)+,d2-d7     normally where we restore regs
                unlk        a5
                rts         back to C
```

Listing 2: With this assembler patch the parameter data is collected from the stack!

The do's and don'ts of surfin'

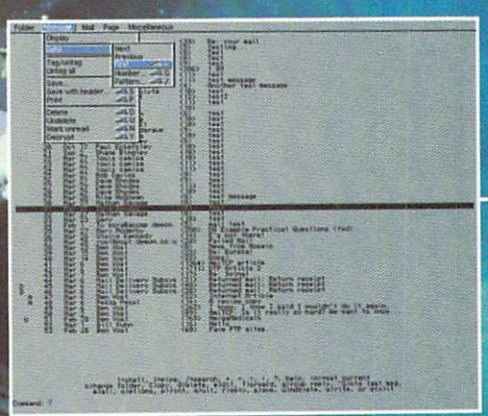
Ben Vost gives some tips and hints for polite, trouble-free Internet usage

With the Internet getting more crowded these days than downtown Delhi, it is becoming ever more important to get your message across while annoying the smallest number of people possible. You can travel the superinfobahn wearing nothing but a pink tutu, flippers and marmalade, but as far as everyone else is concerned, this is what you look like: :-).

This anonymity can be a double-edged sword. While it grants us freedom from gender, age and colour, it also means that although we might be trying to be really funny, people aren't going to know unless we give them really obvious clues, all the time. And it's just possible that people might think we are annoying, rude or just plain mad. So this isn't a guide to your behaviour on the net, but how to deal with other people's.

Let's start with e-mail. This is probably the most private of the methods for getting your point across to other users. E-mail can be addressed to just one person, or to groups of people, but the same rules still apply. Be aware of where your mail is actually going to go. Obviously, it will be going to your friend or colleague, but where will they be reading it? If it contains information that is sensitive or that you'd rather keep secret, perhaps you should mail it to them at their home account, rather than at work or university.

If you are sending important information, trade secrets, or otherwise sensitive material, it is worth remembering that e-mail can be very easily faked or forged. Make sure that what you are getting is actually from the person you expected. Until e-mail is made more secure, the ➤



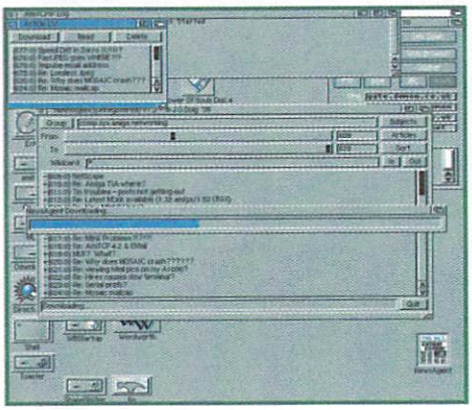
A postman's life may be a jolly one, but I prefer to deliver my mail by clicking on a button

easiest way of doing this is to give them a telephone call or send them an e-mail confirmation of their request before sending the information itself. In fact, it's never a good idea to send UUencoded binaries of enormous size without first checking that the recipient of your generosity is actually going to be happy staying online to download all this information.

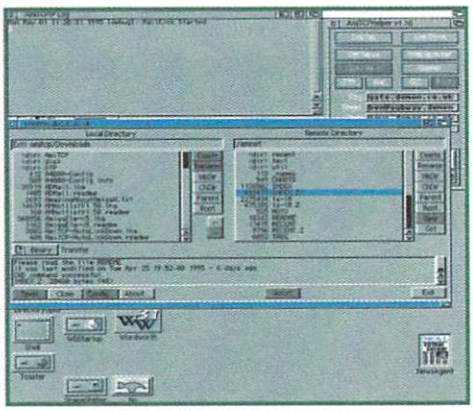
The same thing applies with constant referencing. If you have taken part in an e-mail conversation where there are numerous levels of quoting, trim your reply a little. It's highly likely that the other party still has the previous correspondence, so they can always refer back to that if necessary. In general, you only really need to quote direct questions when giving replies, along with pertinent ancillary information. Leave all the earlier stuff out – basically anything you have read more than once.

NO PRIVACY

We'll go onto a related topic now, that of UseNet. Usenet can be treated just like e-mail, but on a worldwide basis. Many thousands of people could end up reading what you have written, so it is even more important that you pay attention to what you are saying. Flame wars can be started by the most trivial things such as poor spelling or what might seem to be perfectly innocent comments. It is vital that you trim quotes when you follow up a thread to prevent bandwidth from being wasted.



NewsAgent – A splendid new method of gathering your news articles selectively should help anyone who doesn't want "noise" articles



Downloading the Aminet Index file can be done once a week and prevents those embarassing "Where is...?" questions

You also never know who might be reading the newsgroup you are posting to, so avoid the example set by Jake Baker who wrote a story in one of the alt.sex.* newsgroups and had the idiotic idea of using the name of one his fellow students for the victim of a fairly sick fantasy.

It resulted in Baker being arrested, and now there are deliberations to find out whether Baker's tale was merely harmless fantasising (he had never even spoken to the girl in question), or whether it was a prelude to an actual physical attack. This is unlikely to happen to most of us, but you could still end up alienating people with careless comments, so be polite.

It's not all doom and gloom, however. People tend to be very helpful on the Net, giving a plethora of answers to any sensible query. If you want to get an answer to a problem that's been troubling you, I can't think of a better resource, but make sure you have tried all possible solutions first, otherwise not only will you be wasting people's time, you will also be wasting that precious bandwidth. In particular, make sure you have read whatever documentation comes with the package, else you

A word of warning

Do: Take your time and re-read your e-mails before sending them out.
Do: Ignore people who are just blowing off hot air and **don't** rise to their bait if they continue to taunt you.
Don't: Send large files without confirming with the recipient that it will be OK to do so.
Don't: Put information that must be kept absolutely secret in e-mail, unless you have some form of Public Key Encryption.
Do: Help to propagate the helpful attitude that exists on Usenet by offering your advice to people who need it.
Do: Read the manuals before asking questions.
Don't: Put your questions into more than two or three newsgroups at most. People get fed up with having to read the same item over and over again.
Do: Be aware that others are reading your news.
Do: Have a good time, but spend as little time as possible on-line so that you can still have a good time in three months when the two-volume BT bill gets delivered in a truck.

Mailing lists

One good way of getting information you want without any extraneous noise is to subscribe to a mailing list. Mailing lists work like a cross between newsgroups and e-mail. You receive e-mail from the list containing articles posted by other people on the list, and when you want to reply or post you address your mail to the mailing list rather than an individual. That way, every one that subscribes to the list will receive your e-mail.

The PageStream user's mailing list
PGS-request@ramiga.cts.com
ADD [your e-mail address]

ami-sci (Scientific/engineering software and related homebrew hardware)
Majordomo@CFHT.Hawaii.edu
subscribe ami-sci

Blitz Basic 2 Programming
blitz-list-request@helsinki.fi
"SUBSCRIBE username@domain"

AMOS
subscribe@xamiga.linet.org
"#amos username@domain;"

CDPub (CDROM publishing and systems) – All platforms
Mail-Server@knex.via.mind.org
"SUBSCRIBE CDPub FirstName LastName"

Commodore-Amiga
subscribe@xamiga.linet.org
"#commodore username@domain;"

Smileys and TLAs

Smileys or emoticons are one way of ensuring that people know how you are feeling when you are typing your ASCII epistle. TLAs are Three Letter Abbreviations (that sometimes have more than three letters) and are a useful shorthand, especially if you are typing online.

:-	Basic smiley	**BTW**	By The Way
:?)	Big nose smiley	**IMHO**	In My Humble Opinion
;-)	Wink	**IMNSHO**	In My Not So Humble Opinion
:-(	Unhappy	**L8R**	Later
:-P	Raspberry blower	**ROFL**	Rolls On Floor Laughing
8-)	Speccy smiley	**RTFM**	Read The F*?@ing Manual
:-*	Kiss	**TANSTAAFL**	There Ain't No Such Thing As A Free Lunch
:o)	Clown		
:-/	Angry	**TTYL**	Talk To You Later

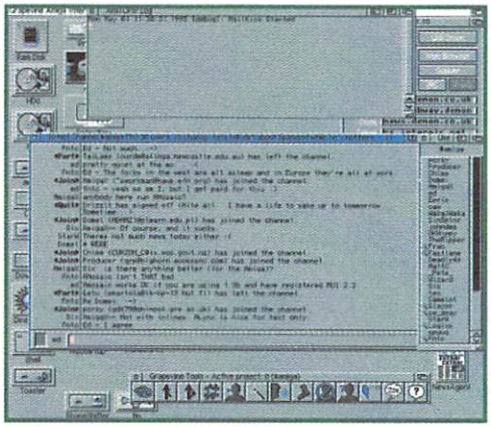
could end up with a terse RTFM in response to your question.

One of the things that really annoys me, but other people seem to take it in their stride, is the net user who can't be bothered to download an Aminet index file. Granted, these files are big (around 400k for the compressed version), but having one enables you to find any piece of software on the Aminet, so it has to be worth the wait.

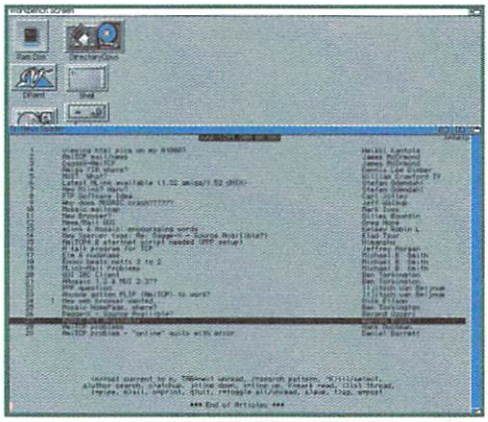
As a last resort you can stop downloading messages which conform to particular criteria, such as author name or subject. This is done using a kill file, and users of AmiTCP will find they won't even download the offending articles. However, people who are sticking to AmigaNOS will only avoid having to read them – AmigaNOS not being sensible enough to not download them in the first place.

The web doesn't tend to pose too many problems as it is pretty much a passive communication medium, unlike news and mail, but as a general bit of advice, if you are going to be reading the same page for more than about five minutes, you might want to set a ping window going at the same time which will ensure your connection doesn't get timed out for lack of traffic.

In conclusion, as users of the Internet we must remember that we are the first of the many, rather than the few. Whether it stays as it is, which is extremely unlikely, or changes beyond recognition, there will still be a need to keep going what has been started – an ultimate democracy that currently exists, with no barriers for nations, colour, creed, sex or age. And as such, we have a burden to bear. We can make it a replica of today's society in the Western world, with greed and paranoia being our chief motivators, or we can continue to create the nearest thing to a utopia. It's up to us. AC



IRC or Internet Relay Chat using Grapevine. Here you have an on-line forum for the discussion of anything



The heart of flaming territory. Newsgroups can be a source of superb information, or great irritation

CSAA (comp.sys.amiga.announce)
(Product or other)
announce-request@cs.ucdavis.edu

Emplant List
subscribe@xamiga.linet.org
"#emplant username@domain;"

Excelsior! BBS System
subscribe@xamiga.linet.org
"#excelsior username@domain;"

Hyperami – AmigaVision, CanDo, DeluxeVideo, Director, etc.
listserv@archive.oit.unc.edu
"subscribe hyperami"

Imagine – the 3D Rendering package
imagine-request@email.sp.paramax.com
"subscribe" in subject line

Lightwave – Video Toaster and related hardware
1. subscribe@xamiga.linet.org
"#lightwave username@domain;"

2. lightwave-request@bobsbox.rent.com
body: "subscribe lightwave-l
your_id@your_address (your_name)"

lwplugin-l (for lightwave plugin software development info)
listserv@netcom.com
subscribe lwplugin-l

Video Toaster
toaster_request@bobsbox.rent.com
body: "subscribe toaster-l
your_id@your_address (your_name)"

ParNET – Amiga Amiga networking system
parnet-list-request@ben.com
questions to: parnet-list-owner@ben.com

SupraFAX
subscribe@xamiga.linet.org
"#supra username@domain;"

Amiga Misc (bit.listserv.i-amiga)
i-amiga@rutvm1.rutgers.edu

Comp.Sys.Amiga.Hardware
ami-hard%mainecs@cunyvm.cuny.edu

Comp.Sys.Amiga.Tech
ami-tech%mainecs@cunyvm.cuny.edu

EGS Mailing List (The 3rd party RTG system for 24-bit graphic boards)
listserv@darkside.osrhe.edu
body: "SUBSCRIBE EGS "

Piccolo (The 24-bit Graphics Board)
pks-list-request@ben.com

Linux (680x0 channel)
linux-activists@niksula.hut.fi

Amiga SLIP List
amiga-slip-requests@ccs.carleton.ca

Amiga Mosaic
subscribe to: witbrock@cs.cmu.edu

Amiga Mach List
mailserver@lists.funet.fi
"sub amiga-mach firstname lastname"

Amiga X11 Info
mailserver@lists.funet.fi
"sub amiga-x11 firstname lastname"

Amiga GNU C info
mailserver@lists.funet.fi
"sub amiga-gcc-info firstname lastname"

Amiga GNU C Compiler Internals
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"sub amiga-gcc-port firstname lastname"

Amiga Reviews Request Info
amiga-reviews-requests@math.uh.edu

Aminet Uploads
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"SUBSCRIBE aminet-weekly" OR
"SUBSCRIBE aminet-daily"

Amiga Oberon & Modula-2
amiga-m2-request@virginia.edu

NetBSD Port
netbsd-admin@cbmuucp.commodore.com

listserv@gu.uwa.edu.au
"subscribe real3d firstname lastname"

AmiTCP
queries to: amitcp-group@hut.fi

Picasso II Gfx Board
Picasso-Request@Terrapin-Station.umd.edu
"subscribe picasso"

Amiga LISP
amigalisp-request@contessa.phone.net

UMS (Universal Message System)
request@umshq.dfv.rwth-aachen.de

PGP Encryption for Amiga
listserv@peti.gun.de
body: "ADD [your_email_address] PGPAmiga" or "HELP"

Always remember that when you receive mail from a mailserver, you can't reply to that mail to unsubscribe from the list.

Next month in AMIGA COMPUTING US EDITION

Cheaper faster better

As Escom announce their plans for the future of the Amiga, **Amiga Computing** is on hand to bring you all the news – what will happen to CD32? How much are the new machines going to be? What will the next generation of Amigas be like?

Next month also sees features on Magic User Interface and how to incorporate charts, graphs and equations into your favourite Amiga DTP and word processing applications.

PLUS

CD-ROMs

Photogenics v1.2

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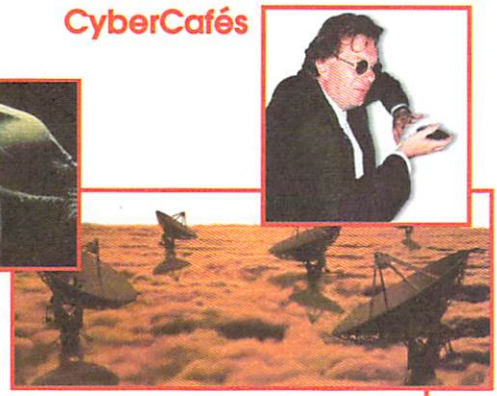
CyberCafés



Electronic publishing

SYSTEM

games reviews including:

- *Obsession*
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With Personal Paint 4 and a whole bunch of useful utilities on our CoverDisks for Gold Subscribers, you know that August's **Amiga Computing** is going to be a doozie!

The good, the bad and the ugly

Gareth Lofthouse and Adam Phillips bring you our regular review of the latest tide of CD releases. This month there's the usual mixed bag plus a special focus on Amiga educational CDs

"More! More! More!" cry the CD-ROM owners, hungrily awaiting the next gleaming gigabyte disc of useful utils, thrifty tools or dynamic demos. At least that's what the distributors seem to believe, as once again another host of releases comes up for *Amiga Computing*'s scrutiny.

One of the main advantages of CD is it allows for multimedia applications with memory-greedy graphical and audio sections. Unfortunately, despite the growth of the CD market for the Amiga there's been a dearth of this type of product that has yet to be corrected.

Nevertheless, in addition to the usual mixture of sights, sounds and utilities, we've focused on the few multimedia titles that are available. Let's hope it will encourage developers to come up with some more multimedia software for the growing hoards of CD-ROM enthusiasts in the near future.

Weird Science Animations

As is becoming the fashion in this quantity-obsessed field, Weird Science's animation collection comes on two discs. The proclaimed purpose of the compilation is to show owners how the experts make use of the best animation tools available – in other words it's primarily just for enjoyment.

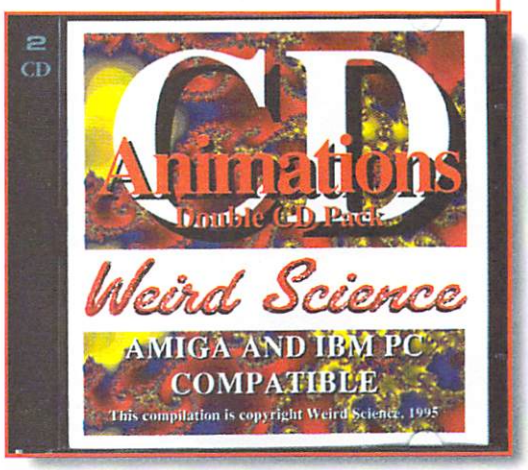
A viewer has been provided, so it's possible to view all the anims directly from disk providing the user has enough RAM. However, some of the files need up to 10Mb of memory, so you're not going to be able to view everything on the basic Amiga or CD32.

The first disc is reasonably well organised into a number of separate drawers, with space set aside for animation works by the reputed Tobias Richter and Eric Schwartz. Unfortunately, many of the Richter animations date back to the '80s and are less than impressive when compared with the sort of material that can be created on packages such as LightWave these days.

The Schwartz animations are comparatively successful, with a good range of his Aerotoon series to look at. Again, however, this is old stuff and parts of it have appeared elsewhere. A lot of the larger animations were created in Moviesetter, a powerful but old program that leads to problems in itself. New machines like A1200s and 4000s have trouble making these cartoons work successfully.

Other familiar files are the animations of VistaPro-created landscapes – the ones which send the camera swooping down into canyons and skimming over mountains. These were spooling directly from CD, and though they were jerky with a dual-speed drive, they should run more smoothly when used with a triple or quad speed. The second CD is less well organised than the first, being a general and alphabetic directory of animation files. Ploughing through this lot feels more like a hit and miss affair than is usual with CD libraries.

Basically, this package is about fun and there is some enjoyable material to be found for the patient searcher. However, the majority of the anims are rather disappointing or outdated, a fact which would put it fairly low on my CD shopping list.



The bottom line

Product: Weird Science Animations
Price: £19.95
Supplier: Weird Science
Tel: 0116 234 0682

Ease of use	**9**
Implementation	**6**
Value for money	**7**
Overall	**7**

Grolier CD Encyclopaedia

This is another disc that's been available for some time, and is one of the few CD32 titles we couldn't get working with the Squirrel emulator. This is a shame, since those who do have a CD32 can benefit from one of the best educational resources available for the Commodore range.

The CD contains the complete text from the 21-volume Grolier Encyclopaedia combined with over 2000 photographs and illustrations to bring the information alive. In addition to the colourful visual content, many of the program's entries are accompanied by sound samples such as excerpts from famous speeches and musical compositions, or animal sounds such as various bird calls.

SIMILARITIES

The interface is similar to that found in the other educational CDs reviewed, except it also features a powerful search facility. Entering text to search for is always slightly inconvenient using the CD32 thanks to the absence of a keyboard, but once this is done it will scan through the package's 10,000 word database remarkably quickly and give you a list of connected articles.

Along with the advantages of its presentation and diminutive size in comparison to a printed encyclopaedia, the Grolier Electronic encourages curiosity in its users because of the cross-referencing tools included. Articles lead on to related topics, or you can click on words in the text and perform a search at the press of a button.

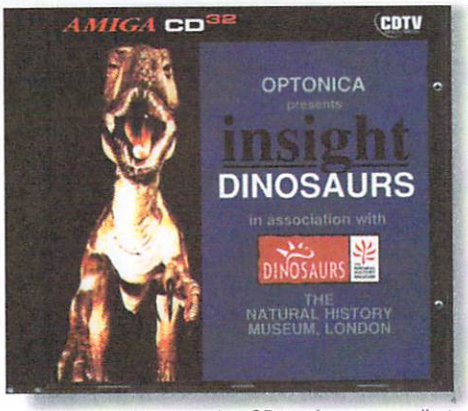
Yes, it's been around for a while now but it remains an impressive product regardless. Considering the price, anyone with a CD32 should invest in this package and hope that serious releases of a similar quality will appear for their machine in the near future.

The bottom line

Product: Grolier Electronic Encyclopaedia
Price: £29.99
Supplier: Epic Software
Tel: 01793 490988

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

Insight Dinosaurs



Educational tools targeted at CD are few and far between so far on the Amiga, and in my mind Optica's Dinosaurs remains one of the best examples of what can be achieved on the platform with a little effort.

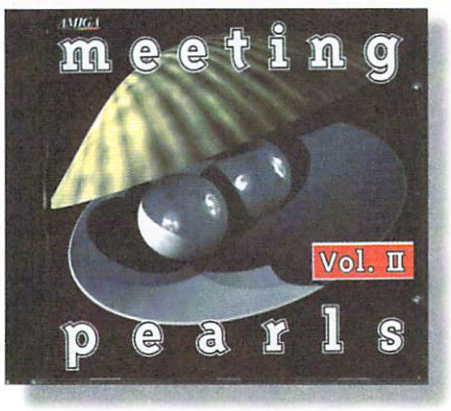
While it's a learning experience, the makers have remembered the first rule of computer education, by which I mean it should be fun to use. Consequently, the emphasis of Dinosaurs is on colourful pictures and sound combined with an easy-to-use interface.

Dinosaurs was actually designed for the CD32 or the CDTV, but we had no problem running it from a CD-ROM drive using Squirrel emulation software, and this should now make it of wider appeal to a new market. The CD's menus are far more visually appealing than on the other educational packages reviewed here, thanks to the use of large buttons with well drawn dinosaur packages representing various topic areas.

Optica have used a variety of media to make the subject as interesting as possible. In addition to many professional illustrations, there are authoritative voice-over, motion video, photos and computer animations, all of which represent appealing additions to the standard textual information on each topic.

The CD is divided into three main sections. First the Life of a Dinosaur includes an explanation of hunting patterns, diet and digestion, and the natural attack and

Meeting pearls



Another general collection of utilities, games, graphics and the rest, this CD comes to us from Germany and is the second in the series. Created by programmers who gather for these meetings, the relative low price of this compilation comes down to the fact that all the programs were provided free of charge.

The makers have tried to give Meeting Pearls a particularly user-friendly front-end, but unfortunately it hasn't quite worked. Hypertext pages, for example, lead on to various categories on the CD, but they are so bogged down with graphics that getting anywhere can be a very slow process. There doesn't appear to be any guide summarising the contents of each file, an omission that leaves it lagging behind the Aminet CDs when it comes to ease of use.

On the plus side, it is an unusually low-cost CD that includes some interesting material, with 25Mb of terminal programs, 9Mb of music programs and 10Mbs from 'The Party '94' featuring as just a few of the disc's highlights. Despite this, the inferior organisation of the CD and the fact that there's too much untranslated German to be found left me rather lukewarm about Meeting Pearls. This one's probably best left for the CD addicts or those with serious cash flow problems.

The bottom line

Product: Meeting Pearls
Price: £9.99
Supplier: Schatztruhe
Tel: 0049 6171 85937

Ease of use 7
Implementation 6
Value for money 9
Overall 7

defence mechanisms the creatures evolved. The second section, on the other hand, expounds on the main theories behind the extinction of the dinosaurs. Finally, the third section is an index for immediate access to information on a particular species.

With a dinosaur quiz and chinese puzzle thrown in for good measure, this is an excellent learning tool for children and, for that matter, one which will keep the parents intrigued for a fair while too.

The bottom line

Product: Insight Dinosaurs
Price: £39.99
Supplier: Optica
Tel: 01455 558282

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

Insight Technology

In contrast to Dinosaurs, Technology is not a topic that will have average child buzzing with excitement and curiosity. All the more reason to make a professional job of the CD and use the potential of the medium to liven the subject up.

Unfortunately though, it was made by the same people as the Dinosaurs CD – this product came out earlier and lacks a lot of the polish of its successor. Even on booting the CD up, the menus look rather drab in comparison. It all works in much the same fashion as Dinosaurs but the user has to scroll through a lot more grey text indexes here. Then, when you do get to the sparse video sections, it's of a poor quality with an often all too brief voice-over to be informative.

Click on the tractor picture, for example, and the voice-over tells you nothing more than that the tractor replaced animals as the most important farming aid. This is followed by a three-second film of a tractor turning around in a field – basically it's pretty uninformative.

In fairness, the animated diagrams of how the machines work is relatively helpful. This, however, fails to make up for the overall weakness of a package that was dull in the first place and which is beginning to look very dated now.

The bottom line

Product: Insight Technology
Price: £39.99
Supplier: Optica
Tel: 01455 558282

Ease of use 8
Implementation 4
Value for money 6
Overall 6

Town of Tunes

While the title might make the average consumer flinch with embarrassment with a capital E, this CD from the Scandinavian CD-ROM Publishers is an interesting collection of sound modules, midi, samples and rather risqué pictures. The most hyped contents of the CD are the 960 modules forming a solid library of all types of music. Quality varies from module to module – some hark back to the day of C64 games music while others use the latest electronic gear to produce their synthetic sound.

Zip files have been included for BBS use to aid uploading and downloading times, and there's also some special mixes of popular tunes including groups such as 2Unlimited, Snap and Blackbox.

Other sound files consist of midi and sample data, of which there are several hundred to choose from. As something of a strange bonus, you can also plough your way through song lyrics from bands such as Aerosmith, ACDC, Anthrax and solo artists (I use that term loosely) such as Paula Abdhul.

It's good to see that the necessary players have been included, but it would have been nice if the producers had given the front-end the same ease of use as the Aminet CD collection, where viewers and sound players are already up and ready to run and listed in hypertext-like links for selection.

On a more cautionary note, the CD also includes promotional material for other products produced by the Netherlands team. These include soft porn pictures of Japanese ladies clutching at various parts of their anatomy and some rather surprising/shocking (depending on your view point) pictures of Manga-style explicit material. While I would assume the material is not illegal in this country, parents should be advised that the disc does contain such material and distributors should put some kind of label on the front of the package to warn potential buyers.

This aside, Town Of Tunes is a rather useful collection for musicians needing instantly gratifying tunes, samples and other oddities to play round with. Recommended.

The bottom line

Product: Town Of Tunes
Price: £19.99
Supplier: 17 bit Software
Tel: 01924 366982

Ease of use 7
Implementation 8
Value for money 8
Overall 8

Lightwave Enhancer

When Imagine Enhancer surfaced on the scene a few months ago, it dropped jaws all over the Amiga community with a range of objects and backgrounds to inspire the best 3D artists. With the arrival of Lightwave Enhancer from Oberland, hopes were high that this CD collection of objects, macros, maps, brushes, backdrops, fonts and more would prove equally as successful.

The first hurdle to overcome once the CD is up on the Workbench is the installing of the relevant libraries into Lightwave. This is a hassle which doesn't happen with the likes of 3D Arena from Almathera – there was various going back and forth as I tried typing in where the files should go. Like the Imagine Enhancer it can be overcome, but there really shouldn't be any need for fiddling round installing and copying for this price.

Get past this though and you have access to a multitude of different facilities to enhance the number one animation package. Let's get the disappointments out of the way first though – there are seven objects on offer which are of a very high quality and rather familiar to the owners of the Imagine Enhancer CD. Unfortunately, it's a small number to have – the large library of furniture on the Imagine Enhancer CD has not been ported across to this version.

On the plus side, 25 macros have been included for use in Modeller which produce a variety of differing effects, from exploding the faces of an object and turning any picture into a reflection, to creating a Wavemaker-like storyboard. Easy to operate and fully explained via text on screen as you select them, these are one of the most valuable sections in the whole CD.

Summing up, if you want lots of objects to play with then go for Almathera's 3D Arena, but for textures, macros, animmaps and lots of other odds and sods to make life easier, then Lightwave Enhancer is a very promising CD – just watch out for the rather substantial price tag though.

The bottom line

Product: Lightwave Enhancer
Price: £40 approx.
Supplier: 17-bit Software
Tel: 01924 366982

Ease of use 6
Implementation 8
Value for money 6
Overall 7

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Your essential guide to the Amiga gaming world

A fistful of fun

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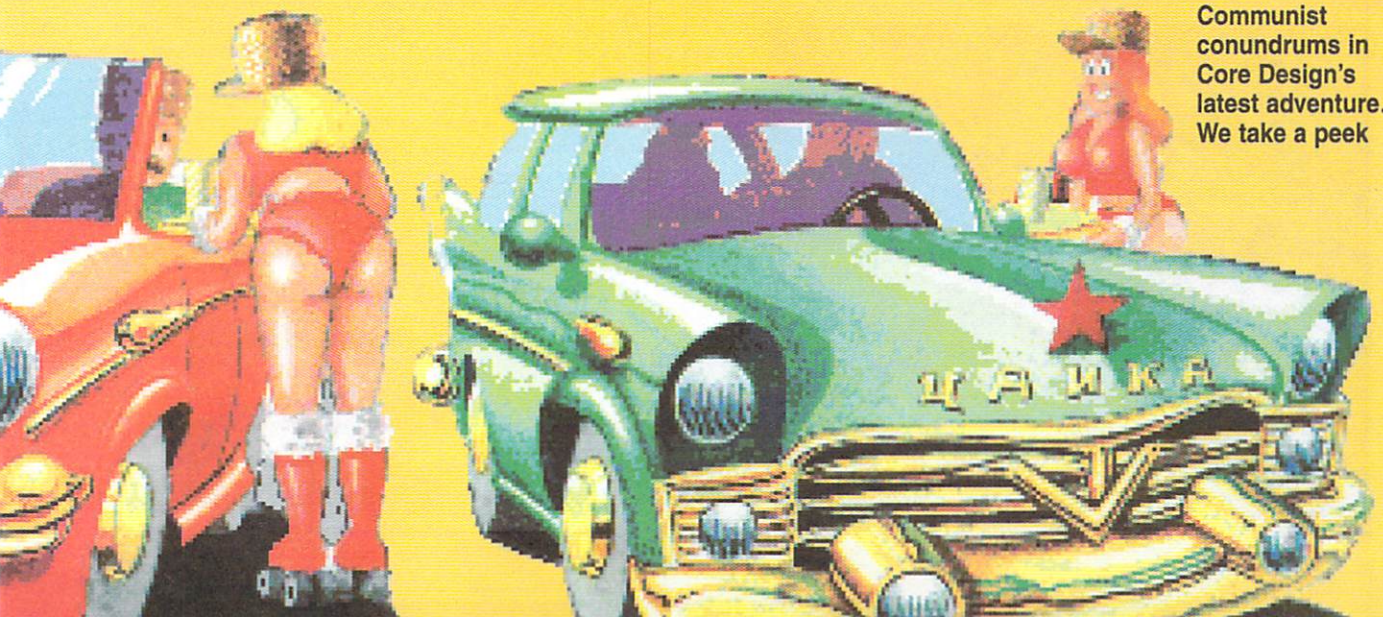


Monster Manga

Fans of Manga will be pleased to hear of the latest releases from Manga Video this month. Godzilla vs. Mothra, released on 1 May, is based on the 1964 film, Godzilla vs. The Thing. The movie is the fourth in Toho's big budget remake series and is directed by Takao Okawara and Koichi Kawakita. The plot sees a giant meteorite hurl to Earth setting off volcanoes and earthquakes which awaken Godzilla from his slumber. The landslides reveal a mysterious sphere which truns out to be the egg of Mothra and surprise – it hatches! More trouble is in store as the earthquakes have also caused Mothra's enemy, Battra, to rise.

Manga Video also kick off their new six-part series, Angel Cop, where the deadly but sexy Angel, a member of the Special Security force, is sent to fight a new wave of crime in Tokyo. This story follows the Red May, a dangerous terrorist organisation. Part One also includes the first episode of the comic strip, Bone 'Ed, The Chainsaw Messiah.

Part One of Angel Cop is due out this May

Toho's budget remake series now includes Godzilla vs. Mothra

system online

Summer's here and the heat is certainly rising on the Amiga games scene. Tina Hackett brings you news of the hottest releases that will be coming your way

Zee sheep in Zeewolf's clothing

Binary Asylum are busy at work on the sequel to their excellent helicopter sim, Zeewolf. It promises to keep the same successful gameplay as before, but with a variety of new missions and improvements. They are still aiming to keep the tactical element and the same freedom of mission order.

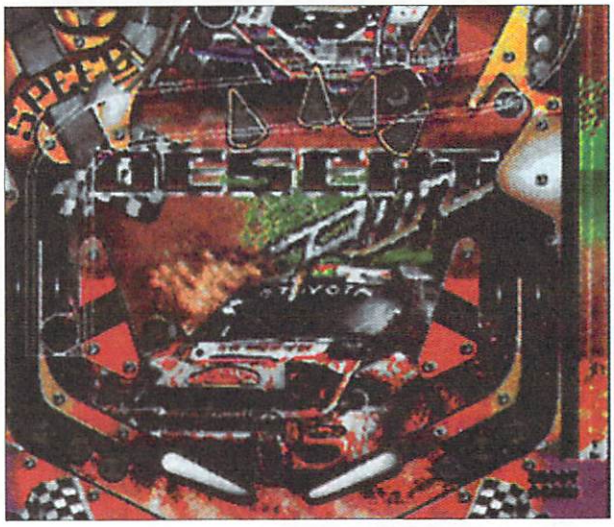
The company are also expanding their development team with the appointment of Chris Newcombe, previously a Senior Software Engineer at Sega Europe and a programmer on Gunship 2000 for MicroProse.

The original Zeewolf was a great success for Binary Asylum

Manic Pinball

It certainly is Pinball Mania at the moment – literally! 21st Century, the people behind the hit pinball sims Pinball Illusions, Pinball Dreams and Pinball Fantasies, are working on yet another that promises to better its predecessors. At the moment the Amiga version isn't definite, but keep your fingers crossed because this one looks like being the best yet!

There are going to be four tables which will have the themes, Tarantula, Jailbreak, Kick-Off and Jackpot. They will all include animations such as moving switches and passage spinners, and there will be a minimum of three flippers on every table. The controls will also be user-definable.



Play to win

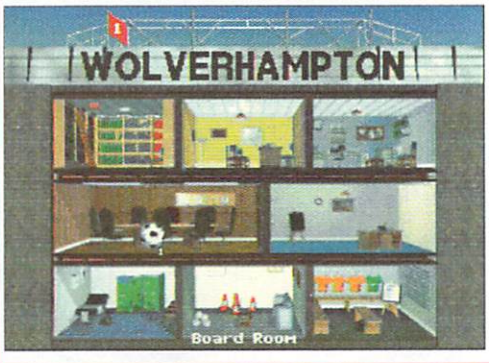
The popular footy management game, Player Manager, has been given a fresh lick of paint and the new moniker Player Manager 2 to bring you a sequel.

You actually get to play in the matches and can choose from options such as Personal Challenge – where you must reach a set target – or Knock Out – where four players test their skills against each other.

There are also all the other usual managerial options where you'll have to decide everything from tactics, to carrying out individual player team talks and deciding on stadium improvements.

A Ray Trace option will also make for a highly impressive game. This allows you to design your tactics accurately, and by applying the Ray Trace you can pinpoint player limitations, decide on the best positions for your players, and choose the right tactics for individual matches.

From what we've seen so far, it looks like falling into the new genre of management games we're seeing at the moment that tend to go for a highly polished, realistic graphical style rather than the totally stats-based approach.



Player Manager 2 will have many new features and will boast some very realistic graphics

Get the power

Ever-busy Impressions are working on another strategy title called Power House. It's set in the future and puts you in the role of a power giant competing against three other ruthless rivals, all vying for the earth's natural resources.

It's your aim to build a profitable business empire without destroying the earth's already crumbling eco system. You can choose from nine types of energy to invest in, from the renewable to the fossil fuels.

You will also have to do things like test drilling and mining, or construct oil rigs. Negotiating territorial rights and extraction rights is also important. Power House will be available this June and it certainly sounds different.

Play the part of a ruthless power baron

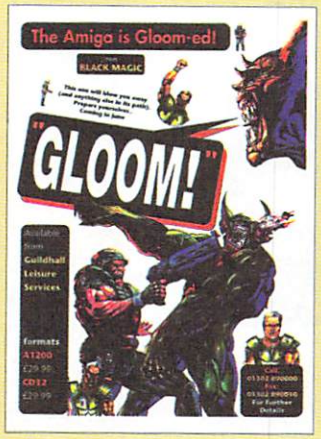
In their Shadow

Thanks to all those who entered our Shadow Fighter competition a couple of months back. We had a good response and the standard of entries was high. But as they say: There can only be one winner! So congratulations to Sarah Snape from Sheffield who gets a CD32 courtesy of Gremlin. The five runners-up are Marek Walford, Adam Scott, Tom Wilson, Craig Humphries and Tom Gaskell. Each receive a copy of the excellent beat-'em-up, Shadow Fighter.

Living in Fear

PC cynics who claim that Doom can't be done on the Amiga may soon be eating their words. A huge effort is being made on the part of Amiga developers to find the ultimate Doom beater, or at least an equal to it! Death Mask tried and failed, Alien Breed 3D is in the pipeline and already looking pretty stunning, and two more contenders are raring up to take the challenge.

Fears is just one of theses titles. Written by French team MANYK and published by Bomb Software, Fears aims to provide a good combination of action and some of the more Doom-like strategy aspects. You will also be able to link two Amigas together via a null modem cable for a networked game.



The other is Gloom and is being developed by a New Zealand team called Black Magic. The programmer, Mark Sibbly, has already earned a top reputation for himself for the hit game Guardian, among others, and the programming language Blitz Basic. Gloom guarantees gore in abundance and two different graphical styles which will alter the mood of the game dramatically.

Both games will be released this summer.

Fears – one of the games lining up to try and challenge Doom

Obsessive behaviour

In my days on ST Review magazine I remember there was a certain title that really grabbed my attention. So much in fact, that I awarded it a huge 98 per cent. And now, rumour has it that this very same game (plus a few tweaks and improvements) is heading its way on to the Amiga.

It's a pinball game by a relatively new Swedish team called Unique Developments. When I saw the game it had four completely stunning tables: Aquatic Adventure, Balls and Bats, Desert Run and X-ile Zone, but an extra table is promised for the A1200 version, along with 256 colours and multi-ball.

Look forward to this quality pinballer, Obsession, soon

In Brief

Tiny Troops

Mindscape are working on a multi format release across the CD32, Amiga, PC and PC CD-ROM called Tiny Troops. It is a fun strategy game featuring two warring races of bugs across six different worlds. A June release is planned and it will have 70 different missions.

To the Hilt

Kellion, the very new publishers behind Leading Lap and Ants, are working on a Laser Squad sort of title called Hilt, but based around robots. It'll be ready in a few weeks and we'll hopefully be bringing you a full review soon.

Explosive game

Kent based Arcane are working on yet another Amiga title along the lines of Bomberman and Dyna Blaster. It's a Blitz Basic game that will have a multi-player link mode for ultimate playability

Hot in the city

Bruce Smith Books are continuing there range of Gamers Guides with their latest addition, Secrets of Sim City 2000. Written by Andrew Banner, it contains 128 pages of hints and tips to help players build the perfect city. It also contains details on the recently released Urban Renewal Kit.

Priced at £9.95, you can find the title in major book stores or order via Computer Bookshops on +44 121 706 1250.

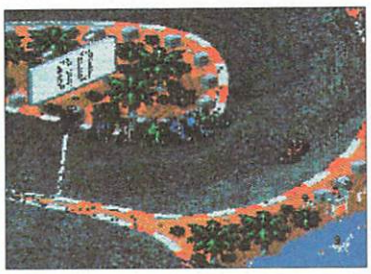
Stuck on Sim City 2000 – help is at hand

System Selections

With all the new releases available your probably wondering which ones to spend your hard-earned cash on. Well, take a look below.....

All Terrain Racing

On the balance of things it beats its predecessors because of a greater long-term incentive. The rewards of winning the money, then spending it to soup up my motor filled me with a boyish flush of satisfaction – and that's the sort of thing to keep a player going. It's got the looks, the features and the speed to take the chequered flag. Go forth and spend your money.



SKIDMARKS 2

This is one hell of a race-'em-up it has to be said. It's great fun especially when you have two or more players and it works really well in bringing out the competitive edge in you. This is one of the most playable and fun race-'em-ups around and with the vast amount of new features added it's certainly worth a look, even if you have the original.

TFX

With a suitably accelerated machine, this game has the visual flair and excitement to attract fans usually put off by the Sim-designers' fetish for complexity. Problems aside, this game beats its closest rival both in detail and speed. TFX is the best sim on the Amiga of all time, and that's a fact unlikely to change in a long, long time.

Manchester United: The Double

The Double is a true football game for true football fanatics everywhere. Krisalis have broken out from defence, played it beautifully through the middle, knocked it out to the wing, gone round two of the opposition and delicately curled another golden goal, past the flustered keeper, into the top corner of the net.

Ultimate Soccer Manager

This is one quality title and thankfully it's different from all the others – and what's more it's fun! The whole game comes across as extremely polished with a great attention to detail. Highly recommended to both fans of the genre and those that would normally give this a wide berth.

The scores on the doors

A guide to how our revolutionary scoring system works...

We're sure many of you are now familiar with our new scoring system, but for those reading *Amiga Computing* for the first time and those who might have forgotten exactly how it works, here is our guide to the System scoring, err system.

In our opinion, review scores have lost their context as a percentage; some products receiving scores which were only a few percentage short of being the "perfect" game, when in truth they were only marginally above average.

OK, so the scores might seem unnaturally low at first, but that's only because other scoring systems tend to be on the high side and perhaps not as comprehensive or honest as they could be.

In the long run you'll receive a more concise and reader-orientated review that's geared towards the consumer.

0-20 This is given to the lowest of the low

21-30 An all-round poor game that may have a single saving grace

31-40 Just below the average, perhaps let down by a few indiscretions.

41-55 Games of this score are roughly average with 50 being a perfectly average score.

56-66 This is an above average game and is worth buying. For this reason it would be awarded the BRONZE award.

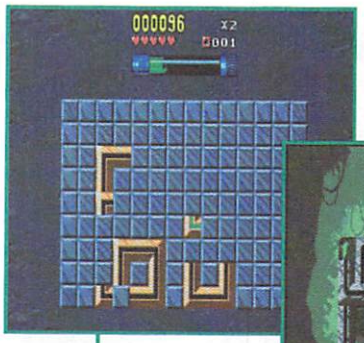
67-77 A game of high quality that you as a reviewer would have no reservation in recommending. Anything of this ilk would be awarded the SILVER award.

78-89 A brilliant title. Definitely worth buying and almost the definitive of its kind. This type of game would receive the GOLD award.

90-100 The best in its genre. This benchmark title receives the PLATINUM title.

INTRODUCTION

Either you love puzzlers or you don't. I'm afraid I was in the latter category until I played X-It a couple of months ago. It was too late to salvage my Rubik's Cube by then though, so I waited with baited breath for another puzzler to come along that would take my fancy. And it has – sort of! It's Audiogenic's latest offering which takes the form of building loops. It's one of those games I shouldn't like for all the reasons I'll go into in a minute, but for some weird reason it's rather playable.



As the blocks fall on to the grid you create the loops, see?

The backdrops are hardly inspiring and could have had far more to them

Super Loopz

Publisher: Audiogenic
Developer: In-House
Disks: 1
Price: £15.99
Genre: Puzzler
Hard Disk Install: Yes
Control: Joystick/Pad/Mouse
Supports: A1200/CD32
Recommended: 68020/CD32

Being rather loopy herself, Tina Hackett takes a look at Audiogenic's latest puzzler that will drive even those with saintly patience completely round the twist

PLAYABILITY

Basically, the idea behind Super Loopz is to join the different blocks that fall onto the grid to create continuous loops. There is a time limit to put down each piece, and if you can't place it you lose a life.

The game can be played by using a one or two-button joystick, a CD32 controller or a mouse. The joystick seems to be the easiest, and when the piece drops onto the playfield you can rotate the shape by pressing fire and right, then when it is in the position you want, press fire and left. However, once it is in position it is permanent. The bigger the loop you can make, the more points you'll get.

Super Loopz has a variety of different sections to play. The arcade game can be played by one or two players, and you must make ten loops to progress on to the next level. Three bonus games can be accessed by completing different missions.

You can also play a challenge game which means you can pit your wits against an opponent. You each get a separate grid and the winner is the one who scores the most points.

There is a puzzle option too which involves being shown a complete loop with some of the pieces then dropping off one by one. You have to watch carefully because you have to remember where they go and replace them.

SOUND

The tunes are the usual lively in-game music you'd expect to find. When you're playing the puzzles you'll get a range of sound effects when you make a loop, from a crowd cheering to a strange monkey sound. However, the accompanying tunes are rather grating and be warned – supply ear plugs to anyone within a mile radius of your computer. My advice: turn the volume down and hum.

35%

On one of the bonuses the blocks don't actually disappear which makes life very tricky

GRAPHICS

Visually, the game is certainly nothing to get excited about. But it is a puzzler after all – I mean look at Tetris, nobody would describe that as graphically stunning, I'm sure.

The screens in Super Loopz contain a grid, falling blocks that make the loops, and a variety of backgrounds. Unfortunately, the backgrounds aren't all that stunning, and something a bit more imaginative would have made a hell of a difference.

They vary (?) from bonus backgrounds covered in fruit to a tree housing animated monkeys that pop out whenever you complete a loop. Hmm, inspired.

30%

OPINION

56%

Okay, it's certainly not the best puzzler in the world and granted, there are many features missing that would have made this a good title. *But* for some strange reason I found myself sneaking back to the computer for just one more go. I don't know why, because it certainly didn't have a big incentive to strive for, the graphics are pretty bland, and the sound is nothing special.

I think it could have had a lot more to it, especially with an objective or fancy graphics, but the puzzle element does seem to work quite well and is quite addictive as far as it goes.

It does worry me though that the game is A1200 and CD32 only. "Why?" is my only thought on that matter. Rumour has it an A500 version will be released which is the original Loopz, only the graphics aren't as good – I'll refrain from comment on that, I think!

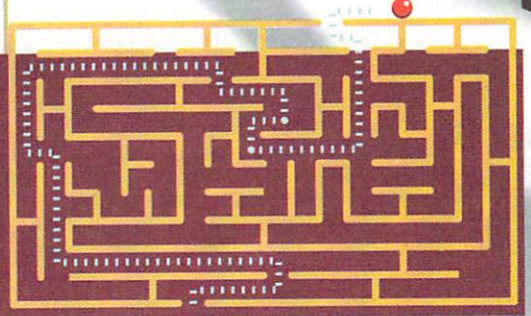
If you like puzzlers then this could be worth checking out. Trust me, it is quite fun, for a while anyway, and it is only £15.

Moves selector

Just to make our lives easier, I've devised this handy table. Simply find the special move you wish to perform, read the corresponding letter next to it and then look up the joystick move on the table. Easy!

Letter	Manoeuvre
A	Forward, down/forward, down + fire
B	Backward, down/forward, down + fire
C	Down, down/forward, forward + fire
D	Down, down/back, back + fire
E	Down/forward, down, down/back, back + fire
F	Rapid fire
G	Back, forward + fire
H	Down, up + fire
I	Jump, down/back + fire

beat the system



Shad

You are such lucky people. Courtesy of gremlin, we give you a fantastic guide to the various kicks, punches and special manoeuvres contained within this superb, all-conquering beat-'em-up

Name: Slamdunk

Nation: Denmark

Special moves: Jumping B-ball – C; Spinning fire kick – H; Speed attack – G; Spinning fire B-ball – D; Head spring kick – B

Name: Soria

Nation: Belgium

Special moves: Spinning roundhouse – D; Flying kick – G; Double drop kick – J

Name: Fakir

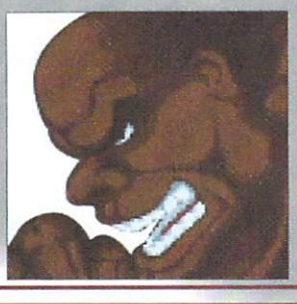
Nation: Pakistan

Special moves: Genie hurricane – D; Mystery fire – C; Teleport – E; Magic carpet – A

Name: Kury

Nation: Tibet

Special moves: Power smash fist – D; Body drop – C; Rock roll – G; Spinning fire hand – E



Name: Yarado

Nation: Mexico

Special moves: Electric speed – E; Spirit power – D; Electric body – F; Electric splash - J; Spinning arms – G

Name: Okura

Nation: japan

Special moves: Electric sword – F; Spinning blade – C; Thunder power – J; Steel sword – A; Teleport – A

Last resort?

If you're having major problems with Gremlin's superb beat-'em-up, you can do the dirty deed and use these type-in cheats

Cheat	What exactly does it do?
TEREKAKKU	Gives you unlimited credits
PARAPONZIPOPO	Allows you to fight as Puppaz
MBARIVIDISOCCAFFARIMBARI	Allows you to fight as Shadow Fighter
EBBRAVOSECCU	Type in at start of each round and opponents will lose all their energy

Name: Electra

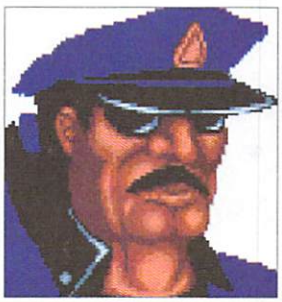
Nation: Denmark

Special moves: Electric body – F; Power launch – C; Earth power energy – E; Electric boomerang – D; Double kick – H; Spinning jump – G

Name: Yurgen

Nation: Germany

Special moves: Gun fire – D; Power fist – C; Earthquake fist – A



Name: Cody

Nation: USA

Special moves: Kuto kick – A; Fast punch – F; Flying power kick – G; Kuto fireball – D

Name: Salvador

Nation: Spain

Special moves: Spinning powerball – C; Turning flip kick – H; Flash panther – G

ow Fighter

Name: Toni

Nation: Italy

Special moves: Burning uppercut - A; Spinning fire – E; Flame kick – B; Massive uppercut – H

Name: Lee Chen

Nation: China

Special moves: Fire hand spring – H; Fist of Falling sun – C; Fire fist – D; Fury kick – F; Falling nunchaku – A

Name: Marx

Nation: Unknown

Special moves: Fire hands – A; Cutting claws – C; Rolling claw clash –G; Tiger pounce attack – D; Falling angel – I

Name: Top-Knot

Nation: Thailand

Special moves: Fast fire somersault – D; Spinning kick – A; Power combination – E; Speed elbow smash – G; Hangmans uppercut – H

Name: Toshio

Nation: Japan

Special moves: Fireball – D; Speed dragon – E; Dragon uppercut – H; Dragon kick – C; Circle of fire – A

Name: Khrome

Nation: Unknown

Special moves: Liquid silver attack – D; Melting body – E

Name: Puppaz

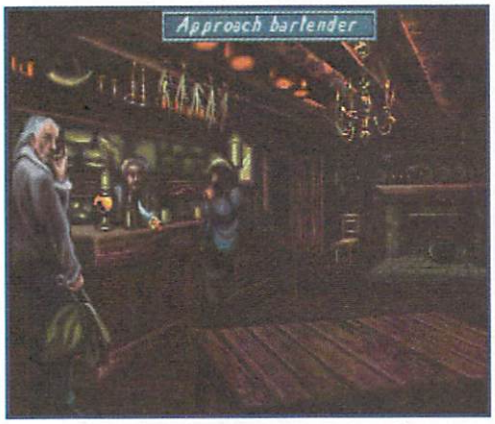
Nation: Taiwan

Special applications: Bowling Ball; Buzzing Saw; Electric Fence Force; Flame Thrower; Jack in the Box Punch; Head Bomb

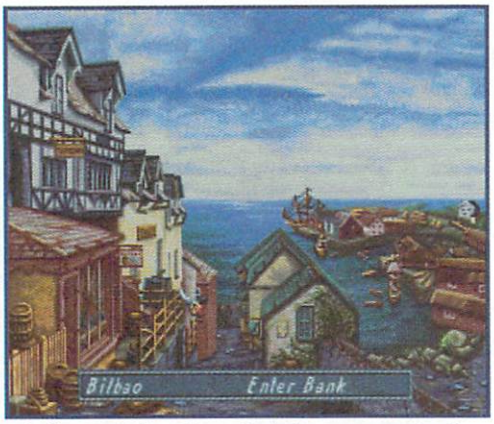
Name: Shadow

Nation: Unknown

Special Moves: Unknown

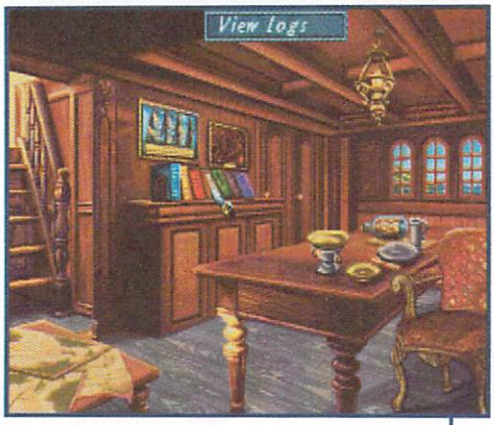


At the tavern you can gossip with the bar-tender to glean valuable info or entertain your crew to boost morale

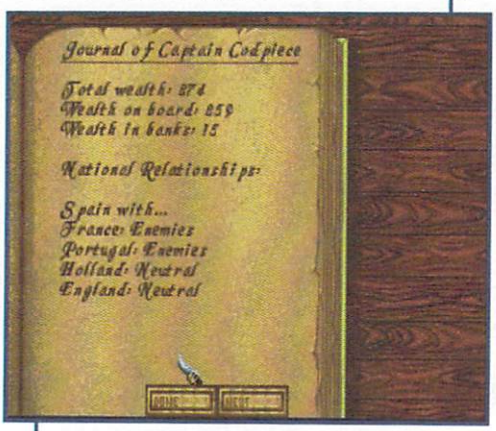


Take the opportunity at the port to bank some money. Then if you are attacked at sea you won't lose all your gold

Publisher: Daze
Developer: Impressions
Disks: TBC
Price: £34.99
Genre: Strategy
Hard disk install: Yes
Control system: Mouse
Supports: A1200
Recommended: 68020



From your plush cabin you can view the log books, check rations and chart your progress



Your journal will provide valuable information – keep an eye on national relations

INTRODUCTION

Since the days of Elite, strategy trading games have been a very popular genre. Now Impressions, the masters of strategy, have turned their talents to the high seas and combined the usual dose of trading with a rum punch cocktail of sea shenanigans, pirating and combat.

High

Calling all Sea Captains that want to buckle their swashes. If high seas adventures are your bag then get ready to shiver your timbers. Tuna Haddock reviews

PLAYABILITY

Gameplay is divided into many distinctive parts. For one, you have to navigate your ship. This is done by choosing the port you wish to go to and plotting a course to it. A problem arises though, because when you place the cursor on the map you can scroll it around. This is supposed to be a plus point but if you move your mouse too far, the map jerks unexpectedly off the area you want, and even moving your cursor to the instruction panel on the same screen can result in losing your place on the map.

While on the high seas you'll have to deal with pirates and attacks from enemy ships. You do battle by firing cannons and you have a wide range of artillery at your disposal, from the small Swivel Gun or the Demi-Culverin to the Cannon. This works well and brings variety to the game. And the main part, as you've probably gleaned from the name, is trading. As you sail between ports you will have to buy certain goods and then decide where to sell your cargo for maximum profit. This, as you'd expect, is the game's strong point and is quite in-depth.

A good captain will also take care of his crew, making sure conditions are good and ensuring there will be enough supplies for the voyage. Wages will also have to be set according to morale and funds available. If you neglect these, you will find you'll have a sickly and mutinous crew on your hands. When morale gets low you can boost the rum rations or entertain them in the local tavern when you reach land.

FLASHBACK

Just recently, Black Legend brought out their sea venturing game called Voyages of Discovery. Although a very similar concept, they both have very different gameplay. Voyages uses a turn-based system and places emphasis on discovering continents and building an Empire as well as trading.

There is more to Voyages of Discovery, but High Seas Trader looks far more attractive and is probably easier to get into.

After months at sea, land comes into view and you can stock up on supplies or prepare to trade your wares

STORYLINE

There is no storyline to the game as such, more a brief background. You are cast in the role of a merchant sea captain during the 17th and 18th century, eager to prove your worth and win back your family's honour.

Your Father was a Viscount serving the Earl but when the Earl died his son took over and to cut a short story even shorter, he was a bit of a bad sort. Your Father, being an honourable chap, would not stand for it but the new Earl, being far more powerful, strips him of his wealth and title.

And now you seek to regain your family's honour by working your way up the ranks on the high seas. You start as a mere peddler and you strive for the ultimate title of Viscount. You must increase your rating in daring, honour, loyalty and nobility.

SOUND

The game implements different tunes for certain areas of the game. For example, above deck you have a different tune playing to when you go to your cabin. All the music fits in with the time and atmosphere of the game, but as stand-alone tunes they're not exactly brilliant. If you particularly want to have in-game music it is adequate enough but more than likely you'll turn this off to have just the sound effects option.

But again, I'm afraid, they're not very good either. There is the occasional creak of the boat or the splosh of the anchor as you plot your course on the map, and there is also a rather dubious seagull cry throughout. I feel as though a great deal more could have been done to increase the atmosphere.

40%

As the game progresses you must try and achieve a higher level rating

Seas Trader

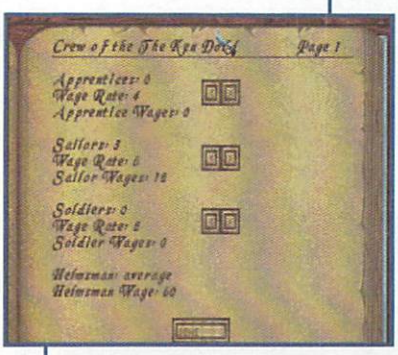
GRAPHICS

High Seas Trader has been very nicely presented, however I do feel that some of the visuals have not been exploited to the full. For example, when the crew mutiny, you only get a still screen (albeit a very nicely drawn one) of you having to walk the plank. The same goes for the market. Although you do get a well set-out table which contains all the information you need, I would like to have seen some visual representation of the goods you can trade, or just something with a bit more appeal.

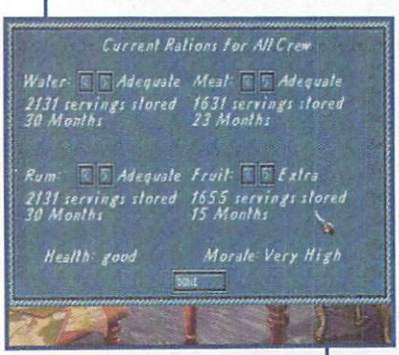
The game boasts to have a 'stunning' 3D perspective. This is apparent when you are sailing the ship and you can see the ocean ahead and supposedly the helm of the ship. Again, I feel this could have been done better by maybe showing the front of the boat or having the wheel more prominent to give more of a realistic feel.

The actual effects do work well though, from the lapping of the waves to the storms with the darkened skies and bolts of lightning. Overall, the graphical style is good, althoughlimited, and the ports look nice. The inside locations such as the tavern or the cabin fit in with the period and also look very good. Although everything is very nicely drawn, I do feel that some animations would have not have gone amiss.

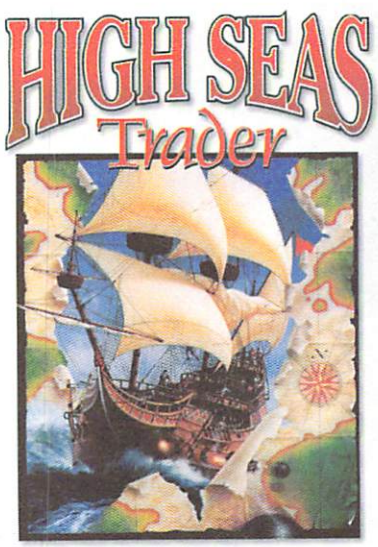
65%

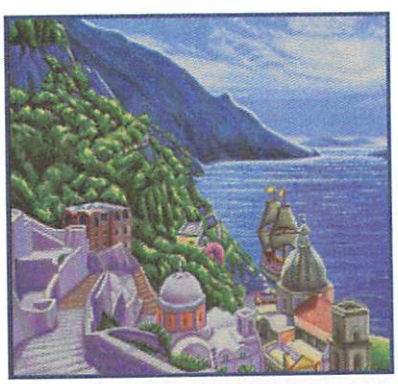


Wages can be altered depending on morale and available funds



Keep a check on rations – this affects the morale and health of your crew





There are many ports around the world you can travel to – but don't forget to buy a map!

OPINION

66%

On the whole, High Seas Trader is a competent trading simulator, with more variety than you usually get in a game of this sort. However, it's not without its drawbacks. The 3D view gives the game a certain graphical appeal, but I can't help feeling this could have been implemented more effectively. Also, the navigation of the ship is far too fiddly and as this is a major aspect of the game it does become very irritating.

There are elements that do work very well though, such as keeping your crew in order and morale high. Combat with enemy ships also adds variety. The trading aspect works well too, especially with various events affecting the economy such as wars or locusts which will alter the price of harvested crops, but by talking to the bartenders you can pick up all the news you may need.

Those heavily into trading simulations may well want to give this game a try. It is quite fun for a while but there were quite a few negative aspects which would put casual players off returning for another go.

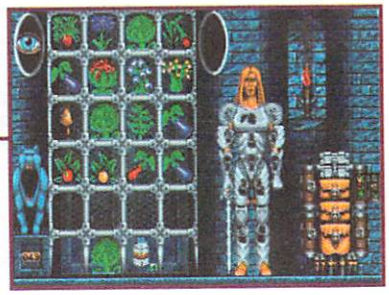
INTRODUCTION

What have the following got in common? A demon, a fortress, a quest to repel all evil from a once peaceful land, a young slip of a lad with a hidden heritage and a ridiculously large rucksack. That's right, the main ingredients to most RPGs across the world. While the hope to actually play something where some kind of imagination has been used in the plot line would be appreciated, The Tower of Souls is ultimately no different.

Presented in a 3D isometric scrolling view akin to Ultima 8 on the PC, this rehash of old ideas tells the story of an evil demon called (insert silly name) who has taken over the land (insert silly name). The ancient prophet (insert silly name) foretells the day when a young lad will make an assault against the evil one and return the country to a peaceful existence.

Funnily enough, this does indeed happen and you, the humble player, take the enviable role of playing the result of this prophecy in the shape of (insert silly name), the hero of the piece.

The alchemy kit is an excellent idea and works rather well



The inventory is a well laid out affair with your substantial backpack offering all manner of places to put your valued finds

Tower of

The quilled intro is a nice idea but goes on for far too long

Move the hero round the fortress using the virtual joystick i.e. the character moves in the direction of your pointer

In a word – simple. For the few hours I played, the main objective is to wander round the fortress turning off fountains which apparently flood the bottom levels if left on, and picking up massive amounts of herbs, spices and money. The puzzles I've experienced so far are of the 'flick the switch to open the door' variety. This area is enlarged upon, unfortunately, by the inclusion of a lock pick section and the disconnect the three bolt lock segment.

The former involves moving four different types of picklock tools over the keyhole (shown in close-up in the main panel) and moving the mouse frantically around until one of them hopefully slips into place, opening the door. The latter is shown in the main panel depicting three bars forming a lock. On the right are a number of switches that can be moved.

Click on these in a random fashion and eventually the three bars will slide all the way open, unlocking the door or turning off a particular fountain. These two ideas must have sounded great on paper but in practice are just a touch on the gimmicky and unnecessary side.

Fighting the various foe guarding the fortress is none too exciting either, whether you be using a sword or a potent spell from your substantial inventory of magic. Their habit of rising from the ground again and again from the same place even after being killed several times adds a certain monotony to the already repetitive proceedings.

There's also an auto map facility available to aid you in your wanderings round the fortress, which you'll only need once in a while.

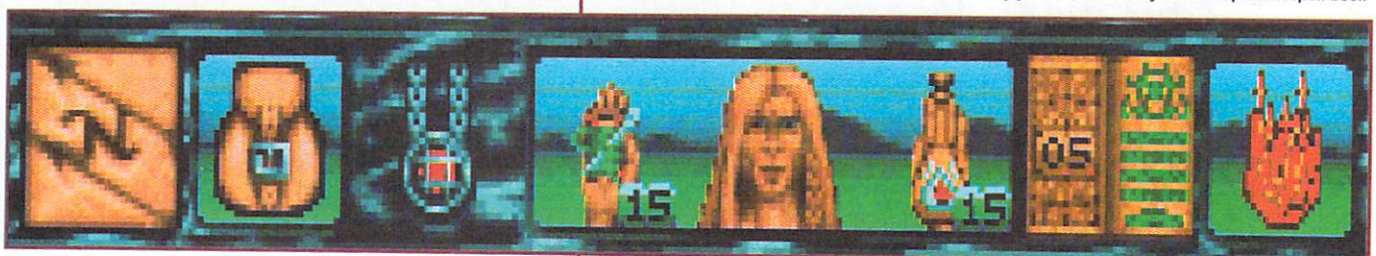
One of the game's most original features is the alchemy kit where you can mix all nature of magic. Presented as some kind of primeval James Bond-like gadget, the unit is contained inside a metal case where basic ingredients are mixed and heated to create a spell in one of the four categories available – attack, defence, morphing and equipment spells.

Click on the make option and the magic making kit starts to cook your ingredients, then the end result plops into a test tube which is corked and ready to use. The idea is novel and works rather well.

There are a substantial amount of spells to play with, ranging from various lethal projectiles such as acid, fireballs and lightning to the more oddball magi such as creating an illusion to fool your enemies, morphing into a rat to outwit the enemy or maybe slipping into previously unreachable places. It has to be said that out of the whole game, the magic side is by far the strongest.

80%

The control panel – from left to right, the compass, the inventory, what you're holding and how healthy you are, and finally the all-important spell book



GRAPHICS

There's real professional quality to the graphics on first viewing – the fancy but overlong intro depicts a quilled pen writing out the game story on a parchment, with illustrations of the key events fading up into view at the top. The inventory screen looks equally as impressive, with a rather meaty looking rucksack and the most bizarre and inventive looking magic tool kit I've ever seen.

While lacking the excellent standard of graphics seen in Heimdall 2 or, to a lesser extent, Dragon Stone, the main in-game visuals are well-defined on the whole, and the scrolling, while a touch slow, works at a decent enough rate as to not prove distracting. The scenery, as far as I've seen it, is relatively dull – lots of fortress walls in various tones and colours become rather repetitive after a while.

Another annoying aspect is the sometimes indistinguishable objects that can be picked up – there's no text saying what something is and you've no idea what they are.

As with the plot, the main problem with the graphics is that I've seen this genre style again and again in other games – it would be refreshing to see visuals that smack of something more pictorially inventive like some of the scenes in Heimdall 2. The dank dungeon walls, the spikes in the floor, the hooded figures throwing fireballs – all look the part but what a dull part to play.

68%

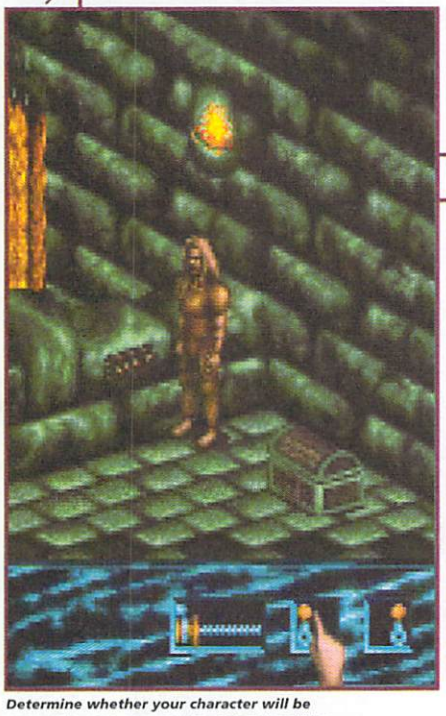
Souls

Hackneyed RPGs are becoming as commonplace as long-in-the-tooth platformers. Adam Phillips reviews a game that's determined not to change the trend

FLASHBACK

If you want to indulge yourself in a rich story with involving gameplay then look no further than Core Design's Heimdall 2. Featuring cartoon-like graphics packed with character, a variety of differing puzzle types and numerous places to visit such as huts, astral planes and castles on different islands, this a rather successful attempt at the RPG genre.

- Publisher: Black Legend
- Developer: Parys Technografx
- Disks: 2
- Price: £29.99
- Genre: RPG
- Hard disk install: Yes
- Control: Mouse
- Support: Amiga 1200 with 2Mb of RAM
- Recommended: 68020 upwards



Determine whether your character will be more of a mage or a warrior using the slider at the bottom of the 'rack' of statistics

These fountains need to be turned off to stop the lower levels from flooding later on in the game

SOUND

The main bulk of the music is string-based, supposedly epic, but unfortunately the synth sound used is a just a touch on the naff side. Imagine the music used to accompany a Conan film, with everybody's hero, Arnie, riding off to face his quest – big, butch, brave and tacky.

The in-game sounds are spot effect-based, with musical accompaniment, but the tune is a little basic although effective.

Again, though, there is a problem – while we hear the rasping of flames, the footfalls of our hero, the sliding of locks as they open, and more, the makers have unfortunately pitched the footsteps at a much lower volume level than all the other sound effects.

So putting the volume up to clearly hear the hero's footfalls as they clank down on the stone floor results in a sudden explosion of loud sound when anything else happens. Annoying.

55%

OPINION

57%

I can't help but feel it's a cop out to say that this kind of game will suit the tastes of the professional role-players among you. Perhaps there are people out there who will glean some excitement from this package and be held in its grip for hours, but for the rest of us with some semblance of a life, this is an average, uninspiring game with the only temporary relief being the magic making.

To have succeeded, Tower of Souls needed more thinking man's puzzles and perhaps some kind of interaction. Indeed, perhaps all this is included later on but after spending a few hours on it, I gave up out of boredom and frustration.

There's obviously some clever programming talent here but the game designer needs to rethink what makes an RPG interesting, gripping, atmospheric and, above all, imaginative: After all, that's what fantasy is all about – escapism. Until this happens, any further releases or sequels along a similar line will end up on the Most-Not-Wanted list. And you need two meg to play Tower of Souls.

You'll meet some very strange characters during the course of the game

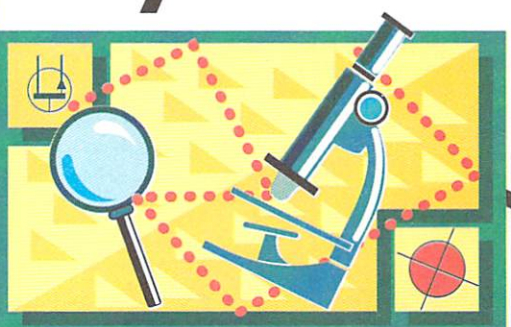
Hallucinogenic worms in tequila. Hmm, a very weird pastime

Animations will enhance the game, like this imaginative drowning scene

The inventory screens are tucked neatly away at the bottom

Rescue the sacred book from the malevolent horsemen

system analysis



Limbo

Tina Hackett, your devil in disguise, casts her soul into Limbo forever to take a look at what certainly promises to be one helluva game from new developers Tri-Logik Studios

The recent ECTS was a platform for quite a few new Amiga releases. One such title could be found on the Rasputin stand and at first glance it looked to be your rather average arcade adventure fare.

Called Limbo of the Lost, it's a first project for Kent-based developers, Tri-Logik Studios. When I first saw the game, I must admit I wasn't particularly gobsmacked. But having now seen the previewable version demonstrated fully, I am rather optimistic for the future of this up-and-coming team.

It's an adventure game that has a passing resemblance to Another World in its graphical style and approach. And what does look particularly appealing about the title is its historical storyline. Based on the factual events of the Mary Celeste, it uses this historical background and the mystery surrounding it to create a highly atmospheric game.

As no-one knows what happened to the crew of the ship, they've created one particular fantasy-based ending that makes an excellent storyline for the game.

An unusual and original touch will be the addition of a video which will accompany the game and provide the following plot: The Mary Celeste is en-route to Italy when a strange mist engulfs the ship, sending the navigation into turmoil. Eventually, the ship runs aground on an island that doesn't appear on any sea chart.

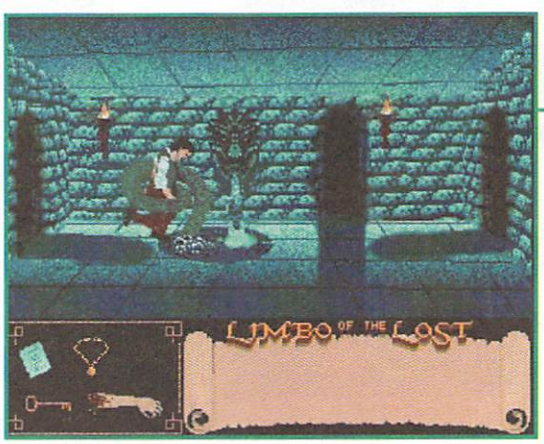
Briggs, the Captain, sends a party ashore, but when they don't return he sends another group to look for them. Again, they don't return. A storm brews up and he gives orders to abandon ship. He then sets off himself to see what's happened to his crew, and stumbles across one of the shipmates lying in the undergrowth, barely alive but able to recount the previous days events. He tells of how they came across an ancient temple, and finding a beautiful book written in a strange language they agree to take it back to the ship.

But as they lift the book, from a dark opening in the temple four figures emerge mounted on horseback, and they attack with a force that seems to melt the flesh off their bones. They tussle for the book one of them is holding and the crew flee in terror, managing to only grasp on to one page from the book.

After telling the tale he dies and Briggs continues his search. He comes across the temple and cautiously goes inside. Hidden from their view, he hears the horsemen tell his shipmate, Johnson, that the book is God's book of creation and having been moved from the sacred altar by a mortal, they are now able to use it to reverse the creation of earth.

They then kill Johnson and ride away. Briggs ventures further and sees a ghostly apparition of Johnson who tells him the horsemen do not know the page is missing and without it they cannot perform their evil deed. He begs Briggs to find the book and free their souls from Limbo, where they are condemned to spend eternity as slaves. Biggs steps into the portal and the game begins.

You play the unseen guardian to Captain Briggs, directing all the action via a point



Watch out for hidden traps that will lure you to your doom

The Mary Celeste

The Mary Celeste is well renowned for being a very unlucky ship – some may even say jinxed! Built in 1860, disaster struck only a year later. Originally christened 'Amazon', she set sail, and only a short time afterwards her skipper fell ill and died. John Nutting Parker assumed command but the ship then ran into a fishing weir causing damage to the hull, had to go to the shipyards for repair and while she was there a fire broke out.

The bad luck didn't end there, though. On her first Atlantic crossing she collided with a brig and sunk it. After the repairs she returned to America where she ran aground off Cow Bay, Nova Scotia.

It's not all that clear as to what happened after she was yet again repaired, although it seems she was passed between a variety of owners, none of which did well out of her – some even went bankrupt. Eventually, a consortium of New York ship owners took ownership of her and as an improved and larger vessel, she was renamed Mary Celeste. The next voyage was the greatest mystery of all. In 1872, under Captain Benjamin Spooner Briggs, she set sail with a full crew including the Captain's wife and one of their children.

Nothing was seen of them after this and the ship was later discovered by the crew of the Dei Gratia who found the Mary Celeste abandoned. The vessel was still seaworthy though, and missing was the chronometer, sextant, bill of lading and navigation book. Abandoning ship is a desperate measure and as one of the Dei Gratia's crew remarked: "The Mary Celeste was in a fit enough state to sail around the world. So why was she abandoned?"

The game is littered with rather gory tongue-in-cheek touches that will add humour

of the Lost

'n' click mouse system. The inventory and all the information you will need will be kept at the bottom of the screen so as not to interfere with the main play area, and the mouse icon can be changed according to the action you want to carry out.

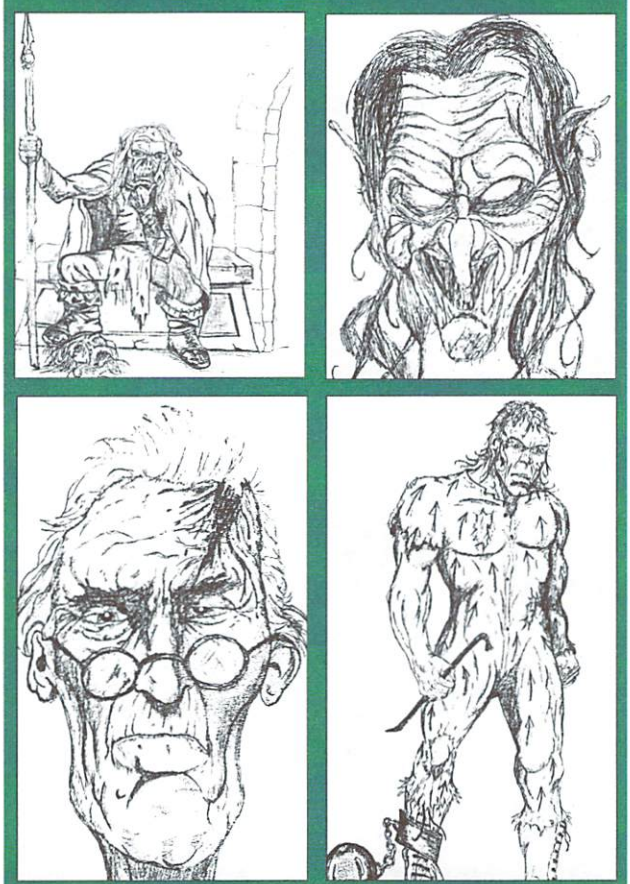
There are many weird and wonderful characters you'll come across in Limbo of the Lost. Some may be good, others bad, and you'll have to find out about those that will help you on your quest and those that will just hinder – or even kill you. The main character, Briggs, will also talk to you, explaining an object you may want to know about. He may not agree with you though, and could nag you if you take too long over a decision.

A range of animations will be added to the game. There are quite a few nasty ways to die and these are accompanied with some rather grisly scenes such as a drowning! Characters will also be animated and fully-interactive environments will ensure some thorough gameplay.

Sound effects are rather promising at this stage too. Speech will be used throughout and all the characters will have different voices such as deep sinister speech for the four horsemen or a slow, demented drawl for one of the monsters. So far, all of these have been well implemented and a good range of realistic sound effects will provide atmosphere.

The final version won't be ready until October but we'll be bringing you updates on what looks like being an original and atmospheric adventure.

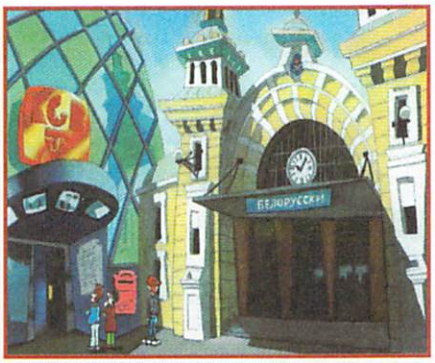
A rather worried Captain Briggs. You play his unseen aide



Steven Bovis, responsible for the graphics, has created some very imaginative characters for the game, including Cranny the Cook and Grunger the Gate Keeper

The introduction anim tells the story of the Russian cultural revolution since the Cold War ended. In other words, the appearance of scantily clad women, cadillac cars and beef burgers

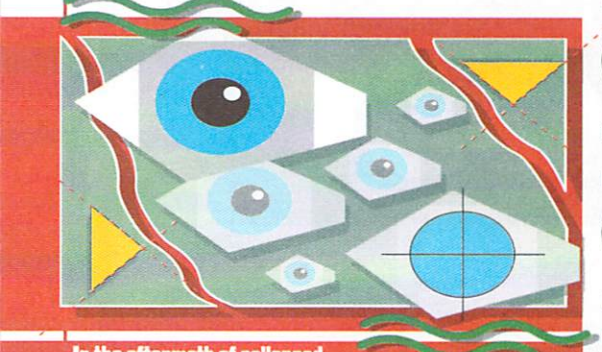
The control panel – click and hold on the right-hand mouse button to bring up the iconified list of actions and inventory



Visit Moscow Station (right next to the KGB television Studios where daytime quizzes are now shot) and catch the Orient Express

system preview

Big Red



In the aftermath of collapsed communism, Russia has become virgin territory for Western goods. Core Design go one step further and base a game round the new democracy. Adam Phillips previews

Let's get one thing clear from this point onwards – stereotypes in computer games are a fad that are never going to go out of fashion. Japanese with their cameras, the Irish with their potatoes, and now the Russians with their technologically-backward attitudes and a naiveté of Western culture.

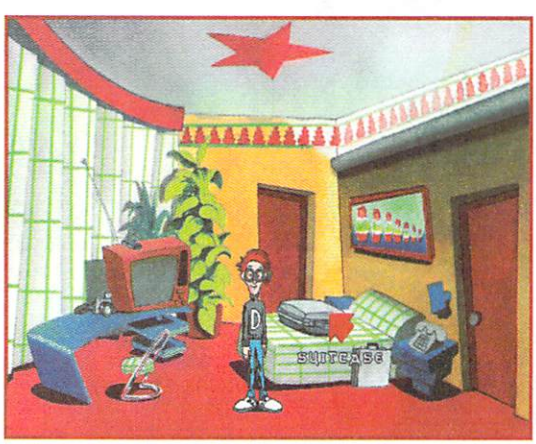
The backdrop for the rather handsome looking Big Red Adventure is Moscow after the initial wave of capitalism has swept over it. The Kremlin palace has been turned into a museum housing Russia's greatest treasures. Among the pickings is the coveted crown of Tsar Ivan the Horrible covered in a variety of jewels, pearls and other assorted goodies that are worth a fortune.

For some reason, to begin with, you take on the role of a foreign tourist turned criminal who wants to steal the crown. Doug Nuts, techno-nerd extraordinaire who has a penchant for criminality, is the first character to be put in your control in the room of a hotel suite. The game itself is split into four different sections – for three of these you play three differing characters including our Doug.

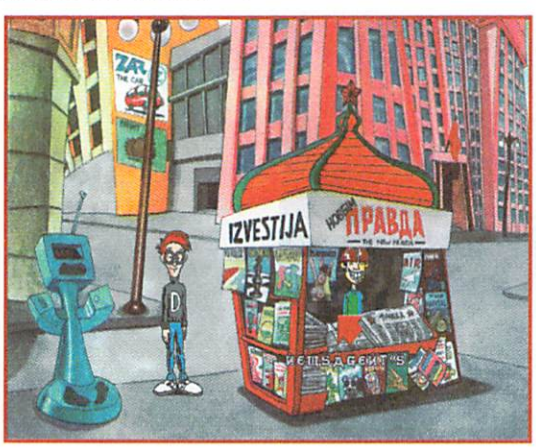
Further on in the game you take on the role of Dino Fagoli, an ex-boxer of Italian origin (let's get those stereotypes really cooking) who's described as an honest and decent kind of guy who unfortunately (surprise, surprise) is as thick as black strap molasses (thick, black treacle to you, sunshine).

The third and final personality is Donna Fatale whose past is somewhat sordid – apparently. Forever trying to cover up the indiscretions of a mis-spent youth, she often finds herself on the receiving end of

The Big Red Adventure is made up of 100 different locations to explore your way through. From the sunny shades of Gorky Park to the icy wastelands of Zerograd



The hotel room where you begin. Move the red pointer over an object you want to use, open or examine



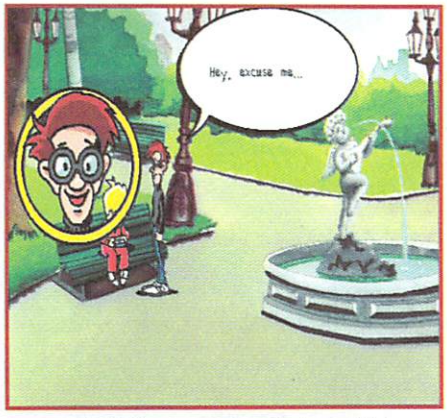
Newsagents have hit the streets of Moscow big time! For all sad people reading, that copy of PlayBoris dangling enticingly from its hook can be bought – that's democracy for you

Gorky Park – a location wrapped in mystery and cloak 'n' dagger normally, but now home to kid with a Leninintendo handheld console. Oh, culture!

McRomanov – the Russian Macdonalds. Choose from a wide selection of fast food snacks but watch out for the roller-skating waitress

The much-heralded crown of Ivan the Terrible which is kept in the Kremlin and has now been turned into a tourist attraction. All speech is shown in cartoon-style speech bubbles and close-ups of the characters

Adventure



At some point in the game, you're going to need that Lenintendo handheld the kids got. Why not swap that super-doopah PC in your inventory with him?

ruthless blackmail threats. The fourth and last section of the game is where all the loose ends are brought together to an exciting denouement. I can hardly wait.

It transpires during the animated introduction to the game that certain factions of old Russia are none too happy in the way Western culture has affected the once great motherland. Lenin-loving crusties want to get things back the way they were before the invasion of Big Macs, computer games and rock music, and they intend to go to any measure to achieve this.

LOOK-ALIKE

Heading this cast of evil-looking Stazi stormtroopers is a Lenin-like figure who looks like a university lecturer after an AA meeting. Obviously, at some point, you're going to have to put a stop to their dastardly plans through the use of cunning, good looks and luck.

Using the conventional point 'n' click method of moving the character around, objects can be picked up and used, characters talked to, and doors opened. Like most games of this ilk, puzzles come in the form of using the objects in the right place and talking to Moscow's denizens in a quest for more information.

One of the first problems the player stumbles across is how to get on the daily quiz show held at KGB Studios. First of all, watch the programme on the television which will tell you to buy the Moscow TV Times to get hold of a ticket. The paper can be bought from the newsagents outside the hotel.

Inside is a ticket with three questions on that'll each need answering before you can send it off to be entered into the draw of lucky audience winners. How you get the answers leads to separate puzzles and quests, one of which involves getting a queuing Russian to buy caviar for you in return for a roll of toilet paper.

CONUNDRUMS

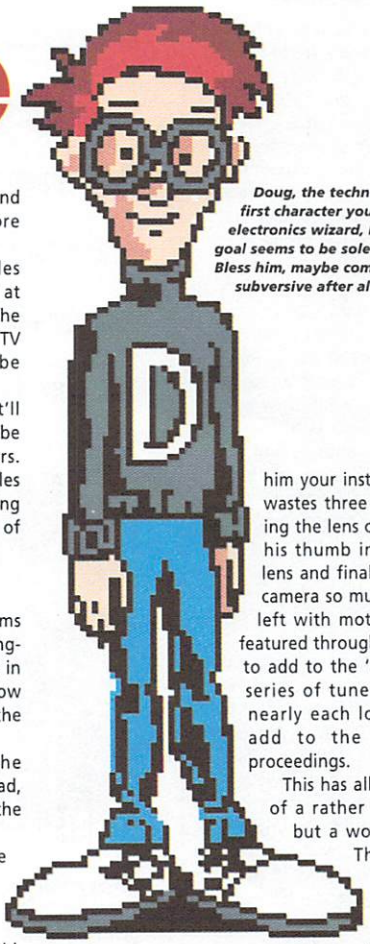
From what I've played, the various conundrums thrown up by the game are intelligent and challenging, but not so overtly difficult as to stop you dead in your tracks for several weeks. But who knows how hard they get on the later sections? Find out in the full System review in the next couple of months.

Along your travels you're whipped along the streets of Moscow, across the icy steppes of Zerograd, taken on a ride on the Orient Express and enter the deep red heart of communism.

One of the game's most enticing aspects is the rather sumptuous graphics that have a real professional sheen to them. The backgrounds have been painted and put on the screen in 256 colours, with the colourful, if clichéd, characters presented in bold, vivid colours. There's no doubt that a considerable amount of time has been taken on aspects of the visual presentation, and the graphics match those seen in most Sierra titles such as the later King's Quest games.

With over 100 locations to trawl through, varying from Moscow station and KGB TV studios to McRomanovs (Macdonalds anyone?) and Gorky Park, the player can interact with 50 characters along their travels. Most of these characters are clichéd but well drawn and fill their parts effectively.

Take the Japanese photographer who doesn't know how to use his top-of-the-range camera – give him your instamatic and he wastes three shots by leaving the lens cap on, getting his thumb in front of the lens and finally shaking the camera so much that you're left with motion blur. Also featured throughout the game to add to the 'ambience' is a series of tunes tailored for nearly each location which add to the atmospheric proceedings.



Doug, the techno-nerd, is the first character you play. An electronics wizard, Doug's main goal seems to be solely criminal. Bless him, maybe computers are subversive after all

This has all the hallmarks of a rather special game, but a word of caution. The PC version, released a few months ago, suffered from an awkward control system where it was difficult to move your character to an exact position, and the map didn't make much sense – lapping back on itself when you were going in a completely different direction, and the main character sometimes simply ignoring where you wanted to go.

If Core Design has cleared up these hiccups, Amiga users everywhere could be in for a refreshing treat in an original gaming environment (apart from those comic book characters). We'll be able to look over our shoulders at Sierra and LucasArts and realise that the Amiga community doesn't need them anymore anyway. Hopefully.

UFO -

Andy Maddock becomes intrepid adventurer as he goes in search of those infamous little green men and the answers to a million UFO questions

INTRODUCTION

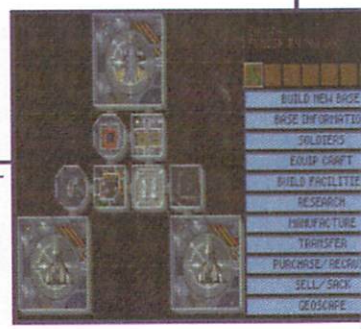
UFO actually stands for Unidentified Flying Object, as most people already know. They tend to associate them with triangular space things that whizz through the sky at millions of miles per hour. The theory is Aliens. That's the explanation!

Many years have gone by while scientists have studied all the evidence, yet there's still no concrete proof that these little green men do or don't exist.

If they do, they obviously don't seem to be planning to attack us or wipe us out in the future. They just seem content researching us. Some people claimed to have been examined or monitored by a weird method! Is it true? Who knows? What would happen if they did find a reason to attack us. What would we do? The thought is terrifying. Well, sort of.

Recently, over the South Manchester area, there have been many sightings of these unknown objects whizzing over the Pennines. Are there other life forms living in new galaxies using technology far more advanced than anything we've ever dreamt of?

Aliens, supposedly, have access to small, shiny vehicles that can travel in depths of any galaxy they please and never get pulled up for speeding. And what do we have... the Amiga 500?



From the Xcom base you can build various facilities to aid you in your quest

STORYLINE

The idea is to take control of XCom which is a secret organisation planning to wipe out invading UFOs – who, incidentally, have decided to attack. The only way of defeating them is to shoot the UFOs down to the ground and search the wreckage for technology to use against them. This is where the strategy aspect comes in.

Deciding on what weapons to research and the type of armoury for your soldiers is, unfortunately, your first worry. You then have to land on their territory and defeat them. Only by constant research will your army grow large enough and strong enough to enable you to even think of attacking the aliens.

Once you defeat them you will learn more about them and their way of thinking. After a while you may be able to predict their moves and form different strategies.

A number of important decisions have to be made to prevent the UFOs attacking your base. Once you have made ground and established yourself as a leading base, you can extend your community and set up plant elsewhere within the world. To do this you must send out your jets to patrol the vicinity to check for unwanted guests – disposing of them immediately.

Sending out various Interceptor jets to shoot them down is a good thing to do to make an area clear. You can then think about sending out a passenger ship carrying all your soldiers and ammo. This is very dangerous as you have no real knowledge of the UFO's crew or cargo. It's your job to organise your troops safely and control them through the exploration stages, and this is where the action begins.

Plan your battle strategy carefully and collect UFO technology to research

SOUND

Atmospheric tunes are usually the norm for strategy games, and UFO is no exception. It has its fair share of eerie tunes blending in well, suiting the action and graphics, but the effects are fairly limited to the odd bleep, resembling gun fire. There isn't much to write home about in particular because the style of the game is progressive rather than action all the way.

The action scenes could have been spiced up with some speech or sampled aircraft noises, which would have added to the realism. However, as it stands, the music and sound effects are really both adequate because you don't really take much notice of them. Actually, you may as well make your own sounds. Eeeeaaaawww! Chaaa! Chaaa... erm, maybe not.

59%

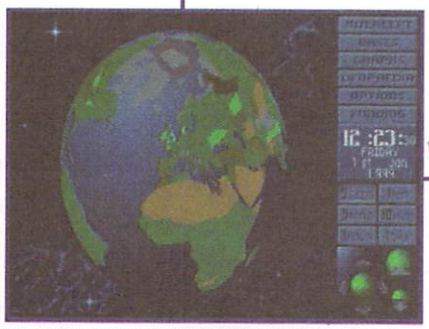
GRAPHICS

The graphics are probably the best part of the game. They are chunky yet very detailed. However, the only let-down are the actual combat sequences on the ground, which are very bland and could easily have been improved. The world map is very well drawn and the actual stills of faces, equipment and transporters are very good. Overall, the graphics are clear and adequate.

Obviously, the main factor for a strategy game is to be detailed and playable rather than very presentable. The graphics and sound are much of a bonus if you're going to be constantly engrossed in your tactics and strategies – the presentation will not play too big a part in your initial reaction.

The animation of the game is slightly different, and becomes very jerky during the ground battle scenes. The limited amount of frames of animation look unfinished and very unprofessional, which make the battle scenes, in particular, very sluggish and even clumsy. The control system then becomes awkward and results in a game which hosts a whole load of detail being disappointingly let down by slightly minor, although very poor finishing touches.

74%



Protecting your base is the easy part. Intercepting the UFOs and shooting them down requires skill

Take a look at all the technology you have collected in recent missions

Select your battle plan for intercepting the UFO. Plan a cautious attack before leaping in with missiles

Enemy Unknown

ADDITIONAL INFO

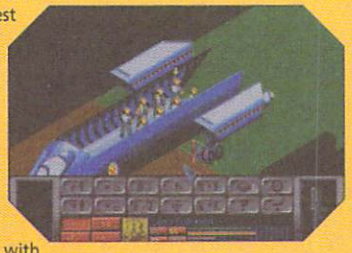
UFO is now available to all 500 owners. After being released on the 1200 and CD32, the 500 version follows suit. Compared to the superior versions, it's basically another run-of-the-mill 500 version – vastly slower, and generally a 500 feel to it. If you've never played the other versions then you haven't really got anything to compare it to.

Collated to other similar strategy games with a twist of adventure, it doesn't really touch them. The two that stand out from the rest are Space Crusade and more recently, K240, which are both incredibly in-depth and contain livelier action sequences.

OPINION 67%

The menus are well implemented and easy to use, although the lack of on-screen information takes a toll at important parts of the game – constantly looking at the manual to get started becomes very boring, very quickly.

Now for the 500 version itself. I'm afraid it's not as fast as I'd hoped. They've tried to keep the disk swapping down to a bear minimum and they've succeeded, but it's the accessing of the disks that now becomes the big wait. More or less every icon clicked on needs a few seconds of access, and if you click on the wrong icon you'll have to wait to get back into the game. Through this, I lost interest very quickly.



I must admit, the amount of detail is fantastic and it's certainly one of the most in-depth games I've played yet. It contains all sorts of information on guns, ships, ammunition and troops, and is a real statistic buff's heaven. Unfortunately, this isn't me.

If you enjoy strategy/battle games with a hint of adventure then you might as well invest in a hard disk. Most games of this genre appear in the box accompanied by about five to ten disks, and the last thing you want to do is swap them around every few minutes. It's certainly a worthy purchase for existing 500 owners who want to inject a little oomph and snazz into their grey-haired machine, but be careful non-hard disk owners!

- **Publisher:** MicroProse
- **Developer:** Mythos Games
- **Disks:** 5
- **Price:** £34.99
- **Genre:** Strategy
- **Hard Disk Install:** Yes
- **Control System:** Mouse
- **Supports:** A500/A600
- **Recommended:** 68000

Check out your remaining supplies and finances in the monthly report

Recruit soldiers to make your team of troops the strongest possible

Be careful not to fall of the edge. It wouldn't be very healthy now would it?

Make sure you avoid the robots, as they have a particularly long firing range

system essentials

Andy Maddock takes a look at some more mouth-watering essential prospects, this time delving his hand into the lucky dip of arcade adventures

Flashback

Flashback, released on the Amiga a while ago, was one of the greatest animated games around. If you can recollect an earlier game by the title of Prince Of Persia, which was released many moons ago, then you'll have an idea of what Flashback is like in respect to presentation.

You take control of the hero, Conrad Hard, in the year 2142. Belonging to a secret fraternity, the Galaxia Bureau of Investigation, you are in great danger. Conrad exposed a secret piece of machinery that fabricated inhuman beings, and his only immediate notion was to warn the authorities. But wait, now your woman has disappeared. Immediately suspecting these individuals of abduction, Conrad sets out to redeem his fiery-haired temptress, Sonya.

The establishment behind these foul deeds were well aware of Conrad's intentions and instantly set out to capture him. Conrad, being the hero, escaped on a hover bike while chased by two of the most fearful of villains. Laser shots were exchanged, resulting in Conrad plummeting into a vegetation land covered with trees and rocks. When Conrad regained consciousness, he thought he was safe.

Flashback arrived courtesy of Delphine Software, landing quite prominently into the Amiga market at a time when it was in its prime. What really gave it the edge over other platform adventures were the outstanding graphics and animation. The recently discovered methods of rotoscoping were rarely used to such efficiency as Flashback.

As said before, Prince Of Persia stretched the graphics to the extreme and sadly the adventure didn't quite live up to the graphical capabilities. We all know by now that superb graphics don't add to the actual playability – to achieve a high grade, graphics and playability must be of the highest standards.

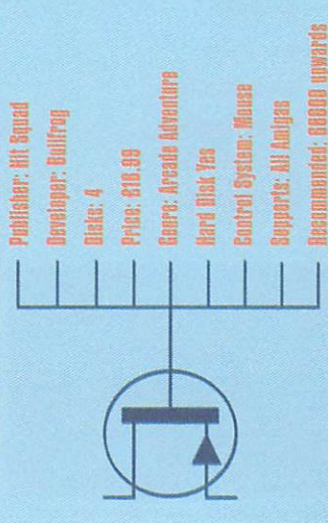
Flashback boasts these qualities to the highest degree. The music begins atmospherically and as the action hots up the drums become aroused and start beating just like a film. The quality of the entire package cannot be explained enough.

Publisher: Kixx XL
Developer: Delphine Software
Disks: 4
Price: £16.99
Genre: Arcade Adventure
Hard Disk Yes
Control System: Joystick
Supports: All Amigas
Recommended: 68000 Upwards

To say this is one of the premium graphical arcade adventures would be an understatement. There is no doubt in my mind that this is an essential purchase for any games player.

90%

Syndicate



Syndicate is about being a young executive for a European Syndicate in a world where corruption and crime is business, a world where only the pure enduring of residents can subsist. Custom built cyborgs are being used as marketing ploys to sell the CHIP – a powerful implant which can be inserted into the necks of anthropomorphic beings to alter their minds, to see things others will never see. Better than any drug.

Four of your specialised cyborgs take to the streets to assassinate one of the members of a rival syndicate

Inevitably, pirating of the CHIP was imminent and therefore, resulted in bribery and murder – much of a norm when the syndicates began to take over the entire globe. These custom-built cyborgs were automated to hunt down combatants and traitors, transmitting the idea of desolation and spreading predominance around the world.

The object of the game is to dispatch your syndicate agents into neighbouring countries, draining them of rival syndicates. On completing the missions you can manipulate that particular state – raising taxes and so on. Only by procuring complete control will your coalition triumph.

You begin the mission with several agents, but only four on screen at any one time – you can enlist stronger members for more perplexing missions. Your first mission objective is to assassinate one of the main army colonels who has apparently been stealing resources from your weapons division. To do this, all that is necessary is to find him and kill him. However, more complicated tasks are presented progressively throughout.

Syndicate is, and will always be, one of the finest games to include such high quality graphic detail mixed with intriguing gameplay and adventure. The graphics themselves are superb, with excellent introduction sequences, leaving you with a overall view of a completely new virtual world. Games of this calibre should never be overlooked – Syndicate will give you weeks of absolute gaming bliss. A true essential.

92%

AMIGA GUIDE

Leading the way in Amiga advice, the definitive guide is back to keep enthusiasts fully informed

Publishing 88
Frank Nord highlights the design and time-saving benefits of using style tags

System Medical 89
The standard start-up sequence goes under the microscope this month

Amiga 3D 91
Stevie Kennedy explains the uses of flame effects and transparency

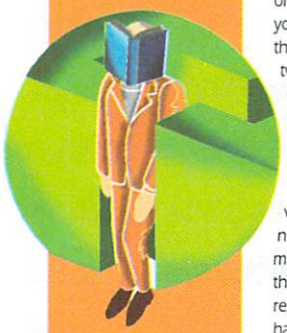
Amos 92
It's the turn of the readers this month as Phil South answers a few of their queries

ARexx 93
Paul Overaa looks at menu coding, console display control and keypress data scripts

Music 94
Paul Overaa takes a look at Dr T's M Package as it makes its debut on the Amiga

Comms 95
Phil South reviews two new Internet books

Video 96
Using a monitor instead of a TV with your Amiga can make all the difference.



Frank Nord has a look at style tags and their time-saving uses

Style is a state of mind

A friend of mine is laying out a brochure for someone he knows. He admits he isn't very good at all this DTP malarkey, so he came and asked me for some help. He has a good eye for layout, but the technical intricacies of using PageStream were defeating him. Anyway, I suggested he use my machine to layout this brochure so that a) I would be able to assist him in his endeavours, and b) he would be giving me some new material for this column.

And so we looked at the design elements for the brochure. The client wanted an A4-sized brochure with an insert that, if you can imagine it, was another sheet of A4 folded along its longest axis one third of the way across the page, so that when you opened the brochure there was a flap one third of a page in size, followed by a second flap, two thirds of a page in size, followed by the back page of the brochure. All in all, a nice layered effect.

The first thing we did was to make a mock-up of the brochure using a sheet of A3 and one of A4. Then we got the text and images the client wanted inserting, but at this point there had been no decision made as to typography. My friend had made some suggestions and had started laying out the text on the pages, but when the client saw the results he wasn't very happy with the text style and had only really gone ahead with things because he wasn't sure about what typefaces were what. This demonstrated the need for font spec sheets and even more importantly, style tags.

TIME-SAVERS

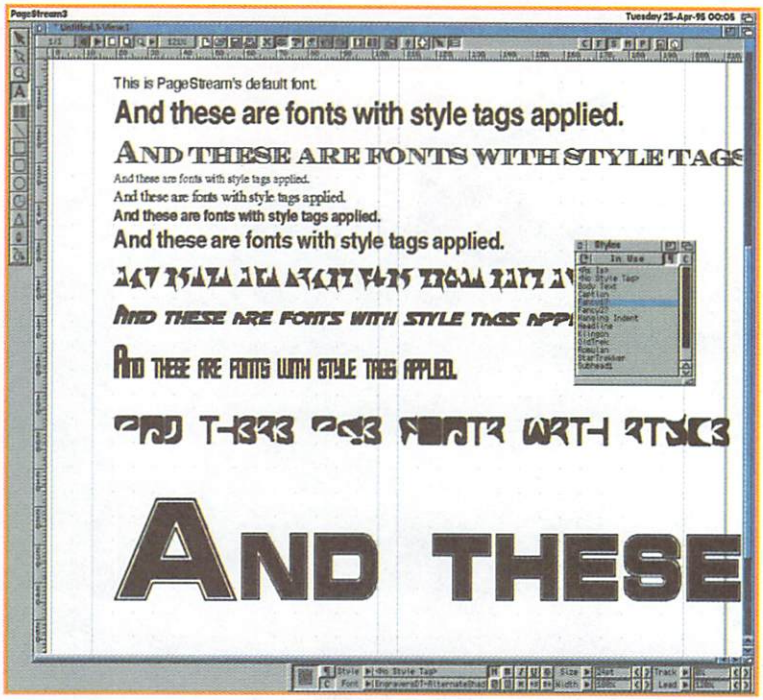
I know that whenever I mention Style tags to anyone, they groan and say they are a waste of time and more hassle than they are worth to set up. "Bosh!", I usually retort, and with good reason as my friend was to discover as he spent an hour and a half reformatting the text he had put on the page. This time I sat down with him and we set up a range of style tags pertinent to the situation. We made a headline tag, one for section headings, subheadings, body text and finally, one for captions.

This took about ten minutes to set up, but once we had finished, the longest time involved in changing the typefaces used was waiting for PageStream 3's screen to update. What is even better with this version of the software is the fact that you can now set up style tags for objects as well as text. And, as we all secretly know and understand, however much we grumble about it, style tags are almost guarantors of consistency between documents.

If you are writing a newsletter, or putting together a fanzine, there is nothing worse for your readers than having the style jump around from one issue to the next. "But", I hear you cry, "we don't all write newsletters or magazines." I'm sure this is the case. However, even if you only use PageStream occasionally, it would be beneficial for you to set up some often-used styles, for an address perhaps, or differing styles for personal or business letters.

Again, if you are using PageStream 3, think how much easier it would be to simply use style tags for gradient fills and border styles, rather than having to draw your box, go to the line/fill requester and make numerous clicks with the mouse and taps on the keyboard.

Once you have gone to the effort of sitting down and setting a few up, life will be so much easier in the future. You wouldn't even have to set aside a special session to do it – just remember, the next time you want a gradient fill, or particular line style, don't just make it up as you go along, set it as a style tag. This way you will be able to build up a library of useful tags for both text and objects with very little effort.



A wide variety of styles, not all of which are useful to sane people

Star Trek fonts

As you can see from the screenshot, the same piece of text can have quite a different look with a different typeface, or even just a different style or size. Some of the fonts used here are based on those used in the Star Trek and Star Trek Next Generation TV shows.

These are complete, commercial postscript fonts which are available from EM Computergraphic 01255 431389. I must admit to not really being a fan of the Star Trek shows, but you have to admire the obsessive nature of someone who could sit down and create a Klingon or Romulan typeface.

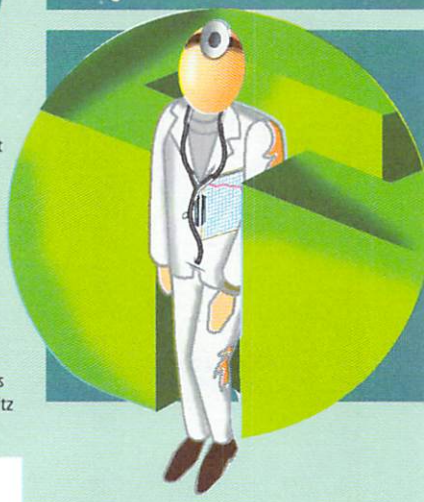
PageStream 3 progress

Well, as of 24 March, the version number for PageStream moves to 3.0g. This version is faster again than 3.0f, but still not up to full speed, and printing for non-postscript printers is still pretty slow, although landscape printing has now been implemented. For more professional use, spot colour separations are not yet implemented, and neither is plate control, but support for the Fargo Primera Pro has been finalised.

Altogether there are some 230-odd lines of improvements made to the previous version, and the list of features that have not been implemented just keeps shrinking. SoftLogik have also announced new Import/Export modules for JPEG and Wordworth documents, but, surprisingly, the fact that these are not going to be included with PageStream and represent an extra expense ($20 each) to be incurred by the hapless PageStream user has raised more than a few eyebrows and has caused some rather uncomplimentary e-mail to flow SoftLogik's way.

Return to DOpus

Amiga Medical Part 7



Frank Nord re-visits the Directory Opus config file

Going back a couple of months, you will remember I spent a couple of pages giving some advice about configuring your Directory Opus setup. Well, space is always the enemy in publishing and there's always something more to be said. So here's a few more tips to increase your file management productivity.

First up, you might not know that Directory Opus has some internal functions that aren't immediately obvious. For instance, you know how to click the left-most edge of the directory list to move up to its parent, but did you know that you can click with your right mouse button to get straight to the root directory of whatever device you are displaying? This can certainly save a lot of time if you have several layers of directories.

Another great time saver is the bottom-left button in the small cluster of buttons at the junction of the two directory windows. You know the ones, they are marked B R S A. You are probably aware that clicking on the B with your left mouse button will bring up a list of all the directories buffered in memory, but if you are running low on RAM:, try clicking on it with your right mouse button. This will free up any buffers held in memory, apart, obviously, from the ones currently displayed.

SELECTIONS

However, the button that's most useful, to me at least, is the one labelled S. This button lets you select filenames by certain criteria if you hit it with the left button, but if you use your right mouse button on it, it shows you a complete list of devices, volumes and assigns. Much quicker than having to trawl through the drive buttons or typing the path into the text field under the directory window.

As for external applications, there are a couple more I didn't mention last time around. The first will be of use to anyone who owns a copy of AdPro and has access to the program 'Splitz.' In case you aren't familiar with it, Splitz takes a file that is too big to fit onto a particular sort of media and splits it into user-definable chunks. Then you use Splitz's companion program, 'Joinz', to rejoin the chunks back into a complete file at the other end.

This is mainly designed for people who need to move large bitmap files (well, it does come with AdPro, after all) from one machine to another. You can add Splitz functionality to Directory Opus quite simply by creating a button for Splitz and applying the following rules:

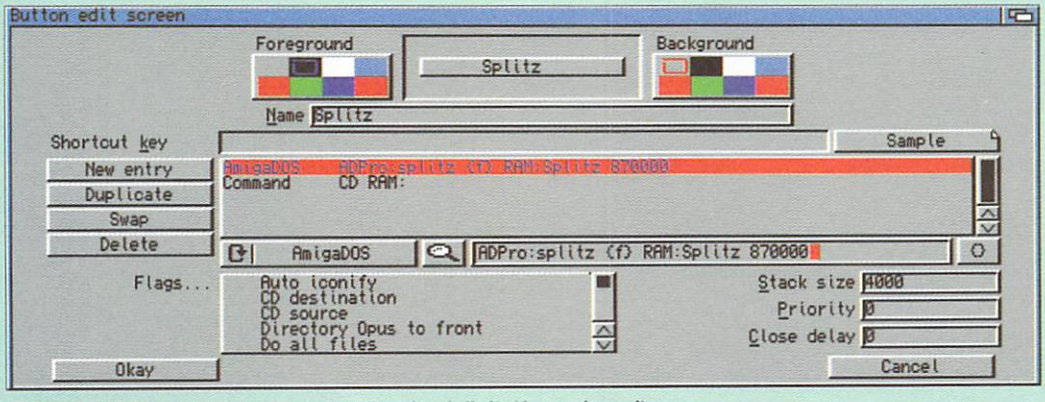
```
AmigaDOS  ADPro:splitz (f) RAM:Splitz
870000 Command        CD RAM:
```

You should have flags set for Output Window, Rescan Source and Rescan Destination. What the button will do is take any file you have selected and split it into chunks roughly 850k in size, which is small enough to fit onto an FFS formatted disk with no trouble. If you normally use Splitz for transferring stuff on double-density PC-formatted floppies then you should use a value of 720000 or less.

Now the only problem with this setup lies in the amount of free memory you have. If it is low, I suggest you change the part where it says 'RAM:Splitz' to something like 'HD1:temp/Splitz.' Of course, you are still going to need enough room on your hard drive.

Another useful button to have is one that generates a ReadMe file ready for you to edit. For this I have set up a button that copies a pre-defined empty text file with an icon which has a text viewer as its default tool, something like more or multiview would be ideal, into the current destination directory. Don't forget to turn on the Rescan Destination flag so that the readme file shows up.

One last gizmo is a commodity called CacheFont which you should have found on last month's CoverDisk. Cachefont comes in two parts: There is the cachefont command itself, which goes in your startup-sequence, and there is the MakeFontList command which has to be run every time you add or subtract fonts from your system. You can very easily add a button to your DOpus palette which calls the command up from the C: directory. It doesn't take any arguments so you should find it pretty simple to set up.



The number of different tools you can add to DOpus is only limited by your ingenuity

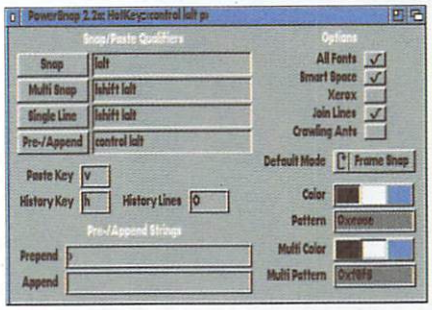
Nostalgia ain't what it used to be

In my never ending quest to help Amiga owners everywhere, I sometimes forget that not everyone has access to all the latest software and hardware to check things out, and most of you will probably not have owned an Amiga as long as I have.

So I decided to call your attention to tools and utilities that make my job easier but might be a little old, so not in the headlines. One of those very utilities is a commodity called PowerSnap. The latest version of PowerSnap came out early last year, but it has a long history.

PowerSnap lets you copy text you would not normally be able to copy to the clipboard and then paste it in any package that supports the standard Amiga clipboard. For instance, earlier on in this article I gave you the information to set up a Splitz button and you saw the two commands needed to get it working. I could have remembered those two commands, after all, they aren't exactly complex, but with PowerSnap I can just hold down a key and drag my mouse over the text on the screen and copy it to the clipboard. Then all I have to do is simply paste it back into the text editor I am using to write this text and hit the Paste shortcut. Much easier and probably safer too.

PowerSnap also comes in real handy if you have set up an Aminet Index button in DOpus, as I explained two months ago, because it means you don't have to write the filenames you want to get on a piece of paper, you can just paste them into a document for Batch FTP, or as a scratch pad while you use your ftp program.



PowerSnap might be a bit old, but it's still superb

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Amiga 3D Part 4

Fanning the flames

Stevie Kennedy looks at a bag full of tricks involving flame effects and the art of transparency

One of the most impressive tricks with a ray tracing package, and the one most likely to have viewers asking "how'd he do that then?" is the flame effect. Candles and space ship engines are only the most common uses for a technique which can be used to simulate smoke, glowing balls of plasma, ghosts – you name it.

Users of LightWave 3D are particularly spoiled in this department. The NewTek package's excellent transparency effect can be carefully adapted to suit most requirements, and with its envelope control of brushmaps and transparency values themselves, LightWave makes for a pretty powerful arsonist.

Imagine fans are a little left out when it comes to flames, and particularly transparency. Even the 3.0 version's transparency texture is a stop-gap measure with limited uses, and if you have an older version of Imagine you simply can't achieve the effects we're pursuing.

The Imagine user with a burning need for pyrotechnics can try an old and simple trick by putting two candle flame-shaped objects inside each other and making the inner one a dark red-orange. Leave the outer object bright yellow and make both about 50 per cent transparent using the 'transpar' texture. For a better effect, try making the outer object a little bit more transparent, but don't go too far – real flames aren't actually all that see-through. To simulate the flickering of flames you'll have to use a paint package to produce a simple two-colour flame animation, then wrap this sequence of images onto the two flame objects. By offsetting the axes on the two objects to ensure they don't show exactly the same view of the images, a reasonably good effect can be achieved.

Your brushmap sequence should be twice as wide as the flame object you are going to use so that wrapping in the X axis doesn't distort it too much. Don't bother wrapping in the Z axis for candle effects, as this will just make them look stretched out.

With version 3.1 the fire texture can be used to good effect, but be warned that it is very slow to render. Altering the aspect of the flame object and making the flames bright blue with a much faster than normal speed makes for a decent thruster, and patient experimentation will result in anything from a candle to a bonfire, so use this texture if you have it (and either a 68040 or lots of spare time).

Could be better, but this flame is a lot more controllable than either the Imagine texture or the (faster and more convenient) LightWave Pro method

There's no need to mess about with brushmaps, however, and the flames themselves are pretty realistic – especially when used for normal fires rather than more exotic sci-fi effects. To force a more elongated thruster look, scale down the X axis of the texture itself using Edit Axes and increase convection speed by a factor of two or three.

TALENTED

LightWave users don't have the same procedural textures available to Imagine 3.1 owners, but the program's other talents make up for this. You will have received a flame surface with last month's LightWave Pro disk, and it's good enough to slap on and use. For a better result, though, it can be altered. The default for this sort of texture, and the method most commonly used, is to slap on a transparency envelope and use the fractal noise procedural texture to create an animated flame. In this way, the texture's velocity creates movement, and where there are darker areas in the fractal noise effect these become more transparent.

However, the drawback is that the flame object itself has sharp, well-defined edges which are unlike most flames. To improve the effect, make the object 100 per cent transparent and use the fractal reflections IFF as a cylindrical image map on the axes, along which you want flames to travel.

Make the edges transparent and re-size the texture itself to match your object. A thruster, for example, will be much longer than it is broad and your texture size must reflect this – don't use automatic sizing. To complete the effect, use texture falloff to ensure the outer edges of the flame are invisible and that the effect stops before the abrupt (and unrealistic) end it would normally meet at the end of the object.

Sample values for a one metre-wide flame which is eight metres long would be falloff of 110 per cent in both Y and Z (to ensure transparency at the edges), and 15 per cent in X (for a flame travelling along the X axis). This would ensure that the flame tapered to a point as it moved away from its source. All you need do now is set a texture velocity, something which is best done over 25 frames using very low resolution previews to create a one second test animation.

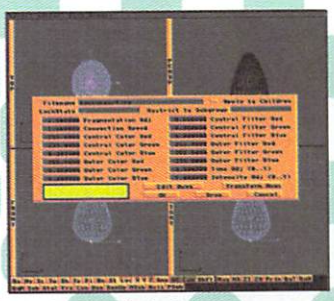
A hundred and one uses

It takes a fair amount of faffing around and experimenting to arrive at a LightWave flame object with which you are happy, but the end result is better and much more flexible than anything to be found in Imagine. I've used versions of the above surface for everything from candles to weird temple altar flames and space ship engines, with only a little editing.

In fact, the use of texture falloff, transparency, and image maps instead of the LightWave Pro method can lead to lots of other effects. In one render which included a frigate and a U-boat, these same techniques worked for the ship's bow wave and wake, the turbulence behind the torpedo propellor, and smoke coming from the ship's funnels.

In LightWave, anything which requires splashes, smoke, fire, or even explosions can be given the same treatment. Once you master the uses of transparency and texture falloff, you'll be surprised at the close control you have over the final appearance of objects.

To give this one a good hard testing, try creating an animated face in DPaint and save the anim to disk as a sequence of images. Now use these and the above techniques to create a ghostly face hovering above the ground. Use the same image maps as bump maps and give them a high texture amplitude of 400 per cent or so. The result won't be disappointing.



Imagine 3.1's fire texture can be used as is for good flames, but renders very slowly and could be more flexible

Engine thrusters require a fast flame with no tell-tale edges, so be brutal with texture falloff and transparency

A picture says a thousand words, though repeating 'crash and burn' 333 times is about as far as this Imagine 3.1 fire image goes

Phil South looks at some readers' questions about AMOS

Dear phil...

I've been asking people to send in Amos queries lately, and sure enough we've had a torrent, especially since we bundled the Easy AMOS program with our magazine. A lot of the problems are easily solvable, such as syntax errors and omissions, but others are a little bit more complex. But let's pull a few out of the bag and see what's going on, shall we?

The first question comes from John Eustace of East Dulwich, who writes: "I have been with Amos a short time now, so I'm writing to say please could you answer this problem I'm having with this simple routine. Here's the routine:

```
Repeat
  For X=1 To 90
    Wait Key
    Print X
    X=Rnd(90)
Until Mouse <> 0
```

or the last line could read:

```
If Mouse=1 Then Exit
```

This is just one way I have tried this routine but without CTRL-C I can't seem to break out of the loop."

Well, for a start you have a FOR without a NEXT in there, and the statement isn't really required. It doesn't refer to a NEXT, and the numbers are randomised by the RND statement further down the program anyway.

Secondly, the command is MOUSE KEY, not just MOUSE. The other problem is with WAIT KEY which prevents the mouse button being trapped, unless of course you hold down the mouse key and press any key to get it working.

A better and more efficient listing would go something like this:

```
Repeat
  Print X
  X=Rnd(90)
Until Mouse Key<>0
```

or perhaps:

```
Repeat
  X=X+1
Until X=90
```

or something similar to that.

Next we have a couple of people who are confused by the listing we gave you for the Easy AMOS tutorial, and it all circles around the line:

```
Palette
$0,$FFF,$FFFF etc.
```

I have no trouble with this line, so I suspect it's a formatting problem. If the program we use to put the magazine together encounters a line with no breaks in it, it breaks it wherever there is a space, so the line should read:

```
Palette $0,$FFF,$FFFF etc.
```

As well as this problem, KH Tjoa of the Netherlands asks: "Please advise me how to change my keyboard set-up in order to allow me to type the # symbol. Also what is the difference between AMOS Pro and Easy AMOS?"

The first question is simple, all you have to type is the # on your keyboard. It may be that you have a European setting on your shell keyboard, which means it will be a different key. If you can't find it, how about the £ symbol? What does that type – look at your copy of Amos? The second question sounds obvious, but in case you haven't noticed, Easy AMOS has fewer commands, and it also has no AMAL.

Next we have Daniel J Green of Coventry who writes: "I am almost going out of my mind with this little problem, the problem being colours. I want a program that ranges colours from $0 to $FFF. I know it must be able to be done so if you can, please print it in the magazine. My previous attempt was:

```
For N=0 To 4096
  Colour N,N
Next N
```

and I thought this would work but it doesn't."

Hmm, this is a conceptual problem as much as a coding one. For a start, you normally only have 15 colour indices to choose from, so attempting to load 4096 into them is doomed to failure. Secondly, even in HAM mode you can only access up to 64 colour using screen indices, which is what you are doing when you use the Colour command. Also, you are using a numeric variable for Colour when the second figure after the comma has to be hexadecimal, for example:

```
Colour  3,$34
```

You can convert Dec to Hex using the Hex$() command, like this:

```
Print Hex$(34)
```

but sadly the hex generated by the command are strings, not figures. Although you can add and subtract hex in AMOS, you can't put a string into an addition. As HAM screens are generally only used as background, you can't really draw on them except in the default 64 colours. That's usually enough and besides, HAM screens are very flickery and fuzzy, so what's the point?

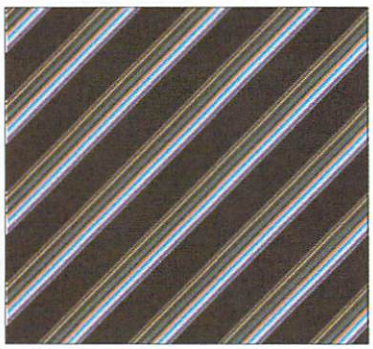
If you want to see an example of what you can do, then look at the following:

```
Screen Open 0,320,256,4096,Lowres
Flash Off : Cls
X=0 : Y=0 : A=0
'
MAIN:
Repeat
   Ink A
   If X>320 Then X=0 : Y=Y+1
   Plot X,Y
   Inc X
   Inc A
Until N=4096
N=0
Goto MAIN
```

I'll be doing a little tutorial on colour in a couple of issues time, so watch out for that.

Finally, we have PK Shepherd, who asks: "I've been trying to get a cyclic IFF ANIM to run within a program I've written in AMOS Pro. No matter how I seek to run it, I always get a joggle at the end of each individual cycle. The methods I've been using are:

```
IFF Anim "xxxxxx" To <screen number>,times
```



Daniel green in Coventry: Apply the example listing given and get this result

and this appears to give a repeat frame at the end of each cycle. Secondly:

```
Frame Load
```

followed by:

```
Frame Play
```

with a DO/LOOP construction as shown in section 07.05.06 of the AMOS Pro Handbook. This gives a blank frame at the end of each cycle, apparently while the LOOP operation is taking place. Is this a bug in my version of AMOS Pro?"

Not a bug as such, just understandable. The animation is buffered and compressed, and if you want the animation to repeat you have to put up with a little joggle at the end. Animation was added to Amos as a bit of an afterthought, and it is really designed to play back an animation from start to finish without much messing about.

Also, bear in mind that the animation will always restart from frame two rather than one, so a lot of the jerkiness might be coming from that quarter. There are supposed to be some ways around this, and I'll look into it for next time.

That's about all we have time for. Let's hear some more of your Amos questions, and we'll see what we can do to sort them out for you. Amos is still the best language to develop software on for the Amiga, and it's going to be a long time before something better comes along. I look forward to hearing from you, and see you next time.

Write stuff

If you have an Amos question, or a routine you'd like to share with the world, then please write to Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP, England. Please send routines on an Amiga disk with notes on how the program works on paper. Make the routines short (use these routines as a guide) and make them reasonably independent of any graphics and sound support files, although I will make provision for these if necessary.

The AmigaDOS console device

A lot of ARexx users tend to write scripts where program output is achieved using ARexx's Say instruction coupled to a conventional Shell window. Unfortunately, this approach has some disadvantages such as the need for the Return key to be hit before the program takes any notice of your input.

This effect, due to an inherent characteristic of the normal Shell window, can be eliminated by using a special console window known as a 'raw' window – so called because its input stream provides raw keypress information as soon as keys are pressed. Another limitation with Say is that it always forces a new line at the end of its output and sometimes this may not be exactly what you want. The solution here is to forget about Say and use ARexx's file-oriented I/O (input/output) instructions to read and write to the window instead. As far as opening a raw window is concerned this can be done by using the built-in library function Open() in this manner:

```
call Open(raw_window,'RAW:40/40/560/200/
example_script.rexx')
```

The second argument specifies the console type, top-left position and initial size of the window. The first argument, which I've called raw_window, is the file handle used for all I/O operations connected with the window. For example, to write text strings into the window we would use the Writech() function like this:

```
call Writech(raw_window, 'some example text')
```

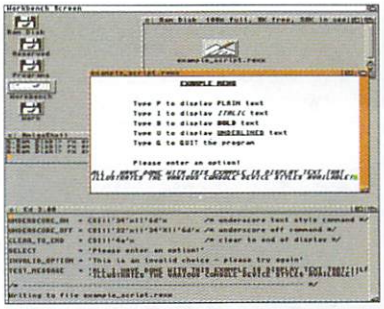
There is also a corresponding file input function called Readch(). The arguments needed in this case are the file handle and the number of characters to be read, so the code to collect one character from the raw_window and place it in a variable called keypress$ can be written as:

```
keypress$=Readch(raw_window,1)  /* read a
character */
```

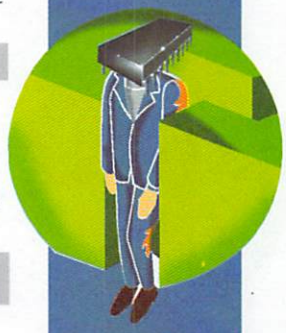
Because, in this case, we are dealing with an AmigaDOS raw window, the function returns immediately a keypress is detected, i.e. the program does not need to wait for the return key to be pressed.

Text style	
0	Plain text
1	Boldface
3	Italic
4	Underscore
7	Reversed character/cell colours (inverse on)
22	Bold off
23	Italic off
24	Underscore off
27	Reversed off (inverse off)
Character colour	
30-37	system colours 0-7 for character colour
39	reset to default character colour
Character cell colour	
40-47	system colours 0-7 for cell colour
39	reset to default character colour
Background colour	
>0-7	System colours 0-7 for background colour

Table 1: Some useful graphic rendering control settings (in ASCII form)



A few control sequences are all that are needed to produce text displays like these



Menu coding, scripts that react at once to keypress data, console display control – it's all here

Putting it all together

The example on the cover disk is a simple Shell 'menu' program which displays a list of things to do, asks the user to select an option, collects the response, and then carries out the appropriate action. The thing to notice is that, having opened a raw window, all I/O operations are done using Writech() and Readch() and it is this, coupled with the use of a cursor positioning function, which provides the greater flexibility.

I've chosen, somewhat arbitrarily, to provide options which specify various text styles using a series of 'pseudo-constant' definitions placed at the start of the program (using the ideas outlined in previous instalments). These define text messages, special constants and, of course, the console control sequences themselves.

Incidentally, it is well worth knowing a bit about console device use. Some console device control sequence characters, like Backspace (8 hex) and Return (13 hex), behave just like you'd expect from their ANSI/ASCI definitions, but others produce more Amiga-flavoured responses. A Linefeed, for example, gets translated to the Return/Linefeed combination, the Bell character (07 hex) produces a DisplayBeep() Intuition call, while the reception of a Formfeed character (0C hex) actually clears the display.

As well as these simple commands, there are a host of more sophisticated sequences available that handle cursor positioning, line insertion, scrolling, event reading and so on. Console device use is a massive subject in its own right and you'll need to look in the Amiga ROM Kernel 'Devices' reference manual for the full story. One sequence worth mentioning, because it finds use in a great many ARexx scripts, is that used for changing the text style, character, character cell, and background colours used by a console window.

The general arrangement here is that you send a CSI (control sequence introducer) character followed by any number of graphics setting parameters. With the exception of background colour settings – which must be specified last – these parameters can be supplied in any order, separated by semicolons (3B hex). The end of the sequence should be marked by sending a 'm' (6D hex) termination character.

Table 1 gives control sequence values for a number of useful effects. Do note that the numbers shown represent individual ASCII characters to be transmitted rather than the equivalent hexadecimal values. For example, to select an inverse display you must send the ASCII character '7', i.e. the value 37 hex. Similarly, to turn off the inverse display you'd send the two ASCII characters '27', i.e. 32 hex followed by 37 hex!

You'll be able to see examples of how such sequences are used to produce italics, bold print and so on by examining the cover disk script (and also running it from a Shell window using the RX command). Next month I'll round off these discussions with some other console device related details!

M for music

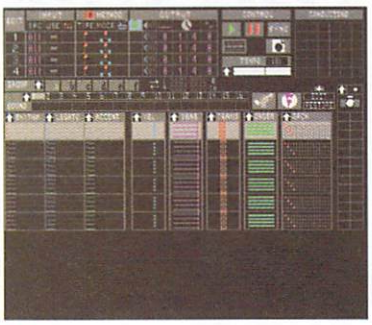
Dr T's 'M' package has recently made its debut on the Amiga and Paul Overaa has taken a look to see what's on offer

Dr T's M program has been around on other platforms for quite a while but since most Amiga users are unlikely to have seen it, a few words about what M is and how it works are clearly in order. Basically, it's a music composition and performing system which allows you to record and modify sequences and riffs in a variety of ways. While M can be used to create and modify complete arrangements, it is not an auto-arranger program as such, rather a composition aid that encourages you to experiment.

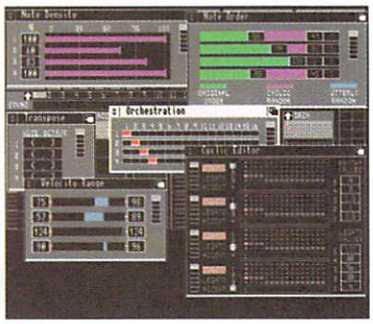
Display-wise, as you might expect, M includes a fair number of gadgets – arrow buttons can be rotated, numerical gadgets can be drag-selected to take on particular values, range bars, clever pop-sidewards gadget menus and many other features. To make life easier for the user, the main screen control types have been split into separate areas for input operations, general control functions (stop/start, tempo setting etc.), variable settings, playback conducting and so on. There's even an area which allows you to store and retrieve 'snapshots' of selected groups of other screen controls, the idea here being that by executing these snapshots during playback it's possible to move from one control set up to another.

M's use revolves around three basic stages, with you first recording or importing the note and chord material to be used. Four 'players', which in essence can be regarded as four individual sequencer tracks, are available so you might, for example, start by playing a melody line using player 1 and then add some backing chords for player 2.

Having done that you are able to control the ways in which that material is going to be transformed during playback. All manner of changes can be experimented with – a melody line might be scrambled, or M might be asked to produce cyclic or random variations to the base material. Because M has settings which allow you to add any amount (from 0 to 100 per cent) of cyclic and random variations, this means results can be obtained that are as near, or as far away, from your original riff as you choose. Needless to say, it's necessary to be sensible with such settings since high levels of random change, for example, may not always produce good results.



The main display page of Dr T's M program



Dr T's M makes good use of the Amiga's multi-window facilities

REVERSE EFFECT

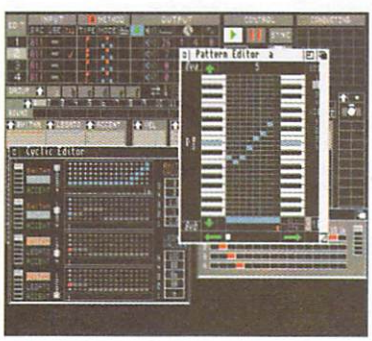
The important thing about the approach M uses, however, is its reversibility – you can try a setting and if you don't like the results you just reduce or change it to hear a new effect. Incidentally, you can use M to control Midi drum machines as well, and the program provides special modes for this type of use.

There are also various ways of performing your music. You can manipulate M's screen gadgets, move the mouse within a two-dimensional 'conductor' grid or create automatic performance processes. Another control facility offered by M is based around the use of a Midi keyboard, where certain keys are defined as 'control keys' which duplicate many of the functions found within the program's main display.

In essence, having recorded your sequence material, M can then be used to change tempos, key, velocity, duration, note accents and so on. You can reverse melody lines and even do things such as adjusting the 'note density,' thereby allowing M to make choices about which notes from a pattern should sound. There are, in fact, a whole collection of editing functions to choose from and you can, of course, use both Midi and internal sounds and even write M's musical output to disk in standard Mid file form.

M's editing and control features are quite easy to use, particularly since most of the edit functions operate from separate windows. The Orchestration window, for example, lets you send the output of particular players to any chosen Midi channel, while the Pattern editor window lets you view and edit the notes stored in a player sequence.

Midi files can be imported as well and I found this to be a good way of bringing raw base material into the M environment. Although most M users will probably be Midi users, it's worth pointing out that you don't actually need a Midi synth in order to be able to use M on an Amiga. This is because sequences can be created using the pattern editor and subsequently used with M's AmiSynth internal IFF sounds module.



M's pattern editor provides a gateway for using the program without Midi!

First impressions

The Amiga version of M has been reasonably well implemented, although there are some things, such as the use of a very old fashioned file requester, that surprised me. The program certainly has the ability to perform musically interesting pattern changes (effectively creating new riffs and food for thought as it does so), but it is important to realise that it is necessary to spend a fair bit of time getting to know the program in order to get the best out of it. Needless to say, the Dr T documentation is excellent as always and there's plenty of tutorial material to get you started.

On a personal level, I've been quite impressed with this new Amiga Dr T offering, and it has certainly been good fun to use. I do, however, have some general 'conceptual worries' about the program and, at the moment at least, my 'gut feeling' is that this is simply not the sort of music program that will find instant favour among all Amiga musicians. To be honest I hope I'm wrong but on that score only time will tell!

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

1 Mb
RAM

The bottom line

Product: Dr T's M
Supplier: Millenium Music
Price: £79.95
Tel: 01602 241924

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

Oops! wrong planet

Phil South looks at two new Internet books

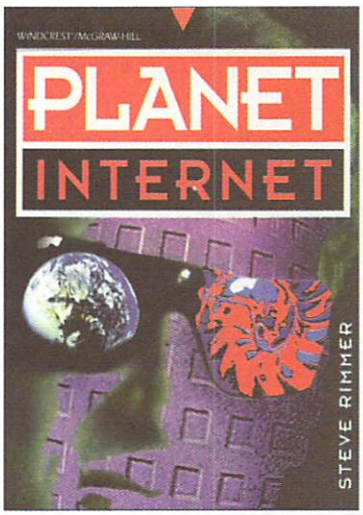
There are few things as useful to the Net Potato at large than the 'really Good Guide Book.' Okay, so you can surf about like a loony clicking on buttons, looking about for cool stuff and running up your phone bill, but it's much more elegant to know where you're going and go right there, perhaps stopping off a little on the way. It's like the difference between travelling somewhere by car with a map and just diving into your car and seeing where the road takes you. The latter approach burns a lot of gas to no end, and probably gets you lost. The former approach gets you to some very interesting places quickly and efficiently.

One such book of the plethora of dire Internet books that have recently flooded the market is 'Planet Internet' by Steve Rimmer (Windcrest/McGraw Hill), a self proclaimed "irreverent guide to the Internet's pubs, curiosity shops and back alleys."

A lot of Internet books will tell you how the Net works and give you a lot of information about protocols and really dull stuff like that. Planet Internet gives you a really useful list of places to visit on the Internet and a snippet of information from the relevant sites.

There are a number of books which try to cram in a load of URLs and gopher and FTP sites into as big a book as they can find – most of which are out of date and no longer there. The difference with Planet Internet is that it concentrates on quality, so although there are relatively few references in it, it is very good and the sites have been quite extensively researched to make sure, within a reasonable certainty, that the sites are going to be where you left them.

The other thing I find refreshing about the book is that it has a lot of style. It has been luxuriously designed and printed, and is an extremely good book to read and hold. The content will keep you chuckling long into the night, and once you have it and have finished



reading it from cover to cover (which is what you will want to do to it, believe me), it will stay very close to your computer for when you fire up your Net software.

Verdict? I think you can tell from the way I talk about it that this is a book I like rather a lot. It's a slickly produced book with a nice feel to it, and there is, in fact, a lot of information in it. Definite thumbs up.

In comparison

The other book on review this month is 'Net Chat' by Kelly Maloni, Nathaniel Wice and Ben Greenman (Random House/Michael Wolff & Co), the makers of Net Guide. Where Planet Internet is specifically targeted at the strange, Net Chat is aimed at the sleazy. The idea is that you can pick up people on the Net and have Cybersex.

Er, actually no, that's not really what it's about, but that's what the cover lines would have you believe. This is tabloid Net journalism. The cover is lurid and the content spiced with nudish pictures downloaded from various BBS sites and various non-Net places like CompuServe. (CompuServe? I thought that was a family show, no nudes allowed? Oh well, you live and learn.)

Again, I wouldn't like you to think I don't like this book, because actually I do. It has its failings, however. Firstly, it goes for quantity rather than quality. Secondly, it contains a lot of info about BBSs not available in the UK – in other words it is a little bit US-centric. The preface of the book says that the Net is The Internet, plus CompuServe, Delphi, America Online, The Well, Echo, FidoNet, which of course it isn't, at least not to me. The Net is a place I can reach from my computer, wherever you might be in the world. It is not scratty little Adult BBS' in Atlanta, Georgia.

A lot of the more interesting things in the book are on BBS' rather than on the Internet, so are largely inaccessible from the UK, and that almost halves the amount of hard info you'll get out of the book. It is an entertaining read, however, and although most Net heads would know a lot of this stuff already, it is interesting to see how much dubious material there is on the Net.

The book is one of the few I've ever seen with an Adults Only sticker on the cover. Reading some of the entries inside I can easily see why, and I welcome this kind of approach. Some things are for adults and some are for kids, and there's little point in softening everything so it won't offend anybody. But I think more than anything that the sticker is a marketing ploy to give the book more weight than it actually has.

Net watch

For those of you who are still looking around for new places to explore on the Internet, how about some of these for size:

Satellite TV Images – some really odd TV pictures from around the globe, all digitised and ready to paste into your latest multimedia extravaganza.
http://itre.uncecs.edu/misc/images/images.html

atom Co. Ltd. – a very cool Japanese site with lots of photographs and very Japanese arty stuff. Some nice links too.
http://www.atom.co.jp/

Nomadic Research Labs –ever wonder what happened to that wacky Tech Nomad dude, Steven Roberts? You know, the guy who rode across America on a recumbent cycle which had a SparcStation in the trailer? Well, he's off building the Microship, a seagoing version, and this is where you can get updates on what he's been doing.
http://microship.ucsd.edu/

The Wiretap Web Site – home of a lot of odd texts, the site has now moved over to a more modern Web-based interface. Lots to read, and well worth the effort of downloading something.
http://www.spies.com/

The WWW Virtual Library: Unidentified Flying Objects – the best source of info about UFOs including links to other sites and some really cool photos.
http://www.bgsu.edu/~jzawodn/ufo/index.html

Look out next month for a new front end to your Amiga TCP/IP exploits on the Internet.

If you have any BBSs you'd like to tell me about, or there's anything you'd like to find on the Internet but can't, then please feel free to ask me. Hell, I can only say no! You can reach me by e-mail at these locations:

Internet
phil@snouty.demon.co.uk

CIX	snouty
The Direct Connection	snouty
CompuServe	100102,1500
Delphi	snouty@delphi.com

or by post to:

Phil South
Comms Section, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP.

Getting the full picture

Still using the family TV with your Amiga? Gary Whiteley puts the case for buying a dedicated monitor instead

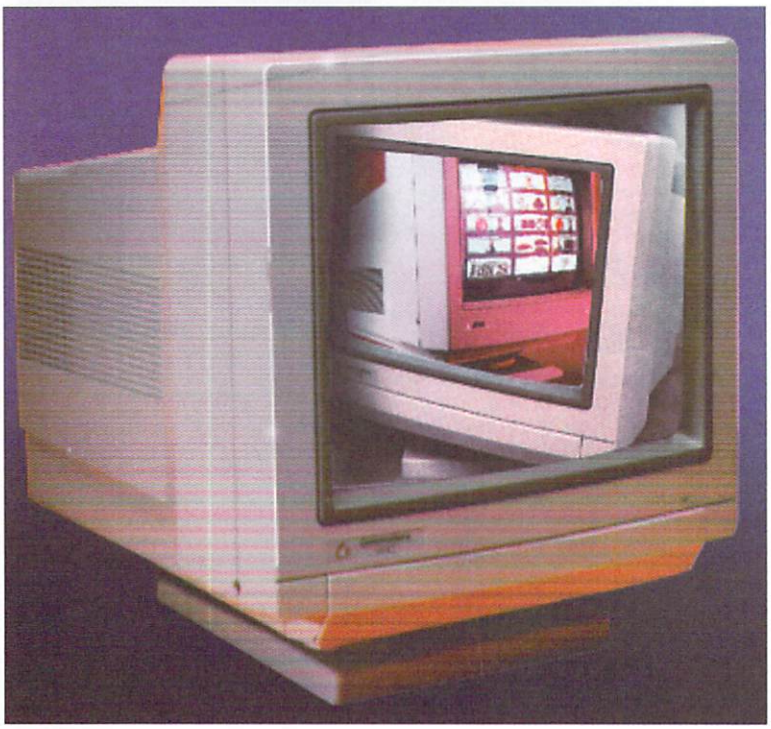
Everyday all across the UK there must be arguments over who gets priority use of the telly. Mum and big sister want to watch Neighbours, while the brothers want to use their Amiga. Dad comes in from work and, once again, finds the same old argument in full swing. Some things never change.

But there can be a solution. In fact, there can be several, dependant on factors such as space, the Amiga itself and, of course, cash. For most folks the last item, cash, will be the crucial one. Serious Amiga users know that it's impossible to do crucial graphics and other quality work on a bog-standard TV, so we simply scrape up the cash and get on with it, but for most cash-strapped families there will inevitably be priorities other than buying a 'proper' monitor for the Amiga.

The simplest, and probably cheapest, fix is a second-hand TV installed in the lad's bedroom so they can blast away to their heart's content. Of course, big sis will kick up a fuss and likely need paying off, but if it keeps the family from rowing, then maybe it's a small price to pay. Suitable TVs can be found by scouring the local free papers and second-hand shops. Just make sure you see them working before you part with any cash!

But a second-hand TV isn't necessarily the best bet if you want to do more than just play games. Why? Well, the long and short of it is that both RF video (which is what goes into the TV's aerial socket) and composite video produce noticeably lower quality than the Amiga's own RGB video output. The reason for this is that internally, the Amiga generates separate red, green and blue (hence 'RGB') signals which can be fed directly to a suitable monitor and displayed on screen with minimum modification, resulting in a high-quality image.

However, both RF and composite video signals have to be converted from the Amiga's RGB signal via a modulator or encoder, which requires that the RGB is first electronically combined together and then passed to the TV, where it is then decoded back to RGB. Inevitably, some of the original signal will be lost because of the nature of this coding/decoding process.



RGB monitors reproduce the Amiga's own RGB signals as faithfully as possible

The result? RF looks worse than composite video, and both are significantly inferior to RGB, particularly where high resolution screens and small text and graphics are concerned. Colour reproduction can also suffer and, all factors combined, using a TV as a computer display can make using productivity software such as wordprocessors, DTP packages and graphics and animation software quite a strain.

Alternatives

A better solution is to buy an RGB monitor. Sometimes a TV will have RGB inputs and, with a suitable cable (either bought or, if necessary, home-made) will work with an Amiga. Even better is a dedicated RGB monitor such as the Philips 8833 MkII or Commodore's own 1084S models. The trouble is that one of these monitors costs around £220-£230 new, and second-hand ones are getting less common by the month.

The best thing about RGB monitors is that they reproduce the Amiga's own RGB signals as faithfully as possible, giving a crisp, colour-rich display which makes for great graphics and sharpens up all your applications no end, making those parts which were hard to read on a normal TV entirely visible at last.

One thing recent converts from TV to RGB often remark on (as do PC users used to displays of 30kHz or more) is that Amiga displays can appear to flicker, especially at higher resolutions. The short explanation for this is that the Amiga's RGB output is at standard video frequency (15.6kHz) which is what makes it so adaptable as a video machine. Hence, it only refreshes the screen at half the rate at which a standard PC screen is refreshed – and the eye sees the difference as flicker, particularly where highly contrasting thin horizontal lines are displayed.

Most people quickly get used to the flicker but to circumvent it, newer Amigas with the AGA chip set can drive a multiscan monitor (i.e. an RGB monitor which is capable of higher than 15.6kHz displays) such as those produced by Microvitec or other manufacturers. Unfortunately for the feuding family, such a monitor doesn't come cheap so let's leave this train of thought right here.

Watch out

I have one last, but very important point to make. Always be very careful when buying a second-hand computer monitor. There are so many different kinds around, especially at auctions, that it is easy to buy something which doesn't stand a hope in hell of working with your Amiga. Particularly, don't buy a monochrome or amber monitor (since it won't display in full colour) and ensure that the monitor can display RGB at 15.6kHz PAL frequencies via an analogue RGB input. This last point is very important.

Also, make sure the monitor has a manual or, at the very least, a pin connection diagram for its inputs, since it might be impossible to work this out otherwise. If you can, get a written assurance that your prospective monitor will work with an Amiga and, if it doesn't, try to ensure you can get your money back later. If I had £10 for every reader's letter I'd had about unsuitable second-hand monitors they'd bought on spec I'd be having a nice holiday right now.

Contact

Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk.

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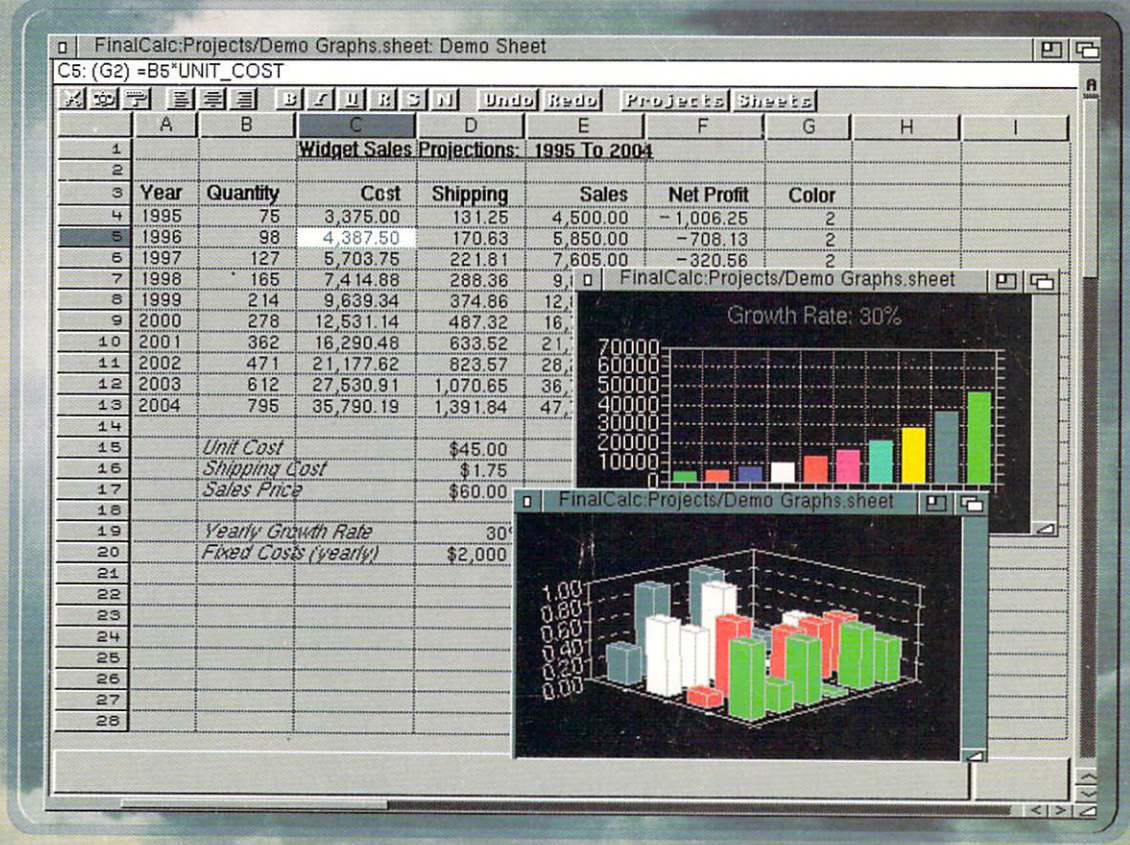

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