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AW 100TH ISSUE

AMIGA WORLD

January 1995
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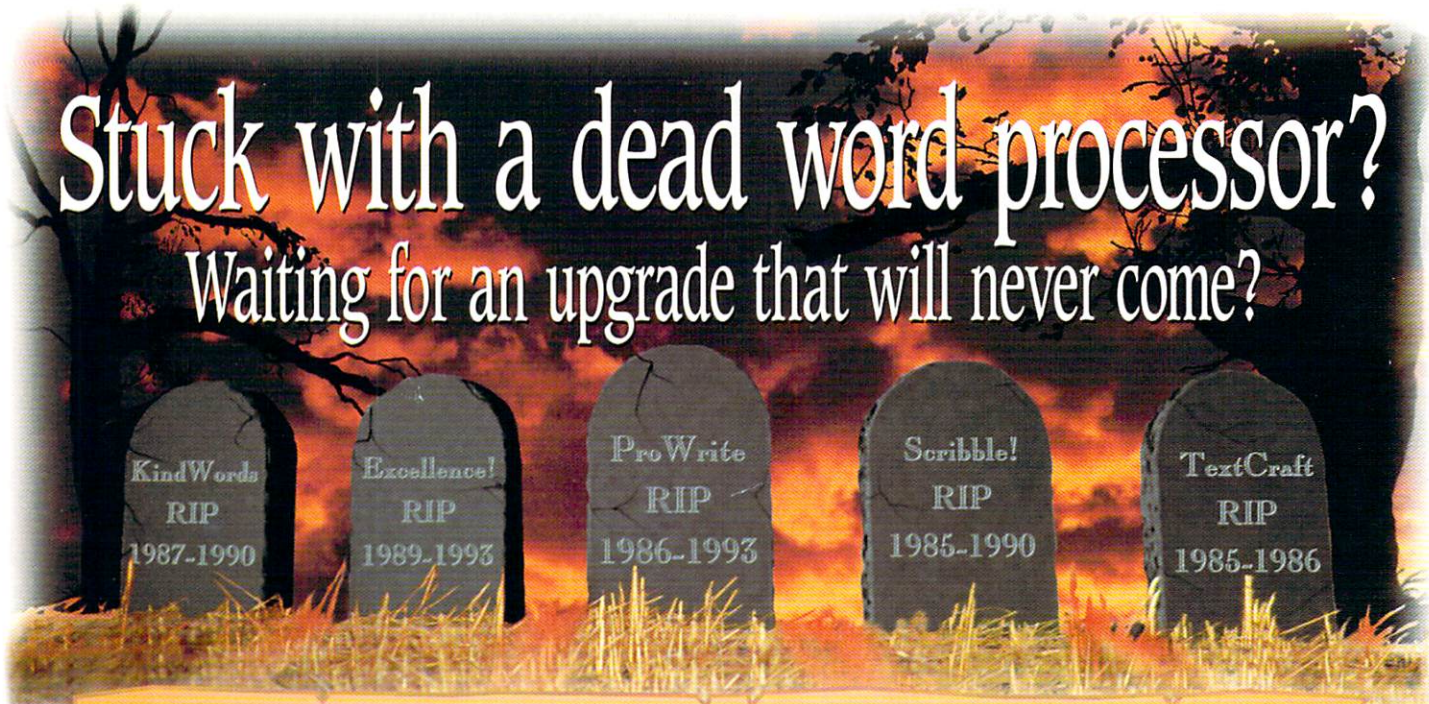

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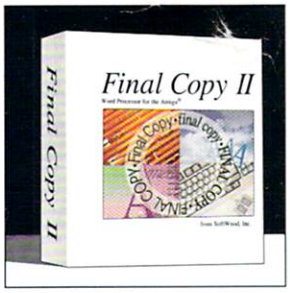

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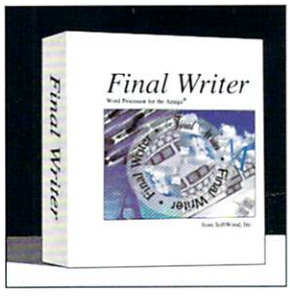
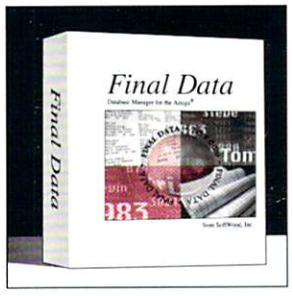


New Release 3. "...Final Writer is arguably the best word processor yet released for the Amiga.", Amiga World, March 1994. "...Final Writer is the top Amiga word processor to rival even the Mac and PC heavyweights.", CU Amiga (England), January 1994. Final Writer has all of Final Copy II's features (see above) plus many more. It includes: undo; easy bold, italic, and underlining; table of contents, table of illustrations, endnotes, bibliography, and index generation; sections; multiple master pages; EPS graphic support; 120 outline fonts; rotating graphics; movable text blocks; and a user button strip. Release 3 now includes easy page numbering, drag and drop, type and spell, polygon drawing tool, special shape drawing tools, and dictionary hyphenation. Requirements: 2.5 megabytes of RAM, hard drive, and Workbench 2.04 or higher.



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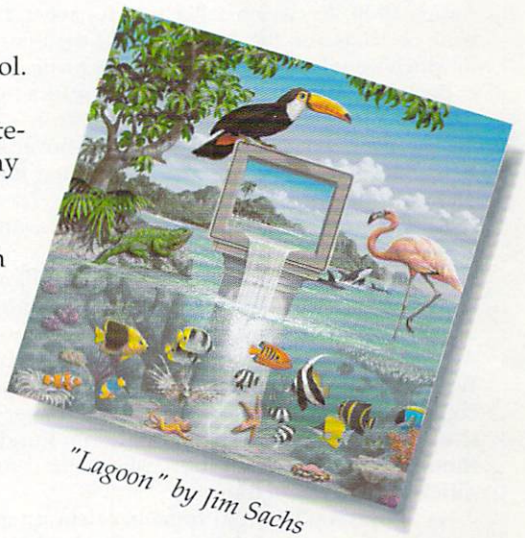

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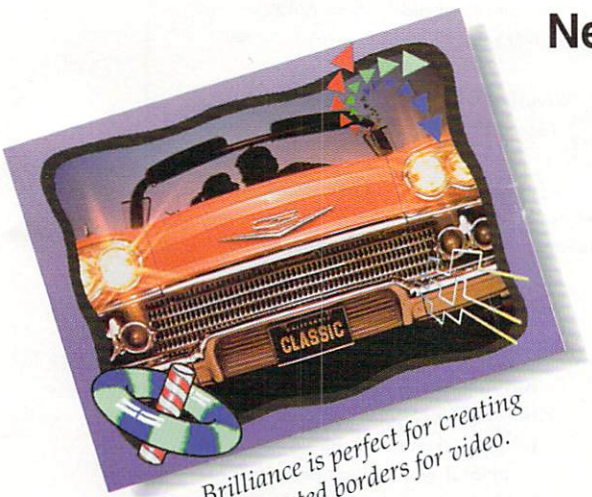

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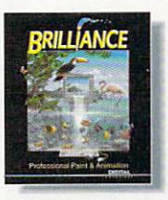

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FIRST IMPRESSIONS

Reaching some big ones . . .

People love to ask—and answer—"where-were-you-when . . . " questions. So, try this one: Where were you when the original Amiga was launched? The reason I'm asking, here in this first issue of 1995, is that this marks the beginning of the 10th Anniversary Year of the Amiga (which officially had its debut on July 23, 1985, at a gala celebrity affair at New York's Lincoln Center).

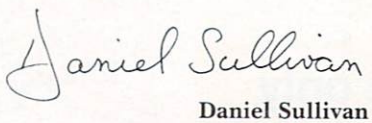
As to where we were on that date, well, the very same place. The premiere issue of *AmigaWorld* was also being unveiled amidst the fanfare surrounding the debut of the Amiga 1000. As circumstance would have it, the present issue of *AW* is also the 100th issue of the magazine—a fact in which we take no small amount of pride.

Back in 1983, when I was the editor of a now long-defunct multiplatform computer magazine called *Desktop Computing*, I remember publishing a "Buyer's Guide to Personal Computers" one issue that listed more than 350 individual makes and models. Guess how many of these are still around now (or were even around five years ago)?

The point I'm making is that in a world long dominated by the two giants in the field, only one other personal computer has made a lasting impression: the Amiga. I'm proud that during an era when Big Blue and Big Red came to have a near-monopoly on personal computing, there was still room for a "Beige" alternative—because there were tens and even hundreds of thousands of people out there who wanted something different, something more.

So I hope you'll join with me in celebrating these dual anniversaries—the 10th year of both the Amiga and *AW*. We kick off our 100th Issue special with a fond backward look at where the Amiga has been over this past decade. Our "Amiga Scrapbook" feature recounts Amiga firsts, Amiga accomplishments, Amigas in Hollywood, and much more. (We've even got an Amiga trivia contest to challenge your powers of memory.)

Some may ask why this occasion for celebration, given the present impasse (at least as I write this) in the Commodore liquidation proceedings. I don't think any of us can block out the heartache we've all experienced over the last six months, but that's no reason to neglect this very significant milestone in our history as the Amiga enters its second decade. To even get to this point, the Amiga and Amiga users have had to show a lot of grit—and I think there's enough left to ride out this present storm as well.



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Editor in Chief

AmigaWorld

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The reason for those cover thumbnails of every previous issue of ***AmigaWorld*** *on this month's cover is that 99 + 1 (this one) = 100! January '95 marks not only* ***AW****'s 100th issue, but also the beginning of the Amiga's 10th Anniversary Year. So join in on the festivities that begin on p. 11.*

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OVERSCAN

News, New Products and Networks

GATEWAY: "THE BIGGEST LITTLE AMIGA SHOW ON EARTH"

ST. LOUIS, MISSOURI—The second annual Gateway Computer Show, hosted by the Gateway Amiga Club, entertained nearly five hundred Amiga users and vendors under its tent. Attendees came from all over the country and from as far away as Japan. The two-day event holds the distinction of being the only Amiga show in the Midwest—if not the only major show in the US this year.

Attendees were offered dozens of door prizes as well as a taste of a huge Amiga cake. Classes offered at the show included one on ARexx lead by Merrill Calaway, author of *The ARexx Cookbook*; another on the Toaster with Greg Heifner of Heifner Communications; desktop publishing with Dan Weiss; and DeluxePaint with Brandt Dargue. The keynote address was given by, yours truly, Dale Larson.

Among the new products available for sale at the show were ***Oregon Research's*** **Termite**, a terminal emulation program with many advanced features and **DiskSalv 3**, Dave Haynie's disk utility now commercially available from ***Intangible Assets Manufacturing***. Also on display, **MultiFinder**, a new database package from ***Data Management & Research***.

Other developers present at the show included ***AMIGA Game Zone, Amiga Library Services*** (represented by Fred Fish's son), ***Pure Logic Software*** (creators of **On the Ball**), ***Soft-Logik***, which exhibited the latest **PageStream**, and ***Whitestone Publishing***.

Many developers who were not able to attend the show were there in spirit, nonetheless, having sent "care packages" to distribute to attendees, including ***Electronic Arts***, which teased the crowd with a promotional flyer announcing **DPaint V**, scheduled for release by the time you read this. Bob Scharp, show chairman, and The Gateway Amiga Club did a wonderful job with this event and Amiga users across the country certainly have something to look forward to in the year ahead.

(For more information about the show you can contact Dale L. Larson at dale@iam.com.) ***—Dale L. Larson***

FLYER "GARAGE"

The **Drive-In** ($499, ***Desktop Video Systems***) may not offer twilight shows and sneak previews, but it does offer a complete hard drive expansion system for your Video Flyer and other nonlinear editing systems. It includes a heavy duty case, 250-watt power supply, internal SCSI cabling, external SCSI pass thru connectors, SCSI ID switches, power/hard drive activity LEDs, and three cooling fans. The Drive-In supports several Flyer-compatible hard drives, CD-ROM drives, and tape drives. An optional adapter kit, lets you access all three SCSI-2 controllers included with the Flyer. The Drive-In is available in several different configurations and as a pre-configured system with hard drives installed and ready to go.

JET SET

Super DJC3 and **Super LJ4** from ***Creative Focus*** (each $60) will put your Amiga in the driver's seat of your Hewlett-Packard color printer. The Super DJC3 printer driver is compatible will all DeskJets, including the 1200C, 520, and 560C. Super LJ4 is for use with all HP LaserJets, even the new 4L and 4P. Each driver provides direct Preferences access to at least 14 different typefaces and offers extended commands for text output and ink control. Both are compatible with AmigaDOS 1.3 and later. A special discount is offered to owners of previous versions of the Super DJC driver to upgrade to Super DJC3.

COMMODORE WATCH

Just as this issue was going to press, Creative Equipment International (CEI) of Florida was expected to sign an agreement offering to purchase the assets of Commodore. While such an agreement by no means guarantees CEI's chances of ownership of the Amiga, it came as an unexpected development in a negotiation process in which the unpredictable has become commonplace.

In mid-October, under a deadline from the Bahamian Supreme Court, the liquidators recommended that the former management team at Commodore UK be allowed to proceed with its buyout proposal for Commodore's assets. It had been expected that the deal would be negotiated by the first week of November.

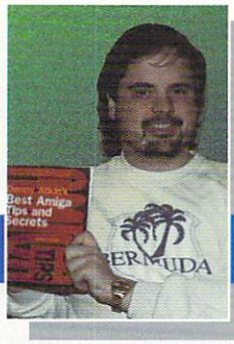
But a curious condition of the liquidation settlement called for an unorthodox "counter-bidding" round to follow the acceptance of the UK group's original bid. In other words, CEI (and anyone else still interested in bidding) would have one final opportunity to counter the UK group's offer—after which the UK group would have its own final opportunity to top the counter offer. (The reason for these Byzantine proceedings, reportedly, is to ensure Commodore's creditors that every effort has been made to obtain the highest possible price for the company's assets.)

The UK group, however, did not sign the agreement as offered, so the liquidators then made the offer available to CEI. CEI now finds itself in the position originally open to the UK group. While not confirmed as of this writing, it was expected that Alex Amor of CEI would accept the offer.

Meanwhile, the UK group says it has not dropped out of the proceedings. Joint managing directors David Pleasance and Colin Proudfoot, have intimated they will prepare a counter bid for the final, auction round of the bidding. Stay tuned for the final resolution of these bizarre proceedings.

—DS

To locate the vendors of products mentioned, see the "Manufacturers'/Distributors' Addresses" list on p. 59.



Denny on DOS

HINTS & TIPS FOR MASTERING THE OPERATING SYSTEM

#8—AmigaDOS 3.1, Part 2

By Denny Atkin

Last month we took an initial look at AmigaDOS 3.1, which was recently released by Germany's Village Tronic and made available in North America by Expert Services and Software Hut. This month we'll examine the features of the upgrade in more detail. The earlier the version of AmigaDOS you're currently using, the more 3.1 has to offer you.

Improvements Over 3.0

AmigaDOS 3.0 users will find 3.1 to be largely a fine-tuning upgrade. There are a number of minor bug-fixes in the ROMs, but they're generally not noticeable. One ROM-based enhancement that will make many A4000 owners happy is enhanced overscan support—you can now stretch the DoubleNTSC overscan value to 720x467, eliminating most of the annoying black borders.

There are no new AmigaDOS commands beyond those of 3.0, but some have been enhanced. New Datatypes allow Multiview to show ANIM and CDXL files, and CrossDOS now translates Macintosh, as well as MS-DOS, text files. A new CD-ROM file system is included that allows you to read MS-DOS and CDTV or CD32 discs connected to a SCSI interface. The hard-disk file system has also been speeded up quite a bit.

For Current 2.1 Users

There are more improvements in store for 2.1 users. Along with everything above, you'll find ROM support for 256-color Intuition screens. This means that if you own a graphics card such as the Picasso II, you can now run many AGA applications in 256-color mode without weird, sometimes-compatible system hacks. You'll also find that the new graphics.library in ROM speeds up window and screen updates even with the standard chip set.

Another ROM feature is support for Attached Screens: A screen can identify itself with another; for instance, when you pull down a paint program's main screen, the toolbox screen in front of it pulls down as well.

There is now a directory for Datatypes in the Devs drawer. The operating system can now recognize a variety of file formats, such as ANIM, IFF, 8SVX sounds, CDXL, and AmigaGuide hypertext help files. A viewer, Multiview, is supplied that displays (or plays) any data file for which a Datatype exists.

The Workbench screen has been spruced up a bit—you can now display IFF pictures as Workbench and Window backdrops along with simple patterns. There's one downside for folks who've spent time designing fancy 16-color icons: Along with 256-color Workbench support comes a sophisticated system for allocating various colors on the Workbench screen to different applications. Because of this, you can now define only eight of the Workbench colors for icons and backdrops; the others are reserved by the operating system for dynamic allocation to programs like Multiview, which may need colors not normally used on the Workbench.

Folks who use floppies a lot will like the new DirCache formatting option that makes reading directories from floppies nearly as fast as from a hard drive. (Data transfers are not any faster, though.) If you write AmigaDOS scripts, you'll like the new RequestChoice and RequestFile commands that let you pop up mouse-controlled requesters from your batch files.

A Big Jump From 2.04

If you're still running 2.04, you'll really love AmigaDOS 3.1, for in addition to all the improvements listed above, it includes all those that were incorporated into version 2.1. You'll discover CrossDOS, which lets you read and write files from MS-DOS and Atari ST floppies, and the new Sound Preferences editor that lets you change the system alert from a simple screen flash to a tone or even a sampled sound (my system beep is a Star Trek communicator signal).

If English isn't your primary language, you'll appreciate 3.1's Locale support, which allows you to change operating-system text (and text in Locale-supporting applications) to languages ranging from Portuguese to German. The disk file system has also been improved to sort international characters properly.

The outline font-rendering engine has been accelerated and improved over the one in 2.04, and an improved ASL file-requester library includes a ScreenModes requester that makes changing your screen resolution easier in many applications.

The included PostScript printer driver isn't much to write home about, but it's better than no support at all if you use a PostScript laser printer. You'll also see improvements in nearly every command and in Workbench programs: better interfaces for Format and Diskcopy, more options for CLI commands, and so on.

For 1.3 Users

Do yourself a favor and upgrade! Not only will you see all the new features above, you'll also get a new, 3-D user interface, a much faster operating system, outline-font support, common CLI commands in ROM, the ARexx command language, virtual screen support, and much more.

You can also run many new commercial programs, such as PageStream 3.0 and Pixel 3-D Professional, that won't run under 1.3. It's like having a completely new computer! ■

Quick Tip

One reason to buy AmigaDOS 3.1 is to get some of the best documentation ever created by Commodore. Three manuals cover Workbench, AmigaDOS, and ARexx in wonderful detail. For once, you'll really be able to find the answers to most of your questions by Reading The Friendly Manual.

Denny Atkin is author of the book ***Denny Atkin's Best Amiga Tips and Secrets****. Address him via e-mail at DennyAmiga@aol.com, or c/o* ***AmigaWorld****.*

Photo Opportunity

It may be true that the camera never lies, but you needn't worry; with a package like ***Almathera's*** **Photogenics**, every image can be picture perfect. The software combines the best of both worlds: image conversion with the features of a paint program. You can load an image from various file formats (including, JPEG, IFF, and GIFF), and save it in another. Also, you can manipulate multiple images (each with its own resizable window) using one of the program's built-in brushes (including chalk, pencil, and pastel), or retouch it with the Airbrush feature. It requires an AGA Amiga, AmigaDOS 3.0 or later, and 2MB of RAM (4MB of RAM and a hard drive are recommended).

Every image can look like a work of art with Photogenics.

The Amiga Makes a Surprise Splash at Future Entertainment Show

LONDON, ENGLAND—In a somewhat surprising turn of events, the Amiga line had its own large booth at the '94 Future Entertainment Show. All parties were convinced that the Amiga would be a "no-show" at this year's event, in light of the Commodore liquidation proceedings. It is to the credit of David Pleasance and team that they were able to coax the trustees into allowing them a booth at the show—one stipulation: Commodore, no; Amiga, yes. Under a banner proclaiming "Amiga" instead of the familiar Commodore logo, the former management team of Commodore UK reminded everyone that the Amiga is still a viable force, and without offering any details, promised new developements in time for the next major show—the World of Amiga in early December.

Video applications had a strong presence at the show. A demonstration of the full-motion video card for the CD32 impressed many. The **Raptor** (reviewed in Nov. '94) likewise, wowed the crowds. Also on display were real-time 24-bit video digitizers from both ***Gordon Harwood Computers*** and ***Rombo***.

HiSoft showed off its new 12-bit sound sampler, **Aura**, for the Amiga 1200. Aura (about $150) offers OctaMED-compatible editing and effects, and claims to have a 72 db signal-to-noise ratio.

Two new versions of popular word-processors were premiered at the show. **Wordworth 3.1** from ***Digita*** features faster internal functions, drag and drop editing, foreign language dictionaries, landscape printing, and enhanced support for PostScript printers. **Wordworth 3.1SE** is a less elaborate but economical alternative for the A1200 that operates on only 2MB and a single drive. **Final Writer 3** ***(Softwood)*** features some powerful new features seen before only in packages available on other platforms.

On the gaming front, ***Ocean Software*** announced three new titles: **PGA Euro Tour, Jungle Strike**, and **Mutant Hockey**, with more in the works for the year ahead. ***Microvalue Flair*** displayed **Deadly Racer** and **Whizz**.

Although the folks at the Amiga booth were hard-pressed to reveal anything about their stand in the bid for the remains of Commodore, it is notable that they were able to pull something together for the show. What all this means is anyone's guess. Despite all the uncertainty, show attendees were delighted just to see their favorite platform back in the limelight and were hungry for an "encore" at the World of Amiga.

—Stuart Menges

All-In-One Video Studio

In a move that should prove popular with economy-minded Amiga videomakers, ***Digital Creations*** announced **SuperGen SX Studio**, a broadcast-quality video solution priced at $799.95. The new bundle incorporates DC's SuperGen SX (the S-Video version of the company's renowned genlock) and Brilliance 2.0 (its best-selling 24-bit paint/animation program) with InnoVision Technology's industry-standard video-titling software, Broadcast Titler 2.0.

DC's John Botteri promises that with SX Studio, "users can overlay titles on their videos, create animated borders, and fade between any video source and Amiga graphics." SX Studio works on all Amigas in both AGA and non-AGA modes and is available in NTSC and PAL versions.

Update Scan

CanDo 3.0 ($399.95, ***INOVAtronics***), the object-based authoring system, now features an improved interface, 53 new transition effects, enhanced object and brush commands, new tools, and more. The revision includes a new manual and tutorial. Sold separately, **CanDebug** ($199.95) will let you examine your CanDo scripts as they execute to troubleshoot your "buggy" creations. Both CanDo 3.0 and CanDebug require AmigaDOS 2.04, 2MB of RAM, and a hard disk.

MaxDOS 2.1 (***Media4 Productions***), Mac emulation software, now offers transparent handling of MacBinary files, displays the Mac's icons on the Workbench, and touts a completely rewritten manual.

GameSmith Development System ($129.95) has been acquired by ***Oregon Research*** and promises to be easier than ever to use with its new tutorial and expanded manual. In other acquisition news, ***Small-Biz Software*** of Australia has picked up distribution of **Easy Ledgers** accounting software, which has undergone a redesign.

Digital Creations, a leading developer of such popular Amiga products as Brilliance, SuperGen, and DCTV, has entered into a three-way merger agreement to form a new company called ***Play Incorporated***. The new group combines desktop-video pioneers Digital Creations, Progressive Image Technology, and an eight-person contingent of former NewTek employees who left that company early in 1994.

The Digital Creations name will be retained for the development and marketing of all present and future Amiga products, including the recently announced SuperGen SX Studio (see column, left). According to Play president Paul Montgomery, the new company will use its broad experience in Amiga desktop video/multimedia to develop also for the PC and Mac.

Prime-Time PD

ON-LINE SOURCES FOR FREELY DISTRIBUTABLE SOFTWARE

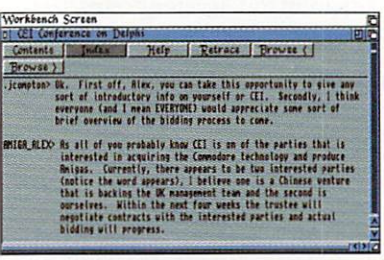
By Tim Walsh

Every day I speak with Amiga developers who ask for the latest updates on the Commodore liquidation. If these industry professionals need updating, how do the common *AmigaWorld* readers fare in their quest for information?

Thanks to the efforts of a number of concerned individuals, those readers with commercial online accounts or access to the Internet stay informed of liquidation happenings in a timely manner. I'd like to devote the remainder of this column to some of those people in the online community who have displayed an unselfish willingness to distribute important Commodore information.

Volunteer of the Year: Jason Compton

Many Amiga users probably know by now that Alex Amor, president of CEI, generously devoted three



Here's a portion of one of the CEI online conferences, as seen in Amiga Report.

evenings in recent weeks for real-time conferences on Portal, BIX, and Delphi. Along with presenting outlines of CEI's plans should it acquire Commodore, these conferences served as morale boosters to the Amiga market. End users got a chance to ask Amor questions, and these conferences laid to rest more than a few rumors.

Jason Compton, editor of the *Amiga Report* (an online AmigaGuide-format magazine) captured these conferences, cleaned up the texts, and published the transcripts in *Amiga Report*. Furthermore, Compton turned each one around in a timely manner, usually just a few days after it was held.

Thanks to his efforts, no one needed to have an account on each network to know what was said. A quick read of the printouts of all three conferences reveals how the Portal conference differed from that on BIX (several former Commodore engineers attended the former) and how candidly Amor spoke during the Delphi conference. The Amiga community owes Jason Compton a round of applause for his work.

Best Liquidation Summary: Dan Stets and Steve Ahlstrom

CompuServe's Amiga User Forum holds once-a-week live conferences with *Philadelphia Inquirer* reporter Dan Stets. Maintaining contact with the trustee overseeing the liquidation and asking the right questions, Stets has revealed more hard-hitting facts than anyone else online.

Shortly after the October 15th "deadline" set by the Bahamian Supreme Court, Amiga User Forum users were treated to a comprehensive summary of the liquidation by Amiga Forum sysop Steve Ahlstrom. His concise description of the legal proceedings was first-rate. It detailed Commodore UK's good-faith verbal agreement, the agreement between Commodore's major creditors and the trustee to hold an auction of sorts, and the process in which the assets would be awarded to the highest bidder. (See "Overscan," p. 4, for the latest details.) No one else has managed so far to publicly summarize the details as accurately as Ahlstrom.

Roundtable Roundup: Deb Christensen

When it comes to keeping large numbers of Amiga users informed, a lot of credit goes to GEnie sysop Deb Christensen. As I mentioned in last month's column, the Amiga Roundtable publishes the transcript of *AmigaWorld*'s hotline, and Deb updates it as necessary. These hotline text files consistently generate download numbers roughly two to three times the norm for the most popular Amiga files in the Amiga Roundtable.

Besides keeping her forum informed of what *AmigaWorld* is saying, Deb has a legendary reputation for diplomatically cooling things down when tempers flare or the tales get a little too tall in the message bases, and she does a commendable job of keeping the Amiga libraries fresh and current with offerings from the Internet. Of course, she also keeps the chat areas hopping with lots of quality chatter.

Honorable Mention: Joanne Dow and Harv Laser

No discussion of the online conferences with CEI is complete without mention of two hard-working sysops: BIX's Joanne Dow and Portal's Harv Laser.

Joanne deserves credit both for the CEI conference on BIX and for striving to maintain the core group of Amiga developers who are continually being lured away to other platforms as the liquidation process drags on. When the call goes out to beef up Amiga development, we're hoping that Joanne spearheads the necessary call to arms.

On a similar note, Harv Laser always makes it a point to go the extra mile to report on Amiga happenings. Working with Jason Compton, he arranged for the initial online conference with CEI. Furthermore, he has developed the Amiga Zones on Portal into a first-rate source of freely distributable Amiga files. When it's time to get the Amiga back on its feet, we're hoping that Harv, and others like him, will be there to help make it happen.

Network Voice Numbers

BIX
800/695-4882
617/354-4137

CompuServe
614/457-0802
800/848-8199

Delphi
800/695-4005

GEnie
800/638-9636

Portal
408/973-9111
800/433-6444 ■

Write to "Prime-Time PD" c/o ***AmigaWorld*** *Editorial, 80 Elm St., Peterborough, NH 03458; or contact Tim through the Internet at "twalsh@bix.com".*

REVIE

Professional-quality, 24-bit paintbox.

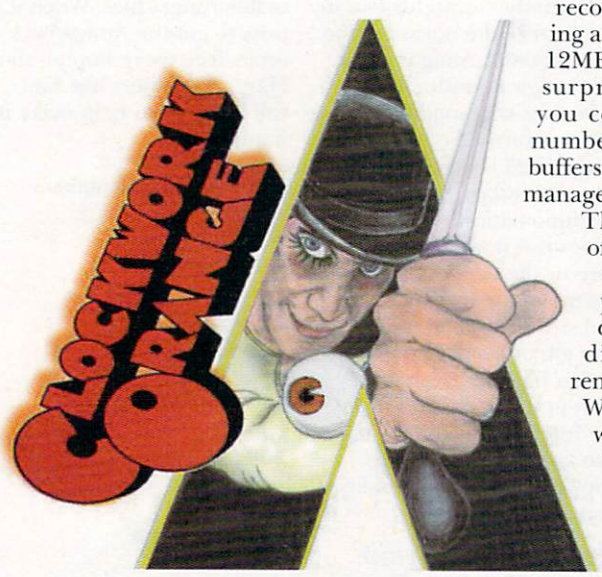
Alpha Paint

InnoVision Technology $699.95
All Toaster-equipped Amigas.
1.3/2.x/3.x compatible.
Hard drive installable.
Copy Protection: installable on only one machine.
Accelerator compatible.
***Minimum system*: Video Toaster, 12MB RAM.**
***Recommended system*: Same as minimum.**

ToasterPaint is the Video Toaster's weakest link. This was true when it was first released, and every subsequent update has left it virtually unchanged. Happily, InnoVision, the maker of Montage 24, has recently released Alpha Paint, a new 24-bit paint package that renders Toaster Paint completely obsolete.

Buffer City

Alpha Paint does something no other software can: It operates interactively in real time directly on the Toaster's framebuffer. Furthermore, you don't need the latest and greatest Toaster system to use it. It worked just fine on my A2000 with 1MB of chip RAM and my original Toaster. However, you will need a goodly amount of fast RAM—Innovision recommends using a minimum of 12MB. This is not surprising when you consider the number of framebuffers Alpha Paint manages.



The program offers no flashing screens, periodic updates, HAM8 displays, or render buttons. What you see is what you get. The drawing speed is very snappy; even with a good-sized, multicolored, edge-feathered transparent brush, Alpha Paint keeps pace with your strokes. And it does a pretty good job of not squaring off the corners of your freehand curves when your movements are faster than its draw speed.

Ads for the program tout it as a 36-bit paint program, a number that derives from 24-bit RGB, 8-bit stencil, and 4 bits of dithered video alpha. There are two 24-bit RGB buffers (main and swap), two 8-bit video-alpha buffers (each coupled to its respective RGB buffer), and a single 8-bit stencil buffer. The 8-bit video-alpha buffers control the way the graphics are mixed with live video, and the stencil buffer is used both for masking drawing operations and to control compositing between the main and swap screens.

Because the Toaster provides for only 16 levels of alpha transparency in the Switcher, Alpha Paint dithers the output of the video-alpha buffers down to 4 bits, yielding an apparent 256 levels of transparency. On top of this, brushes can possess their own 8-bit graphics and 8-bit video-alpha channels that determine, respectively, how the 24-bit brush is applied to the work screen and blended with live video.

Menu Work Area

To activate Alpha Paint, you first start the Toaster's Switcher, then quit it (to conserve memory), and then start Alpha Paint. After a few moments, up pops the interface on the lower half of the Toaster program output. A click of the mouse toggles back and forth between the interface and the full work screen.

You will see a bank of 20 color boxes lining the top of the interface, and nine other hidden banks are available. These boxes may hold multicolor linear, concentric, or radial gradients that you can set up in the Palette menu. Clicking a box gives you quick access to a multitude of predefined gradients—not only for color, but also to modulate alpha.

To locate the vendors of the products reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 59.

W S

Below the color boxes are icons for the standard drawing tools. These icons bring up additional options, such as the Fill Menu for all the filled primitives. Menu buttons and sliders control the pen/brush, palette, buffers, draw modes, image processing, input, and display. Alpha Paint includes watercolor, mix, gamma, oilpaint, rub-thru, sharpen, and negative. An onionskin display mode makes compositing with the rub-thru draw mode easy. The mix draw mode is similar to watercolor, and I used it to create the painterly image of a hurricane lamp that originated as a LightWave rendered image. You can test the tools in the image-processing menu on a mini version of the work screen before actually applying them, thus saving lots of time in going back and forth to tweak the parameters.

Whether it's a "water-color" look (above) or tweaking a hand-sketched color scan (Clockwork Orange artwork, preceding page), Alpha Paint delivers.

As shown by the three screens on this page, Alpha Paint gives you a number of control panels for easily changing colors and accessing drawing tools.

Font Support

Brush handling in Alpha Paint is excellent. Besides having its own two alpha channels, it has tools for interactive 3-D perspective and scaling, beveling, shadows, outlines, and even glows. From the brush menu, you can load Toaster, Chroma, and PostScript fonts, but not standard Amiga fonts.

A wealth of controls augment the text, including those for brush manipulation. An angle entry lets you italicize any font and run the text around a circle. A preview window lets you quickly view text with your chosen font and type size.

Alpha Paint works wonderfully with pressure-sensitive tablets, such as my CalComp Drawing Board III, as well as with Wacom tablets. You can enable or disable pressure sensitivity, which modulates the transparency of the drawing operation. The program's multilevel Undo function is the best I have ever seen, with its configuration dependent upon the size of the drawing operation and the memory available. I was able to undo ►

seven full screen operations in a row!

Redo and Redo+ also deserve mention: Redo re-executes the last operation, while Redo+ takes into account new draw modes, attributes, colors, or brushes. Finally, besides providing the ability to zoom in on your work, a hotkey lets you zoom out 75%—handy for dealing with the overscan areas of the screen.

Short Gripe List

On the downside, Alpha Paint does not handle multitasking well. You do things such as render scenes in the background. However, as there's no way to temporarily iconify Alpha Paint, you must save your work, quit, then access the other program to see your progress. I also encountered a few minor bugs, some of which trashed parts of the interface screen.

Topping my wish list for improvements is the addition of animation support, a pantograph tool, ARexx support, and Palette load and save. Tablet pen pressure should also control other aspects, such as gradient color and pen/brush size.

Be assured, however, that Alpha Paint is an extremely professional package that serves as a tremendous asset to any Toaster-based studio. It has loads of power and options, tempered with a simple, easy-to-navigate interface. You need look no further for a first-rate video paintbox.

— Mark Thompson

VLab Motion

fully functional non-linear editor and real time 24-bit animation recorder

- *Outstanding quality non-linear editor*
- *16 bit audio with the Toccata*
- *Complete ARexx support*
- *Comprehensive digital effects*
- *Digital character generator*
- *Chroma keying for "Blue Box" effects*
- *Composite & Y/C input & output*
- *Freely adjustable data rates*
- *Optional transcoder for component in/output*
- *Powerful, easy-to-use MovieShop software features time line & hierarchical editing*
- *$1750 for VLab Motion or $2150 with the Toccata*

"PRODUCT OF THE YEAR" AMIGA PLUS (Germany)

"Here at last . . . an affordable, broadcast quality non-linear editing system has finally arrived in the form of VLab Motion! As an independent film company that produces low-budget B-movies, we have long awaited the ability to create big-budget Hollywood effects. Now, thanks to VLab Motion we are able to create everything from laser blasts and motion morphs to blue screen composite shots — just like the big guys. A whole world of opportunity unfolds once you have the ability to digitize and manipulate your images in the digital domain. I am amazed at the output quality . . . it's very clean, and suits our needs perfectly. We cut our last project on the Avid, and let me tell you, for about ONE-TENTH the cost of an Avid, **the VLab Motion System will blow your socks off!**"

— Michael Ricks, Producer/Director
SUNSTONE PICTURES, Phoenix, Arizona

A PERFECT "10" AN AMIGA COMPUTING FIRST!

Noah Ji's

Also distributing Retina Z-III, Retina Z-II, VLab Y/C, and Toccata 16.

3591 Nyland Way • Lafayette, CO 80026
Voice: 303.499.1975 Fax: 499.1979 • Tech: 447.8126 • BBS: 969.8967

All product names are trademarks of their respective companies.

MaxDOS

Media4 Productions, $124.95

CrossMAC

Consultron, $149.95

All Amigas.
2.1/3.x compatible.
Hard-drive installable.
Not copy protected.
Accelerator compatible.
***Minimum system*: AmigaDOS 2.1.**
***Recommended system*: One or more high-density floppy drives, mfm.device, Mac-formatted SCSI devices.**

Macintosh file-reading and -writing software for the Amiga.

In the computer world, the Amiga's media format is neither PC- nor Mac-compatible. Amiga utilities that bridge this gap include a variety of emulators, translators, file readers, graphics-conversion programs, and so on. MaxDOS and CrossMAC, both recent arrivals on the scene, are perhaps the most-welcomed utilities of all. Both programs let your Amiga read and write on Macintosh disks and partitions, much as CrossDOS enables your Amiga to read and write on PC-formatted disks.

MaxDOS

MaxDOS is designed to read and write on high-density Mac-formatted disks using Consultron's mfm.device that's bundled with AmigaDOS 2.1 or later, but you can use MaxDOS as is on Mac-formatted SCSI devices. With appropriate drivers, MaxDOS also works with Emplant and A-Max-formatted devices.

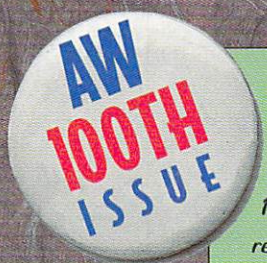
It's a little tricky to install MaxDOS, as you need to enter the name of any alternate device driver. A "browse" feature would be handy to pluck them from the directory list instead of having

Continued on p. 40.

Amiga's 10th Anniversary Year

Scrapbook

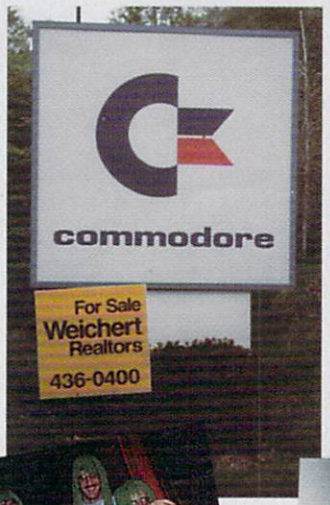
By Denny Atkin



1995 marks two milestones in Amiga history. First, with January we begin the 10th Anniversary Year of the Amiga (you'll remember that the original Amiga 1000 was introduced in 1985, amidst great fanfare, at New York's Lincoln Center in July). 1995 also marks AmigaWorld's own 10th anniversary (we, too, had our debut at that same Lincoln Center unveiling)—and, in addition, January '95 is the 100th issue of AmigaWorld. For all of you who've been with the Amiga—and with us—AW celebrates these anniversaries with this special scrapbook that looks back at highlights of the Amiga Decade.

Our special thanks to Denny Atkin, who prepared this feature, and to the many people who shared memories and mementos with us during the process.

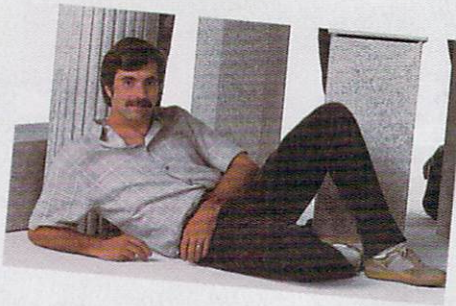
—Dan Sullivan



What was the most significant or innovative thing that the Amiga brought to personal computing?

"Creativity. Not just in the artistic way, but in the software and the methods used to solve problems. The software on the Amiga was innovative and advanced because the Amiga brought out the best in people. It was truly a wonderful machine with enough technology and innovation to keep it alive in spite of the IBM-PC dominated world."— Michael Sinz, Senior Amiga Systems Engineer

"Huge power, graphics and video capabilities, all at a low, low cost."— RJ Mical, Director of Intuition

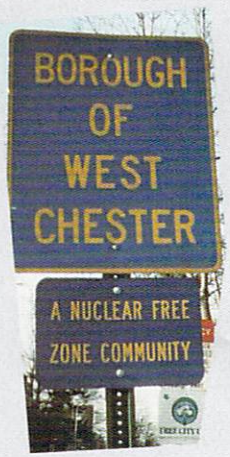


RJ Mical

Men At Work

Dave Haynie

"Multimedia done right. While many still balk at the truth, this thing everyone calls Interactive Multimedia is a real-time, multitasking problem. The reason everyone likes Multimedia is because human beings are used to a real-time, multitasking world. The Amiga got all of the elements of this right ten years ago. Sure, many systems now have updated versions of these elements that go much faster. Yet to date, no one's put it all together in one system again."— Dave Haynie, Senior Systems Design Engineer



As the Amiga moves into its second decade, what would you write in its graduation yearbook?

"I don't think the Amiga has graduated. If anything, I feel it's been held back a few years, through no fault of its own. Blame the Headmaster."— Spencer Shanson, Amiga System Software Engineer

"Always hold your head high, my little friend. You've done very well for yourself, and I'm proud of you."— RJ Mical, Director of Intuition

Jay Miner designed the Amiga's custom chips, as well as the chips used in the Atari's OCS and 8-bit computers—not to mention heart pacemakers. Jay passed away in 1994 and is very much missed.

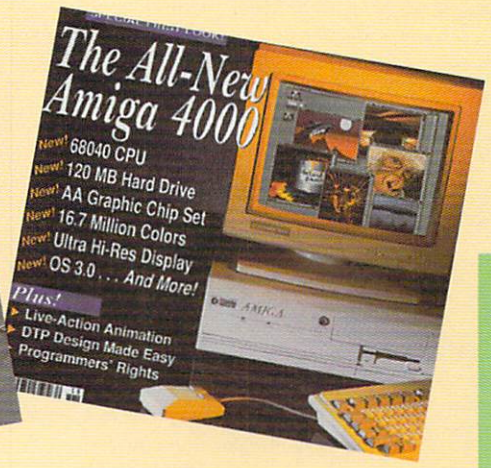
"I'll tell you this about Jay Miner: His passing was a loss for the whole world. This was a vastly intelligent, creative, sensitive person who touched many people's lives. I owe him a lot, for who I've become and for the many, many hours of pleasure I've had because of things he created for us. He is much missed, and I'll always remember him and think of him for inspiration."— RJ Mical

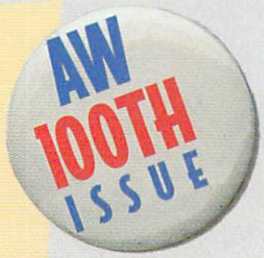
"It would be a scribbled drawing of a meteor crater located where Redmond, Washington once stood, with the inscription, 'Chin up, Amy. What goes around comes around!'"— Ross Hippely, Senior Technical Writer

Amiga/*AmigaWorld* Timeline

1982 Hi-Toro, Inc. is formed by a group of midwest investors hoping to cash in on the videogame craze. The company later changes its name to Amiga, Inc., after people confuse it with the lawn-mower producer.

Top-of-the-Line Amiga: Then and Now





Amiga Then, 1985

Amiga 1000
7.14-MHz 68000 (less than 1 Million Instructions Per Second)
256K RAM, 512K maximum (later 8.5MB maximum) 880K floppy
Hard drive optional, approximately $1000 for 20MB 4096 colors
No internal expansion, one external slot

Amiga Now, 1995

Amiga 4000
25-MHz 68040 (16 Million Instructions Per Second)
6MB RAM, 1GB maximum
1.76MB floppy
120MB hard drive included
16.8 million colors
Four internal slots

"The new Amiga personal computer from Commodore International is a machine to rekindle the enthusiasm that drives personal computing." (Phil Lemmons) "We think this machine will be a great success; if that happens, the Amiga will probably have a great effect on other personal-computer companies and the industry in general."— Byte, August 1985.

Famous Amiga Users

Arthur C. Clarke
B.B. King
Andy Warhol
Walter Williams (creator of Mr. Bill)
Herbie Hancock
Timothy Leary
Oingo Boingo (now just plain Boingo)
Billy Idol
Gary Coleman
Todd Rungren
NASA
Stanford Linear Accelerator Center
DisneyLand and DisneyWorld
Amblin Entertainment

B B King

Andy Warhol

1983 John J. Anderson leaks word in *Creative Computing* about an incredible computer, codenamed Lorraine, that would feature unheard of graphics and sound, multitasking, an 80-column display, 5+MB of RAM, and more.

1984 Los Gatos, California-based Amiga Inc. is purchased by Commodore.

1985 July 23: The Amiga 1000 is unveiled at New York's Lincoln Center, where Andy Warhol dazzles the assembled audience by creating a real-time portrait of Blondie's Deborah Harry. *AmigaWorld*'s premiere issue makes its debut.

September: Amiga 1000s ship to consumers. *AW* lists "over 25 programs" available for the new computer.

Amiga Firsts

"July 23, 1985. If you are interested in history, you will want to remember that date; it is the day that IBM's PC, Apple's Mac, and scores of lesser silicon marvels of our decade became obsolete."— Benn Dunnington, INFO, Sep/Oct. 1985

✓**First** personal computer to ship standard with a preemptive multitasking operating system. (Windows 3.1 and Macintosh System 7.0 still support less-efficient, cooperative multitasking.)

✓**First** personal computer to ship with a 32-bit operating system.

✓**First** personal computer to support more than 16-color output as a standard feature.

✓**First** personal computer with an inexpensive genlock option.

✓**First** personal computer to ship standard with a double-sided 3.5" disk drive.

✓**First** personal computer to include a two-button mouse as standard.

✓**First** personal computer to offer a choice of command-line and graphical user interfaces.

✓**First** personal computer to include four-channel, digital sound on the motherboard.

✓**First** personal computer to ship standard with speech synthesis.

✓**First** (and unfortunately, only) personal computer to ship with a keyboard garage.

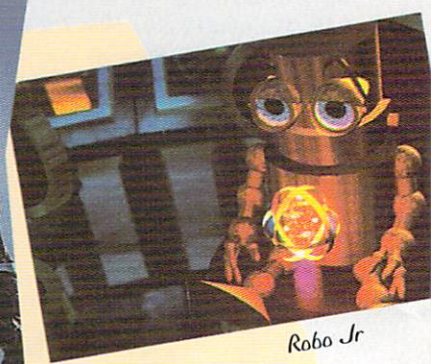
✓**First** personal computer to include plug-and-play (AutoConfig) expansion cards.

Amiga's Hollywood Highlights

TV Series:
Babylon 5
seaQuest DSV
RoboCop
Viper
Quantum Leap
Small Wonder
Miami Vice
Liquid Television
Inside Space
Max Headroom
Nick Arcade
Unsolved Mysteries
Total Panic
Clarissa Explains It All
Anamaniacs
Goof Troop
Mysteries From Beyond the Other Dominion
Robo Jr (4 Emmy Awards)

Movies:
Jurassic Park
Young Indiana Jones Chronicles
Warlock
Afterburn
Tommyknockers
Honey, I Blew Up the Kid
Death Becomes Her
The Dark Half
Panama Deception (Oscar/Best Documentary)

RoboCop


Robo Jr

seaQuest DSV

AW 100TH ISSUE

1986 The Los Gatos team begins work on the more expandable Amiga 2000, but their design is rejected in favor of one created by CBM's German hardware developers. The Mar./Apr. *AW* proclaims "Over 100 Programs Listed."

1987 The second-generation Amiga 500 and Amiga 2000 are introduced. In the Jan./Feb. issue, *AW* predicts a bright future for Amiga desktop video. The magazine goes monthly in November.

1988 *AW*'s December issue now lists "over 1200 Amiga programs"—time to stop counting!

Amiga Family Tree

Amiga 1000—*1985: This 68000-powered machine was seven years ahead of its time, providing a fast, multitasking, 4096-color system for about $2000 in the days of $4000 single-tasking, 16-color IBM 286 machines.*

Amiga 2000—*1987: It sacrificed the A1000's sleek lines in exchange for an extremely expandable, slot-packed design. It suffered a bit of an identity crisis, being released in various world markets as the A1500, A2000HD, A2500/20, A2500/30, A2000HDA/100, A1500Plus, and A2000Plus.*

Amiga 500—*1987: The most popular Amiga model, this one-piece case packed all the power of the Amiga 1000 in an inexpensive package. A European model with Kickstart 2.04 and 2MB chip RAM capability was called the A500Plus.*

Amiga 3000—*1990: Nearly the perfect Amiga design, the A3000 took the Amiga to a full 32-bit 030 architecture, got rid of the flicker, and packed plenty of speed. Also available in a tower model, the A3000T, and a Unix model, the A3000UX.*

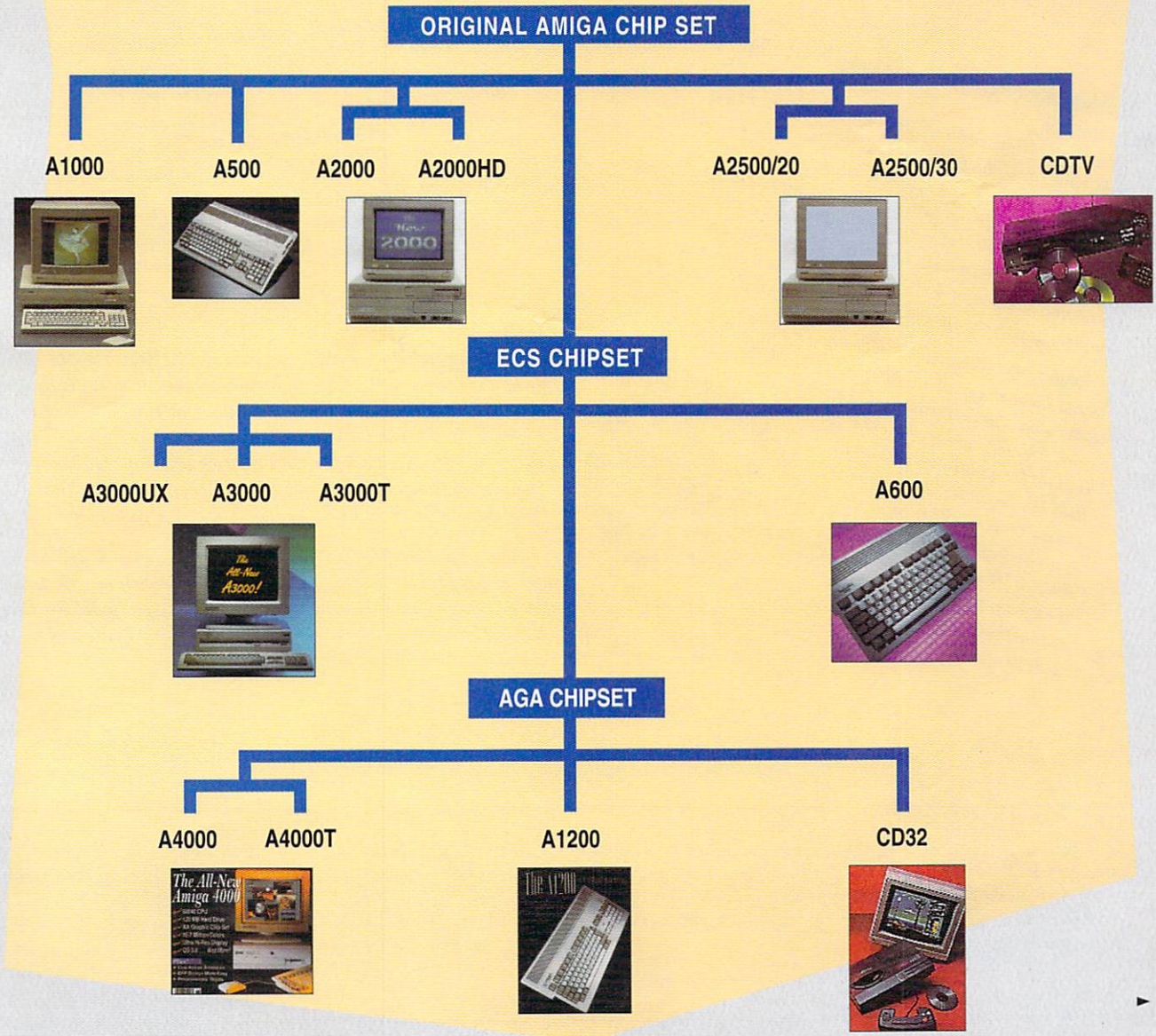
CDTV—*1991: Commodore designed this home CD-ROM player based on the A500 as a Stealth Computer, hoping to sneak it into the homes of unsuspecting computerphobes. Unfortunately, the stealth worked a little too well, and not many people noticed it.*

Amiga 600—*1992: Originally planned as a cost-reduced complement to the A500, the A600 ended up costing more and doing less. With its tiny case and internal hard drive, though, it makes a great portable Amiga.*

Amiga 4000—*1993: The pinnacle of the Amiga line, featuring a fast 68040 microprocessor and the improved AGA chip set. Still one of the most-capable video computers on the planet more than two years after its release.*

Amiga 1200—*1993: AGA graphics power comes to the masses in this sleek one-piece Amiga.*

CD32—*1994: The CDTV concept done right, this 32-bit CD-ROM game machine was a hit in Europe and could have been a contender in the U.S.*



Amigas We Never Saw

> "Amiga's speed is going to be a headache, a heartache and a headwind to the Competition."—Borland advertisement, AmigaWorld, Premiere 1985

A1000+—An $800, 32-bit AGA system with an IDE hard drive that sat in an updated Amiga 1000-style box with separate keyboard.

A3000+—An Amiga 3000 updated with a 68040 microprocessor, the AGA chip set, SCSI on the motherboard, and an AT&T 3210 DSP chip. A few lucky developers have prototypes of this unit, which was shown at the Denver DevCon in 1992 and could have shipped a year before the slower A4000 did.

A300—An ultra-inexpensive Amiga designed to sit below the A500 in the product line. This idea grew into the A600, which ended up costing more than the A500.

A2200—A stripped-down Amiga 3000 with an IDE hard drive interface. The design was completed and the machine was nearly ready to go into production, but no Commodore subsidiary would order one. Engineers referred to it as the A1000jr, a reference to the disastrous PCjr.

Products With the Mostest

The Most Anticipated Commodore Amiga Product That Never Shipped

The Amiga AnswerMate. This answering machine would have used the Amiga's built-in voice synthesis to answer the phone, recording messages digitally. Consumer-priced modems with similar features didn't appear until 1994. Advertising brochures for this then-revolutionary device went out to Amiga dealers when the computer shipped in 1985, but Commodore canceled the device due to a perceived lack of demand.

Runner-up: Commodore's Trump Card. This board would have plugged into the Amiga 1000's expansion slot and provided hardware acceleration to the snail-like Amiga Transformer software IBM PC emulator. Instead of releasing this $200 product, Commodore opted for the ill-fated $1000 SideCar, basically a keyboardless IBM XT that plugged into the side of the Amiga 1000.

Most Anticipated Product That Took a Long Time To Ship But We're Glad It Finally Did

The winner, of course, is the Video Toaster, which moved the Amiga into the forefront of the American desktop-video market. NewTek didn't officially announce the board until it was nearly ready to ship, but press leaks and trade-show previews caused anticipation to build for years.

Runner-up: Return to Atlantis, a screen shot of which appeared in the very first issue of AmigaWorld. It finally shipped about two years later.

The Most Anticipated Third-Party Amiga Product That Never Shipped

Turbo Pascal, from Borland. In an advertisement in the very first issue of AmigaWorld, Borland said "We think Amiga will take off—just like Turbo Pascal did." The company promised Turbo Pascal for the Amiga in the first quarter of 1986, but it never shipped an Amiga product. HiSoft's HiSpeed Pascal, a Turbo Pascal clone for the Amiga, finally shipped six years later.

Runners-up: WordPerfect 5.0 for the Amiga, Lotus 1-2-3 for the Amiga (which various developers have reported having seen in Lotus' Cambridge offices), and Jim Sachs' 20,000 Leagues Under the Sea (which was started back in the Amiga-1000 days and may still see the light of day on a 32-bit videogame system).

1990 April 24: The A3000 makes its debut at a "Multimedia Live" unveiling in New York.

November: NewTek's long-anticipated Video Toaster finally ships, placing the Amiga at the forefront of the nascent desktop-video market.

1991 CDTV is released. It doesn't make much of a splash, but impresses the industry nevertheless, becoming the first "set-top box" to reach the market.

1992 The Amiga 3000+ featuring the AGA chip set is previewed at the Denver DevCon in February. The product is shelved after one of the primary designers of the IBM PCjr takes over Commodore's engineering department.

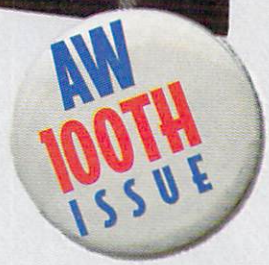
Amiga Trivia Quiz

1. What were the original names of the custom chips in the Amiga?
2. What was the original codename of the Amiga?
3. What company loaned Amiga, Inc. money and almost got the rights to the technology instead of Commodore?
4. What famous blues musician and Amiga 1000 owner was profiled in an early issue of AmigaWorld?
5. What major Amiga feature was supposed to have been deleted from the custom chip set before the computer was released?
6. The Amiga 1000 had the signatures of its creators on the inside cover; who was the only non-human to sign the machine?
7. What was the name of the Electronic Arts graphics demo shipped with the Amiga 1000?
8. What was the first ray-traced animation for the Amiga?
9. What was the Amiga 500's codename?
10. The Amiga's voice synthesizer sang lead on a filler track on a popular 80's New Wave album. What was the song?
11. What was the only game released by Commodore for the Amiga?
12. What Amiga model shipped with two microprocessors?
13. What was CDTV's codename?
14. What are the three primary custom chips in the AGA Amigas?
15. What was the last Amiga model released by Commodore?

"With the introduction of the Amiga . . . consumer computing will never be the same again."—Robert Lock and Richard Mansfield, COMPUTE!, September 1985

Bonus Question: What contribution to the success of the Amiga did these men make?

Sixty-seven issues ago (August '88 to be precise) this was the staff of AmigaWorld. Shawn and Linda Laflamme (seated left), Guy Wright (center), and Bob Ryan (right) have since left to lead less interesting lives. (They were replaced by current AW staffers Tim Walsh, Ann Record, and Swain Pratt.) Dan Sullivan (far left) and Barbara Gefvert (seated right) remain. Most of the bears still work here, too, but Bob's dog Mae works for another magazine.



ANSWERS

1. Agnes, Portia, Daphne.
2. Lorraine
3. Atari.
4. BB King.
5. HAM mode.
6. Michie, Jay Miner's dog.
7. PolyScope.
8. Eric Graham's "The Juggler."
9. Rock Lobster.
10. Information Society, "Make it Funky."
11. Mindwalker.
12. The Amiga 2500—with a 68000 and an '020 or '030.
13. Baby—due to its speedy nine-month gestation.
14. Alice, Lisa, Paula.
15. The Amiga 4000T—about 200 hand-built units were produced. Bonus Q: None. (Medhi Ali and Irving Gould.)

1993 The Amiga 4000 and Amiga 1200 are released worldwide, while CD32 hits European stores in time for Christmas. Commodore begins a string of layoffs. The AAA chip set is shelved due to lack of development funds.

1994 CD32 is released briefly in the US, but Commodore files for liquidation before a marketing push can begin.

1995 January: The Amiga begins its 10th-anniversary year, while *AW* celebrates its 100th issue. Amiga users look forward to many more years of productivity and fun with a machine that's still ahead of its time.

—Denny Atkin

ALFA DATA
GOLDENIMAGE

Better Mouse

Time and use are bound to prey on your trusty mouse.

When it's finally time to chase down a new one, you've got plenty of choices.

Should your Amiga mouse give up the ghost, it's nice to know that there are lots of replacement options. Standard mice, trackballs, light pens—you name it, and it's out there. To help you sort things out, we trapped an even dozen of these critters and pushed 'em through a wide range of performance and usability tests. But before we get to product specifics, let's look over the categories.

Types of Input Devices

Opto-mechanical Mice

The most popular mouse design available today, the opto-mechanical mouse has a weighted ball that's in contact with a series of rollers inside the mouse. As the mouse is moved along a flat surface, the rotating ball causes the internal rollers to move. The rollers rotate a slotted wheel; an LED (light-emitting diode) shines light through the slots, and optical sensors count the pulses and translate that information into X-Y coordinates. The mouse ball and internal rollers must be cleaned periodically to remove lint build-up.

Optical Mice

Instead of using moving parts, the optical mouse relies on a beam of light—bounced against a grid-covered mouse pad—to track the movement of the mouse. A pair of LEDs point out of the bottom of the mouse, with one tracking X movement and the other tracking Y movement. When light from the LEDs strikes the pad, it is reflected back into the mouse and analyzed by a series of optical sensors. These sensors test for changes in the light consistency and convert that information into X-Y coordinates. Because they have no moving parts, optical mice need less maintenance than opto-mechanicals. However, an optical mouse must have its specially designed mouse pad in order for it to operate correctly.

Cordless Mice

The cordless mouse is usually very similar to the standard opto-mechanical mouse, except that the cord connecting the mouse with the computer is replaced by a beam of infrared energy. If you're tired of wrestling with your mouse cords, a cordless unit will give you unfettered movement within a limited area.

Trackballs

In essence, the trackball is a regular mouse flipped on its back. Instead of the roller ball moving across a flat surface, you move the ball directly by spinning it with your fingers or the palm of your hand.

Pen Mice

One of the more unusual input devices available, the pen mouse replaces the standard mouse design with something analogous to a traditional pen or pencil. A tiny roller, or opto-mechanical sensor, is present in the tip of the pen; you simply move that point across an appropriate surface to generate mouse movement. Buttons on the pen's shaft serve as left and right mouse buttons.

Light Pens

A light pen is shaped like a regular pen, but with a connector cord attached at one end and a photodetector at the other. To use it, you simply position the photodetector end of the pen near the monitor screen. Since the screen is continuously redrawn by a beam from the electron gun about 60 times per second, the photodetector detects when the electron beam passes in front of it. The light pen then transmits information to the computer, which identifies the exact location of the light pen. ►

by Jeff James

PHOTOGRAPH BY ED JUDICE

THE CONTENDERS: SEE HOW THEY RUN

Here are the results of the Amiga mouse comparisons. For an all-in-one view of how they compare, see the table entitled "Mouse to Mouse."

OPTO-MECHANICAL MICE

MegaMouse ($49.95, ***AlfaData***): With 400-dpi resolution and a two-year warranty, the MegaMouse has a great deal going for it. Quick and sensitive (thanks in part to its high resolution), it features crisp, responsive mouse buttons. It isn't very ergonomic, however, with a short, five-foot cord, and it's the most expensive mouse in this category.

MegaMouse MK-II ($39.95, ***AlfaData***): The next iteration in AlfaData's MegaMouse series, the MegaMouse MK-II is the better of the two. While it doesn't have the alacritous responsiveness of the original MegaMouse, the MK-II compensates with an extra-long, seven-foot cord, a glossy hard-plastic finish, and a heavier mouse ball.

GI-600N ($39.99, ***Golden Image***): The GI-600N's cord is six feet long, not three, as the box claims. Other things in its favor are an included mouse pad and an ergonomic, palm-filling design with a glossy, hard-plastic finish. Caveat: the one-year warranty is the shortest in the opto-mechanical group.

Swifty Mouse ($39.99, ***Micro R&D***): Offering possibly the best combination of price, features and performance, the Swifty offers 300-dpi resolution, three mouse buttons, and a lifetime warranty. While the box claims that the Swifty is switchable between Atari ST and Amiga, the required switch was missing from the package I received.

OPTICAL MICE

AlfaOptic ($79.95, ***AlfaData***): A 300-dpi mouse using an optical encoder, the AlfaOptic ships with a mouse pad, a user's manual, and a mouse holder. This white-plastic mouse features three mouse buttons and a two-year warranty. The pad seemed too small for the mouse, and the cord is only five feet long, but the mouse was generally quick and responsive.

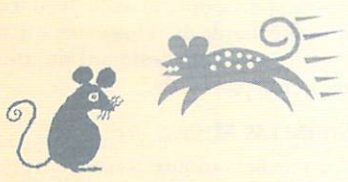
Boing! Mouse ($99, ***GfxBase***): One of the most expensive input devices tested, the Boing! mouse features the smoothest operation, with crisp mouse clicks and smooth, point-to-point movement. The included pad is part of the reason: Made of thin, high-quality metal, it offers little resistance to the mouse movement. Although it has a short (four-foot) cord and a conservative 200-dpi rating, the Boing! mouse is an excellent alternative to the standard opto-mechanical variety. ►

Mouse to Mouse

Manufacturer	Model	Type	Price	dpi	Buttons	Cord	Warranty	Other
AlfaData	MegaMouse	Opto-Mech	$49.95	400	2	5′	2 years	—
AlfaData	MegaMouse MK-II	Opto-Mech	$39.95	260	2	7′	2 years	[2]
Golden Image	GI-600N	Opto-Mech	$39.99	290	2	6′	1 year	[2] [3]
Micro R&D	Swifty Mouse	Opto-Mech	$39.99	300	3*	5′	Lifetime	—
AlfaData	AlfaOptic	Optical	$79.95	300	3*	5′	2 years	[2] [3] [7]
GfxBase	Boing! Mouse	Optical	$99.00	200	3*	4′	2 years	[3]
Golden Image	GI-6000N	Optical	$59.99	250	3*	3′	1 year	[2][3]
AlfaData	CLM-MT	Cordless	$99.95	260	3*	6′	2 years	[1] [2] [3]
AlfaData	TKB-MT-AC	Trackball	$69.95	162	3*	5′	2 years	[2] [6]
AlfaData	AlfaPen	Pen Mouse	$99.95	200	3*	6′	2 years	[3]
Golden Image	JP-100P Brush	Pen Mouse	$19.99	250	2	3.5′	1 year	[4][7]
Inkwell Systems	Light Pen	Light Pen	$129.95	N/A	N/A	4′	90 days	[5]

Key

[1] = Length of cord on infrared receiver is 6′. Cordless mouse can be up to 5′ from infrared receiver.
[2] = Atari ST/Amiga switchable.
[3] = Ships with mouse mat.
[4] = Ships with DeluxePaint II.
[5] = Includes Light Pen driver software.
[6] = Mouse button lock feature.
[7] = Ships with mouse holder.
* = While some Unix/X-windows programs support a third button, I know of no other Amiga programs that do so.



Another Barrier SMASHED!

Now you can read and write files on **Mac floppies** and **hard disks** directly from your favorite Amiga program. **CrossMAC™** is a Mac File System for the Amiga®. It easily installs into the Amiga operating system to allow you to transparently access files on Mac disks from any application.

CrossMAC is packed with many features, since it's based on our experience designing **CrossDOS™**. (The same **CrossDOS** included in the Amiga's OS)

Requirements: *Any Amiga with at least 1 M of RAM and AmigaDOS 2.0 or higher.*

File System Features:

- Read/write Mac low* and high** density floppies (including Amax and Emplant disks).
- Read/write Mac hard drives (including SyQuest™ and Bernoulli™ cartridges and Amax™ and Emplant™ partitions).
- Read Mac HFS CD-ROMs.
- Data and Resource 'forks' as separate files.
- Mac icons displayed under Workbench.
- Full Mac file names.
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- Optional Amiga↔Mac character translation.

* Requires either an Amax cartridge and Mac 800K drive **or** an Amax II plus/Amax IV card.

** Requires an Amiga-compatible high density drive. [***We have a limited supply of these drives for sale***].

File System Support Utilities:

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- File salvation program to try to recover files from a corrupt Mac disk.
- Resource extractor to view or copy individual resources from a Mac resource 'fork'.
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GI-6000N ($59.99, ***Golden Image***): This poor man's optical mouse has a number of shortcomings. Instead of the rigid pad included with the other opticals, the GI-6000N ships with a flexible plastic one. The mouse was quick and responsive, and is switchable for use on the Amiga or Atari ST. However, a one-year warranty and a short, three-foot cord put the GI-6000N at the bottom of the optical heap.

Cordless Mice

CLM-MT Infrared Mouse ($99.95, ***AlfaData***): If you're sick of fiddling with tangled mouse cords and long to move freely, consider this one. Although AlfaData claims a maximum transmission distance of five feet, I found it to be closer to four. AlfaData is also a trifle optimistic when it says that the mouse "works under heavy use for at least ten hours after a full recharge." In practice, I found that it usually lasted six to seven hours, beginning to move erratically towards the end of that period. Freedom is the operative word here, however; if you work within these constraints and nightly recharges, this is the mouse you want.

Dots Not All

As with monitors and printers, mice and other input devices are usually given a "resolution" rating by the manufacturer. The most common measurement for resolution is in dots per inch (dpi). The higher the resolution, the greater the ability of the input device to interpret small movements. For example, a mouse with a 400-dpi rating will respond to even the tiniest of movements, while getting the on-screen pointer to move the same distance with a 200-dpi mouse may take a considerably stronger shove.

Having an ultra-high-dpi mouse isn't always ideal. A tiny bump of your hand could send your mouse pointer zooming across the screen. Generally, a higher dpi results in faster on-screen pointer movement. If your mouse is moving too slowly or quickly for your taste, you can adjust the settings in the Input Preferences program that's found in the Workbench 2.0/3.0 Preferences drawer.

Trackballs

TKB-MT-AC Trackball ($69.95, ***AlfaData***): With its sturdy, rugged construction and smooth operation, the AlfaData TKB-MT-AC trackball emerges as the best unconventional mouse design. It occupies very little desk space. A nifty drag-lock button lets you perform mouse-drag operations without finger gymnastics; a left-button click releases the drag-lock, a fact not documented in the tiny manual. On a more unusual note, the trackball's transparent plastic roller ball alternately flashes green and red when plugged in to the mouse port, serving as a source of irritation or entertainment, depending on your attitude.

Pen Mice

AlfaPen ($99.95, ***AlfaData***): With an optical design, three mouse buttons, and a six-foot cord, the AlfaPen appears to be a workable replacement for a standard Amiga mouse. In use, I found the AlfaPen to excel as a creative instrument, perfect for drawing and painting. However, it didn't work quite as well for resizing windows, selecting menus, and so on.

The JP-100P Brush ($19.99, ***Golden Image***): At a price of less than $20, the opto-mechanical, 250-dpi JP-100P is easily the best buy in the pen-mouse category. This is true despite its being hampered by a three-foot cord and a warranty of only one year. It ships with a complete copy of the outdated DeluxePaint II and a square wooden "brush holder," which I found actually worked better as a paperweight. The JP-100P shares the AlfaPen's operational strengths and weaknesses, but it is clearly a better value.

Light Pens

Light Pen ($129.95, ***Inkwell Systems***): Clearly the most unusual product in our roundup, the Light Pen is ideally suited for use in multimedia kiosks, educational programs, and other specialized environments. A disk provides driver software that allows it to work with your applications programs. In testing it with a wide variety of Amiga software, I found it works best with graphics programs.

Not intended as a replacement for an Amiga mouse, the Light Pen works alongside your existing input device. Getting it correctly calibrated is important for efficient operation, but you should be aware that the calibration program doesn't work well if you're using a television as a display device.

Summary/Recommendations

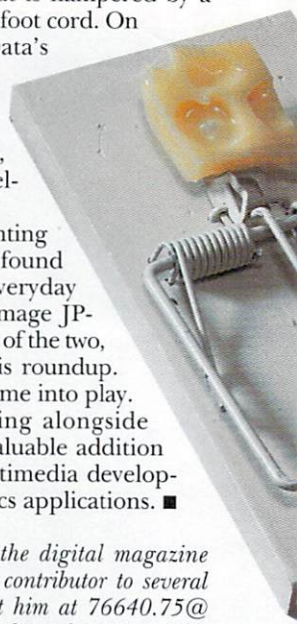
The type of mouse you choose will be strongly influenced by your own personal preferences. If you simply need a basic replacement for an ailing Amiga mouse, any of the listed opto-mechanical mice will fill the bill nicely. In the opto-mechanical category, the Micro R&D Swifty mouse offered the best combination of cord length, warranty, and other features.

If you're looking for an optical mouse, expect to pay up to twice as much as you would for an opto-mechanical model. The optical mice from AlfaData and GfxBase are the best in the optical category, each having its own strengths and weaknesses. The GfxBase Boing! Mouse offers crisp, precise operation, but is hampered by a high retail price and a short, four-foot cord. On the other hand, although AlfaData's AlfaOptic mouse didn't operate quite as smoothly, it's a better value overall.

If you're short on desk space, the AlfaData trackball is an excellent choice.

Pen mice are well suited for painting and drawing applications, but I found using them a bit awkward for everyday mouse operations. The Golden Image JP-100P is undeniably the better value of the two, and possibly the best value in this roundup. Again, personal preference will come into play.

Finally, the Light Pen, working alongside another input device, can be a valuable addition to your system if you're into multimedia development or involved in other graphics applications. ■



Jeff James, an assistant editor for the digital magazine ***InterActive Gaming****, is a frequent contributor to several other computer publications. Contact him at 76640.75@compuserve.com or c/o* ***AmigaWorld*** *Editorial, PO Box 802, 80 Elm St., Peterborough, NH 03458-0802.*

DOS Upgrade Blues

Part 1

Come here, doctor, come here quick;

this new DOS 'bout to

make me . . .

By Daniel J. Barrett

IT SEEMS THAT upgrading to the latest (3.1) version of the operating system has some Amiga users singing the blues. Not that there's anything wrong with AmigaDOS 3.1—far from it. In fact, 3.1 is the most powerful and stable operating system Commodore ever released. But it does contain a number of important changes that may catch you unawares or cause some programs you use to experience problems—especially if you are upgrading from AmigaDOS 2.04 or 2.1. (Users upgrading from 3.0 will have fewer problems.)

With the right Rx for your new OS, however, you can avoid these upgrade "gotchas." The remedies prescribed in this two-part series should help you eliminate—or at least circumvent—the bizarre little quirks you may encounter when you start using AmigaDOS 3.1.

First Things First

Before we visit the DOS doctor, though, let's dispense with a few preliminaries. First, we are proceeding on the assumption that you already have AmigaDOS 3.1 installed on your Amiga: both Kickstart (a hardware ROM upgrade) and Workbench (a software upgrade). Also, keep in mind that AmigaDOS 3.1, like previous versions, has a file called s:startup-sequence that executes every time the Amiga boots. You should never change this file under AmigaDOS 2.0 and later, for doing so can cause many mysterious problems. Even worse, if you did previously alter your startup-sequence, all those changes will be undone when you upgrade to 3.1.

What if you *do* need to customize your Amiga's startup? There are two recommended ways to proceed. First, you can drag programs into the SYS:WBStartup drawer, and they will automatically execute when the Workbench loads (see page 4-26 in the Workbench 3.1 manual). Second, you can add commands to the s:user-startup file to be executed at boot time (see page 8-8 in the DOS 3.1 manual). WBStartup and user-startup are not affected when you undertake to upgrade AmigaDOS.

Now, on to that litany of upgrade problems—and their solutions!

Weird Colors and Pointers

Are you having any of the following problems?

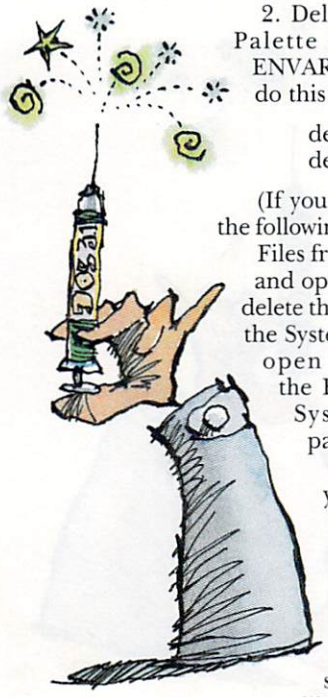
- Your mouse pointer is the wrong color.
- Your "busy" pointer has stopped appearing.
- After changing your pointer Preferences, clicking Save, and rebooting, your pointer has not changed.
- Your Workbench screen turns strange colors.
- WBPattern backdrops don't work correctly.

Any of these quirks may be due to out-of-date Preferences settings. These are stored in the directories ENVARC:Sys and ENV:Sys, in files with names ending with .prefs. AmigaDOS 3.1 uses a new format for these files that is not completely compatible with AmigaDOS 2.0 files. The solution is to delete your old Preferences settings (or move them to another directory for safekeeping) and then re-create them from scratch. I recommend that you do this even if you are not experiencing these problems, just to prevent them from occurring in the future.

Here is a method for fixing the Preferences setting for Palette that you can then adapt for all the other Preferences programs:

1. Run Palette. Write down the settings on a piece ►

ILLUSTRATED BY COURTNEY GRANNER



of paper for later reference. Quit Palette by clicking Cancel.

2. Delete the two Preferences settings files for Palette that are found in the ENV:Sys and ENVARC:Sys directories. The Shell commands to do this are:

```
delete ENV:Sys/palette.prefs
delete ENVARC:Sys/palette.prefs
```

(If you prefer to delete from the Workbench, do the following: Open the RAM disk icon, select Show All Files from the Window menu, find the Env drawer and open it, find the Sys drawer and open it, and delete the palette.prefs file found inside. Then, open the System3.1 disk icon, find the Prefs drawer and open it, select Show All Files again, find the Env-Archive drawer and open it, find the Sys drawer and open it, and delete the palette.prefs file found therein.)

3. Run Palette. Re-create the settings that you wrote down on paper in step 1. Quit Palette by clicking Save.

Repeat this method for each Preferences program, substituting the name of the program for Palette. When you are finished, reboot, and all should be well. You should need to fix your Preferences settings like this only once.

You may feel tempted to take a shortcut and not delete the settings files, but this will not work. Even if you save your new Preferences settings, the existence of the old settings file can cause a problem.

If you also want to fix all your old Preferences presets contained in the SYS:Prefs/Presets drawer, a similar method will work. Load each file into the appropriate Preferences program using the Open... menu item, write down the settings, click Cancel, delete the file, rerun the Preferences program, re-create the settings, and click Save.

IconEdit Crashes

Does IconEdit crash whenever you choose a menu item? This can happen if you are running the freely distributable program CPUBlit 1.0 (Fish Disk 528) and using WBPattern to make a fancy pattern on your Workbench screen. While I do not know exactly why this crash occurs, I have carefully verified (together with the author of CPUBlit) that it is caused by an interaction between IconEdit, WBPattern, and CPUBlit.

To get around this problem, you have several choices:

1. Upgrade from CPUBlit 1.0 to 1.1. While the update had not yet made it to common freeware distribution channels as of this writing, it should be available by the time you read this.

2. Don't use a Workbench screen pattern. Note that the screen pattern is the one marked by the word Screen in the Placement gadget in WBPattern. This is new in AmigaDOS 3.1; previously, there were only Workbench and Windows patterns. To remove a pattern, click the upper-leftmost color selection in the window, and then click Clear. Then click Save to exit.

ScreenMode/Overscan Strangeness

When you exit the ScreenMode or Overscan program, does your Workbench suddenly change to a low-resolution screen twice as wide as your monitor? And nothing will change it back except rebooting? If so, you may be running the freeware commodity SwitchNTSC, which does not work properly under AmigaDOS 3.1. The only workaround is to quit SwitchNTSC whenever you change the ScreenMode or Overscan Preferences, and then restart it afterwards. Unfortunately, the author of SwitchNTSC reports that he cannot update the program because of compiler problems.

Datatypes Not Working

Datatypes are a powerful feature that was introduced in AmigaDOS 3.0. They allow graphics, sound, and other programs to use files of many different kinds, not just IFF files.

Unfortunately, depending upon the particular way in which your Amiga's user-startup file is set, Datatypes may not be able to work properly. For instance, in trying to use programs such as Multiview or WBPattern, you may receive an "unknown datatype" or similar message. Datatypes are especially likely to malfunction if you have reassigned LIBS:.

In AmigaDOS 2.1 and earlier, LIBS: refers to the directory SYS:Libs. In AmigaDOS 3.1, this has changed. It now refers to both SYS:Libs and SYS:Classes, using this Assign Add command in the s:startup-sequence file:

```
Assign >NIL: LIBS: SYS:Classes ADD
```

If you have modified your startup-sequence (naughty, naughty!), you may have deleted this line accidentally. In addition, some advanced users have commands in their user-startup file that reassign LIBS: to point at other directories. If you do this, also make sure to include SYS:Classes in your user-startup by adding the Assign command given above.

Alternatively, if you use the commercial product WShell 2.0 (as I do), you might have a command like this in your user-startup file:

```
Assign LIBS: PATH:Work:Libs,SYS:Libs
```

In that case, you must change it to:

```
Assign LIBS: PATH:Work:Libs,SYS:Libs,SYS:
    Classes
```

If you do not use WShell 2.0, the above two Assign commands are not relevant to your situation.

MUI and WShell

If you use MUI (Magic User Interface on Fish Disk 967) and WShell 2.0, watch out for a conflict between the normal SYS:Classes directory and the MUI Classes directory. If MUI or your Datatypes are not working, this may be the reason. As in the previous section, MUI requires an Assign Add command to make LIBS: point at its Classes directory. For example:

```
Assign Libs: Work:MUI/Classes ADD
```

If you use WShell 2.0, you may be tempted to do this:

```
Assign LIBS: PATH:SYS:Libs,SYS:Classes,Work:
    MUI/Classes
```

Beware! Both the SYS:Classes and Work:MUI/Classes directories have subdirectories with the same names. This can cause conflicts. Instead, put

```
Assign LIBS: PATH:SYS:Libs,SYS:Classes
Assign LIBS: Work:MUI/Classes ADD
```

in your user-startup, and all will be well.

NickPrefs Problems

If you are using NickPrefs (Fish Disk 780) on your Amiga, be warned that many people on USENET have reported problems with NickPrefs under AmigaDOS 3.1. If your system appears unstable, try removing NickPrefs and see if the problem goes away.

Use the Real Thing

Finally, did you obtain an officially licensed version of AmigaDOS 3.1? (The German company Village Tronic arranged with Commodore—before the liquidation—to sell a licensed version of 3.1. Expert Services and Software Hut are distributing it in North America.) If not, you may be running an outdated beta version of AmigaDOS. Some of these have appeared on BBSs and other freeware distribution channels, but don't be fooled—AmigaDOS is not freeware! It is a commercial product.

Beta versions of AmigaDOS are only for testing by registered developers, and those versions may have serious bugs that can damage your files. To make sure you are running the genuine AmigaDOS 3.1, use the Workbench's About... menu command. The Kickstart version should be 40.63, 40.68, or 40.70, and the Workbench version should be 40.42. If not, then you should contact your dealer to obtain the correct version of 3.1. (The reason for all the Kickstart versions is that Village Tronic found that version 40.70 did not work correctly on some Amiga models. The differences between the versions are very minor and pertain mostly to SCSI and IDE interfaces.)

A Final Word

AmigaDOS 3.1 is a big improvement over 2.1 and its predecessors. Every upgrade, however, comes with at least a few problems, and I hope that this series will ease your transition to the Amiga's latest and greatest operating system.

Next month, we'll conclude by troubleshooting some further 3.1 "gotchas" you're likely to encounter, including problems concerning speech, ARexx, protection bits, requesters, rebooting, and hard-drive documentation. "By then you'll be ready to lose those upgrade blues." ■

Daniel J. Barrett is a long-time Amiga user and the author of BLAZEMONGER. He is currently pursuing a Ph.D. in computer science at the University of Massachusetts. E-mail him at barrett@cs.umass.edu. The author wishes to thank Osma Ahvenlampi, Klaus Burkert, Eddy Carroll, Mario Kemper, Mike Meyer, and Chris Wolf for helpful information that contributed to this article.

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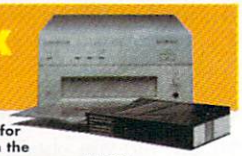

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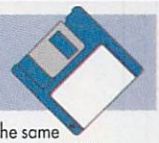

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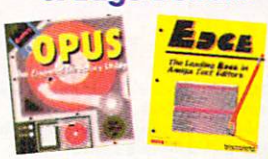

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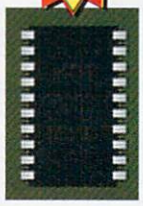

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Two-Dimensional Art For Exhibition

71

A continuing series of tips, techniques, and tricks for creating more imaginative Amiga graphics.

By Joel Hagen

IN SEVERAL RECENT "Accent" columns, I've discussed computer art in gallery exhibition from the perspective of installations—sculptural constructions assembled in a gallery for the duration of a show. This month we'll explore some some of the technologies available for getting your two-dimensional computer art into a gallery-ready form suitable for exhibition.

The Iris Solution

Computer art is usually created and viewed on a monitor, where the artwork is seen as pure pixels of light. Translating that light into high-quality printed form presents a challenge. Perhaps the most direct solution is simply to send a disk containing your image to a service bureau to be made into Iris prints. Iris printing technology is now widely available for transferring computer images to paper or canvas, and many print artists are turning to it to produce copies of their work. Iris prints are not cheap, but the results are superb.

Other printing technologies available through service bureaus offer results and prices competitive with the Iris process. It is now possible to print your images at virtually any size you desire. Talk to your local print shop or browse through the yellow pages to track down a suitable service bureau.

To get the best results, especially if you want your prints to be large, you should work at a high pixel resolution on the computer. The more pixels in the original image, the better the print. Remember, too, that you can work on a "page" larger than your screen by scrolling through it. Of course, working on a large computer image in 24-bit color requires a lot of RAM and produces huge files, and getting these files from your Amiga to a service bureau can present problems. One solution is to use ADPro (Elastic Reality) or some similar conversion software to translate your Amiga image into a format such as TIFF that the service bureau can handle, and then transmit the file from your machine via modem.

Another solution is to use removable cartridges or optical disks to transfer files. While floppy disks hold less than one or two megabytes of information, removable cartridges can contain more than 200 megabytes. SyQuest cartridges seem to be the most widely accepted media at service bureaus, but Bernoulli is gaining ground, as are optical disks. Not many service bureaus deal with Amiga-format images or disks, but you can transfer your image files to IBM- or Mac-format cartridges using any of several solutions outlined recently by Denny Atkin in *AmigaWorld* (Jul. and Aug. '94, pages 14 and 22, respectively). I use MaxDOS 2.0 (Media4 Productions) on the Amiga to transfer files to Mac-format, 150MB cartridges on an external Bernoulli drive. Such cartridges can be taken or shipped to a service bureau, many of which will even mount and frame your finished work if you so desire.

Doing It Yourself

If you plan to do all the printing and mounting yourself, one approach is to simply assess the resources you have available, then find a creative way of using them to produce finished work that will hold its own with artwork you see in galleries. Look at the kinds of paper being used, the way images are placed on a page, the way the piece is framed or mounted, the way it is signed, and so on. You might regard this as the fundamental "protocol" of gallery art. Working within that protocol will increase the chances of having your work accepted and shown.

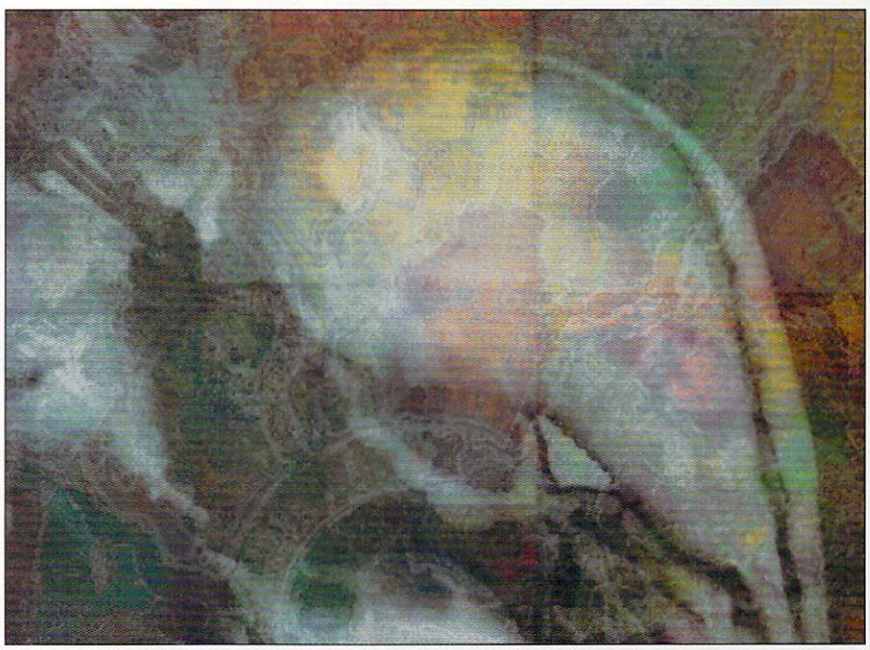
California artist David Bacigalupi creates signed limited editions of computer prints that have been exhibited in the United States and Europe. To do this, he uses nothing more complicated than laser-printer output on 8½ by 11-inch paper. The prints are elegant diffusion-dither renderings of his black-and-white screen art. You

Numerous technologies now provide interesting ways, both costly and inexpensive, of getting your two-dimensional computer art into gallery-ready printed form.

could achieve a similar effect by experimenting with the printing options of your graphics or desktop-publishing software. It often helps to print the image at a reduced size to increase its resolution on the paper. Each of David's 3- by 4-inch images is surrounded by a hairline border and centered high on a vertical sheet of 90-lb rag paper. Some laser printers allow a flat feed that will accommodate paper of this weight. Directly under the image on the left is the print number and edition, such as 32/50. The title is in the middle, and the signature and date on the right. David's sense of design and his attention to detail give his images the gallery presence of nicely mounted etchings. By doing a signed and numbered edition, the real and perceived value of each piece is enhanced. The buyer knows there will not be an unlimited number of prints produced, yet also understands that it is not one of a kind.

Another California artist, Roberta Lee Woods, goes to more complex lengths to produce printed versions of her computer images. Before printing, she flips each of her 24-bit color images horizontally to produce a mirror version. She then prints them out on a CalComp Colormaster printer at standard size and photocopies them on a Kodak color copier. Finally, using a lithographic press, Roberta transfers the toner from the color photocopy to full sheets of Rives BFK, 100% rag printmaking paper. The photocopy is placed face down, centered on the Rives sheet. Lacquer thinner is then spread over the back of the copy, newsprint is placed over everything, and it is quickly run through the press before the thinner evaporates. When the copy is peeled off, the result is a beautiful, full-color print neatly centered on a large sheet of archival paper.

Obviously, a technique like this requires much experimentation, but at each stage lie opportunities for controlled accidents that can yield interesting results or new ideas. Roberta looks on the entire process as part of the art she is pursuing. Her instincts and experience guide her to rich results. You should be wary, of course: Working with toxic materials is hazardous and should be done in a safe, ventilated environment, working with someone who is knowledgeable about the materials.



Getting images like this 24-bit Amiga painting into gallery-ready printed form presents a challenge. This column explores a variety of solutions.

Then There's Kinko's

Color copiers at service centers such as Kinko's also offer interesting opportunities for experimentation with large, inexpensive prints. For example, slides or prints of your work can be enlarged to 11- by 17-inch color copies at Kinko's for less than two dollars. Line art can be run through oversize copiers or even blueprint machines for interesting effects.

These ideas only scratch the surface of the possibilities you can discover for presenting your work. Explore the resources available and apply your imagination to producing finished prints within your budget. There is always a workable combination. Compose, mount and frame your work within the "protocol" of gallery presentation, and the remaining factor determining the acceptance of your work will be its quality and content. ■

Joel Hagen's credits include work in art, astronomy, science fiction, and software development. Write to him at 10512 Sawyer, Oakdale, CA 95361. Please include a stamped, self-addressed envelope for a reply.

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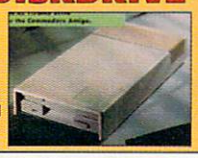

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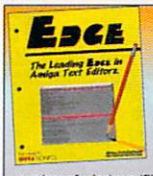

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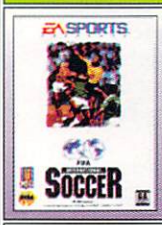

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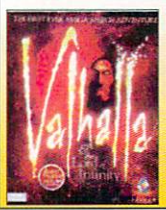

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Video in Focus

PRACTICAL ADVICE FOR AMIGA VIDEO PRODUCERS

By Paulo de Andrade

Big improvement, small investment

Cables, a seemingly insignificant part of every Amiga video system, can make a *huge* difference in results and performance. Let me give you two examples:

One day, while working on a network TV show, my engineer friend pointed to the waveform monitor and vectorscope and told me to pay close attention. A brand-new tape with freshly recorded video was playing on a 1-inch VTR, and the broadcast monitor displayed exceptional-looking images. My friend stopped the tape, fiddled around behind the VTR, and then pressed Play. The same tape now showed noisy video and degraded color. He reached behind the VTR again, and produced two cables. "This is the cause of all that trouble," he said, pointing to one.

On another occasion, I spent many frustrating hours looking for the reason why a SMPTE time-code-based system occasionally missed a frame or two while editing. Then it dawned on me to check the cables coming from the sync generator. When I replaced the old cables with new ones, I had no more problems.

Whether it is a loose connection, broken wires, or something else, you can diagnose and fix cable troubles with a little know-how.

Only the Best

The ideal video cable for your system is not the one that came with your VCR or camcorder. It is RG59/U, a thick 75 ohm coaxial cable with a plastic or rubber coating. Inside, a copper-braid shield, designed to block interference from reaching the core wire, connects to the ground signal. It is the core wire that shuttles the video signal between your components.

While the cable may have any of several types of connectors, the most common are RCA and BNC. RCA connectors, used mainly in consumer and "prosumer" VCRs, are found on some Amiga genlocks. The more robust BNC connectors lock into place, providing a better connection. They are found on broadcast and professional VTRs, more expensive genlocks, and NewTek's Video Toaster.

An imperfect connection results in signal degradation. Most metals oxidize with time, and even a brand-new cable may have an invisible layer of oxidation. Because gold is practically immune to oxidation, it is best to use gold-plated connectors. Gold RCAs are easy to spot, as the whole connector is plated with the yellow metal. BNC connectors require a detailed inspection, as only the connector's center is gold.

Make or Buy?

You can buy good video cables assembled with the necessary connectors, or you can put together your own.

Ready-made cables save you time. You can find professional-quality cables in different lengths and with various types of connectors from sources such as ***Markertek*** and ***Comprehensive Video*** (*see the "Manufacturers'/Distributors' Addresses" list, p. 59*). The various components of your system may use different connectors. For example, your Video Toaster has BNC connectors, but your VCR may have RCA jacks. While the Toaster comes with RCA-to-BNC adapters (so you can use regular RCA cables), it is best to use a cable with a BNC connector at one end and an RCA at the other. The adapters offer a less-than-ideal connection, and act as an unnecessary "bridge" in the path.

Assembling your own cables can save money. If you do so, be sure to use quality components (which both Markertek and Comprehensive can provide). If you are using BNC connectors, a good investment is a crimp tool; this lets you mount the connectors to the cables very tightly without soldering. (An inexpensive kit that includes several connectors, a crimp tool, and a special cable stripper may be all you need besides a length of cable.) If you use RCA connectors, you may have to do some soldering.

Whether you make or buy, use the shortest cable that will do the job, because the signal degrades as it travels through long wires.

To avoid interference, do not run your video cables parallel to power cables. If they must cross, make sure they do so at right angles.

Physical Exam

Two of the most common causes of cable malfunction are broken wires and short circuits. Both are easily diagnosed with a multimeter, which is also useful for testing cables you assemble yourself. You can find multimeters at major electronics stores and other tool dealers; you need only a very inexpensive one for these purposes.

To test a cable, put your multimeter in either continuity or resistance (ohms) test mode. Joining the instrument's probes should produce a beep or an ohms display of zero (meaning there is perfect current flow.

Now touch the outside (ground) part of both connectors with your probes at the same time. If the connection is good, your meter should act as if the probes were touching each other. If that does not happen, your cable has a problem.

The next step involves performing the same test on the inside pin of the connectors. Again, if nothing happens, you have a bad cable.

To test for a short circuit, connect one probe to the inside pin of the connector on either end, and connect the other probe to the cable's outside (ground) part. If nothing happens on the multimeter, your cable is fine. If, however, the meter behaves as if the probes were joined, you have a short.

Few important system upgrades are so inexpensive. So don't limit the use of good video cables to your Amiga and VCRs. Other video devices, including TBCs, monitors, sync generators, switchers, waveform monitors, and vectorscopes, can benefit from good connections, too! ■

Paulo de Andrade is president of Digital Reality, an Amiga-based broadcast-video and 3-D animation company in Seattle.

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From p. 10.

to search for them and manually type them in.

MaxDOS offers you various startup options. If you intend to use the program only occasionally, you can mount the Mac devices as needed; or, if you use it more frequently, you can have them mounted each time the Amiga boots. MaxDOS refers to hard drives using names such as MH0: and to floppies as MF0:. Once properly installed with the drivers in place, the program works as advertised with most Mac-formatted media. Accompanying MaxDOS is a well-written manual that helps in troubleshooting any problems that may arise.

CrossMAC

CrossMAC lets both high- and low-density Amiga drives access either 800K A-Max- or Emplant-formatted Mac disks. Using an Amiga drive connected via A-Max II+ (or an older A-Max cartridge and a Mac 800K drive), CrossMAC lets your Amiga read an 800K Mac floppy.

CrossMAC works with Workbench 2.1 or later, using Consultron's mfm.device, and file reading is utterly transparent. The package also includes utilities for diagnosing and repairing file problems, formatting Mac disks, and viewing files. It also is able to display Mac disk icons on the Amiga Workbench.

Like MaxDOS, CrossMAC creates new Mac devices and accesses them as if they were Amiga drives. It names hard drives MacHD and floppies MAC0:, and you can rename each device. Just click on a few prompts, and you're home free. The CrossMAC installation is a breeze. It automatically mounts the disk drives and SCSI partitions, and it also has a feature that checks the Gary chip for proper functioning.

Transfer Twins

Both programs can read Macintosh-formatted SCSI devices and Macintosh-formatted partitions on Amiga SCSI devices, including hard drives, Bernoulli drives, SyQuests, and optical and floptical drives.

The Macintosh filing system uses two files for every Mac file. One is the "data fork," which usually contains the useful information, and one is the "resource fork," similar to the Amiga's .info file. MaxDOS thoughtfully lets you choose to show both forks, hide the resource fork, or hide all empty files.

CrossMAC goes further, giving you extensive technical information on resource and data forks in its manual's appendix, and also providing a utility called Res_Extractor to pull vital information from the useful resources. CrossMAC's innovative solution for storing file-type information is to place it into the Amiga file comment. Because of this, you must always clone the comment when copying Mac files under CrossMAC. The program also contains a database into which you can enter new file types.

Conclusions

In summary, these two utilities seemingly do the impossible. Of the two, CrossMAC is the more option-laden and refined, suitable for everyone. For users who only need to read high-density Mac disks in their high-density Amiga drives or Mac-formatted hard disk partitions, MaxDOS also fills the bill nicely.

—Daniel Greenberg

Pegger 2.0

Heifner Communications, $99.95

All Amigas.
2.x/3.x compatible.
Hard-drive installable.
Not copy protected.
Accelerator compatible.
***Minimum system*: 2MB.**
***Recommended system*: 4MB, AGA Amiga, and hard disk.**

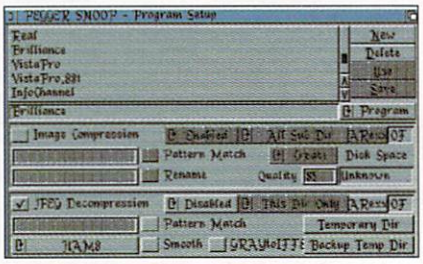
Automated JPEG conversion software.

Released late last year, Heifner Communications' original Pegger program (reviewed Feb. '94) proved itself a worthy addition to any Amiga user's software repertoire. Pegger's purpose is to make relatively quick and painless work of the otherwise time-consuming process of converting graphics images. Without any noticeable loss of quality, it rapidly converts bulky formats such as IFF24 into space-saving JPEG graphics formats, making them easier to manipulate.

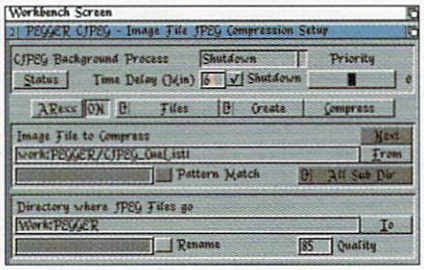
Pegger 2.0 is the natural evolution of the original program, which needed improvement with respect to speed and a wider range of supported graphics formats. The new Pegger is faster, roughly halving the time required to convert IFF24 files. You'll also find new network support, an improved Snoop function, and other enhancements that serve to make an already good program significantly better.

Better Pegger

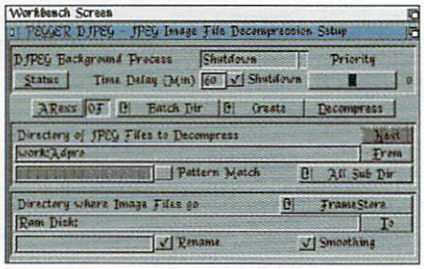
Like the original Pegger, 2.0 is unconventional in appearance and execution. It arrives on one disk that installs using



Snoop works just as its name implies.



CJPeg, where files become JPEGs.



DJPeg, the decompression program.

the standard Commodore installer, which checks all the library files that it needs and reports if it finds previous Pegger files.

Once the program is installed, double-clicking the Pegger icon places three new AppIcons on the Workbench screen: Snoop, CJPeg and DJpeg. Dropping a graphics file's icon on any one of these activates the program that each one represents. Of course, you can opt instead for the traditional double-clicking of them, or you can select one of the AppMenu items that Pegger adds to the Tools menu on the Workbench. ►

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Snoop, with a fast, attractive interface, is the first program you'll want to learn to use. Revised under 2.0, Snoop works its magic well. For starters, you now use a screen button to choose between two modes of operation: Program and Directory. In Program mode, it lists 18 graphics programs, and you choose the one (ImageFX, ToasterPaint, and so on) in which you want Pegger to "snoop" for files to convert. In Directory mode, you select a directory, and the mode, as its name implies, snoops in that directory looking for new files to convert to JPEG format.

CJPeg's interface, as stylish as Snoop's, works by letting you manually call up a standard file requester and select a file or a batch of files to convert to JPEG format. DJPeg works in the reverse manner, with some new twists in 2.0. Decompressing a grayscale JPEG file with DJPeg results in an 8-bit IFF grayscale file—much smaller than IFF24 files, and a format that's required by some 3-D rendering programs.

There's new support within DJPeg for creating oversized Toaster Framestores and 24-bit Targa files. Pegger 2.0 also now offers a small window that appears in both CJPeg and DJPeg when a large batch of files is selected. The window informs you of progress as the sorting and checking of the files occurs—a nice touch.

More of a Good Thing

Full ARexx control is included with the package, along with four new ARexx scripts: two file-copy scripts, a move script, and a debugger for ARexx scripts. Perhaps one of Pegger 2.0's most valuable qualities is its relatively low overhead. Here's a program (three, actually) that converts files like a frenzied circus roustabout, yet consumes only about half a megabyte of RAM in operation and barely any chip RAM when used in Workbench display mode. Astonishing.

If there's a downside to all this goodness, it's in the documentation. This ten-page Updates and Changes booklet could use some refinement. It is too sketchy. Yet, the almost exuberant operation of the program easily compensates for shortcomings in the documentation. Hurrying through lengthy directories of files, with CJPeg converting them to JPEGs and DJPeg converting them the other way, this software is powerful, useful, and thoroughly impressive.

One can argue that Pegger doesn't do anything that a semi-skilled ARexx programmer can't do, given a good graphics-conversion program and a little time. True, but not everyone possesses the knowledge to write conversion routines for their image-processing software, and even those who do would be hard-pressed to write and debug scripts that could do the job. Regardless of your level of expertise, do yourself a favor—get Pegger 2.0.

—Tim Walsh

World Construction Set

Questar Productions, $250

All Amigas.
2.x/3.x compatible.
Hard-drive installable.
Not copy protected.
Accelerator compatible.
***Minimum system*: 4MB RAM, accelerator.**
***Recommended system*: Hard drive, 8+MB RAM, 68040 accelerator.**

Landscape-rendering software.

Belonging to a specialized group of programs commonly known as landscape makers or terrain renderers, World Construction Set (WCS) is arguably the most powerful and complex package of this type ever unleashed on the Amiga or possibly any personal-computer platform. I've used every commercial Amiga landscape maker, and though they're capable of delivering impressive results, none compares to WCS.

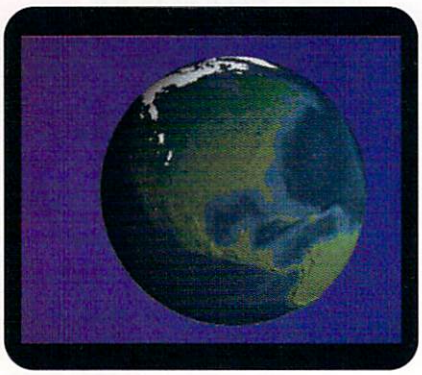
Rome Wasn't Built in a . . .

WCS makes use of the shareware Magical User Interface (MUI) by Stefan Stuntz, which is almost a work of art in itself. Commodore's Installer program puts everything in its proper place on your system, including MUI and nearly two disks of terrain data (mostly areas of Colorado) in WCS's proprietary DEM (digital elevation map) format.

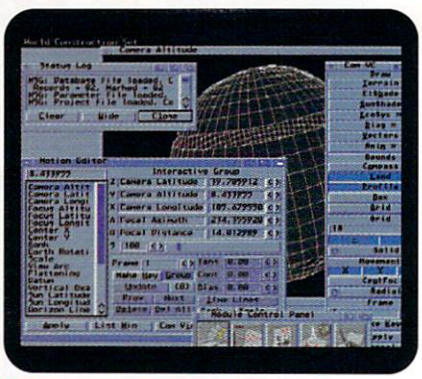
WCS understands many different formats for import or export, including LightWave motion files for complex animations, Z-Buffer data, and US Geological Survey Digital Line Graphs and ascii DEMs (readily available on the Internet).

Those of us who have collected and rendered many megabytes of VistaPro-format binary DEM files can rest assured that WCS can read those in and convert them to its own format. This makes nearly the entire planet Earth available for use in WCS.

Given WCS's incredible power, don't expect to master it in an evening or even a week. Not that WCS is difficult or unpleasant to use. Rather, the complexity is due in part to mastering its "nonmodal" windowing scheme. You can



Create an entire world with WCS.



WCS' nonmodal windowing scheme.

have many windows open on its screen at once, interacting with one while others process data and display both numeric and graphical output.

To serve this end, WCS understands the Amiga's "display database" and, depending on which chip set is installed in your machine and the kind of monitor you're using, offers you various screen-mode choices in which to work. The lowest screen mode is interlaced hi-res. Other hi-res modes (and a sufficiently large display monitor) allow you to have many windows open side by ►

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side, instead of being hidden behind one another.

Construct Your World

WCS's rendered output is IFF 24-bit, although you can use an image processor to massage this output into any other image-file format. If you have enough RAM, you can render frames in any size up to an enormous 32767x32767 pixels. You can also preview and fine-tune animations before rendering.

WCS is the only terrain renderer that knows that the world is round; given enough data and time, it can render or animate an entire planet. Questar will sell you either large (more detailed) or small (renders faster) DEM files to render the whole planet Earth.

The program's mapping features read like a complete "ecosystem," including water, snow, rocks, grasses, and many types of trees. As of this writing, WCS doesn't render clouds, but that's promised for a future upgrade. The 146-page manual is being revised to include more illustrations, and a videotape tutorial should be available by the time you read this. Questar offers registered WCS owners superb telephone support, and it has an Internet e-mail address, as well.

Whether you're a professional, or an artist or animator who yearns for the ultimate terrain-rendering package, WCS won't disappoint you. Just invest the time and effort to learn the software, and the results will amply reward you.

—Harv Laser

CyberEdit Pro 2.26

Cybercall, $995

All Amigas except A500 and A1000.
2.x/3.x compatible.
Hard-drive installable.
Not copy protected.
Accelerator compatible.
***Minimum system*: Requires Future Video Edit Link 2000, 2200 or 3300 edit controller, 2MB RAM w/o Video Toaster; 2MB chip RAM, 10MB fast RAM with Video Toaster.**
***Recommended system*: De-interlacer, accelerator, Video Toaster 2.0 or later, and extra RAM.**

Software for using the Video Toaster with Future Video edit controllers.

While other computers are only now becoming capable of Amiga-like video production, their prices and hardware requirements seem absurd to Amiga users. This price/performance gap widens even further whenever products such as CyberEdit Pro hit the market.

CyberEdit Pro brings professional, cuts-only editing to the masses. Used in conjunction with a Future Video edit controller (I tested it with Future Video's Edit Link 3300), your Amiga, a Video Toaster, and a couple of industrial VCRs become a capable edit system.

Cuts 'n' Rolls

Geared toward budget-conscious video editors, CyberEdit is a cuts-only system that controls one source and one record VCR. This enables the Toaster to perform edits such as cuts and A/X roll transitions that use the Toaster framestores or backgrounds as a second image source. These transitions allow you to dissolve from a frozen frame at the end of a sequence to another video segment on the same source deck. This type of transition looks similar to an A/B roll transition, but you avoid the expense of an additional source VCR.

CyberEdit Pro interfaces flawlessly with the Future Video edit controller. The software includes several test programs that ensure everything is working fine before you start editing. I like this approach—much better than trying to alter settings in the middle of an edit session.

It's obvious that Cybercall made every aspect of setup and installation as simple as possible by including icons that automatically load your text editor to make the configuration process easier. The software runs directly from floppies—although you get better performance by running it from your hard drive. Once you have installed the program and tested the setup, all you have to do is run the Video Toaster, switch to the Workbench screen and run CyberEdit. I would like to point out that you may also run the program without the Toaster, in which case you still have all the edit functions available, but not the A/X roll capabilities. This is not only an advantage for those who don't own a Video Toaster, but it also allows you to run just the edit software when no Toaster transition is necessary.

Overall Control

CyberEdit Pro is well designed, including features available on other edit systems that cost several thousand dollars. For instance, you can enter a description for each edit, making it easy to find a specific edit even from a long list. The system also makes the most of each VCR's capabilities. If you have the luxury of SMPTE time code, no calibration is needed, as each video frame has a unique address. And if you're using low-end decks with the more common control track, then CyberEdit offers some calibration features that squeeze the highest possible precision out of them. Furthermore, you can automatically repeat scene descriptions for your edits through the use of colons.

The interface lets you control your decks via the mouse or function keys and perform all manner of edits, including assemble, insert (audio, video, or both), freeze frames, and transitions. You can also call up CG pages for titles as well as framestores. To enter your edit points, just click a button, and double-click the time window for adjustments. The system informs you of the length of your adjustments, and if you select another out point, you're told how much it lengthens or shortens your edit. To fill a specific time, you can enter that duration, and CyberEdit automatically calculates the out point for you.

The program lets you select any Toaster transition and activates it for you by means of GPI triggering. As with more expensive systems, CyberEdit lets you load and save edit lists for later use. The manual is clear and comprehensive, including a number of tips that are generally helpful.

While CyberEdit Pro is clearly aimed at entry-level editing and is not intended to serve as a replacement for elaborate A/B roll-editing systems, it offers substantially more than I expected. The edits I performed were accurate and easy to set up, and this system actually made the process fun. If you are an aspiring editor, CyberEdit Pro gets you going fast and makes the transition to high-end edit systems a breeze. I highly recommended it for everyone, from video students to beginning professionals.

—Paulo de Andrade

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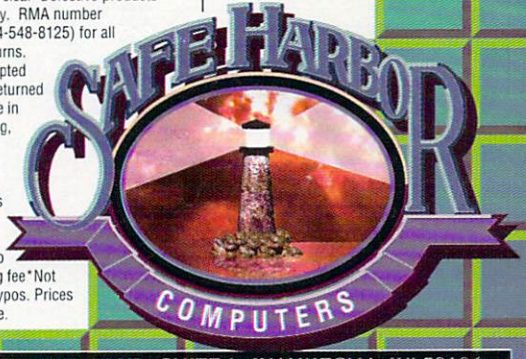

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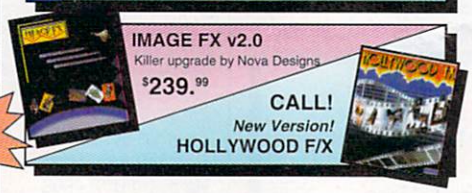

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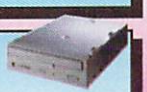

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The Game Preserve

By Peter Olafson, AW Games Editor

Special Report: A Preview of Full-Motion Video

A common buzz-word in the IBM game market these days is "full-motion video" or FMV. It seems to impress people. I couldn't say why. Perhaps because it's more like watching TV. In fact, on many occasions, FMV has nothing to do with gameplay, and that is precisely the problem.

FMV hasn't made its way to Amiga games aside from its occasional use as a cute effect. Oh, Sherlock Holmes, Consulting Detective, for CDTV (using CDXL) and Amiga Football for CD32 both came close, but they featured only limited motion recorded at a low frame rate. The MPEG module introduced early this year gives the CD32 true FMV capability, but no FMV game software has appeared yet. A version of Jurassic Park, using clips from the movie, was to be the first, but it seems to have gotten stuck in a tar pit en route to release. (However, at least two other developers are working on FMV games.)

So, it may come as something of a surprise to find that the first FMV Amiga game is already here—on an unexpected medium (disk, rather than CD), from an unexpected direction (the US), and in an unexpected form (shareware).

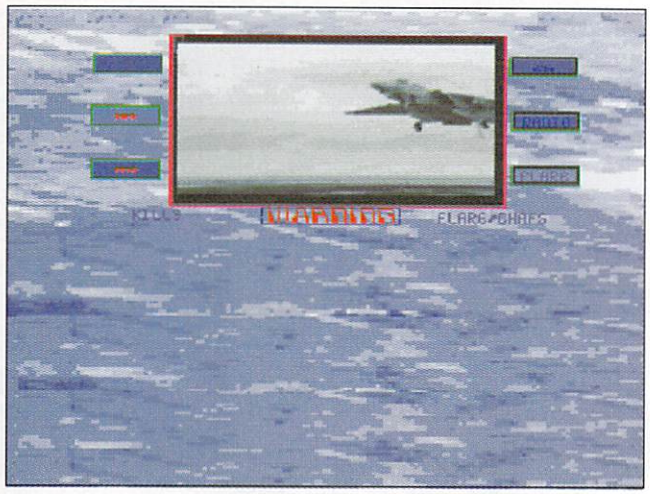
And here's something else: It's rather good. The FMV sequences don't replace the gameplay; rather, they complement it nicely.

As of this writing, **Tomcat**—inspired by Tomcat Alley for Sega CD—is in beta testing. A playable preview (a whopping 2.4 megs compressed) is available for downloading.

The game is something over 7 megs and occupies about 5 disks, so you'll need a hard disk and a meg of chip RAM to run it properly. Not to mention a firm hand and clear vision: Tomcat's a simple fighter-pilot arcade game based on the Navy's famed F-14, but with a heavy emphasis on quick reactions and good aim. (The black-and-white FMV sequences, appearing in a central window, set up each action sequence and then show the results.)

You use the joystick to follow the pilot's digitized instructions: Move the onscreen crosshairs to a waypoint, the tail of an enemy fighter, or just to clear out of the Dodge when a bogey's on your six. You'll either live to fight another day, or crash and burn.

Tomcat is the work of John Graham—a member of Dark Unicorn Productions (DUP), a South Carolina-based shareware coding group that aims to become to the Amiga shareware game market what Apogee and Epic MegaGames are to the IBM. The 12-member group has been around in various forms since at least '92, but none of its earliest projected releases—including Castle of Terror, Return of the Ancients, and Star Trek: The Next Generation—saw the light of day. The first ones to appear were Shane Monroe's pleasant strategy games, Psycho Squares (1993) and Psycho Squares Deluxe (1994).



Tomcat features full-motion video: a gaming first for the Amiga.

Tomcat promises to be the game that gets DUP noticed. At this writing, the shareware version has been available for a week, and Graham has already received 27 registrations. (The shareware version includes only air-to-air missions. The full one has air-to-ground, recon, and rescue, as well.)

The beta version I saw wasn't quite as polished as a commercial release, but it was highly playable, and it certainly wasn't as slow as one might expect a non-CD FMV game to be. Ideally, Tomcat should be played from RAM on an accelerated machine. But the FMV sequences are loaded in on the fly from HD during play; there was no waiting around for the game to kick in. When I crashed (which was often), I could get right back at it.

If Tomcat takes off, there's an FMV space sim in our future as well. This one, already laid out on paper, will be in color—as will a planned adventure about being followed.

Now, the trouble with FMV games generally is that they tend to lack genuine choices and wind up playing like Dragon's Lair: Make the one right move and proceed to the next stage, or make one of several wrong ones and die horribly. If Graham and DUP can stay out of this trap and provide lots of interesting alternatives to encourage replays, they'll be in business.

Also in the works from DUP, but farther down the road:

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As this went to press, we still had not heard the word on the Commodore situation, however, we have been told to expect good supplies of Amiga's by Christmas. In the last several weeks, supplies have become more limited, and Amiga's have been more difficult, more expensive and much more time consuming to aquire. However, we *still* have supplies and we *are* continuing to ship units every week. We *have* shipped over 150 computers last month and more than 90 this month, so regardless of Roomers you may have read trying to talk you into abandoning the Amiga platform in favor of a Mac or PC, Amiga dealers *are* still supplying computers, slow but steady. Also, we have just received our first demo units of the exciting new A2200 from AMI-Tech Canada, and it is scheduled to ship in quantity by Mid December. We have an exclusive on the first 100 units, so call early to avoid disappointment!

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destroy game with FMV clips, digital sound, rendered graphics, and a random mission generator. A preview should be available by the time you read this, and the game itself is a good bet for December release.

It's the Pits: A Bold Miner's Slaughter ***(Kit Felice)***: An arcade adventure from the author of the Gladiators of Dagania, with different styles of play in different segments. A couple of levels were reportedly up and running, and one is said to be like the tunnel sequences in Stardust, while another appears to hark back to Thrust. Look for this after Christmas.

Flying Tigers ***(Seumas McNally)***: Said to resemble a combination of Choplifter, Gunship 2000, and Desert Strike (I guess it involves helicopters!), this shoot-'em-up has reached playable state. Again, due after Christmas.

THEME PARK

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THE MAIN THEME in amusement parks seems to be intermingling spasms of rapture with prolonged sojourns in the depths of human misery. The people come in thickets, the lines are long, the food is expensive, the help is harried. You lose your car in the parking lot and your lunch on the big coaster.

You now have the power to verify that grim vision, or stand it on its head. **Theme Park** (***Electronic Arts UK***, about $35) puts you in command of a big rectangle of green space and charges you to fill it up with rides (including an elaborate design-it-yourself roller coaster), food stands, shops, and other attractions.

This delightful simulation from England's Bullfrog Productions—its first Amiga game since Syndicate—suggests a conflation of Maxis "software toys" with Bullfrog's traditional "God" sims. That is, it's immensely fun and challenging to play as a game—Theme Park pokes its fingers into many different parts of the gamer's soul—but, like SimCity, it's also fun to just play around with and watch.

You use the mouse and screen-bottom icons to plunk down attractions (starting out simple with the Bouncy Castle, a treehouse, a haunted house, and a merry-go-round), along with ticket booths, roped-off waiting lines, exit stairs, and paved walks to hook them into the rest of the park.

Then, open the gates and see all the people . . . and watch the bottom line. They'll want to eat, of course, so you'll need junk-food vendors. And they'll want momentos of the occasion, so you'll need places to sell souvenirs. They'll drop litter, so you'll need someone to pick it up. And they'll want to be thrilled, so (in the more advanced levels) you'll have to invest in research to develop bigger and better rides.

The full game is a genuine sim that gets heavily into the business end of the operations. (Dig that balance sheet.) Here, you negotiate over wages with staff and goods prices with suppliers (where the game can be won or lost); order up junk food like ice cream, fries and soda; buy shares in your competitors' parks (and keep them from taking over yours); and, at length, earn enough from the auction of your park to take on a new site.

The detail is impressive throughout. You can even control how much caffeine goes into the coffee and how much sugar into the ice cream, and the odds and the value of prizes in the carny games.

But the basic fun is simply watching your creations in action. A big, profitable, well-organized park just hums. You can almost feel it. The rides aren't just little stand-alone animations. People line up for them, ride them in turn and eventually the rides break down and start smoking, which will draw the atten- ►

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tion of a mechanic—provided you've hired one. (You can also enlist Barney-like animated characters to entertain the crowds.)

In a throwback to PowerMonger, all these little folks carry miniature histories with them, and you can stop visitors at any time and find out what they think of the park, how long they've been there . . . and how much money they have left.

Limitations: Mainly hardware-related. The initial release of Theme Park is only for AGA machines. (A trimmed-down, standard-Amiga version is in the pipe.) And the flow of play improves markedly if you have a hard disk, which requires 2.5 megs of RAM.

Then again, some additional business aspects might have been explored in the full game. Space is limited to that starting rectangle, and it might have been nice to include in the full game an option to buy adjacent lots for expansion and to address the environmental and community-relations challenges encountered. However, this is pretty much the game as it already existed on the IBM. Bullfrog only trimmed one ride, one feature, one type of staffer, and some minor menu items in the move to the Amiga, and while I'll miss the fireworks, the omissions aren't serious.

Besides, in an unusual but welcome move, they've added an "Ultra" speed that's specific to the A4000—whose association with productivity usually means that its soaring specs evade game designers' attention. Most important, all of the considerable satisfactions of Theme Park remain intact. If you build it, they will come. If you do your job well, they'll come in thickets and the lines will be long. Some things never change.

GUARDIAN

A– CD32 ✓ CDTV –

FINALLY, A CD32-SPECIFIC game that you can really play! **Guardian** (*Acid Software*, about $35) is a splendid, polygon-based shoot-'em-up from the creators of Blitz Basic that will bring back memories of some older classics while it carves out a nice niche for itself as a new one.

The Guardian is you. In a wedge-shaped craft (seen from an adjustable camera position) armed with laser cannon, smart bombs, and guided missiles, you'll defend ten varied planets—the last vestige of the human race—against the usual alien invaders.

That means blasting. Lots and lots of blasting. (The packaging proudly heralds "an endless supply of violence, mayhem and destruction.") But be sure to blast with care. In this 3-D version of Defender (an evident favorite of coder Mark Sibly), everything—enemies, buildings, ground craft, even pine trees—disintegrates into itty-bitty pieces when shot up. And you don't want to blow up everything, because that does the aliens' job for them.

To think of this simply as a shooter would be to overlook some significant inclusions; Guardian's play mechanics obviously were given a good deal of thought. There's support for a second player. The enemies may be called Dronoids, but they've got minds of their own and are not beyond ganging up on you or catching you in a crossfire. The power-ups that you'll get for wasting certain of the enemies can be stockpiled and, if you already have one, applied to your next life. All aircraft, by the way, cast shadows, which are sometimes easier to see than the craft themselves. Also, the array of surface objects allows you to lead enemies into destructive collisions.

And the brake-and-thrust controls—smartly positioned atop the controller—give you easy access to an old fighter-pilot standby: Hit the brakes, let your pursuer roar past and jam a missile up his spout. (Guardian represents the best use of the CD32 controller to date.)

And smooth? Yes, it flies smoothly.

Now, this sort of game could doubtless be done well on a standard Amiga. (A disk-based version is in the works.) It's not AGA-specific, and it's not going to blow you away with HAM8 screens and Imagine-rendered cut scenes. The game here is largely where it belongs: in the gameplay.

Still, I had read that Acid was aiming to use every last bit of CD space, and was surprised to see that the game occupies only about 2.2 megabytes. My guess: The rest of the disk is used for music, playing directly from the CD.

The music, provided by an up-and-coming New Zealand band, is extraordinary. It fairly powers out of the speakers. (Headphones or a stereo hookup are a must.) And it's not the usual Euro-thrash stuff that the mod crowd keeps churning out. It's real music—derivative in places, perhaps, but eminently listenable—and the perfect arcade complement to the game itself.

If I had to come up with a complaint—and I don't have one, really—it's about the packaging: just a jewel box and a slip of documentation. The game really doesn't require anything further, but a more substantial, eye-catching box (perhaps in the style of MicroProse's CD32 games) would give this small classic a bigger shelf presence both in stores and in homes—a position it manifestly deserves. ■

To locate vendors of the games reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 59.

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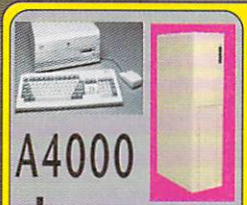

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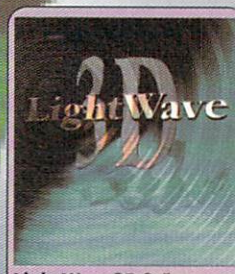

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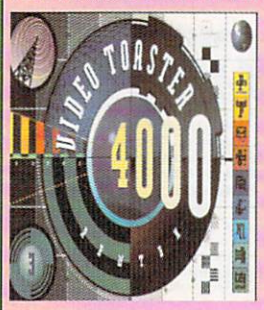

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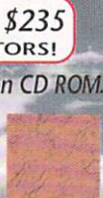

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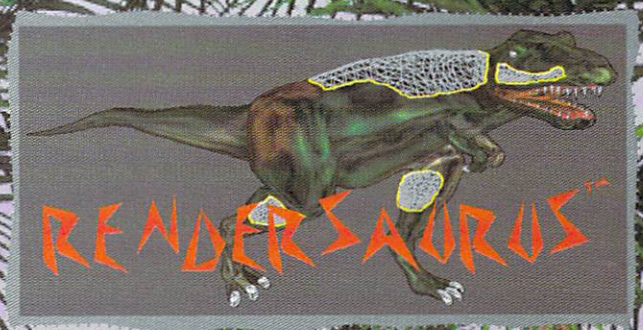

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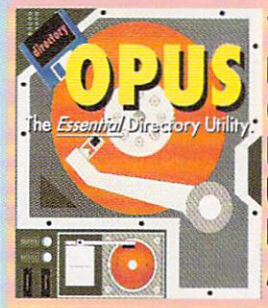

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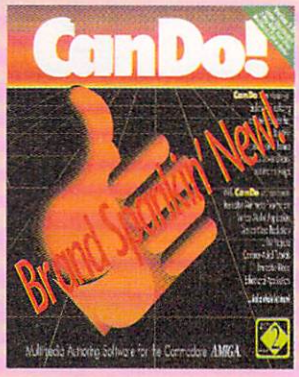

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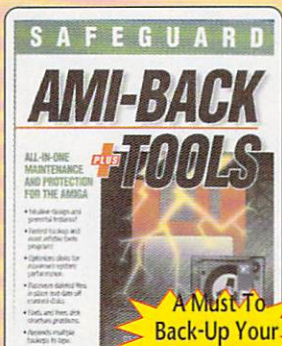

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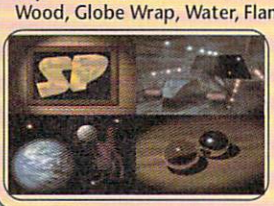

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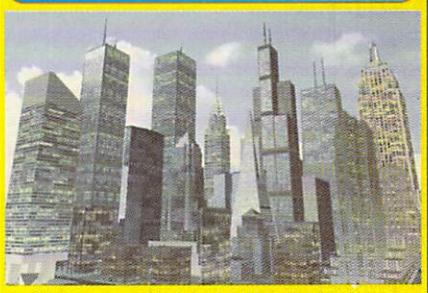

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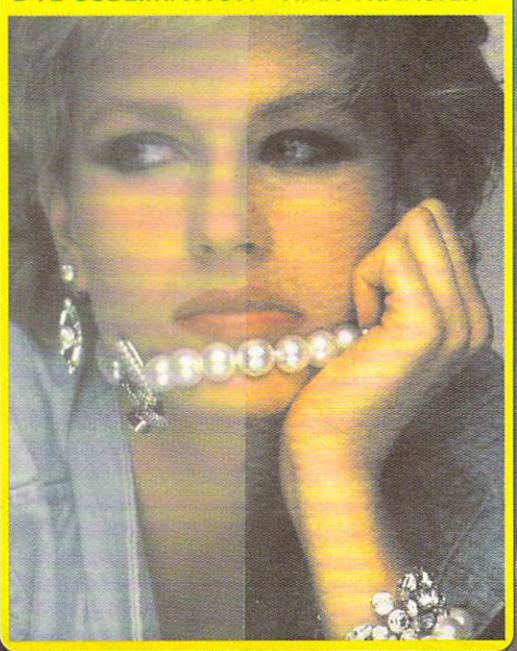

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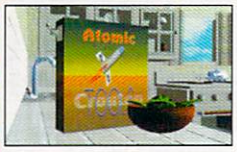

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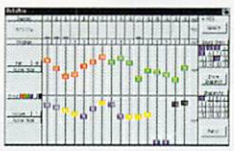

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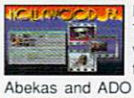

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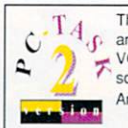

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A couple of easy ones from the pile of monitor questions; whither goes the Retina Z3; and expanding your A4000.

HELP KEY

BY TIM WALSH

FLICKER AND MODEM MISADVENTURES

Q. *After reading the June '94 Help Key, I switched my A1200 to Double-NTSC, Hi-Res, No-Flicker mode for an improved screen display on my 1942 monitor. However, if the monitor is on for more than an hour in this mode, or if a number of screen windows are open, a series of short, horizontal flickering lines appear. Is this a normal occurrence or the sign of a problem?*

My second question concerns connecting two Amigas through their serial ports for use with Psygnosis' Combat Air Patrol. I purchased a serial cable from Radio Shack, but had to get a gender changer for one end, since they don't sell a 25-pin dual-female cable. I followed the instructions in the Combat Air Patrol manual to no avail. Any suggestions?

Leland Jones
Dallas, Texas

A. In reference to your first question, your monitor might be defective. If it starts flickering after an hour of operation, there is a definite problem. Furthermore, no matter how many windows are open, no flickering lines should appear. If a computer-repair center gives your monitor a clean bill of health, it might be the computer.

As for your serial cable, you might try another Radio Shack to find one in stock. Ask for part #813-2506-551. But after reviewing the instructions for the CAP program, I think you probably need an RS-232, 25-pin null-modem connector (RS part # 000-2505-1). Any Amiga programs that require null-modem connections should work fine with that component in place.

MORE ON MONITORS

Q. *I have three monitors: a CBM 1950, an Amiga 1680, and a Cordata SVGA. I also own three Amigas: an A3000, an A1200 and an A500. What would be the best matching of each computer to a monitor?*

On another note, my A3000 operates a multiline BBS using Supra 14400 modems. Which CD-ROM drives operate fast enough to prevent data slowdown?

James Larry Stell
Glasgow, Kentucky

A. The most logical matching is as follows: the A3000 with the 1950, the A1200 with the SVGA, and the A500 with the 1680. The only one that requires any changes beyond plugging in a cable is the A1200/SVGA combination: You'll need to use the 23-to-15 pin adapter that comes with the A1200 and experiment with monitor drivers from the AmigaDOS 3.0 Devs/Monitor directory. Some fine-tuning will definitely be in order.

Concerning your second question, while tests I've performed show they read data at roughly one-third the speed of an A4000's IDE hard drive, any of the new double-speed CD-ROM drives will probably be fast enough to prevent any significant slowdown. My favorite for the Amiga is Alfa Data's internal, dual-speed Mitsumi CD-ROM drive coupled with a Tandem IDE controller. Although some newer drives are faster, the Tandem combination is fast and works exceptionally well with the A4000.

MY KINGDOM FOR A Z3

Q. *In your May '94 issue, you published an article on 24-bit Amiga-compatible graphic boards. I've gotten a lot of use out of my 24-bit Retina board, but I'm dismayed to hear that MacroSystemsUS will not be carrying the Zorro-III version of the board. Why did they advertise the Retina Z3 card for months if they had no intention of selling it?*

Robert Poole
Vernon, Connecticut

A. You're in luck, Robert. MacroSystem US has changed its name to MacroSystem Development and has thrown all its efforts into marketing and manufacturing its first-rate Warp Engine 68040 accelerator. So it no longer carries the MacroSystem product line.

However, NoahJi's, a Colorado-based distributor, has picked up all the MacroSystem products. It now markets the Retina Z3 and will soon release new software for it. It's an excellent display card and takes advantage of the increase in speed offered by the Zorro-III design. Watch for a review in an upcoming issue.

MORE SLOTS, PLEASE

Q. *I use an A2000 and an A4000 to develop computer graphics and animations for local TV stations. After reading your review last year about DPS' Personal Animation Recorder, I bought one and also intend to buy a TBC-IV from them.*

If I install both the PAR and TBC-IV on the A4000 for modeling and rendering, I'll still need to get the output on the A2000 for output to videotape. I'd like an expansion box where I could install the PAR, TBC-IV, and a hard disk. CeV Design's X-Pander Chassis seems to be the solution, unless you know of a better one.

Marcus V.V. Villaboim
Juii de Fora, Brazil

A. An item made expressly for situations like yours is the Toaster Toolbox 4000. Manufactured by Desktop Video Systems (913/782-8888) , this $369 expansion box has its own 200-watt power supply that can be stuffed with all manner of PC slot-based peripherals.

In your situation, the PAR would stay in the A4000, and the TBC-IV could go in one of the Toaster Toolbox's slots, operating just like an external TBC. If you have a SCSI controller card in the A4000, you could also install a SCSI hard drive or a SyQuest drive in the Toolbox and connect it to the A4000 with a SCSI cable. ■

Send your questions to Help Key, c/o ***AmigaWorld*** *Editorial, 80 Elm St., PO Box 802, Peterborough, NH 03458.*

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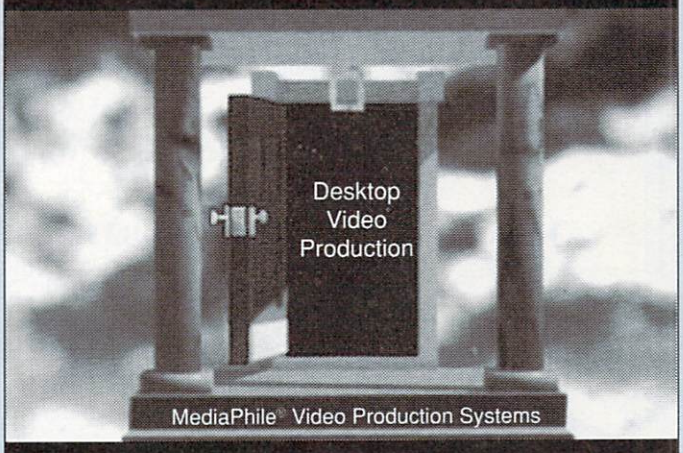

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SOUTHERN DISTRICT OF NEW YORK

In re	**In Proceedings For A Reorganization Under**
COMMODORE BUSINESS MACHINES, INC.,	**Chapter 11**
Debtor.	**Case No. 94 B 42187 (JLG)**

NOTICE OF LAST DATE FOR FILING PROOFS OF CLAIM

TO: ALL PERSONS ASSERTING CLAIMS AGAINST THE ABOVE-CAPTIONED DEBTOR

PLEASE TAKE NOTICE THAT:

An involuntary petition under title 11, United States Code (the "Bankruptcy Code"), was filed against Commodore Business Machines, Inc. ("CBM") in the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") on May 4, 1994. On May 24, 1994, CBM consented to relief under chapter 11 of the Bankruptcy Code.

On November 1, 1994, the Hon. James L. Garrity, Jr., United States Bankruptcy Judge, entered an order under Rule 3003(c)(3) of the Federal Rules of Bankruptcy Procedure requiring that all persons and entities, including, without limitation, individuals, partnerships, corporations, estates, trusts and governmental units, EXCEPT THOSE CREDITORS DESCRIBED BELOW, who may have or assert any Claim, as defined in § 101 (5) of the Bankruptcy Code, against CBM or its property that arose prior to May 24, 1994 or pursuant to the rejection of an executory contract or unexpired lease based upon an order of rejection issued on or before October 31, 1994, shall file such claim on or before 5:00 p.m. (EST), January 17, 1995 (the "Bar Date") and such claims must conform substantially to Form No. 10 of the Official Bankruptcy Forms, for each and every Claim asserted, whether general unsecured, priority or secured, either by (i) mailing the proof of claim, together with all supporting documentation (if voluminous, a summary thereof), to: **United States Bankruptcy Court, c/o Commodore Business Machines, Inc., P.O. Box 11, Bowling Green Station, New York, New York 10274-0011**, or (ii) by delivering the proof of claim, together with all supporting documentation (if voluminous, a summary thereof), by hand delivery or courier service (but not United States mail) to: **The Clerk of the Court, United States Bankruptcy Court, One Bowling Green, New York, New York 10004-1408.**

PROOFS OF CLAIM WILL BE DEEMED TIMELY ONLY IF ACTUALLY RECEIVED BY THE CLERK OR AT THE POST OFFICE BOX NOTED ABOVE, ON OR BEFORE 5:00 P.M., (E.S.T.), ON JANUARY 17, 1995.

ALL CREDITORS REQUIRED TO FILE PROOFS OF CLAIM WHO FAIL TO DO SO ON OR BEFORE THE BAR DATE SHALL BE FOREVER BARRED FROM ASSERTING CLAIMS AND SHALL NOT BE PERMITTED TO VOTE UPON, OR RECEIVE DISTRIBUTIONS UNDER ANY CHAPTER 11 PLAN, OR OTHERWISE PARTICIPATE IN CBM'S CASE.

THE FOLLOWING CREDITORS NEED NOT FILE PROOFS OF CLAIM:

(a) Any creditor that has already duly filed a proof of claim against CBM that the creditor does not desire to amend;
(b) Any creditor (i) whose Claim is listed in the schedules filed by CBM with the Bankruptcy Court (the "Schedules") and is not designated therein as "disputed," "contingent," "unliquidated," "not determinable" or "unknown" and (ii) who agrees with the classification and amount set forth therein;
(c) Any creditor whose Claim has been allowed by order of the Bankruptcy Court prior to the date hereof; or
(d) Any creditor whose Claim is an administrative expense within the meaning of § 503 of the Bankruptcy Code.

Any creditor whose Claim is not listed in the Schedules, is listed in an incorrect amount or is listed as "disputed," "contingent," "unliquidated," "not determinable" or "unknown" on the Schedules and who desires to participate in the case and share in any distribution, must file a proof of claim on or before the Bar Date. If it is unclear from the Schedules whether a Claim is scheduled as "disputed," "contingent," "unliquidated," "not determinable" or "unknown" as to amount, or, otherwise improperly listed, the creditor must file a proof of claim prior to the Bar Date. Any person or entity who desires to rely on the Schedules will have the responsibility for determining that its Claim is accurately listed therein.

All known creditors will receive written notification of the Bar Date together with a proof of claim form containing information on how CBM has listed the Claim of such creditor on the Schedules. If a creditor does not receive a written notification by December 1, 1994, the creditor should assume it is not listed on the Schedules. Copies of the Schedules are available for inspection between the hours of 9:30 a.m. and 4:00 p.m. at the Office of the Clerk, United States Bankruptcy Court, Fifth Floor, One Bowling Green, New York, New York 10004. INQUIRIES CONCERNING THE AMOUNT AND PRIORITY OF THE CLAIMS LISTED ON THE SCHEDULES SHOULD BE DIRECTED TO CBM AT (610) 666-2729.

Any Creditor whose Claim arises from rejection of any executory contract or unexpired lease after the date hereof, but prior to the entry of an order confirming a chapter 11 plan, must file its proof of claim within thirty (30) days from the date of the order approving the rejection of the contract or unexpired lease, but in no event earlier than the Bar Date.

Dated: New York, New York
November 3, 1994

BY ORDER OF THE COURT
HON. JAMES L. GARRITY, JR.

KAYE, SCHOLER, FIERMAN, HAYS & HANDLER
Attorneys for Commodore Business Machines, Inc., Debtor
425 Park Avenue
New York, New York 10022
(212) 836-8000
Attn: Herbert S. Edelman, Esq.
Brian E. Kriger, Esq.

THE LAST WORD

Kudos, complaints, comments, concerns, and contributions from our readers.

Wish Lists for the New Owner

I am totally in love with the video/computer marriage made possible by the Amiga and such cards as the Video Toaster and OpalVision—it has changed my life. The A4000, however, turned out to be incompatible with the existing Toaster card, and Commodore built it with inadequate slots, power, and RAM for dealing with such a complex application.

So here is my request to whichever group succeeds in buying Commodore: Please aim at producing an Amiga with a 68060 processor (or at least a 68040 at 50 MHz), 4MB of chip RAM and 32MB of fast RAM, at least two video slots, and fast SCSI controllers. Such a machine would at least begin to make the Amiga competitive with the IBM and Apple computers in terms of power and speed. (We already know the Amiga towers above the other platforms in video and graphics capabilities.)

In addition, please work very closely with developers before you bring out some major new computer or device. Instead of working with NewTek, Commodore caught everyone by surprise by releasing an A4000 that was incompatible with the Toaster. Such a "decision" was preposterous! To ignore a company that brought the Amiga such new-found success is worse than absurd.

Whoever you turn out to be, rest assured that if you operate things in an intelligent and positive manner, you will have the most devoted and loyal users anywhere.

Steven L. Thomassin
Ventura, California

If the new owner of the Amiga turns out to be the Commodore UK management group headed by David Pleasance, the future of our favorite machine will be in the hands of persons having an excellent marketing track record. We in America wonder, however, what kind of Amigas will be coming our way—and when. Commodore UK was noted for producing low-priced, bare-bones machines for use as game platforms, a strategy that simply won't work in America.

Naturally, Mr. Pleasance would be expected to concentrate on reintroducing the Amiga into the UK, but I hope he does not forget that most of the Amiga's nonentertainment software and hardware is produced in America, and this support network is eroding rapidly. Attention on the part of the new owners to the American market might go a long way toward forestalling the extinction of the Amiga as a serious computer system.

Instead of working with NewTek, Commodore caught everyone by surprise by releasing an A4000 that was incompatible with the Toaster. Such a "decision" was preposterous!

Jeffrey T. Powell
West Covina, California

A Tip o' the Hat To Quick Tip

As a serious Amiga user since the days of the A1000, I'd like to point out how helpful your magazine really is. This is to thank Denny Atkin for his Quick Tip in the "Denny on DOS" column of your August issue. I had bought a used 210MB IDE hard drive, and after installing it, I tried to save a scan from ADPro. It seemed to save fine, but when I went to load it in again, I got an Incomplete File error. At first I thought the drive was corrupt, but a quick check with Ami-Back Tools eliminated that possibility. I then assumed the drive's controller card was bad, and was about to write it off as a loss, when I remembered Denny's Quick Tip. Within ten minutes the drive was up and running with no problems. Thanks, Denny, for a great column and for saving me some cash!

William Young
Address unknown

AW May Be Thin, But It's There

When I got my first Amiga (an A1000) there were only three commercial software titles on my dealer's shelf, and no Amiga-specific magazines. Then the Amiga hit the launching pad and blasted off, rocketing us into another age of computing. Magazines such as *Amazing Computing* and *AmigaWorld* appeared on the scene to provide users with information about the Amiga and its capabilities.

Now, three Amigas later and still not owning a modem, I count on those magazines to feed my hunger for new information and updates. So in response to those readers who complain about the "thinness" of *AmigaWorld*, I simply say that, thin or fat, it helps to fill what was once a void and would be again without it.

Also, many thanks for "Denny on DOS" and the *AmigaWorld* hotline about CBM. For a guy who never met a program he couldn't guru (me), Denny's tips alone are worth the price of your magazine. And even though I have to pay for it, it's nice having the hotline number to call.

Colonel Conner, Jr.
Tampa, Florida ■

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UPCOMING FEATURES

February

A Buyer's guide to new color printers. Also: Troubleshooting guide to printer problems, printer drivers and other printing issues.

March

Resources and support for Amiga users in the post-Commodore era. Product support and services; book, tapes and tutorials; BBSs and online support groups;eduction and training; find parts and equipment.

April

Hints and tips for desktop publishers. Also: Hands-on tutorials on using the latest version of PageStream.

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Four different versions of EMPLANT are available, ranging in price from $279.95 to $399.95

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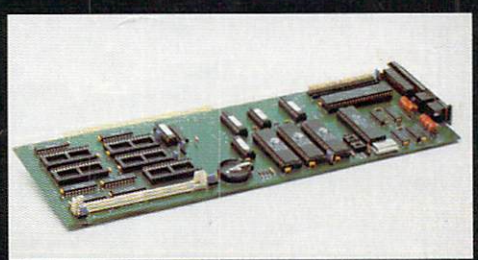

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The SuperGen SX Studio works on all Amigas, from the A500 to the A4000, in both AGA and non-AGA modes. SuperGen SX Studio lets you overlay titles, create amazing animated borders and graphics, and fade between any video source and Amiga graphic. And, since SuperGen SX Studio is easy to use, you'll be producing videos that look just like the pros' in no time.

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